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Posters sessions

P2.001 Evidence meets the media: working with science journalists in South Africa
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Background: Consumers are important stakeholders within evidence-based health care (EBHC). Journalists are gatekeepers to consumers’ understanding of healthcare, thus influencing consumer decision-making. Consequently it is important to build capacity of and engage journalists in knowledge translation activities and the use of best evidence to inform healthcare decisions. Objectives: To enhance the capacity of South African science journalists to better understand, find and apply EBHC principles when reporting on health research. Methods: As part of an initiative to facilitate engagement between researchers and science journalists, we are facilitating a workshop on the use of best evidence and the role of EBHC in October 2013. Content development: the workshop will focus on the first three steps of EBHC and is divided into the following subessions: EBHC: the why, the what and the how; Ask and you shall retrieve; and Critical appraisal: not all evidence is equal. We will end off with structured discussions centred on enablers and constraints of applying EBHC principles during reporting. There will be ample interaction, using local scenarios for formulating questions, and referring to The Cochrane Library for retrieving research. Basic principles of critical appraisal will be covered and demonstrated. Measuring potential impact and feedback Potential impacts will be measured by pre- and post-assessments, consisting of five Likert-scale questions testing confidence in EBHC knowledge and skills and three multiple-choice questions assessing application. An evaluation form will be used to obtain constructive feedback from journalists for improving the workshop. Results: We will share details regarding the content of the workshop, including the approach, content and measuring impact. Conclusions: Engaging with journalists is key to enhance use of best evidence in media articles. It is of equal importance to familiarise ourselves with journalism etiquette, and learn about the context and challenges which journalists operate in.

P2.002 New marketing and communication strategies of the Brazilian Cochrane Centre
Brazilian Cochrane Centre, Brazil

Background: In 2012, Brazilian Cochrane Centre (BCC) decided to increase dissemination of its activities to professionals and consumers, emphasizing the importance of looking for systematic reviews (SR) when facing health related decisions. Objectives: To report new communication and marketing strategies implemented by the BCC. Methods: Over the last 6 months, volunteer collaborators of the BCC have held monthly meetings to plan integrated communication and marketing strategies. Results: The following strategies have been implemented: Improved visual identity: The BCC logo has been modified improving its quality and the metanalysis diamond is now represented by the Brazilian flag. Standardization of the logo in all the material used in virtual and paper communication. Improvement of the language used in the BCC webpage and continuous updating of events, workshops and activities promoted, including links to new translations and online courses. Relationship strategies: creation of material (postcards, e-mails) for special dates. Social media: creation and updating of a BCC Facebook account, using informal language to inform users about EBH, the Cochrane Collaboration and the BCC. In its first month, the page had 130 followers. The Basic Workshop post had 2333 accesses. Journalism: Creation of an electronic quarterly online Newsletter with information about the BCC, the Cochrane Collaboration and EBH, distributed to the press, health institutions, research agencies, universities and policy makers. The first edition will be available on the BCC webpage in May 2013. Conclusions: The aforementioned activities, all developed by volunteer collaborators of the BCC, are promoting (a) increased visibility and interaction of the BCC with different publics, (b) increased recognition of the BCC as a pioneer research center in Brazil and (c) large scale dissemination of the concepts of EBH in our country and the importance of role of SR when taking health related decisions.

P2.003 Consumer involvement in the Cochrane Musculoskeletal Group
Cochrane Musculoskeletal Group
Background: There is a world-wide trend toward patient involvement in their health care and in all levels of health research. The Canadian Institutes of Health Research as well as the Cochrane Musculoskeletal group has adopted this approach, in the hopes that it will produce research findings that have greater relevance and usefulness to consumers are more relevant to consumers and more likely to be used by them when making health care decisions. Objectives: To showcase the many different ways consumers are involved with the Cochrane Musculoskeletal Group. Methods: The Cochrane Collaboration is an international, independent, not-for-profit organization dedicated to making up to date, accurate health information available worldwide. The Cochrane Musculoskeletal group is one of many groups within the Cochrane Collaboration. Consumers within the Musculoskeletal group have many different roles including: • Providing comments on systematic reviews and protocols • Helping to guide research priorities • Evaluating decision aids and plain language summaries • Oral and poster presentations at national and international conferences • Promotion of the Cochrane Library • Knowledge translation • Recruitment and training of new consumers • Mentoring new consumers • Joining author teams in writing a systematic review • Consumer representation on the Cochrane Musculoskeletal editorial board. Results: The role of consumers within the Cochrane Musculoskeletal Group continues to expand due to the support and encouragement of the Group’s staff. There are many ways that consumers can become involved at a meaningful level. Conclusion: Within the Cochrane Musculoskeletal Group there are many roles that consumers can assume including promoting widespread use of The Cochrane Library Consumers support and work with Collaboration staff to have full access to The Cochrane Library available for all Canadians. A challenge faced by the consumer group is recruiting more members from countries where English is not the first language.

P2.004
Critical outcomes in a Cochrane Systematic Review: patients’ perspective

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Background: GRADE methodology requires that up to seven critical outcomes are selected to highlight the most relevant findings of the systematic review (1). However, the selection of these outcomes has so far been left to the review authors. As far as we are aware, no Cochrane systematic reviews have explored the views of patients while selecting outcomes for summary of findings tables. Objective: To identify which outcomes are important to patients undergoing short-term urinary catheterisation. Methods: We contacted content experts to identify outcomes of importance to patients undergoing short-term urinary catheterisation that could be included in a Cochrane systematic review. The content experts included clinicians, nurses, and a health economist. Subsequently, through a local charity (UCAN), we identified five individuals who had undergone urinary catheterisation and invited them to take part in a group discussion to identify important outcomes from their perspective. The participants were not aware of the views of the content experts. Results: The content experts identified the following critical outcomes: symptomatic catheter-associated urinary tract infection (CAUTI) with microbiological evidence; symptomatic CAUTI without microbiological evidence; patient discomfort whilst catheter is in situ; bacterial resistance to the antimicrobial agent; and urinary sepsis. Participants suggested that infections and discomfort were certainly important from their point of view. However, they also highlighted length of hospital stay and the duration of catheterisation as important. Interestingly, participants also raised issues around being catheterised and the impact on self-esteem and ability to wear clothes comfortably. Conclusions: There was some overlap between the views of the participants and the content experts on important outcomes, but patients reported that broader quality of life issues were also of importance. It is paramount that patient’s perspective is at the heart of Cochrane Reviews in order to maximise their relevance.

Reference

P2.005
The Cochrane Library publicity programme—promoting Cochrane evidence worldwide

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Background: Press releases highlighting selected new and updated Reviews are an important part of the monthly marketing strategy for The Cochrane Library. Reviews published in the Cochrane Database of Systematic Reviews are often reported by journalists and bloggers, and coverage is increasingly international. Objectives: The objective of Wiley’s publicity strategy is to raise the international profile of The Cochrane Library through professional and consumer media, and to increase usage. Methods: A number of new and updated reviews are selected for publicity from each monthly issue of The Cochrane Database of Systematic Reviews. The resulting coverage is analysed by region, and we also look for a corresponding increase in usage for the articles that are most widely reported. Results: In 2012 Wiley issued press releases on 33 Cochrane Reviews, generating 4268 stories in the media. Cochrane stories were covered in over 2400 media outlets in over 80 countries. Of the media outlets which covered Cochrane stories, 18 ran 10 or more pieces (0.73%), 89 ran 5 or more pieces (3.6%), and 390 ran 3 or more stories (15.7%). 9.7% of stories were in a language other than English, from 15 different languages in total. The US was the country with the most coverage, reporting 2176 stories. Increasingly our press releases are highlighted and reported via social media in addition to traditional and broadcast media, especially on blogs and Twitter. Conclusions: Media coverage of new and updated Cochrane Reviews raises the international profile of The Cochrane Library in both professional and consumer media, and increases the usage of Cochrane Reviews. With the move to ‘when ready’ publication of CDSR in 2013 it will be important to ensure that relevant Reviews continue to be highlighted in traditional and social media.
P2.006
The ‘Implications for Practice’ of empty reviews: an analysis of Cochrane Systematic Reviews with no included studies

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Background: Systematic reviews that find no studies eligible for inclusion, commonly known as ‘empty reviews’, may be especially problematic for clinicians and other decision-makers. The reporting of implications for practice in particular has been suggested as potentially sustaining a risk for bias. Objectives: This research examines the reporting of ‘Implications for Practice’ of empty reviews in The Cochrane Database of Systematic Reviews (The CDSR). Methods: All empty reviews within the CDSR as of August 15, 2010 were identified, extracted, and coded for analysis. Descriptive characteristics and the complete ‘Implications for Practice’ section were extracted from each empty review. Thematic content analysis was performed by two authors (JY & LS) and refereed by the third author (PM). Results: 376 (8.7%) active reviews in the CDSR report no studies eligible for inclusion. Of these, 117 (31.1%) contained a one sentence ‘Implications for Practice’ section, generally concluding that no studies were identified for inclusion. 59 (15.7%) appeared to contain recommendations to use additional research literature 2. To identify a subset of studies for further research. A further 1087 citations were included following an updated search. Objectives: To systematically and transparently describe this additional research literature. Methods: 294 publications were included and descriptively coded (NB. approximately 7% are awaiting coding). There was a wide range of study designs: cross-sectional surveys (n = 125, 43%); 95 (33%) qualitative/ethnographic studies; 27 (9%) each of intervention evaluations in LMICs in this area Further descriptive characteristics and the findings of the thematic synthesis will be presented. Conclusions: This project illuminated a body of literature providing insights into the mechanisms and processes of effectiveness, enabling the research team to access the views and experiences of people/provider views about services. Mapping identified an important gap between the wealth of descriptive research and the relative absence of intervention evaluations in LMICs in this area Further descriptive characteristics and the findings of the thematic synthesis will be presented. Conclusions: A trial registry is a free, valuable tool if used correctly. In order to do so, users must be kept abreast of changes made to the registration processes of such registries. This research will provide a clear outline of those changes and the potential ramifications that such changes have for adjudicating bias and inclusion of trials for systematic reviews.

P2.008
Illuminating review results using systematic evidence mapping

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Background: Of 29151 citations retrieved for a review about street children, the majority were excluded as not topic relevant, and 2085 potentially relevant studies were excluded on study design. Given that street children are a ‘hard to reach’ research group further analysis of these studies was undertaken, using systematic mapping methods. A further 1087 citations were included following an updated search. Objectives: 1. To systematically and transparently describe this additional research literature. 2. To identify a subset of studies for inclusion in thematic synthesis. Methods: 294 research studies from low and middle income countries (LMICs) only were included in the map. They were screened and coded according to a range of predetermined categories (e.g country, study design, population, study purpose) using Eppi Reviewer 4 software. A thematic synthesis was performed on selected studies focusing primarily on intervention processes. Results: 294 publications were included and descriptively coded (NB. approximately 7% are awaiting coding). There was a wide range of study designs: cross-sectional surveys (n = 125, 43%); 95 (33%) qualitative/ethnographic studies; 27 (9%) each of intervention evaluations in LMICs in this area Further descriptive characteristics and the findings of the thematic synthesis will be presented. Conclusions: This project illuminated a body of literature providing insights into the mechanisms and processes of effectiveness, enabling the research team to access the views and experiences of people/provider views about services. Mapping identified an important gap between the wealth of descriptive research and the relative absence of intervention evaluations in LMICs in this area Further descriptive characteristics and the findings of the thematic synthesis will be presented. Conclusions: A trial registry is a free, valuable tool if used correctly. In order to do so, users must be kept abreast of changes made to the registration processes of such registries. This research will provide a clear outline of those changes and the potential ramifications that such changes have for adjudicating bias and inclusion of trials for systematic reviews.

P2.007
A crib sheet for Cochrane Review authors’ use of trial registries

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Background: Clinical trial registries offer free, useful tools for identifying ongoing trials to be included in updates of reviews, assessing topics where reviews should be undertaken, and as a networking tool for review authors seeking further information or unpublished research. Prospective trial registration is an important means of ensuring transparency and completeness in trial reporting. Cochrane authors face challenges assessing selective outcome reporting when adjudicating bias in trials they include in reviews. A trial registry is a useful cross-referent for judging bias. Increasingly, trial registries allow retrospective registration of trials to ensure that databases make accessible as much information as possible. This shift in practice means reporting identification numbers provided by registries no longer provides authors with proof that a trial’s outcomes have not changed or can be tracked from the trials inception. Objectives: To describe and demonstrate the important differences across trial registries that relate specifically to Cochrane Review authors ability to judge bias. Methods: First we describe the utility of a registry in adjudicating bias. We then describe each of the member registries in the WHO Network of Primary Registers, their timing policies for the trials they accept, and the related impact this may have on Cochrane authors. Of the 14 registries, the majority are now accepting retrospectively registered trials. Such a change could affect the utility of the registry as a tool, and we provide warnings to ensure that review authors are aware of the implications. Conclusions: A trial registry is a free, valuable tool if used correctly. In order to do so, users must be kept abreast of changes made to the registration processes of such registries. This research will provide a clear outline of those changes and the potential ramifications that such changes have for adjudicating bias and inclusion of trials for systematic reviews.
street children. Systematic mapping provides a broader overview of a topic, and useful information for practitioners and policy makers.

**Attachments:** Map abstract Table 1.pdf

### P2.009

**Registered paediatric trials worldwide: frequency, location and focus**

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**Background:** The need for more, better, and relevant paediatric clinical trials have been recognised internationally with several initiatives underway to fix these gaps, but the current status of trials involving children is unclear. **Objective:** To describe and evaluate the spectrum of registered paediatric clinical trials on the World Health Organisation International Clinical Trials Registry Platform (ICTRP).  

**Methods:** All clinical trials on ICTRP from 2000 to 2012 were reviewed. Data extracted included the number of paediatric (0–18 years) and adult trials, medical conditions treated, intervention type, funding sources, and location (classified by country). **Results:** Overall 16.7% (31 587/189 592) of registered trials are paediatric trials. The proportion of paediatric trials have decreased from 22.9% in 2000 to 15.4% in 2012. However, the total number of trials overall have increased from 484 in 2000 to 4514 in 2012. There are significantly fewer paediatric trials conducted in low to middle income countries compared to high income countries (21.8% of trials), considering that 89.3% of children live in those countries. Paediatric trials in low to middle income countries focussed on respiratory problems (630, 9.2%), malaria (422, 6.1%), HIV (386, 5.6%), perinatal health (360, 5.2%) and cancer (321, 4.7%) and trials in high income countries focussed on cancers (2447, 9.9%), respiratory health (2360, 9.5%), musculoskeletal diseases (1645, 6.6%), infections (1203, 4.9%) and metabolic/endocrine diseases (1074, 4.3%). The majority of registered paediatric trials were pharmaceuticals trials (10 509, 33.3% of trials). Slightly more paediatric trials were sponsored by the pharmaceutical industry compared with adults (4116, 13.0% vs. 19 623, 12.4%, \(p = 0.002\)). **Conclusion:** Although the total number of trials have increased, there remains disproportionately fewer paediatric trials compared with adult trials, particularly in low to middle income countries, with many pharmaceutical sponsored trials. The focus of the trials seems appropriate to the disease burden faced by children in those countries.

### P2.010

**The therapeutic drug management program: a collaborative initiative of teaching hospitals**

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**Background:** The Therapeutic Drug Management Program (TDMP) is an innovative joint venture of university teaching hospitals (UTH) to share expertise, clinical practice experiences and evidence-based information. The TDMP represents a unique collaborative evidence-based practice initiative between pharmacists and physicians from different UTHs. **Objectives:** With limited qualified resources in each center, the TDMP enables sharing of high quality information to better address the challenges surrounding the introduction of new drugs on hospital forms, and to perform drug utilization reviews (DUR). **Methods:** An executive committee sets priorities while the scientific committee develops the methodology for drug evaluations and DUR. The process integrates systematic reviews of literature, revision by peers, evaluative and outcome research and assessment of economic impact. Models for dissemination and integration of the recommendations are currently under study by the TDMP. **Results:** Since its creation in January 2004, the TDMP has published many drug evaluations, descriptive analyses, and has realized a number of DUR. Experts from different fields have teamed up with the TDMP, resulting in publications and talks at different meetings. The main beneficiaries of the TDMP’s work are the Pharmacy and Therapeutic committees through facilitation and harmonization of the decision making process. Since 2004, documents produced by the TDMP are integrated to the UTH executives’ decision-making process. **Conclusions:** The TDMP allows clinicians to access quality and evidence-based information to optimize drug utilization in their centers. The TDMP converts research into innovative tools for clinicians and in doing so, facilitates the transfer of theory into everyday practice and therapeutic decision-making.

**Attachments:** Cochrane_Abstract TDMP.20130326.pdf

### P2.011

**Shaping HTA to meet new regulatory and pricing evidence requirements in the UK**

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**Background:** As regulators are turning to early and conditional licensing of new pharmaceuticals to mitigate market access delays; payers such as the Department of Health in the UK are simultaneously considering value-based pricing (VBP) as a new scheme to efficiently allocate scare funds to promising medicines. These on-going regulatory and pricing changes will have significant implications for the conduct of health technology assessment (HTA) in coming years. **Objectives:** First, to identify key evidential and methodological issues associated with early drug evaluations, conditional licensing and VBP; second, to identify potential analytical and statistical solutions to address these. **Methods:** A systematic literature review in Medline®, EMBASE, and the Cochrane Library; as well as a comprehensive search of relevant institutional and government websites was conducted. In addition, a horizon scan across different research areas was performed to identify methodological developments not currently used in the health sciences that could be applicable to the issues raised. Relevant documentation was reviewed and expert opinion considered for discussion. **Results:** Earlier assessment of relative effectiveness necessitates the consideration of wider sources of evidence than purely RCTs, in addition to issues surrounding the analysis of small numbers/subgroups, heterogeneity, immature/incomplete datasets, and issues of bias. Additional limitations were considered for VBP, particularly in combination with the above, such as data...
constraints for (network) meta-analysis and uncertainty. A number of statistical approaches are currently used to address these issues such as stratified analysis according to study ‘quality’, bias modelling, model averaging, etc. **Conclusions:** HTA practice needs to evolve to embrace the regulatory and pricing changes in the UK. Tools are available to tackle the evidential and methodological issues arising from new clinical data requirements; however, these have not necessarily been used jointly nor been evaluated in the context of HTA.

**P2.012**

**The potential of text mining to reduce screening workload in systematic reviews: a retrospective evaluation**

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**Background:** The task of identifying relevant studies for systematic reviews in an unbiased way is increasingly time consuming. Text mining may be able to assist in the screening process in two ways: (1) by prioritising the list of items for manual screening so that the studies at the top of the list are those that are most likely to be relevant (‘screening prioritisation’; Fig. 1); (2) by using manually-assigned include/exclude decisions in order to ‘learn’ to apply such categorisations automatically (‘semi-automatic classification’; Fig. 2). **Objectives:** To evaluate the performance of two text mining methods to reduce screening workload by assessing their performance in completed reviews. **Methods:** Data from ten previous reviews covering health care and public health were entered into the system. Data included the record’s title and abstract text plus reviewer decisions on whether to exclude the study or not. We ran simulations of the screening process (ten times for each condition) testing how the following affected the performance of the two text mining processes: the size of the initial training sample (5, 10, 20 or 40 studies); the method and frequency of re-running the search/training the classifier (after 5 or 20 includes were identified, or after 25, 250 or 500 records were screened). Performance was assessed using accuracy, precision, recall/sensitivity, F-measures, and Area Under a (ROC) Curve and burden. **Results:** There was some variability between the performance of the tools between reviews, but consistency within reviews. Screening workload can be reduced, but at the risk of missing potentially relevant studies. **Conclusions:** A balance needs to be drawn between the number of studies it is feasible to screen manually and the gain that accrues from screening thousands of ultimately irrelevant studies. Text mining is likely to have a role to play, though further evaluation is required.

**P2.014**

**The evolution of technology for Cochrane**

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**Background:** Since 2003, creation of the Belgian Health Care Knowledge Centre (KCE), our researcher benefit from an explicit scientific procedure describing how to produce a scientific report. This procedure is based on international standards and was first updated in 2007 (3 PDF documents). **Objectives:** In 2011, the management asked for an on-line publication that would facilitate the access to and updates of the procedure. **Methods:** A panel of researchers was invited to agree on a new table of content and define functional requirements for the on-line tool. A demonstrator was build based on an existing and already known technical option in order to evaluate its feasibility. A survey was conducted using a web form on the Intranet in order to evaluate satisfaction about the on-line tool and receive suggestions. **Results:** Drupal Open Source Content Management System (CMS) was used to build the website. A table of content and navigation facilities are provided, as well as printer friendly version, internal links, import/export of references and link to the full-text. The layout mimics the layout of PDF documents. Each author is responsible of a set of pages, all researchers may provide comments directly on the pages; the page owner is responsible for managing the comments: suggestion can be directly included, or will result in the organisation of a workshop in order to reach consensus among the researchers. The survey showed a general satisfaction about the new system and allowed to identify points to ameliorate. It also helped to recall the possibility to provide comments on the site. **Conclusions:** The Process Book on-line has been provided for a limited cost thanks to the use of an Open Source CMS, and mainly internal development. This successful approach could inspire a change in the publication of reports that would benefit to Semantic Web.

**P2.013**

**Turning a scientific procedure into an online participative tool**

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**Conclusions:** Through this poster and its associated editorial, we will show how far The Cochrane
Collaboration has come and what we have achieved in support of health care by the use of technology. We will also discuss how future advances in technology can contribute to Cochrane’s mission and to the broader field of evidence-based health care.

P2.015
An innovative tool for incorporating risk of bias ratings into the GRADE assessment

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Background: Assessing the risk of bias (RoB) of included studies and then incorporating this information into the GRADE assessment is one of the most complicated aspects of conducting a review. This is especially true for reviews of non-randomized studies (NRS). Objectives: To develop a useful tool for rating RoB in included studies that (1) clarifies which RoB items to use for both RCTs and NRS with a control group and (2) organizes the ratings by bias category to help reviewers make a decision about downgrading the evidence due to study limitations. Methods: We used Excel to create a spreadsheet for conducting RoB for both RCTs and NRS with a control group. We took RoB items from the Back Group’s RoB tool and the Downs & Black checklist and organized them by bias category (i.e., performance, attrition, measurement, and selective outcome reporting). Users are instructed to make a rating of ‘Bias’ or ‘No Bias’ within each category. These ratings are automatically copied into outcome-specific tables for ease of making judgements about downgrading the evidence. We sent a draft of the spreadsheet to colleagues within the Collaboration for evaluation. Results: Six authors and three editors provided feedback. Respondents agreed that the tool is useful, especially the way it links RoB to GRADE. Three respondents expressed concern about having to re-enter the same information into our spreadsheet, RevMan, and GRADEpro. There were suggestions for making it more user-friendly; including the use of drop-down menus to minimize user errors. Conclusions: A simplified version of our tool may be useful to new authors and authors working with NRS, and it may be especially valuable for training purposes. The next steps will be to communicate our findings to the Informational Management System team, conduct further validation work, and consider adapting the tool for use on smartphones.

P2.016
Implementing the extended risk of bias tool for non-randomised studies: feedback from the Cochrane Epilepsy Group

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Background: Over the past couple of years the Cochrane Non-Randomised Studies Methods Group have been developing the Cochrane risk of bias tool to be used with non-randomised studies. This has included the addition of a seventh domain examining the aspect of confounding variables and the implementation of a scale ranging from 1 (low risk of bias) to 5 (high risk of bias). The Cochrane Epilepsy Group (CEG) tested the extended tool in two systematic reviews that included non-randomised studies, further results to follow from a third review. Methods: A reference table of 1–5 scale parameters was developed by the CEG to aid decision making on each domain of bias. 46 non-randomised studies were assessed using the extended risk of bias tool from two systematic reviews. For allocation concealment and sequence generation each study was rated either low/high or unclear. For blinding, confounding variables, incomplete outcomes data, selective reporting and other bias each study was rated 1–5 according to pre-specified criteria. Results: For allocation concealment and sequence generation all 46 studies were rated as high risk of bias and agreement was 100%. For blinding, agreement was reached +/− 1 in 45 studies. For confounding variables agreement was reached ± 1 in 43 studies. For incomplete outcome data, agreement was reached ± 1 in 38 studies. For selective reporting agreement was reached ± 1 in 44 studies, and for other bias agreement was reached ± 1 in 36 studies. Using the tool was time-consuming with regards to developing the 1–5 scale, training other authors and first usage however became more feasible with time. Conclusion: Agreement on bias judgements was more prevalent in the domains of allocation concealment, sequence generation, blinding and confounding variables. Challenges with using the extended risk of bias tool and recommendations will be presented.

P2.017
The effectiveness of interventions for reducing publication bias

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Background: Publication bias occurs when the publication of research depends on the nature and direction of the results—a study’s positive, negative, or null result can influence its chances of publication. The non-publication of clinical trial results might mean that the findings are entirely unavailable or inaccessible, which decisively reduces the benefit of systematic reviews of drugs, medical devices, or procedures as the results from the research that is available differs from the results of all the research that has been completed in an area. This makes it difficult for clinicians, decision-makers, and patients to rely on the available evidence when making informed decisions about health care. Objectives: To evaluate the effectiveness of interventions designed and implemented to prevent and reduce publication bias related to the publishing of study results from clinical trials. Methods: A systematic literature search, completed in May 2012, was conducted in MEDLINE (via PubMed), the Cochrane Library, EMBASE, Web of Science, CINAHL, PsycINFO, and AMED databases. We manually searched reference lists of pertinent reviews, included studies, and background articles. Two independent reviewers identified studies on interventions to reduce publication bias where an analysis was performed that sought to quantify or determine the success of the intervention in reducing publication bias overall. Results: We identified 2634 citations from searches and reviews of reference lists (Fig. 1). We located 15 articles that analyzed the effectiveness of interventions to prevent or reduce publication bias in the following categories: changes in publication process (i.e., peer review process, disclosure of commercial interest, electronic publication), prospective registration of trials, open access policy, right to publication, research sponsors’ guidelines, and confirmatory large-scale trials. Conclusions: Many interventions
that should supposedly reduce publication bias and that have been advocated by researchers and organizations over many years are not supported by any study data.

Attachments: figure 1.png

P2.018
Factors related to biases of randomized controlled trials published from Japan
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Background: Randomized controlled trials (RCTs) are an important foundation for evidence-based healthcare. Despite an increase in the number of RCTs in Japan, existing international databases fail to capture them, and factors related to biases of Japanese RCTs is lacking.

Objectives: This study assessed the number, characteristics, and risk of bias, and analyzed factors related to biases of RCTs published from Japan in 2010. Methods: One Japanese database and four international databases were searched for all RCTs published from Japan in 2010. Sixty percent of the included RCTs were randomly sampled and the quality was assessed using the risk of bias tool. Twelve domains of risk of bias was compared with a random sample of 534 trials from 50 Cochrane systematic reviews in the Cochrane Library and the quality of Japanese RCTs classified by the type of journals was compared. Finally, the factors affecting RCT quality were analyzed using a logistic regression model. Results: Among 2957 studies, 1013 were identified as RCTs. Japanese RCTs had significantly higher odds of risk of bias (p < 0.05) compared with relevant Cochrane systematic reviews in the following domains: sequence generation, allocation concealment, blinding of the outcome assessor, and selective outcome reporting. Non-indexed RCTs in international databases were lower in quality than indexed RCTs in some domains. From the result of regression analysis, factors such as disease and conditions, type of intervention, sample size, trial registration and number of arms were shown to be positively associated with quality, but overall quality was not significantly different. Conclusions: The CONSORT statement should be endorsed by Japanese researchers, funding bodies and organizations to promote and improve the quality of Japanese RCTs. In addition, since the overall quality of indexed and non-indexed Japanese RCTs was not significantly different, systematic reviewers should consider including Japanese databases.

P2.019
Assessment of risk of bias due to blinding for objective and subjective outcomes: an exploratory study of Cochrane Reviews
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Background: In Cochrane Reviews, the risk of bias (RoB) in included studies is assessed to determine the likelihood that the intervention effects have been affected by bias. The Collaboration’s tool for assessing RoB has different domains related to particular types of bias - sequence generation, allocation concealment, blinding, selective outcome reporting and incomplete outcome data. For blinding, RoB assessment should be done separately per outcome reported, especially for studies with a mix of subjective and objective outcomes.

Objectives: To evaluate whether Cochrane Review authors assess risk bias due to blinding separately for subjective and objective outcomes.

Methods: We included all new or updated reviews published in The Cochrane library in January and February 2013. Two assessors independently classified the reported outcomes in each review as objective or subjective, and whether authors of the reviews assessed the risk of performance and detection bias separately per outcome. Discrepancies were resolved by discussion and with input from a third assessor.

Results: We identified a total of 158 new and updated reviews (66 new reviews and 92 updated reviews). Twenty of the reviews (12.7%) did not have included studies, seven (4.4%) included non-randomised controlled trials (RCTs), while 131 (82.9%) included RCTs. Of these, 82 (63%) reported a mix of subjective and objective outcomes. The risk of performance and detection bias was assessed per outcome in seven (5.3%) and 14 (10.7%) of these reviews respectively.

Conclusions: Few Cochrane authors separate risk of performance or detection bias for objective and subjective outcomes. Objective outcomes are less likely to be influenced by lack of blinding, compared to subjective outcomes. Authors should thus be more careful in evaluating the risk of bias from lack of blinding per outcome, especially in reviews reporting a mix of objective and subjective outcomes.

P2.020
Risk of bias in pediatric critical care randomized controlled trials: a systematic review
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Background: Risk of bias is a critical consideration when interpreting and applying the results of randomized controlled trials (RCTs).

Objective: To describe the risk of bias in RCTs in pediatric critical care.

Methods: As part of a scoping review we searched MEDLINE, EMBASE, LILACS and CENTRAL (from inception to January 4, 2013). We included RCTs and quasi-randomized trials published in English that administered any intervention to children in a critical care unit. We excluded trials enrolling exclusively newborns, cross-over trials, and those only published as abstracts. Pairs of reviewers independently screened studies for eligibility, abstracted data, and used the Cochrane Risk of Bias Tool to describe the risk of bias for the included trials.

Results: We included 221 trials. Figure 1 shows the assessments for the individual domains of the Cochrane Risk of Bias tool. 97 trials (44%) were assessed as high risk of bias for at least one domain. 10 trials (5%) were assessed as low risk of bias for all domains. All trials at low risk of bias were published since 2006 and the proportion at low risk of bias increased over time (p for trend < 0.001). All trials at low overall risk of bias were published since 2006. Trials at high
risk of bias less frequently reported a commercial source of funding (10% vs. 23%; p = 0.02) and less frequently studied medications (52% vs. 70%; p = 0.01) than trials at low or unclear risk of bias. The median (IQR) number of children randomized was not different between trials at high 48 (28–97) and low or unclear risk of bias [46 (36–92); p = 0.89]. Conclusions: Many trials in pediatric critical care are at high risk of bias, most commonly because of lack of blinding. The proportion of trials at low risk of bias is increasing over time.

Attachments: rob.png

P2.021
Outcome domains reported by Chinese randomized controlled trials of postoperative analgesia for children

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Background: Standardization of outcome domains and measures in pediatric pain randomized controlled trials (RCTs) would streamline designing and reviewing research protocols and articles, simplify and strengthen systematic reviews, and help clinicians make treatment decisions. The Pediatric Initiative on Methods, Measurement, and Pain Assessment in Clinical Trials (PedIMMPACT) has recommended six core domains be considered in clinical trials of pediatric acute pain (Table 1) (J Pain 2008;9(9):771–783). Objectives: To explore the distribution of outcome domains reported by Chinese RCTs of postoperative analgesia in the pediatric population, and determine whether they followed the PedIMMPACT recommendation. Methods: Four Chinese medical databases, including Chinese Biomedical Literature Database (CBM) were searched using the search terms ‘child’, ‘pediatrics’, ‘infant’, ‘postoperative pain’, ‘postoperative analgesia’ and ‘randomized’ in July 2012 for RCTs of postoperative analgesia for children. Outcome domains of included RCTs were recorded. MetaAnalyst 3.13 software was used to analyze data. Results: Our study included 296 relevant RCTs, with 10 outcome domains being reported (Table 1). Each RCT reported a median of 3 (range: 1–7) outcome domains. Pain intensity was reported by the most RCTs, and followed by symptoms and adverse events, vital signs and effective analgesic time. For the six outcome domains PedIMMPACT had recommended, none of included RCTs reported all of them; most RCTs (266/296, 90%) reported less than four domains; two RCTs (1%), however, even reported none of them. Conclusions: Although most RCTs reported pain intensity, an important outcome for acute pain trials, other patient-important outcomes, such as patient satisfaction and physical recovery were reported at a very low proportion. Researchers should pay more attention on patient-important outcomes, and follow the PedIMMPACT recommendation when designing and conducting RCTs of postoperative analgesia in the pediatric population.

Attachments: Table 1. Outcome domains reported by Chinese RCTs of postoperative analgesia in the pediatric population.pdf

P2.022
Suspected publication bias regarding efficacy of psychoeducative interventions on burden experienced by caregivers of people with dementia

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Background: The effect of publication bias on the efficacy of pharmacological interventions has been extensively studied, but less is known on its effect in systematic reviews about non-pharmacological interventions. Objectives: To assess the possibility of publication bias on a systematic review of the efficacy of psycho-educative interventions on the burden experienced by informal caregivers of people with dementia. Methods: We searched randomized clinical trials in CENTRAL, PubMed, Embase, and PsycInfo reporting the efficacy of psycho-educative interventions versus usual care on dementia caregiver’s burden. We also searched lists of references of relevant qualitative and quantitative reviews on caregiver’s burden. We obtained pooled Hedges’ g effect sizes using a random effect model. Results: We obtained data for effect sizes of psycho-educative interventions from 11 trials. Although random effect model estimates showed small to moderate effects favouring the intervention (g = −0.25; 95% CI = −0.43 to −0.07), the funnel plot (Fig. 1) was clearly asymmetric (rank correlation p = 0.004; linear regression p = 0.0063). The trim and fill approach suggested 4 more trials and a smaller effect (g = −0.11; 95% CI = −0.30 to 0.08), whereas the Copas selection model suggested 11 trials might be unpublished and decreased even further the effect size (g = −0.0015; 95% CI = −0.1889 to 0.1860). Conclusions: Our results show a huge impact of publication bias in a systematic review on the efficacy of non-pharmacological interventions, as others have suggested in this field. Since the registry of such trials is not yet mandatory and practically inexistent, the quantification of the problem is harder than for pharmacological interventions.

Attachments: Figure 1.jpeg

P2.023
Poor reliability between Cochrane Reviewers and blinded external reviewers when applying the Risk of Bias Tool in physical therapy trials

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Background: The Risk of Bias (RoB) tool is an emerging method for determining the risk of bias of clinical trials. However, Cochrane Library has recommended further testing of the psychometric properties of the RoB domains, and validating the tool in a wider range of research fields. Inter-rater reliability of the RoB tool has been evaluated for child trials,
general medical and nursing trials. The inter-rater reliability of the RoB has not been evaluated for physical therapy (PT) trials. **Objectives:** To test the inter-rater reliability of the RoB tool applied to PT trials by comparing ratings from Cochrane Review authors and blinded external reviewers. **Methods:** Randomized controlled trials (RCTs) in PT were identified by searching the Cochrane Database of Systematic Reviews for meta-analysis of PT interventions. RoB assessments of PT trials included in the meta-analyses were conducted independently by two reviewers blinded to the RoB ratings reported in the Cochrane Reviews. Consensus ratings between the two reviewers were compared with the ConChoe RoB ratings. Agreement between Cochrane and blinded external reviewers for individual domains and the final rating of the RoB tool was assessed using weighted kappa (K) for categorical data (K = 0.0–0.40 poor; K = 0.41–0.60 moderate; K = 0.61–0.80 substantial). **Results:** In total, 109 trials included in 17 Cochrane Reviews were assessed. Interrater agreement on the overall RoB rating was poor (K = 0.07). Agreement on individual domains of the RoB tool was poor (median K = 0.20) ranging from K = 0.01 (‘Other bias’) to K = 0.63 (‘Sequence generation’). **Conclusions:** Risk of bias assessments are not consistent across different research groups. Results have implications for decision making since different recommendations can be reached depending on the group analyzing the evidence. Improved guidelines to apply the RoB tool and revisions to the tool for different health areas are needed.

**P2.024**

**Selective reporting: a proxy or a more direct indicator of our confidence in the summary estimates?**

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**Background:** The Cochrane Handbook for Systematic Reviews of Interventions advises to judge the risk of bias potentially introduced by selective reporting of outcome data on the trial level. From a ‘Grading of Recommendations Assessment, Development and Evaluation’ (GRADE) perspective, a judgment on the outcome level would however more directly inform the confidence we have in the summary estimate of an outcome, together with the other (risk of bias) domains to be considered. **Objectives:** To summarize and discuss applied methods to judge and handle risk of bias (RoB) due to selective reporting in Cochrane Reviews. To generate an informed discussion how future Cochrane Reviews should handle this RoB item, inviting stake-holders to express their preferences. **Methods:** Reviewing the reviews published in the past 5 years by authors from the Cochrane Musculoskeletal Group and Cochrane Peripheral Vascular Diseases Group. Extraction items include definitions used to judge the RoB by selective reporting, the frequency of scoring low, high or unclear RoB due to selective reporting, and the handling of this item in the Summary of Finding Tables (SoF). The different definitions and approaches will be tabulated and discussed. Informed by the results, templates will be constructed from different perspectives of assessing RoB for selective reporting at the trial versus the outcome level, while demonstrating how this item could be considered in future systematic reviews. The summary of our review and the constructed templates, including SoF tables, will then be circulated to consumers, Cochrane Reviewers, experts from the bias methods group and the GRADE working group asking them for feedback and asking them to indicate which would be the preferred method. **Results and Conclusions:** Will be presented at the colloquium.

**P2.025**

**Systematic review of the empirical evidence of the selective reporting of analyses**

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**Background:** Selective reporting of information in trials may occur for many aspects of a trial. Examples include the selective reporting of outcomes, the selective reporting of analyses: e.g. subgroup analyses or per protocol rather than intention to treat analyses. Selective reporting bias occurs when the inclusion of analyses in the report is based on the results of those analyses. **Objectives:** We review and summarise the evidence from studies that have assessed the selective reporting of analyses in randomised controlled trials. **Methods:** Systematic Review of studies that have assessed the selective reporting of analyses in randomised controlled trials. Along with the collaboration with experts in this area, the review will feed into the development of guidelines to support the appropriate reporting of a clinical trial with respect to outcomes, outcome measures, subgroups and analyses. **Results:** Fifteen studies have been included in this review and consider aspects of selective reporting such as statistical analyses (7); subgroup analyses (4); the use of different scales (1); composite outcomes (2) and quality of life measures (1). Guidelines will be discussed at a face to face meeting scheduled for July 2013 and the output presented at The Cochrane Colloquium. **Conclusions:** This work highlights the evidence of selective reporting and demonstrates the importance of pre-specifying analysis and reporting strategies during the planning and design of a clinical trial, for the purposes of minimizing bias when the findings are reported.

**P2.026**

**Comparing apples and oranges? A Bayesian meta-regression of effect estimates from non-randomized studies and randomized controlled trials**

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**Background:** Multiple studies suggest that effect estimates from non-randomized studies (NRS) are comparable to those from randomized controlled trials (RCTs). There is also evidence of bias associated with specific design characteristics of RCTs. Accordingly, comparisons of NRS and RCTs to date have often compared NRS with a heterogeneous group of RCTs. **Objectives:** To compare the results of NRS with those of RCTs at low risk of bias. Studies evaluating the surgical treatment of colon cancer were used for this case study. **Methods:** All studies comparing laparoscopy with conventional surgery for the management of colon cancer were
identified. Bayesian meta-analysis was separately performed for two subjective outcomes, post-operative complications (binary) and length of stay (LOS, continuous) and two objective outcomes, mortality (binary) and number of lymph nodes harvested (continuous). Meta-analysis was performed for (i) All Studies, (ii) NRS, (iii) RCTs, (iv) Typical RCTs and (v) Strong RCTs. The Cochrane Risk of Bias Tool was used to classify studies as ‘Strong’ (low risk of bias) or ‘Typical’ (unclear and high risk of bias). A Bayesian meta-regression was conducted with study design (NRS, Typical RCT, Strong RCT) as a predictor variable. Sensitivity analyses assessed the impact of period effects and between-study case-mix. Results: 145 studies reported the outcomes of interest (Table 1). For post-operative complications, the odds ratios from NRS were 36% smaller (i.e. demonstrating more benefit) than those from Strong RCTs [ROR 0.64, (0.42-0.97), p = 0.04] (Fig. 1). The same exaggerated benefit among NRS was seen when assessing LOS, [Difference in Mean Difference, −2.15, (−4.08, −0.21), p = 0.03].

This pattern was not observed for the objective outcomes (mortality, p = 0.38, and number of LN harvested, p = 0.62). Meta-regression results, adjusted for period effects and case-mix between studies, showed persistent bias among NRS. Conclusions: When evaluating subjective outcomes, effect estimates from NRS may be associated with significant bias.

Attachments: Table 1 – Lakhbir Sandhu.png, Figure 1 – Lakhbir Sandhu.png

P2.027 Glaucoma drug trials: Why 349 trials and 130 unique interventions?

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Background: Theoretically, unlimited variations of interventions or combination of interventions can be evaluated in randomized controlled trials (RCTs) for a given condition, for example, by varying dose and usage, and by combining one drug with another. However, not all interventions may pan out as worthy and ethical pursuits. Objectives: To examine the history of glaucoma drug trials and to explore factors contributing to ‘isolated’ trials, defined as single trials evaluating interventions not evaluated in any subsequent trial for the condition. Methods: As part of a network meta-analysis, we examined the number of times an intervention was evaluated in RCTs of medical treatment for glaucoma. We are in the process of comparing the characteristics of ‘isolated’ trials with other trials, and examining factors (e.g., sponsorship, statistical significance and direction of results) associated with the frequency that an intervention was evaluated in RCTs. Results: We included 349 trials on glaucoma medication published between 1966 and 2009 (median 2001). These 349 trials examined 130 unique interventions; 62/130 (48%) interventions were examined in only one RCT. These isolated interventions were largely drugs not typically used for glaucoma (e.g., celiprolol), non-standard dosages (e.g., timolol 1%), or two drugs used as a combination therapy (e.g., dipivefrin 0.1% and levobunolol 1% used together). The combination therapies constituted more than half of all isolated interventions. Conclusions: Examining any trial in the context of the entire evidence base provides an opportunity to investigate factors that may contribute to selecting interventions in RCTs. Curious investigators may test drugs off-label, at a different dose, or in combination with other drugs to explore potential benefits to patients. Alternatively, if trials are initiated for marketing purposes or a way to obtain a publication, which are of little relevance or value to patient care, recent claims of avoidable waste in clinical research ring true.

P2.028 Are all Cochrane Reviews born equal? Statistical methods in Cochrane Reviews (could be improved)

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Background: Systematic reviews combine the quantitative evidence from primary studies using statistical methods. The correct choice, implementation and interpretation of these methods are key to obtaining reliable estimates of effect sizes. Although the Cochrane Handbook offers advice about these methods, their implementation is not easy and in many cases requires statistical support. Objective: To assess the use of statistical methods in systematic reviews published in the Cochrane Library. Methods: All the new reviews published in the Cochrane Library issue 2, 2013—with at least one meta-analysis—were selected for appraisal. Two evaluators assessed independently each selected review using items 9 and 10 of the AMSTAR tool. Results: Fourteen of the 35 new systematic reviews retrieved were selected for appraisal. They included a median of 5 studies (2–39) and presented a median of 9.5 forest plots (1–82). All of them stated in the Methods section how they would assess heterogeneity. The most commonly planned methods were the I2 statistic and the chi-squared test. Eleven of the 14 reviews stated in the Methods section how they would examine the causes of heterogeneity. All of them planned to use either subgroup or sensitivity analyses. In the Results section, potentially moderate/large heterogeneity was identified in 9 of the 14 reviews. Five of these nine reviews did not explore potential causes of heterogeneity. Nine of the 14 reviews stated in their Methods section how they would assess publication bias, but only four described an assessment in their Results or Discussion section. Conclusions: There are deficiencies in the use of statistical methods for measuring and investigating heterogeneity and publication bias in Cochrane Reviews. Because of the limited number of reviews assessed, our findings should be considered as preliminary, and further work is needed for identifying factors associated with the deficiencies identified.

P2.029 Using QUADAS-2 in systematic reviews of diagnostic test accuracy studies: survey of users’ experience

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Background: Quality of Diagnostic Accuracy Studies (QUADAS) was first developed in 2003 as an assessment tool to be used in the context of systematic reviews of diagnostic test accuracy (DTA) studies. Following a number of evaluations and feedback from users, the tool was further updated and a new version, known as QUADAS-2, published in 2011. QUADAS-2 differs from the original tool on a number of points, among them the strong emphasis that the tool is more like a guideline and should be customised for each review, as detailed in the background document. At present, no formal evaluation of the tool has been conducted and only isolated comments suggest potential difficulties and confusions. Objectives: To investigate common problems encountered by users of QUADAS-2 when customising and applying the tool in the context of DTA reviews and to elicit hypotheses about the sources of these problems and possible solutions. Methods: A brief on-line questionnaire has been devised to elicit the experience of systematic reviewers with QUADAS-2. Authors of Cochrane and non-Cochrane DTA reviews will be identified through electronic searches and invited to take part in the survey. Thematic analysis supported by descriptive statistics will be used to analyse the data and, whenever possible, the results will be compared with those from QUADAS-1 evaluations. Results: The main result will be a narrative description of the common difficulties encountered by review authors in the process of customising and applying QUADAS-2 in DTA reviews; the sources of these difficulties; and suggestions how to overcome them. Current stage of the study: An on-line questionnaire has been devised and sent to experts in the field for feedback. We expect the final results from the survey to be available by the end of July 2013.

P2.030
Challenges in conducting a systematic review of diagnostic test accuracy of genetic test: an example of the genetic diagnosis of familial hypercholesterolaemia

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Background: The availability and uptake of genetic tests is increasing. The UK National Institute for Health and Care Excellence commissioned a review on rapid genetic tests for the diagnosis of familial hypercholesterolaemia (FH). Objectives: To explore methodological challenges of undertaking a review of diagnostic accuracy of genetic tests and to give recommendations for future reviews. Methods: A systematic review of diagnostic accuracy of Elucigene FH20 and LIPvchip (rapid genetic tests) for the diagnosis of FH was performed. The problems encountered, decisions made and the recommendations suggested were tabulated and summarised descriptively. A review of systematic reviews on the diagnostic accuracy of genetic disorders was conducted to corroborate our issues. A comparative analysis of the methodological aspects, including reporting of sensitivity and specificity, a meta-analysis, susceptibility to bias and quality of reporting, was performed. Results: Lack of valid data on diagnostic indices, heterogeneity across studies, the use of incomplete reference standards and poor quality of reporting imposed problems during the evaluation process. For example, due to the nature of genetic tests given in practice, no studies reported false positive data. An assumption of no false-positives, and therefore 100% specificity was made. Studies were also susceptible to differential and partial verification bias. Decisions to deal with these problems were made with the help of clinicians and the statistician involved in the process. Two systematic reviews were included from the review of systematic reviews. Data comparing methodological aspects of these reviews with our review will be reported. Both reviews stated the lack of carefully designed studies to make valid evaluation similar to our findings. Conclusions: Reviewers should implement strategies (intensive scoping, clinician advice etc) early in the process to deal with the complexity of genetic tests. There is a need of specific guidelines for the reporting of diagnostic accuracy studies of genetic tests.

P2.031
Inter-rater reliability of the QUADAS-2 for assessing screening accuracy studies

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Background: Published empirical evidence is scarce on the inter-rater reliability of the latest version of the Quality Assessment of Diagnostic Accuracy Studies the QUADAS-2. Objectives: To evaluate the inter-rater reliability of the QUADAS-2 used in a systematic review to assess the methodological quality of 34 screening accuracy studies of transcutaneous bilirubin meters used to test neonatal hyperbilirubinemia. Methods: A review-specific guidance was developed for the 11 signaling questions; possible answers include ‘yes’, ‘unclear’ or ‘no’. Two reviewers independently piloted the QUADAS-2 tool in four studies. One question in the domain of reference standard was removed from the tool, resulting in 10 questions. Two independent reviewers assessed 34 studies using the modified QUADAS-2 tool along with the refined guidance. Agreement between the two reviewers for each of the 10 questions was measured by proportion of agreement (po), Kappa coefficients (κ), and prevalence adjusted bias adjusted kappa (PABAK) which takes into account the effects of prevalence and bias the two paradoxes associated with the Kappa statistic. Results: For the 10 questions, po ranged from 41 to 97%; κ ranged from −0.03 to 0.57, indicating poor agreement for 2 questions, slight to fair for 3 questions, and moderate for 5 questions. PABAK ranged from −0.18 to 0.94, indicating poor agreement for two questions, fair for one question, and moderate to almost perfect for seven questions. After adjusting for bias and prevalence, κ values increased for six questions. In one question, κ increased from 0 (poor agreement) to 0.94 (almost perfect agreement), mainly due to a large prevalence effect (prevalence index of 0.97). Conclusions: The low prevalence of certain items may result in a substantial reduction in κ values, which can be misleading. When measuring inter-rater reliability for accuracy studies using the QUADAS-2, PABAK should be measured when a significant discrepancy exists between po and κ.

P2.032
Direct versus indirect comparisons in systematic reviews of test accuracy studies: an IPD case study in ovarian reserve testing

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Background: The need for a proper comparison of test accuracy is increasingly recognised as a critical methodological requirement and as a result, the use of direct comparison (DC) methods has become more common. However, when direct comparisons are not possible, indirect comparisons (IC) are often used. It is currently unclear whether the use of IC methods is valid. Objectives: To compare DC and IC methods in terms of their ability to estimate test accuracy and to explore their potential sources of bias. Methods: A systematic review of test accuracy studies was performed. Studies were included if they compared the diagnostic accuracy of a new test with an existing test and if they provided enough data to perform both DC and IC methods. Results: A total of 7 studies met the inclusion criteria. The results of the DC and IC methods were compared for each study. The agreement between the two methods was moderate to perfect in all studies. However, the IC methods were found to be more sensitive to potential sources of bias. Conclusions: The use of IC methods should be discouraged. If DC methods are not available, then the results of IC methods should be interpreted with caution.
Background: Comparative systematic reviews of diagnostic test accuracy compare relative accuracy of two or more tests. Direct comparisons evaluate all tests in the same study, even in the same patients, are most valid and regarded as the reference approach. Indirect comparisons are more prone to bias than direct comparisons, but excluding them may lead to a loss in precision in the summary estimates. Objectives: To investigate the difference of indirect comparisons compared with the results of direct comparisons in meta-analysis; to develop appropriate methods of adjusting indirect comparisons to improve their comparability. Methods: A dataset from Individual Patient Data (IPD) meta-analysis on the test accuracies of Anti-Müllerian Hormone (AMH), Antral Follicle Count (AFC) and Follicle Stimulation Hormone (FSH) in relation to ovarian response was used in this case study. Test accuracies were measured by the area under the ROC curves (AUCs) and compared in each pair of tests under direct and indirect comparisons. Inconsistency was defined as statistical significant difference in comparative results between the direct and indirect evidence. Results: 32 studies were included with IPD from 4762 women undergoing IVF. By comparing AUCs, the difference between AFC and FSH (0.0948, p < 0.001) is significant in direct comparison but not significant (0.0678, p = 0.09) in indirect comparison; while the difference between AFC and AMH is significant (−0.0830, p < 0.001) in indirect comparison but not significant (−0.0176, p = 0.29) in direct comparison. Adjusting for indirectness by considering covariate effect could improve the comparability but these differences still existed after covariate-adjustment. Conclusions: Comparative results of test accuracy obtained through indirect comparisons are not always consistent with those obtained through direct comparisons. There is no straight forward way to make indirect comparisons more comparable. Evidence from indirect comparisons should be assessed carefully and combined with direct comparisons after adequate assessment of the consistency and with adjustment.

P2.033
How do authors investigate selective publication in diagnostic test accuracy reviews?

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Background: Systematic reviews can be misleading when the results are affected by selective publication. For intervention reviews it is advocated to investigate the presence of publication bias graphically by funnel plots or by the use of statistical tests. These methods, however, appear to be less useful for investigating publication bias in diagnostic test accuracy (DTA) reviews and to date it’s not clear how these methods could be applied or interpreted in the DTA setting. Objective: To explore what methods authors use to investigate publication bias in DTA reviews and how they interpret the results. Methods: We have searched MEDLINE for DTA reviews published between September 2011 and January 2012. We have extracted methods that were applied to investigate publication bias (graphically or statistically), the results thereof and the author’s conclusion. Results: We included 113 reviews whereof 44 investigated publication bias: seven explored publication bias graphically, 11 performed a statistical test and 26 did both. Funnel plots addressed the diagnostic odds ratio in 22 cases, sensitivity/specificity in 3 cases, and 8 addressed other parameters. The statistical methods to investigate publication bias were Egger’s test (n = 17), Deeks’ test (n = 10) and Begg’s test (n = 4), while multiple or other methods were used in six reviews. High risk of publication bias was identified by graph and test in four cases, only by graph in one case, only by test in seven cases and in three cases graphs and tests gave conflicting results. Conclusions: Little is known about the actual presence and the potential impact of publication bias in DTA reviews. Statistical methods to test for publication bias in diagnostic meta-analyses have their limitations, though they are frequently applied (39%). More guidance and empirical studies on the use and interpretation of these tests are needed.

P2.034
Search methods for diagnostic test accuracy reviews in dementia: an overview of a programme grant

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Background: In 2010 the Cochrane dementia and cognitive improvement group began work on a series of diagnostic test accuracy systematic reviews as part of a programme grant. Objectives: Three years on, and 200 000 citations screened later, this poster aims to consider the effectiveness of the search activities performed for this is body of work. Methods: This will include evaluation of the range of sources searched, the effectiveness of peer review, the sensitivity, specified, precision and accuracy of the search strategies and consideration of whether we are any closer to a topic-specific methodological search filter. An evaluation of the reporting standards in the abstracts of included studies will also be shown with specific attention paid to study population and setting. Conclusions: Looking back, what could we have done better? This evaluation will identify what the main challenges were and offer recommendations to those about to or in the process of undertaking extensive search activities for a portfolio of diagnostic test accuracy reviews.

P2.035
The quality survey of campbell systematic reviews using AMSTAR

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Background: Campbell Systematic Review (C2 review) was acknowledged to be a high quality evidence, especially in fields of social work, education and so on. However no study was found to evaluate the quality of them. Objectives: To evaluate the quality of C2 review associated with international development, education, social welfare, crime and justice. Methods: We downloaded all studies about the following four fields: international development, education, social welfare, crime and justice in Campbell Library. Two researchers evaluated the quality of these C2 review independently using AMSTAR...
tool, which includes 11 items and each item measured by Y, N, Can’t answer and Not applicable. Results: From 2003 to 2012, 90 studies met the inclusion criteria and all of them were downloaded: 1 article (1.11%) is about international development, 13 articles (14.44%) are about education, 35 articles (38.89%) are about crime and justice and 41 articles (45.56%) are about social welfare. General speaking, the quality of C2 review was pretty good, over 80% of studies reported Y in five items (include item 1, 3, 4, 6 and 7) and over 60% of studies reported Y in five items (include item 2, 5, 8 and 9). On the other hand, only 55.56% of studies reported Y in item ‘Was the likelihood of publication bias’ assessed. And another quality index ‘Was the conflict of interest stated?’ were done only by 48.89% of studies. Conclusions: The quality of Campbell Systematic Reviews was high based on assessment results, however, some details could be improved like publication bias and interest stated.

Attachments: Attachment.pdf

P2.036
Poor interpretation of quality assessment results in diagnostic accuracy reviews

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Background: Interpreting and presenting results in systematic reviews without taking into account the outcome of quality assessment has been shown to be common in systematic reviews of interventions, but may also play a role in reviews of test accuracy studies. Drawing conclusions or making recommendations without considering the risk of bias and limited applicability of included studies may lead to unwarranted optimism about the value of the corresponding test. Objectives: To identify and compare approaches used to make conclusions out of the results of quality assessment in diagnostic accuracy reviews, and to provide guidance on recommended methods. Methods: We searched MEDLINE and EMBASE for test accuracy reviews published between May 2012 and September 2012. We examined the abstracts and main texts of these reviews to check whether and how the results of quality assessment were taken into account when drawing conclusions. Data was extracted by one author; a sample was checked by a second author. Results: Our search identified 53 eligible reviews. Of these, 49 (92%) had formally assessed the methodological quality of included studies; Twenty-two (45%) distinguished high quality from low quality is troubling. So, on one hand, animal research publication quality is troubling. On the other hand, reporting items for systematic reviews should be discussed. On the other hand, reporting items for systematic reviews should be discussed. On the other hand, reporting items for systematic reviews should be discussed. On the other hand, reporting items for systematic reviews should be discussed.

Conclusions: Although some SRs of animal studies have been published in Chinese journals recently, the reporting quality is troubling. So, on one hand, animal research publication checklist should be abide by in order to improve the quality of animal research; On the other hand, reporting items for systematic reviews and meta-analyses of animal studies should be discussed.

Attachments: Table 1. AMSTAR Checklist Assessment.png

P2.037
Using AMSTAR to assess methodological quality of systematic reviews/meta-analysis of animal studies in China

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Background: Systematic reviews (SRs) of animal studies in the world have become increasingly popular in recent years. This review try to provide the first examination of methodological quality of these SRs in China use the AMSTAR guidelines. Objectives: To examine the methodological quality of SRs of animal studies in China. Methods: Four Chinese databases were searched (CBM, CSJD, CJFD and Wanfang Database) for SRs of animal studies, from January 1978 through to December 2012. Data were extracted into Excel spreadsheets. The AMSTAR checklists was used to assess the methodological quality. Results: A total of seven SRs were identified. Compliance with AMSTAR checklist items ranged from 0 to 100% (Table 1). Most reviews were compliant with the following checklist items: used appropriate methods to combine the findings of studies (100.0%), reported the status of publication (i.e. grey literature) used as an inclusion criterion (85.7%), provided a list of studies (included and excluded) (85.7%); More than half of the reviews assessed and documented the scientific quality of the included studies (71.4%), appropriately addressed the quality of included studies in formulating conclusions (71.4%), reported that a comprehensive literature search was performed (57.1%), assessed the likelihood of publication bias (57.1%), provided the characteristics of included studies (57.1%); Few studies reported duplicate study selection and data extraction (42.9%). No studies provided an ‘a priori’ design, or stated whether there was a conflict of interest. Though all of the reviews used the term ‘systematic review’ or ‘meta-analysis’ in the title, no reviews reported a protocol and none were updated even after they had been published after two or more years. Conclusions: Although some SRs of animal studies have been published in Chinese journals recently, the reporting quality is troubling. So, on one hand, animal research publication checklist should be abide by in order to improve the quality of animal research; On the other hand, reporting items for systematic reviews and meta-analyses of animal studies should be discussed.

Attachments: Cochrane2013-Table-QualityInterpretationDTAs.doc.pdf
P2.038
Quality of systematic reviews of diagnostic test accuracy on Alzheimer’s disease dementia and other dementias

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Background: The Cochrane Handbook of Diagnostic Test Accuracy (DTA) has introduced important guidelines in order to develop high-quality DTA reviews. In dementia, clinical diagnosis has become a paramount issue related to early and adequate management. Systematic reviews (SRs) of accuracy of dementia tests can establish which diagnostic tools should be used in daily-practice. It is important to know the rigor of these reviews in order to know their role to guide decision-making process. Objectives: To describe the characteristics and quality of DTA SRs in the field of Alzheimer disease (AD) and other dementias. Methods: We searched MEDLINE, EMBASE, The Cochrane Library and DARE (from their inception to March 2013), as well as list of references of included studies. Two reviewers independently assessed eligibility, extracted data and assessed risk of bias (RoB) using the AMSTAR-II tool, according to the Cochrane methodology for DTA reviews. Results: We included 23 SRs with sample sizes ranging from 160 to 26 019 participants. Only ten reviews (43%) assessed RoB of included studies, being patient’s spectrum and incorporation bias the most frequent biases. One review (4.3%) reported to have a protocol, 20 (86.9%) not provided a list of included/excluded studies and 15 (65.2%) did not reported a duplicate study selection/data extraction. Eight reviews pooled data with methods addressed to SRs of interventions (34.7%). Five reviews (21.7%) analyzed publication bias by means of funnel plots and/or Egger’s Test. All SRs did not report consequences of inconclusive results, adverse events or use of resources. Conclusions: The set of assessed SRs shows important flaws with an impact in the confidence of their results. In order to improve the quality of DTA SRs is necessary to value the nature of the diagnostic evidence, apply appropriate statistical methods for summarize the evidence and provide an assessment of quality of included studies.

P2.039
Reporting and methodological quality of systematic reviews of interventions published in Chinese surgical journals

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Background: Systematic reviews (SRs) or Meta analyses (MAs) of randomized controlled trials (RCTs) are considered to provide the highest level of evidence for surgeons to access the sources of information. However, not all published SR or MA are rigorously performed. Objectives: To assess the reporting and methodological quality of SRs or MAs of intervention published in Chinese surgical journals. Methods: 3 Chinese databases were used to search 20 Chinese surgical journal for SRs or MAs on interventions of RCTs, from inception through October 2012. Data were extracted into Excel soft. The PRISMA and AMSTAR checklists were used to assess reporting characteristics and methodological quality, respectively. Results: 262 records were searched, 79 SRs or MAs on interventions of RCTs were identified, most (69/79, 87.34%) of which used the terms SR or MA in the title. 84.81% (67/79) studies were written by hospital and only 12.66% (10/79) by hospital and university. The most commonly treated conditions were diseases of the musculoskeletal system and connective tissue (24/79, 30.38%), diseases of the digestive system (22/79, 27.85%). And surgical intervention (53/79, 67.09%) was most commonly. Funding sources were reported for 7 reviews (8.86%), 57 reviews (72.15%) reported the tool of quality assessment, the most commonly is Cochrane Handbook (28/79, 49.12%). According to the AMSTAR checklist (Table 1), the score range of the methodological quality was 2.0 to 10.0, the average score was 6.49 ± 1.50. The results of PRISMA checklist shows that the score range of the reporting quality was 8.0–23.0, the average score was 17.76 ± 3.27 (Table 2). Conclusions: The reporting and methodological quality of SRs or MAs published in Chinese surgical journal is poor, we recommend AMSTAR and PRISMA statement for the optimal conduct and reporting of SRs or MAs in surgery.

P2.040
The quality of economic studies in respiratory diseases in China by QHES tool

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Background: Economic studies (ESs) are increasingly common in the respiratory diseases. Although clinical trials are subjected routinely to critical appraisal, there has been no attempt to appraise the quality of ECs in this field. Objective: To assess the quality of ESs in respiratory diseases, and to identify predictors of study quality. Methods: An electronic literature search of all ESs of respiratory diseases from inception to December 2012 was conducted using the following text and keywords in combination both MeSH terms and text words, the search strategy was (cost OR cost effective OR cost benefit OR cost utility) AND (respiratory diseases) in four databases. The methodological quality was assessed independently by two reviewers using the the Quality of Health Economic Studies (QHES). Results: Of 77 ESs were included and analyzed, there were not high quality, 96.10% were fair, and 3.90% were poor. Compared with before 2003, the number of articles is significantly increasing, but the quality was
not improved. Compared with the foreign ECs, the score of Chinese ESs (Mean ± SD: 62.51 ± 5.96) was lower (Table 1, 2). **Conclusions:** There is not ESs in respiratory diseases meet criteria for high quality. QHES is a validated instrument to appraise the quality of health economic analyses. In the future, the journal editors and peer reviewers should pay more attention to the quality of ESs in reperatory diseases.

**Attachments:** [Table1 the quality of Published Economic Studies in Respiratory Diseases in China.pdf](#), [Table2 the difference between Chinese studies and foreign studies.pdf](#)

**P2.041**

**Navigating the rough waters of knowledge translation (KT) research: effective search strategies for systematic reviews with a KT focus**

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**Objectives:** To discuss the role that literature searching/information specialists can play in the knowledge to action cycle and the challenges of searching within the research field of knowledge translation (KT); to present practical and effective literature searching techniques and methods used for reviews of KT studies. **Methods:** Knowledge translation (KT) is a growing area of research in the health sciences. The problem of inconsistent language and indexing has been well-documented in the literature, but few practical strategies exist to assist those who must create comprehensive searches for systematic and scoping reviews in this field of study. Through the experience of creating KT searches for researchers in medicine, nursing, and rehabilitation, the presenters have developed suggested best practices for approaching KT questions. **Results:** Examples of successful search strategies and the rationale behind the creation of these strategies will be presented. Concrete methods for approaching the development of KT searches will also be presented with an emphasis on the following key areas: KT theory versus KT interventions and tools, suggestions on resources to search, and guidelines for selecting MeSH terms and keywords. **Discussion:** The challenges and opportunities for information specialist involvement with knowledge translation research will also be discussed.

**P2.042**

**Where to look for studies to include in EPOC reviews**

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**Background:** The Cochrane Effective Practice and Organisation of Care Group (EPOC), prepares systematic reviews about non-clinical interventions targeting health personnel, health services and health systems. EPOC reviews may include study designs other than RCTs, and these studies are often considered hard to find due to where and how they are indexed. Rada et al. (2009) found that systematic reviews in Health Policy and Systems Research had searched an average of 7.7 resources. MEDLINE and Embase were among the resources most frequently searched, but their contribution is unknown. **Objectives:** To find how many studies included in EPOC reviews are indexed in MEDLINE, Embase, or elsewhere. **Methods:** We looked at all EPOC reviews published in Issue 1 2013 of The Cochrane Library. We used OvidSP to find whether included studies were indexed in MEDLINE, Embase, or in neither of the two databases. **Results:** 84 reviews included a total of 1462 studies. 1348 studies were indexed in both MEDLINE and Embase. 9 were indexed in MEDLINE only, 23 in Embase only, and 82 elsewhere. **Discussion:** Although we know where most ‘EPOC studies’ are indexed, they may still be hard to identify when conducting a systematic search. We have yet to investigate how hard they are to find, and the number of records needed to screen in order to find them. **Conclusions:** Even though MEDLINE and Embase are known as clinical databases, they both include studies relevant to non-clinical reviews. There is also a large overlap between MEDLINE and Embase which could lead one to question whether it is necessary for EPOC reviews to search both databases.

**Reference**


**P2.043**

**Finding evidence from developing countries: the use of regional databases and other search sources**

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**Background:** The past few years has seen the number of systematic reviews relevant to developing countries increase substantially. It is essential that systematic reviews include all available, relevant evidence to minimize bias and maximize the generalisability of their findings across settings. Recently, The Norwegian satellite of the Cochrane Effective Practice and Organisation of Care (EPOC) group and its partners produced a collection of search sources relevant to developing countries. **Objective:** To explore the usage of regional databases and other search sources used in systematic reviews relevant to developing countries focusing on healthcare. **Methods:** We identified Cochrane Systematic Reviews using ‘developing countries’ terms in both free text and MeSH term searches. The retrieved citations were imported into EPPI-Reviewer software. Data on databases and search sources were coded and analysed. **Results:** We identified 34 relevant systematic reviews; 32 were published in the past 5 years. Nearly two-thirds (n = 23) carried out searches in regional databases. The most commonly searched regional database was LILACS (n = 20), followed by MEDCARIB (n = 3) and African Index Medicus (n = 3). Nearly half also searched topic-specific databases (e.g. ERIC, POPLINE, AGRIS). Searches in grey literature (e.g. dissertations, conference proceeding databases), international development specialists (e.g. ELDIS, BLDS) and non-English databases (e.g. Banque de Données Santé Publique database) were less common. Further sourcing methods included references checking, website searching and personal contact.
with experts, authors, and/or relevant organisations. **Conclusions:** Identifying relevant research evidence in developing countries is challenging. Most systematic reviews identified searched only one regional database, namely LILACS. There is potential to improve search strategies by including other regional databases and other search sources to identify relevant research evidence in health in developing countries.

**P2.044**

**Investigating the use of the McMaster Premium Literature Service (PLUS) as a method to efficiently update systematic reviews**

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**Background:** Systematic reviews (SRs) of treatment effects are evidence syntheses that inform clinical practice decisions and healthcare policy by providing the best answer to a clinical question. To maintain validity, SRs should be regularly updated to include novel research, which is why timely updating of SRs is a primary goal of the Cochrane Collaboration. In reality, updating practices are irregular, with resources and time constraints cited as major barriers. The McMaster Premium Literature Service (PLUS) is a database of high quality, pre-appraised evidence, which has been shown to be of potential help in efficient updating of SRs. **Objective:** To determine the performance of PLUS to locate studies that drove a change in the conclusions of updated Cochrane SRs. **Methods:** All updated Cochrane SRs, published from January 2012 to January 2013, with conclusions changed from prior versions will be included in this study. We will identify the new references in the updated version. We will classify SRs based on the type of conclusion change (i.e., change in magnitude or direction of treatment effect), and identify mean number of new trials and new patients added (both expressed as absolute number and proportion of total trials). We will determine which new references are captured by PLUS, and how excluding references, not captured by PLUS, impacts the conclusions for each review. **Results:** From January 2012 to January 2013, 31 Review Groups published 96 SRs with changed conclusions. Overall approximately 900 new studies were added. Detailed study results will be available by mid-2013. Results will include characteristics of SRs with changed conclusions, proportion of new studies captured by PLUS, and impact on conclusions of excluding studies not included in PLUS. **Significance:** The results of this study will provide empirical knowledge about characteristics of updated Cochrane SRs and a method to improve efficiency of updating SRs.

**P2.045**

**MAPA: a live meta-analysis with customized tables in a live map**

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**Background:** Latin America and Caribbean (LAC) remains the most unequal region in the world. Besides, LAC has experienced rapid and complex epidemiological changes in recent decades. Despite the need of having available updated data, most countries in the region rely mostly on external financing to sustain long-term research and, therefore, it is not easy to be achieved. The production of documents with systematic reviews and economic evaluations are useful but not enough to provide the whole produced information in the research. A live epidemiological map with customized tables could provide a valuable contribution to the health part of the population in the region. **Objectives:** To show an online interface that allows to retrieve interactive quantitative data with a graphic support, based on meta-analysis about some specific diseases in LAC population. **Methods:** We performed systematic reviews with meta-analysis about certain diseases in LAC countries. That information has been uploaded to a database. Firstly, an online interface has been developed in order to show interactive tables where rows, columns, filters and outcomes can be customized. Besides, the information that feeds each of those cells can be easily retrieved by the users. Secondly, a customized forest plot can be shown. Thirdly, a list of other systematic reviews and economical evaluations that were found in the performed systematic review can be seen. Finally, an interactive map with several graphics will help users to see distributions along the region. **Results:** An online interface with the previously mentioned information. **Conclusions:** The living tables, meta-analyses and maps allow researchers, decision makers and health providers to acquire some specific and detailed customized information, which fits their needs and convenience.

**P2.046**

**Filtering for findability in systematic review search strategies**

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**Background:** Researchers constructing a search strategy require results that meet sensitivity and specificity needs. Search filters are collections of search terms designed to retrieve articles of a specific study design, such as randomized control trials or observational studies, or by some other aspect of the research question, such as economic s or patient issues. Filters are a sophisticated combination of controlled vocabulary, keywords and methods that take advantage of the unique tools and indexing of particular databases. Search filters can run from a few search lines to over one hundred lines in length. Since researchers need to search several databases in order to be comprehensive and reduce bias of results, filters are also specific to the database and platform such as Ovid for MEDLINE or EBSCO for CINAHL. They are created by research teams and are pre-tested and evaluated to ensure the quality of retrieved results. **Objectives:** This poster will illustrate the importance as well as the limitations of search filters in the overall searching and information retrieval process. **Methods:** We will illustrate various sources of search filters in accordance with relevant study types and database interfaces. We will include links and QR codes to the websites of the filters, the organizations that created them, as well as supporting evidence. **Results:** Knowledge of where to find an appropriate search filter and how to incorporate into the search strategy can lead to efficiencies, as the search results will be more relevant. **Conclusions:** Search filters can aid in retrieving relevant citations and weeding out unwanted results, thus saving valuable time for analysis.
P2.047
Comprehensive overview of conduct and reporting of cross-sectional studies on STROBE statement in public health field of China

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Background: Cross-sectional Studies are widespread in public health, however, the studies’ quality are unclear in China. STROBE statement, with the common aim of STrengthening the Reporting of OBServational studies in Epidemiology, provides recommendations in the conduct and dissemination of observational studies. Objectives: To assess the conduct and reporting of cross-sectional studies in public health in China based on STROBE. Methods: An electronic literature search of cross-sectional studies was conducted using the China Disease Knowledge Total Database (CDD), which has one part on cross-sectional studies classified by journals. We selected cross-sectional studies from CDD’s journals in public health randomly by computer and analysed completely on STROBE statement. Two researchers independently screened and extracted the related data, disagreements were resolved by the third one. Results: 199 cross-sectional studies from 13 journals in public health were included. We checked all the 22 Checklist of items of STROBE for cross-sectional studies, 12.6 items were reported on average across included studies. More than half of included studies did not report or report incompletely in nine items (4 in Methods, 3 in Results, 1 in Conclusion and 1 in Other Information part). In Methods part, 196 (98.49%) papers did not report Bias, 186 (93.47%) did not explain the studies size, 142 (71.36%) did not explain how quantitative variables were handled and 104 (52.26%) did not describe all statistical methods. In Results part, 179 (89.95%) did not report main results completely, 168 (84.42%) did not report other analyses done and 135 (67.84%) did not give descriptive data of participants. 133 (66.83%) papers did not give the funding information. Conclusions: Most cross-sectional studies in public health of China are not up to standard of STROBE statement. For the purpose of improve reliability and standardization of public health research, there is a need to disseminate the STROBE statement on the reporting requirement in public health in China.

P2.048
Search filter accuracy to LILACS (via iAHx 2.6-5 interface) for retrieving Randomized Controlled Trials by Brazilian Cochrane Centre

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Background: The translation and validation of a clinical trial filter for identifying studies scientifically correct and clinically relevant in the bibliographic index LILACS is critical to use in the systematic reviews.

Objective: To assess the accuracy of the new translation of the search filter for retrieving clinical trials in the LILACS in the new interface iAHx 2.6–5. Methods: Stages were completed to translate and identify the new terms found in other works by the gold standard handsearch and therefore incorporated into this new version. The chosen methodology as an alternative to handsearch was the Relative Recall. Analysis was done in the references of Cochrane Systematic Reviews that used the LILACS bibliographic index. The search using the words ‘LILACS and Cochrane’ was performed in PubMed and the full text of Systematic Reviews was retrieved in the Cochrane Library through the free version for Brazilians at http://cochrane.bireme.br/. Results: After searching the literature, we found that none of the versions available are translated to the new interface and also are not validated. The stages of identifying terminology which formed a set ‘gold standard’ for the new filter were performed considering the development and assessment based in performance (sensitivity), specificity, and accuracy. Conclusions: We established a new accurate search filter for retrieving clinical trials in the LILACS (via iAHx 2.6–5 interface).

P2.049
Electronic culling of the clinical research literature: filters to reduce the burden of hand searching

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Background: To facilitate the transfer of new, valid, relevant knowledge into clinical practice, research staff in the Health Information Research Unit at McMaster University have created a health knowledge refinery (HKR). The HKR begins with critical appraisal of original and review studies in 122 top clinical journals and leads to the creation of the McMaster PLUS (MacPLUS) database. The time and resources to critically appraise the literature are substantial. Objectives: To determine if Clinical Queries search filters (available for use in PubMed) for large bibliographic databases could be modified to electronically cull the clinical research literature to reduce the burden of hand searching. Methods: The Clinical Queries were modified to include only text words and a NOT string to exclude irrelevant content. A retrospective database of all content indexed in the 122 journals was created by searching Medline via PubMed for a 17 month period. We tested the modified Clinical Queries in this retrospective database to determine if articles contained in the MacPLUS database were retrieved by the modified Clinical Queries. Results: 66 939 articles were downloaded from PubMed for the 122 journals over 17 months of publishing, May 1, 2010 to September 30, 2011. This is the number of articles that HiRU staff would need to review over 17 months (average of 3938 articles per month—at a time estimate of 92 hours per month). Of these 66 939 articles 3701 (5.5%) met our criteria for the MacPLUS database. Given prior validation of the search filters, results are shown in the Table using all articles rather than showing the results for the development and validation data sets. Use of the new filters reduced manual processing time by 55%. Conclusions: Search filters can be used to electronically cull the clinical research literature to reduce the burden of hand searching.

Attachments: Wilczynski_Table_Cochrane-2013.png
P2.050
To improve the efficiency of database searches for the identification of reports of RCTs used in NICE guidelines

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Background: The National Institute for Health and Care Excellence (NICE) ‘Guidelines manual’ outlines a core number of databases that should be routinely searched for identifying reports of randomised controlled trials (RCTs), including MEDLINE, Embase and CENTRAL. Current practice is to search each bibliographic database from its inception. However, the Cochrane Handbook recommends that searches of MEDLINE and Embase for trials should be undertaken in knowledge of the fact that both MEDLINE and EMBASE have been searched systematically for reports of trials and that these reports of trials have been included in CENTRAL (section 6.3.3.2). Objectives: To estimate the accuracy and reliability of the processes used by the Cochrane Collaboration to identify reports of RCTs from MEDLINE and Embase, for CENTRAL. To validate the Cochrane Handbook approach of searching CENTRAL supplemented by searches of MEDLINE and Embase for the more recent years. A further objective is to develop a common filter(s) for identifying reports of RCTs from MEDLINE and Embase for the more recent years that optimises the balance between sensitivity and precision. Methods: A sample of ‘included’ RCTs from NICE guidelines from each of the four National Collaborating Centres (NCCs) and Internal Clinical Guideline (ICG) team will be used to validate the Cochrane Handbook approach for identifying reports of RCTs. The sample will also be used to objectively develop RCTs filters for searching MEDLINE and Embase for the more recent years. Results: This is an ongoing project, interim data will be presented on the number and proportion of RCTs indexed in MEDLINE and Embase which are also indexed in CENTRAL. Conclusions: We plan to draw conclusions about the validity of the Cochrane Handbook searching approach compared to the current ‘all years’ searching approach which will inform the methods for searching for RCTs for NICE guidelines.

P2.051
On beyond endnote: doing more with search results

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Background: Your search results represent more than just days or weeks of hard work - they are also data, locked in a range of formats and difficult to analyze, re-purpose or transform. Objectives: This presentation demonstrates a collection of software tools that allow access to this data, as well as couple of example applications. Results: The first sample application is a tool for comparing the keywords in a set of references, generating Venn diagrams of the keywords in common to the citations. When developing search strategies for systematic review we often begin with two or more references that exemplify what we hope to include in our review. This software allows the systematic examination of the keywords used in a set of references. This process will hopefully make the decisions of which keywords to use in a search strategy more transparent. Also, if the development of the search strategy does not have the benefit of subject matter expertise, a data-driven approach can aid the search strategy developer to produce a result that is improved by the examination of latent data in a corpus of references. The second sample application is a tool for exporting a set of references to a spreadsheet. More than once I wished for a way to send references to colleagues without bibliography-management software - but they did have access to a spreadsheet program and furthermore they knew how to use it. Also, by transforming search results into a spreadsheet format they are vastly easier to import into statistical software for analysis. Conclusions: This presentation will discuss these and other potential applications, the tools needed to build them, and the source code of all the tools discussed.

P2.053
The development of highly sensitive retrieval strategy for cluster randomized controlled trial

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Background: There has been an increasing interest in cluster randomized controlled trial (CRT) over the past 20 years. If several cluster randomization trials are performed to investigate similar interventions for the same outcome then it may be of interest to combine the results using the techniques of meta-analysis. Objectives: To develop, through revision of the Cochrane Collaboration search strategy, a highly sensitive search strategy to retrieve reports of CRT in PubMed. Methods: We identified all CRTs published in the BMI, Lancet, JAMA, and New England Journal of Medicine from 2003 to 2012 by searching their own official websites as golden standard records. Then we searched CRTs in PUBMED with revised highly sensitive Cochrane strategy in the four journals from 2003 to 2012. Sensitivity was defined as the number of gold standard records retrieved/the number of gold standard records × 100. Precision was defined as the number of gold standard records retrieved/the number of records retrieved × 100. Results: We identified 175 CRTs as golden standard records. We searched PUBMED and used the different combination strategy, the results showed in the Table. No. strategy CRTs Sensitivity Precision 1 the highly sensitive Cochrane strategy(HSC) for CRT 5254 174 99.4% 3.3% 2 HSC AND cluster*[ti] 152 129 73.7 84.9% 3% 3 HSC AND (group*[ti] OR cluster*[ti/ab]) 226 165 94.3% 73% 4 HSC AND (group*[ti] OR cluster*[ti/ab]) 264 166 94.8% 62.9% 5 HSC AND (communit*[ti] OR cluster*[ti/ab]) 271 172 98.3% 63.5% 6 HSC AND (communit*[ti] OR cluster*[ti/ab]) 308 173 98.9% 56% 7 HSC AND (group*[ti] OR field*[ti] OR cluster*[ti/ab]) 315 173 98.9% 55%. Conclusions: Combining the highly sensitive Cochrane strategy AND (communit*[ti] OR cluster*[ti/ab]) could be the highly sensitive strategy for searching CRTs. Attachments: table-cluster.jpg
P2.054
Is there a potential of umbrella reviews to inform guideline development?

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Background: A best practice guideline on the prevention of substance misuse in adolescents was developed in Belgium, using the ADAPTE methodology. A comprehensive search revealed three high-quality relevant guidelines. However, several clinical questions formulated by the stakeholders involved could not be answered by these guidelines. As multiple systematic reviews were available, we conducted an umbrella review in an attempt to fill in the gaps.

Objectives: To summarize the evidence on programs to prevent adolescent substance misuse in order to inform the guideline adaptation process.

Methods: We searched seven electronic databases, websites and checked reference lists of relevant articles for reviews on the effectiveness of school-based, family-based, community-based or multicomponent prevention. We also assessed who should deliver the program, what content and delivery method would be best and which groups should be targeted. Systematic reviews that met our predefined inclusion criteria were critically appraised using the AMSTAR instrument. Due to the heterogeneity of outcome measures and the way these were reported, the findings were synthesized using a vote-counting approach.

Results: We found 22 reviews reporting on several populations and a wide range of interventions and outcomes. Many reviews also lacked detail in the reporting of process and implementation related aspects of the prevention programs which hampered overall conclusions of which programs are effective, who should deliver the programs, what content and delivery method is best and which subgroups should be targeted. Conclusions: None of the outstanding clinical questions could be answered by the results of the umbrella review. This may be due to the heterogeneity in population, interventions and outcomes and the low level of detail of reporting. The potential of umbrella reviews to adapt guidelines need to be investigated for topics with a higher level of standardization in interventions and outcome measures.

P2.055
Analysis of clinical guidelines developed based on evidence in China

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Background: The clinical guideline is the bridge from the research evidence to practice and evidence based guideline is thought as current better guideline which developed by scientific methods. Chinese medical association is the major academic organization to develop national practice guidelines in China. Objective: To analyze the quality of clinical practice guideline mentioned evidence based on evidence in China.

Methods: We selected clinical guidelines developed based evidence issued by the Chinese medical association in 2010–2012 and with additional search for guidelines on clinical major diseases. Excluded those published common sense, translation, abstract and discussion, etc. Guidelines quality evaluated by 8 items selected from the assessment of the methodological rigour which reference to the Appraisal of Guidelines for Research and Evaluation (AGREE II).

Results: (a) Twenty-two guidelines included, 13 were originated and 9 were updated at 3–5 years, diseases covered on stroke, diabetes, hypertension and chronic hepatitis, etc. (b) The number of guideline references cited were 10–218, seven cited 24 Cochrane systematic review (CDSR), which occupied reference 2.62% (24/916) and the top was the acute ischemic stroke guideline (cited 7 CDSR). (c) The number of experts involved in guidelines development was 2–95, guidelines page was 4–150. (d) The guidelines quality were generally scores 4–7, most of them described the process of guidelines developed, mentioned grades of recommendation consistent with the levels of evidence. Few guidelines provided the systematic methods used to search to evidence, have been externally reviewed by experts prior to its publication and procedure for updating the guideline, etc. Conclusions: There is growing trend that clinical guidelines developed based evidence in China. However, the quality of report and methodological rigour of included guidelines need further improvement. The number of Cochrane systematic review cited in these guidelines is limited. We suggest guidelines recommendations should be consistent with the levels of evidence and adapt to the local conditions, and relevant support policies for guideline implementation in practice. Key words Evidence-based medicine Cochrane systematic review Clinical guideline Evidence-based guideline development Evaluation.

P2.056
Use and quality of Cochrane Reviews used in knee and hip osteoarthritis clinical practice guidelines

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Background: In the last 10 years, various clinical practice guidelines (CPGs) have been developed to guide the pharmacologic and non-pharmacologic management of knee and hip osteoarthritis (OA). Evidence-based recommendations rely on a wide range of evidence, including Cochrane systematic reviews (SRs). Objectives: To determine the extent of use and quality of evidence provided by Cochrane Reviews in the development of CPGs for OA. Methods: All CPGs addressing both OA pharmacologic and non-pharmacologic interventions from the last 10 years were reviewed. We selected the 2012 American College of Rheumatology (ACR) CPGs for OA because they used the most recent evidence. The best available evidence in the ACR CPGs was identified by searching for the most recent SR for each treatment comparison and patient important outcome (i.e. pain, function, adverse effects, adherence, withdrawals). If no SR was identified, the most recent randomized controlled trial of sufficient quality was chosen. Evidence quality for each outcome was appraised using the GRADE (Grading of Recommendations Assessment, Development and Evaluation) method. Results: Cochrane evidence was chosen as the best available, most recent evidence for 5 of...
10 pharmacologic interventions and 4 of 14 non-pharmacologic interventions. Cochrane Review GRADE scores for pharmacologic interventions were moderate for 32% of reviews and high for 65%, while scores for non-pharmacologic interventions were moderate for 37% of reviews and high for 29%. Non-Cochrane SR evidence was generally rated lower, with some of the outcomes of interest not reported. Evidence was high for 53% of pharmacologic treatments and high for 14% of non-pharmacologic (61% low). Conclusions: Cochrane Reviews were used extensively as evidence for the most recent OA CPG, especially the pharmacological interventions. Cochrane evidence quality was generally high for pharmacological treatments and moderate or high for non-pharmacologic treatments. Cochrane evidence was of higher quality than other SRs.

P2.057
Changing physician practice patterns: methods for implementing clinical research and guidelines
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Background: There are various interventions for guideline implementation in clinical practice, but the effects of these interventions are generally unclear. There is a plethora of primary research evidence about the effectiveness of these interventions however it is dispersed amongst medical literature. Objectives: We conducted a systematic review to identify the most effective methods of implementing clinical research findings and clinical guidelines to change physician practice patterns, in surgical and general practice. Additional focus was placed on presenting research findings on long-term effects and cost effectiveness of the implementation methods. Methods: We searched electronic databases (including MEDLINE, EMBASE, and PubMed) for systematic reviews published in English, which evaluated the effectiveness of different implementation methods. Two reviewers independently assessed methodological quality and extracted relevant data from the reviews. Results: Eighteen reviews were identified covering a wide range of interventions. In general, passive approaches are ineffective and unlikely to create physician behaviour change. Most other interventions were relatively more effective when used as multifaceted interventions, compared to single interventions. Overall, continuing medical education was most effective in changing physician practice pattern. Conclusions: Continuing medical education and multifaceted interventions are the most effective implementation methods. Additionally active approaches to changing physician performance are shown to improve practice to a greater extent than traditional passive methods. Further primary research is necessary to inform the effectiveness of these methods specific to surgical settings, their cost-effectiveness and long-term effects.

Attachments: Intervention Method Summary Figure.JPG

P2.058
Optimal use of GRADE in Cochrane Reviews to inform clinical practice guidelines

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Background: The GRADE approach (short for Grading of Recommendations Assessment, Development and Evaluation) offers a transparent, explicit and systematic way to summarize evidence, rate its quality, and move from evidence to recommendations. Cochrane Reviews are a valuable resource to inform trustworthy clinical practice guidelines. However, systematic reviews are not always conducted or reported in a way that facilitates their use for guideline development. An optimal use of GRADE in Cochrane Reviews could help to enhance their usefulness. Methods: Through an iterative process, we developed a set of criteria to evaluate the optimal use of GRADE. In this report, we focus on the criteria concerning the synthesis and evaluation of the evidence, which are relevant for systematic reviewers. Results: We developed six criteria for the optimal use of GRADE. Three are relevant for Cochrane Reviewers (Table 1) 1. The outcomes selection should be driven by what it is important to patients instead of what it is reported in primary trials. 2. Reviewers should provide effect-estimates for all the patient important outcomes relevant for decision making, including relative and absolute measures. 3. Finally, the reasons to rate down and up the confidence in effect-estimates should be explicit and described in detail, ideally providing an Evidence Profile in addition to the Summary of Finding table. Conclusions: The adherence to a simple set of criteria could enhance the usefulness of Cochrane Reviews for the development of clinical practice guidelines. Table 1—Optimal use of GRADE in systematic reviews

1. Were all the patient important outcomes relevant for decision making considered? Did the systematic review provide explicit relative and absolute effect estimates for all the relevant outcomes? Were the judgements about the confidence in the effect-estimates explicit?
P2.059
The use of GRADE methods in World Health Organization (WHO) public health guidelines: distributions of strength of recommendations and confidence in estimates of effect

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Background: A perception exists that expert guideline panelists are sometimes reluctant to offer weak/conditional/contingent recommendations. GRADE guidance warns against strong recommendations when confidence in estimates of effect (quality of evidence) is low or very low, suggesting that such recommendations may seldom be justified. Objectives: To characterize the distribution of strength of recommendations and confidence in estimates of effect in WHO guidelines that have used the GRADE approach and graded strength of recommendations and confidence in effect estimates. Methods: 436 WHO documents were initially reviewed (October/November 2012). We identified 116 (26.0%) guidelines of which 48 (41.3%) referred to GRADE methods, and 43 (37%) utilized GRADE and provided both a strength of recommendation and confidence in estimates grading. We describe the distributions of strong and weak recommendations and associated rating of confidence in estimates of effect. Results: The 43 guidelines offered 456 recommendations: 290 were strong (63.6%) and 166 (36.4%) were weak. Of the 290 strong recommendations 50 (17.2%) were based on high confidence in estimates, 80 (27.6%) were based on moderate confidence, 97 (33.4%) were based on low confidence, and 63 (21.7%) on very low confidence (a total 55.2% on low or very low confidence estimates). Of the 166 weak recommendations, 4 (2.4%) were based on high confidence in estimates, 24 (14.5%) based on moderate confidence, 59 (35.5%) on low confidence, and 79 (47.6%) on very low confidence. Discussion: Strong recommendations based on low or very low confidence in effect estimates are very frequently made in WHO guidelines. Further study to determine the reasons for such recommendations is warranted. Implications: Guideline developers/authors should provide a clear, compelling rationale for strong recommendations based on low confidence estimates.

P2.060
Does journal endorsement of reporting guidelines impact the completeness of reporting of health research? A systematic review

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Background: Reporting guidelines (RGs) have been developed to overcome inadequate and incomplete reporting of health research. Aside from CONSORT, which was assessed in a recently published systematic review, the effectiveness of RGs for improving the completeness of reporting is unknown. Objectives: To evaluate the impact of journal endorsement of RGs (excluding CONSORT) on the completeness of reporting of health research studies. Methods: We conducted a systematic review assessing RG impact on completeness of reporting by comparing studies published (1) before and after journal endorsement and (2) in endorsing and non-endorsing journals for a given RG. RGs providing a minimum set of items for reporting a specific type of research, developed with explicit methodology, and using a consensus process were identified from another systematic review and the EQUATOR Network’s reporting guidelines library (to June 2011). MEDLINE, EMBASE, the Cochrane Methodology Register, and Scopus were searched (October 2011) for evaluations of RGs. Fulltext articles were screened independently by two reviewers. One person extracted data, and a second person verified 10% of study characteristics and 100% of validity and outcomes data. RGs were analyzed according to individual checklist items and their total sum, where applicable. RR, MD, or SMD with 99% confidence intervals using random effects models were used. Results: 101 relevant RGs were identified. Of 15 240 records retrieved from the literature search for evaluations, 20 evaluations assessing 7 RGs were included. Of those, 10 evaluations addressing 6 RGs (BMJ economic checklist, CONSORT for harms, QUOROM, STARD, STRICTA, STROBE) could be analyzed. Most RG checklist items were assessed by one evaluation; evaluations included relatively few studies. Conclusions: Only 7 of 101 RGs have been evaluated by a small number of evaluations assessing relatively few publications. Insufficient evidence exists to determine the impact of journal endorsement on completeness of reporting.

P2.061
PEN - the global resource for nutrition knowledge translation

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Background: Dietitians translate research into practice when applying the science of nutrition to the feeding and education of individuals or groups in health and disease. Maintaining currency is challenging when knowledge is constantly expanding. In 2005 Dietitians of Canada launched a dynamic knowledge translation subscription service called Practice-based Evidence in Nutrition (PEN) for dietitians, including those working in two Canadian provincial government call centres. Establishing international partnerships required modifying PEN processes of knowledge translation. Methods: Collaborating authors from each global partner use protocols to identify, analyse and synthesise the evidence to create new or update existing practice questions, practice-based evidence toolkits/guidance summaries and client resources, the key components of PEN. While the evidence to develop these components comes from the international literature, including Cochrane Systematic Reviews, global partners have customised PEN to take into account national reference documents e.g. nutrient reference values and dietary guidelines. Additional partners have meant enrichment in knowledge pathway content and usage data that are helping to prioritise pathways for revision or development. Partners
have used online tutorials, webinars and conference workshops to build capacity and maximise use by practitioners, and to encourage contribution to the PEN knowledge pool. **Results:** As of February 2013 there were 169 knowledge pathways, 1044 practice questions and 3341 resources. Usage data indicates that client handouts are often accessed more than practice questions. Social media confirms the popularity of PEN with distribution to 12,000 first year PEN eNews subscribers and greater than 1500 followers on each of Facebook and Twitter. Universities report PEN as a tool to support student studies and for students to gain recognition by refining their critical appraisal skills and contributing to the global knowledge pool. **Conclusions:** Problem solving and cooperation within the global partnership has enabled the development of PEN as a valuable international resource for practitioners.

**P2.062**

The challenges of moving evidence to practice

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USA

**Background:** Despite overwhelming clinical trial evidence, increasing publication of systematic reviews, expert opinion, national guidelines, and a vast array of educational conferences, evidence-based therapies continue to be underutilized. Such underutilization leads to a gap in care, such that reports indicate: 55% of patients get less than adequate care; 30–40% do not get what they should get; 20–25% get what they should not have or they do not need. Purpose: To begin to address this issue, a project was undertaken to translate evidence to practice using methods of action research and quality improvement. **Conclusions:** This poster will detail the challenges encountered in moving evidence to practice: The Challenge of Commitment, The Challenge of Democracy, The Challenge of a Slow and Messy Process, The Challenge of Obtaining Baseline Data, The Challenge of Context and Real World Complexities, and The Challenge of Competing Priorities.

**P2.063**

The growing role and impact of Evidence Aid: its 10-year vision

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**Background:** Evidence Aid, an independent international organisation, promotes the use of systematic reviews in disasters, humanitarian crises and other health care emergencies. Since its creation by The Cochrane Collaboration after the Indian Ocean Tsunami of December 2004, it has grown and has provided summaries of reviews to humanitarian aid workers during disasters such as the earthquake in Japan and Haiti and during floods in Pakistan, Thailand etc. **Objectives:** To share the recent developments of Evidence Aid and its 10-year vision. **Methods:** Through the needs assessment, organisation of two international conferences on evidence in disasters, and increasing collaboration with aid agencies, systematic reviews are increasingly being discussed in the humanitarian aid community. Additionally, a priority setting meeting in June 2013 will lead to ten priority themes, and from those themes the selection of 30 intervention questions for systematic reviews in disaster management. These new reviews will be added to the Special Collections which already contain more than 100 reviews. **Results:** Evidence Aid Special Collections (earthquakes, flooding and poor water sanitation, Post Traumatic Stress Disorders (PTSD) and burns) containing more than 100 Cochrane Reviews are freely available. Thirty other reviews from the priority setting meeting will be added to the resources, alongside other identified reviews, and will allow Evidence Aid to build a system to deliver relevant information which is seamlessly integrated into other information systems in the field. **Conclusions:** Evidence Aid will become a one-stop shop to search for evidence on the effectiveness of interventions in disasters, humanitarian crises and major healthcare emergencies. Evidence Aid’s impact is growing and it has been able to build strong partnerships with aid agencies, research centres and donors. Further steps will focus on increasing collaboration with users of systematic reviews in order to adapt them to the appropriate circumstances in which users work.

**P2.064**

Exercise for lower limb osteoarthritis: systematic review incorporating trial sequential analysis and network meta-analysis

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**Background:** International guidelines recommend exercise to be part of ‘core’ management of osteoarthritis, given existing evidence regarding the beneficial effects of exercise, ease of application, few adverse effects and low costs. **Objectives:** To determine whether there is sufficient evidence that exercise interventions are more effective than no exercise control and compare the effectiveness of different exercise interventions in relieving pain and improving function in patients with lower limb osteoarthritis. **Methods:** Nine electronic databases were searched from inception to March 2012 for RCTs comparing exercise interventions either with each other, or no exercise control for adults with knee or hip osteoarthritis. Two reviewers evaluated eligibility and methodological quality. Main outcomes extracted were pain intensity and function limitation. Trial sequential analysis was used to investigate reliability and conclusiveness of available evidence for exercise interventions. Bayesian network meta-analysis was used to combine both direct (within-trial) and indirect (between-trial) evidence on treatment effectiveness. **Results:** A total of 51 trials covering 13 exercise interventions and 5116 patients met inclusion criteria. Sequential analysis revealed that as of 2005 sufficient evidence had been accrued to show significant benefit of exercise interventions over no exercise control. For pain relief, aquatic strengthening plus aerobic exercise (78%) was ranked as most effective followed closely by land-based flexibility plus strengthening and aerobic exercise (72%), land-based flexibility plus strengthening (70%) and land-based strengthening (69%). Flexibility plus strengthening (95%) followed by strengthening (67%) had the highest probabilities of being the overall best exercise interventions for improving function. **Conclusions:** As of 2005 sufficient evidence had accumulated to demonstrate significant benefit of exercise. Further trials of exercise versus no exercise are unlikely to overturn this pooled result. This network meta-analysis shows that the most effective exercise approaches are strengthening
exercise alone or in combination with flexibility exercise. These results inform optimal care for lower limb osteoarthritis.

P2.065
Network meta-analysis of multiple outcome measures with extrapolation of effects across networks

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Background: Recent advances in meta-analysis have seen increased application of multivariate methods to evidence synthesis involving multiple outcome measures or multiple treatment effects. These methods are particularly appealing in evaluating the effectiveness of healthcare interventions because many studies and systematic reviews of individual studies typically focus on broader health effects and therefore usually report on multiple treatment and outcome measures. Analyses of such data should take into account the correlation structure between effect estimates from the different outcomes. Objective: To (i) extend the standard network meta-analysis (NMA) model for simultaneous comparison of multiple intervention effects from the univariate to a multivariate outcome setting and in so doing (ii) enable intervention effects to be extrapolated across outcomes. Methods: The standard NMA model is first described and then extended to multivariate outcome settings. These random effects multiple outcome NMA models allow appropriate modelling of the correlation structure between outcomes through inclusion of the within and between-study correlations. Then using a strategy first proposed by DuMouchel and Harris for combining evidence from human and animal studies, the multiple outcome models are adapted to enable extrapolation of intervention effects across the related outcome measures. Analyses are conducted using Markov Chain Monte Carlo (MCMC) techniques implemented within the WinBUGS software. Results: The models are applied to binary outcome data investigating the effectiveness of seven home safety education interventions on four fire injury prevention measures in households with children. Conclusion: In the absence of individual trial evidence on all outcomes, extrapolation of evidence across related outcomes can enable estimates of intervention effects for all outcome measures to be obtained, including intervention effects on outcomes where no trial evidence is available.

P2.066
Closing the research-practice gap using integrated knowledge translation: a practical webinar series

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Background: The Canadian Cochrane Centre (CCC) and the Canadian Physiotherapy Association (CPA) collaborated to develop a two-part webinar program for clinical physiotherapists to apply evidence-based healthcare information to practice. Objectives: There is continued concern from knowledge producers and users how to effectively connect research to clinical practice. Using an integrated knowledge translation (IKT) model with active collaboration, a tailored online educational program pairing researchers and clinicians was developed and delivered to help bridge the gap. Methods: The program was divided into two independent but related series. Each series included three 90-minute webinars exploring the steps for finding, understanding and making informed, effective use of the best evidence for clinical physiotherapy decisions. The first series covered how to frame a clinical question for researching, where to look for quality evidence, and practice implications. The second series introduced statistics used in systematic reviews, presented challenges and opportunities in understanding research evidence, and illustrated how to put research into practice. The CCC knowledge broker and the CPA education programs manager recruited and coordinated both Cochrane and physiotherapy presenters, delivered the webinars, and evaluated the webinar series. Results: The sessions provided the basic foundation for interpreting research and evaluating the evidence as it applies to clinical physiotherapy. Clinical case examples illustrated how the concepts could be applied to a variety of practice areas and patient populations. Feedback from participants indicated that the webinars have improved their confidence and skill level. They are able to better recognize and appraise relevant evidence to answer clinical questions. Conclusions: It is anticipated that physiotherapists with improved critical appraisal skills will understand and use Cochrane Reviews in their clinical practice. Although presenter timing and recruitment were challenging, this ‘pairing research/clinical presenters’ model can be used to aid other health care professionals in disseminating, interpreting, and applying Cochrane Review findings.

P2.067
A case study on the reporting of effect size estimates in breast cancer trials

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Background: Guidance on trial reporting from the CONSORT statement outlines that primary and secondary outcomes should be presented with estimated effect sizes and range (item 17; [1]). In oncology trial reports, time-to-event outcomes are commonly reported in the form of survival curves. When pooling time-to-event data for systematic reviews, the Hazard Ratio (HR) from survival curves is the most appropriate way to express the results [2]. Objectives: To conduct a preliminary assessment on whether trial reports comply with CONSORT by providing the appropriate effect estimate and range for oncology trial reports, time-to-event outcomes are commonly reported in the form of survival curves. When pooling time-to-event data for systematic reviews, the Hazard Ratio (HR) from survival curves is the most appropriate way to express the results [2]. Objectives: To conduct a preliminary assessment on whether trial reports comply with CONSORT by providing the appropriate effect estimate and range for each time-to-event outcome. Methods: A Cochrane Review update on Taxane-containing regimens for metastatic breast cancer was used as a test case. For each included study that had a full-text publication, details on the time-to-event outcome reported and the presence or absence of (i) a survival curve (ii) a P-value and (iii) HR, median survival time or risk ratio and associated Confidence Interval (CI) were extracted. Results: Twenty-four trial publications were included and publication dates ranged from 1995 to 2011. Nearly all trial reports (23 out of 24) provided survival curves for overall survival and time-to-progression or time-to-failure and P-values, and reported one effect estimate (i.e. either median survival times, risk ratios or HRs). The ranges for median survival times or risk ratios were absent in 6 out of 24 trial reports. Also, 6 out of 24 trials reported HRs and CIs, and this was observed in trials published in the early 2000s and 2011. Conclusions: This case
study showed that effect size estimates for time-to-event outcomes were consistently reported, suggesting compliance with CONSORT. However, only a small number of trials (6/24) reported the HRs and CIs from the survival curves. The lack of reporting relevant effect sizes, such as HRs, for time-to-event outcomes may have implications when undertaking meta-analyses.

**Attachments:** References.pdf

**P2.068**

Legal issues in health technology assessment: a case study

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**Background:** Health Technology Assessment (HTA) is a synthesis of the evidence concerning mainly the effectiveness, safety, risks and costs of different healthcare interventions. A review of ethical and legal issues is also occasionally required in HTA. Question was raised in a neonatal care unit at the CHU de Québec regarding the safety of specimen container use to store expressed breastmilk (EBM). **Objectives:** To assess the acceptability of specimen container use to store EBM. **Methods:** A literature search was performed in PubMed, Embase, the Cochrane Library and the grey literature between January 2002 and March 2013. Recommendations and characteristics about containers used to store EBM were retrieved from evidence-based practice guidelines. Information on legal considerations about food packaging and consumer product safety was retrieved from governmental sites (Health Canada, U.S. Food and Drug administration). Article selection and quality assessment were performed by one reviewer and data extraction by two independent reviewers. Synthesis review was shared with an interdisciplinary group of experts. **Results:** Following an evidence-based process, there was no definitive research results aimed to clarify if its use may be safe to human health. **Conclusions:** The systematic comparisons between randomized and non-randomized studies have showed the evidence concerning mainly the effectiveness, safety, risks and costs of different healthcare interventions. A review of ethical and legal issues is also occasionally required in HTA. Question was raised in a neonatal care unit at the CHU de Québec regarding the safety of specimen container use to store EBM. Legal issues in health technology assessment: a case study

**Attachments:** Tab. 1 .pdf

**P2.070**

Enabling engagement: the UK Cochrane Centre’s experience of using social media for communication about Cochrane Reviews and more!

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**Background:** Effective use of social media is central to the UK Cochrane Centre’s new focus on engagement. Social media platforms offer ways to communicate with all our stakeholders, such as patients, policymakers and health professionals, about evidence-based health care and Cochrane Reviews in particular, and about our activities. **Objectives:** To engage effectively with all our stakeholders and with others outside the UK, through social media. **Methods:** Since September 2012 we have become active on Twitter and Facebook and have a new, regularly-updated website. We have a blog, Evidently Cochrane, where we write lay-friendly summaries of reviews, setting them in context and giving key results and a comment on the quality of the evidence. We have established monthly meetings to review the next issue of the Cochrane Library and discuss with a team of clinicians the potential impact of the reviews and how we might best disseminate them. We are now going out to our UK-based Cochrane Review Groups to offer training and support in using social media to promote their reviews and activities. **Results:** Twitter is our most active social media channel; we are sending tweets about Cochrane Reviews daily, both through planned tweets and responding to health topics under discussion, which often results in conversation about reviews. We have used Twitter and Storify to increase our participation in conferences and capture these events. We are blogging at least weekly and these
are generating comments and interest. We disseminate around forty Cochrane Reviews each month across several social media platforms.

Conclusions: Since starting to use social media in these ways we have seen a growing following across these platforms. We are now in conversation with a vast network of people about Cochrane Reviews and related topics and can direct people to evidence that is timely and relevant. Engagement in action!

P2.071
Cochrane eyes and vision group reviews and co-publications
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Background: To achieve wide dissemination of Cochrane Reviews and maximize their impact, the Cochrane Collaboration allows co-publication of Cochrane Reviews in other journals. Objectives: To identify co-publications of systematic reviews published by the Cochrane Eyes and Vision Group (CEVG), and compare characteristics of CEVG reviews and corresponding co-publications. Methods: For the 104 CEVG reviews in The Cochrane Library published by issue 2, 2013, we identified potential co-publications by: (1) using the keywords in the title and first author’s name to search the Web of Science, Scopus, EMBASE and PubMed, (2) searching for ‘Cochrane eyes and vision’ in Google Scholar, and (3) querying 88 contact authors of the 104 reviews. For each co-publication and corresponding CEVG review, we recorded titles, authors, publication dates, and citation information. We classified each co-publication as ‘identical’, ‘similar but not identical’, ‘abridged’, or ‘other’ compared to the CEVG review. Results: We found 22 co-publications that corresponded to 19 CEVG reviews: 1 co-publication from 2 CEVG reviews, and 2 co-publications from each of 4 CEVG reviews. We classified 3 of the 22 co-publications as ‘identical’ (14%), 14 as ‘similar’ (64%), 3 as ‘abridged’ (14%), and 2 as ‘other’ (9%). In half the co-publications, either the names or order of the authors differed from the CEVG reviews. CEVG co-publications were published in ophthalmology (55%) and general medical (45%) journals; most (77%) were published within 2 years of the CEVG review. Six co-publications (27%) did not cite the CEVG review in the text or reference list (Table 1). On average, co-publications were cited more than the CEVG review (mean = 28–29.9) than the CEVG reviews (mean = 9.7–13.1) according to Web of Science and Scopus (Table 2). Conclusions: The Cochrane Policy Manual established co-publication standards in 2011, but not identical’, ‘abridged’, or ‘other’ compared to the CEVG review. Providing information on increased frequency of citation of co-publications to journal editors and review authors may help encourage co-publication.

Attachments: Table 1.pdf, Table 2.pdf

P2.072
Brazilian Cochrane Center strategies for disseminating the Cochrane methodology for systematic reviews
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Background: The systematic review (SR) is an essential study for taking clinical decision and has attracted a great deal of people interested in having a better knowledge of it. Cochrane Collaboration makes available extensive support material for conducting such study, but in English only. In order to disseminate that material to other countries it is fundamental to have it translated and didactically presented. The Brazilian Cochrane Center (BCC) has been developing tools to broadcast the material in Portuguese in order to motivate researchers from Portuguese speaking countries and promote the adequate training for performing the Cochrane SR. Objectives: Verifying the strategies elaborated by BCC for the dissemination and learning of the methodology proposed by Cochrane Collaboration.

Results: The BCC created the Online Course of Cochrane Systematic Reviews based on the Handbook for Systematic Reviews of Interventions (available at http://www.virtual.epm.br/cursos/metanalise/#). It is a free of tax course with no pre-requirements that presents the basic principles for the planning and conduction of a Cochrane Review in an easy and didactic way. Until April 2013 the course had a total of 105.741 accesses. The students interested in deepen their knowledge on Cochrane SR are instructed to participate in workshops offered by BCC, which take part every 2 months in average, and are split in two levels: basic and advanced. Conclusions: Among the strategies proposed by BCC for the dissemination and learning of the Cochrane methodology, the Online Course of Cochrane Systematic Reviews seems to be a viable, didactic and accessible strategy for any Portuguese speaking individuals. The course was updated by the BCC team in 2012, according to the last version published by Handbook, and the version will be available online until June 2013.

P2.073
Barriers to knowledge translation in Chinese doctors: a cross-sectional survey
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Background: Knowledge translation is very important for evidence-based practice. Little is known about the factors influencing knowledge translation in China. Objectives: To explore barriers that influence knowledge translation in China. Methods: We conducted a cross-sectional survey using a questionnaire adopted from relevant studies abroad. The questionnaire included 7 domains and 42 items. The survey was conducted between August 2012 and March 2013 involving 650 doctors attending workshops of evidence-based practice. The doctors were required to fill the questionnaire anonymously before the workshops. Three reviewers independently input the data to Microsoft Excel 2003. Data analysis was performed using SPSS 17.0 software. Results: The validity and reliability of the questionnaire was tested with Cronbach’s α 0.731. We distributed 650 questionnaires and collected 578 (response rate: 88.9%). Among the respondents, 43% think that current acquired knowledge cannot meet the clinical needs, 44.8% think that learning sources provided by their hospital are not sufficient. When they meet difficult clinical problems, 45.9% doctors prefer foreign database other than Chinese database to find information of interest. When they try to understand the efficacy and safety of an intervention, the most common problem is that 22.5% doctors cannot find relevant information after systematic search of all known databases. When they read the research reports, the most principal problem is that 48.3% doctors find it difficult
to understand the results and conclusion. When they apply a new intervention to patients, 23% doctors think whether the insurance company can pay for the intervention or not is the biggest factor influencing their choice. There are significant difference among doctors with different age, education background, English level, title and level of hospitals. Conclusions: Insufficient learning resources provided by their hospitals and doctor’s capability in dealing with knowledge hinder knowledge translation in clinical practice.

P2.074
The utility of systematic reviews for informing agri-food public health policy: a survey of Canadian policy makers

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Background: In recent years, several systematic reviews-meta-analyses (SR-MAs) have been published addressing various agri-food public health topics. It is not known to what extent agri-food public health policy-makers are aware of SR-MAs and how their evidence could be used to inform policy. Furthermore, the traditional format in which SR-MAs are disseminated (i.e. journal articles) may present a barrier towards their use among these end-users. Objectives: The objectives are this study were to investigate the extent to which policy makers in Canada are aware of and have used evidence from SR-MAs to inform their work, and to gather their feedback on the utility of SR-MAs and three corresponding summary formats to inform policy. Methods: An online survey was conducted from July to September, 2012 with policy makers, advisors, analysts and program managers and directors in Canada—from all levels of government and industry. Nine questions pertained to familiarity with and use of SR-MAs and other knowledge syntheses. Participants were also asked to provide feedback on a SR-MA article and three corresponding summary formats: a summary-of-findings table, a one-page summary and a three-page summary with supporting contextual information (e.g. costs, practicality, public sensitivity). Semi-structured interviews were held with six participants interested in discussing their survey responses in more detail. Results: The survey was completed by 92 individuals, comprised mainly of policy analysts (32.6%), policy advisors (32.6%), and program managers/directors (15.2%). Most participants had previously read a systematic review (73.9%), and 37.8% had used evidence from a SR-MA to inform a policy. Given a choice between the four formats, the three-page summary with contextual information was the preferred resource to inform policy (50.5%). Conclusions: We found a high awareness about SR-MAs and other knowledge synthesis methods among participants in this study. The results indicate that disseminating evidence from SR-MAs in more user-friendly formats can maximize its potential uptake by end-users.

P2.075
Evidence-based approaches for evidence dissemination in Cameroon

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Background: The Centre for Development of Best Practices in Health (CDBPH) in Yaounde, Cameroon is a knowledge translation unit that collects, synthesizes and communicates relevant evidence to stakeholders in user-friendly formats. Objectives: In collaboration with the Effective Health Care Research Consortium (EHRC) we sought to promote evidence-based decision making in the health sector by improving the generation, use and uptake of high quality health research evidence related to developing countries, over 5 years. Methods: We used email and door-to-door priority setting with Ministry of Health staff and other stakeholders; systematic review workshops with researchers; supporting authors of Cochrane Reviews; evidence-based-practice workshops with clinicians, journalists and civil society organisations; translation and dissemination of Cochrane Review summaries, evidence assessments and the creation of evidence-based-medicine (EBM) task forces within selected hospitals in Cameroon. Results: The door-to-door priority setting exercise was the most fruitful, with a three-fold response rate compared to email. After 2 years, three protocols and one review have been completed. Thirty seven locally-relevant Cochrane Review summaries have been translated into French in collaboration with the French Cochrane Centre. Eight bilingual evidence summaries have been produced and four functional EBM task forces have been created. Four workshops targeting a variety of stakeholders (journalists, civil society organisations, researchers, clinicians) have been held. Conclusions: Setting priorities with stakeholders enhances end-user participation. Door-to-door priority setting is very effective in our setting and should be encouraged for activities with a potential for low response. Collaborating with other centres is necessary to avoid duplication of translation efforts. Engaging a wide variety of stakeholders in the generation of evidence augments uptake and use.

P2.076
Cochrane Public Health Group South Asian satellite-Public Health Evidence South Asia (PHESA): early experience

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Background: Public Health Evidence South Asia (PHESA) is a new initiative started in January 2013 aiming to meet the public health evidence needs of the South Asia region. The initiative, which is part of a satellite of the Cochrane Public Health Group, is based within Manipal University and approved by the Cochrane collaboration registration and monitoring group. PHESA is the outcome of more a years of deliberations, meeting, video conferences etc. It is centered in Manipal led by Prof.Sreekumaran Nair (Dr. TMA Pai Endowment Chair in Systematic Reviews and Evidence Based Public Health, & Statistical Editor, CPHG) and Dr Ruhi Saith (Senior Consultant, Oxford Policy Management & Developing Countries Editorial consultant, CPHG). Objectives: The major task of PHESA is to build capacity to address South Asia evidence priorities in the domain of public health. The satellite plan includes mentoring reviewers for Public Health reviews, production of review relevant to south Asian region, translation of the knowledge into policy through network of govt. and local level institutions.Primary research including methodological development is also another objective. Methods: The whole initiative is based on
mentoring approach. We identified different set of people for this mentoring. A group of 15–20 young medical students have been identified for the systematic review appreciation programme. Another group of similar number of medical faculty have been identified for evidence creation and translation. A group of experience systematic reviewers have been identified for mentoring these new mentees. Now we are contacting a group of senior public health policy makers to get relevant questions into place. We connect these mentees and mentors. We are in the process of exploring funding for the mentoring programme. Results: Our initial experience provide confidence that the programme will work and PHESA will be a successful attempt.

Conclusions: Our initial work givel confidence of success.

P2.077
Should the PRISMA statement be fully qualified to report an updated meta-analysis? A case report

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Background: The PRISMA statement (preferred reporting items for systematic reviews and meta-analyses) was developed to provide the reporting guidelines for reviewers of systematic reviews (SR) or meta-analyses (MA), to improve clarity and transparency of SRs. On the other hand, Meta-analyses are commonly updated when new trials appeared, or authors of Cochrane Reviews are suggested to update the reviews every second year. However, it might be a question whether it should be fully qualified to report an updated MA/SR. Objectives: To evaluate a published updated MA using the PRISMA statement and put forward the questions. Methods: An updated MA was included (The Lancet Oncol 2011; 12: 681–692), 27 items of the PRISMA statement were concerned by using ‘point-to-point’ method to evaluate its clarity and transparency. A table, included the 27 items, was showed to put forward the questions. Results: The evaluated results and our concerns were showed in Table 1. Conclusions: The PRISMA statement might be not fully qualified when it was used to guide the reporting of an updated MA/SR.

Attachments: table 1.pdf

P2.078
Logic model templates for systematic reviews of complex health interventions

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Background: Complex interventions are commonly encountered in health service, public health and social welfare and present significant challenges when conducting systematic reviews. Logic models, originally developed in the field of programme evaluation, can be useful at every stage of the process of a systematic review, from scoping to defining and conducting the review to communicating the results. While various templates of logic models for programme evaluations exist, no such templates have been developed for systematic reviews. Objectives: To develop two different logic model templates for systematic reviews of complex health interventions, focusing either on the underlying systems (systems-based logic model) or the processes involved (process-orientated logic model). Methods: We conducted literature reviews on complex interventions, conceptual frameworks and logic models and the use thereof in systematic reviews, and contacted experts for additional information. We developed logic model templates based on the traditional PICO framework; and informed by various templates on logic models for programme evaluations as well as the current use of logic models in systematic reviews. Results: The systems-based logic model template allows authors to focus on the system into which the intervention is introduced, by considering underlying theories, assumptions and contextual factors that play a role in the relationship between the intervention and the outcomes. The process-orientated logic model template focuses on the components and implementation of the intervention, the different levels of outcomes and the multiple causal pathways and relationships that exist between them. Conclusions: The two logic model templates are useful tools for authors of systematic reviews, because they provide a structured framework that considers critical factors and pathways influencing the effectiveness of the intervention. This template will be tested across multiple systematic reviews of complex interventions and revised as needed.

P2.079
Challenges of complex interventions: a worked example

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Background: Complex interventions pose significant challenges for Cochrane Reviews, especially when there is lack of consensus in a particular field with relatively little experience or commitment to RCTs. In a review of a widely used complex intervention we found five RCTs but little agreement on how the interventions were described or the outcomes selected. Objectives: To demonstrate a systematic approach to managing a complex intervention in a Cochrane Review. Methods: We compared interventions and outcomes from five RCTs by mapping components to a conceptual model (derived from theory) developed for the protocol and by applying common Cochrane approaches to minimise bias. Outcomes were grouped into categories to increase the potential for meta-analyses. Results: The evidence generated by the review was low to medium quality due to methodological weaknesses in the included studies. However all components in the conceptual framework were addressed and outcomes for all primary outcomes were identified. The conceptual framework provides the basis for further work to establish agreement on the core components of the intervention and how the intervention can be evaluated in future trials. Conclusions: The processes of the review provided the means to develop a robust framework that will be used to develop consensus on how a complex intervention will be described and evaluated in future studies.

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P2.080
Development of a quality appraisal tool for case series studies

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Background: Health technology assessment (HTA) researchers are often confronted with situations where only case series studies (CSs) are available; however, no universally accepted validated tool exists for assessing the methodological quality of these studies. Objectives: To describe the processes of developing a quality appraisal checklist for CSs. Methods: An initial broad list of 30 criteria was compiled through a limited search of the literature. Six HTA researchers from Canada, Australia and Spain participated in a modified Delphi study to develop the checklist. The checklist culled to 18 criteria was updated through an additional search of newly published checklists. An explanatory dictionary was developed for each of the final 20 criteria and the resultant tool was piloted in a number of HTA reviews. Results: A four-stage e-mail-based process culled an initial list of 30 criteria to a more 'user friendly' 18-criteria checklist. Two new criteria were added later to the checklist (i.e. prospective study design and blind assessment of outcomes) based on the literature review of other CSs checklists. First-hand experience with the checklist and its dictionary indicated a general level of satisfaction by the researchers. Suggestions were made to improve the clarity and feasibility of the checklist and the dictionary. Conclusions: This comprehensive checklist and dictionary was considered a valuable tool by its initial users, although it may not include all the criteria seen to be crucial for assessing methodological quality of CSs by reviewers outside of the HTA field. Reviewers involved in the appraisal process should determine which of the 20 criteria are essential in accordance to the specific condition and technology under review. The dictionary may also need to be customized for each review. The process of validation of the tool is continuing.

P2.081
Using a combined realist and socio-ecological approach to integrating quantitative and qualitative systematic review evidence in a health technology assessment setting

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Background: Systematic reviews of the effectiveness of interventions can be complemented by including qualitative evidence. While the Cochrane handbook offers guidance, many methods for synthesising and integrating qualitative evidence exist and integrated reviews remain rare. Objectives: To describe the process used for conducting an integrated systematic review of evidence-based management strategies for treating obesity in men. Methods: Quantitative and qualitative researchers met weekly, with regular feedback from a UK service user group, to identify and link data. We used quantitative pooling where possible and narrative synthesis of the clinical, process and cost effectiveness data. Deductive and inductive approaches guided qualitative data analysis, with coding of data in a thematic index according to a priori or emergent themes. We compared and contrasted qualitative and quantitative findings both within and between studies, and within epistemological disciplines. Results: We included 31 randomised controlled trials, 16 non-randomised studies and five economic evaluation studies in our quantitative reviews. We included 22 qualitative studies linked to interventions. Few included quantitative studies reported qualitative data or were linked to qualitative publications, even where it was clear qualitative work had been conducted. We developed an emergent logic model (see Fig. 1) for conducting the integrated synthesis. We identified key social determinants for obesity along with important motivators, barriers and facilitators for engagement with obesity interventions. Conclusions: Integrated reviews offer invaluable contextual socio-economic and cultural information for those designing public health interventions. Including qualitative evidence in our review provided valuable insights for identifying factors associated with the effectiveness of obesity interventions. Conducting an integrated review proved time consuming and the extent of our integration was limited due to paucity of linked quantitative and qualitative evidence. Clearer guidance for conducting integrated reviews according to different research questions could be useful.

P2.082
What is the current situation of the published N-of-1 trial?

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Background: An N-of-1 trial is a clinical trial in which a single patient is the entire trial, a single case study. It can be very effective in confirming causality. This can be achieved in many ways. However, there is no clear the epidemic characteristics of N-of-1 trial. Objectives: To survey the current situation of N-of-1 trial and provide related information on published year, author, country, journal, annual citation information, the type of literature of N-of-1 trial. Methods: An electronic literature search of all N-of-1 trial from inception to February 2013 was conducted using Web of Science. Using the following search terms ‘randomized controlled trial in individual patient, single case experiment, N-of-1 trial, N-of-1 RCT, N-of-1 study’ in the title or keyword. Two reviewers independently determined study eligibility and extracted details on published year, author, country, journal, annual citation information, the type of literature. Disagreements were resolved by the third author. Results: 111 studies were included, table showed that the frequency and of citations of N-of-1 trial in each year, published studies in different country and type of literature; 1 journal published 4 N-of-1 trials, 2 journals published three N-of-1 trials, nine
journals published 2 N-of-1 trials, 83 journals only published 1 N-of-1 trial; top 6 research areas were as follows: 19.82% N-of-1 trials focused on neurosciences neurology, 14.41% for psychology, 13.51% for general internal medicine, 10.81% for pharmacology pharmacy, 9.01% for rehabilitation, 7.21% for health care sciences services; As well as, 365 authors wrote 111 papers, the average citations per paper was 11.25, average citations per year was 46.26, the h-index was 19.

Conclusions: More and more N-of-1 trials are published in different journals and focus on different research areas, which methodology is still in the development stages. Therefore, undertake further research to increase methodological transparency, develop reporting standards, and report the methodological limitations of N-of-1 trials.

Attachments: N-of-1 trial.PDF

P2.083
IPD meta-analyses are important to improve evidence-based decisions in the geriatric population

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Background: In a meta-analysis of individual patient data (IPD), original trial data may be used to analyse the effects of an intervention in a particular subgroup. IPD meta-analyses may, therefore, be a helpful method to generate evidence that is more applicable to the geriatric population, which may have treatment effects that differ from a younger population. Objectives: To provide an overview of treatment differences between the older and younger patients based on meta-analyses on an IPD-level. Methods: A MEDLINE search was conducted for IPD meta-analyses of randomized controlled trials (RCTs) published before July 2012. IPD meta-analyses involving patients with a mean age of ≥ 70 years or describing a subgroup in this age range were included. We evaluated whether the IPD meta-analyses reported similar conclusions for both the younger and older populations. Results: Twenty-six IPD meta-analyses with a subgroup of older individuals were included (median N = 3,581). The most important reason for applying the IPD methodology was the ability to perform a subgroup analysis in the older population, as well as multivariable analysis with additional patient characteristics (e.g., different tumor parameters or type of drug). Fourteen IPD meta-analyses suggested that older people should receive distinct treatments compared to younger people due to differences in effectiveness, whereas eight reviews indicated that the investigated treatment(s) should be avoided or adjusted in older patients. However, in six reviews the investigated treatment was more effective in older than younger patients. Conclusions: IPD meta-analysis is a valuable approach for generating evidence for older patients. In 54% of the included IPD meta-analyses, treatment effects differed between older and younger patients. The collaborative sharing of raw data should be promoted and facilitated to improve evidence-based decisions in the growing population of older and more vulnerable patients in our society.

P2.084
A practical taxonomy proposal for systematic reviews of therapeutic interventions

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Background: No consistently used terminology is currently available to classify systematic reviews of therapeutic interventions according to their aim, their methodological rigor and the conclusiveness of their results. Some researchers consider systematic reviews to be merely observational studies, as in contrast to confirmatory randomized controlled trials (RCTs), all data used for the evidence synthesis are already available. This assumption results in the paradox that a high-quality RCT is qualified for drawing confirmatory conclusions, but a high-quality systematic review containing the same RCT together with other high-quality RCTs, is only qualified for generating hypotheses.

Objectives: To avoid the paradox described above, a new taxonomy for systematic reviews of therapeutic interventions is proposed, taking into account the research question as well as the impact of methodological and outcome issues on the value of the systematic reviews. Methods: Different uses of systematic reviews and common sources of variability regarding the methodological rigor of systematic reviews and the resulting implications are discussed. Criteria to assess whether the results of systematic reviews allow firm conclusions regarding the considered therapeutic intervention are summarized.

Results: In a first step the proposed taxonomy discriminates between exploratory and analytic systematic reviews considering their aim and methodological rigor. Furthermore, the new taxonomy avoids the paradox that a systematic review is on the one hand regarded merely as an observational study, but on the other hand considered to be the highest evidence level, but on the other hand regarded merely as an observational study.

P2.085
Survey of the reporting characteristics of systematic reviews in rehabilitation

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Background: Systematic reviews (SRs) have become increasingly important for informing clinical practice; however, little is known about the reporting characteristics and the quality of the SRs relevant to practice of rehabilitation health professionals. Objectives: To examine the reporting quality of a representative cross-sectional sample of published SRs on rehabilitation. We specifically focused on the descriptive, reporting and bias-related characteristics. Methods: We searched Medline for aggregative and configurative SRs indexed in 2011 focused on rehabilitation as restoring of functional limitations, written in English. Two reviewers independently screened and selected the SRs and extracted data using a 38-item data collection form derived from PRISMA. The data were analyzed descriptively. Results: We sampled 88 SRs published in 59 journals, with most journals publishing only one Sr. Eight were Cochrane Reviews (10%). Nearly half [41/88 (47%)] of SRs were focused on musculoskeletal and connective tissue diseases followed from neurological diseases. Over two-thirds of SRs assessed the quality of primary studies (74/88 [84%]). One-third of the studies included a meta-analysis. All Cochrane Reviews included only randomized controlled trials (RCT) whereas 45% of non-Cochrane Reviews used also other designs. Half of the Cochrane Reviews reported a statistically favorable result for the primary outcome, whereas only 11% of non-Cochrane Reviews did so. Both non-Cochrane (83%) reviews and Cochrane Reviews (100%) assessed dimensions of risk of bias (e.g. allocation concealment). Conclusions: Our sample of SRs in the rehabilitation field shows heterogeneous characteristics and a moderate quality of reporting. Poor control of potential source of bias might be improved if more widely agreed upon evidence-based reporting guidelines will be actively endorsed and adhered to by authors and journals.

P2.086
Implementing a HTA-unit in a university-affiliated child welfare agency: the challenge of adapting the medical model of HTA to the social services context

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Background: Health technology assessment (HTA)-units has originally emerged from the medical domain, were systematic reviews (SR) of randomized-controlled trials (RCT’s) are commonly done. Recently, HTA-units have started to be implemented in the social services context; in the province of Quebec, Canada, it’s implementation is mandatory for every university-affiliated agencies. This situation appears quite unique and requires different adaptations of the medical model of HTA, in order to meet the specific needs of the social services context. For example, far less RCT’s are performed in the social literature, mainly for ethical reasons, but also because RCT’s cannot answer numerous questions emphasizing more the process than the outcome, a major concern in social sciences. Consequently, SR of observational studies are more common in the social context; but is it possible to perform them using the typical methodology and the usual quality assessment tools? Objective: This presentation addresses the challenges of implementing a HTA-unit in a University-affiliated child welfare agency, and the necessity to adapt the medical model of HTA in at least two ways: (1) the structure of the unit; (2) the way SR are carried out, including the pertinence of quality assessment tools. As an example, we will present the process of doing a meta-analysis (MA) of observational studies in our social HTA-unit, with a particular focus on the available quality assessment tools. Results/Discussion: The challenges of implementing a HTA-Unit in the social services context will be discussed. We propose that the paucity of quality assessment tools available and pertinent for observational studies raises the question of its actual pertinence in this context. As MA allows to do moderator analysis, including methodological variables, we suggest that it can represent an interesting way of doing high quality systematic reviews in social sciences.

P2.087
Intervention Now To Eliminate Repeat Unintended Pregnancy in Teenagers (INTERUPT): multiple integrated review method exemplar

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Background: The UK has the highest rate of teenage pregnancies in Western Europe, resulting in significant emotional, psychological and educational harm, often with enduring effects on life chances for mothers and babies. In this review we use a structured, innovative and iterative methodological approach to address a complex topic; reducing unintended repeat pregnancies. Objectives: With the aim of informing policy makers, objectives are: • To quantify the evidence for interventions used and estimate which are effective, how they work, in what setting, and for whom • To determine who is at greater risk of repeat unintended pregnancies • To identify the barriers and facilitators to intervention uptake • To estimate the cost-effectiveness of interventions. A parallel aim is to further develop mixed method review methodologies. Methods: We will conduct a mixed-method systematic review to examine world-wide literature on repeat teenage pregnancies (Fig. 1). Traditional database searches will be augmented by targeted searches for evidence ‘clusters’ (qualitative studies, programme evaluations, etc. associated with effectiveness studies). A mapping exercise will be undertaken to describe the literature, identify evidence gaps, and provide a context for interpreting the results and a basis for refining the scope of the review. We will be guided by experts and stakeholders including teenage parents. Where clinical homogeneity and data exists quantitative methods will be used to summarise the evidence. These will include meta-analyses of incidence of pregnancy, and the effectiveness of interventions. We will also carry out a meta-regression to explore possible effect modifiers. The qualitative data addressing facilitators and barriers to uptake (feasibility), experience (appropriateness), and acceptability (meaningfulness) will synthesised thematically. We will apply the principles of realist synthesis to evidence of theories and mechanisms underpinning interventions (what works, for whom and in what
context). Finally we will conduct an overarching narrative synthesis and interpretation of findings.

Attachments: Figure 1.pdf

P2.088
Treatment of quasi-randomised trials in Cochrane Reviews

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Background: In some Cochrane Reviews the authors claim to exclude quasi-randomised trials (qRCTs). This is contrary to guidance in the handbook and is futile as many reports of trials just state participants were randomised without enough information about how this was done. Objectives: To determine how many authors specify that they exclude quasi-randomised trials from Cochrane Reviews, and what review group instructions say. Methods: A random sample of 300 Cochrane Reviews was selected and the methods scrutinised to see if qRCTs were excluded. Details of all review groups were read to determine policies regarding qRCTs. Results: Forty-seven of the 300 stated that qRCTs were excluded (15.7%, 95% CI 11.7–20.3%). In addition, of the remaining 253 trials, 138 simply stated that RCTs were included (54.5%, 95% CI 48.2–60.8%). In these it was unclear whether this referred to securely randomised trials only. One Cochrane Review group states in their suggested methods that qRCTs should be excluded, and six suggest that they should only be included if there are only a few or no RCTs, or only for adverse effects. Seven review groups say that RCTs should be included with no further elucidation so it is unclear whether they would like qRCTs to be excluded. Conclusions: Contrary to the advice in the handbook many Cochrane Reviews attempt to exclude qRCTs and some review groups support this. Many reviews and groups are unclear with respect to qRCTs. While it is a good idea to use only trials at low risk of bias this is unlikely to be achieved by excluding qRCTs that are the better reported ones.

P2.089
Using GRADE to evaluate the quality of evidence in systematic reviews about Chinese traditional medicine

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Background: Some systematic reviews about Chinese traditional medicine have been produced in China. However, little is known about the quality of evidence they provided. Objectives: Using GRADE to assess the quality of evidence in systematic reviews about Chinese traditional medicine. Methods: We selected the systematic reviews about Chinese traditional medicine to cancer as our sample. The mesh terms ‘meta-analysis’ and ‘systematic review’ were used to search the Chinese Biomedicine Literature Database (CBM) up to September 2012. And the systematic reviews about Chinese traditional medicine to cancer were screened and included to analyze. Each systematic review was independently identified and evaluated by two reviewers, and discussed with the third member when disagreement appeared. Results: 67 relevant articles including 295 outcomes were included. 1 (0.3%) outcome was rated as high quality, 55 (19.6%) as moderate, 157 (53.2%) as low, and 82 (27.8%) as very low (Fig. 1). The quality was downgraded for study limitations (93.2%), imprecision (22.7%), inconsistency (17.3%), publication bias (90.5%), and indirectness (0.7%). Conclusions: Most evidences in systematic reviews about Chinese traditional medicine to cancer were low or very low. Study limitations were the major factors for downgrading evidence.

P2.090
Evidence synthesis of implementation studies in health research: a systematic scoping review of methodological approaches

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Background: The synthesis of implementation studies in health research to identify shared messages would be helpful in understanding the issues that prevent or slow effective implementation of evidence based health recommendations. There are no published methodological guidelines for best practice for evidence synthesis in this area. Objectives: To identify and explore methods used to synthesise evidence from implementation studies in health research. Data Sources: Medline, Embase, CINAHL, HMIc, The Cochrane Library, relevant websites including KT+ and KT exchange, forward and backward citation searches for all included papers. Methods: All evidence syntheses of implementation studies in health research with explicit, predefined and reproducible methods were included. Study selection was performed by two reviewers independently; quality appraisal (using AMSTAR or a bespoke instrument based on ENTREQ) and data extraction were performed by one reviewer and checked by a second. All disagreements were resolved by discussion with arbitration where necessary. For each included review, details of the methodological process were extracted and tabulated. Results: Electronic searches identified 3106 unique references. Final study selection processes are near to completion and we anticipate in the region of 140 included papers; approximately two-thirds of which were published in the last 5 years. There is a wealth of published evidence syntheses of implementation studies from a broad spectrum of health research; from regulation and policy to clinical practice. Systematic review of quantitative data from studies of the effectiveness of implementation, knowledge translation and improvement strategies and process evaluations was the predominant methodological approach. Other approaches included the qualitative synthesis of barriers and facilitators to implementation, realist synthesis and the consideration of the determinants of behaviour change. Conclusions: The synthesis of implementation evidence is an area of increasing focus. Establishing guidelines for methodological best practice and reporting that encompass both quantitative and qualitative approaches to synthesis is warranted.

Attachments: fugure1.jpg
P2.092

Rapid evidence reviews: the CADTH experience

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Background: Constant, rapid, and often expensive advances in medical technologies make evidence-based information essential in healthcare decision-making. While comprehensive systematic reviews are used to support many deliberations, the urgency of some decisions requires a more immediate response. To support these decisions, CADTH offers a range of products through its Rapid Response Service.

Objectives: The objective of CADTH’s Rapid Response Service is to provide Canadian healthcare stakeholders with timely, relevant evidence to support informed decision-making. Methods: Rapid Response topics are requested by CADTH customers. Modified review techniques accommodate accelerated evidence synthesis and can be tailored to the decision-makers’ needs. Recently, for more in-depth reviews, a one-page plain language Report-in-Brief is prepared in English and French and posted with the full report on the CADTH website. HTML coding and keywords are assigned to ensure search engine optimization, and further dissemination efforts may be undertaken depending on the topic. Results: The Rapid Response service has continued to evolve. In 2012–2013, 233 reports were produced with 65% addressing a question on non-drug health technologies. A variety of report types are available—from reference lists to summaries with critical appraisal—however in recent years more requests for the latter may indicate that these reports represent the ideal balance of rigour and timeliness for decision-makers. Customer evaluations of the reports and the Reports-in-Brief have demonstrated the success of the program. Conclusions: Using rapid review techniques, CADTH ensures our customers have the evidence they need in time to help with their decision-making processes about drugs and health technologies. Through knowledge mobilization techniques we assist our customers to effectively share information with their teams while also broadening the reach of our reports. Improvements to the rapid review methodologies and processes will continue to be made based on our evaluations and advances in the field.

P2.093

Improving practice: Rx for Change - an intervention research database for healthcare decision-makers and researchers

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Background: Improving health care often requires changing the behaviour of healthcare professionals and consumers. While there is abundant evidence available on the effects of behaviour change strategies across diseases, populations and systems, it is difficult for decision-makers and others to reliably access and assess. The Rx for Change (www.rxforchange.ca) database attempts to close the gap between research discovery and program implementation by gathering and translating the evidence from systematic reviews into a single accessible package to inform healthcare decision-makers.

Objectives: To describe the Rx for Change database and disseminate evidence gathered on the effectiveness of interventions designed to change professional practice and medicines use by consumers. Methods: We identify, analyse, summarise and report our findings from included systematic reviews using standardised methods. We organise and present this data using a multi-layer format. Using intervention

P2.091

Development of an innovative theory-based instrument to assess the impact of continuing professional development activities on clinical practice

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Objectives: To present the development of a theory-based, reliable instrument to assess the impact of accredited CPD activities on clinical practice.

Methods: After a systematic review and analysis of existing instruments assessing healthcare professionals’ intentions and behaviours, an inventory of instruments based on social cognitive theories was created. Items most relevant to the constructs of an integrated theoretical model were selected from this inventory to devise a new tool. An e-Delphi study with experts from different domains was conducted to check its face validity and likely acceptability in CPD settings. A test-retest validation was done with end-users.

Results: We identified 47 eligible instruments with 1218 items. These items were reclassified into the eight constructs of an integrated theoretical model for the study of healthcare professionals’ intentions and behaviours. Through an interactive process, 61 items were selected to compose the preliminary tool. Following an e-Delphi process, a generic questionnaire with 40 items was created. By completing the 40-item questionnaire at the end of a CPD activity (test), 138 physicians indicated their agreement to participate in the validation study. The same questionnaire was completed 2 weeks after by 121 participants (retest). Exploratory factorial analysis allowed an item reduction process resulting in a 12-item questionnaire. The Cronbach α coefficient of a global score was determined for each construct of the integrated model. Values varied from 0.77 to 0.89.

Conclusions: We propose a new instrument for assessing the impact of CPD activities on physicians’ clinical practice. Before its implementation on a large scale, further studies are needed to validate its ability to predict intentions and behaviour and its sensitivity to change in response to CPD activities.
categories developed by two Cochrane Review groups, we provide summaries of the evidence found for each intervention, list all systematic reviews that address each intervention topic with corresponding quality scores, describe and summarise results and conclusions from each individual review, and provide links to the reviews and their trials. Results: Updated eight times since 2007, the database contains summaries of key findings for 310 systematic reviews, and summaries and statements of effectiveness for 39 intervention categories the reviews addressed. Examples of particularly effective interventions include distribution of educational materials and use of educational meetings to improve professional practice, as well as use of decision aids to minimise risks or harms to improve consumers’ use of medicines. Research gaps are evident in 11 intervention categories. Conclusions: Rx for Change is an internationally recognised, publicly available intervention research database. It provides up-to-date evidence to guide healthcare decision makers towards effective intervention strategies. Guidelines and other policy, program and research initiatives can potentially be informed by this resource.

P2.094
The Canadian Association of Pediatric Surgeons Evidence-Based Resource: improving patient care and maximizing the use of research resources

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Background: There is a lack of good-quality, empirical evidence in the field of pediatric surgery. Even when such evidence exists, it must be disseminated, accepted and applied in order to improve the care of pediatric surgical patients. Objectives: Our objective is to encourage evidence-based practice and direct research efforts to areas where evidence is lacking in the field of pediatric general surgery. We will do this by establishing a regularly-updated resource summarizing the best available evidence in this field, accessible by medical students, residents, fellows, and surgeons worldwide through the Canadian Association of Pediatric Surgeons (CAPS) website. Methods: 1. Identify areas of controversy in the field of pediatric surgery using the Delphi method. 2. Conduct an extensive literature search for primary research and reviews in each identified area. 3. Summarize the available evidence for each area. 4. Classify the amount and quality of evidence for each area. 5. Suggest research topics where good evidence is sparse. 6. Regularly update the website as new evidence emerges. 7. Measure the impact. Progress: Data collection began in November 2012. We have completed one topic and have begun gathering evidence for another. We will continue to cover topics, in an order determined by the average number of each type of surgery performed by residents each year (i.e., more common surgeries will be covered first). The website where we will present the evidence will be available to the public shortly as a link on the main page of the Canadian Association of Pediatric Surgeons (CAPS) website: http://www.caps.ca. Impact: This website will improve patient care by providing an up-to-date, evidence-based educational resource for students, residents, fellows and surgeons. It will also help to identify areas where further research is needed, facilitating the formation of good research questions and preventing duplication of research efforts.

P2.095
Experiences and attitudes toward evidence-informed policy-making among Canadian research and policy stakeholders working at the interface of agri-food and public health

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Background: Policy-makers working at the interface of agri-food and public health often deal with complex and cross-cutting issues that have broad health impacts and socio-economic implications. They have a responsibility to ensure that policy-making based on these issues is accountable and informed by the best available scientific evidence. Objectives: We conducted a qualitative descriptive study of agri-food public health policy-makers and research and policy analysts in Ontario, Canada, to understand their perspectives on how the policy-making process is currently informed by scientific evidence and how to facilitate this process. Methods: Five focus groups of three to seven participants and five one-to-one interviews were held in 2012 with participants from federal and provincial government departments and industry organizations in the agri-food public health sector. We conducted a thematic analysis of the focus group and interview transcripts to identify overarching themes. Results: Participants indicated that the following six key principles are necessary to enable and demonstrate evidence-informed policy-making in this sector: (1) Establish and clarify the policy objectives and context; (2) Support policy-making with credible scientific evidence from different sources; (3) Integrate scientific evidence with other diverse policy inputs (e.g. economics, local applicability, and stakeholder interests); (4) Ensure that scientific evidence is communicated by research and policy stakeholders in relevant and user-friendly formats; (5) Create and foster interdisciplinary relationships and networks across research and policy communities; and, (6) Enhance organizational capacity and individual skills for evidence-informed policy-making. Conclusions: Ongoing and planned efforts in these areas and a supportive culture in both research and policy realms are important to facilitate evidence-informed policy-making in this sector.

P2.096
Effects of decision aids on the accuracy of patient knowledge of outcome probabilities: an investigation of sources of heterogeneity

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Background: Interpretation of prior meta-analysis of randomized controlled trials (RCTs) evaluating patient decision aid effects on the accuracy of knowledge of outcome probabilities is complicated by high, unexplained heterogeneity. Objectives: To explore effect modification
from three possible sources of heterogeneity: the type of control intervention, decision aid quality, and patients' baseline knowledge of probabilities. Methods: A sub-analysis of studies identified in the 2011 Cochrane Review on decision aids for people facing treatment and screening decisions was conducted. Additional unpublished data were requested from relevant study authors to maximize the number of eligible studies. RCTs (to 2009) comparing decision aids with standardized probability information to control interventions (lacking such information), and assessing accuracy of patient knowledge of outcome probabilities were included. Proportions of patients in each group with accurate knowledge of outcome probabilities were converted to relative effect measures. Instrument quality was assessed using the IPDAS instrument. Results: Main effects analysis of 17 eligible studies confirmed decision aids significantly improve accuracy of patient knowledge of outcome probabilities [$RR = 1.80 (1.51, 2.16)$], with substantial heterogeneity (87%). Meta-regression indicated the control event rate (CER, reflecting baseline knowledge) is a significant effect modifier ($p = 0.001$), with over half the variability in ln(OR) explained by the linear relationship with logit Control ($R^2 = 0.52$); this relationship was slightly strengthened after correcting for dependence of the effect measure on CER. The decision aid quality measure suggests potential effect modification ($p = 0.037$) accounting for some variability ($R^2 = 0.28$). Conclusions: Patients' baseline rate of knowledge of outcome probabilities is an important variable explaining heterogeneity of decision aid effects on improving accuracy of this knowledge, with greater relative effects observed when patients' baseline rate of knowledge is low. This may indicate that decision aids are most effective in populations with low awareness.

P2.097 Profile of overviews published by the Cochrane Library

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Background: Cochrane Overviews present a new concept for facilitating the access to results of multiple Cochrane Reviews about a particular medical condition, being considered a ‘friendly front end’ to The Cochrane Library. Given the growing number of Systematic Reviews (SRs) published, researchers’ interest to conduct Overviews tends to increase in coming years. The Cochrane Collaboration is pioneer in conducting Overviews with rigorous methodology as proposed in Chapter 22 of Cochrane Handbook for Systematic Reviews of Interventions. Objectives: To conduct a survey and analysis of the number of Overviews and Overview’ protocols published to date in the Cochrane Library. Methods: A search was conducted in The Cochrane Library with the term ‘Overview’ and 77 studies were identified. The titles and abstracts were evaluated by two authors (MBC e ALCM). The data of completed Overviews were extracted according to: Editorial Group, year of publication, number of included SRs and the tool utilized to analyze the methodological quality of these. Graphs with numbers and dates of publication of Overviews and of protocols were made in order to ascertain the number of this study so far. Results: We selected 9 completed Overviews and 20 protocols. The data extracted from published Overviews are shown in Table 1. Eight Cochrane Editorial Groups have nine Overviews published, with first publication in 2009. Six Overviews included only Cochrane SRs. Eight Overviews used the AMSTAR tool for methodological quality assessment of SRs included. The analysis of production of Overviews and its protocols is presented in Figures 1 and 2. Conclusions: According to the last 4 years, the development of Overviews is on the rise. Given the practicality and relevance of conducting Overviews for decision making in health problems, its methodology should be disseminated to check which interventions are scientifically proven with clinical significance to health care.

Attachments: Table 1.pdf, Figure 1.pdf, Figure 2.pdf

P2.098 The theory of planned behaviour applied to shared decision making behaviours: a systematic review

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Background: Adoption of shared decision making (SDM) requires behaviour changes in health professionals. The Theory of Planned Behaviour (TPB) widely used to provide theoretical underpinnings for understanding such behavioural changes. Objectives: We systematically reviewed studies that used the TPB to assess SDM-related clinical behaviours in health professionals. Methods: We searched PsycINFO, MEDLINE, EMBASE, CINAHL, Index to Theses, ProQuest dissertations and Current Contents for all years up to April 2012. The search terms were (Planned behaviour OR intention) AND (Health professional). We included all studies in French or English that used the TPB and/or the TRA to assess SDM-related clinical behaviours in health professionals. Results: Out of 12388 titles, we assessed 136 full-text articles for eligibility. We kept 20 eligible studies, all published in English between 1996 and 2012 (Cohen’s kappa = 0.78). Studies were conducted in Canada (n = 8), the USA (n = 6), the Netherlands (n = 3), the United Kingdom (n = 2) and Australia (n = 1). The SDM behaviours most often measured in a clinical context were ‘sharing knowledge and making recommendations’ (n = 9) and ‘clarifying the patient’s values and preferences’ (n = 8). The most frequently reported psychosocial determinants of the intention to perform a behaviour were subjective norm (n = 11), perceived behavioural control (n = 11) and attitude (n = 10). Six studies measured behaviour alongside intention. Great variability was observed in regression coefficients between psychosocial variables and theoretical constructs of intention (range = 0.05–0.75) and behaviour (range = 0.28–0.56). Conclusions: The TPB is a valid theoretical framework for understanding health professionals’ behaviour in the context of SDM. Further research is needed to understand how intention is linked to behavioural change in this context.
P2.099
Better values clarification methods for better decisions
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Background: Shared decision making requires that decisions be grounded in patients’ values and preferences. However, people frequently express preferences and make choices that are at odds with their stated values. This suggests that, for shared decision making to reach its full potential, better values clarification methods are needed. Objectives: To test whether interactive online values clarification exercises developed through user-centred design could help better align treatment preferences with stated values. Methods: We conducted a between-subjects online randomized experiment in a demographically diverse US-based population (n = 2033, 46% male, 82% white, age range 18–68, 57% no college degree.) We first asked participants about their values relevant to colostomy versus death: if they had to choose, would they rather die or have a colostomy? Participants were then asked to imagine that they had been diagnosed with colon cancer. We presented evidence about 82% white, age range 18–68, 57% no college degree.) We first asked participants about their values relevant to colostomy versus death: if they had to choose, would they rather die or have a colostomy? Participants were then asked to imagine that they had been diagnosed with colon cancer. We presented evidence about as effective as long among all provider types and to patient satisfaction (p < 0.05). Patient satisfaction was associated with inclusion of patient readings, but not inclusion of a decision aid or other problem-specific educational material (included in 17/42 trials). SDM-related skills training was not associated with success. Variable use of terminology for patient education materials (PEMs) limits conclusions. Conclusions: Our results support the published review conclusion that PCC training is successful across trials. No training technique appears critical to success. Brief training is effective and appropriate for health care settings. Further investigation is required to differentiate the impact of SDM vs communication models with and without PEMs.

P2.101
Patient-centered care and shared decision-making: challenges and proposed approaches
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Introduction: Patient-centered care allows a shared and active involvement of patients and their families in clinical decisions, where individual patient characteristics, preferences, needs, and values are considered. Big challenges have been faced worldwide to enable the patient-centered care to become a common practice in private and public healthcare systems. Challenges and Proposed Approaches: Some authors consider that most evidence-based approaches must be at odds, as it focus on populations, and not on individual needs and values. Outcomes based on these attributes must be defined. Another challenge is how to minimize the information asymmetry. Clinical guidelines, technical reports, systematic reviews, and modeling results must be synthesized and translated to a friendly/accessible language. Risks, benefits and economic implications of each option for treatment should be clearly presented. By this way, the patient becomes more compromised with the consequences of his choice. Another challenge pointed by many authors is the poor relationship between patients and physicians. Physicians must be encouraged to improve the quality of relationship with their patients, which greatly determines both treatment outcomes, patient’s satisfaction, adherence to treatment and involvement, and costs. A crucial challenge implies in an dramatic change of paradigms. Shared decision-making should be systematically encouraged in public and private healthcare. For the former, new healthcare models should be designed and implemented through an active engagement of patients and consumers. Conversely, for the latter, all stakeholders, including the patients, should have active voice during the discussion of new reimbursement and coverage policies. Conclusions: A few countries have already found ways to face most of these challenges, but we’re still far away from an ideal world where sparse resources are rationally allocated in healthcare through a participative, shared, and patient-centered way.
P2.102  
The Grading of Efficacy-Effectiveness in Clinical Trials (GEECT): a modified PRECIS tool

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Background: When discussing treatment and talking about evidence, we refer to effectiveness (treatment that works under real-world conditions) and efficacy (treatment that works under ideal conditions). However, the use of these terms seems to be randomly chosen by the investigators who design clinical trials not reflecting the true purpose of the study. In addition, renowned educational institutions involved in Evidence-Based Medicine disseminate a very vague definition of these terms. The PRECIS tool was developed in 2009 with the aim of identifying the characteristics of clinical trials that distinguishes from pragmatic (effectiveness) and explanatory (efficacy) issues and to assist researchers in preparing their clinical trials. It is worthy to say that according to PRECIS, the classification of a clinical trial is not a dichotomy, i.e., there is a gradient between effectiveness and efficacy, therefore it is very difficult to conduct a clinical trial ‘purely’ pragmatic or ‘purely’ explanatory. However, it is unclear whether investigators when designing a clinical trial use PRECIS to help policy makers and health professionals to apply its results into their clinical practice. Objectives: To assess (i) whether clinical trials published in high impact journals in the last 3 years used the criteria proposed by PRECIS to differentiate between effectiveness and efficacy; (ii) to consider whether the clinical trials’ authors have made appropriately use of the terms effectiveness and efficacy according to a new score (0–10) and classification (high or moderate efficacy, high or moderate effectiveness) proposed by us, called the Grading of Efficacy-Effectiveness in Clinical Trials (GEECT).

Methods: A cross-sectional study of published randomized clinical trials from high impact journals mentioning the term effectiveness or efficacy was performed. We added to the PRECIS tool a score ranging from 0 (more efficacious) to 10 (more effective). Results: 842 randomized trials were analyzed by 19 investigators from different expertise areas. No clinical trials published in high impact journals in the last 3 years used the criteria proposed by PRECIS to differentiate between effectiveness and efficacy. The majority of the trials was classified as moderate effectiveness (51–75) and, they often did not match the term chosen by their own clinical trials’ authors. Conclusions: The GEECT classification based on the 0–10 score system facilitated the identification of a clinical trial’s application to real or ideal conditions, although the modified PRECIS tool is still highly subjective and can be easily misunderstood in their all domains according to each investigator’s own experiences, knowledge, and values. Furthermore, most clinical trials published in high impact journals in the last 3 years mistakenly use the terms effectiveness and efficiency, according to the GEECT tool, to illustrate the application of results in clinical practice making it difficult the development of health policies. More research are needed to establish the easiest and useful tool to (a) facilitate the applicability of the results in clinical practice; b) distinguish between pragmatic (effectiveness) and explanatory (efficacy) results and; (c) assist researchers in preparing and planning clinical trials. We also suggest that after the establishment of an ideal tool to determine the specific application of a clinical trial’s results (i.e., more about effectiveness or more efficacious), journals all over the world that publish clinical trials should request authors the submission of a quantitative score related to effectiveness or efficacy along with their full research article and, also publish a note with regards the effectiveness and efficacy scores to accompany the main text of a clinical trial.

P2.103  
Is clinically significant decisional conflict prevalent in primary care? A scoping review

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Background: Clinically significant decisional conflict (CSDC) refers to a decisional conflict that is likely to have harmful effects on a patient. Objectives: We aimed to explore the prevalence of CSDC reported in primary care studies by systematically reviewing published literature. Methods: We searched PubMed and Web of Science using the keywords ‘decisional conflict AND/OR decisional conflict scale’ up to February 2012. We included original studies conducted in primary care published in English or French. Eligible studies had to specify a threshold on the Decisional Conflict Scale (DCS) at which they considered a decisional conflict to be clinically significant, and the proportion of patients scoring above or below this threshold. Two reviewers identified eligible studies independently. We extracted study characteristics, the DCS version used (10 or 16 items), the threshold for CSDC and the proportion of patients above this threshold. Results: We found 386 potentially eligible studies, of which 262 had used the DCS. Only 12 studies (4.6%) met all inclusion criteria (Kappa coefficient = 0.87). All studies were published between 2006 and 2011, and were conducted in Canada (n = 4), the USA (n = 3), the UK (n = 2), Australia (n = 2) and Japan (n = 1). Most were conducted in English (n = 8) and used the 16-item DCS (n = 10). The most common clinical settings were maternal-fetal health (n = 5), vasectomy (n = 2) and cancer screening (n = 2). Seven studies used a DCS threshold of 25/100 to establish the prevalence of CSDC, while five used a threshold of 37.5/100. Reported prevalence of CSDC ranged from 1.9% to 72%, although the prevalence in most studies was between 20% and 60% (n = 9). Conclusions: Although decisional conflict is widely assessed in primary care, very few studies report the prevalence of CSDC in their population. Future studies are needed to explore the epidemiology of CSDC in primary care and establish a clear threshold for CSDC.

P2.104  
Decision aids from current systematic reviews for the clinical encounter

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Background: Although decision aids help communicate evidence to patients, their production is time consuming and often not based on the best available evidence. Linking decision aids to credible, current recommendations, such as those using the GRADE framework (Grading of Recommendations Assessment, Development and Evaluation), could both overcome these limitations and enhance dissemination of the evidence at the point of care. Objectives: To test the feasibility of automatically translating evidence summaries from systematic reviews into generic and interactive decision aids accessible on tablet computers for clinicians and patients in the clinical encounter. Methods: As part of the DECIDE project (http://www.decide-collaboration.eu), we developed a framework consistent with the International Patient Decision Aid Standards for translating evidence summaries from systematic reviews using the GRADE framework into decision aids. Using recently published evidence profiles, we implemented this framework in the MAGIC (MAking Grade the Irresistible Choice) application—a prototype electronic guideline authoring tool and publication platform, developed by our group, that can automatically display recommendations in multilayered formats. We are refining the presentation formats for the decision aids using an iterative process of brainstorming, stakeholder feedback, and user-testing in real clinician-patient encounters. Results: Our prototype can automatically translate a large number of GRADE recommendations and their supporting evidence summaries into electronic and interactive decision aids. Preliminary results of user-testing in real patient-clinician interactions suggest that these tools can be used at the point of care to facilitate communication of estimates of treatment effects, confidence in those estimates, and burden of treatment, resulting in decisions consistent with patients’ values and preferences. Conclusions: This study provides a proof-of-concept that evidence summaries using the GRADE framework can be automatically translated into interactive decision aids for the clinician encounter. These tools offer a potentially revolutionary method for enhancing shared decision-making using best current evidence from systematic reviews.

P2.105
Online access to personal health information as a key component of shared decision-making: a pilot study in severe mental illness

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Background: To pursue shared decision making, patients often request access to their medical records, yet doing so can be frustrating. E-health has the perceived advantages of cost efficiency, improved access and participation, and better service provision, but this is yet to be convincingly demonstrated in severe mental illness. Objectives: We aimed to test how a new software (Smartmed Medfile) affects access to medical records, and perceived benefits of such access. Methods: We recruited volunteers with severe mental illness and asked their clinicians to confirm suitability and safety to participate. With training they could view HoNOS scores, medication details, treatment plans and lab results. Kaupapa Maori research methods were used to ensure effective collection of data from Maori participants; these included a focus on individual and collective Maori identity in relation to accessing and sharing information. Results: Recruitment proved difficult. After 8 months of vigorous advertisement to over 600 eligible patients, 19 consented to participate, and of these only 4 completed the protocol of 6 months access. Most withdrawals were due to worsening mental health. Participants were chiefly interested in prescriptions, progress notes, details about involuntary hospitalisation, and direct communication with their clinicians. Conclusions: Access to personal health information is a patient priority and, in combination with evidence, optimizes informed participation in decisions regarding health care. Despite stated interest in access to their records, recruitment of patients to this study was difficult, with identified obstacles at the organisational, practitioner, and consumer levels. Although the current software system is easy to use and visually attractive, patients with severe mental illness appear to have limited use for it. Despite refinements in facilitating access, mistrust of researchers and a clinician culture of protecting consumers from ‘too much information’ is likely to retard adoption of such technology.

P2.106
New teaching and research activities of the Brazilian Cochrane Center

Brazilian Cochrane Centre, Brazil

Background: The Brazilian Cochrane Centre (BCC) has increased its efforts to disseminate the culture of evidence-based health (EBH) to the general public. Objectives: To report new activities implemented by the BCC. Methods: Over the last months, volunteer collaborators of the BCC have held meetings to implement, upscale or improve the activities described below. Results: • Basic Workshop: monthly, 1-day activity that introduces 20 students to the Cochrane Collaboration and how to develop systematic reviews (SR). • Advanced Workshop: monthly, 1-day workshop that helps 20 participants to advance their SRs, guiding them through title registration and protocol development. • Online course: introduces students to the main concepts of a SR (12 modules). • Improving translations: aiming to increase the proficiency of volunteers involved in the Portuguese translation of Cochrane abstracts and Plain Language Summaries. • Beginners’ Manual: based on our online course and the Cochrane Handbook, this booklet, written in Portuguese, guides researchers through the main steps involved in a Cochrane Sr. • Cochrane abstracts and Plain Language Summaries. • Handsearch: volunteers are being trained to manually review Brazilian journals not indexed looking for trials to be uploaded to CENTRAL. • New workshops: based on the demand of our workshop participants, the team is planning new workshops: Introduction to Clinical Research, Basic Biostatistics, Statistics for Metaanalyses, Critical appraisal, Assessing risk of bias, Cochrane Library for consumers, Using Rezman and GRADE. • Improving teaching: The team is being trained to improve communication and didactic performance to upgrade the quality of our workshops. Conclusions: These activities are promoting increased visibility and interaction of the BCC with different publics, more participants in our workshops, recognition of the BCC as a research center and a highly motivated and qualified team of professionals capable of both performing SR and transmitting their knowledge and experience to others.
P2.107
Participants in the online course ‘Handsearching: identifying and classifying controlled trial reports’

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Background: To conduct a systematic review, one must find all reports of randomized controlled trials (RCTs) and possible randomized controlled trials (CCTs). Although most RCTs are identified from searching electronic databases, some RCTs are found only by handsearching. The US Cochrane Center developed and maintains a free online course to train individuals in classifying clinical studies as RCTs or CCTs. Objectives: To describe handsearching course participants. Methods: Students are asked to provide location, demographic information and affiliation with the Cochrane Collaboration at registration. Information is collected on modules completed by students and scores on self-assessment and knowledge assessment tests. Results: As of March 21, 2013, 249 students had registered for the course. They were located in North America (n = 101), Europe (n = 63), Asia (n = 40), Central/South America (n = 17), Australia (n = 12), Africa (n = 5) and the Middle East (n = 12). Of participants responding to the online questionnaire, half (50/100) claimed a Cochrane affiliation; 41 with a Group, 6 with a Field, and 3 with a Center. 21 respondents revealed a Cochrane role, including author (n = 6), handsearcher (n = 4), Trial Search Coordinator (n = 5) and other (n = 6). 64 of 101 of respondents had found the course on a Cochrane website, and 13 through word-of-mouth. The most common reason for taking the course was ‘personal growth’ (64/106, 60%). All self-assessment tests were completed by 32 students with 67 students completing at least one. The final test for the course, handsearching 6 months of the British Journal of Ophthalmology for RCTs and CCTs, was attempted by 23 participants and completed by 21, with a median score of 92.7%. Conclusions: The handsearching course continues to be an information source for the Cochrane Collaboration and others across the world to learn to classify clinical studies as RCTs or CCTs.

P2.108
Teaching searching in an intensive systematic review course: ‘how many citations should I expect to review?’

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Background: We offer an intensive 8 week systematic review course in a School of Public Health. The course is unique, requiring student groups to complete all steps of a systematic review on intervention effectiveness (randomized controlled trials, RCTs) or etiology (observational studies, OBS). Informationists oversee searching techniques. One challenge is teaching students to create a high quality search that produces a manageable number of results; only 3 weeks is allocated for searching and title abstract review. Although there has been research on the number of databases needed to search, data are sparse on the number of citations needed to review for systematic reviews of RCTs and OBS. Objectives: To calculate number needed to be reviewed and read for RCT and OBS reviews. Methods: Using 2 years of data from 19 groups we abstracted data on total number of citations and full text reports retrieved and reviewed, databases from which they were identified, and number ultimately included. We analyzed frequency statistics overall (mean, median, range) and by database and type of review. We investigated whether included studies were in PubMed, EMBASE, or CENTRAL. Results: The 19 systematic reviews retrieved on average 4464 unique citations ranging from 1060 to 16 747 (median: 3720). Students retrieved and reviewed on average 183 full text reports (range: 31–357) and abstracted data from on average 23 articles (range: 19–27). Thus, about 200 citations and 5 full text reports need to be reviewed to include 1 study in data abstraction. Results were generally similar for RCTs and OBS. Almost all included studies from 11 reviews analyzed to date are indexed in EMBASE. Conclusions: The wide range of citations reviewed reveals a discrepancy in workload between student groups. We plan to investigate factors contributing to this wide range and the surprising similarity of results for RCT and OBS reviews.

P2.109
Brazil’s growing production of scientific review articles

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Background: Publications are vital for the advancement of science because they disseminate new findings and stimulate interaction between researchers. In the last decades, the Brazilian government has financed initiatives to promote the country’s scientific production and its international dissemination. This has led to an improvement of the performance of Brazil in the international ranking of scientific publications. Objectives: To assess the contribution of Brazilian authors to the production of scientific reviews. Methods: We performed a search for review articles published 2000–2010 in Web of Science, National Science Indicators, Scopus and GeoCapes. All those whose corresponding author was affiliated to a Brazilian institution were retrieved. Results: The number of articles went from 12 434 in 2000 to 34 634 in 2010. The mean annual growth of Brazilian scientific publications was 10.7%, which is 5 times higher than the world average and Brazil is now the 13th country in the world in terms of annual scientific publications. The number of reviews went from 196 in 2000 to 1209 in 2010 and Brazil now holds the 15th place in the world in terms of review publications. The number of reviews grew 5 times more than that of original scientific articles. Almost all authors were from public universities. The director of the Brazilian Cochrane Centre (Atallah A) was second in the list of Brazilian authors with the largest number of reviews published and two research assistants of the Centre (Saconato H, Soares BGO) ranked 19th and 20th. Conclusions: The number of Brazilian review publications has grown remarkably over the last decades. This growth is directly related to the number and quality of post-graduate courses and also to the dissemination of the culture of evidence-based health and the importance of systematic reviews in this context.

Attachments: Note.pdf
P2.110
Translating one million words into two languages: process approach and lessons learnt from the translation of a comprehensive international guideline database

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Background: A Belgian national electronic point-of-care information service was initiated in September 2011 to optimise quality of care by promoting evidence-based decision-making. All Belgian healthcare professionals get free access to a comprehensive international database of clinical practice guidelines, in addition to the national guidelines.

Objectives: Translating a set of 938 concise international clinical practice guidelines from English to Dutch and French.

Methods: The translation process was set up by a broker company for scientific information, an academic institution of Applied Language Studies and the editors of the national point-of-care information service. In a first step, the translation software SDL Trados Studio (www.sdl.com/products/sdl-trados-studio) was used. This program combines machine translation with a translation memory database, as well as a terminology management system to ensure the consistent use of terms. This first translation was post-edited by human translators, verified by medical proofreaders and approved by validators. This working process was written down in Business Process Modelling Notation with the Open Source software Bizagi. The process was coordinated in a Microsoft Sharepoint work flow and task list.

Results: The total word count of the translated guidelines database was the equivalent of nearly one million words. It took 15 months to undertake this translation project. Per language 2000 translation hours, 500 proofread hours and 200 validation hours were needed. The validated versions of the translated guidelines were re-entered in the translation memory database, which will improve the quality of the translation when future updates of the international guidelines have to be translated.

Conclusions: Translating a comprehensive set of clinical practice guidelines presented a huge challenge. Details on the working process, lessons learnt and future directions for the updating process will be presented during the conference.

P2.111
Disseminating information on medicines and health interventions in Brazilian Portuguese using a internet-based resource: the Cemed's Blog

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Background: The Centro de Estudos do Medicamento (Cemed) is a Brazilian centre dedicated to research and knowledge translation activities to support informed decisions regarding pharmacological interventions. Recently, communicating evidence has become a central core of the Cemed activities due the lack of updated high quality scientific information published in Brazilian Portuguese language.

Objectives: We present the experience of the Cemed in settling up an internet-based resource to deliver evidence-based health information to lay people and health professional in a practical, consistent and accessible way to Brazilian readers.

Methods: A team consisted of a pharmacist researcher trained in epidemiology and working with the Cochrane Collaboration, three epidemiologists, a pharmacist with large experience in pharmacy practice, and pharmacy students, were established. The weblog, an internet resource known by its dynamism and interaction possibilities, was chosen because of its resemblance with an electronic journal and its functionalities of ease access and update.

Results: The Cemeds' Blog was officially launched in February 25, 2012 at http://cemedmg.wordpress.com. In 1 year, we published 100 posts. We accumulated 17 224 hits (average of 50 hits/day), a total of 10.019 visits (average of 106.6 visits/post) and a median of 1.5 page views/visitor/day. Despite of the language restriction, visitors from a number of 47 countries on the five continents have accessed the weblog. After Brazilian readers, our major public with 14 843 hits, we have been followed by readers in Portugal (328 hits), Australia (165 hits), US (157 hits), Spain (102 hits) and Argentina (78 hits), among others.

Conclusions: The establishment of this multidisciplinary team has been proved a fascinating and fruitful didactic experience for training graduate students. The audience reached by the Cemeds' Blog demonstrates the power of this internet resource in disseminating information worldwide and the relevance of translating knowledge on health care outcomes and the use of medicines.

Attachments: Figure1.png

P2.112
The Italian IN-DEEP project - integrating and deriving evidence, experiences and preferences: developing research-based health information applicable to decision making and self-management by people with multiple sclerosis

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Background: Patients increasingly want to know the evidence behind treatments and how the research relates to them. People with multiple sclerosis (PwMS) increasingly search for information on the Internet.
This creates a challenge for providing high quality health information online. The IN-DEEP project is a collaboration between teams in Australia and Italy, developing parallel projects involving researchers, neurologists, PwMS, MS societies, communication experts. Here we present the Italian project findings. **Objectives:** To make high quality evidence accessible and meaningful to PwMS and their families, starting from their information needs to develop an online resource of evidence-based health information. Evidence from Cochrane Reviews of MS treatments was the initial focus. **Methods:** Six focus groups and an online forum were conducted to analyse the experience of PwMS and their families in finding, assessing, integrating health information with personal values. Drawing from people’s experience, a template for an evidence-based online resource was developed by the research team and PwMS. After pilot testing, the online resource was launched with an online evaluation questionnaire. **Results:** 40 PwMS and 20 family members participated in the focus groups and online forum. Information needs covered MS causes, drugs’ adverse events, new drugs and quality of life. Attitudes towards the Internet were variable: for some it was useful, others were cautious or stopped searching over time. For many, the neurologist remained the preferred information source. A modular multi-page template was developed and interferon was the first topic covered. Benefits and adverse events were included, with practical information, information on research methodology, tools to evaluate health information and personal stories. 433 respondents completed the evaluation questionnaire. Overall the website was well received. **Conclusions:** The online resource is considered readable, understandable and useful by PwMS and their families. Other findings and the challenges to disseminate Cochrane Reviews will be discussed.

**P2.113**

**Using a scoping review to identify promising gender-sensitive health promotion interventions for women**

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**Background:** Gender, as a social determinant of health, affects an individual’s health and social outcomes. Initiated within the field of HIV/AIDS, gender-sensitive health promotion interventions (GSHPI) are programs and policies designed to address gender-related health and social inequities among and between women and men. It is important to develop methods for incorporating the analysis of sex and gender within scoping reviews and to explore how gender-sensitive elements are being incorporated in current health promotion interventions to identify promising practices. **Objectives:** Conduct a scoping review to identify promising GSHPI for women in the fields of tobacco, alcohol, physical activity and sedentary behaviour, and assess the extent to which they have considered sex, gender, diversity and equity. **Methods:** A systematic search was conducted in 47 bibliographic databases and 16 websites for studies published between 2001 and 2012 that (1) explicitly targeted girls and/or women; (2) incorporated an understanding of sex and/or gender; (3) engaged with the determinants of women’s health; and (4) sought to reduce gender-related social and health inequities. The method was enhanced through consultations with key stakeholders to guide the overall review process and to verify our preliminary results. **Results:** The scoping review helped identify and categorize a large volume of academic and grey literature and allowed for categorization of findings to explore how the interventions considered sex, gender, diversity and equity. The review also highlighted gaps in the existing literature and our results suggest that few interventions met the criteria for gender-sensitive interventions. **Conclusions:** Findings highlight gender-sensitive features of health promotion interventions in tobacco, alcohol, physical activity and sedentary behaviour, including how gender roles may affect health behaviours. However, current literature is only at the early stages of documenting GSHPI and enhanced methods are required to further define and measure GSHPI.

**P2.114**

**The DECIDE frameworks for going from evidence to recommendations and decisions**

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**Background:** Evidence about benefits and harms of interventions is essential but not sufficient for making healthcare decisions. Additional factors must be considered, including values (the relative importance of benefits and harms), resource use, equity, and the intervention’s acceptability and feasibility. These factors are not always considered in a balanced or transparent way. **Objectives:** DECIDE frameworks aim to help people systematically think through each factor (criterion) that is relevant for a particular recommendation or decision. These include clinical recommendations, coverage decisions, and health system and public health recommendations and decisions. **Results and Conclusions:** Each framework includes a set of criteria, judgments about each criterion and the evidence informing those judgments. The frameworks enable people to systematically consider all the important factors leading to a recommendation or decision. Their conclusion, with the evidence and judgments leading to it, becomes transparent. The frameworks are being developed by DECIDE (a project funded by the European Union’s 7th Framework Programme) and the GRADE Working Group.

**P3.001**

**The reporting of research design of diagnostic test accuracy (DTA) studies in abstracts of Cochrane Diagnostic Test Accuracy Reviews**

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**Background:** The abstract of a scientific publication helps readers to gain an overall idea of the study and to decide whether or not they should read the full text. Within diagnostic test accuracy studies, the reporting of research designs within the abstract section is commonly inconsistent or absent. This has implications for screening on the
basis of study design as well as for study identification in terms of keywords and indexing. We recently conducted an analysis of DTA studies published in English within EMBASE between 2012 and 2013 (N = 200) and found a great deal of heterogeneity in reporting of research design. On this basis, we thought it would be useful to carry out a similar analysis on DTA studies published in the Cochrane Library.

**Objectives:** We aim to analyse different ways in which the research design terminology of DTA studies is reported in Cochrane DTA Reviews, and to explore potential inconsistency in the terminology used to refer to different DTA designs. **Methods:** We will investigate all full reviews and abstracts published by the Diagnostic Test Accuracy Working Group within the Cochrane Library to identify (a) study design reporting variation within abstracts; (b) the range of research design terms used; and (c) any inconsistency in their use. **Results:** We have initiated the analysis by identifying all full reviews and abstracts published by the Diagnostic Test Accuracy Working Group within the Cochrane Library (N = 60), and results will be forthcoming. **Conclusions:** As part of our analysis, we will create a frequency and distribution map of the research design reporting within titles and abstracts of all full reviews and abstracts published by the Diagnostic Test Accuracy Working Group within the Cochrane Library, with recommendations for future practice in reporting study design within diagnostic test accuracy reviews published in the Cochrane Library.

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**P3.002**

**Measuring and reporting of statistical heterogeneity in reviews of diagnostic accuracy studies**

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**Background:** In the majority of diagnostic reviews there is more variability in accuracy measures than can be expected due to chance alone. As a variety of approaches exist for how reviewers examine, measure, report and interpret their results in such circumstances, more guidance is urgently needed. **Objectives:** To describe the methods currently used in diagnostic reviews to visualize, quantify, and report statistical heterogeneity in accuracy results between primary studies and to explore how the results of this examination influence subsequent analysis decisions and formulation of conclusions. **Methods:** Systematic reviews on diagnostic tests published in MEDLINE-indexed journals between May and September 2012 were identified using a systematic search. Using a standardized form, information was extracted on the clinical context and methods applied from the main meta-analysis in each review. **Results:** 53 meta-analyses met inclusion criteria. These meta-analyses contained a median of 14 primary studies (IQR = 9.5–20.5). Statistical tests for heterogeneity were used in only 72% of the meta-analyses. The most common tests were I² (29), followed by χ² (26), and r² (2). Heterogeneity was represented visually in all but 5 studies; 40 plotted sensitivity and specificity in ROC space and 34 presented forest plots. Data on how the investigation of statistical heterogeneity influenced subsequent analysis decisions (i.e. whether to investigate sources of heterogeneity) and the formulation of conclusions will be available before the colloquium. **Conclusions:** The exploration of statistical heterogeneity in diagnostic accuracy meta-analyses is increasing, although not yet universal. However, there is a lack of consistency in which heterogeneity tests are used, how these tests are interpreted, and how these results influence subsequent analysis decisions and conclusions. In a diagnostic meta-analysis, because mean values are difficult to interpret and translate to clinical practice and because confidence intervals and ellipses do not accurately reflect the amount of between-study variation, identifying sources of variability becomes important.

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**P3.003**

**The DEPRESSion Screening Data (DEPRESSD) registry: a protocol for a registry to support individual patient data meta-analyses of the diagnostic accuracy of depression screening tools**

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**Background:** Major depressive disorder may be present in 10–20% of patients in medical settings. Routine screening for depression has been recommended to improve depression management. However, studies that have examined the diagnostic accuracy of depression screening tools typically have used data-driven, exploratory methods to select optimal cutoffs. Typically, these studies report results from a small range of cutoff points around whatever cutoff score is most accurate in that given study. When data from these published studies are combined in meta-analyses, estimates of accuracy for different cutoff points are often based on data from different studies, rather than having data from all studies for each possible cutoff point. As a result, traditional meta-analyses can generate grossly exaggerated estimates of accuracy. Individual patient data (IPD) meta-analyses can be used to address this problem by synthesizing data from all studies for each cutoff score to obtain precise, unbiased diagnostic accuracy estimates. **Objectives:** The DEPRESSion Screening Data (DEPRESSD) Registry was created as a data repository for IPD meta-analyses of depression screening accuracy. The Registry is accumulating datasets from original studies with diagnostic accuracy data for common depression screening tools, which will result in large enough samples to accurately estimate accuracy across all relevant cutoff scores. It will also allow analyses of moderating factors that may influence accuracy (e.g., age, gender, diagnosis). **Methods:** Authors of eligible published studies are being invited to contribute original data to the Registry. Datasets will be eligible for this project if they include a DSM or ICD diagnosis of MDD based on a validated structured or semi-structured diagnostic interview administered within two weeks of the administration of one or more depression screening tools included in the Registry. **Conclusions:** This Registry will provide a mechanism to obtain realistic estimates of depression screening tool accuracy, which currently appears to be substantially exaggerated.
P3.004
The assessment of reporting quality on systematic reviews or meta-analyses of diagnostic test published by Chinese authors

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Background: The quality of reporting on diagnostic systematic reviews (SRs) or meta-analyses (MAs) published by Chinese authors is unclear. Objectives: The research aims to evaluate the quality of reporting on diagnostic SRs or MAs, using the PRISMA statement and determine whether there has been a improvement. Methods: According to the inclusion and exclusion standard, we searched Chinese Biomedical Literature Database, PubMed, EMBASE, the Cochrane Library, Web of knowledge five databases to identify SRs/MAs on diagnostic test. The searches were implemented in July 2012 and the cut off for inclusion of the SRs/MAs was December 31, 2011. The PRISMA statement was applied to assess reporting quality. Analyses were performed using Excel, SPSS17.0 and Meta Analyst soft. Results: A total of 312 studies were included. Fifteen diseases systems were involved. According to the PRISMA checklist, the score range of the study quality was 4–26, the average score was 17.14 ± 4.18 (Table 1). Figure 1 showed that there has been some improvement in total score after the PRISMA publishing. The reporting quality of researches published by University is better than by Hospital. Funding theses compared with Non-funding theses, funding theses has been some improvement in total score. SRs/MAs werewritten by ≥3 authors and ≥2 cooperating unit compared with 1–2 authors and one unit, the reporting quality improves distinctly. The report quality of CSCD these and SCI these was better than Non-CSCD these and Non-SCI these. And the difference in total score to all stratified factors was statistically significant (P < 0.05).

Conclusion: The number of diagnostic SRs/MAs is increasing annually. The quality of reporting has measurably improved over the previous years. Unfortunately, there are still many deficiencies in protocol and registration, search, risk of bias across studies, additional analyses. Future SRs/MAs should pay attention to these aspects.

Attachments: Figure 1 Stratified analysis of reporting quality of included studies.pdf, Tab 1 The results of reporting quality assessment (n = 3T2).pdf

P3.005
The study of reporting quality of randomized controlled trials in systematic reviews of acupuncture

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Background: The reporting quality of randomized controlled trials (RCTs) is one of the factors during developing a systematic review (SRs)/meta-analysis(MAs). It is significant to know which information was ignored by reviewers in RCTs which were included in SRs/MAs. Objectives: To evaluate the reporting quality of RCT in SRs/MAs of acupuncture. Methods: We searched PubMed, EMBASE, Web of Science and Cochrane Database of Systematic Reviews (CDSR), the Chinese Biomedicine Literature Database(CBM), Traditional Chinese Medicine database (TCM database), Chinese Journal Full-text Database (CJFD), Chinese Scientific Journal Full-text Database (CJSDF) and Wanfang Database, until December 2011. The RCTs in English and Chinese were identified from those SRs/MAs. The random samples were selected from these RCTs in 2001–2010. Data was extracted into excel spreadsheets according to pre-prepared data extracted forms. The reporting quality was assessed based on CONSORT (27 items) and STRICTA checklists (17 items) statements by two reviewers, respectively. Results: A total number of 327 SRs/MAs of Acupuncture & Moxibustion and a random sample of 363 RCTs were identified and selected in this study. It showed that the reporting quality of 363 Chinese and English RCTs of acupuncture was poor. The scores of CONSORT of RCTs in 2006–2010 were higher in English than in Chinese (P = 0.000). However, scores of STRICTA in 2006–2010 of English RCTs were similar to Chinese RCTs (P = 0.440). Compared with these in 2001–2005, scores of CONSORT in 2006–2010 were significantly higher than in both English (P = 0.011) and Chinese RCTs (P = 0.001). Besides, scores of STRICTA in both English (P = 0.317) and Chinese RCTs (P = 0.853) in 2006–2010 were similar to RCTs in 2001–2010. Conclusions: The RCTs from the SRs/MAs of acupuncture have not comprehensive reporting of relevant information based on CONSORT and STRICTA statements. The researchers should be pay attention to comprehensive report of RCTs on acupuncture.

P3.006
Has completeness and quality of systematic review and meta-analysis reporting in major radiology journals changed since publication of the PRISMA statement? Subtitle: is completeness of reporting associated with study quality?

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Background: The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement guides completeness of reporting of systematic reviews (SR) & meta-analysis (MA). The completeness of reporting in major radiology journals is unknown. Additionally, the association of completeness of reporting with study quality [measured by the Assessing the Methodological Quality of Systematic Reviews (AMSTAR) tool] has also not been evaluated. Objectives: The purpose of our study is to determine whether the completeness of reporting of systematic reviews & meta-analysis in major radiology journals has changed since publication of the PRISMA statement. A secondary objective is to evaluate whether completeness of reporting (PRISMA) is associated with study quality (AMSTAR). Methods: SR & MA published in high impact radiology journals were identified by searching Medline using the modified Montori method.
P3.007
Methodological quality of systematic reviews and meta-analyses on interventional in leading Chinese evidence-based medical journals

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Background: More and more Systematic Reviews (SRs) and Meta-analyses (MAs) with different angles and opinions were emerging published in Chinese leading evidence-based medical journals. However, the current situation on methodological quality of SRs/MAs published is not clearly yet. Objective: To critically assess the methodological quality of SRs/MAs on interventional published in Chinese leading evidence-based medical journals. Methods: To Chinese Journal of Evidence-based Medicine, The Journal of Evidence-Based Medicine, Chinese Journal of Evidence-Based Pediatrics and Chinese Journal of Evidence-Based Cardiovascular Medicine web-based database for data sources, to select SRs or MAs of interventional strictly up to December 2011 based on the inclusion and exclusion criteria. Data were extracted by two reviewers independently. The methodological quality of the trials was assessed by the AMSTAR tool. We discussed the factors may affect methodological quality on five aspects: publication year, number of author(s), financial support, author affiliation. All analyses were undertaken in Meta-analyser 3.13 and Microsoft Excel 2003. Results: A total of 487 studies were included. The Table 1 showed that AMSTAR checklist score range from 1.5 to 9.5, the average score was 5.94 ± 1.05. AMSTAR publication greatly increased the total score statistically. There were no significant differences among the other groups (Fig. 1). Conclusion: The results from multivariate analysis showed that the methodological quality of SRs/MAs of interventional published in Chinese leading evidence-based medicine journals had problems in different levels, which required to be further improved. The lack of the details of retrieval strategies and single type of document retrieval should be noticed. There remained a pretty low rate of usage on grey literature and a poor report on publication bias. We sincerely hope that analysts will take this as a warning and produce high-quality SRs/MAs in future.

P3.008
Quality appraisal of clinical practice guidelines on the treatment of hepatocellular carcinoma or metastatic liver cancer: a systematic review

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Background: More and more Systematic Reviews (SRs) and Meta-analyses (MAs) with different angles and opinions were emerging published in Chinese leading evidence-based medical journals. However, the current situation on methodological quality of SRs/MAs published is not clearly yet. Objective: To critically assess the current available clinical practice guidelines (CPGs) for hepatocellular carcinoma (HCC) and sum recommendations of strongly recommended guidelines, so as to provide a policy-making evidence for clinical practice. Methods: The databases of MEDLINE, Web of science, CBM and CNKI and the relevant CPGs websites were systematically searched until August 2012. The quality of CPGs was appraised by AGREE II instrument, and data and graphics were performed by SPSS 13.0 and SigmaPlot 12.0, respectively. Results: Total 19 evidence-based guidelines and 10 expert consensuses were included. The mean percentage of six domains score of clarity of presentation, scope and purpose, stakeholder involvement, rigor of development, editorial independence and applicability were 89%, 84%, 64%, 49%, 37% and 20% respectively. The two domains of rigor of development and clarity of presentation in evidence-based guidelines were superior to expert consensus (p < 0.05). We finally strongly recommended and recommended five and nineteen guidelines, respectively. However, five guidelines were not recommended due to poor quality. Conclusions: The overall methodological quality of CPGs for HCC is moderate, but with poor applicability and potential conflict of interest. The quality of evidence-based guidelines are significantly superior to consensus; however, it is also need to further increase the transparency of quality appraisal of evidence, recommended process and the involved conflict of interest.

P3.009
Interventions for age-related macular degeneration: What is the quality of the evidence?

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Background: Systematic reviews on interventions for age-related macular degeneration (AMD) are essential for making informed clinical inferences and providing evidence-based care. Objectives: This report
examined the quality of systematic reviews on interventions for AMD using modified versions of the Critical Appraisal Skills Program (CASP), the Assessment of Multiple Systematic Reviews (AMSTAR), and the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA). Methods: PubMed/Medline, EMBASE and CENTRAL were searched for relevant reviews in 2009 and updated in 2012. We selected reviews, which asked a focused clinical question, used explicit, pre-specified scientific methods, and examined the efficacy of an intervention for AMD. Two authors independently extracted and assessed the characteristics and methodological quality of each review. Results: Out of 7676 citations, 36 systematic reviews met our inclusion criteria. 36% of systematic reviews were classified as a Cochrane Review. Most of the systematic reviews targeted neovascular AMD and investigated anti-VEGF interventions, dietary supplements or photodynamic therapy. Although the majority of systematic reviews presented a search description, 56% searched non-English journals, 47% included unpublished data, and 39% searched for ongoing studies. 56% and 56% reported at least two data abstractors screened abstracts and full-texts respectively. 53% of systematic reviews assessed the risk of bias independently. 94% of systematic reviews appraised the included studies qualitatively. Nearly all systematic reviews explored the limitations at the study and outcome levels, while 42% discussed limitations at the review level. Only 36% did not report the source of monetary or material support of the review. 47% of reviews were judged to be reliable. We found Cochrane systematic reviews to be more reliable than non-Cochrane systematic reviews. Conclusions: We identified areas for improvement in systematic review conduct. The quality of systematic reviews varied, with better quality found in Cochrane Reviews as compared to non-Cochrane Reviews.

P3.010
Assessment of the quality of reporting for treatment components in Cochrane Reviews of acupuncture

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Background: High-quality reporting of treatment details can aid replication of study results in real-world clinical practice. The revised Standards for Reporting Interventions in Clinical Trials of Acupuncture (STRICTA) is a reporting guideline for key elements of acupuncture interventions in clinical trials. Objectives: This study used STRICTA to investigate whether Cochrane Reviews of acupuncture adequately report important treatment details. Methods: Cochrane Reviews of acupuncture were identified from The Cochrane Library (Issue 7, 2012). Randomized controlled trials (RCTs) included in the reviews and published after 2009 were obtained. Using STRICTA, we extracted acupuncture-related information from both the Cochrane Reviews and the RCTs. The Characteristics of included studies table was the major source of intervention information from Cochrane Reviews. Reporting quality of acupuncture interventions in Cochrane Reviews was assessed and compared to the respective RCTs. Results: In total, 25 Cochrane Reviews of acupuncture and 92 RCTs met the selection criteria. Cochrane Reviews were 16% less likely to report the acupuncture-related items of STRICTA than RCTs (risk ratio 0.84, 95% confidence interval 0.79–0.88, I2 = 8%) (Fig. 1). Information was significantly better reported for 10 of the 15 treatment-group items of STRICTA in RCTs than in Cochrane Reviews (p < 0.05), while four items did so without statistical significance. One item related to practitioner background was significantly better reported in Cochrane Reviews. Conclusions: Reporting quality of treatment details in Cochrane Reviews of acupuncture was insufficient with regard to STRICTA, even though such information was readily reported in RCTs. The overall quality of reporting of the RCTs, while better than the reviews, was also often suboptimal. Use of the STRICTA guideline during the review process is recommended to adequately report the key treatment components in Cochrane Reviews of acupuncture. The potential impact of STRICTA to the external validity and generalizability of reviews needs to be investigated.

Attachments: Forest plot.png

P3.011
Assessment of the quality of clinical trials registries

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Background: Clinical trial registration is known to improve research transparency and will ultimately strengthen the validity and value of the scientific evidence base. Through clinical trials registration, it should be possible to take steps to ensure that registered data about health care are informed by all of the available evidence. However, previous evaluations of registered records of clinical trials have shown that registered information is often incomplete and non-comprehensive. Objectives: The study is aimed to evaluate the quality of clinical trials registries. Methods: The quality of 14 primary registries in the World Health Organization (WHO) Registry Network and the ClinicalTrials.gov registry (http://clinicaltrials.gov/) was evaluated by comparing the completeness of WHO 20-item Trial Registration Data Set items. Results: Among the 15 clinical trials registries included in the study, 40.0% (6/15) of the clinical trials registries ignored the item of ‘date of first enrollment’, 26.7% (4/15) trials registries neglected the item of ‘secondary identifying numbers’, 20.0% (3/15) trials registries unnoticed of ‘Secondary Sponsor(s)’ and ‘Countries of Recruitment’ items. Only four clinical trials registries fulfilled all the 20 items in the WHO Trial Registration Data Set. Conclusions: Clinical trials registration has the potential to improve clinical trial transparency and reduce publication bias and selective reporting. These potential benefits are currently undermined by deficiencies in the provision of information in key areas of registered records. The missing or uninformative entries of key information could be reduced by improving the quality of clinical trial registries.
P3.012
Quality appraisal of clinical practice guidelines on glioma

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Background: Clinical practice guidelines (CPGs) play an important role in healthcare. The guideline development process should be precise and rigorous to ensure that the results are reproducible and not vague. To determine the quality of guidelines the Appraisal of Guidelines of Research and Evaluation (AGREE) instrument was developed and introduced. Objectives: To assess the methodological quality of clinical practice guidelines for neurological disease on glioma. Methods: Eight databases (including MEDLINE and EMBASE) were searched till December, 2012. The methodological quality of the guidelines was assessed by two authors independently using the AGREEII instrument. Results: From 940 citations, 15 relevant guidelines were included. The overall agreement among reviewers was moderate [ICC = 0.83; 95% confidence interval (CI), 0.66–0.92]. The mean scores were moderate for the domains ‘scope and purpose’ 60% and ‘clarity of presentation’ 65%, however there were low for the domains ‘stakeholder involvement’ 44%, ‘rigor of development’ 39%, ‘applicability’ 32%, ‘editorial independence’ 31%. Only 1/3 guidelines described the systematic methods for searching and selecting the evidence, nearly half of the 7(47%) guidelines didn’t give a specific recommendation. None described a procedure for updating the guideline. None used the Grading of Recommendations Assessment, Development and Evaluation (GRADE) system. Conclusions: The quality and transparency of the development process and the consistency in the reporting of glioma guidelines need to be improved. The quality of reporting of guidelines was disappointing. Many other methodological disadvantages were identified. In the future, glioma CPGs should based on the best available evidence and rigorously developed and reported. The quality of glioma guidelines in China is low. Greater efforts are needed to provide high-quality guidelines that serve as a useful and reliable tool for clinical decision-making in this field.

P3.014
Clinical practice guidelines manuals and toolkits. Are they different among languages, countries and developers?

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Background: Manuals and Toolkits (MT) are standards for developing Clinical Practice Guidelines (CPG). Most developers have their own MT. There isn’t enough information about characteristics of MT in other languages than English. Objectives: To assess the characteristics of MT for developing CPG from different developers in English and Spanish. Methods: We searched electronic databases, national clearinghouses and non-electronic sources such as guidelines developer’s sites. Epidemiologists independently assessed MT retrieved. Information about scoping, development group, Conflict of Interests (COI), updating, evidence systems among others, were extracted. Results: Twenty MT were retrieved, 8 in Spanish, and 12 in English. It is not clear how COI is declared and handled in most of the MT. GRADE and SIGN were the most recommended systems for assessment of quality of evidence, nevertheless many didn’t recommend any system. Only two MT had a complete explanation about patient’s participation. Three years is the most common recommendation for updating CPG. Only a few include an economic component. There isn’t clarity in how recommendations are reported and how should be the external review of MT. Conclusions: There is heterogeneity in CPG development. Spanish MT are less specific than English ones. It is important to improve quality of Spanish-language MT’s, in order to enhance quality of Spanish CPG. There is an important lack of information

P3.0013

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Background: In recent years, the GRADE approach has been broadly accepted by many GDG. The use of SR for GDG is highly expected. There is a lack of information about the relationship between the types of evidence with the strength of recommendations using GRADE. Objectives: To present the evidence mapping of the literature used to develop recommendations in the Guideline for Syndromic management of the Genital Tract Infections, with emphasis in the use of Cochrane SR. Methods: The evidence of each recommendation was reviewed and was classified according to the type of evidence, quality, quantity and strength of the recommendation. A descriptive analysis was performed as well as a cross-analysis to identify the relationship between the strength of the recommendation and the quality of the evidence. The quality of the SR was assessed with AMSTAR. Results: SR supported the 29.1% of the recommendations, 52% of them were Cochrane SR, RCT 25.6%, observational studies 5.9%, guidelines 9.3% and expert opinion 30.1%. The quality of the evidence was high (14%), moderate (15%), low (16%) and very low (55%). 63.7% of the recommendations were strong in favor. 14% of the strong in favor recommendations came from high quality evidence and 49% came from very low quality evidence. Not all the Cochrane SR had the same level of quality. Conclusions: The evidence shows a similar percentage of systematic reviews, RCT and expert opinion in the guideline. 15% of the recommendations were supported by RS Cochrane. The GRADE approach allows weighting other factors beyond quality of the evidence which are relevant for clinical practice. Research needs to be done on the most important factors in grading recommendations and how the collaboration can support GDG worldwide in order to become a source of high quality evidence for guideline developers.
about patient’s participation and drafting of recommendations. It’s important to improve the contents and quality of MT in order to achieve high quality standards on CPG development for both developed and developing countries.

P3.015 Reducing unnecessary cervical cancer screening: achieving more by doing less

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Background: Too-frequent screening for cervical cancer can increase costs, lead to unnecessary invasive procedures associated with overtreatment, and shift resources away from the one in five women who do not receive recommended routine screening. Objectives: A large, U.S.-based integrated healthcare system with centralized evidence services and eight independent regions developed and implemented an evidence-based guideline for cervical cancer screening. Novel implementation strategies and performance monitoring in one region led to significant improvements and are described below.

Methods: Graded systematic reviews were conducted by a centralized analytic unit, and recommendations developed by a guideline team with representation from each region. In one large region with more than 3.5 million patients, interventions aimed at the practitioner, patient and systems levels were implemented for routine Pap and HPV cotesting. Practitioner interventions included electronic distribution of guidelines, point-of-care electronic prompts, and workflow support. Patient-level interventions included point-of-care education, and inreach/outreach activities. System-level interventions focused on centralized patient outreach letters and reminder calls, computerized decision support, and unscreened cancer lists for panel management. Monthly performance monitoring on a measure of ‘overpopulation’ was reported at medical center, department and provider levels. Results: In a 5-year period, over 100 000 fewer unnecessary Pap tests were performed, while screening rates increased by 7%. Conclusions: Centralized systematic evidence review and guideline development, coupled with coordinated implementation and performance monitoring, can reduce unnecessary screening and invasive procedures, focus resources on appropriate routine screening in underscreened populations, improve patient access and reduce costs.

P3.016 Meeting end-user needs through rapid evidence reviews: a partnership case study

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Background: Barriers to using traditional systematic reviews in the ‘real-world’ policy setting have led to a growth in accelerated approaches to evidence reviewing. Those that expedite the process whilst maintaining high quality and rigour show promise, however achieving a one-size-fits-all accelerated approach may not be suitable. Transparency in reporting, application to other disciplines, and lack of impact assessment are some limitations of current accelerated approaches. A new partnership in compensation health between academic research and government groups created the need for a tailored evidence review program that could inform decision-making as well as other activities such as strategic planning and stakeholder engagement. Objectives: To develop and implement an accelerated review approach that is robust, transparent and delivers reviews that meet end-user needs. Methods: We reviewed existing external accelerated review programs, conducted stakeholder interviews (researchers and end-users), and also evaluated evidence reviews conducted during the establishment phase of our partnership. Through a separate project impact and return on investment was assessed for three earlier evidence reviews. Our Research Translation model was also an input to the framework. Results: Two accelerated evidence review ‘products’ have been developed—‘snapshot reviews’ and ‘rapid reviews’. They share the same eight high-level stages and differ according to the depth and breadth of process, timelines, and the expertise required to conduct the review (researcher network). The way in which evidence will be used is a key factor in determining which product is most appropriate. Tools have been developed to inform and guide the review, such as the evidence review plan and stakeholder meeting protocol. Conclusions: Our snapshot and rapid reviews deliver a unique and collaborative approach that can be applied across disciplines. The potential impact of accelerated evidence reviews is highlighted through our impact assessment work.

P3.017 Summarizing evidence for policy: some limitations of rapid and systematic reviews

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Background: The increasing demand for evidence-informed policymaking may translate into pressures on scientific advisory bodies to produce rigorous and timely assessments. Several constraints may force health agencies to opt for rapid reviews, the quality of which depends on previous evaluations and the applicability of results to the local context. Objectives: To share some observations on the conformity of systematic reviews and health technology assessment (HTA) or evidence-based (EB) reports to standard quality guidelines and on the pros and cons of rapid reviews to inform policy decisions.

Methods: The observations derive from a rapid review of reviews on cystic fibrosis (CF) newborn screening (NBS), diagnosis and treatment. This review included a formal systematic review on the impact of CF NBS, for which the methods applied in systematic reviews, HTA or EB reports published between 1995 and 2011 were critically analyzed. Feedback on the quality of this assessment was obtained through formal peer review, a deliberative forum and a web-based consultation process. Results: Five reports on the impact of CF NBS were identified. Their methodological quality was acceptable but not optimal. Considerable heterogeneity was noted between reports with respect to data selection, description and appraisal. Authors’ conclusions were less concordant for clinical outcomes for which evidence was less conclusive. Their scope sometimes went beyond the quality of the reviewed evidence and was predominantly based on the
benefits of NBS. **Conclusions:** A thorough review of reviews was less time-consuming than a systematic review but did not prove sufficient to derive final conclusions on CF NBS benefits at the population level or to gauge the balance between the benefits and risks in the local context. The focus of reviews on the benefits of CF NBS to the detriment of other aspects, including test performance, limited the scope of evidence readily available to support decision-making.

**P3.018**

What’s more important - timeliness or accuracy of results in providing evidence? Preliminary results on a research program on rapid reviews

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**Background:** Health decision-makers (including clinicians, patients, and policy-makers) need timely access to health information. Frequently, this information can be obtained from a systematic review; however, the amount of time it takes to complete a systematic review may not suit the needs of some decision-makers. Instead, they may be forced to rely on expert opinion or the results of single studies to make important decisions. Rapid reviews are a form of knowledge synthesis in which components of the systematic review process are simplified or omitted to produce information in a timely manner. Yet rapid reviews might be susceptible to biased results as a consequence of streamlining the systematic review process. **Objectives:** To develop a comprehensive list of rapid review methods and categorize each method by feasibility, timeliness, comprehensiveness, and risk of bias. **Methods:** Two previous systematic reviews on rapid review methods will be updated by searching electronic databases (e.g., MEDLINE, EMBASE, the Cochrane Library) and conducting targeted Internet searches (e.g., Google). Citations (titles/abstracts) and full-text articles will be screened, and data abstraction will be conducted by two reviewers independently. This list will be supplemented by an electronic survey of international rapid review programs. A comprehensive list of all rapid review methods will be compiled and categorized by feasibility, timeliness, comprehensiveness and risk of bias. **Results:** Our research proposal was funded by the Canadian Institutes for Health Research and is currently underway. Preliminary results will be presented at the conference. **Conclusions:** Our results will be a first step to understanding how rapid reviews can be used to balance decision-makers’ need for accuracy, as well as timeliness. By advancing the methods used in rapid reviews, the quality of health care decision-making will be enhanced, and researchers can better ensure that decisions are based on the best possible evidence.

**Attachments:** Cochrane abstract_Rapid reviews_26MAR2013.pdf

**P3.019**

Usability of Cochrane-based evidence summaries in point-of-care guidelines

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**Background:** Evidence-based Medicine Guidelines (EBMG) is a collection of concise point-of-care guidelines produced by Finnish Medical Society Duodecim. The EBMG collection of almost 1000 guidelines is completed with Evidence Summaries indicating the level of evidence and some also the strength of recommendation. An Evidence Summary can be (1) directly linked to a specific point in guideline text; (2) linked to the guideline general topic (in a separate document named ‘Related Resources’), or (3) a lone summary not linked to any guideline. **Objectives:** To assess the usability of Cochrane-Based Evidence Summaries attached to guidelines by assessing how they have been linked with guidelines. **Methods:** A database search was done to find the number and type of EBMG Evidence Summary links. Special attention was paid to ‘lone summaries’ - whether they were actually not usable in this type of guideline of if there were other reasons for non-linking. **Results:** Currently, there are 4355 EBMG Evidence Summaries, almost 3000 of them based on Cochrane Reviews. Of these 3000, 1500 are directly linked with guidelines, 1500 are linked to guideline topics, and 500 are lone summaries without links to guidelines. The distribution of linked summaries in different clinical specialties is presented. **Conclusions:** Evidence summaries are most likely to influence clinical decisions, if they are clearly visible to guideline users. Summaries attached to ‘Related Resources’ and especially lone summaries are less likely to influence practices. In this presentation, possibilities to enhance evidence summary impact by developing their general appearance, visibility and concordance with guideline texts are discussed with practical examples in a live demo; and gaps in Cochrane evidence are identified.

**P3.020**

No RCT is an island: how often do RCTs cite relevant existing Cochrane Reviews?

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**Background:** Randomised controlled trials (RCTs) need to place themselves in the context of other studies, ideally through making reference to any existing systematic review in completed RCT publications. **Objectives:** To assess the extent of RCTs citing relevant Cochrane Reviews in existence before publication of the RCT and the nature and purpose of these cites. **Methods:** All Cochrane Reviews including > 50 RCTs, updated at least once, as at January 2013 were assessed for trials included since the previous version(s) of the review. These trials were then checked to see if and how they had cited the previous review version. **Results:** Of the 100 Cochrane Reviews estimated to fulfill the above criteria, results are presently available for 40 reviews. Just under half (19/40) included at least one RCT which cited previous versions of the Cochrane Review—median 2 (range 1–28) per review. On a per RCT basis, nearly 77% of eligible trials (258/334) failed to cite a previous Cochrane Review where an update of the review now includes that trial. When RCTs did cite a Cochrane Review, this was generally a statement of review results. Six trial reports described research gaps and three mentioned that they had used the Cochrane Review to help design their trial. Full results will be available for the Colloquium. **Conclusions:** Most new RCTs included in updates of Cochrane Reviews should be able to cite the previous version of the review, yet less than a quarter do so. This may be due...
to lack of knowledge that a Cochrane Review exists or a preference for citing individual RCTs addressing similar questions. Either way, failure to use a relevant Cochrane Review at design stage may decrease the risk of the RCT addressing the most pertinent questions.

P3.021
The publishing characteristics of Cochrane Reviews for health policy research

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Background: With the propagation of the evidence-based health policy-making, the systematic reviews of health policy research have become increasingly popular. However, due to the complexity of the Health Policy Research, they are facing challenges. Objectives: To describe the publishing characteristics of the Cochrane Reviews of Health Policy Research. Methods: We searched the Cochrane library by the topic on ‘Effective practice/health systems’, and retrieved the Advanced Search as a supplement in March 2013. The search terms were health, policy and strategy. The EndNote X4 and Excel were used for data description and analysis. Results: 112 Cochrane Reviews of health policy research were included out of the 927 identified, accounting for 1.23% of the total Cochrane Reviews, of which there were 13 (11.61%) Protocols, 12 (10.71%) New Searches, 5 (4.46%) Conclusions Changed, 2 (1.79%) Withdrawn, 2 (1.79%) Overview, and 1 (0.89%) Methodology, Comment and Major Change; there were 7 Reviews included 0 studies, 45 included 1 study, others included more than 10. They were published online in 2005 (1, 0.89%), 2006 (1, 0.89%), 2008 (5, 4.46%), 2009 (41, 36.61%), 2010 (17, 15.18%), 2011 (17, 15.18%), 2012 (24, 21.43%) and 2013 (6, 5.36%). They focused on the Implementation Strategies (84, 75.00%), Financial Arrangements (17, 15.18%) and Governance Arrangements (11, 9.82%); involved Public Health (41, 36.61%), Theoretical Exploration (21, 18.75%), Hospital Management (16, 14.29%), Medical Insurance (14, 12.50%), Pharmaceutical Policy (9, 8.04%), Community Health (9, 8.04%) and Rural Health (2, 1.79%). Conclusions: Although many Cochrane Reviews of Health Policy Research have been published, the quantity and quality of the evidence should be improved, we should pay more attention to the Financial Arrangements and the Governance Arrangements involved Rural Health, Community Health and Pharmaceutical Policy and so on.

P3.022
Analysing the impact factor of the Cochrane Database of Systematic Reviews (CDSR)

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Background: The Impact Factor of the Cochrane Database of Systematic Reviews (CDSR) is calculated and published as part of the Journal Citation Reports (JCR) by a commercial company, Thomson Reuters, each year in June. From 2007 to 2010, the Impact Factor of the CDSR increased by an average of 10% annually. For the first time in 2011, the CDSR Impact Factor decreased. The CDSR is currently in the top 10 of the Medicine, General & Internal category of the JCR.

Objectives: To establish the reason(s) why the Impact Factor for the CDSR decreased in 2011 by analysing the citation data from 2010 to 2011 and the 2012 data when available, and to look for methods to minimize the risks of this becoming a trend. Methods: Citation data taken from the ISI Web of Science covering the years 2009–2012 will be analysed using a macro created in Microsoft Excel in order to identify the factors contributing to an increase or decrease in the CDSR Impact Factor. Results: Is the CDSR Impact Factor reliant on a small number of highly cited articles? Has there been a large increase in the number of citable items published? Are more reviews being published that are not cited? Which subject areas, individual articles and Review Groups have contributed most to the Impact Factor of the CDSR? Conclusions: Conclusions will be drawn from the analysis once the data is made available from Thomson Reuters in June 2013.

P3.023
Making Cochrane Reviews more clinically accessible: Cochrane Clinical Answers

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Background: Research among clinicians in the USA conducted by Wiley publisher in 2008 suggested that, although Cochrane systematic reviews are widely used and highly regarded, there is a need for evidence translation to make Cochrane Reviews more immediately useful at the point of care (e.g. before, during and after a patient consultation).

Objectives: To create a user-friendly entry point to the high-quality evidence from Cochrane Reviews; Cochrane Clinical Answers (CCAs). Methods: Step 1: Initial subject areas for development decided in collaboration with Cochrane Review groups and reviews selected as source material for CCAs based on currency of search date and clinical utility. Step 2: Editorial team recruited to oversee strategic development, develop CCA editing protocols, and source appropriate CCA authors. Step 3: Population, Intervention, Comparison, and Outcome (PICO) data agreed as core content required to allow the results of a review to be individualized to the patient and thus be useful at the point of care. PICOTron data extraction program designed to automatically extract as much of these data as possible directly from Cochrane Reviews. Step 4: Additional data required to inform PICO manually extracted from text of Cochrane Reviews, primarily using Characteristics of Included Studies tables. Step 5: Practicing clinicians commissioned and trained to author CCAs and their output approved by editorial team. Results: Cochrane Clinical Answers website (http://cochraneclinicalanswers.com/) has been designed and market tested and to date 100 Clinical Answers based on single Cochrane Reviews have been published Conclusions: Translating Cochrane Reviews into bite-sized, quickly digestible Clinical Answers is challenging but rewarding. A key challenge relates to the lack of standardized presentation of PICO data within Cochrane Reviews. Good progress has been made on developing CCAs based on single Cochrane Reviews and further development will focus on synthesising the evidence from more than one Cochrane Review.
P3.024
Cultures of evidence among decision-makers in non-health fields: systematic review

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Background: Many non-health public policy sectors may have impacts on population health outcomes. Decision-makers’ views about research evidence are less well understood in these sectors than in healthcare or public health. Objectives: To systematically review data on decision-makers’ views about research evidence in non-health sectors. Methods: Systematic review of qualitative evidence. A range of database sources were searched. Studies were included if: they included local policy-makers or practitioners in transport, housing, urban planning and regeneration, crime and policing, or licensing; and reported qualitative data on views, beliefs or experiences regarding research evidence. Study findings were synthesized using a grounded-theory thematic analysis approach. Results: Sixteen studies were included. Several factors are reported to impact on decision-makers’ use of evidence. These include practical issues such as capacity and organisational factors. However, the relevance and decision-makers’ use of evidence. These include practical issues such as capacity and organisational factors. However, the relevance and decision-makers’ use of evidence. These include practical issues such as capacity and organisational factors. Discussion: Compared to healthcare or public health, cultures of evidence in non-health sectors present distinct issues. The findings of this review indicate the need for a broader perspective on evidence use, which takes into account the whole decision-making process, and the interaction of academic research with more informal and situated forms of knowledge. Linear models of 'knowledge translation' may not capture the complexity of potential relations between knowledge and practice, and the wide variation in decision-makers’ understandings of the concept of evidence. The findings call into question the assumption that increasing the uptake of research evidence is likely to lead to better decisions.

P3.025
The limitation of word count in Chinese journals: a potential impediment for implementing the CONSORT statement

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Background: Though improvement in recent years, the reporting quality of randomized controlled trials (RCTs) is still poor in China according to the CONSORT (Consolidated Standards of Reporting Trials) statement. Poor reporting quality may make RCTs less credible in clinical application and lower value in further study. Generally, good reporting quality needs certain number of article words. The limitation of word count in Chinese journal may be a possible hindering factor for the application of the CONSORT statement in China. Objectives: To assess the current situation about limitation of word count in Chinese journals. Methods: ‘Instructions to Authors’ of Chinese clinical journals indexed by ‘Chinese Science Citation Database, CSCD’ were systematically collected in January 2013. The data of word limitation was extracted by two reviewers independently. The data were analyzed in Excel 2007. Results: Overall, 219 journals were eligible. In the 219 journals, 57 journals didn’t mention any information about limitation of word count. And there were only 5 journals which claimed that RCTs should be reported according to the CONSORT statement (2.3%). Conclusions: The limitation of word count in RCTs was still widespread in Chinese clinical journals, and limited to 4000–6000 Chinese characters was most common. Though there was no unambiguous evidence about appropriate words for good reporting of RCTs in Chinese, word limitation may played a hindering factor on the application of the CONSORT statement in China. The minimum of Chinese characters count which is sufficient for good reporting is still unproved.

P3.026
A family of different dissemination products from one Cochrane Review

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Background and Objectives: For several years, the Norwegian Cochrane branch and the Norwegian EPOC satellite have participated in the development of dissemination products derived from systematic reviews, aimed at audiences using evidence for different tasks. All products use the Summary of Findings table as a core starting point. In this presentation we will demonstrate how the tables and other elements make up critical building blocks for creating products tailored to specific and different uses. One parent, many children: The Cochrane Review on the effect of lay health workers was first published in 2005 and has been updated twice since then. We aimed to increase its impact by re-representing the results in the following formats: (1) Structured plain language summary format. In addition to including the summary in the review, elements from this summary were also reused in parts of the remaining products. (2) SUPPORT summary format, aimed at policy makers in low and middle-income countries. This review summary was made available through several websites, including the WHO’s Reproductive Health Library, where it was the most downloaded document of 2012. (3) Video version of the SUPPORT summary. This was made available on YouTube, and has so far been viewed 7800 times. (4) As part of a SURE policy brief format. This was developed by Ugandan colleagues in response to a specific request from national policy makers for evidence on task shifting. (5) As part of the DECIDE evidence to recommendation frameworks that were developed to support a WHO Guideline panel. Conclusions: The Summary of Findings table is the core starting point for all our dissemination work. Without it, creating a consistent and precise message across different media and contexts would be an overwhelming task. You can read more about these formats on www.cochrane.no.
P3.027
Moving from evidence to implementation for childhood vaccination communication strategies: synthesising programme experience from low income countries

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Background: Caregivers’ knowledge and perceptions regarding vaccination are key determinants of childhood vaccination status, and communication interventions are therefore important in providing information. A key challenge for policy makers in low income countries (LICs) is how best to integrate evidence-based communication strategies into vaccination programme delivery at scale. To address this challenge, the ‘Communicate to vaccinate 2’ (COMMVAC 2) project will develop guidance for policy makers on how to strengthen vaccine delivery and increase vaccination uptake in LICs through the integration of evidence-based communication strategies that are adapted for local conditions. Aim To describe how the ‘Communicate to vaccinate 2’ (COMMVAC 2) project will improve knowledge translation for childhood vaccination communication efforts in LICs.

Methods: COMMVAC 2 has two components: firstly, to extend earlier work on mapping the evidence on communication (see: www.commvac.com/publications.html) to include mass vaccination campaigns; and then to develop a taxonomy of these strategies and a framework for outcomes associated with vaccination communication interventions. Secondly, we will build an evidence base to guide the implementation of these strategies. This will involve a systematic review of factors affecting the successful implementation of communication interventions at scale and then integrating this evidence with that from systematic reviews of the effectiveness of vaccination communication interventions. The synthesized product will be the starting point for developing a range of best practice options with local applicability issues factored in, and which can be applied to routine and supplementary immunization activities.

Conclusions: This project will contribute to improving childhood vaccination coverage in LICs by building the evidence needed to implement effective vaccination communication interventions. The systematic reviews will provide a deeper understanding of the range of vaccination communication interventions being delivered in LICs and the factors associated with their implementation at scale. The project will also translate this evidence into guidance for policymakers.

P3.028
Development of knowledge brokering intervention model based on a systematic review

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Background: Health care policy decisions are often made without careful consideration of best available research evidence. A knowledge brokering intervention may be useful in addressing the disconnect between research evidence and policy decision. Objectives: This study aims to construct a conceptual model for knowledge brokering intervention using information obtained by conducting a systematic review. Methods: Randomized controlled trials evaluating the effectiveness of knowledge brokering intervention were searched in MEDLINE, EMBASE and the Cochrane library. Observational and descriptive studies of knowledge brokering intervention were identified using MEDLINE, EMBASE, CINAHL, Implementation Science and Google Scholar. A narrative synthesis was carried out to summarize the evidence. Results: Two randomized controlled trials (RCT), two cross-sectional surveys, two case-studies, four qualitative studies and two mixed methods studies were identified. Based on limited number of RCTs with poor methodological quality, the knowledge brokering intervention appears to be effective in improving evidence use in clinical and policy decision. The methodological quality of observational and descriptive studies varied widely. Even though the knowledge brokering intervention was explained with similar theoretical concepts, there were significant heterogeneities in the description of knowledge broker’s role. The knowledge brokers tend to: (a) Build network with decision makers and researchers, and assess their needs, (b) Access, appraises and summarize relevant research evidence, (c) Adapt the evidence to local context and advocate the use, (d) Monitor evidence use and identify new challenges, (e) Summarize priorities of decision makers and generate research question and (f) Communicate research needs to researchers. Using these description of knowledge broker’s role, a conceptual model for knowledge brokering intervention was constructed (Fig. 1). Conclusions: An intervention using knowledge brokering intervention appear to be effective in improving evidence use in health care policy decision. A conceptual model for knowledge brokering intervention was constructed using information summarized by conducting a systematic review.

Attachments: Figure 1.pdf

P3.029
An updated review of the development of Evidence-based pharmacy: definition, practice and research

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Background: In 1990s, Evidence-based Medicine (EBM) was introduced into the field of Pharmacy, leading to the emergence of Evidence-based Pharmacy (EBP). Although, many professionals in concerned filed are promoting EBP, there was no study focusing on the concepts and development of EBP. In 2010, we systematically reviewed
the definition and literatures of EBP and updated this review in 2012. **Objectives:** To provide updated evidence on the definition, practice and research of EBP. **Methods:** We searched PUBMED, EMBASE, four local Chinese journal databases and Google with pre-designed search strategy. We extracted definitions of EBP and other information from included articles. We compared the existing definitions of EBP on three domains (who, how and where to practice). We consulted experts in concerned fields in and outside China to raise a new one if the existing definitions failed to reach a consensus. We descriptively analyzed the existing literatures on EBP practice and research. **Results:** The current five definitions of EBP varied a lot on three domains and we raised a new one based on expert consulting and available evidence. Included articles reported that EBP was practiced in clinical pharmacy, drug treatment recording, prescription verification and pharmaceutical management. The current practice model follows the model of EBM. There are EBP practice training program both in and outside China. 45% of the included articles were published between 2011 and 2012. 57% of the authors are majored in Hospital Pharmacy. **Conclusions:** A definition of EBP was raised based on current evidence and expert consensus. The practice model of EBP follows the model of EBM, and there is EBP practice training in and outside China. Number of studies on EBP increased dramatically in recent 2 years. Researchers in EBP are mainly hospital pharmacists, which is consistent with the previous study.

P3.030
Engaging nurses in the work of the Cochrane Collaboration: a field’s account

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**Background:** Getting nurses to access, understand, and use Cochrane Reviews can be challenging. Developing innovative strategies to disseminate the findings of reviews may help with this problem and subsequently assist in improving patient outcomes. **Objectives:** To establish a series of activities to increase the use and ease of the Cochrane Library by nurses involved in delivering care. **Methods:** The Cochrane Nursing Care Field (CNCF) has undertaken a number of activities to engage the nursing community with the Cochrane Collaboration. The Evidence Transfer Program (ETP) consists of two components - Review Summaries and Podcasts. Review summaries of nursing-care-relevant Cochrane Reviews are developed by the CNCFs membership base and are subsequently published in a range of international journals. Following the completion of a review summary a podcast is developed and where possible both resources are translated into languages other than English. Additionally the CNCF is involved in identifying and tagging Cochrane Reviews that are of relevance to nursing care. **Results:** Since its establishment in 2010 the Field has seen over 175 summaries published in more than 20 international journals. Over 25 podcasts are freely available and translations have commenced in German and Chinese. Review tagging has led to the development of a classification system that has seen over 500 Cochrane Reviews identified as relevant to the nursing community. **Conclusions:** The importance of the Cochrane Collaboration and its role in providing an evidence base for nursing care is fully supported by the CNCF. The Field has undertaken a range of activities to assist with this work which has proven popular.

P3.031
The PRISMA evaluate the reporting systematic reviews and meta-analyses’ abstracts of cost-effectiveness of pregnancy mortality

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**Background:** Systematic reviews (SRs)/Meta-Analyses (Mas) of cost-effectiveness about pregnancy mortality become increasingly popular, which could provide direct decision basis for managers. However, not all SRs/Mas reported the important information, and the SRs/Mas quality is unknown. It is significant to know which information was ignored by reviewers in structured summary in SRs/Mas of cost-effectiveness about pregnancy mortality. **Objectives:** To evaluate the reporting quality in SRs/Mas’ abstracts on cost-effectiveness about pregnancy mortality accuracy published. **Methods:** We searched the Cochrane Database of Systematic Reviews (CDSR), Web of science and PubMed, from 2002 to March 2013. Using the following text and keywords in combination both MeSH terms and text words, the search strategy was (meta analysis OR meta analyses OR systematic review* OR over review) AND pregnancy. Details of the relevant aspects of items as reported in these SRs /MAs were extracted from the abstract structure. Reporting quality was assessed independently by two reviewers using the PRISMA for abstract. **Results:** 49 SRs/MAs were included, 40 (81.6%) studies stated the backgrounds. 46 (95%) studies represented research objectives. 39 (79.6%) studies reported data sources.19 (38.8%) studies provided eligibility criteria. 44 (89.8%) studies reported interventions. 40 (81.6%) studies provided participants. 23 (46.9%) studies stated the study appraisal and synthesis methods. 37 (75.5%)studies described results. 19 (38.8%) studies mentioned limitations.42 (85.7%)studies provided the conclusions and implications of key findings. 36 (73.5%) studies reported systematic review registration numbers. These reviews were reported by thirteen Countries, and majority from USA 23 (46.9%). **Conclusions:** The reporting quality of SRs/Mas of cost-effectiveness was better in these studies, but authors still should improve reporting quality in field of ‘provided eligibility criteria’, ‘study appraisal and synthesis methods’ and ‘report limitations’ in the SRs/Mas. All countries should increase the studies on cost-effectiveness of pregnancy mortality to improve public health level.

P3.032
How to explore user experience when developing communication products

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**Background:** Many teams worldwide are developing products for communicating evidence from systematic reviews for different contexts, such as shared decision making, clinical support, priority setting, guideline and policy development, mass media reporting. These projects can benefit from incorporating methodology from a user
centered design approach, in order to create products that are more useful and usable for their intended audiences and tasks. **Objectives:** In this presentation I will describe some of the principles and pragmatic considerations for 'user testing' - a method of observing and exploring users' experiences of a product under development, in order to improve the design for the end user and their tasks. Presentation: I will cover the following points: • What is user testing? • Why is it important? • How can you carry it out? • What are some of the challenges? • How can it be modified for different products, stages of development or resource limitation? Getting started with user testing: I will make available downloadable instructions and materials for user testing.

**P3.033**

A novel approach to presenting adverse effect

**Results:** a case study

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**Background:** We conducted a systematic review of randomized controlled trials (RCTs) on the comparative effectiveness and safety of drugs for acute migraine headache in the emergency department. Safety is poorly reported and often the same adverse effects (AEs) are not reported for similar interventions, so traditional pair-wise meta-analysis of data is not possible. We proposed an alternative comprehensive safety report for these treatments. **Objective:** To describe a novel approach to presenting AE results in the absence of traditional pair-wise meta-analyses. **Methods:** A priori AEs were grouped into categories (e.g., vomiting, sedation). After mapping the interventions and AE categories, a traditional pair-wise meta-analysis was not possible. Therefore, we analyzed AEs for individual arms of trials. When an intervention had more than one study reporting on any AE, the results were pooled using a standard inverse variance random effects meta-analysis. The risks (i.e., incidence) for each AE category are presented as a summary estimate and 95% confidence interval.

**Results:** From a comprehensive search, 39 RCTs investigating 9 drug classes reported specific AEs. Summary tables present the risk of each AE category for specific active agents and placebo. Graphs for each AE category were created using Excel. The horizontal axis shows the active agents or placebo that resulted in an AE; the vertical axis shows the risk of an AE associated with each agent. Specific examples of tables and graphs for AE categories will be presented. **Conclusion:** A traditional pair-wise meta-analysis of AEs was not possible since multiple RCTs testing the same drugs failed to report common AEs. Instead, we present a summary of AEs by treatment arm that provides an overall picture of which interventions had a high risk of specific AEs.

**P3.034**

'Discussion sections': are we ignoring valuable insights into intervention effectiveness?

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**Background:** Synthesizing the evidence for the effectiveness of complex interventions requires an understanding of contextual factors that influence; why, when, for whom and in what circumstances interventions may or may not work. Various methodological developments are evolving to enable a greater understanding of the mechanisms that influence intervention effectiveness, such as inclusion of qualitative evidence and realist synthesis approaches. This study sought to explore the value of a qualitative assessment of the discussion section in the included RCTs in a review. Frequently this section allows the authors to describe why the results of the study were or were not as expected, yet it's frequently overlooked in data extraction. **Objectives:** To compare the insights from discussion sections of included RCT's with the results of a synthesis of qualitative research studies. **Methods:** We undertook a review of brief interventions to promote physical activity. To understand the barriers and facilitators of such interventions we conducted a synthesis of qualitative studies alongside a synthesis of RCTs. We also conducted a qualitative analysis of the discussion sections of the RCTs to see if they also identified barriers and facilitators and how these compared to the findings of the qualitative studies. **Results and Conclusion:** The value of the discussion sections was they were reliable in terms of being directly relevant to the studies on which they were commenting. Qualitative studies may have been conducted indifferent cultural contexts and findings maybe inappropriately used to interpret findings of RCTs. There were some themes that occurred in both the discussion sections and in the analysis of qualitative studies. However, the perspectives of participants were rarely given voice in discussion sections of RCTs. Nonetheless, discussion section provide useful insights that can inform understanding of why certain results were obtained.

**P3.035**

Patient-important outcomes reported in randomized clinical trials (RCTs) of neuromuscular electrical stimulation (NMES) in mechanically ventilated patients: a systematic methodologic review

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**Background:** NMES is an emerging rehabilitation therapy to prevent or reduce intensive-care unit acquired weakness. **Objectives:** To contrast the outcomes reported in RCTs of NMES in mechanically ventilated patients against authors’ interpretations of NMES effectiveness and its role in clinical practice. **Methods:** We searched MEDLINE, EMBASE, Lilacs, CINAHL, SCOPUS, and Web of Science for RCTs of NMES in mechanically ventilated patients. Independently, in duplicate we...
identified studies and abstracted descriptive data. We classified outcomes according to the International Classification of Function:
body structure (e.g., protein turnover, muscle size), body function (e.g., muscle strength), activity (e.g., walking), and participation (e.g., return to work). We also identified safety and feasibility outcomes and the authors’ interpretations about NMES effectiveness and its role in clinical practice through textual assessment of study conclusions. Results: Of 428 citations, we identified 13 unique RCTs; 5 of these were pilot trials. Seven studies randomized patients by treatment group, 4 randomized by body side, and 2 were crossover studies. The median [minimum, maximum] numbers of patients enrolled and evaluated per study were 19 [7, 142] and 15 [7, 52], respectively. Authors reported 33 different outcomes (Table 1), with a median [interquartile range] of 5 [3, 6] per study. Most studies reported measures of body structure (n = 11) or function (n = 7); only 2 reported activity, and none reported participation. Authors reported safety, feasibility, and other outcomes in only 6, 5, and 5 studies, respectively. Most authors [10 (78%)] concluded that NMES was an effective intervention and half [7 (54%)] suggested that NMES could be used in clinical practice. Of all favorable conclusions regarding effectiveness or usefulness in clinical practice, only 2 studies reported measures of activity. Conclusions: There are at least 13 RCTs of NMES in critical care, but these studies are small and include few patient-important outcomes. To inform clinical practice, more studies reporting patient-important outcomes are needed.

Attachments: Table (Apr-03-2013).pdf

P3.036
Are claims of interventional benefit in clinical trial abstract conclusions justifiable? A case report of pharmacological and complementary therapies for chronic asthma

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Background: Conclusions in abstracts of randomised controlled trials (RCTs) should accurately reflect study results, as people may only read this section of the report. Authors sometimes use strategies (‘spin’) to suggest therapies are beneficial, even if results suggest otherwise. We examined how often, when abstracts of RCTs of interventions for asthma suggest an intervention has benefit, this claim is justifiable. To suggest interventional benefit, we felt studies must recruit the pre-specified sample size, and demonstrate statistically significant between-group differences for the primary outcome (p < 0.05). Methods: Studies were identified from Cochrane Reviews of chronic asthma therapies. We included RCTs, of pharmacological and non-pharmacological/complementary interventions, in which the abstract conclusion suggested interventional benefit. The abstract conclusion of each RCT was categorised: (1) suggesting benefit without uncertainty; (2) suggesting benefit with uncertainty (eg more studies required); (3) not suggesting benefit. We identified whether the trial report presented a required sample size, primary outcome, and between-group comparison for this. For abstracts suggesting benefit without uncertainty, we evaluated whether the claim was (1) justified (sufficient participants, and primary outcome between-group comparison p < 0.05); (2) unjustified (not all criteria met); (3) non-evaluable (insufficient information). As an exploratory evaluation of ‘spin’, we evaluated how often, when abstract conclusions suggest benefit with uncertainty, this claim appeared based on secondary outcome/within-group comparisons. Results: Of 153 abstracts screened, 42 full RCT reports were evaluated. 26/42 abstracts suggested benefit with no uncertainty. This was justified in 11/26, unjustified in 3/26, and non-evaluable in 12/26. 16/42 abstracts suggested benefit with uncertainty. In 11/16, the suggested benefit was felt to be based on secondary outcome/within-group comparisons (ie ‘spin’). Non-evaluable claims of benefit, and ‘spin’, were particularly common in RCTs of non-pharmacological/complementary therapies. Conclusions: When abstracts of RCT reports suggest benefit of experimental treatment, the full report frequently includes insufficient information to justify this claim. Spin is commonplace in RCT abstracts.

P3.037
Cross-over trials—are they doing it right? Are we doing it right?

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Background: Previous work by Elbourne et al. (2002) indicated that the description in the methods section of systematic reviews regarding how cross-over trial data were to be included was insufficient and recommendations were made for improvement. Recent work found that reports of cross-over trials often omit important methodological issues in design, presentation and analysis. Objectives: To assess review methodology for including cross-over trials in reviews published by the Cochrane Cystic Fibrosis and Genetic Disorder (CFGD) Group and to investigate whether there has been an improvement compared to the Elbourne results published over 10 years ago. To assess the quality of reporting of cross-over trials within the trial reports themselves and subsequently, within Cochrane Reviews. To determine whether MECIR conduct and reporting standards for cross-over trials are adhered to. Methods: CFGD reviews (published to September 2012) were accessed. Reviews which did not include cross-over trials were excluded. The methods sections of reviews were checked to identify how review authors planned to manage cross-over trial data. Cross-over trial reports were accessed and the quality of the reporting of the results assessed and compared to the data included in the review by review authors. Results: There were 104 published CFGD reviews, 82 (79%) included or planned to include cross-over trials; 39% of trials actually included were cross-over. However, 48% of reviews made no statement in their methods regarding including cross-over trials, or only referred to the work by Elbourne with no further details. Full results regarding the quality of reporting within the trial reports and how results were actually included in the reviews will be presented. Conclusions: Guidelines are needed for reporting of cross-over trials. Review authors and groups should be more aware of the inclusion of cross-over trials within reviews and ensure the methodology is correct and data are included appropriately.
P3.038
Using bivariate meta-analysis and meta-regression to investigate the effects of exercise on pain and disability in osteoarthritis

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Background: Previous reviews have documented that exercise interventions are more effective than no exercise control for osteoarthritis (OA) however effect estimates vary widely. Objectives: To estimate effectiveness of exercise interventions and explore trial-level characteristics that may be associated with effect size estimates of exercise for OA. Methods: Pain and functional limitations are both key outcomes in OA. Bivariate random effects meta-analysis was used to simultaneously synthesize effects on pain and function, taking the correlation between the two outcomes into account. We calculated 95% prediction intervals which incorporate between-study variability. A series of unadjusted bivariate meta-regression analyses was carried out to investigate the impact of trial-level characteristics on treatment effect size estimates. Results: A total of 43 trials involving 4466 patients met the inclusion criteria. The results of the bivariate meta-analysis showed that exercise interventions significantly reduced pain (Δ = −1.35 cm; 95% CI −1.75 to −0.95 cm, 10 cm visual analogue scale) and improved function (1.03 units; 95% CI 0.75 to −0.80 units, WOMAC disability scale from 0 to 10). There was statistically significant strong correlation (0.740, p < 0.001) between pain relief and improvement in function. The prediction intervals suggest that exercise interventions applied at population level may not always be beneficial in all settings, about 15% future trials are likely to show exercise not to be effective for pain and function. Exercise tended to be more effective among younger adults; in hospital-based settings, and when supervised and standardized. Trials with low risk of bias showed less promising results. Conclusions: This review provides insight into some of the sources of variability in effect estimates of exercise interventions for OA. In this bivariate meta-analysis, effect estimates for pain and function were pooled simultaneously in a single analysis in order to reduce reporting bias due to outcome measures ‘borrowing strength’ from each other.

P3.039
Measurement harmonization in individual-participant-data meta-analysis

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Background: Our project stands to advance measurement harmonization a great deal by carefully developing statistical methods to support the practice of individual participant data meta-analysis. Some statistical harmonization approaches have been already developed to integrate different measures but there is not a compromised solution in a meta-analytic context with complex health behavior constructs. Objectives: To review the methodological approaches to combine different measures of the same construct, and, finally, compare one of the most common ones, standardization with a moderated nonlinear factor analysis (MNLF). Statistical performance of each one will be evaluated under different circumstances to, and finally, apply to a real dataset. Methods: For this study we review the statistical harmonization techniques that have been used in the literature and we compared simple standardization to a method can be applied to the dichotomous, ordinal, and sometimes continuous measures, MNLF. We used Monte Carlo simulations and real archival data from seven HIV prevention intervention trials. Different measurement scales and distributions were created using parameters and scales derivate from the real HIV prevention interventions individual data. In order to evaluate the robustness of the measurement scales under different conditions the percentage bias of the estimate was calculated as well as the efficiency as the variability of the estimate across replications. Results: The MNLF was more efficient and unbiased in most of the circumstances and it did not make a difference from a simple standardization when the measures were all continuous and normal regardless the sample sizes and the number of studies. Conclusions: The moderate nonlinear factor analysis is more generalizable harmonization technique when individual data needs to be integrated than just standardizing the metrics. The most important limitations are that requires at least some items to overlap within studies and the data needs to be independent within study.

P3.040
Challenges in conducting a systematic review of predictors and moderators of outcome: an example in psychological therapies for OCD

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Background: Psychological interventions play an increasingly significant role in treating mental and physical health problems. However, treatment effectiveness varies across conditions and individuals. The systematic assessment of predictors and moderators of outcome in trials has the potential to help understand this variability and provide treatments focussed on the needs of individual patients. Objectives: We sought to synthesize current evidence on predictors and moderators in psychological therapies for adults with Obsessive-Compulsive Disorder (OCD). Methods: Relevant trials of any language were identified through electronic database searches (CENTRAL, MEDLINE, PsycINFO and EMBASE), key author contact and searches of systematic reviews. We assessed quality of predictor and moderator analyses using published criteria - predictors measured via a validated pre-randomization measure, < 5 predictors assessed, using a test of interaction, and a-priori hypotheses of anticipated predictor effects. Results: 55% (38/69) of trials reported baseline factors associated with outcome. Predictors were commonly assessed via a validated pre-randomization measure, though few trials adopted existing guidelines by stating a-priori hypotheses or conducting the appropriate test of interaction. Inadequate data reporting prevented the use of meta-analytic procedures; the analysis was restricted to a
variant of the box-score. None of the common predictors showed a consistent association with outcome. Commonly reported variables, showing a lack of association comprised medication use, age of onset, OCD-related beliefs, and educational level. **Conclusions:** Whilst analyses of predictors and moderators are common, their utility is limited by methodological weaknesses. Advances in this field require the implementation of existing guidelines and full reporting of the planning and conduct of predictor analyses; explicitly, the use of gold standard statistical procedures in assessing moderators, the reporting of a-priori hypotheses of anticipated predictor effects, and increased consideration of statistical power in predictor analyses.

**P3.041**

**Statistical simulation to assess results of meta-analyses using post-intervention, change from baseline and mixed methods**

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**Background:** Meta-analyses of continuous outcomes can be performed by post-intervention, changes from baseline and also by a mixture of these methods (Fig. 1a). General recommendations are available in the Cochrane Handbook for Systematic Reviews of Interventions in chapters 7 (Section 7.7.3.1), 9 (Section 9.4.5.2) and 16 (Section 16.1.3.2), however, the impact of the choice of a methods has not been assessed. **Objective:** To assess the impact in estimated effect (effect size and confidence interval) in meta-analyses performed by post-intervention, change from baseline and by a mixture of these methods. **Methods:** We produced 20 theoretical randomized controlled trials (RCT) (10 small-trials and 10 mega-trials) through statistical simulation using Software R (version 2.15.3) (Fig. 1b). The function was developed based in a random number generation for the normal distribution. Continuous outcome data were produced; mean and standard deviation were calculated for the experimental and control groups of the post-intervention and change from baseline from each RCT. The theoretical RCTs analyzed by post-intervention and change from baseline were randomized for mixture of methods. Random-effects meta-analyses of mean difference and standardized mean difference were performed, followed by the 95% confidence interval, using the inverse-variance method. Sensitivity analyses were conducted. **Results:** Differences in the effect sizes ranged from 0.10 to 9.01 and differences in the width of the confidence intervals ranged from 1.16 to 18.04 (Fig. 2 and Table 1). **Conclusions:** Despite the lack of significant differences in this statistical simulation, there were changes in the effect sizes and confidence intervals indicating that meta-analyses using post-intervention, change from baseline and mixture of methods can produce different conclusions especially if the effect estimated is close to accepting or rejecting the null hypothesis. Sensitivity analyses are recommended when the methods were mixed.

**Attachments:** Silva V, et al. Statistical simulation to assess results of meta-analyses using post-intervention, change from baseline and mixed methods.pdf

**P3.042**

**Which journals have cited Cochrane Systematic Reviews?**

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**Background:** Cochrane systematic reviews (CSRs) are systematic reviews of primary research in human health care and health policy, and are internationally recognized as the highest standard in evidence-based health care. **Objectives:** To investigate which journals have cited CSRs and articles in which groups are more likely to be cited by other journals. **Methods:** All CSRs published in the Web of Science from inception to December 2012 were retrieved and information extracted about the published year, group, the citation frequency of each CSR, journals citing CSRs. Two reviewers independently performed data extraction. **Results:** Of 5647 CSRs from database searching, 3874 CSRs were cited in other articles. Until December 2012, each CSR published in 2007 has been cited 16.94 times on average, followed by CSR published in 2006 (15.67 times), 2008 (14.98 times) and others were shown on Table 1. A CSR published in 2006 has been cited as much as 320 times. Table 2 showed that of 1794 journals which have cited CSRs, Cochrane database of systematic reviews (CDSRs) has cited 793 (11.7%) CSRs, followed by American family physician 93 (1.37%), Plos one 89 (1.31%), European journal of physical and rehabilitation medicine 83 (1.22%) and Pediatrics 58 (0.86%). 4 journals has cited 51–100 CSRs, 21 journals has cited 21–50 CSRs, 103 journals has cited 11–20 CSRs, 180 journals has cited 6–10 CSRs and 843 journals has cited only one CSR. Table 3 showed that every CSR in Methodology Review Group has been cited 17 times on average, followed by Consumers and Communication Group (7.58), Back Group (7.38), Tobacco Addiction Group (6.76), Drugs and Alcohol Group (6.65). **Conclusions:** This survey showed that except for CDSRs, CSRs also have been widely cited by other journals. But the citation of different groups was imbalanced. Therefore, efficient measures should be taken by some groups to improve the quality of CSRs, so as to provide evidence for more articles.

**Attachments:** Table 1 the number of articles citing CSRs from 2005 to 2012.pdf, Table 2 the citation frequency of CSRs in different journals from 2010 to 2012.pdf, Table 3 average citation frequency of CSRs in different groups from 2010 to 2012.pdf

**P3.043**

**Which is more generalizable, powerful and interpretable in meta-analyses, mean difference (MD) or standardized mean difference (SMD)?**

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**Background:** When the outcome is continuous, the effect size is commonly represented either as a mean difference (MD) or as a standardized mean difference (SMD). When the outcome is measured
in different units across trials in the meta-analyses, we have no other choice than to use SMD to combine the outcomes. When the outcome is measured in the same unit in every trial, we can use either MD or SMD. In this latter case, there appears currently to be no agreement about which effect size to prefer. Few quantitative assessments have been conducted with regard to their relative generalizability and statistically power. Objectives: To empirically examine which index is more generalizable and statistically powerful in meta-analyses when the same unit is used. Methods: From the Cochrane Database, we included all the meta-analyses in which the continuous outcome was contributed by at least 3 trials. We examined percentage agreement, I-squared statistics and z-scores of MD and SMD in fixed-effect and random-effects models. Generalizability was assessed as percentage agreement, when one study was taken from each meta-analysis and MD and SMD of that individual trial was compared with the meta-analytically pooled MD and the SMD of the remaining trials. The agreement was defined when the point estimate of MD or SMD of the individual trial is included within the 95% confidence interval of the pooled MD or SMD of the remaining trials. This procedure was repeated for all the trials, and the overall percentage agreement was calculated. I-squared statistics, which index heterogeneity among the combined trials, relate to the generalizability, and z-scores represent the statistically power. Results: We are currently conducting the analysis. We will present the results at the colloquium.

P3.044
The feasibility and reliability of using restricted mean survival time in aggregate data meta-analysis of time-to-event outcomes
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Background: Meta-analyses of time-to-event trial outcomes commonly use the hazard ratio (HR) as the treatment effect measure. For aggregate data reviews, this relies on extracting or estimating HR from published analyses. Use of the HR implicitly assumes proportional hazards (PH), which may be violated for some or all trials in a meta-analysis. An alternative treatment effect measure is the between-arm difference in the restricted mean survival time (RMST). For a given arm, the RMST is the expected time-to-event up to t* and may be estimated as the integral of S(t)  dt , where t* must be chosen by the analyst. The RMST relaxes the need for PH assumption and allows treatment effect to vary with time. However, the RMST analysis relies on having IPD or reconstructing survival data from published curves. Objectives & Methods: We aim to assess the feasibility and reliability of estimating the restricted mean survival time for aggregate data meta-analysis of randomized trials. We compare the non-PH test results and estimates of the RMST differences from the individual participant data (IPD), survival curves reconstructed from this IPD, and from published survival curves. Results: Based on a meta-analysis of neo-adjuvant chemotherapy for invasive bladder cancer (6 trials), testing of the non-PH assumption, the estimated HR and difference in RMST are similar for IPD and curves reconstructed from it. However, the ability to use published survival curves to assess non-PH and estimation of the RMST was limited to 3 trials. Conclusions: Reconstructed survival curves enable non-PH testing and good approximations of the difference in RMST, offering an alternative to the HR for meta-analysis of time-to-event outcomes. Better approximations could be achieved if good quality Kaplan Meier curves, including the number of participants at risks were regularly available.

P3.045
Comparison between Autocad and Draftsight in data extraction
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Background: None included studies in Systematic reviews can be lost to perform meta-analysis. We can use autocad and draftsight software to gain the data we needed when published figures as the only source of outcome data. Draftsight is more convenient for using to extract data than autocad. However, is it accurate and reliable enough performing draftsight for data extraction? Objectives: To analyze and compare the precision of autocad and draftsight software for data extraction from figures by performing meta-analysis. Methods: We prepared ten figures together with original data from published papers, which would be used for the precision test. Mean, 95% confidence interval (CI) and standard deviations (SD) were used as statistical parameters from figures to elevate the data extraction. Autocad and draftsight were performed by different researchers, and data analysis was implemented by the third researchers, which were designed with blind method to avoid bias. Differences in data extraction between researchers with the same software were previously compared and adjusted. Meta-analyses were performed to compare precision between the two software, using original data from papers and the data extracted with autocad and draftsight. Results: We gained the data exactly from figures using the software. As result of the meta-analysis, there was no statistically significant difference of precision between autocad and draftsight software for data extraction; and both of them showed their satisfactory precision. Conclusions: There is no difference of accuracy between the two software; however, draftsight is small and exquisite in the practicality, which is more convenient than autocad. So we would prefer to recommend draftsight in general. With the draftsight software, we can always get the data exactly when papers were published with figures as the only source of outcome data. Then we can perform meta-analysis without data lost of included studies.

P3.046
Why 196 Cochrane Systematic Reviews were withdrawn in Cochrane Database of systematic review?
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Background: Cochrane Systematic Review (CSRs) is the leading resources of the medical care systematic evaluation. The number of CSRs published has increased steadily over the past decade, at the same
time, the number of withdrawal CSRs has also increased too. What led to the CSRs withdrawn from Cochrane Database of Systematic Review? Objectives: To access the reasons of withdrawn CSRs, so as to search countermeasures to reduce quantities of withdrawn reviews and improve the quality of CSRs. Methods: An electronic literature search of all CSRs from inception to December 2012 was conducted using the Cochrane Library, with clicking the following search terms ‘By Review Group’. Two reviewers independently determined CSRs eligibility and extracted the withdrawal reviews information and search details. Disagreements were resolved by the third author.

Results: 196 studies were included, which account for 2.74% of the whole CSRs (7143); The CSRs are composed of 53 review groups, of which 6 groups have more than 6 withdrawn reviews, 12 groups have 3–5 withdrawn reviews; 15 groups have 1 to 2 withdrawn reviews, and 18 groups have no withdrawn reviews. Table 1 shows that the largest proportion of withdrawn reviews group is: Prostatic Diseases and Urologic Cancers Group (8.89%); followed by Menstrual Disorders and Subfertility Group (8.84%), Pregnancy and Childbirth Group (8.45). There were seven reasons for withdrawn, 43.88% of the withdrawn CSRs were out-of-dated reviews, and 29.08% of the withdrawn CSRs were updated by other CSRs (Table 2). Conclusions: This survey showed that the whole reasons of withdrawn of CSRs. The main reason for the withdrawn is because the reviews were out-of-dated, and some of CSRs were withdrawn owing to the absence of abstract or detection of errors, which can be avoided by frequent update and strict check. Therefore, efficient measures should be taken to reduce the portion of withdrawn reviews.

Attachments: Table1 List of withdrawal CSRs in review group.pdf, Table2 List of main reasons for withdrawal CSRs.pdf

P3.047
Supplementary tables for systematic reviews of herbal medicine or acupuncture
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Background: In a systematic review, tables play an important part to clearly and intensively present the essential information of the included studies. The commonly used tables are known to show ‘characteristics of included/excluded trials’, ‘risk of bias assessment’, and ‘summary of finding’. However, during the study, more tables might be generated and they would be a valuable media to record and reveal the study process. It would be meaning to explore supplementary tables to present details of the characteristics or quality-related items for specific intervention, especially for the interventions with more variability such as herbal medicine (HM) or acupuncture. Objective: To introduce some useful supplementary tables for systematic reviews of HM or acupuncture for the usage during the literature searching, trials selection, data extraction or results presenting process. Description: There are some tables help efficiently record the process of the review but may be hardly presented in the text, such as ‘searching strategy and result’ (Fig. 1) for each literature source, ‘screening form’ (Fig. 2), ‘contact information with the authors’ (Fig. 3), and ‘data extraction form’ (Fig. 4). Recording and presenting this additional information encourage review authors to perfect the details, and improve the quality during conducting the review. Other supplementary tables could be summarized in the Results section. ‘Components of the herbal medicine in relevant trials’ (Fig. 5) summarize the prescription with dosage and using method by studies. ‘Summary of point selection in included trials’ (Fig. 6) presents the name and frequency of the points for specific disease. ‘STRICTA checklist for included trials’ (Fig. 7), or ‘checklist of elaborated CONSORT statement for trials with herbal interventions’, helps to evaluate the reporting quality of trials. Furthermore, table of ‘adverse events’ (Fig. 8) is needed to reveal the potential side-effect of HM or acupuncture and the comparison result of occurrence rate of adverse events between groups.

Attachments: Fig.1 Searching strategy and result.jpg, Fig.2 Literature screening form.jpg, Fig.3 Contact information with the authors.jpg, Fig.4 Data extraction form.jpg, Fig.5 Components of the herbal medicine in relevant trials.jpg, Fig.6 Summary of point selection in included trials.jpg, Fig.7 STRICTA checklist for included trials.jpg, Fig.8 Adverse events.jpg

P3.048
A hybrid approach for automating citation screening process
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Background: Building a classification method to facilitate screening of search results is an explicit way to enable more efficiency in systematic review process. We propose to use a hybrid approach to optimize the collection of features used to characterize the citations (feature space) by combining Independent Component Analysis (ICA) and Sequential Forward Floating Search (SFFS), and by using Support Vector Machine (SVM), Perceptron voting (VP), and BayesNet (BN) for both comparison and achieving the best outcome as possible. Objectives: To optimize the feature space by utilizing ICA and SFFS, as well as through the comparison and adjusting the results from SVM, VP and BN. Methods: We used the search results and listings of eligible studies from three systematic reviews: First, we built three feature spaces: (i) MeSH terms (ii) title keywords (iii) keywords from abstracts. We used ICA to extract 500 ‘relevant’ feature types from 5000+ types among these three spaces mentioned above for three projects; Further we used modified SFFS method to select ‘most relevant’ feature type for individual project, through machine training/test with SVM, BN, and VP; Then we used SVM, VP and BN for classifying the citation collections. For comparison purpose, we also run the process without ICA process, and without both ICA/SFFS process. Results: The preliminary result shown the sensitivity has increased to 90.23%, 84.67% and 88.02% for each projects from 55.02%, 58.4%, and 53.21% after ICA/SFFS optimization. The specificity rates are from 56.32%, 67.34%, and 84.34% to 77.98%, 80.04% and 83.74% after ICA/SFFS optimization. High sensitivity means we do good job including ‘right’ documents; High specificity means we do good job excluding ‘wrong’ documents so we don’t waste time. Conclusions: The preliminary results shown that optimizing the feature space is an important route to improve classification. With improvement, we could achieve 100% sensitivity while still maintain high specificity.
P3.049
Underreporting of conflicts of interest among authors of clinical drug trials: cross sectional study

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Background: Conflicts of interest (COI) may influence how the benefits and harms of treatments are interpreted. Knowledge about individual author COI is therefore important when reading an article. However, some COI may be undisclosed by authors. Objectives: To determine the prevalence of conflicts of interest among non-industry employed Danish physicians who are authors of clinical trials and determine the number of undisclosed conflicts of interest in trial publications. Methods: We searched EMBASE for articles with at least one Danish author. Two assessors included the 100 most recent articles of drug trials published in international journals that adhere to the ICMJE’s manuscript guidelines. For each article, two assessors independently extracted data on trial characteristics and author COI. We determined the prevalence and type of disclosed COI among non-industry employed Danish physician authors. We compared the COI reported in the articles to those reported on the publicly available Danish Health and Medicines Authority’s disclosure list in order to identify undisclosed COI. Results: A pilot study of ten articles included seven with industry sponsorship, one with mixed sponsorship and two with non-industry sponsorship. Twenty-eight (26%) out of 107 authors were non-industry employed Danish physicians. Eleven out of 28 authors disclosed one or more COI in the journal. We found that among the 28 authors 7 had undisclosed COI related to the trial sponsor or manufacturer of the drug being studied. Nine of the 28 authors had undisclosed COI related to competing companies manufacturing drugs for the same indication as the trial drug. Full data analysis of all 100 trials and further exploration of data will be presented at the conference. Conclusions: Our preliminary results suggest that there is substantial underreporting of COI in clinical trials. Publicly available disclosure lists may assist journal editors in ensuring that all COI are disclosed.

P3.050
Publication bias in randomised trials of duloxetine for the treatment of major depressive disorder

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Background: In order to reduce publication bias, researchers have called for many years for clinical study reports submitted in licensing applications to the regulatory authorities to be made publicly available. In 2010 an important precedent was set when the European Medicines Agency (EMA) granted researchers at The Nordic Cochrane Centre access to full clinical study reports and corresponding protocols. Objectives: To assess and compare selective reporting in full clinical study reports and published articles in a cohort of RCTs submitted to the EMA for marketing approval. Methods: Unredacted clinical study reports and the corresponding protocols, approximately 13 500 pages, for all nine placebo controlled trials used in the regulatory submission for duloxetine for the treatment of major depressive disorder were obtained from the EMA in May 2011. Published articles, including pooled analyses, were identified through searching relevant literature databases; contacting the manufacturer; and through reference checking. Data of interest were: primary outcome (including type of analysis, and analysis population), and harms (deaths, serious adverse events, drug related serious adverse events, suicides, attempted suicides, number of discontinuations due to adverse events, and total number of adverse events). Relevant data were extracted from protocols and clinical study reports by one set of independent observers, and from published articles by a second set of observers. These data were then compared. Results: No major discrepancies were identified between protocols and clinical study reports. Sixty published articles were identified. There was evidence of both publication bias and selective reporting. Harms, in particularly serious adverse events and discontinuation emergent adverse events, were poorly reported in published articles (see Table 1). Conclusions: Whilst there was no evidence of selective reporting in clinical study reports, there was evidence of publication bias and selective reporting in publications. Clinical study reports contained important data on harms that were not available in publications.

P3.051
Publication bias in clinical trials on monoclonal antibodies: a cross-sectional study

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Background: Publication bias can affect the reliability of systematic reviews. This study investigated the problem from the perspective of biologicals, with high aggregate economic value, in order to assess whether the nature of the medical supply may change the patterns of publication and dissemination of results. Objectives: To evaluate the characteristics (indices and ratios) of publication and dissemination of results of clinical trials on monoclonal antibodies adalimumab, bevacizumab, rituximab, trastuzumab and infliximab registered at ClinicalTrials.gov. Methods: Cross-sectional study. In the first stage of the research, the sample included every protocols of interventional clinical trials, phases III–IV, completed and registered at ClinicalTrials.gov on the above mentioned monoclonal antibodies (n = 243). Set the initial sample, we evaluated the patterns of publication and result’s disclosure at ClinicalTrials.gov, through a search strategy that considered Pubmed, Embase, Lilacs, Cochrane Central and Google Scholar. Results: Among the 243 trials that comprised the initial sample, 169 (≈ 69.5%) were published and 61 (≈ 25.1%) had their results disclosed at ClinicalTrials.gov. The industry sponsored, wholly or partially, 169 trials (≈ 69.5%). Considering the subsample of unpublished studies (n = 74), 51 (≈ 69%) were fully or partially funded by industry. The prevalence of placebo controlled or single arm studies is greater in trials funded by industry (≈ 59.41%) rather than in studies not supported by industry (≈ 40.64%). Conclusions: Publication bias in clinical trials is intense, despite the nature of intervention (in this study, monoclonal antibodies). The source of funding (involving or not the industry) did not change the
patterns of publication, suggesting that publication bias occurs similarly in all cases. However, studies involving placebo or single arm studies (therefore, with a poor design) were more common in the sample financed by industry.

P3.052
Barriers and facilitators in the implementation of interventions to prevent publication bias

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Background: Non-publication of clinical trial results may decisively reduce the benefit of systematic reviews. Because the results from the research that is available differ from the results of all the research that has been completed in an area, this may lead to wrong conclusions about benefits and harms of medical interventions. As awareness has grown about the problem of publication bias, preventive measures have been implemented—but with without much success. Objectives: To identify factors acting as barriers or facilitators in the implementation of interventions to prevent publication bias. Methods: We chose two qualitative approaches to identify influencing factors: A thematic analysis of 42 articles identified through a literature search in MEDLINE, the Cochrane Library, EMBASE, CINAHL, PsycINFO, AMED, Web of Science and a hand search (Fig. 1) and 33 semi-structured interviews with different stakeholders. We focused on the following interventions to overcome publication bias: (1) prospective trial registration; (2) peer review; (3) open access policies; (4) monitoring of ethics committees and funding agencies on the publication of trial results; and (5) conflict of interest statements. Results: We identified 22 barriers and 14 facilitators. Competing interests of different stakeholder groups and reluctance to publish sensitive data or negative results were identified as main barriers, as well as lack of provided resources, mechanisms to enforce the proper implementation of these interventions, and lack of awareness of the problem of publication bias. Facilitators include international harmonization of prospective trial registration and raising awareness of publication bias among the scientific community. The results of the interviews will be available at the end of May. Conclusions: Given the plurality of barriers, it will not be enough to count on the voluntariness of stakeholders to make sure that interventions to prevent publication bias are implemented. Therefore the implementation of these interventions should be mandatory and enforcement mechanisms should be installed.

Attachments: Fig. 1 Lit.Search.png

P3.053
Full publication of studies presented at biomedical meetings—updated systematic review of follow-up studies

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Background: Studies presented at scientific meetings are hard to identify in electronic literature searches. As part of the ‘grey literature’ they are often not used in systematic reviews. If full publication is dependent on factors such as magnitude or direction of results, reporting bias may occur. This potentially invalidates the results of meta-analyses aiming at an unbiased evidence base. Objectives: To determine the full publication rate of studies presented at biomedical meetings and the time elapsed until full publication. To identify factors associated with full publication. Methods: We searched major electronic databases through 11/2012 without language restriction for follow-up studies using cohorts of abstracts of biomedical meetings. We extracted data if publication rates were reported for a minimum follow-up of 24 months. Using random effects models, we calculated weighted estimates of publication rates and pooled odds ratios (OR; Mantel-Haenszel method) for factors associated with publication. Results: A total of 264 studies following 147.529 abstracts from 667 individual meetings were included. The median publication rate after presentation was 42.3% (range 2.6–90.7). The weighted publication rate was 39.5% (95% CI: 37.4–41.6); individual estimates were heterogeneous (I² = 98.3%, p < 0.0001). Publication activity starts to diminish after 60 months (Figure). In 20 studies including only RCT abstracts the weighted publication rate was 64.2% (95% CI: 56.7–71.0). Study characteristics associated with subsequent full publication were: significant vs. non-significant results (OR 1.9; 95% CI: 1.6–2.2), clinically relevant vs. not relevant results (1.6; 1.3–2.0); basic vs. human research (1.5; 1.3–1.7); RCT vs. observational study (1.4; 1.2–1.7). Abstract characteristics associated with full publication were: accepted vs. rejected for presentation (2.6; 2.2–3.2) and oral vs. poster presentation (1.7; 1.5–1.8). Conclusions: A sizable proportion of research presented at biomedical meetings remains unpublished. Factors associated with full publication suggest that reporting bias is present even after study results have been presented to peers.

Attachments: SR_meeting_abstracts_figure.pdf

P3.054
Quantifying bias in randomized controlled trials in child health

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Background: While randomized controlled trials (RCTs) are considered the gold standard for evidence on therapeutic interventions, they are susceptible to bias. There is a growing body of empirical evidence based on meta-epidemiological methods to quantify biases in RCTs; however, there are inconsistent findings across studies and clinical areas. Objectives: To quantify bias related to specific methodological characteristics in child-relevant RCTs. Methods: We identified systematic reviews containing a meta-analysis with 10–40 RCTs that were relevant to child health in the Cochrane Database of Systematic Reviews. Two reviewers independently assessed RCTs using items in the Cochrane Risk of Bias tool and other study factors. We used meta-epidemiological methods to assess for differences in effect estimates between studies classified as high/unclear vs. low risk of bias. Results: We included 287 RCTs from 17 meta-analyses. The proportion of studies at high/unclear risk of bias was: 79% sequence generation, 83% allocation concealment, 67% blinding of participants, 47% blinding of outcome assessment, 49% incomplete outcome data,
32% selective outcome reporting, 44% other sources of bias, 97% overall risk of bias, 56% funding, 35% baseline imbalance, 13% blocked randomization in unblinded trials, and 1% early stopping for benefit. We found no significant differences in effect estimates for studies that were high/unclear vs. low risk of bias for any of the risk of bias domains, overall risk of bias, or other study factors. **Conclusions:** We found no differences in effect estimates between studies based on risk of bias. A potential explanation is the small number of trials included. It has been postulated that much larger samples are needed to detect differences; however, this raises the question of the magnitude of differences if they exist. Until further evidence is available, reviewers should not exclude RCTs based solely on risk of bias particularly in the area of child health.

**P3.055**

**Completeness of outcome specification across Cochrane Systematic Reviews of three common eye conditions: time to be more explicit!**

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**Background:** Complete specification of outcomes in a systematic review (SR) is important for promoting reproducibility, minimizing bias in the SR process (meta-bias), and evaluating time-dependent treatment effects. A completely-specified outcome has four domains: outcome title (e.g., visual acuity), technique/instrument used, outcome measure (e.g., continuous variable such as mean visual acuity), and time-point(s) for outcome assessment. **Objectives:** To evaluate the degree of completeness of outcomes specification across SRs addressing three common eye conditions: age-related macular degeneration (AMD), cataract, and diabetic retinopathy (DR). **Methods:** Using the four domains, we evaluated completeness of specification for the most frequently-assessed primary and non-primary outcomes for all Cochrane SRs addressing the three conditions. **Results:** We identified 36 completed Cochrane SRs and protocols addressing AMD (n = 16), cataract (n = 16), and DR (n = 4). All reviews provided titles for the outcomes they assessed. Time-point(s) was the next most frequently specified domain; for example 13/16 (82%) SRs on AMD assessing visual acuity specified time-points at which the outcome was assessed (Table 1). Outcome measure was the least frequently specified domain; for example only 1/12 (8%) cataract SRs assessing quality-of-life specified the outcome measure. For the five most frequent outcomes across conditions, 16/35 (46%) SRs assessing visual acuity, 2/13 (15%) SRs assessing contrast sensitivity, and none of the 32, 7, and 13 SRs assessing quality-of-life, disease onset, and disease progression specified all 4 domains. Primary outcomes were more likely than non-primary outcomes to specify all four domains (46% vs. 5%, p < 0.0001), and specified a higher mean number of domains (3.24 vs. 1.92, p < 0.0001). **Conclusions:** Specification of outcomes was largely incomplete across SRs addressing the three conditions. To facilitate reproducibility and reduce bias, systematic reviewers should completely specify the primary and additional outcomes they propose to examine.

**Attachments:** Outcomes Abstract-Completeness_2013_Tables.pdf

**P3.056**

**Characteristics of the authors of acupuncture related Cochrane Systematic Reviews**

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**Background:** Acupuncture is relatively well accepted in the world. Many Cochrane systematic reviews of acupuncture were published. **Objectives:** To investigate the characteristics of the authors of acupuncture Cochrane systematic reviews. **Methods:** Searching ‘acupuncture’ in ‘record title’ in Cochrane Library (January 2013) for published full Cochrane Reviews. Author information was abstracted and analyzed. **Results:** 40 Cochrane Reviews were identified (1 was withdrawn), 39 reviews were included. They were published in 2008–2013. 39 health conditions, edited by 23 groups, were identified. 8 groups, including Menstrual Disorders and Subfertility group (5), Musculoskeletal group (4), Pain, Palliative and Supportive Care group (4), stroke group (3) etc, published 62% of the reviews. Authors from 13 countries contributed. The affiliation of contact authors were from China mainland (10), Australia (8), Hong Kong (6), United Kingdom (6), United States (4), Canada (3) and Germany (2). 18 (46%) reviews were written by international author groups. Authors of 25 (64%) reviews could not be identified to have acupuncture related education or practice background judged by the information provided in the reviews. 6 (15%) first authors published 15 (38%) reviews, with each of whom 2–4 reviews. Among them, 4 authors published 11 reviews for almost totally different health conditions with different Cochrane groups. 16 (41%) reviews included less than 5 studies each (6 reviews didn’t include any study). Only 2 of the 13 reviews that didn’t involve Chinese language reviewers searched Chinese databases. While 22/26 reviews (having Chinese language authors) searched Chinese databases. **Conclusions:** Acupuncture systematic reviews were mainly written by authors from China (including Hong Kong), Australia, UK, US, Canada, Germany. Acupuncture education or practice background of the authors was not provided adequately in the reviews. The registering of the topics of systematic reviews of acupuncture should be in accordance with the clinical practice and research of acupuncture.

**P3.057**

**Would a timely analysis of secondary outcomes have led to an earlier identification of effective stroke rehabilitation interventions?**

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**Background:** Randomised trials often use secondary (or surrogate) outcomes that are believed to anticipate changes in primary outcomes. Many surrogate outcomes are used in rehabilitation research in the belief that recovery patterns are predictable and improved secondary outcomes will herald improved primary outcomes. **Objectives:** To identify if a timely analysis of secondary outcomes would have resulted in an earlier identification of effective rehabilitation interventions. **Methods:** We identified 11 ‘effective’ rehabilitation interventions (median 10 trials; IQR 6–17) that were supported by a Cochrane Review and recommended in Clinical Guidelines in 2010. These were matched with 11 similar ‘neutral’ interventions (13 trials; 5–18).
that are currently not recommended. We then carried out a series of cumulative meta-analysis against; (a) time before guideline publication, and (b) total number of participants included in each analysis. The main outcome was the time (participants) required to achieve a significant z-score (> 1.96). Results: When comparing the ‘effective’ and ‘neutral’ intervention reviews, the total number of participants were similar (P = 0.47) but the ‘neutral’ interventions had fewer available for secondary outcome analyses (median 232 vs. 586; P = 0.04). The ‘effective’ interventions achieved a significantly higher median z-score on the primary outcome after the accumulation of 300 participants compared with only 200 participants for the secondary outcome. Within the group of ‘effective’ interventions both primary and secondary outcomes achieved significance at the same time (8 years vs. 9 years; P = 0.79) prior to guideline publication, but the number of participants required was lower for the secondary outcome (160 vs. 461; P = 0.056). Conclusions: In these rehabilitation reviews, secondary outcome results did achieve statistical significance with fewer participants than the primary outcomes but this did not translate into an earlier demonstration of effect because data were often missing. Secondary outcomes need to be applied in a more standardised and consistent manner.

P3.058
Methodological overview: meta-analyses of adverse effects data from case-control studies as compared to other observational studies

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Background: A diverse range of study designs are used in the evaluation of adverse effects in systematic reviews, including case-control studies. However, case-control studies do have potential biases that may lead to divergent findings compared to studies that use other methods. The extent of any discrepancy or heterogeneity between the pooled risk estimates from case-control studies and other study designs is a key concern for systematic reviewers. Objectives: We aimed to ascertain whether the risk estimates from meta-analyses of case-control studies differ from that of other study designs. Methods: Searches were carried out in 10 databases in addition to reference checking, contacting experts, and handsearching key journals and conference proceedings. Studies were included where a pooled relative measure of an adverse effect (odds ratio or risk ratio) from case-control studies could be directly compared with the pooled estimate for the same adverse effect arising from other types of observational studies. Results: We included 82 meta-analyses. Pooled estimates of harm from the different study designs had 95% confidence intervals that overlapped in 78/82 instances (95%). Of the 23 cases of discrepant findings (significant harm identified in meta-analysis of one type of study design, but not with the other study design), 16 (70%) stemmed from significantly elevated pooled estimates from case-control studies. There was associated evidence of funnel plot asymmetry consistent with higher risk estimates from case-control studies. On average, cohort or cross-sectional studies yielded pooled odds ratios 0.94 (95% CI 0.88–1.00) times lower than that from case-control studies. Conclusions: Empirical evidence from this overview indicates that meta-analysis of case-control studies tend to give slightly higher estimates of harm as compared to meta-analyses of other observational studies. However it is impossible to rule out potential confounding from differences in drug dose, duration and populations when comparing between study designs.

P3.059
The PRISMA statement for reporting systematic reviews of China health policy

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Background: Publication bias in a systematic review (SR) occurs mostly during the selection process and a transparent selection process is necessary to avoid such bias. The Preferred Reporting Items of Systematic reviews and Meta-Analyses (PRISMA) Statement was published to help authors improve how they report SRs. Objectives: To identify SRs of China health policy and evaluate their reporting quality by PRISMA. Methods: An electronic literature search of all SRs of China healthy policy from inception to December 2012 was conducted using the following text and keywords in combination both MeSH terms and text words, the search strategy was (meta analysis OR meta analyses OR systematic review* OR overview) AND (health or policy) in five Chinese databases. The reporting quality was assessed independently by two reviewers using the PRISMA. Results: Fifty SRs were included finally. The result of PRISMA showed in Table 1. The CSCD or non-CSCD articles, the fund support, the published year and the number of the author seem to have little impact on the quality of the SRs. there were more items showing significant difference in the group of the number of the authors, which indicated that the author number may influence the reporting quality of SRs in China health policy. Conclusions: The reporting quality of SRs of China health policy was poor. The PRISMA statement may give the authors a useful reference to improve the reporting quality of SRs in this field. Attachments: Table 1 PRISMA Checklist of Reporting Quality.PDF

P3.060
The correlation analysis of PRISMA, AMSTAR and GRADE in systematic review

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Background: The PRISMA, AMSTAR and GRADE are used to assess the quality of report, methodology and evidence in systematic reviews (SRs), but up to now there was no literature had ever studied the correlation of the quality of report, methodology and evidence in SRs. Objectives: To assess the correlation of PRISMA, AMSTAR and GRADE in SRs. Methods: We selected the SRs about complementary and alternative medicine to respiratory diseases as the sample. Chinese Biomedical Literature database (CBM) and Cochrane Database of Systematic Reviews (CDSR) were searched up to Sept 2012. Each SR was independently identified and evaluated by two reviewers, and discussed with the third member when disagreement appeared.

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Results: (1) 79 SRs were included. (2) The most inadequately reported item in PRISMA was ‘structured summary’ (96%), followed by ‘objective’ (95%) and ‘search’ (86%). (3) 91% and 85% SRs had never provided the information of the conflict of interests and the list of studies (included and excluded) in AMSTAR. (4) A majority of the SRs had a ‘low’ or ‘very low’ quality of evidence in GRADE. (5) the correlation of PRISMA, AMSTAR and GRADE was showed in Table 1.

Conclusions: The PRISMA and AMSTAR obviously had a positive correlation (p = 0), but there was no correlation between PRISMA and GRADE, as well as AMSTAR and GRADE.

Attachments: table1.jpg

P3.061
Development of the PRISMA harms extension

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Background: Systematic reviews (SRs) of harms can provide valuable information to help describe adverse events (AEs) but they are hampered by lack of standardized methods to report these events. A systematic review undertaken by our team has identified major gaps in reporting in systematic reviews of AEs, necessitating the need for a new guideline, The PRISMA Harms Extension. Objectives: To modify PRISMA to include items specific to harms reporting. Methods: A modified Delphi process was used. An initial checklist of potential items to be reported in a SR of AEs was developed and refined by experts. The first phase of the Delphi process was online, such that 40 potential items were sent to experts in SRs, guideline development, clinical trials, statistics and epidemiology, who assigned relevance of each item on a 1–10 Likert scale in two rounds. After the second round, items voted 8 or higher were kept. Items voted 5 or less were removed, and those that were indeterminate were carried forward for the next Delphi phase: the in-person consensus meeting. At this meeting, an invited group of relevant experts discussed and decided the final list of checklist items that should be kept in the guideline. Results: The online Delphi originated significant agreement among participants. Out of the 40 items scored twice by 72 participants, one item was voted ‘excluded’ and 7 items received indeterminate votes. The consensus meeting had 25 worldwide experts in guideline development and systematic reviews. After two full day discussions on the relevance of items, it was decided that 5 items should be mandatory and 14 items should be considered recommended when reporting harms in systematic reviews. Conclusions: The ultimate goal of this guideline development is to improve quality of reporting in systematic reviews, so that both benefits and harms are discussed.

P3.062
Systematic reviews in health policy: method, practice and challenges

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Background: Health policy makers need high quality evidences to make scientific decisions on some important health issues or innovations. How to provide evidences is a big opportunity and challenge for the researchers. Objectives: Explore systematic review method and supply evidences which are to satisfy the needs of health policy makers. Methods: Literature review, key informant discussion and group discussion were conducted. Key important websites and organizations were searched to get the materials about how to conduct systematic review; Six experts on health economics, health policy and public health were invited to discuss the applicability of the current methods in health policy; group discussions were conducted once 2 weeks for nearly 1 year. Results: Two-phase systematic review method in health policy was explored and practiced via three systematic reviews about health financing. The scoping review is the first step to get enough information on different angles which showed the characters of strategies, contexts and outcomes; Evaluative review is the second phase to get high quality evidences which based on the scoping review, needs of health policy maker, context of health system are considered when to select the theme topic. Three systematic reviews were conducted using this method. Some challenges of systematic review method in health policy faced by researchers in the future: searching method to get accurate information about health policy topic; controlled studies are scare in health policy; the applicability of the outcomes of the systematic reviews in different health systems. Conclusions: Two-phase systematic review method in health policy need to be developed especially some key technologies such as searching, quality assessment of observational studies and applicability.

P3.063
Modifiable factors influencing recruitment in clinical trials

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Background: Patient recruitment in clinical trials often takes longer than expected. Trials with slow recruitment are more costly and an insufficient sample size leads to indecisive conclusions. At present, determinants of slow recruitment that could help recruitment of patients both before and during clinical studies have not been systematically investigated. Objectives: To identify modifiable factors influencing recruitment in clinical trials. Methods: We included all 1130 trials registered in the Netherlands Trial Register with an expected date of completion between 2005 and 2010. Through a questionnaire sent to the principle investigators we identified characteristics of the principal investigator and research group, hospital organization, trial organization and design. We used logistic regression analysis to assess which characteristics were associated with (un)successful recruitment. Results: Of 392 trials (35%) questionnaires were completed. For these trials 232,707 persons were to be recruited. Half of the trials did not achieve their original recruitment target (i.e. 80% of the targeted number of patients within the planned time). Although 42% of the trials were extended for ≥ 6 months, when closing recruitment 46% still had recruited fewer patients than originally intended. Factors associated with unsuccessful recruitment were: lack of clear responsibilities for recruitment, trial coordinator not PhD,
multicenter trial (especially > 10 centres). Factors associated with successful recruitment were: newsletter and presentation at start for recruiters, pocket cards, and email at start of the trial. **Conclusions:** Investigators overestimate recruitment success in almost half of the trials. Although we identified factors associated with recruitment, we are yet unable to make a general checklist for improving recruitment. A possible limitation of this study is the risk for selective responses and unmeasured confounders. Nevertheless, trialists and funders should be aware of potential recruitment barriers and incentives at study design as well as during the study.

**P3.064**
Combining systematic review methods with philosophical analysis for a research ethics review: a case study in bridging disciplines

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**Background:** A systematic review of the ethics of conducting research on preterm and sick neonates was commissioned to feed into the research project ‘Improving quality of care and outcome at very preterm birth’. The output was a systematic review of empirical ethics papers and a systematic review of analytical ethics papers. Review findings also informed the pilot randomised control trial design and the procedure for ethics review. Medical ethics questions are more usually addressed by philosophical analysis rather than by systematic review. We reflected on the benefits and challenges from working in a multi-disciplinary, multi-method systematic review. **Objectives:** To review: • contributions of the different disciplines • comparisons between philosophical and qualitative social science methodologies • challenges and solutions in reviewing from different perspectives • resulting advantages and disadvantages. **Methods:** We captured reflections on the process of developing a systematic review for ethics. Data from diaries, interviews and meetings were collated to map methods used at each stage of the review and analysed. **Results:** Both disciplines used conceptual frameworks and aimed to provide impartial, unbiased results and conclusions. Philosophical analysis added informed questioning and detailed critique of the alternative arguments identified. Systematic review methods contributed explicit procedures and methodological rigour. The team had to become familiar with the methods, resources and terminology of other disciplines. **Conclusions:** It was possible to apply qualitative synthesis methods to the ethics review. Involving experts from different disciplines enabled appropriate use of methods and resources to achieve a robust review recognised by those disciplines. Developing understanding of the methods, resources and terminology of other disciplines requires effective communication and ‘extra’ time. Benefits include insights into alternative methods that could be applied to disciplines and creating a wider network of collaborators. Reflections on the review process improved communication and identified challenges and solutions.

**P3.065**
Methodological challenges to assess effectiveness of treatments with retrospective studies: the case of localized prostate cancer

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**Background:** Radical prostatectomy (RP), external beam radiation therapy (EBRT), and brachytherapy (BT) are the main curative options for localized prostate cancer (PCa). However, divergence still remains between experts about which option should be preferred in terms of benefits and harms. **Objectives:** To assess the comparative effectiveness of treatments for localized PCa. **Methods:** A systematic review was conducted in PubMed, Embase, the Cochrane Library and the grey literature up to October 2012 to identify systematic reviews (SRs), randomized controlled trials (RCTs), and observational studies. The primary outcomes were PCa-specific mortality and all-cause mortality. Selection, quality assessment and data extraction were performed by two independent reviewers. Synthesis review was shared with an interdisciplinary group of experts. **Results:** No RCT comparing RP to other therapeutic options was found. A total of 12 retrospective population-based cancer studies, including claims databases and hospital-based observational studies were included. Results suggest that patients treated by RP had a lower risk of PCa-specific mortality (hazard ratio (HR): 0.38–0.67) or all-cause mortality (HR: 0.49–0.63) than those receiving EBRT. Results concerning BT compared with RP and EBRT remain unclear. Use of retrospective databases was associated with major methodological issues. Limitations include validity of the causes of death, age-dependant PCa treatment, staging, individual risk assessment (PSA, Gleason score), treatment description such as surgical procedures, radiation dose, isotope for BT, inability to separate EBRT than BT in databases, and change over time for radiation therapy. **Conclusions:** Results from retrospective studies suggest that RP is associated with better survival outcomes compare with EBRT. However, considering the methodological weakness related to selection, misclassification and confounding by indication bias, the level of evidence remains low. Due to the uncertainty of comparative effectiveness, clinicians should emphasize on patient’s values, quality of life and side effects to support shared-decision making in PCa.

**P3.066**
Evidence mapping: methodological foundations and application to epidemiologic research on sugar sweetened beverages and health

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**Background:** Evidence maps are a new methodology that systematically characterizes the range of research activity on broad topics and are used to guide research priorities, systematic reviews, and meta-analyses. This methodology is underused in epidemiology and has considerable potential to increase the efficiency of research efforts. **Objectives:** We demonstrate the usefulness of evidence mapping as a tool for organizing epidemiological studies, using as an example research on sugar sweetened beverages (SSB) and health outcomes: obesity, type 2 diabetes (T2D), metabolic syndrome (MetSyn) and
coronary heart disease (CHD)/stroke. **Methods:** We performed a search of Pubmed, Scopus, and Cochrane databases and a hand search of references. Studies selected were published reviews and longitudinal studies (intervention and cohort; January 1, 1966–October 31, 2012). **Results:** We identified and mapped 77 studies (18 review, 59 primary research). Most research focused on obesity (N = 47), with the numbers of studies reducing to 6–11 when categorized into groups by age and study type (Fig. 1). The number of cohort studies that assessed SSB and remaining health outcomes were T2D (N = 9), MetSyn (N = 4), and CHD/Stroke (N = 4). For all outcomes, more than 30% (N = 18) of the primary research studies we identified were not referenced in published reviews. We found considerable variability among primary research studies of SSB and the four health outcomes in terms of designs, definitions of SSB, and definitions of outcomes. For example, we counted 14 different definitions of weight/obesity in 29 cohort studies, with no more than 6 studies reporting use of the same outcome measure. **Conclusions:** This map showcases the complexity of research on this topic. Establishing standards in the study of SSB and health would facilitate interpretation across research studies, thereby increasing utility of systematic reviews/meta-analyses and ultimately efficiency of research efforts. Rapid publication of new data suggests the need for caution when reading reviews and regular updates.

**Attachments:** Figure 1. Althuis.pdf

**P3.067**

**Terminology confused: how to name network meta-analysis?**

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**Background:** Many synonymous names for network meta-analysis exist. **Objectives:** So we conducted this survey to find how they named a network meta-analysis and why. **Methods:** Published network meta-analyses were retrieved by searching databases (Pubmed, the Cochrane library, Embase, and ISI Web of Knowledge) and hand-searching other sources (Google engine, HTA websites, references lists). Two independent reviewers conducted search, select studies, abstracted data. Statistical analyses were conducted using SPSS version 15.0 for Windows. **Results:** 104 network meta-analyses were included. In the titles, 65.38% (68 studies) used ‘network meta-analysis’ (NMA), 20.19% (21 studies) used ‘mixed treatment comparisons’ (MTC), 6.73% (7 studies) used ‘multiple-treatments meta-analysis’ (MTM), and 7.69% (8 studies) used systematic review or meta-analysis. Of all these studies, 8.88% (3 studies) mentioned ‘indirect comparison’ in their titles. Of those studies (n = 39) that acknowledged that NMA, MTM and MTC are the same things, 58.97% (23 studies) used ‘network meta-analysis’ (NMA), 23.08% (9 studies) used ‘mixed treatment comparisons’ (MTC), 7.69% (3 studies) used ‘multiple-treatments meta-analysis’ (MTM), and 10.26% (4 studies) used systematic review or meta-analysis. **Conclusions:** Although NMA, MTM and MTC were considered as the same things using different methods combining direct and indirect evidence, and NMA were the most used name, available studies used different names. This might confuse NMA readers, so in the future consensus must be achieved regarding how to name NMA studies.

**P3.068**

**How can we improve trials assessing the effectiveness of Screening, Brief Intervention, and Referral to Treatment (SBIRT) for substance use? Methodological issues encountered during a systematic review**

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**Category:** Other topics. **Background:** Screening, Brief Intervention, and Referral to Treatment (SBIRT) is a comprehensive, integrated public health approach to providing early intervention and treatment services for individuals at risk of substance use-related harms. Evidence exists to support the use of SBIRT for alcohol use, but no systematic review has been done for other substances. We conducted a systematic review on the effectiveness of screening and brief interventions as part of the SBIRT model for reducing the non-medical use of psychoactive substances. During our assessment of studies, we uncovered methodological and reporting issues in this literature. **Objectives:** We will present the methodological and reporting issues we identified in the literature assessing screening and brief interventions for substance use, as encountered during our systematic review. We will offer possible solutions to overcome some issues. **Methods:** We included randomized controlled trials opportunistically screening adolescents or adults and then providing a one-to-one, verbal brief intervention to those at risk of substance use harms. The non-medical use of psychoactive substances were of interest, excluding alcohol, nicotine, and caffeine. Interventions were comprised of four or less sessions and were compared with no/delayed intervention or provision of information only. Methodological and reporting issues were encountered during the process of conducting the review. **Results:** Few studies met the inclusion criteria. Methodological issues in the literature relate to the consent process, the screening procedure (i.e., whether opportunistic), inconsistent measurement and reporting of outcomes, and trial design. We will discuss possible solutions for some of these issues when designing future studies in this area. **Conclusions:** Important methodological limitations exist in the SBIRT literature, some of which could be overcome with the design of future studies. This presentation will be relevant to those conducting methodological assessments of this or related literature and those involved in trial design in this area.
P3.069
Variability and completeness of outcome reporting in studies for low back pain rehabilitation interventions: a survey of trials included in Cochrane Reviews

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Background: The selection of appropriate outcomes or domains is crucial when designing clinical trials in order to compare directly the effects of different interventions in ways that minimize bias. Objectives: We aimed to assess the frequency and completeness of outcome measures in randomized controlled trials (RCTs) included in Cochrane systematic reviews (SRs) focused on rehabilitation interventions for low back pain. Methods: We performed a cross-sectional study of all RCTs included in 11 Cochrane SRs. Data extraction exploring frequency and completeness (full, partial or incomplete) was independently evaluated by two raters. Our outcomes were: the cumulative frequency of outcomes across RCTs and the proportion of outcomes rated as fully replicable. Results: The provisional results are derived from a random sample of one-third (n = 60) of the 190 RCTs. Overall forty-two outcomes were investigated. The outcomes most commonly reported were pain (in 52 RCTs (86,7%)) and disability (in 49 RCTs (81,7%)) measured respectively by 34 and 15 different measurement instruments. An half of RCTs described the methodological procedure to assess the outcome as blinded (50%), in a few less the procedure was unclear (43,3%) and few reported not blinded (6,7%). For 50% of the RCTs the outcome description was considered sufficient to allow replication. Conclusions: In our preliminary results, we reported a large number of outcome measures and a myriad of measurement instruments used with better opportunities to the standardization of approaches. Most times the outcomes reporting was complete. In other cases was partial or incomplete. Initiatives to ensure quality assurance of outcomes in rehabilitation trials should be encouraged.

P3.070
From health to development: a growing centre of excellence in systematic reviewing

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Background: It is a credit to the Cochrane Collaboration that systematic reviews are increasingly viewed as gold standard evidence for decision-making in disciplines other than health. Most recently we have seen a paradigm shift in International Development towards commissioning and making use of systematic reviews. Our team from the University of Johannesburg have played an important part in these developments. Objectives: This poster will report on the growing centre of excellence in systematic reviewing at the University of Johannesburg and reflect on how systematic reviews in Development differ from those in Health. Methods: With experience of Cochrane, Campbell, EPPI-Centre and CEE systematic review methods, we are in a unique position to reflect on how reviews in Development build on, and differ from, Cochrane Reviews. We will draw on our experience of seeking funding for reviews, conducting them, providing training, engaging stakeholders and shaping policy. Results: Firstly we note that ‘Development’ is an externally applied label, and largely refers to reviews on a wide range of questions with a focus on evidence from low- and middle-income countries. Reviews in Development also currently address particular kinds of (often very broad) questions and draw on a wider range of study designs. This has particular implications for searching, assessing risk of bias and synthesis. Thus far Development reviews have engaged predominantly with policy-makers rather than service users, and have incorporated a relatively new emphasis on causal pathway analysis. Conclusions: There is considerable potential to influence the nature of systematic reviewing in Development, and we believe that it is key for Southern academics to play a role. We therefore welcome the opportunity to share our experiences and invite input from others experienced in reviewing this evidence.

P3.071
Identifying underlying mechanisms between intrinsic and variable prognosticators and clinical outcomes: a structural modelling approach

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Background: It is often implicitly assumed in clinical practice as well as in research that prognosis of outcomes and effect of medical interventions to improve outcomes are homogeneous across fixed biological factors, such as gender, ethnicity and age. Thereby the process and underlying mechanisms, through which fixed and variable risk factors and subsequent intermediate outcomes result in the final outcome, are unclear. For instance, risk of preterm birth is different for boys and for girls, and women of different ethnic origin have different normalcy curves for pregnancy. Consequently, to appropriately evaluate interventions aiming at reducing preterm delivery, the definition of preterm—as abnormal in comparison with at term—should take these different intrinsic prognoses into consideration. In addition, it is unclear whether and how intrinsic prognosis and variable risk factors interact. Knowledge and understanding of such mechanisms is pivotal to appropriately design clinical trials and interpret their results. Objectives: To present the rationale and analytical methods and illustrate this approach with an example from the PRO-TWIN and AMPHIA studies. Methods: In the PRO-TWIN and AMPHIA
studies, women with a twin-pregnancy were randomized between pessary versus no-pessary and between progesterone versus placebo, to evaluate whether they reduce the risk of preterm delivery and poor neonatal outcome. In doing so, we model the causal chain between ethnicity, fetal gender, acquired risk factors, cervical length and signs and symptoms for preterm birth. Relevant variables will be selected to specify directed acyclic graphs (DAGs) representing causal relations between prognostic variables and outcome(s) (see example shown in Fig. 1). Structural equations modeling will be used to statistically test whether the model adequately fits the data, also allowing specification of latent (unobserved) variables that represent a combination of several manifest (observed) variables.

**Attachments:** Hypothetical SEM for preterm birth.pdf

### P3.072

**Reaching certainty: a descriptive study of ‘stable’ Cochrane Reviews and coming to firm conclusions**

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**Background:** According to the Cochrane Handbook, a ‘stable’ review is ‘one that is highly likely to maintain its current relevance for the foreseeable future’. **Objectives:** To monitor the extent and reasons for Cochrane Reviews (CR) being designated stable, and to describe the reviews designated by the CR authors as having a conclusion that would be unlikely to change with new trials (called here a ‘firm conclusion’). **Methods:** Stable reviews were identified in the February 2013 Issue of the Cochrane Database of Systematic Reviews (CDSR). Data on the year and reasons of the designation ‘stable’ were extracted from the ‘What’s new’ section. When reasons were not clearly reported there, the abstract, discussion and conclusions sections were searched. Both authors agreed on categories. The conclusions and body of evidence of reviews with firm conclusions were described. **Results:** There were 180 stable reviews among 2600 reviews, 69% of which were categorized as ‘stable’ as of February 2013. Reasons for the designation were often not explained in the ‘What’s new’ section, and a total of 26 reviews gave no clear reason in the review for the categorizing reviews as stable. Where a reason was given (154 reasons), the most common category was a belief that future trials were unlikely (36%) (see Table 1). Only 16 reviews are designated as having firm conclusions, mostly because there was no evidence of benefit, or any benefits were either clinically unimportant or not sustained (11/16 reviews, 69%). **Conclusions:** Reasons for the decision to designate a review ‘stable’ are often poorly reported. Cochrane authors rarely conclude that new trials would be unlikely to change the conclusions of their reviews. They may be more likely to do so when there is an absence of evidence of effect.

**Attachments:** Table 1-Bastian-Hemkens-Apr-2013.jpg

### P3.073

**Methodology of animal studies and impact on aggregating data: why meta-analyses might be inappropriate for preclinical studies**

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**Background:** For scientific and ethical reasons, experiments involving animals should be appropriately designed, correctly performed and transparently reported. **Objectives:** We evaluated the characteristics of reporting, methodology and differences in the efficacy pattern of statins in animal models (mice, rats and rabbits). We explored where these have implications for the conduct and interpretation of meta-analyses. **Methods:** We searched Medline and Embase. All eligible articles were examined and results about total cholesterol (TC), myocardial infarction and survival were extracted. We recorded also design and experimental characteristics. Weighted mean difference and odds ratios were pooled. Fixed and random effects models were compared. Heterogeneity, prediction intervals, publication bias, and meta-regression analyses were done. **Results:** We included 161 studies and more than 2500 animals. Statins lowered TC in all species considered although with large differences in the magnitude of the effect size: —30% in mice, —20% in rabbits and —10% in rats. Few studies considered strains at high risk of cardiovascular diseases and hard outcomes. Although the majority of studies reported they were randomized (55%), many omitted essential information about gender, age or weight of the animals undermining the opportunity for meta-analyses. In 4% of the studies the number of animals used was not reported. Fixed and random effects models gave different results (ratio of effect size increased by five folds). Within animal models heterogeneity was consistently substantial. Accounting for co-variates had minimal impact on it. Publication bias is highly suspected. Prediction intervals were width. **Conclusions:** Although statins showed efficacy in animal models, the preclinical data were scarce, often un-interpretable and difficult to reproduce. Meta-analyses were inconsistent: a reliable approach to estimate the true parameter was imperceptible. In such conditions one would ideally simply consider improper to meta-analyse animal studies.

**Attachments:** Methodology of animal studies and impact on aggregating data_VPecoraro.pdf

### P3.074

**A strategy to increase partnerships between health care professionals and Cochrane Canada: online peer review modules for dietitians**

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**Background:** To monitor the extent and reasons of the designation ‘stable’ were extracted from the abstract, discussion and conclusions sections were searched. Both authors agreed on categories. The conclusions and body of evidence of reviews with firm conclusions were described. **Results:** There were 180 stable reviews among 2600 reviews, 69% of which were categorized as ‘stable’ as of February 2013. Reasons for the designation were often not explained in the ‘What’s new’ section, and a total of 26 reviews gave no clear reason in the review for the categorizing reviews as stable. Where a reason was given (154 reasons), the most common category was a belief that future trials were unlikely (36%) (see Table 1). Only 16 reviews are designated as having firm conclusions, mostly because there was no evidence of benefit, or any benefits were either clinically unimportant or not sustained (11/16 reviews, 69%). **Conclusions:** Reasons for the decision to designate a review ‘stable’ are often poorly reported. Cochrane authors rarely conclude that new trials would be unlikely to change the conclusions of their reviews. They may be more likely to do so when there is an absence of evidence of effect.

**Attachments:** Table 1-Bastian-Hemkens-Apr-2013.jpg
Background: Cochrane Canada continues to work to create partnerships with health care professional groups to increase the awareness and use of Cochrane Reviews. Recently, Cochrane Canada and the Dietitians of Canada saw the opportunity to involve dietitians more actively in the systematic review process, and in particular, to include the unique perspective of dietitians in the peer review/referee process. 

Objectives: Develop online peer review modules for dietitians to increase their confidence, expertise and comfort in knowledge synthesis; use the experience of practicing dietitians to ensure Cochrane Reviews are relevant to dietitians’ needs; involve dietitians in authoring nutrition-related Cochrane Reviews and integrating them into practice or guidelines. 

Methods: Twenty-one stakeholders from 15 organizations across Canada—representing a variety of clinical, public health, educational, research and community backgrounds—joined the brainstorming, planning, development, revision and pilot testing of three online peer review training modules. Managing editors from 15 Cochrane Review Groups were invited to provide nutrition-related protocol and review examples for the modules. After pilot testing, a one-day stakeholder planning and dissemination meeting was held to review the pilot testing results, exchange ideas and plan module dissemination. 

Results: Evaluations from dietitians completing the modules were positive and Cochrane managing editors welcomed the new peer reviewers. Six months following the launch of the modules on October 1, 2012, thirty dietitians have completed the modules with twelve deciding to become peer reviewers/referees. Dietitians’ peer review areas of interest cover 13 Cochrane Review Groups and one field. 

Conclusions: Although collaborating with multiple stakeholders requires time, the iterative development of the online modules harnessed the collective strengths and unique perspectives of both researchers and clinicians. In the future, the basic online module structure could be used and examples adapted to other healthcare professions to solidify additional partnerships between Cochrane researchers and other clinicians.

P3.075 
Local strategies for disseminating knowledge on evidence: a Cuban project

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Background: Scientific evidence is the better knowledge to ensure the best health decisions. This topic is undervalued in Cuba and a change is needed. Information & communication technologies, education and knowledge transfer constitute key pieces to get it.

Objectives: To promote evidence-based practices and the work of the Cochrane Collaboration in Cuban health system. 

Methods: A research-development project was carried out by the Coordinating Centre of Clinical Trials (CENCEC) throughout the Ministry of Health during three years, into the human resources formation branch. 

Results: A promotional group composed of national and foreign professionals was created. A thematic website supported in the web 2.0 was launched in 2010 through Infomed; it includes a promotion column of Cochrane Collaboration. A chair at the Medical University of Havana was formed. The first postgraduate course on searching, retrieval and critical appraisal of the evidence was validated and it has graduated more than 50 professionals; this includes workshops on the Cochrane Library and systematic reviews. A motivational seminar program is being carried out on our proposal or by request from the health institution concerned and has had over 1320 recipients from three levels of health-care. A joint work with Iberoamerican Cochrane Centre to validate Cuban medical journals for hand-searching of clinical trials was completed. The hand-searching was restarted and sending full-text articles previously identified was made through Dropbox. 

Supporting the Cuban Public Registry of Clinical Trials (RPCEC) tasks and the development of the first national workshop about evidence as main topic are some other results. Final considerations: Our perspectives are related to bring education & training programs toward virtual learning environments (ongoing on Moodle), to design a central database on the web of published reports of Cuban clinical trials for promoting and facilitating the development of systematic reviews and to keep working for RPCEC.

P3.076 
Evaluation of a wiki-based platform to develop clinical practice guidelines

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Background: Clinical practice guidelines in cancer need to be effectively disseminated, regularly updated as new evidence is published and enable wide stakeholder consultation. These goals were difficult to achieve with printed guidelines, so Cancer Council Australia has developed a wiki-based platform to support all stages of guideline development (GD).

Objectives: To evaluate the utility of the wiki platform at each stage of guideline production. 

Methods: The key steps in guideline production had to be integrated with the wiki capability. Clinical questions were identified by the guideline working group and search strategies were developed to perform a systematic review for each question. Literature searches were recorded and an online tool was developed to screen and appraise the results as well as extract the key data of each relevant study on the wiki. Evidence-based recommendations were developed and evidence tables automatically generated. Stakeholders could comment on each section of the guidelines on the wiki and then the guidelines were disseminated electronically. Web analytics were used to monitor usage. 

Results: The wiki platform was developed in 2010. For the lung guidelines, 22 authors identified 67 clinical questions. The literature search and screening process resulted in 2035 potentially relevant articles being forwarded for detailed methodological evaluation with another 571 added through snowballing and other methods. To fine-tune the initial draft content, the working party used the wiki to exchange 156 internal comments in 9 weeks. The web statistics recorded that 1055 users visited lung cancer content pages during the initial 30-day public consultation period. There were 38 external comments which resulted in 31 content edits by the working party. 

Conclusions: The wiki platform was embraced by both guideline writers and the public. The next phase is to test sustainability and develop and link educational modules about the guidelines.
P3.077
Social work and the Cochrane Collaboration: qualitative interviews with Cochrane contributors of social work background

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Background: The relationship between the Cochrane Collaboration and social work has never been formally discussed in published literature, potentially undermining the goals of both organizations.

Objectives: In commemoration of the Cochrane Collaboration’s 20th anniversary, this study explores the historical and potential relationship of social work and the Cochrane Collaboration through semi-structured qualitative interviews with Cochrane contributors of social work background.

Methods: Cochrane contributors of social work background were invited through purposive and snowball sampling to participate in a semi-structured interview that explored the relationship of social work and the Cochrane Collaboration. Informed consent was secured for each of seven participants. Interviews took approximately one hour and were conducted in person or via the Web. Participant interviews have been recorded, transcribed, and explored using thematic content analysis.

Results: Member checking pending, a preliminary analysis of seven interviews indicates no formal link between social work and the Cochrane Collaboration. Participants provided multiple rationales for their participation in Cochrane, but generally noted a shared value of evidence-based practice. Participants identified social work as having an informal presence in Cochrane through cross-over of relevant content, objectives, and contributors. Furthermore, participants described social work as largely relevant to Cochrane through a common interest in supporting evidence-based decision-making. Participants identified some barriers to the Cochrane and social work relationship, including conflicting research traditions, lack of resources, and a research-to-practice disconnect. Finally, a few participants suggested that it might be beneficial to discuss formally organizing social work within Cochrane.

Conclusions: Social work and the Cochrane Collaboration appear to have some common goals, values, methodologies, and contributors, indicating the significance of formally considering the relevance and potential collaboration of the two groups. Ultimately, it is recommended that this research inform such directed discussions within both social work and the Cochrane Collaboration.

P3.078
Working with knowledge users to improve evidence-based medicine prescribing and use: key informant interviews and the process of developing an international training collaboration

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Background/Objectives: Health systems globally are interested in promoting appropriate prescribing by health care providers and use of medicines by consumers. Currently, interventions that improve prescribing are underutilized and related evidence is not readily accessible. Rx for Change is a publicly available, Cochrane-supported, online database that provides quick access to systematic reviews regarding best practices for prescribing and using medicines (www.rxforchange.ca). Despite an on-line tutorial to maximize use, uptake of Rx for Change has been suboptimal. Providing database training that includes knowledge user (KU) input may facilitate the uptake of evidence among health care providers, policy makers and consumers.

Objectives: To describe the development of a collaborative, international training program using feedback from two KUs in Canada (provider-based organizations) and two KUs in Australia (consumer-based organizations).

Methods: The training development and evaluation is guided by the CIHR Knowledge-to-Action framework. The process consists of four stages: (1) interviews with key informants in each organization; (2) development of training; (3) implementation and evaluation; (4) application to future training programs. This presentation will describe results of the first two stages. The teams in Canada and Australia will meet with two to four volunteers within each organization. The interviews will include short answer questions and a hypothetical exercise to observe engagement with Rx for Change. Results and local data from each organization will be used to develop training.

Results: Results of key informant interviews and how they were used to guide the development of a training module for Rx for Change will be presented. Issues specific to consumer versus provider organizations and challenges related to working with KUs will be described.

Conclusions: Engaging KUs in shaping the content of training may improve database awareness and uptake of evidence on interventions aimed at improving medicine prescribing and use.

P3.079
Involving service users and clinicians to identify research uncertainties of preterm birth: the James Lind Alliance Priority Setting Partnership

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Background/Objectives: Preterm infants have immature internal organs and often need help with breathing, feeding, and other
life support. Those who survive may suffer ill health or disability in childhood, which could potentially continue to adulthood. Even modest improvement for these infants and their families would be important. We aimed involving service users and clinicians to identify and prioritise uncertainties that are of greatest importance to them. **Methods:** This research adapted a mixed-method approach developed by the James Lind Alliance to establish Priority Setting Partnerships. We recruited 44 clinical and service users’ organisations across UK and Ireland from April 2011 and formed a Steering Group. Online surveys were conducted from March to February 2013, with paper-based survey at UK hospitals (December 2012). **Results:** 1103 participants started the survey, while 371 of them (service users: 57%, clinicians: 30% and both 12%) suggested 654 research uncertainties. We received feedback from clinicians of various specialities (neonatologist: 28%, nurse: 25%, obstetrician: 18%, midwife: 12% and others 10%). Most service user respondents were white British and middle class. Service users asked about aetiologies, interventions and outcomes for pre-pregnancy (12), antenatal (42), perinatal (18), postnatal (58) and other (20), revealing interests in a broad range of issues surrounding preterm birth. Priorities of the identified uncertainties will be set by consensus development meetings and voting. **Conclusions:** Preterm birth is a highly technical and emotive topic. This study has shown service users’ and clinicians’ willingness to participate in furthering the research agenda and their desire for greater understanding and knowledge. Responses ranged from pre-pregnancy education to childhood interventions, highlighting the importance of continuity and duration of care for preterm infants. Finding ways of providing emotional and practical support to mothers would be important. The introduction of new innovations is faster than the generation of evidence, which may result in risks for patients in reimbursement controlled health systems. It seems likely that the publication of Cochrane Reviews is too slow to serve the preparation of evidence overviews. On the other hand, it would be of much help if Cochrane Reviews were published if no RCT is included. This will be the case often in early stages of innovation development. Addressing the lack of evidence and allowing clinical / scientific discussion, as well as identifying the need for further research, is of paramount importance for patient health and safety. The annually updated evidence overviews could even be useful for prioritizing Cochrane Reviews, since these indicate the needs in patient-centered care.

**P3.080 Cochrane Reviews need to cope with the flood tide of innovations**

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**Background:** In Germany the reimbursement of new methods not covered by German DRG, is based on a yearly request by hospitals. An individual contract with health insurances is compulsory for covering additional costs. Requests by ten or more hospitals indicate the vast use in patient-centered care. To support the negotiations of health insurances, the Medical Advisory Service prepares evidence overviews assessing the health benefits and risks for patients. **Objectives:** To assess whether Cochrane Reviews can support the needs of reimbursement controlled health systems. **Methods:** For new non pharmaceutical interventions ten or more hospitals requested in 2012 the Cochrane Library was scanned for titles, protocols and published reviews of these interventions. The number of RCTs was retrieved from the results of the evidence overviews prepared in 2012. **Results:** In 2012 more then 10 hospitals requested special reimbursement for 30 new interventions. For nine of them, at least one RCT was published, but only four Cochrane protocols and one title addressed these topics (see Table). There was no specific full Cochrane Review for any topic. **Conclusions:** The introduction of new innovations is faster than the generation of evidence, which may result in risks for patients.

**Attachments:** Table.pdf
P3.082
Prioritisation for Evidence Aid: choosing systematic reviews for the Evidence Aid database

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Background: Evidence Aid draws on knowledge from Cochrane Reviews and other systematic reviews which assess interventions/actions which might have an impact on health in disaster settings. Objectives: To identify Cochrane Reviews relevant to Evidence Aid, to provide reliable, up-to-date and timely access to evidence for natural disasters, healthcare emergencies or humanitarian crises. Methods: In August 2012, The Cochrane Library contained 5168 full Cochrane Reviews and 2236 published Protocols. Each of these 7404 records was assessed to ascertain whether it might be relevant to Evidence Aid. For protocols and reviews published up January 2012, this assessment was done by three people working separately to categorise potentially eligible records as ‘High priority’, ‘Unsure’ or ‘Not Relevant’. Three Cochrane Review Groups were sent their selected records and provided feedback leading to the addition of a category of ‘Low priority’. Lists of records were then sent to all other Cochrane Review Groups for prioritisation. A more streamlined approach was adopted for the protocols and reviews published since the start of 2012, and the registered titles for a small number of Cochrane Reviews were also considered. Results: All assessors categorised 135 records as ‘high priority’; prioritisation for 522 records was inconsistent. 91 records contained in the Special Collections were automatically marked as high priority and not assessed. This gives a total of 226 high priority records for the prototype for the Evidence Aid database which have since been assessed by the International Rescue Committee. Conclusions: Prioritisation is important to Evidence Aid to ensure that the database contains relevant information. Evidence Aid will partner with aid agencies, NGOs and others to incorporate views and priorities. A workshop in 2013 will help to identify the highest priorities, using the approach developed and refined by the James Lind Alliance; results from this will be presented at the Colloquium.

P3.083
A framework to identifying and characterise research gaps from systematic reviews

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Background: Research gaps prevent systematic reviewers from making conclusions and, ultimately, limit our ability to make informed health care decisions. Methods for conducting a systematic review are well-defined but there has been no explicit process for the identification of research gaps from systematic reviews. Objective: To develop and evaluate a framework for the identification and characterisation of research gaps from systematic reviews. Methods: We developed a framework that uses PICOS (Population, Intervention, Comparison, Outcomes, Setting) to describe the gaps and categorizes the reasons for the gaps as: (A) insufficient or imprecise information, (B) biased information, (C) inconsistent or unknown consistency results, and/or (D) not the right information. We evaluated the framework by: (1) applying the framework to existing systematic reviews, and (2) asking Evidence-based Practice Centers (EPCs) to use the framework and provide feedback on usability and usefulness of the framework. Results: Our application of the framework to 50 systematic reviews identified about 600 unique research gaps. Key issues emerging from this evaluation included the need to clarify instructions for dealing with multiple comparisons (lumping versus splitting) and need for guidance on use of the framework retrospectively. We received evaluation forms from seven EPCs, applying the framework in eight projects. Challenges identified by the EPCs led to revisions in the instructions including guidance for teams to decide if there is a single research gap for each topic of the cardiovascular systems guidance and to consider a priori whether to limit the use of the framework to questions for which strength of evidence has been assessed, and the level of detail needed for the characterization of the gaps. Conclusions: Our team developed and evaluated a framework. Future research is needed to evaluate the relative costs and benefits of using this framework, for review authors and for users of the systematic reviews.

P3.084
Validating prognosis search filters using relative recall based on prognosis systematic reviews

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Background: Methods for conducting systematic reviews of prognosis research are currently being developed and refined. The comprehensive identification of primary studies is a crucial component of systematic reviews; search filters have played a significant role in the effective retrieval of relevant studies. Previous research has demonstrated that the inconsistent use of prognosis-related language in the citations of prognosis studies makes systematic searching difficult, and presents challenges to the development and use of methodological filters. Furthermore, few prognosis reviews employ search filters to assist in citation retrieval. Validating filters based on relative recall of included studies from systematic reviews has been effectively used in the past to create test sets but this approach has not yet been widely applied in prognosis research. Objectives: We will use the included studies from prognosis reviews identified from the Prognosis Systematic Review Database (PSRD) to validate various PubMed prognosis search filters using relative recall. Methods: From reviews in the PSRD, we will identify those that used an explicit prognosis search strategy; we will include systematic reviews that meet methodological standards. Data will be extracted about the topic, search strategy, methodological search filter, and citation information for all included studies. Included studies retrieved through PubMed will serve as a test set for validation of the modified prognosis filters. Results: For the PSRD, we used a sensitive strategy to search five high impact journals (all years) and select prognosis systematic reviews. Relative recall using modified prognosis filters will be compared to published precision of the Clinical Queries prognosis filter. We will explore differences in effectiveness of the filters for different research topics and for different types of prognosis systematic reviews. Conclusions: Using a relative recall approach, we will test the recall and precision of published and modified prognosis filters to inform best practices for prognosis systematic reviews.

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P3.085
Using a search filter to improve literature searching efficiency for clinical question updating
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Background: Guideline updates require comprehensive search strategies to identify all relevant studies. The number of studies identified initially can be quite large and requires an efficient process to quickly identify the most relevant studies. Objectives: Describe the methods used by a US health care delivery organization to create comprehensive search strategies and filter results to improve efficiencies in literature searching. Methods: A comprehensive search strategy was constructed for a systematic review addressing a clinical question within a cardiovascular disease guideline. Identified abstracts were evaluated using a filter consisting of the top general medicine and disease specific journals. If filtered abstracts met inclusion/exclusion criteria, the systematic review was evaluated for possible updating using key questions (e.g. do the newly identified studies change the recommendation, confidence interval, or point estimate?). If yes, the systematic review was updated necessitating review of all identified abstracts. If no, the systematic review was not updated resulting in no change to the clinical question. Results: Search strategy results identified 396 abstracts; 98 were identified in key journals and did not meet inclusion/exclusion criteria thereby warranting no update. Reviewing 98 abstracts compared to 396 reduced review time by 75%. Conclusions: Using a filter to review relevant abstracts saves time by reviewing only those abstracts identified in top journals allowing the updating process to proceed more rapidly.

P3.086
Using social media and crowdsourcing to gather important publications for a scoping review about wikis and collaborative writing tools
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Background: Social media like wikis, Google Docs and social reference managers (e.g., Mendeley) could be used when conducting a scoping review to crowdsource (i.e., obtaining content by soliciting contributions from an online community) important unpublished work found in the grey literature. Objectives: To compare the performance of email and three crowdsourcing tools to collect and share citations to be considered for inclusion in a scoping review. Methods: This study is part of an ongoing scoping review. Our methodology has been published (http://goo.gl/MbtVW). In addition to standard databases, the grey literature sources searched for this review were: HTAi portal, Mednar, OpenSIGLE, Google, Bing and Yahoo. In order to identify any missing articles or unpublished work, 40 experts were invited by email to share relevant papers using one of three different crowdsourcing tools: an HLWIKI page (http://go.g/oe11), a Mendeley Group (http://go.g/alhpo) and a Google Docs spreadsheet (http://go.g/0qyCC). We also tweeted about the study protocol. In each of these crowdsourcing tools, we added some of the articles we had found in order to stimulate reciprocal sharing and to give experts an idea of the kind of papers we were looking for. Results: Figure 1 presents our flow chart. We sent emails to 40 different experts and our protocol was tweeted 12 times (http://go.g/oe4J). Direct email generated the most responses (n = 10) which allowed us to identify two papers that met our inclusion criteria. Mendeley and HLWIKI did not generate any new articles. For the Google Docs spreadsheet, two experts proposed two different links to papers, but none of them were included in the scoping review. Conclusions: More research is needed to identify the barriers and facilitators to the use of crowdsourcing in academic research. This would help us understand how to improve the use of crowdsourcing tools to support the conduct of knowledge syntheses.

P3.087
Reporting methodological search filter performance comparisons: a review
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Background: Effective retrieval of literature is essential for evidence-based healthcare. Methodological search filters are tools for retrieving studies using specific research method. As the number of filters proliferates, choice of filter is likely to be based on filter performance data. Aim: To review measures reported and presentation methods in comparing methodological search filter performance. Methods: Studies were identified from the InterTasc Information Specialists Subgroup (ISSG) Search Filter Resource website, a search by the Cochrane UK Centre and references from a concurrent review. Included studies compared two or more methodological search filters for randomised controlled trials (RCTs), diagnostic test accuracy studies (DTA), systematic reviews (SR) or economic evaluations. Results: Eighteen papers met the review inclusion criteria comparing DTA (8), RCT (5), SR (3), economic evaluations (1) and both RCT and SR filters (1). The number of filters compared in a single study ranged from 2 to 38. Seventeen studies assessed performance against a gold standard set
of studies derived from hand-searching journals (10), included studies from systematic reviews (5) or from database records (2). The most commonly reported measures were sensitivity/recall (16) and precision (13). Specificity was calculated for seven studies. All studies displayed results in tables, generally listing filters in descending order by the measure of interest. Results were given as percentages or proportions in all studies. Two studies supplemented results tables with graphical displays of data: bar graph of the proportion of retrieved and missed gold standard references per filter; forest plot of the overall sensitivity and specificity of each filter. Conclusions: The most commonly reported measures in filter performance comparisons were sensitivity and precision. Methods of presenting results of filter performance comparisons were limited to tables and a small number of graphs.

P3.088
Finding the largest pool of relevant citations in MEDLINE using the Pearl Harvesting Information Retrieval Theory
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Background: Locating as many topic related research studies as possible is critical for meta-analyses, systematic reviews and scoping studies. However, performing a comprehensive literature search can be complicated using current protocols, and evidence indicates difficulties even for experienced researchers (e.g., Valentine et al., 2010). MEDLINE is important for health sciences so developing a comprehensive, verified system for information retrieval here is essential. Objectives: The Pearl Harvesting Information Retrieval Theory is premised on finding and using the largest possible set of topic related search terms (i.e., a synonym cluster) to locate a comprehensive set of relevant studies. The present investigation tested this theory in MEDLINE using search terms representing the topic of autism. Methods: A synonym cluster of search terms representing autism was produced according to the theory. Testing was done comparing this list with terms from MeSH searches and text searches used in 18 meta-analyses on autism in the Cochrane library. Results: Twenty-three potential autism search terms were found, nine of which were verified as essential. Two terms were not used in any of the Cochrane Reviews, but they added only a small number of relevant citations. However, many terms used in the Cochrane Reviews produced thousands of non-relevant citations, thereby making them unnecessary. Conclusions: Locating the maximum number of relevant studies is critical for acquiring knowledge leading to evidence informed decision-making. As found here, also knowing what not to search is equally important in terms of managing time and costs of searching. The Pearl Harvesting Theory utilizes a unique, yet simple approach relying on a verified list of topic related search terms. The effectiveness of this approach for the topic of autism was indicated here in MEDLINE. Once located, synonym clusters can be shared with all those interested in specific topics; saving time and effort.

P3.089
Searching for unpublished data for Cochrane Reviews: cross-sectional study
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Background: Failure to include unpublished data in meta-analyses will generally lead to too positive results. New sources of unpublished data have become available in recent years but it is unknown to what extent such data are being used. Objectives: To describe the experiences that Cochrane authors have with searching for, getting access to and using unpublished data. Methods: Cross-sectional survey of corresponding authors of Cochrane Reviews. Authors were invited by e-mail to an online survey which contained open-ended and closed questions. Results: We sent 5915 invitations and got 2184 replies (37% response rate). Of those, 1656 (76%) had searched for unpublished data. In 913 cases (55%), new data were obtained, and details about these data were provided in 794 cases. The most common data source was trialists/investigators accounting for 74% (n = 587) of the 794 data sources. Most of the data were used in the review (82%, 651/794) and 54% (424/794) received their data in less than a month. Most common were summary data, which 51% (403/794) of the data sources provided, whereas 21% (163/794) provided individual patient data. Only 6% (50/794) reported to have obtained data from the manufacturers and this group waited longer and used more contacts to get the data. The data from manufacturers were less likely to be individual patient data and less likely to be used in the review. Data from regulatory agencies accounted for 3% (24/794) of the obtained data. Conclusions: Most authors that searched for unpublished data received useful data, primarily from trialists. Manufacturers and regulatory agencies were uncommon sources of unpublished data.

Attachments: Figure 1 - short.pdf

P3.090
Dual monitors to increase efficiency of conducting systematic reviews
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Background: Systematic reviews (SR) are the cornerstone of evidence based medicine and guide the development of guidelines, policy decisions and clinical decision making. However, a high-quality SR takes significant resources and time. Methods to improve the efficiency of conducting SRs are needed. Objectives: To evaluate the effectiveness of using dual monitors (i.e. two screens for each computer) on speed (measure of efficiency) and inter-rater agreement among the two reviewers (measure of possible adverse effect of speed). Methods: A cohort of reviewers before and after using dual monitors was compared to a control group that did not use dual monitors between 2009 and 2013. The outcomes of interest were time spent for abstract screening, full-text screening and data extraction, and inter-rater agreement measured by Cohen’s Kappa. We adopted difference-in-differences linear regression models by adjusting number of studies eligible for each step, number of questions for data extraction, rate of complicated questions, and reviewer’s experience in SRs and content expertise. Results: A total of 57 reviewers and 59 SRs were included in the analysis. Compared to the control group, we found
a significant reduction of time spent on data extraction (median time difference = −22.23 minutes, 95% CI: −42.98, −1.48, p = 0.04). No significant change was found in time spent on abstract screening, full text screening, or inter-rater agreement (Table 1). Conclusions Using dual monitors in SR reduces time spent on data extraction without affecting inter-rater agreement.

Attachments: table.pdf

P3.091
A numbers of randomized controlled trials reported in Chinese literature are not covered in MEDLINE

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Background: More and more randomized controlled trials (RCTs) have been published in Chinese journals; However, Language restriction can be a problem for English-speaking countries collecting the relevant research data when they conduct systematic reviews. Objectives: To assess the number of RCTs in Chinese database comparing MEDLINE reporting Chinese literature number. Methods: We conducted a comprehensive search using the term of 'random*', including MEDLINE from 1983 to 2012, and Chinese databases included Chinese BioMedical Literature (CBM) and China National Knowledge Internet (CNKI). We counted the number and calculated the proportion of RCTs in CBM and CNKI. Results: 84.2% of RCTs published in Chinese-based journal have been incorporated in Medline since 1983. Chinese-based journals included in MEDLINE increase annually (3% in 1983 vs. 10% in 2007). Conclusions: The number of RCTs published in Chinese journal increases year by year. The great majority of Chinese RCTs are not incorporated in Medline. Local language literature database may not be neglected.

Background and Objectives: Under- and over-nutrition negatively affect the health and development of individuals and communities. Evidence-based interventions addressing nutritional risk factors contribute to ameliorating these effects. The Cochrane Diet and Nutrition subfield of the PHC Field was formed in 2005 with the key goal of supporting the preparation of nutrition reviews, which are currently widely distributed across Review Groups. One of its original aims was to establish a specialized register of nutrition trials but this has not yet been realized. We propose establishing a Cochrane Diet and Nutrition Trials Register with the following specific Objectives:

• Provide a comprehensive repository of randomized controlled trials (RCTs) and controlled clinical trials (CCTs) assessing the effectiveness of diet and nutritional interventions for systematic review authors and other stakeholders.

• Provide a resource to study the epidemiology of nutrition trials and identify knowledge gaps for future research.

Methods: Studies will be included in the register if they meet the eligibility criteria outlined in Table 1, regardless of publication status. We will develop a search strategy, and conduct an initial comprehensive search of all relevant sources, including CENTRAL, MEDLINE, EMBASE, and other electronic databases recommended by nutrition experts. No time or language limits will be used. We will assess eligibility through screening of abstracts, or full-text articles if necessary. Another investigator will conduct a quality check on a sample of the data. We will store citations in Microsoft Access 2007, coding them as RCTs or CCTs. Conclusions: We will collaborate with individuals and groups within and outside of the Collaboration in the development of this work. Immediate challenges identified include: • Development and validation of a comprehensive search strategy with a filter for nutrition trials. • Identify funding for developing and maintaining the register.

Attachments: Table 1 Eligibility criteria for selecting studies for the Diet and Nutrition trials register.pdf

P3.094
Evidence about colchicine for gout to be added to 17th WHO EML

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Background: Gout is the most common inflammatory arthritis and Colchicine is the primary choice, which was not yet in the 17th WHO Essential Medicines List and applied to be added. So we are appointed to perform a review of colchicine for gout by the WHO 19th Expert Committee on Selection and Use of Essential Medicines. Objectives: To assess the efficacy, safety, cost of colchicine for gout, and provide evidence for WHO Expert Committee. Methods: Databases of the Cochrane Library, PubMed, EMBASE, VIP, CNKI, Wanfang and reference lists of relevant reports were searched. Systematic reviews, meta-analysis, clinical guidelines and clinical studies of colchicine for gout were included. Study inclusion, quality assessment and data extraction were performed by two independent reviewers. We would conduct meta-analysis if possible, or a narrative summary instead. Results: One meta-analysis (43 patients), Five RCTs (550 patients), and 118 case reports (118 patients) were included, and we conducted two meta-analyses to evaluate the efficacy and dose relevant of colchicine. Efficacy: the meta-analysis suggested that colchicine could
reduce the pain or VAS score (MD: −34.00, 95% CI: −50.33, −17.67) for gout with higher events of diarrhea (MD: 49.85, 95% CI: 15.28, 162.60), comparing with the placebo. Low dose has equal efficacy with high dose (RR: 0.97, 95% CI: 0.75, 1.25), but lower events of diarrhea (RR: 4.03, 95% CI: 2.81, 5.77). Safety: The major adverse event is diarrhea, especially higher in high dose group. Other AEs are neuromyopathy, leucopenia, liver dysfunction. SAEs such as rhabdomyolysis, multi-system organ failure also reported in some case reports. Cost: The public price of colchicides is 0.2USD/1mg in China, comparing the average cost of 0.11–0.13USD/1mg in most countries except the USA. Conclusions: Based on current clinical evidence, colchicine was effective for gout, ADRs are dose relevant, the cost was acceptable. Low dose could be the priority choice. So, we recommended colchicine be added to 17th WHO EML.

Attachments: pain relief.png, adverse event.png

P3.095
International cooperation in the abstracts of the 20th Cochrane Colloquium
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Background: Cochrane Colloquium is the annual scientific and business meeting of the Cochrane Collaboration, an international network of more than 28 000 dedicated people from over 100 countries/regions. However, what countries/regions involved in the Colloquium and how they worked with each other were unknown.

Objectives: To provide a visualized map of international cooperation based on the abstracts of the 20th Cochrane Colloquium. Methods: Two researchers (R Sun and CH Shi) extracted the information of author’s countries/regions for each abstract of the 20th Cochrane Colloquium. Co-occurrence matrix of author’s countries/regions was built with the bicomb software and visualized with the UCINET software.

Results: There were 251 abstracts, including 68 oral abstracts and 183 poster abstracts, in the 20th Cochrane Colloquium, with involvement of 44 countries/regions. The median of participant countries/regions in one abstract was 1 (range: 1–12), and the five countries/regions participated in most abstracts were USA (55, 21.9%), China (48, 19.1%), Canada (47, 18.7%), Australia (36, 14.3%) and UK (33, 13.1%). The visualized network (Fig. 1) showed that USA and Canada were located near the center of the chart and had bigger node size, which means they linked more to other nodes (European countries like UK, Switzerland, Norway, Italy, Poland, Spain, Finland etc. as well as Latin American Countries like Costa Rica, Argentina and Chile etc.). Many Asian countries/regions (including China, Thailand, Singapore, Japan, Korea, Myanmar and Taiwan) could be considered periphery members. India, Belgium and Malaysia even had no links with other countries/regions. Conclusions: USA and Canada participated in the most abstracts, were located close the center of the international network, and had closer relations with European and Latin American countries/regions. Asian countries/regions, especially China, although participated in many abstracts, but hardly cooperated with other countries/regions, which need to be improved.

Attachments: Figure 1. Social network-mapping of the participating countries/regions.jpg

P3.096
The attention of reporting in journals’ under the Chinese Medical Association: research on ‘instructions for authors’
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Background: The Chinese Medical Association (CMA) is an important social force in the development of medical science and technology in China. The CMA publishes 126 medical journals covering all medical fields till January 2013, and the journals’ Instructions for authors provides recommendations for reporting to authors. However, the information of the journals’ publication and reporting requirement of these journals is unclear. Objectives: To know the basic information of CMA journals and assess if they have a good reporting guide for authors on the Instructions. Methods: We searched journals’ ‘Instructions for Authors’ on journals’ websites, databases or Google scholar, and extracted the information following the CMA’s journal’s publication place, publication frequency, reporting guidelines (PRISMA, STROBE or CONSORT) mentioned or not, requirement on papers format and so on by data extraction table predesigned. Journals included in this research are under CMA’s and published in Chinese only.

Results: Of 96 journals included, 44 (45.83%) published in the capital Beijing, 30 (31.25%) published in eastern region which excluding Beijing city and 22 (22.92%) published in other regions. 56 (58.33%) published monthly and 31 (32.29%) bimonthly. 52 (54.17%) journals had submission system online already and 47 (48.96%) mentioned peer-reviewed in Instructions for Authors, 11 (11.46%) published at home and abroad. On the requirement on research format, 43 (44.79%) mention ethics on people involved in and 1 (1.04%) mentioned ethics on animals test, 90 (93.75%) journals had requirement in form and 6 (6.25%) had requirement on content. 9 (9.38%) mentioned explanation of methods choosing and 17 (17.71%) required on study design. None mentioned authors to comply the recommendation in the relevant reporting guidelines policy on the requirement in research reporting. Conclusions: The reporting requirement and distribution of CMA’s journals is unbalance in China. For the purpose of improving reliability of medical research literatures, there is a need for CMA’s journals to post more strict requirement and put reporting guidelines in journals’ Instructions for Authors.

P3.097
An analysis of randomized controlled trials of tuberculosis prophylaxis and treatment in Africa
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Background: Africa is severely affected by tuberculosis (TB). In 2011 sub-Saharan Africa carried the greatest proportion of new cases with over 260 cases per 100 000 population. Completed, ongoing and planned trial information is needed by health workers, researchers, policy makers, consumers and other stakeholders, in order to apply the best available strategies to treat and prevent the disease and to
plan future research. **Objectives:** To identify and describe randomized controlled trials (RCTs) of TB conducted in Africa. **Methods:** We searched electronic databases to identify RCTs of TB in January 2013. The search strategy incorporates the highly sensitive RCT search string developed by the Cochrane Collaboration and an African trials search filter developed and validated at the South African Cochrane Centre. We searched the Pan African Clinical Trials Registry (www.pactr.org) for data on on-going trials. We analyzed the distribution of trials by country and by decade and will further analyze trials conducted in the past 20 years for clinical characteristics, principal investigators location and funding patterns. **Results:** We obtained 4479 records describing tuberculosis in Africa between 1966 and 2011. Of, 197 controlled trials 51 trials focused on prevention, 135 on treatment and 33 on vaccines. Fifty-four included children as participants. The highest number of trials were conducted in South Africa (67), Uganda (20), Tanzania (17), Malawi (14), Nigeria (6) and Zimbabwe (5). Currently there are 27 TB related trials registered in www.pactr.org Current studies are conducted in South Africa (6), Tanzania (3), and one each in Gabon, Zimbabwe, Zambia, Uganda, Mozambique. **Conclusions:** Trial research related to TB is extensive and widespread in South Africa. The focus on treatment, and the density of trials in the sub-Saharan region highlight the disease burden of the region. Exploring the TB trial landscape on the African continent can assist in directing limited funds to appropriate endeavours.

**P3.098 Transferring knowledge: equity for health professionals in Ethiopia**

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**Background:** In response to the Ethiopian Government’s aim to train 5,000 specialist MDs and PhDs and 10,000 Masters graduates by 2018, the Toronto Addis Ababa Academic Collaboration (TAAAC) was established to co-build capacity and sustainability in graduate programming at Addis Ababa University (AAU). The Library Science Project (LSP) began in 2008; librarians travelled to Addis in 2011 and 2012 to offer health literacy sessions. **Objectives:** A program for clinical medical librarians will build capacity in library literacy skills, including the accessing of up-to-date information, with foundational knowledge of appraising the evolving literature in evidence-based medicine and critical thinking skills to support medical faculty and trainees. **Methods:** Annual train-the-trainer programs, as well as the provision of access to the University of Toronto’s online resources by affiliated researchers through the Ptolemy project, including clinical decision support tools. **Results:** Approximately 400 learners have attended sessions so far, including over 160 clinical residents. The train-the-trainer aspect has resulted in a further 140 students being instructed by in-country trainers. **Conclusions:** Our training sessions reinforce and sustain medical library literacy skills for librarians through an inter-professional exchange of in-country and distance training.

**P3.099 The use of Cochrane Reviews for decision making by a local public health department**

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**Background:** Peel Public Health, one of Canada’s largest local public health departments, is midway through a ten year strategy focussed on evidence-informed decision making. Central to the strategy is a rapid review process, developed in-house, for finding, appraising and applying the best available research evidence to program and policy decisions. **Objectives:** For the first 24 rapid reviews, the use of Cochrane Reviews in program decision making was examined. **Methods:** Search results and relevance and quality assessments were reviewed to identify which rapid reviews used Cochrane Reviews. Topics were grouped according to domain of public health practice: communicable disease control, environmental health, chronic disease and injury prevention, family health, and other. Impact of the research evidence on the program decision was evaluated using a standardized tool for assessing applicability and transferability. Gaps were noted for domains where there were no Cochrane Reviews. **Results:** A total of 22 Cochrane Reviews were used in one third (8 of 24) of the rapid reviews. Two reviews, both on workforce development, accounted for more than half (12 of the 22 Cochrane Reviews). Each public health domain used at least one Cochrane Review. However, chronic disease and injury prevention was underrepresented in the use of Cochrane Reviews. Research significantly influenced the final program decision in 12 of 24 reviews. Other decisions were more strongly influenced by politics, resources, reach or community needs. Program decisions included stopping a program, staying the course, developing a new approach to current programming, and starting a new program. **Conclusions:** Public health decision making embraces a range of factors, of which research evidence is only one. Cochrane Reviews are being used regularly in our rapid review process, and are influencing our program and policy decisions.

**P3.100 Do Cochrane Systematic Reviews help decision makers from middle income countries? Update of the Chilean experience**

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**Background:** Chile has been facing a health system reform since 2000, in which health services for 80 health conditions have been prioritized. Policy-makers need the best evidence to decide on the efficacy of interventions for these conditions. Systematic Reviews (SR) of comparative studies represent the best quality evidence for questions about effectiveness and the Cochrane Collaboration is committed to making them widely available. In 2006 we reported the availability of Cochrane SRs (CSRs) for clinical questions related to the first 56 health conditions of our health reform. Up to 2012, 24 additional conditions have been included. **Objectives:** To update to what extent CSRs...
respond to the needs of policy-makers in the Chilean health reform. **Methods:** We retrieved the last version of clinical guidelines issued for each of the 80 prioritised health conditions from the Ministry of Health (MoH) website. We identified the recommendations included in each guideline and the evidence supporting them (in footnotes and/or lists of references) focusing on the presence of SRs. **Results:** We assessed 72 clinical guidelines from the MoH website. There was no guideline available for the other 8 conditions. They presented a median of 19 recommendations (range 4–211). Fifty-seven of them (79%) made reference at least to one systematic review, with a median of 5.5 reviews cited (range 1–38) by guideline. Regarding Cochrane Reviews, 39 (54%) of the guidelines cited at least one of them, with a median of 3 (range 1–21) reviews per guideline. **Conclusions:** Cochrane and non-Cochrane systematic reviews have been used by the guideline development groups in the Chilean health system. However, there is a wide variation in their use in the different clinical areas covered by the guidelines.

**P3.101**

High risk cancer screening in workers exposed to asbestos. Application of evidence through partnerships in managing injured workers

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**Background:** Epidemiological studies demonstrated that patients with asbestosis have a 6× increased risk of developing lung cancer and people who smoke have an 11× increased risk of developing lung cancer. However, people who are diagnosed with asbestosis and smoke have a 59× increased risk of developing lung cancer. Several high quality systematic reviews and recent randomized controlled trials showed that screening these high risk individuals with low dose chest CT scanning may lead to early detection and treatment of lung cancers. At present, WorkSafeBC has approximately 200 workers that have been diagnosed with asbestosis and the vast majority of these workers are smokers or ex-smokers. **Objectives:** - To describe evidence-based policy development in the area of occupational medicine - to describe the process and implementation of such policy - to describe early outcome of this policy. **Methods:** Systematic review based business proposal was developed by concerned departments at WorkSafeBC and presented to the senior executives for funding approval. - Outside stakeholders, including the BC Cancer Agency, were identified and engaged in the development of the screening protocol. - Upon senior executives’ approval, the program was implemented and outcome monitoring is ongoing. **Results:** - Low dose CT lung cancer screening program among workers exposed to asbestos started in January 1, 2013 is ongoing - Development process of this screening project, incl. the evidence-based protocol, will be described as well as the early outcomes. **Conclusions:** Among workers exposed to asbestos, low dose CT scan screening is effective in detecting lung cancer at early stage, provides better quality of life to workers and cost-effective to WorkSafeBC.

**P3.102**

Utilizing a logic model framework to evaluate patient navigation interventions on colorectal cancer screening time to diagnostic follow-up care: a study protocol

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**Background:** Colorectal cancer (CRC) is the second leading cause of adult cancer death in the United States. CRC mortality rates can be reduced through screening using a Fecal Occult Blood Test and timely follow-up care. Following a positive CRC screening result, a patient must undergo diagnostic follow-up. Patient navigation (PN) uses trained individuals to guide patients through the healthcare system to obtain care. A growing body of evidence examines whether PN decreases the time from CRC screening to diagnostic follow-up; however, there is a paucity of reviews examining this topic, and where reviews exist, most underutilize logic models. Logic models can improve systematic reviews through evaluative reasoning and methodological transparency. **Objective:** Using a logic model framework, this systematic review will assess the effects of PN interventions on times from CRC screening to diagnostic follow-up. **Methods:** Utilizing a conceptual and analytical logic model framework, the Cochrane Colorectal Cancer Group Specialized Register, Cochrane Central Register of Controlled Trials, MEDLINE, Cochrane Library, PsycINFO, Dissertation Abstracts, and CINAHL will be searched without language restrictions for studies dated from December 1995 to July 2013. Randomized controlled trials and controlled clinical trials assessing times from CRC screening to diagnostic follow-up will be selected. Participants will include adults age 50 and above. One reviewer will screen the studies for relevance and two will independently assess the studies for inclusion. Data will be extracted by one reviewer and assessed by two. Studies will be evaluated on the population, intervention, comparison, outcome, setting, fidelity, and bias will be assessed using the Cochrane Risk of Bias Tool. **Results:** Results will be presented using summary tables. **Discussion:** This updated systematic review will fill a gap in evidence and improve efficiency within the healthcare system by using a logic model framework to evaluate the effects of PN on timely CRC diagnostic follow-up.

**P3.103**

Evidence-Informed Healthcare Renewal Portal: the development of an online repository of policy-relevant documents addressing healthcare renewal in Canada

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**Background and objective:** Policymakers need timely access to different types of evidence that can be integrated with the messages arising from systematic reviews. The Evidence-Informed Healthcare Renewal (EIHR) Portal makes readily available online policy-relevant
documents that address healthcare renewal in Canada. It is a collaborative effort between the McMaster Health Forum and the EIHR Roundtable, which is comprised of various governmental and non-governmental Canadian health organizations. Our objective is to describe the development, content and usage of the EIHR Portal. Methods: The EIHR Portal was developed in several stages: (1) A taxonomy of 24 document types that address priority areas identified by Canadian health care organizations was iteratively developed and integrated with a pre-existing taxonomy of health systems arrangements; (2) Roundtable members referred documents for eligibility assessment; and (3) Two independent reviewers assessed documents for eligibility and coded each based on the taxonomies. Descriptive statistics about the Portal’s contents and usage are collected each month. Results: There are 717 documents included in the EIHR Portal. The top document types are situation analysis (n = 271), health and health system data (n = 134) and jurisdictional review (n = 71). The top national priority areas addressed in the documents are health human resources (n = 586), quality as a performance indicator (n = 392) and information technology (n = 312). There are 1081, 71 and 570 systematic reviews that address these same priority areas in HSE, and interested users are prompted to consult them with links. There are currently 373 policymakers, stakeholders and researchers signed up to receive EIHR Portal content updates, and 713 of the users registered for Health Systems Evidence (HSE) have enabled content from the Portal. Conclusions: The EIHR Portal provides health policymakers in Canada with easy access to the range of policy-relevant evidence focused on health systems while promoting the use of systematic reviews through lateral linkages to HSE.

P3.104 Evidence-based guideline implementation within primary care practices on hypertension and diabetes

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Background: The implementation of evidence-based guidelines (EBG) into the clinical practice of primary care teams is essential to achieve quality assurance in this setting. There is a need to define the framework for deciding the effectiveness to develop and introduce clinical guidelines, as patients with diabetes and hypertension typically obtain most of their care from primary care providers (PCPs). Objectives: To undertake a literature review on the effectiveness of guideline implementation on hypertension and diabetes in a primary health care setting. Methods: The MESH terms used in this review were: implementation, guideline, hypertension, diabetes and primary health care. MEDLINE, Cochrane Controlled Trial Register, EMBASE, and the specialized register of the Cochrane Effective Practice and Organization of Care (EPOC) group were used as data sources. Separate analyses were undertaken for comparisons of different types of intervention. Results: There are four types of strategies for implementing an evidence-based guideline in hypertension and diabetes: (1) educational training, including face-to-face training individual or grouped sections, manuals for self-directed learning, patient management flow-charts, practice based education and newsletters; (2) internal or external audit, including feedback reports on performance and peer review; (3) Information Communication Technology devices; (4) combination among the different kind of interventions. Conclusion: The implementation of EBG instruments is likely to improve the process of care in diabetes and hypertension, rather than patient outcomes. Decision-makers need to integrate several approaches on the management of hypertension and diabetes.

Attachments: cochrane abstract implementation EBG.pdf

P3.105 Cochrane Journal Club: meeting the expectations of our growing membership

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Background: Cochrane Journal Club (CJC) was launched in October 2009 to promote awareness of Cochrane Reviews, educate students and others to critique and use research findings, and aid in the translation of research into practice. By the 21st Colloquium in Quebec, CJC will have been published monthly for almost four years (www.CochraneJournalClub.org). Objectives: To analyse data collected from visitors to CJC. To identify the CJC issues receiving the highest number of unique visitors in the first 2 months of publication. To survey users of CJC to find out how they use the CJC resources and whether the materials presented meet their requirements. Methods: Google Analytics has been used to collect data on visitors to the CJC website since launch. In addition, an online survey of users was circulated to the CJC membership list in March 2013. The survey will also discuss practical experience with the CJC in one residency program, including recommendations from that experience that have emerged for possible improvements or added features to CJC. Results: In April 2013, the CJC website has 7806 members and there have been 158,000 unique users. Most visitors come from the UK (25.6% of all visitors). The rest of the top 10 (in decreasing number of visitors) are US, Australia, India, Canada, Italy, Spain, China, Brazil and Japan. The user survey will be analysed during May 2013 and presented with updated usage data at the 21st Cochrane Colloquium in Quebec. Conclusion: Each issue of CJC is reaching a wide audience and CJC is a valued resource. We wish to continue to develop CJC to meet the expectations of users and provide resources that match their needs.

P3.106 Easy access to information on evidence based mental health interventions for children in Norway: the website ‘Ungsinn’ (http://ungsinn.no)

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Designing a social media strategy for a Cochrane entity

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Background: Cochrane entities continue to seek effective ways of communicating information, both within the Collaboration and to those interested in our work, such as consumers and other stakeholders. Social media is one of the fastest growing areas in modern communication technology and allows users to share, create, discuss and modify content and information quickly and effectively. Any communication plan should consider the importance of incorporating a social media strategy to promote news about the entity’s work, attract larger audiences and offer opportunities for engagement. Objectives: Design and share an effective Cochrane social media strategy which could be adapted by any Cochrane entity. Any plan should allow entities to share news and resources with a wider audience, and promote more effective communication, engagement and participation. Methods: This work will be developed in collaboration with several Cochrane entities who are at different stages in their use of social media. In developing a social media strategy, we will identify benefits in terms of participation and engagement on topics with other Cochrane entities; recognise improvements in understanding by users of our services; and evaluate increased interactions with stakeholders. As part of the strategy we will also consider the value of a social media policy and how developing a social media strategy fits in to the broader context of an entity communication plan.

P3.108
Consumer participation on a Cochrane Review team

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Background: In 2011, two consumer volunteers were invited to join the writing team on a series of reviews on exercise for fibromyalgia. The role of consumers on the writing team was established. Methods: The review team meets once a month via SKPYE or Blackboard Collaborate. Materials circulated electronically prior to meetings include agendas and instructions regarding preparation as needed. The two consumers take part in team meetings and are prepared to comment in all discussions. Consumers help evaluate outcome measures, provide reflections on summaries of included studies, and help identify research gaps and priorities for future reviews. In the area of knowledge translation, consumers review manuscripts, provide feedback about the suitability for lay audiences, assist in developing plain language summaries, and help to develop a knowledge translation plan to share results with lay audiences. Challenges: Consumers needed to learn various technical and scientific terms along with becoming familiar with software such as DropBox and Review Manager. Although there was a definite learning curve, all consumer members were able to meet these challenges. Results: All team members including the two consumers adjusted to the new technologies allowing full participation from across Canada including a rural area. The traditional role of a consumer with a Cochrane Review has grown considerably with this writing team. Conclusion: This approach demonstrates ways to include consumers throughout the entire review process, from planning to manuscript preparation. Consumers felt included and valued by the team, while scientific members appreciated the insights and opinions offered by the consumer collaborators.

P3.109
Café Scientifique—public outreach

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Background: The ‘Café Scientifique’ funding program is an innovative initiative funded by the Canadian Institutes of Health Research (CIHR). The goal of a Café Scientifique is to bring together researchers with members of the public to spark a discussion about some of the most interesting research currently underway in Canada. Objectives: The Canadian Cochrane Centre (CCC) applied to the Canadian Institutes of Health Research’s (CIHR) Café Scientifique funding program to hold a public discussion titled, ‘Health information in the age of the internet. Why Google your health questions when you can Cochrane them?’ The goal of this particular Café Scientifique was to inform the local public about a valuable online resource in which they could research reliable health treatment evidence: The Cochrane Library.
Given that one in three adults search health information online, it is crucial that they understand which sites are reputable and have the best evidence on which to base their health decisions. **Results:** The CCC’s application was successful and ranked sixth out of 82 approved applications (94 submissions). The Café was a tremendous success. There were 73 attendees and all feedback received was positive. The Café was held just after working hours in a pub which provided an ideal time of day and atmosphere. Many participants inquired as to when we would be holding our next event. **Conclusions:** The Café Scientifique program provided a relaxed atmosphere in which the public could feel comfortable engaging with scientists/researchers/physicians to whom they often do not have the opportunity to speak. Café Scientifiques are a great way to engage the public in learning about The Cochrane Collaboration, The Cochrane Library and Cochrane Review evidence. Given that many of today’s interactions take place online, this face-to-face event was a unique opportunity to bring the public and researchers together.  

**Attachments:** CafeScientifiquePoster.pdf

### P3.110

**The young doctor’s opinion on Evidence-Based Health Care (EBHC) in Stellenbosch University’s medical curriculum**

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**Background:** Stellenbosch University (SU) has obtained funding for the Stellenbosch University Rural Medical Educational Partnership Initiative (SURMEPI), aiming to enhance the skills of doctors in HIV/AIDS and TB care, as well as increasing the research capacity in this field. Strengthening Evidence Based Health Care (EBHC) knowledge and skills at an undergraduate level is particularly important within this context. This survey is part of a situational analysis of undergraduate EBHC teaching at SU. **Objectives:** To gather perspectives of recently qualified doctors regarding the appropriateness of undergraduate EBHC teaching. **Methods:** We invited doctors to participate in an electronic survey by sending bi-weekly emails. We analysed quantitative data using SPSS statistical software. Qualitative data was managed and coded with the help of Atlas.ti software. We grouped codes into emerging themes for each question. Ethics approval was obtained. **Results:** We obtained 375 (38%) responses. Most respondents agreed that it was important to learn EBHC at undergraduate level and that EBHC teaching at SU was adequate. However, in contrast to rating EBHC teaching as adequate in the quantitative part of the survey, qualitative responses showed that newly qualified doctors found that they lacked EBHC skills. They felt that EBHC teaching should be integrated into clinical rotations by making use of relevant examples. They recommended that interactive teaching methods, as well as online learning platforms and social media could be used. Access to information in the clinical field emerged as the most important challenge when practicing EBHC. Time constraints, work-overload, lack of self-motivation and the work environment were also listed as barriers. **Conclusion:** Although there is some EBHC teaching at undergraduate level, graduates feel that they are not well equipped to practice EBHC. EBHC teaching should be integrated into a variety of disciplines. SU should consider granting their alumni access to their online library.

### P3.111

**Knowledge translation: the number, coverage, and application of Cochrane Reviews in China**

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**Background:** It was reported that Chinese authors were the third largest contributor in the Cochrane Collaboration. However, little is known about the coverage and application of Cochrane Reviews in China. **Objectives:** To investigate the number, coverage and application of Cochrane Systematic Reviews (CSRs) in China. **Methods:** We searched Archie from 2006 to 2011 for the information of reviews published by at least one Chinese author and the distribution of Chinese authors in CRG. We searched the Chinese Science Citation Database (CSCD) using the term ‘Cochrane’ from 1989 to December 2012 to know the application of CSRs. Microsoft Excel 2007 was used to perform data extraction and analysis. **Results:** The number of publication for full Reviews by at least one Chinese author was increasing from the year 2009 to 2011, with 143, 177 and 217 respectively. The distributions of Chinese authors in top ten groups were: Hepato-Biliary (192), Renal (173), Stroke (106), Heart (99), Ear, Nose and Throat Disorders (90), Oral Health (85), Gynaecological Cancer (83), Acute Respiratory Infections (77), Epilepsy (68), Hypertension (68). There were 3468 CSRs cited by the Chinese medical journals, which of 2985 CSRs were cited once. A total of 450 CSRs were cited more than twice. The Chinese articles citing CSRs increased dramatically from 2 articles in the year of 2000 to 560 articles in 2011. In the 600 Chinese medical journals included by CSCD only 158 journals cited CSRs counting for 26%. The top five Chinese medical journals cited CSRs were: Chinese Journal of Evidence-Based Medicine (656), Chinese Journal of Tissue Engineering Research (240), World Journal of Gastroenterology (176), The Journal of Evidence-Based Medicine (173), Chinese Journal of Practical Gynecology and Obstetrics (123). **Conclusions:** The application of Cochrane Reviews in China is still limited and need to be improved.

### P3.112

**Usefulness of Cochrane Systematic Reviews in health technology assessments in Argentina**


Argentine Cochrane Centre - Institute for Clinical Effectiveness and Health Policy (IECS)

**Background:** Health Technology Assessment (HTA) has been increasingly considered for decisions in health care policy in many countries but this trend is just beginning in Latin America. The Institute for Clinical Effectiveness and Health Policy (IECS) is a leader HTA agency that provides its reports to public and private institutions...
in Argentina. Objectives: To describe the usefulness of Cochrane Systematic Reviews (SR) in the production of HTA documents by a weighty HTA agency in Argentina and to establish differences over time. Methods: All HTA documents (rapid response documents, brief technical documents, and complete HTA) produced since 2000 will be assessed and will be classified as: (a) evaluating drugs; (b) therapeutic procedures; and (c) diagnostic procedures. Documents can be accessed through internet (www.iecs.org.ar). Pairs of independent researchers will evaluate the number of HTAs using SR, how much coincidence you found between the question of the HTA and the question of the SR that was used (very/enough/poor/not related), the contribution of the SR to answer the HTA’s question (entirely/enough/marginally/null), problems of the SR to answer de HTA’s question (non-updated SR, bad quality, applicability, none). Discrepancies will be solved by consensus. We will analyse separately Cochrane SR (CSR), and non-Cochrane SR (NCSR) and the NCSR/CSR ratio stratified by the previously mentioned classification. This analysis will be compared with a random sample of 100 HTAs published in the Centre for Reviews and Dissemination (CRD) database during the year 2012. Results: 315 HTA documents were published by IECs since the year 2000. The results will be presented at the Colloquium.

P4.001
CRISP: online summaries of Cochrane Reviews for policy

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Background: Systematic reviews are a key source of research to guide health policy, however, relevant reviews can be difficult for policy-makers to identify and are often challenging to apply in practice. CRISP (Cochrane Reviews Identified and Summarised for Policy) provides web-based summaries of Cochrane Reviews that are relevant to health policy. Objectives: To support the use of research to inform health policy by providing policy makers with access to reliable and relevant research in an accessible format. Methods: Each issue of The Cochrane Library is scanned to identify new and updated reviews relevant to health policy. Reviews are appraised using AMSTAR, and the location of the included studies and the authors of the review are indicated on a map. The key messages derived from the review are displayed on the front page of the summary along with the essential characteristics of the review (PICO, study settings and study quality). Users of the site can click through for more details about the review (‘What the authors looked for’ and ‘What they found’) plus a summary of the main results. There are also links to the review in The Cochrane Library and to related reviews within the CRISP site and within the Library. Results: The CRISP website (www.policymakers.evidencemap.net) currently contains more than 150 summaries of Cochrane Reviews. To enable browsing, reviews are grouped into six broad categories (e.g. population health; health systems) and then by sub-groups within each category (e.g. injury prevention; financing). Individual reviews are then linked to narrow questions, such as ‘What works to prevent occupational injuries’. The site also supports free-text searching. Conclusions: Cochrane Reviews are a valuable source of evidence to inform health policy decisions but can be difficult to use. CRISP summaries present the key information and findings of policy-relevant reviews through an easily accessible site.

P4.002
Reporting of interim analyses, stopping rules, and data safety and monitoring boards in protocols and publications of discontinued randomized trials

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Background: Pre-planned interim analyses, stopping rules, and the presence of an independent Data Safety and Monitoring Board (DSMB) are means to increase transparency and credibility of the decision-making process in case of randomized controlled trials (RCTs) discontinuation. Objectives: To determine: (1) the prevalence of planned interim analyses, stopping rules and DSMBs in RCTs; (2) the purpose of interim analyses (safety, efficacy, futility, other); (3) the proportion of discontinued trials which report DSMBs; (4) the proportion of discontinued trials with a matching stopping rule; (5) discrepant reporting between protocols and publications; and (6) trial characteristics associated with reporting of planned interim analyses, stopping rules, and DSMBs. Methods: A multi-centre cohort of RCTs was established including protocols approved by six research ethics committees (RECs) in Switzerland, Germany and Canada between 2000 and 2003. Data on trial characteristics were extracted from protocols and corresponding publications. The completion and publication status of RCTs was assessed using information from REC files, literature searches, and by investigators survey. Results: We included 949 RCT protocols. Of these, 302 (31.8%) reported interim analyses, 160 (16.9%) stopping rules, and 263 (27.7%) the presence of DSMBs. The main reported purposes of interim analyses were: efficacy (26.2%), safety (19.2%), and both combined (21.9%). Of a total of 250 (26.3%) discontinued trials (due to any reason), 63 (25.2%) mentioned a DSMB in protocol. We found some evidence for an association between pre-specification of a stopping rule and trial discontinuation (odds ratio 1.56, 95% CI 0.98–2.49, p 0.06). However, only 10/250 discontinued RCTs pre-specified a matching stopping rule in the protocol [benefit (N = 3), harm (N = 6), futility (N = 1)]. Full results regarding all outlined objectives will be presented at the Colloquium. Conclusions: Trial discontinuation appears to happen mostly ad-hoc. Systematic reviewers should bear this in mind when assessing the risk of bias of discontinued RCTs.

P4.003
Systematic reviews on nutrition interventions relevant to low and middle income countries: descriptive assessment of methodological challenges

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Background: Less than a quarter of developing countries are on-track for achieving the Millennium Development goal of halving
under-nutrition. Rigorous and transparent systematic reviews are recognized internationally as a credible source for evidence of effects. However, in the nutrition field, there are a number of conflicting systematic reviews which has reduced their credibility. **Objective:** We aimed to assess the reasons for conflicting findings of systematic reviews in four purposefully selected areas of nutrition. **Methods:** We identified a purposive sample of systematic reviews in four areas of nutrition. We assessed the following possible reasons for differences in conclusions and Results: (1) methodological quality; (2) risk of bias assessment of included studies; (3) inclusion and exclusion criteria; (4) methods used (e.g. subgroup analyses, applicability assessment); and (5) external factors. **Results:** We included 90 systematic reviews across nine content areas. We found that the definition of the question influenced the results of reviews. The generalizability was dependent upon which components of an intervention were included, whether the population was undernourished or healthy, whether conflicted funding.

**Conclusion:** There is a need for improved justification of methodological choices in systematic reviews on nutrition. We propose the need to follow standards for conducting and reporting systematic reviews, such as the Cochrane Handbook and PRISMA reporting guidelines. We propose there is a need to develop nutrition-specific guidance and centralized editorial review for nutrition-related reviews. The Cochrane and Campbell Collaborations are ideally positioned to carry this initiative forward due to their international reputation for rigour, transparency and freedom from conflicted funding.

**P4.004**

Is adequate reporting on health equity in systematic review equivalent to an equitable recommendation? A case report

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**Background:** Transparently reporting of equity-focused systematic review (SR) is recognized as a contribution to improving the evidence base for evidence-informed, equity-oriented recommendation. **Objectives:** Aim to discuss whether adequate reporting on health equity in SR is equivalent to a evidence-based, equitable recommendation. **Methods:** We conducted a case report, basing on a WHO ‘Guideline: vitamin A supplementation in pregnancy for reducing the risk of mother-to-child transmission of HIV’ [1]. The reporting characteristics on health equity of all systematic reviews which are used in guideline are investigated by PRISMA-E 2012 [2]. Then we investigated which factors are considered to formulate recommendations and discussed the relationship between reporting on equity and equitable recommendation in further. **Results:** Only one Cochrane Review [3] is used by the guideline, which assessed the effects of vitamin A targeted at HIV-positive women. Sexual (sexual health status), place of residence (low- and middle- income countries) and age (i.e. HIV-positive pregnant women, different children's age groups) factors are considered in this review. 7 items (i.e. Items 2B, 3A, 6, 6A, 16, 26 and 26A in PRISMA-E 2012 checklist) are not adequately described, especially items on extent and limits of applicability to HIV-positive women, the logic model/analytical framework, a pre-specified subgroup analysis to investigate the differences across age and place of residence factors, etc. According to PROGRESS-Plus framework, only sexual (sexual health status) factor is incorporated to formulate the only recommendation. However, they are lack of recommendations on different age groups and countries, although relevant evidences of synthesizing findings are adequately reported in results section. The main reason maybe no significant effects on the primary outcomes. **Conclusions:** Although they are summarized and reported in SR, relevant evidences on equity in this case are not used to develop corresponding recommendations, which limit their usage in policy making of health equity where relevant.

**P4.006**

La généralisation des résultats de méta-analyses dans les recommandations formulées par les organisations internationales

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**Background:** Les méta-analyses sont généralement considérées comme des études fournissant des preuves scientifiques d’excellente qualité, et elles influencent les recommandations sanitaires des organisations internationales. Afin d’augmenter la validité interne des résultats de méta-analyses, des outils d’évaluation de biais ont été développés, notamment par Cochrane. Toutefois, les méta-analyses peuvent aussi présenter des problèmes de validité externe. **Objectives:** Notre objectif est de mesurer le décalage qui peut s’opérer entre la généralisabilité des résultats de méta-analyses et la portée effective de leurs conclusions à travers les recommandations internationales. Incidemment, notre mission est d’attirer l’attention sur la nécessité de développer des outils d’évaluation de la validité externe des méta-analyses. **Methods:** Nous avons réalisé une étude de cas autour du thème de la prise en charge de la pneumonie infantile par des agents de santé communautaires [CCMp]. Cette étude a consisté à: (i) recenser et apprécier la validité externe des méta-analyses ayant évalué les impacts de la CCMp et; (ii) examiner la portée des recommandations internationales. **Results:** Trois méta-analyses ont démontré l’efficacité de la CCMp pour réduire la mortalité et la morbidité attribuables à la pneumonie. Hormis une, toutes les études incluses dans ces méta-analyses ont été conduites sur le continent asiatique. Les organisations internationales, s’appuyant sur ces preuves, recommandent désormais l’implantation de la CCMp dans les pays prioritaires du Compte à rebours pour l’atteinte des Objectifs du Millénaire pour le Développement, dont la plupart sont situés en dehors du continent asiatique. **Conclusions:** Cette étude montre que la validité externe des méta-analyses peut être limitée et insuffisamment prise en compte dans l’élaboration des recommandations internationales.
P4.007
Cochrane’s impact on child health guidance in three Western countries
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Background: The Cochrane Collaboration was founded on the premise that the preparation of systematic reviews is a foundation for better health care outcomes. However, the real impact of evidence synthesis comes from use. We measured the potential use of Cochrane evidence in child health by assessing the degree to which Cochrane Reviews are cited in pediatric policy statements and clinical practice guidelines in three Western countries. Objectives: To evaluate the use of Cochrane evidence in child health guidance in Canada, the US and the UK. Methods: We identified the practice guidelines and policy position statements of the Canadian Paediatric Society (CPS) and the American Academy of Pediatrics (AAP), as well as the child-relevant clinical guidelines of the National Institute for Clinical Evidence (NICE) in the UK. We extracted the number of references to Cochrane systematic reviews. Results: AAP Practice Guidelines (n = 18): 44% reference Cochrane; no trend by year, no CDSR references before 2001. AAP Policy Statements and Statements of Endorsement (n = 594): 4% reference Cochrane, 5.5% from 2000 onwards; no trend by year, no CDSR references before 2000. CPS Position Statements (n = 194): 24% reference Cochrane; no trend by year, no CDSR references before 2001. NICE Clinical Guidelines: 100% of Children and Youth guidelines (n = 19), 94% of all guidelines that mention children (Children and Youth + Children and Adults, n = 48), and 90% of the guidelines tagged as Child Health (n = 10) reference CDSR. Further analysis by clinical area is ongoing. Conclusions: There is considerable variability between Canada, the US and the UK in the degree to which Cochrane evidence is used in child health guidance. More detailed research would help establish if there are areas where guideline authors require evidence but Cochrane Reviews are not available. This could serve to identify and prioritize topics for future Cochrane Reviews.

P4.008
Structural recommendations assessment of eight clinical practice guidelines developed in Colombia
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Background: There is not enough information to guide editorial wording of recommendations within CPG (Clinical Practice Guidelines) development. The AGREE-II instrument suggests the inclusion of population, intervention and outcome (P-I-O) components within recommendations. Objectives: To evaluate P-I-O component in CPG recommendations and to analyze its relationship with the AGREE-II evaluation. Methods: Eight recently developed in Colombia CPG were chosen and assessed by four methodological experts; the presence of P-I-O component in each recommendation was established, and compared with an external evaluation score of the 15th item of AGREE-II instrument. Results: Eight guidelines with a total of 691 recommendations were evaluated, all of them were appraised by external international review with the Spanish AGREE-II instrument and its use were recommended. An average of 9.9% of recommendations met P-I-O structure; the absence of each component was 31.2% for population, 6% for intervention and 85.2% had no outcome. The item 15 of AGREE-II instrument reported results between 4 and 7, scores of good quality. Conclusions: Recommendations in CPG seem to be clear, but most of them don’t contain the evaluated criteria for their report. External evaluation emphasizes in clarity of recommendation, and there is no agreement with the percentages obtained according to P-I-O structure, which enhance its understanding. It is advisable to standardize methodology for recommendations to include all components that reflect the answer to the research question.

P4.009
Critical appraisal of clinical practice guidelines for treatment of pancreatic cancer based on the global disease burden
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Background: Pancreatic cancer is the eighth most common reason for cancer-related death worldwide. Many countries either lack appropriate clinical practice guidelines for the treatment or the quality of their guidelines has never been evaluated. Objectives: The main objective of our work was to identify published pancreatic cancer guidelines and evaluate the burden and treatment guidelines of pancreatic cancer. Methods: Literatures concerning pancreatic cancer guidelines were identified through PUBMED, National Guidelines Clearinghouse and the Guidelines International Network. Appraisal of Guidelines for Research and Evaluation (AGREE) were applied to assess the methodological quality of the guidelines. Results: A total of 14 relevant guidelines published from 2001 to 2012 were identified, involving four continents (Asia, Europe, North America, Oceania), six counties, four international organizations. According to the AGREE instrument, two guidelines can be strongly recommended, 11 with provisos and alterations while one guidelines cannot be recommended for adaptation due to poor methodological quality. There were only two domains, ‘Scope and Purpose’ and ‘Clarity of Presentations’, getting high average scores (more than 60%) among all guidelines. Their subjects of 14 guidelines covered six treatment categories: Chemotherapy, surgery, radiotherapy, support therapy, radiotherapy and interventional therapy. Guidelines recommended the most Categories in Asian. Conclusions: The overall methodological quality of pancreatic cancer treatment guidelines is suboptimal in different countries or regions. The guidelines mainly focused on the treatment of Chemotherapy, surgery, radiotherapy and support therapy. Interventional and Traditional Chinese Medicine therapy were the most recommended agents in china guidelines unresectable pancreatic cancer.

Attachments: cuicui li 1.pdf
P4.010 The Endocrine Society Guidelines: when the confidence cart goes before the evidence horse?

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Background: In 2005, the Endocrine Society (TES) adopted the GRADE system of developing clinical practice guidelines. This system rates the panel’s confidence in the estimates of effect of the available options (from high to very low confidence) and in the value of following a recommendation (strong or conditional recommendation). GRADE working group guidance suggests that strong recommendations based on low or very low (l/vl) confidence may often be inappropriate. Objectives: We sought to characterize TES strong recommendations based on l/vl confidence evidence. Methods: We identified all strong recommendations based on l/vl confidence evidence published in TES guidelines between 2005 (when TES started using GRADE) and 2011. We applied a taxonomy of paradigmatic situations in which strong recommendation based on l/vl confidence estimates may be appropriate. Independently and in duplicate, reviewers extracted, for each recommendation, whether a strong recommendation was appropriate and if so which paradigmatic situation applied. Results: 206 (58%) of the 357 TES recommendations issued were strong; of these, 121 (59%) were based on l/vl confidence evidence. Of these 121, we classified 43 (36%) as ‘best practice’ recommendations for which sensible alternatives do not exist and do not require grading. In 5 (4%), we concluded that moderate or high confidence in estimates was warranted and in another 5 (4%) that the recommendations were for ‘additional research’. Of the remaining 67, 33 (27% of the original 121) were judged inappropriate. Of the 35 appropriate ones, 5 (4%) were for ‘additional research’. Of these, 13 (27%) was low confidence evidence for benefit and high confidence evidence for harm thus warranting a strong recommendation against the intervention. Conclusions: Guideline panels should beware of formulating inappropriately strong recommendations when confidence in estimates is low. Our taxonomy of paradigmatic situations when such recommendations are appropriate may be helpful.

P4.012 Brain metastasis management: difficulties with integrating Cochrane Review evidence into guidelines

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Background: Treatment options for brain metastasis include surgery, stereotactic radiosurgery (SRS) or whole brain radiation therapy (WBRT). Multiple randomised controlled trials (RCTs) have been performed comparing various combinations of these therapies. Objectives: To determine if advances in RCT evidence is being synthesised into Cochrane Reviews and if this in turn is being used to appropriately formulate evidence based national guidelines. Methods: National guidelines were identified by searching the websites of the major worldwide neuro-oncology associations. Cochrane Reviews and randomised controlled trials were identified through searching CENTRAL (issue 3, 2013). Only RCTs comparing wither surgery, SRS or WBRT (either alone or in combination) were included) and categorised into four specific treatment questions (surgery for single metastasis; surgery versus SRS; WBRT +/- SRS; SRS +/- WBRT). Chemotherapy, molecular targeted therapy, radiation sensitisers and different radiation regimes were not eligible for inclusion. Results: A total of 13 RCTs, 4 Cochrane Reviews and 3 national guidelines were identified. The Cochrane Reviews had some overlap but in total covered 3 of the 4 main treatment questions and 77% of eligible RCTs. National guidelines included 69% of the RCTs in total (range 53–92%) but did not cite any Cochrane Reviews. Conclusions: The major limitation to evidence based management of brain metastasis appears to be a lack of integration of Cochrane Reviews into national guidelines. Advances in
P4.013
Is replication research informing the results of systematic reviews in knowledge translation research?

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Background: Replication is necessary to advance science as reliable evidence depends on the empirical demonstration of its reproducibility, validity, and generalizability. Replication of prior research is rare in many research fields. In knowledge translation (KT) research, it has been argued that choice of KT strategy proceeds on the basis of intuition or anecdotal stories of success and complex interventions are generally insufficiently described to be replicated. Objectives: To document the extent and type of replication present in the field of KT research for one specific intervention, audit and feedback. Methods: We examined 140 randomized control trials included in a recent audit and feedback review for evidence of replication. Our data abstraction form was based on a replication framework developed through a concept analysis of the literature. Findings were analyzed to determine the number of studies reflecting different types of replication and their characteristics. Results: Explicit reference to replication was found in a minority of studies included in the review. A small number (n = 24) of authors questioned the reliability of findings from previous studies in the background to their work. Fewer authors describe testing an intervention (n = 5) or the research design (n = 2) of a previous study when recording their methods. The most prevalent reference to replication was found in the discussion of study findings. A number of factors influencing generalizability, reliability and validity of study findings were identified as limitations by 62 authors and many authors (n = 54) shared recommendations for future research. Conclusions: While opportunities for different types of replication can be found in individual studies, there is little evidence of intentional replication of a previous study. The lack of replication in this review restricts our confidence in the validity, reliability and generalizability of the effectiveness of audit and feedback interventions and thus limits the impact of the review.

P4.014
Tools to evaluate the methodological quality of physical therapy trials: What items should we use from these tools? A factor analysis

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Background: Numerous tools and items have been proposed to judge methodological quality of randomized controlled trials (RCT) in various health research areas. The frequency of use of these items varies according to health area, which suggests a lack of agreement regarding their relevance to trial quality. Recently, researchers have called for more in-depth analysis of the items through psychometric testing [i.e. factor analysis]; especially in the physical therapy (PT) field. Objectives: To identify the underlying component structure of items and determine relevant items from tools used to evaluate quality/Risk of Bias (RoB) of PT trials. Methods: RCTs used for this study were randomly selected from the Cochrane Database of Systematic Reviews. All studies were evaluated by 2 reviewers using 7 tools and their items for a combined set of 45 items. An exploratory factor analysis using Principal Axis Factoring (PAF) method followed by Varimax rotation was conducted. Results: 214 trials were selected. PAF identified 34 items that loaded on 9 common factors as follows: 1) Selection bias; 2) Performance and detection bias; 3) Eligibility, interventions details, and outcomes measures description; 4) Psychometric properties; 5) Contamination and compliance bias; 6) Attrition bias; 7) Data analysis; 8) Sample size; and 9) Control and placebo adequacy. One item (i.e. intention to treat-ITT- performed) did not load in any of the factors mentioned; however, it was added to this set of items based on its relevance to RoB. Conclusions: To our knowledge, this is the first study in PT to explore the underlying component items used to evaluate methodological quality/risk of bias of trials using factor analysis. The items and/or factors represent a starting point for evaluating the methodological quality/risk of bias in PT trials. Empirical evidence of the association between these items with treatment effects (meta-epidemiological approach) is required to validate these items before widespread use.

P4.015
Network meta-analysis in Health Technology Assessments: how frequently used and how necessary are they?

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Background: Network meta-analysis (NMA), in the context of a systematic review, is a meta-analysis in which multiple treatments (that is, three or more) are being compared using both direct comparisons of interventions within randomized controlled trials and indirect comparisons across trials based on a common comparator. NMA holds promise to provide evidence on comparative effectiveness that is valuable for decision-making, in the context of Health Technology Assessments (HTAs), because it allows comparisons of interventions that may not have been directly compared in head-to-head trials. Moreover, in many cases the probability of future head-to-head trials is very low because costs or futility reasons considered by research sponsors. Objectives: To describe the proportion of HTAs comparing interventions without head-to-head trials, and from them how many searched, identified relevant NMA, and eventually if they were considered in HTAs’ conclusion. Methods: We analysed all HTAs comparing interventions, published in the Centre for Reviews and
Dissemination (CRD) database during the year 2012. Out of this sample we will evaluate the proportion of HTAs without head-to-head trials for its main question, the proportion of HTA searching and including NMA. We will search in Pubmed, Embase, and CENTRAL the existence of NMA for each relevant topic. From HTAs using NMA we will evaluate the match of their conclusions about the comparisons (Fig. 1). Results: 951 HTAs were published in 2012 in CRD. The results will be presented at the Colloquium.

Attachments: Figure 1 NMA in HTAs.jpg

P4.016
The growing trend of network meta-analyses topic appearance in medical literature

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Background: Frequently, interventions for a given health problem have never been compared in head-to-head randomized controlled trials. In this context, adjusted indirect comparisons based on network meta-analyses (NMAs) could answer the question posed by most healthcare professionals: what is the best intervention among the existing interventions for a specific condition? Objectives: To evaluate the trend in NMAs publication topic in medical electronic databases and in the top five impact factor journals in the 'Medicine, General and Internal' category. Methods: A search strategy was performed in Medline (PubMed), EMBASE, and CENTRAL, since inception (Fig. 1). We analysed the general yearly trend all together and separately by database and by journal. Results: During the analysed period, the reporting of studies mentioning NMA has increased since the beginning of the XXI century and markedly since 2009. EMBASE was the database with the highest cumulative number of references about NMA and the most manifest increasing trend, while CENTRAL showed a more steady increasing trend (Fig. 1). The most important sources of NMA topic reports are presented in Table 1. The Lancet was the only one among the top-five impact-factor journals in 'Medicine, General and Internal' category (1) that ranked in the first 10 sources that published about NMA. The other four top-five impact-factor journals published a lower number of articles: NEJM, Annals of Internal Medicine, JAMA, and Plos Medicine. Conclusions: Although the relevance of our search strategy was not validated, this study showed a growing report of NMA topics in medical literature, probably reflecting the absence of head-to-head comparisons to identify the best interventions for specific conditions. This trend was not observed among the top-five journals. 1 The Cochrane Library Impact Factor Data Pack—July 2011 http://www.editorial-unit.cochrane.org/sites/editorial-unit.cochrane.org/files/uploads/impact_factor_report_2010.pdf Accessed 25/3/2013

Attachments: Figure 1 Yearly trend in NMA publication topic in medical electronic databases.jpg, Table 1. Ranking of sources publishing NMA topic.jpg

P4.017
Priority setting distinguishing methodological quality from report quality: assessment example of systematic reviews about non-pharmacological intervention for depression with PRISMA and AMSTAR

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Background: Methodology quality of systematic reviews (SRs) is very important to figure out the reliability of the results and evidence. Sometimes, during assessment it is hard to distinguish methodological quality from report quality or identify whether the trail was carried out according to the method written in the article. Objectives: Taking assessment of SRs and meta-analysis regarding non-pharmacological intervention for depression as an example to check whether priority setting including registration and protocol can improve methodology quality and identify it partly free from report quality. Method: We conducted comprehensive search of the EMBASE, PubMed, MEDLINE, PsycINFO, Journals@ovid databases, and the Cochrane Database of Systematic Reviews to identify possible systematic reviews before November 1, 2012. The studies of non-pharmacological intervention for depression were included under prior design standards. Data was extracted and assessed the report and methodology quality independently by PRISMA and AMSTAR checklists. The correlation between methodological quality and report quality are examined by spearman correlation analysis and the methodological qualities of SRs with and without priority setting were compared. Results: 58 studies were included and 17 of them were with priority setting while 43 were not. The priority setting mainly included registration and protocols. The statistical significance (P < 0.05) was found between methodological quality assessment and method part of report quality. The priority settings assist methodological assessment of four articles and check whether priority setting mainly included registration and protocols. The methodological quality of the SRs with priority setting were better than ones without it according to the AMSTAR and PRISMA scales. Conclusions: Methodological quality closely relates to report quality so the poor report quality brings the difficulty for the methodological assessment. Priority settings including registration and protocol can provide the extra information. The methodological qualities of SRs with priority setting are better than ones without it because they are well designed and monitored in the beginning. Thus, priority settings are recommended to be applied in future to identify and improve the methodological quality of SR.

P4.018
Development of a topic nomination and selection process with US Medicaid policy makers

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Background: Medicaid is a US federal-state partnership providing healthcare benefits for low income children and adults. States
began collaborating as the Medicaid Evidence-based Decisions (MED) Project to commission evidence reviews for informing policy decisions. Developing a topic nomination and selection process that is responsive to policy makers and results in focused relevant evidence reviews was crucial. **Objectives:** To describe a topic nomination and selection process and discuss best practices in refining and selecting evidence review topics to inform policy decisions. **Methods:** Development of a topic nomination, refinement and selection process by researchers that is timely and sets the research priorities for the MED project. **Results:** Topic selection includes three key phases: (1) nomination, (2) scanning and refinement, and (3) ranking and selection. States use a nomination form to describe the topic policy context, intended use of the report, and timeline requirements. MED uses an iterative process to refine the topic nomination with the nominating policy maker. A scan of five clinical evidence sources including the Cochrane Library, and three health policy organizations informs the development of the research protocol and key questions. The nominator and subsequently, the collaborative, must approve the research protocol and key questions before ranking the topics. Each participant ranks every topic on a scale of 1–10 and the top ranked topics are selected for an evidence review. The most common topic areas selected have been health services delivery, mental health and behavioral conditions, oral health, and imaging. MED selects 10–12 evidence review topics during each six month selection cycle. **Conclusions:** Policy makers have successfully collaborated with researchers to develop an effective topic nomination and selection process. Topic refinement is an iterative process and is the most critical phase for developing a policy relevant evidence review.

**Attachments:** Topic nomination and selection process_Cochrane_Final_2013.pdf

**P4.019**

**An approach to deal with the absence of cohort studies in prognosis systematic reviews: a meta-analysis of cross-sectional studies**

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**Background:** Systematic reviews aim to provide an exhaustive summary of literature relevant to a certain topic through the organization of similar primary studies and, when possible, summarize them in a meta-analysis. This means that systematic reviews should offer clinicians, health professionals and policy makers with level 1 of evidence for health care decision making. However, it does not often happen as we frequently note an absence of high-quality primary studies in the health field. There are a large number of studies with lower level of evidence in the literature provided by non-randomized studies and/or single case studies that could be used to provide an alternative interpretation of the available evidence in the literature while waiting for the results from high level of evidence. **Objectives:** To describe a statistical analysis of evaluating cross-sectional studies in prognosis health care reviews when there is absence of cohort studies. **Methods:** We provided illustrations from recent experience related to the clinical question ‘is the immunoexpression of p53 a surrogate marker for laryngeal cancer lesions? ’ and, discussed the impact of the level of evidence in the clinical practice. Studies were included if the participants of interesting have received a diagnosis of cancer laryngeal lesion at baseline. The control group was patients who have received a diagnosis of benign laryngeal lesions (i.e., polyps, nodules, cysts) or normal mucosae. This review example planned to include cohort studies as they have an observational and prospective design features with the aim to verify the immunoexpression of p53 as a surrogate marker in recidivism laryngeal cancer lesions compared to the p53 positive rates in laryngeal benign lesions. We also considered to include all available cross-sectional studies as an anticipation of not having many cohort studies in this area. For the cross-sectional studies the occurrence of positive p53 immunohistochemical expression rates were treated as dichotomous variable with their respectively 95% confidential intervals (CIs) and, the statistically significant difference between both interventions studied was defined if their combined 95% CIs did not overlap. The software used to plot the cross-sectional studies into a meta-analysis was StatsDirect. **Results:** 35 studies met the methodological requirements proposed in this review: only two cohort studies with insufficient data to plot in a conventional meta-analysis and, 33 cross-sectional studies. As only two studies from level I of evidence for prognosis purposes met the inclusion criteria of this systematic review, we decided to provide a different overview through a proportional meta-analysis of cross-sectional studies. Figures 1 and 2 show a proportional meta-analysis of cross-sectional studies regarding the occurrence of positive p53 immunohistochemical expression in benign and cancer laryngeal lesions. There was a statistically significant difference favoring cancer laryngeal lesions compared to benign laryngeal lesions on positive p53 immunohistochemical expression rates (31%, 9% vs. 62%) as their CIs did not overlap. **Conclusions:** We described a statistical analysis to evaluate cross-sectional studies in health care prognosis reviews. In our example, there is currently some evidence suggesting a correlation between positive p53 immunohistochemical expression and the occurrence of cancer laryngeal lesions higher than in benign laryngeal lesions. This method is extended to be used in the absence of cohort studies. The use of this method leads to substantial gains in the scientific community as it provides health professionals with the available information for their clinical practice until higher-quality primary studies are conducted, although we cannot ruled out the possibility of clinical heterogeneity and methodological failures due to the lower-quality level of evidence from these studies.

**P4.020**

**Systematic review and methodological exploration of synthesis methods in public health evaluations of interventions**

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**Background:** Systematic reviews have been accepted as providing a transparent and consistent way of obtaining research evidence on effectiveness of interventions in a way that minimizes bias. Meta-analysis, which combines quantitative information from multiple studies, is considered the gold standard in the hierarchy of evidence for intervention effectiveness. However, widespread application of
quantitative synthesis methods to public health is hampered by a number of well documented methodological challenges. Objectives: To review the methods currently used to synthesise evidence in public health evaluations and to demonstrate the availability of more sophisticated approaches. Methods: A systematic review of NICE public health appraisals published between 2006 and 2012 was performed to assess the methods used for the synthesis of effectiveness evidence. The ability of new developments in evidence synthesis methodology to address the challenges and opportunities present in a public health context is demonstrated. Results: Only 7 (18%) of the 39 NICE appraisals included in the review performed pairwise meta-analyses as part of the effectiveness review with one of these also including a network meta-analysis. Of the remainder, 31 (79.5%) consisted of narrative summaries of the evidence only, and 1 (2.5%) had no review of evidence. Heterogeneity of outcomes and interventions were the main reasons given for not pooling the data. Exploration of quantitative synthesis methods shows that pairwise meta-analyses can be extended to incorporate individual participant data (where it is available), extend the number of interventions being compared by using a network meta-analysis, and adjust for subject-level and summary covariates. All these can contribute to ensuring the analysis answers directly the policy relevant questions. Conclusions: More sophisticated methods in evidence synthesis should be considered to make evaluations in public health more vigorous.

P4.021 Validation of a quality assessment checklist for case series studies

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Background: Very few validated quality appraisal tools exit for case series studies (CSSs). Objectives: To evaluate the construct validity of a 20-criterion checklist that has been developed using a modified Delphi approach. Methods: Two health technology assessment (HTA) researchers randomly selected 105 CSSs from various topics from a broad literature search. Six HTA researchers from Canada, Australia, and Spain used the checklist to assess these studies; each researcher assessed 35 studies, and two researchers in pair assessed the same seven studies. An experienced biostatistician conducted a factor analysis to examine the factor structure and to inform potential refinements of the item pool of the checklist. Results: Preliminary results of the factor analysis revealed a trend of a separation of 20 items into two components: (1) Ten items on the presence of the traditional features of the execution of a statistical hypothesis-testing paradigm; (2) Seven items on the descriptions of the subjects’ characteristics that might feature in the experimental design, particularly in judgments about the likelihood of confounding. The other 3 items (i.e. multi-center study, consecutive recruitment, and reporting of competing interest and sources of support) do not correlate very highly with either of the two components. The analysis provided no basis for any cutoff scores by which study quality might be distinguished. Conclusions: The checklist should be tailored to meet the need of different projects, taking into account the relevant importance of hypothesis-testing versus description of subject/intervention characteristics. The set of items for hypothesis testing may be more critical for some conditions (e.g., type 1 diabetes) where causal relationship between the intervention (e.g., islet transplantation) and efficacy/effectiveness outcomes (e.g., insulin independence) can be established from a before-after case series study. The set of items describing study/intervention characteristics may be more important when assessing clinical outcomes such as long-term adverse effects.

P4.022 Assessment of methodological quality of systematic reviews of China health policy

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Background: Health policy is very important for policy makers to make right decision and promote population health. The number of systematic reviews (SRs) about China health policy has increased, and there is a need to assess the methodological quality presented in SRs and MAs. Objective: To analyze the methodological quality of all SRs of China health policy by AMSTAR. Methods: An electronic literature search of all SRs of China healthy policy from inception to December 2012 was conducted using the following text and keywords in combination both MeSH terms and text words, the search strategy was (meta analysis OR meta analyses OR systematic review* OR overview) AND (health or policy) in five Chinese databases. The methodological quality was assessed independently by two reviewers by AMSTAR. Results: Fifty SRs were included. The methodological quality was poor. The CSCD or non-CSCD articles, the fund support, and the published year seem to have little impact on the quality of the SRs, nearly all the items showed no significant difference. The number of the authors may influence the methodological quality, because in the comparison of this group, four items showed significant difference, the item number of which is more than other groups. The details were described in Table 1. Conclusions: The methodological quality of SRs of China healthy policy was poor, and the use of AMSTAR guideline is recommended to improve quality of SRs in China health policy.

Attachments: Figure 1 Reporting of methodological quality of SRs according to different strata.png, Table 1-AMSTAR checklist of methodological characteristics.PDF

P4.023 A QQAQ assessment of the methodological quality of systematic reviews of China health policy

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Background: More and more systematic reviews(SR) of China health policy have been published in Chinese and English journals recent years, which is very important for the health policy makers to make the right decision. Objectives: To evaluate the methodological quality of SRs of China health policy by QQAQ. Methods: An electronic literature search of all SRs of China healthy policy from inception to December 2012...
was conducted using the following text and keywords in combination both MeSH terms and text words, the search strategy was (meta analysis OR meta analyses OR systematic review* OR overreview) AND (health or policy) in five databases. The methodological quality was assessed independently by two reviewers using the QQAQ. Results: A total of 50 SRs were identified finally. Most reviews were compliant with the following items: findings of studies combined appropriately (100%), conclusions made by authors supported by analysis; almost none reviews were compliant with the following items: criteria used for assessing validity of included studies reported, Methods used to combine the findings of studies reported. The details were showed in Table 1. Whether the paper is CSCD or non-CSCD, funding or non-funding, published before 2007 or after 2008, written by less than two authors or more than three authors, seems to have little impact on the quality of the SRs. The reporting quality was poor. The details were described in Figure 1. Conclusions: There is a growing increasing number of SRs of China health policy published in Chinese and English journals, however the methodological quality need to be further improved.

Attachments: Figure 1 Reporting of methodological quality of SRs according to different strata.png, Table 1.pdf

P4.024
Methodological quality assessment of systematic reviews or meta-analysis of interventions on diabetic nephropathy

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Background: High-quality systematic reviews (SRs) or Meta-analyses (MAs) of RCTs are the sources of the best evidence for diabetic nephropathy (DN). Currently, there is an increasing number of SRs/MAs of DN. This study provides the first examination of methodological quality of those SRs/MAs with AMSTAR. Objectives: To examine methodological quality of SRs/MAs of interventions on DN. Methods: Two independent reviewers systematically searched the eight databases, The searches were implemented in September 2012. According to the inclusion and exclusion standard, included SRs /MAs of interventions on DN, and independently extracted data by two reviewers. The AMSTAR was applied to assess methodological quality. Analyses were performed by Excel, SPSS17.0 and Meta Analyst soft. Results: 891 records were identified and a total of 64 SRs/MAs were included. The first SR was published in 1996. 68.8% (44 studies) were published for 2009 and beyond. More than half (57.8%, 37 studies) were written by clinicians and most of studies (84.4%, 54 studies) were reported in CSCD or SCI journals. Funding sources were reported for 23.4% (15 studies). According to the AMSTAR checklist, the score range of the quality was 1.5–9, the average score was 6.16 ± 1.68 (Table 1). Figure 1 showed that there didn’t have been any improvement in total score after the AMSTAR publishing. The quality of CSCD theses, SCI theses and ≥ 3 authors were better than Non-CSCD, Non-SCI and 1–2 authors. But the difference in total score to those stratified factors were not statistically significant (P > 0.05). Conclusions: The methodological quality of SRs or MAs of interventions on DN had some problems and needs to be improved. We sincerely hope that analysts will take this as a warning and produce high-quality SRs or MAs in future.

Attachments: Figure 1 Stratified analysis of methodological quality of included studies.pdf, Table 1 The results of methodological quality for included SRs or MAs.pdf

P4.025
A PRISMA assessment of the reporting quality of systematic reviews or meta-analysis of interventions on diabetic nephropathy

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Background: Diabetes prevalence has increased worldwide. Diabetic nephropathy (DN) is a common complication in diabetes and a crucial issue of public health. More and more Systematic Reviews (SRs) and Meta-analyses(MAs) on DN with different angles and opinions are emerging published these years. Even though SRs have become an increasingly popular source of up-to-date knowledge but the current report quality situation is not clearly. Objectives: To critically assess the report quality of SRs/MAs of interventions on DN by PRISMA. Methods: A SRs/MAs literature search of eight database was used to identify interventions on DN published up September 8, 2012 by two independent reviewers. According to the inclusion and exclusion criteria, two reviewers extracted the data independently. The quality of the SRs/MAs were assessed by the PRISMA. All related data was analyses by SPSS19.0, Meta Analyst and Excel. Results: 891 studies were found in eight database, 64 were selected for analysis, most (57, 89.1%) of which used the terms SR (33, 51.6%) , followed by MA (23, 36.0%) and both SR and MA (2, 3.1%) in the title. The PRISMA checklist score (Table 1) range from 9 to 25, the average score was 18.24 ± 3.22. The report quality of included literatures has problems in different levels. A score in 21–27(14, 21.87%) indicated provide complete information, relatively; 15–21 (44, 68.75%), little information deficiency; below 15 (16, 9.37%), severe information deficiency. From Figure 1 show the significance between the impact factors, the report quality of SCI, university and author’s ≥ 3 were better than non-SCI, hospital and single author (P < 0.05). Conclusions: PRISMA reporting guidelines on diabetic nephropathy is low for many included literatures and different literatures have problems in various levels. As a key data source of information for clinicians and researchers, focusing on improving the report quality is more necessary rather than continuing to publish them in large quantity, which requires to widen our future focus on.

Attachments: Fig 1 The significance among the impact factors.pdf, Tab 1 The results of reporting quality assessment (n = 64).pdf
P4.026
Assessment of the quality of reporting in randomized controlled trials of acupuncture in the Korean literature using the CONSORT and STRICTA statements

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Background: Adequate reporting quality of randomized controlled trials (RCTs) is a prerequisite for comprehensive understanding and optimal utilization of research results. However, the current status is not necessarily satisfactory. Objectives: This study aimed to assess the reporting quality of RCTs of acupuncture in the Korean literature. Methods: Twelve Korean databases and seven Korean journals were searched to identify eligible RCTs published after 2005. The Consolidated Standards of Reporting Trials (CONSORT) checklist for parallel RCTs was used to assess the quality of reporting in Korean RCTs. The revised Standards for Reporting Interventions in Clinical Trials of Acupuncture (STRICTA) was used to investigate the quality of reporting for intervention-related items. Results: In total, 103 eligible RCTs were identified. Reporting quality was poor in 62% (28 out of 45) of items that comprise CONSORT. Items related to the risk of bias, including randomization reporting, allocation concealment and outcome assessor blinding, showed poorer quality of reporting (range 5.8–20.4%) (Table 1). Although some items of STRICTA for acupuncture rationale (range 47.6–97.1%), needling of reporting (range 5.8–20.4%) were relatively well reported, items related to treatment context (range 13.6–44.7%) and practitioner background (21.4%) were poorly reported (Table 2). Conclusions: The reporting quality of Korean RCTs of acupuncture was suboptimal with regard to the CONSORT and the revised STRICTA statements. Inclusion of the CONSORT and revised STRICTA statements in author instructions and attempts to utilize those statements in writing and to review the overall process are necessary to achieve better quality of reporting in Korean RCTs of acupuncture.

Attachments: Table 1 CONSORT adherence.pdf, Table 2 STRICTA adherence.pdf

P4.027
A systematic assessment of the quality of systematic reviews/meta-analyses on radiofrequency ablation versus hepatic resection for small hepatocellular carcinoma

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Background: The systematic reviews (SRs) of radiofrequency ablation (RFA) versus hepatic resection (HR) for early hepatocellular carcinoma (HCC) are increasing, however, qualities of them varies. Objectives: This study was supported by Ministry of Science and Technology of China to evaluate the quality and their impacts on outcomes. Methods: We searched six databases and five official websites, and the Overview Quality Assessment Questionnaire (OQAQ), the Cochrane Collaboration’s tool, and modified MINORS score were applied to assess their quality for SRs, randomized (RCTs) and non-randomized controlled trials (NRCTs), respectively. Pooled odds ratio (OR) and 95% confidence intervals (CI) were integrated by Stata 10.0 software. Results: Nineteen SRs were included. The overall quality was poor, with a mean OQAQ score of 3.3 (95% CI, 2.6–4.1). Only five (26.3%) SRs were assessed as good quality. Six (31.6%) missed statistical models, and three of them changed outcome direction after modification. The authors of five SRs included retrospective studies as RCT. A total of 39 primary studies referenced by SRs were included. Three RCTs were leveled grade B, and 35 NRCTs were of moderate quality, with an estimated mean MINORS score of 15.0 (95% CI, 14.6–15.4). Certain studies (17/39, 43.6%) did not meet inclusion criteria for the SRs; and nine were mixed with other effective interventions in both groups. Four studies included patients with non-primary HCC. Conclusions: The overall quality of SRs comparing the effects between RFA and HR for early HCC is poor. There is high heterogeneity and low evidence level. Physicians should take caution when applying the results of these studies to their clinical practice.

P4.028
Systematic review of clinical practice guidelines on the diagnosis and management of thyroid nodule and cancer

P4.026
Assessment of the quality of reporting in randomized controlled trials of acupuncture in the Korean literature using the CONSORT and STRICTA statements

Kim KH1, Kang JW2, Choi J3, Lee JD2
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Background: Adequate reporting quality of randomized controlled trials (RCTs) is a prerequisite for comprehensive understanding and optimal utilization of research results. However, the current status is not necessarily satisfactory. Objectives: This study aimed to assess the reporting quality of RCTs of acupuncture in the Korean literature. Methods: Twelve Korean databases and seven Korean journals were searched to identify eligible RCTs published after 2005. The Consolidated Standards of Reporting Trials (CONSORT) checklist for parallel RCTs was used to assess the quality of reporting in Korean RCTs. The revised Standards for Reporting Interventions in Clinical Trials of Acupuncture (STRICTA) was used to investigate the quality of reporting for intervention-related items. Results: In total, 103 eligible RCTs were identified. Reporting quality was poor in 62% (28 out of 45) of items that comprise CONSORT. Items related to the risk of bias, including randomization reporting, allocation concealment and outcome assessor blinding, showed poorer quality of reporting (range 5.8–20.4%) (Table 1). Although some items of STRICTA for acupuncture rationale (range 47.6–97.1%), needling of reporting (range 5.8–20.4%) were relatively well reported, items related to treatment context (range 13.6–44.7%) and practitioner background (21.4%) were poorly reported (Table 2). Conclusions: The reporting quality of Korean RCTs of acupuncture was suboptimal with regard to the CONSORT and the revised STRICTA statements. Inclusion of the CONSORT and revised STRICTA statements in author instructions and attempts to utilize those statements in writing and to review the overall process are necessary to achieve better quality of reporting in Korean RCTs of acupuncture.

Attachments: Table 1 CONSORT adherence.pdf, Table 2 STRICTA adherence.pdf

P4.027
A systematic assessment of the quality of systematic reviews/meta-analyses on radiofrequency ablation versus hepatic resection for small hepatocellular carcinoma

Wang Y1, Luo Q2, Li YP3, Deng S2, Li XL1, Wei S4, Yu J1
1The Chinese Cochrane Centre, China; 2National Chengdu Center for Safety Evaluation of Drugs, West China Hospital, Sichuan University, China; 3West China Hospital, Sichuan University, China; 4West China Medical School, Sichuan University, China

Background: The systematic reviews (SRs) of radiofrequency ablation (RFA) versus hepatic resection (HR) for early hepatocellular carcinoma (HCC) are increasing, however, qualities of them varies. Objectives: This study was supported by Ministry of Science and Technology of China to evaluate the quality and their impacts on outcomes. Methods: We searched six databases and five official websites, and the Overview Quality Assessment Questionnaire (OQAQ), the Cochrane Collaboration’s tool, and modified MINORS score were applied to assess their quality for SRs, randomized (RCTs) and non-randomized controlled trials (NRCTs), respectively. Pooled odds ratio (OR) and 95% confidence intervals (CI) were integrated by Stata 10.0 software. Results: Nineteen SRs were included. The overall quality was poor, with a mean OQAQ score of 3.3 (95% CI, 2.6–4.1). Only five (26.3%) SRs were assessed as good quality. Six (31.6%) missed statistical models, and three of them changed outcome direction after modification. The authors of five SRs included retrospective studies as RCT. A total of 39 primary studies referenced by SRs were included. Three RCTs were leveled grade B, and 35 NRCTs were of moderate quality, with an estimated mean MINORS score of 15.0 (95% CI, 14.6–15.4). Certain studies (17/39, 43.6%) did not meet inclusion criteria for the SRs; and nine were mixed with other effective interventions in both groups. Four studies included patients with non-primary HCC. Conclusions: The overall quality of SRs comparing the effects between RFA and HR for early HCC is poor. There is high heterogeneity and low evidence level. Physicians should take caution when applying the results of these studies to their clinical practice.

P4.028
Systematic review of clinical practice guidelines on the diagnosis and management of thyroid nodule and cancer

Background: Usually, physicians base their practice on clinical practice guidelines (CGPs), but recommendations on the same topic may vary across guidelines. Given the uncertainties regarding thyroid nodule assessment and management, physicians should be able to identify systematically and transparently developed recommendations. Objectives: The aim of this systematic review was to assess the quality and consistency of recommendations of international CGPs on the diagnosis and management of thyroid nodule and cancer, and to assist physicians in their choice of recommendations. Methods: CGPs on the management of thyroid nodule and cancer published before March 1, 2013 were retrieved using MEDLINE, EMBASE, CINAHL, the National Guideline Clearinghouse, and the G-I-N International Guideline Library. All guidelines in English were included. Four reviewers independently assessed rigor of guideline development using the Appraisal of Guidelines Research and Evaluation-II (AGREE-II) instrument, and modified MINORS score. The quality of the CPGs’ recommendations on the management of thyroid cancer was assessed using the Appraisal of Guidelines Research and Evaluation-II (AGREE-II) instrument, and modified MINORS score. Results: A total of 39 primary studies referenced by SRs were included. Three RCTs were leveled grade B, and 35 NRCTs were of moderate quality, with an estimated mean MINORS score of 15.0 (95% CI, 14.6–15.4). Certain studies (17/39, 43.6%) did not meet inclusion criteria for the SRs; and nine were mixed with other effective interventions in both groups. Four studies included patients with non-primary HCC. Conclusions: The overall quality of SRs comparing the effects between RFA and HR for early HCC is poor. There is high heterogeneity and low evidence level. Physicians should take caution when applying the results of these studies to their clinical practice.
were quite consistent. Guidelines varied in the indication of fine needle aspiration for thyroid nodule, and the suggestion of radioiodine ablation postoperatively. Cervical lymph node dissection was unnoticed by 3/10 CPGs. **Conclusions:** Our analysis shows that the current CPGs varied in methodological quality, more efforts are need to improve the quality of recommendations on the diagnosis and management of thyroid nodule and cancer.

**P4.029**

**Low carbohydrate diets and cardiovascular health: an example of a rapid response with high quality reviews to inform public health promotion**

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**Background:** Low carbohydrate diets for weight management and cardiovascular-related benefits have generated controversy between advocates, the media and the health profession in South Africa over the last two years. The Heart and Stroke Foundation of South Africa approached the Centre for Evidence-based Health Care to provide evidence to inform their response to the ongoing debates.

**Objectives:** (1) To provide a reliable summary of the effects of low carbohydrate diets on cardiovascular health for a public health client; (2) To road-test a feasible, robust and timely approach for completing a systematic review in response to a public health concern.

**Methods:** We established a review team that wrote the protocol and a multidisciplinary technical group that provided advice. We firstly conducted an overview of systematic reviews. When clear answers were not identified, we carried out a rapid systematic review of randomised controlled trials using Cochrane methods, addressing the gaps identified in the overview.

**Results:** The overview revealed 38 existing systematic reviews of mostly low and moderate quality from AMSTAR scores. All had a variety of problems relating to inclusion criteria and comparisons that made interpretation and generalisability difficult. This phase helped us design a protocol that more closely aligned the advocated diets to the various trials, with clear delineation of inclusion criteria and comparisons. We carried out a rigorous review of 19 RCTs against the protocol approved by the technical group, which is potentially rapidly adaptable as a Cochrane Review.

**Conclusions:** We completed a review against an approved protocol on a complex topic that fed straight into public health promotion in less than a year. This illustrates the power of listening to stakeholders, the value of timely information, and the ability to deliver a rigorous review rapidly. Cochrane Groups should have the capacity to complete such reviews rapidly with active, capable teams.

**P4.030**

**Reporting guidelines for reporting searches of network meta-analysis are needed**

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**Background:** The search in network meta-analysis is very critical, as network meta-analysis aims to rank the benefits (and harms) of interventions based on all available randomized controlled trials (RCTs). **Objectives:** So it is necessary to assess the search status in network meta-analyses. **Methods:** Published network meta-analyses were retrieved by searching databases (PubMed, the Cochrane library, Embase, and ISI Web of Knowledge) and hand-searching other sources (Google engine, HTA websites, references lists). Two independent reviewers conducted search, select studies, abstracted data. Statistical analyses were conducted using SPSS version 15.0 for Windows.

**Results:** 104 network meta-analyses were included. The searches in network meta-analysis were not comprehensive, although 92.6% searched databases and hand-search one or more other resources. The median number of databases was 3 (IQR 2–4). Medline, Embase, and CENTRAL are the most common used databases. However, 7.4% used the included studies in specific systematic reviews and hand-searching other resources and unpublished data were not well conducted. Although most network meta-analyses (70.4%) stated search terms, their reporting for search was poor and inadequate, as search strategy was reported in 24.1% network meta-analyses using simple format and the restrictions and details for search were not well stated. **Conclusions:** The searches in network meta-analysis were not comprehensive, and the reporting for search was poor and inadequate. The best way for retrieving studies for network meta-analysis should be using of two or more databases, cross-checking the reference lists of previous systematic reviews and hand searching of other resources by two independent searcher and/or information professionals. And the reporting guidelines for the searches of network meta-analysis should be developed, and at least include items related to search resources, search terms, search restrictions, search date and the searchers.

**P4.031**

**Underreporting of conflicts of interest in clinical practice guidelines: cross sectional study**

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**Background:** Conflicts of interest may affect recommendations in clinical guidelines and disclosure of such conflicts is important. However, not all conflicts of interest are disclosed. **Objective:** To determine the prevalence and underreporting of conflicts of interest among authors of clinical guidelines on drug treatments. **Methods:** We included up to five guidelines published from July 2010 to March 2012 from each Danish clinical specialty society. Using the disclosure list of the Danish Health and Medicines Authority, we identified author conflicts of interest and compared them with the disclosures in the guidelines. For each guideline we extracted information on guideline development. **Results:** We included 45 guidelines from 14 specialty societies. Of 254 authors, 135 (53%) had conflicts of interest, corresponding to 43 of the 45 guidelines (96%) having one
or more authors with a conflict of interest. Only 1 of the 45 guidelines (2%) disclosed author conflicts of interest. The most common type of conflict of interest (83 of the 135) was being a consultant, an advisory board member or a company employee. Only 10 guidelines (22%) described the methods used for guideline development, 27 (60%) used references in the text and 11 (24%) graded the types of evidence behind specific recommendations. Conclusions: Conflicts of interest were very common, but disclosures were very rare. Most guidelines did not describe how they were developed and many did not describe the evidence behind specific recommendations. Publicly available disclosure lists may assist guideline issuing bodies in ensuring that all conflicts are disclosed.

**P4.032 The use of collaborative writing applications in healthcare education - a scoping review**

van de Belt T1, Grajales F2, Faber M3, Kuziemsy C4, Gagnon S5, Bilodeau A5, Rioux S5, Fournier C5, Émond M6, Nadeau C4, Lalonde TM4, Aubin K6, Gold I7, Gagnon M8, Turgeon A1, Heldoorn M9, Poitras J4, Eysenbach G10, Kremer J1, Légare F10, Archambault PM4

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Background: Collaborative writing applications (CWAs) (e.g., wikis, Google Docs) offer interesting possibilities for healthcare education. There is a need to systematically synthesize the growing evidence concerning their impact on healthcare education. Objectives: To assess the depth and breadth of the literature studying the impact of CWAs in healthcare education. We aimed to discover the type of CWAs used, the educational setting of their use and the educational impact on the learner. Methods: This review is part of a larger scoping review exploring the use of CWA in healthcare that systematically searched the literature in medical and education databases (PubMed, Embase, Cochrane, CINAHL, PsychInfo, Eric and ProQuest Dissertations & Theses) from 2001 to 2011 with the following search terms: 'wiki', 'wikis', 'web 2.0', 'social media', 'Google Knol', 'Google Docs' and 'collaborative writing applications'. CWAs were defined as any technology enabling joint and simultaneous editing of online documents by many end users. We included papers presenting qualitative or quantitative empirical evidence concerning CWA use in healthcare education. Articles were excluded if they only discussed blogs, forums or learning communities. Two reviewers independently reviewed citations, selected studies and extracted data using a standardized form. Results: Figure 1 presents our flow chart. Out of 110 articles whose full text was reviewed, we found 2 experimental and 2 quasi-experimental studies. Characteristics of these studies are detailed in Table 1. One experimental study yielded positive results about using Google Docs to teach scientific writing. The other experimental study demonstrated that a wiki-facilitated problem-based learning course improved student communication skills and satisfaction, but decreased diagnostic skills. Conclusions: A formal systematic review is further needed to critically appraise the quality of these papers and synthesize their results. This will help inform the design of future trials exploring the use of CWAs for teaching in the healthcare field.

**Attachments:** Flow_chart_word_medical_education.pdf, Table_1_Education_Final.pdf

**P4.033 Wikis and collaborative writing applications in healthcare: results of a scoping review**

Archambault PM1, van de Belt T2, Grajales F2, Faber M3, Kuziemsy C4, Gagnon S5, Bilodeau A7, Rioux S5, Fournier C5, Nadeau C4, Émond M6, Aubin K6, Gold I7, Gagnon M8, Turgeon A1, Heldoorn M9, Poitras J4, Kremer J1, Légare F10, Archambault PM4

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Background: The rapid rise in the use of collaborative writing applications (CWAs) (eg, wikis, Google Documents, and Google Knol) has created the need for a systematic synthesis of the evidence of their impact as knowledge translation tools in healthcare. Objectives: To explore the depth and breadth of evidence for the use of CWAs in healthcare, and to identify areas that require further systematic reviewing and where more primary research is needed. Methods: We performed a scoping review searching PubMed, EMBASE, CINAHL, Psychnfo, ERIC, EPOC, ProQuest Dissertations and Theses, HTAi vortal, Mednar, OpenSige, Google, Bing and Yahoo without any language restrictions, but limited to articles published after 2001. Keywords used were: ‘wiki’, ‘wikis’, ‘Web 2.0’, ‘social media’, ‘Google Knol’, ‘Google Docs’ and ‘collaborative writing applications’. CWAs were defined as any technology enabling joint and simultaneous editing of online documents by many end users. Two reviewers independently reviewed citations, selected eligible studies and extracted data using a standardized form built into EPPI-reviewer 4. Papers presenting qualitative or quantitative empirical evidence concerning healthcare and CWAs were included. Results: Figure 1 presents our flow chart. Among the 111 included papers, we found 4 experimental studies, 3 quasi-experimental studies, 5 observational studies, 54 case studies, 33 surveys and 22 descriptive studies concerning the quality of information in wikis. Table 1 presents the experimental studies and their results related to the use of CWAs: (1) increased physical activity and improved blood pressure control; (2) better scientific writing.
P4.034
Calculating confidence intervals for the absolute risk reduction taking uncertainties of relative risk and baseline risk estimates into account

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Background: In Cochrane Reviews as well as in the GRADE system absolute estimates of treatment effect are frequently calculated by using relative risk (RR) estimates based on a meta-analysis in combination with an independent baseline risk (BR) estimate. Spencer et al. (BMJ 2012;345:e7401) pointed out that GRADE and all other systems for rating confidence in absolute treatment effect estimates do not fully address uncertainties in BR estimates. Calculations of confidence intervals for the absolute risk reduction (ARR) currently performed under the GRADE framework take into account the imprecision of the RR estimate, but not that of the BR estimate. Objectives: The aims of this paper are firstly, to show that a method for interval estimation of the BR and RR is estimated from different independent sources, confidence limits for ARR can be calculated from those for BR and RR by a procedure called method of variance estimates recovery (MOVER-R). This method is explained and applied to examples. The resulting confidence intervals are compared to those obtained by the method currently used by GRADE, and to those obtained by the naive method of directly combining the confidence limits for RR and BR. Results: Neglecting the uncertainty of BR estimates leads to confidence intervals which are too narrow whereas the naive method of directly combining the confidence limits for RR and BR results in confidence intervals which are unnecessarily too wide. Conclusions: A simple and effective method is available to calculate confidence intervals for ARR from independent interval estimates of BR and RR. This method should be applied in practice.

P4.035
Translation and validation of the Cochrane Collaboration’s tool for assessing risk of bias into German

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Background: Working inter alia with the Cochrane Risk of Bias (RoB)-tool for Health Technology Assessments, systematic reviews and other evidence syntheses, the idea of a translated version came up being helpful for teachers and lecturers in evidence-based medicine (EbM). They would be able to communicate topics much more quickly and easily. Furthermore, a translation into the mother tongue could help medical professionals, developers of guidelines, patient advocacy-, and patient self-help groups and single patients to gain a better knowledge and a deeper understanding of the principles of EbM. Objectives: Our work will contribute to the further dissemination of EbM-principles as well as to the academization of paramedical professions. Methods: According to the methods described by Beaton et al. 2000 and in close cooperation with the German Cochrane Centre, a translation and validation of the RoB-tool and its information will be undertaken. Beaton et al. describe the process of translation in six stages: In stage one and two, an informed and an uninformed translator will work out a translation each into the target language and synthesize the results. In stage three at least two native speakers without medical background and unaware of the original version will create back-translations. To achieve a prefinal version, a committee will be established at stage four, consisting of all translators, methodologists, language professionals and possibly health professionals. In stage five a pretest with about 40 subjects will be conducted followed by stage six, an audit wherein the developers of the tool or the committee will appraise the adaptation process. Further validity-tests should be desirable. The editors of the Cochrane Handbook are being requested. Conclusions: The ease of use and transparency of the RoB-tool as well as its simply understandable graphical representation of assessment-results are the most persuasive reasons to increase the degree of the instruments’ prominence.

P4.036
The Norwegian electronic health library - helping Norwegian health professionals in accessing English language resources

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Background: A large part of the world’s accumulated knowledge about health care is published in the English language, including many of the highest quality resources. But people who are not native English speakers can have difficulty finding and reading documents in English, even if they are relatively fluent. For this reason, the Norwegian electronic health library identified language translation as one of the primary areas to promote access and use of high quality research and clinical support resources. Objectives: We wanted to make it possible for library users to enter search queries in Norwegian or English and retrieve search results for documents in both languages. We also wanted to promote international resources of high quality in search interface, without sacrificing easy access to important resources in Norwegian language. Methods and Results: • We developed an enterprise search solution that includes a translation dictionary function. This allows a person to search in Norwegian and also receive results from English language resources. • Search results from both Norwegian and English resources are compiled together on one page. • We developed several ‘spotlight’ functions for presenting prioritized search results on the top of the search page, so that the highest quality and most preferred sources are easier to find quickly. • We manually translated over 200 patient leaflets (from BMJ Best Practice) from English to Norwegian for use in Norwegian health care context, and made them ‘findable’ through the spotlight function.
Conclusions and future developments: Translation is very time-consuming. Resources in English can also be made more accessible to users by improving the search functionality. The library is currently leading a project to translate MeSH to Norwegian, which will open new doors to transforming search queries into relevant results for our users.

P4.037
Chronically sick to chronically well: a realistic and concrete way to do things differently with evidence in the Canadian system!

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Context: With only 5% of the population consuming 80% of the canadian health care, who are those persons at risk in the community & what are the evidence and effective actions to create a <<chronically well>> population? An international comparative study has looked at the Canadian health care system with seven countries. It shows a strong and frequent emergency use amongst the population, especially in Québec and Ontario. These difficulties reflect a weak primary care organization in the community. Objective: Two regional Québec initiatives will be presented to demonstrate how to renew community care with a chronically sick population and high consumers of care while reducing preventable emergency visits and hospitalisations. Method: Simple actions working with the 5% of the population who’s consuming 80% of the care will be discussed and revisited: • Organisational portrait and origine of the greatest consumptions of care in the system know the difference between system induced consumptions and complex case management in the community • Significant evidence for an integrated and proactive approach with the <<chronically sick>> • Simple actions with great impact (ex : computarized nominative stratification, NHS complex case management, empowerment of families/patients, . . . ) • Caracteristics of the <<chronically sick >> and the myths surrounding them • Relevant Performance indicators and documentation on Return on investments. Results: Results indicate very significant decrease in preventable ER visits and hospitalisations, an increase in timely and quality community follow ups. With the SF-12, an increased well-being was observed amongst the most vulnerable. Conclusion: Simple & high impact systemic multi-level strategies for creating a chronically well population exist. Let’s share learned lessons to build a stronger primary care system for all PS either french or english. Thanks.

P4.038
Health Systems Evidence: the development of a ‘one-stop-shop’ of health research evidence to support policymaking

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Background and Objective: Systematic reviews about health systems aren’t always available when policymakers and stakeholders need them, or in formats they can use. One strategy that has been promoted to support the use of systematic reviews in policymaking is the development of online ‘one-stop-shops’ that facilitate timely access to relevant reviews. Researchers at the Program in Policy Decision-making and McMaster Health Forum, with partners in a number of high-, middle- and low-income countries developed Health Systems Evidence (HSE)—a ‘one-stop-shop’ of the best available research evidence about health systems. Our objective is to describe the development, content and usage of HSE. Methods: HSE was developed in several stages: (1) A taxonomy of health system arrangements and implementation strategies, and document types was developed; (2) Searches of online databases were conducted alongside hand searches, continuous scanning of journals, listservs and websites (3) Two independent assessors reviewed content and coded those meeting inclusion criteria based on the taxonomies; (4) An approach to ensure HSE is continuously updated with new content, and to provide ‘added value’ to existing content was developed. Descriptive statistics about HSE content and registered users’ usage are collected each month. Results: The HSE taxonomy is organized by governance, financial and delivery arrangements in health systems as well as implementation strategies that can support these arrangements. There are 6601 documents (2487 of which are systematic reviews) that are searchable based on their relevance to the taxonomy. Currently 4855 users are registered, including 1222 policymakers, 1203 health care professionals and 623 managers. Over 15 000 searches have been conducted to date, and the majority of users are from Canada, the U.S., the U.K. and Australia. Conclusions: The ongoing development and evaluation of HSE and similar efforts should be prioritized as a way to ensure these approaches are optimally designed and implemented.

P4.039
Comparison of two experiences of development of healthcare quality indicators

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Background: Healthcare quality indicators are direct measures of the appropriateness of care provided in a particular health condition. Evidence-based indicators are built from clinical recommendations (CR) supported by robust evidence. The complexity of building healthcare indicators depends on the characteristics of the condition studied, as well as on the existing evidence on management of the condition. Objectives: To compare the process and results of developing evidence-based healthcare quality indicators in two different clinical specialties, obstetrics & delivery (OBD) and peripheral vascular disease (PAD). Methods: The OBD and PAD projects followed a similar methodology, described elsewhere. Systematic reviews (SR) were identified through bibliographic searches, and their risk of bias was assessed. Clinical recommendations were built from low risk of bias SR, and their quality of evidence was assessed. Only those CR supported by high quality evidence were used to define indicators. The proposed indicators were assessed to discard those measuring controversial interventions (e.g. unclear benefit-harm balance) or of limited clinical relevance. Results: There was less available evidence
for OBD than for PAD, but such evidence was of higher quality and led to more clinical recommendations (see Table 1). In the end, 20 quality indicators were built for OBD and 6 for PAD. Reasons for discarding CR were a controversial intervention (1 case in OBD), and limited clinical relevance (1 in OBD, 2 in PAD). While indicators could be defined for every main intervention in obstetrics, we could not define indicators for important surgical and diagnostic techniques in PAD (e.g., endovascular techniques). Conclusions: The development of evidence-based indicators is more difficult for some specialties. Challenges arise when the available research has low methodological quality, interventions used in clinical practice are in rapid turnover, there is no sound evidence to support the available interventions, the health condition is infrequent or its management is individualized.

Attachments: table 1.pdf

P4.040
Advancing quality in health policy decision-making in the face of uncertainty: an integrated review to characterize and address uncertainty

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Background: Evidence-based decision-making has become a cornerstone of effective health care in both clinical and policy contexts. Specific to the health policy setting, decision-makers must make decisions within the context of uncertainty, a phenomenon that has been poorly understood. Specifically, while research in this area has focused on key themes, a better articulation of the specific types of uncertainty, their impacts, and strategies available to navigate or mitigate them are warranted. Objectives: Our aim was to identify and characterize the unique uncertainties experienced by health policy decision-makers and to identify strategies for how to deal with them. A systematic review of the literature was undertaken to identify: (1) types and sources of uncertainty that decision-makers experience; (2) the impacts of these sources of uncertainty on decision-making; and (3) strategies to measure, navigate, and mitigate uncertainty. Methods: Scopus and Ovid Medline databases (1995–2011) were searched for English language articles relating to health policy and uncertainty, complemented by a targeted book review and search of the grey literature. Results: A total of 292 articles met inclusion. Three domains comprising 12 factors were identified: scientific (clinical, methods, evidence, statistics, models, generalizability), structural (adoption, practical, affordability), and contextual (acceptance, political, values). Impacts of uncertainty included delayed action, avoidance, suboptimal decisions and non-recommendation. Over 30 formal strategies to deal with uncertainty were identified, ranging from statistical methodologies, to formal methods used in policy contexts, to broader principles (e.g., Precautionary Principle). Conclusions: We successfully characterized uncertainty in the health policy context and created a working framework. These findings will be taken forward to develop a tool to assist health policy decision-makers to navigate uncertainty.

P4.041
The publishing characteristics of Cochrane Reviews for nursing research

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Background: Accompanied booming of the Nursing science and Evidence-Based Medicine, Concepts and methods of evidence-based nursing were given great attention by clinical practitioners and managers. However, due to the scientific and artistic characters of nursing discipline, they are facing challenges. Objectives: To describe the publishing Characteristics of the Cochrane Reviews of Nursing Research. Methods: We searched the Cochrane library by the topic on ‘Nursing’, and retrieved the Advanced Search by term of nursing as a supplement in March 2013. The EndNote X5 and Excel were used for data description and analysis. Results: We included 201 Cochrane Reviews of nursing researches out of the 226 identified, 32 of them published in 1998–2005, 169 published in 2006–2013. There were 9 (4.48%) Protocols, 38 (18.91%) New Searches, 13 (6.47%) Conclusions Changed, 7 (3.48%) Withdrawn, 3 (1.49%) Methodology, 1 and 3 Comment and overview of the inclusion respectively; Among which, 16 Reviews included 0 studies, 101 included 1–10, 37 included 10–20, 33 included more than 20. 130 (67.71%) only included randomised controlled trials (RCTs) or quasi-RCTs, 40 (20.83%) included some of RCT or CCT or controlled before and after studies or interrupted time series. 54 researches are focused on Community or home care, 18 and 13 pay close attention to Obstetric and pediatric nursing respectively, 60 to other patient care at the hospital, 19 are associated with Care system, only 2 are related to nursing education. Conclusions: Although more and more Cochrane Reviews about nursing is published, the quantity of the evidence should be improved; At the same time, we should pay more attention to Nursing education and systematic review of observational studies and qualitative research.

P4.042
RCT databases - reducing research wastage from the systematic review process

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Background: When a systematic review is conducted, the effort in finding and extracting data from studies is usually only used for that one review. The same process is then repeated by other researchers when creating a systematic review on the same condition. As information and communication technology has developed sharing of research data is now easier than ever. The Global Resource of Eczema Trials (GREAT) database allows researchers to quickly and easily find and appraise randomised controlled trials (RCTs) of eczema treatments gathered in the process of creating a systematic review. Objective: To describe how information and communication technology can be
used to extend and enhance the life of trial data gathered whilst conducting a systematic review. **Methods:** The GREAT database has two levels of data. The publicly accessible data provides enough detail for trials to be identified and screened for inclusion in further reviews or studies. This includes details about trial design, outcome measures and participant inclusion criteria. The second level of data in the GREAT database can be used in collaboration and includes extracted results data for clinically relevant outcomes. **Results:** The GREAT database (www.greatdatabase.org.uk) contains entries for over 500 RCTs and links to published systematic reviews of eczema treatments. The database can be searched and filtered using keywords or browsed using categories such as treatment, year, author or journal. The database provides links to PubMed and full citations for all trials. **Conclusions:** The GREAT database will facilitate future research on eczema treatments by greatly speeding up the identification of relevant trials. The creation of similar databases for other diseases could replicate this. This will avoid duplication of effort by researchers around the world searching for evidence to produce systematic reviews that will be used to inform guidelines.

**P4.043**

**Technological solutions for enhancing efficiency and sustainability of data abstraction in systematic reviews**

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**Background:** The Systematic Review Data Repository (SRDR) is an example of an open-access, state-of-the-art, web-based data system that allows online form building, data entry by multiple users, and data management and sharing. **Objectives:** To describe our experience using SRDR for data abstraction. **Methods:** The project leader creates the project and abstraction forms in SRDR following user-friendly wizard. S/He then adds users to the project and assigns roles. Users extract and enter data directly from study reports into SRDR online for seamless data saving and processing. The Data Comparison Tool within SRDR allows identification and adjudication of discrepancies. SRDR can be used to keep track of progress with data collection and workflow. The data can be exported out of SRDR into an analyzable format or a report. SRDR allows different alternatives for archiving and publishing the data. **Results:** The Box summarizes steps for developing abstraction forms in SRDR. We successfully used SRDR to collect data from about 400 trials involving 15 data abstractors (800 records in SRDR due to double data abstraction). Our form contains 125 questions and 550 data items. It takes on average an hour for one data abstractor to collect data from one article and another hour for adjudication of discrepancies. Because the data can be directly exported in an analysis-ready format, we have used SAS® for data management and analysis. Because SRDR codes and stores data in distinct data fields, evidence tables and risk of bias tables can be easily generated. **Conclusions:** SRDR has facilitated efficient data collection and preparation of a dataset from a large number of studies. To enable authors of Cochrane systematic reviews to use this freely available tool for data collection, future efforts must focus on developing tools to link SRDR to RevMan.

**Attachments:** Box_Steps for setting up forms in SRDR.pdf

**P4.044**

**Dealing with publication bias**

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USA

Dealing with Publication Bias Publication bias has been defined as the tendency on the part of investigators to submit, or journal editors, to accept manuscripts based on the significance of findings. Publication bias implies that positive study results have a better chance of being published, are published earlier, and are published in journals with higher impact factors. Conclusions exclusively based on published studies, therefore, can be misleading, and yet, most systematic reviews rely on published studies. A number of reasons have been cited for publication bias, including: negative findings; failure of authors to submit manuscripts; rejection of manuscripts by journal editors. This poster presents ways in which to find and access those studies that have not been published, yet are important to determining best practice.
EMBASE, CINAHL, PsycINFO, and Web of Science databases. Two independent reviewers included studies that reported methadone plasma concentration and the CYP2B6*6 polymorphism. **Results:** We modified the Newcastle-Ottawa Scale to assess the risk of bias in studies of the effect of genetic polymorphisms on drug metabolism. We removed several categories highlighting the comparability of cohort or case/control selection and the importance of adequate follow-up between study groups, while also introducing categories that emphasize explicit outcome and genetic assessment. We identified seven studies assessing the association between methadone plasma concentration and the CYP2B6*6 polymorphism. Five were cross-sectional; two were case-control. Trough (R) methadone plasma concentration was higher in CYP2B6*6 homozygous carriers compared to non-carriers (SMD = 0.53; 95% CI 0.05–1.00; p = 0.03; I² = 0%). Trough (S) methadone plasma concentration was higher in *6 haplotype homozygotes than in non-carriers, (SMD = 1.44; 95% CI 0.27–2.61; p = 0.04; I² = 69%). **Conclusions:** Participants homozygous for the CYP2B6*6 genotype have higher trough (R) and (S) methadone plasma concentrations compared to non-carriers, suggesting that methadone metabolism is significantly slower in *6 homozygous carriers. We developed an instrument to appraise risk of bias in genetic association studies; it rates the evidence in this review to be of moderate quality and cautions our confidence in the estimates of association. This presentation will focus on that instrument and its application.

**P4.046**

**Does the modified intention-to-treat reporting affect the estimate of the treatment effect in meta-analyses? A meta-epidemiological study**

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**Background:** The intention to treat (ITT) principle helps to preserve the balance of prognostic factors among allocated groups generated by randomized trials (RCTs). The prevalence of trials using modified intention to treat (mITT) may influence estimates of treatment effects. **Objectives:** To investigate for any association between estimates of treatment effects among trials with respect to the approach used for analysis (ITT versus mITT). **Methods:** We performed a computerized search of Medline and selected a random sample of systematic reviews published between 2006 and 2011 with the following inclusion criteria: (1) dichotomous data, and (2) presence of meta-analysis of at least two randomised trials with at least one reporting mITT. Within each systematic review, trials were classified according to the type of intention-to-treat analyses used as follows: (1) ITT, trials reporting the use of standard ITT analyses; (2) mITT, trials reporting the use of ‘modified intention-to-treat’ analyses; or (3) ‘no ITT trials’ not reporting the use of any intention-to-treat analyses. **Risk of bias criteria** [sequence generation, allocation concealment and blinding, the type of the center (single vs. multicenter trial), the presence of post-randomization exclusions] and funding source were evaluated for each trial. A meta-meta-analysis was performed and ratio of odds ratios (ROR) were calculated comparing ‘mITT trials’ against ‘ITT trials’ (or ‘no ITT trials’). A ROR less than one implying that trials reporting mITT exaggerate intervention effect estimates. **Results:** After screening 2268 abstracts, 377 full-text publications were analyzed and 201 meta-analyses remained for inclusion. Of these 56 had at least one RCT with a mITT reporting and overall included 804 trials. **Conclusions:** Previous work reported that the proportion of statistical significance within RCTs reporting mITT was high. This study determines whether mITT represents a source of bias. Final results will be presented at the Colloquium.

**P4.047**

**Evidence of design-related bias among studies validating clinical prediction rule: a meta-epidemiological study**

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**Background:** Proper validation is needed for the performance of clinical prediction rule to be trusted. Validating clinical prediction rule using inadequate methodology may result in biased estimation of predictive performance. **Objectives:** This study aims to examine the association between design deficiencies in validation studies of clinical prediction rule and estimates of predictive performance. **Methods:** MEDLINE, EMBASE, the Cochrane library and the Medion Database were searched for systematic reviews of clinical prediction rule studies published between 2006 and 2010. Data were extracted from all validation studies included in the systematic reviews that allowed for the construction of a diagnostic 2 by 2 table. A meta-analytic approach was used to evaluate the influence of design deficiencies. First, meta-regressions were conducted in each meta-analysis for selected design features. Then, the natural logarithms of relative diagnostic odds ratios (RDOR) from meta-regressions were meta-analyzed to estimate the summary RDOR. **Results:** A total of 287 validation studies of clinical prediction rule were collected from 15 systematic reviews and 31 meta-analyses. Validation studies using case-control design produced the largest summary relative diagnostic odds ratio (RDOR) of 2.2 (95% confidence interval: 1.2–4.3) in multivariable analysis under random-effects assumption between meta-analyses (Fig. 1). The summary RDOR of studies using differential verification was 2.0 (95% confidence interval: 1.2–3.1) and the summary RDOR of studies using inadequate sample size was 1.9 (95% confidence interval: 1.2–3.1). Narrow validation, validation studies conducted in similar settings or with similar patients to derivation, produced the summary RDOR of 1.8 but the 95% confidence interval was 0.8–4.4. **Conclusions:** Case-control design, differential verification and inadequate sample size are associated with the overestimation of predictive performance in validation studies. The results of validation studies should be interpreted with caution if design deficiency is detected. **Attachments:** Figure 1.pdf
P4.048
Randomised clinical trials with negative results: Is there an increase in their reporting?

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Background: One of the main aspects of publication bias is underreporting of randomised clinical trials with negative results (RCT-NR). Due to an increased awareness of the importance of publication bias, researchers and entities are now more prone to promote registration of protocols of clinical trials and publication of their results. Objectives: Primary: To assess changes across time in the prevalence of published RCT-NRs. Secondary: To describe the main characteristics of published RCT-NRs (e.g. sample size, medical specialty, journal of publication). To describe the concordance between results and conclusions for the main outcome in abstracts of published RCT-NRs.

Methods: We planned a retrospective, cross-sectional, comparative study of a random sample of RCTs from PubMed database, published in two different periods of time: 1998 (first period) and 2009 (second period). We excluded references with no abstract available and studies with designs other than RCT. The main outcome was the difference in percentage of RCT-NRs in the two periods. A total sample size of 964 RCTs, 482 from each period would have a minimum of 80% power to detect a difference greater than or equal to 10% in the main outcome, assuming a 20% of RCT-NRs in the first period, a 5% type I error and allowing for 40% attrition. Two authors will independently extract data. The chi-squared test will be used to compare the data of the main outcome. We will contrast the trial result associated with the main outcome with the authors’ conclusions.

Results: In April 2013, we obtained 49 363 references of possible RCTs after the application of a validated RCT filter. We identified 623 references from the first period and 2000 from the second period. We randomly selected 482 references from each period. Conclusions: We plan to present the results and conclusions of this study during the 2013 Cochrane Colloquium.

P4.049
Obtaining confidential protocols to increase the completeness and accuracy of risk of bias assessments for RCTs: an example from recombinant human bone-morphogenetic protein-2 (rhBMP-2) for spinal fusion

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Background: Risk of bias assessment is an integral part of a systematic review. The Cochrane risk of bias tool covers selection, performance, detection, attrition, and reporting biases. Trials are classed as ‘high’, ‘low’, or ‘unclear’ risk of bias. The ability to assess a trial confidently as ‘high’ or ‘low’ risk of bias is often hindered by poor reporting of methodology in publications. Objectives: To explore whether access to trial protocols provides more definitive assessments of risk of bias than use of publications and conference abstracts. Methods: As part of a systematic review and meta-analysis investigating the effectiveness of rhBMP-2 in spinal fusion we conducted risk of bias assessments for 12 published RCTs. We compared judgements about selection bias, performance bias, and detection bias for each trial based on information from trial publications and abstracts, from publicly available summary protocols and from detailed confidential trial protocols. Original detailed (in this case confidential) trial protocols were made available to us by the manufacturer of the product or through contacting study authors. Results: Eleven RCTs were conducted by the manufacturer of rhBMP-2, and one was conducted independently. When confidential trial protocols were used, 45 of 48 risk of bias judgements were definitive (‘low’ or ‘high’). Risk of bias assessment based on publications and abstracts resulted in just 28 of 48 definitive judgements. This was due to non-reporting of randomisation and allocation concealment details in the publicly available sources. Publicly available protocols from trial registers produced no definitive judgements; the risk of bias was judged to be ‘unclear’ for all trials across all domains. Conclusions: Reviewers can reduce uncertainty in risk of bias judgements by obtaining detailed trial protocols either from journals or directly from investigators or sponsors. Protocols exclusively from trial registers are unlikely to be adequate for this purpose.

P4.050
Judging the impact of missing participant continuous data on risk of bias in systematic reviews of randomized trials

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Background: We developed an approach to address missing participant data for continuous outcomes in meta-analyses. Objectives: To assist systematic review authors and guideline panels in judging the impact of missing participant data on risk of bias. Methods: Our approach involves a complete case analysis complemented by sensitivity analyses applying four increasingly stringent imputation strategies (Table 1). When the minimally important difference (MID) is available, we calculate the proportion of patients who benefit from the treatment. Systematic review authors should test a range of thresholds that guideline panels might choose as an important effect. A guideline panel should choose the threshold for recommending treatment. If the entire confidence interval for the proportion is above the threshold for all plausible imputation strategies, a panel should not rate down for risk of bias. If the confidence interval includes the threshold, confidence in the importance of the treatment effect decreases. We applied our
approach to a systematic review of respiratory rehabilitation for chronic obstructive pulmonary disease. **Results:** In the complete case analysis, the proportion of patients who achieved an improvement effect greater than the MID was 29% (95% CI of 21–37%) (Fig. 1). Strategies 1–3 resulted in point estimates ranging from 24% to 18%, with lower confidence limits from 17% to 11% (Fig. 1). Strategy 4 was not considered a plausible scenario. In the complete case analysis, the lower confidence limit suggests that at least 21% will achieve an important improvement. The conclusion would be similar for strategy 1 and 2. For strategy 3, if 11% benefiting would be insufficient to recommend treatment, a panel would rate down the quality of evidence for risk of bias. **Conclusions:** We provide a useful approach on judging the impact of missing participant data for continuous outcomes on confidence in estimates of treatment effects.

**Attachments:** Table 1.pdf, Figure 1.pdf

**P4.051**

**Reporting bias in industry-sponsored spinal fusion studies of recombinant human Bone Morphogenetic Protein-2 (rhBMP-2)**

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**Background:** The use of rhBMP-2 in spinal fusion increased 25-fold from 2002 to 2006, with much of that increase due to off-label use. In the midst of concerns over the safety of rhBMP-2 and questions regarding the accurate reporting of adverse events in early industry-sponsored trials, we were afforded access to individual patient data (IPD), study protocols, and manufacturer’s reports which we used to assess benefits, harms, and reporting bias. **Objectives:** To assess reporting bias in publications of industry-sponsored trials of rhBMP-2 in spinal fusion. **Methods:** We searched MEDLINE, EMBASE, the Cochrane Central Register of Controlled Trials and other databases through August 2012 for published studies of rhBMP-2. For each industry-sponsored trial we identified a primary publication and associated companion publications. Using a previously published protocol, we identified and classified examples of reporting bias by comparing journal publications with corresponding study protocols, internal manufacturer reports, and IPD provided by the manufacturer. **Results:** Nine of 16 included studies were published in medical journals as individual trials; two were partly described in articles that analyzed multiple studies together; five were unpublished. When we compared published articles to manufacturer reports submitted to the United States Food and Drug Administration, study protocols, and IPD, we identified selective reporting, reporting of inappropriately pooled data, and underreporting of outcome measures. While published studies of rhBMP-2 indicated no increase in adverse events due to rhBMP-2 along with the same or better fusion rates compared with bone graft, our analysis of individual patient data indicated no increase in fusion rates with possible increased cancer risk. **Conclusions:** Compared with individual patient data and internal manufacturer reports, the journal publications exaggerated the benefits and minimized the potential harms of rhBMP-2 for both on-label and off label use.

**P4.052**

**Assessing publication bias in systematic reviews and meta-analyses in the context of small n trials: application of a capture-recapture method**

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**Background:** Systematic reviews and meta-analyses should include published and non-published evidence. Evidence used to support recommendations for relatively new, easily-delivered, psychosocial interventions, such as mindfulness-based therapy (MBT), often comes primarily from small trials. Methods like funnel plots and other statistical methods that are used to assess the likelihood of publication bias, however, depend on having a sufficient number of large studies to anchor the analysis. When there is insufficient data to support statistical methods, an alternative method is needed. Capture-recapture is a method that has been used to estimate missing information and which has been used to estimate the number of articles that may have been missed by different search methods, for instance. Capture-recapture could also be used to compare completed trials identified via traditional database searches and clinical trial registries. **Objectives:** To investigate (1) whether evidence syntheses of MBT effectiveness include non-published trial evidence and (2) whether risk of potential bias is adequately evaluated in MBT evidence reviews, and (3) to estimate the proportion of completed MBT trials that are not published. **Methods:** PubMed, Psychinfo, CINAHL, Embase, ISI, SCOPUS, Cochrane were searched through 2012 for systematic reviews and meta-analyses on MBT. The same databases and clinical trial registries (ClinicalTrials.gov; Standard Randomized Controlled Trial Number Register; region-specific registries accessed through the World Health Organization registry search portal) were searched for trials of MBT targeting medical symptoms, including psychiatric symptoms. Preliminary Results: Of > 20 published systematic reviews and meta-analyses, few assessed possible publication bias, though all who did concluded, using statistically-driven methods, that there was no publication bias. There are, however, a large number of unpublished trials, and we will estimate the number of these using the capture-recapture method. **Conclusions:** The capture-recapture method may be a useful method to estimate possible publication bias in the context of relatively small trials.

**P4.053**

**Evidence from clinical trials is needed: what are Cuban medical journals doing about it?**

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**Background:** To translate clinical trials into knowledge depends on the right primary information about them but its publishing is a scientific and ethical dilemma. Some initiatives trying to standardize the process aren’t always accomplished in all contexts. **Objectives:** To review the editorial policy in Cuban medical journals related to Uniform Requirements of the International Committee of Medical Journals Editors To estimate the endorsement of reports to the CONSORT statement To assess the prospective registration of Cuban trials.
Methods: The instructions to authors of 39 journals previously identified with the Iberoamerican Cochrane were revised for identifying explicit parameters related to clinical trials. Some studies were evaluated using the CONSORT checklist. Cuban registries from the International Clinical Trials Registry Platform (ICTRP) and the Cuban Registry of Clinical Trials (RPCEC) were checked. Results: Most of journals refer to the ICMJE requirements but they only use it for citing. Journals are published by pharmaceutical industry and the Medical Sciences Press; only one refers explicitly to the CONSORT and the prospective registration of clinical trials. 174 Cuban clinical trials were identified through the ICRTP since the first one in 2004 in the Australasian registry. RPCEC exists since 2007 and shows 151 trials, 54 of them after the condition of primary registry. More than 90% of the registries have been retrospective and just a few of them have been published in journals. The assessed reports don’t fulfill at least the most elementary Consort items. Topics like the random sequence generation, allocation concealment, the intention to treat analysis are ignored. Conclusions: Editorial policy in Cuban medical journals is not aligned to the main international standards for clinical trials publication. As a consequence the quality of reports is not optimal. A joint project with the Medical Sciences Press for assessing and improving the quality of reports was signed.

P4.054
Disturbing evidence
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Background: As a Patient Advocate who practices no type of medicine, conducts no direct research, and is a full-time volunteer, I find myself more and more concerned with the quality of evidence. Objectives: As a Cochrane Consumer, I get the chance to evaluate evidence. As a member of the Adverse Effects Methods Group, I am very aware of the failure to collect evidence/information. Testifying at Food & Drug Administration—FDA (USA) meetings, I see how evidence can be manipulated. As a reader of many journals, newsletters and magazines, I follow what happens when ‘evidence-based’ studies bring drugs or devices into the community settings and fail to replicate. Methods: At the two prior colloquiums I have attended, I was struck by posters showing how badly evidence is collected and reported. These are some poster titles that caught my attention at Madrid Colloquium (the last one attended): P1A15 The sensitivity and precision of adverse effects search filters in MEDLINE, EMBASE and Science Citation Index P1416 The usefulness of different information sources for retrieving adverse effects data for a systematic A603 An investigation into the assessment and reporting of harms in clinical studies A604 What is a rapid review? B203 Primary outcomes reported in abstracts and ClinicalTrials.gov—do they agree? C304 Do Cochrane systematic reviews report patient-important outcomes? P1534 Where and how to find data on safety: What do systematic reviews of complementary therapies tell us? P1448 Geographical and language distribution of trials in Cochrane Systematic Reviews related to acupuncture P2A190 Systematic reviews of adverse events. Is screening by title and abstract enough? Results: Clearly use of this evidence must be examined. Let’s do it. Conclusions: Cochrane Consumers and researchers must discuss this at Colloquio to impact change.

Attachments: Outcome research bias.JPG, Critical outcomes.JPG, Cochrane Consumers.JPG

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P4.055
Development of user-friendly summaries for published systematic reviews and meta-analyses in agri-food public health
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Background: The application of systematic reviews (SRs) is increasing to address agri-food public health topics (e.g. food safety). In order to increase the uptake of SR evidence to inform decision-making in this sector, there is a need to develop user-friendly formats for disseminating this information that are more relevant to end-users. Objectives: We developed a framework for summarizing SR evidence into user-friendly one- and three-page summaries and applied the framework on two SR examples that investigated two different interventions (vaccination and feed and water additives) to reduce Salmonella spp. colonization in broiler chickens on farms. The summaries included the SR evidence about intervention efficacy, as well as supporting contextual information from additional sources. Methods: We pre-selected five relevant categories of contextual information (efficacy, cost, availability, practicality, and public sensitivities/concerns), and data for each category was obtained using an environmental scan approach consisting of the following steps: (1) targeted grey literature searches; (2) scientific literature searches; and, (3) interviews with 12 topic experts. Results: For the vaccination intervention, 8/26 (30.8%) and 4/76 (5.3%) relevant articles identified in the grey and peer-reviewed literature searches, respectively, were used to develop the three-page summary. In the feed and water additives summary, 14/30 (46.7%) and 3/20 (15%) relevant articles were used from the grey and peer-reviewed literature sources, respectively. On average, approximately 6–8 hours, 4–5 hours and 1–1.5 hours were needed to obtain relevant information from grey literature, peer-reviewed literature and topic experts, respectively, per contextual category. Conclusions: The overall utility of the literature searches and expert interviews depended on the specific intervention topic and contextual category. In general, interviews with industry experts were the most useful and rapid method; however, the literature searches were also useful to highlight key knowledge gaps to be investigated further by the topic experts.

P4.056
Does a Cochrane contributor facilitate the implementation of evidence-informed recommendations in practice
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Objective: to measure the rate of implementing evidence-informed recommendations by health care providers supervised by a clinical supervisor who is a contributor to the Cochrane collaboration as compared to a matched clinical supervisor who is not a contributor to the Cochrane collaboration. Methods: this observational study included 145 healthcare providers. All participants received formal training in evidence based practice prior to this study. Participants worked in two groups, one group lead by a clinical supervisor who is...
a Cochrane contributor and the other group lead by a matched clinical supervisor who is not a Cochrane contributor. The primary outcome was the rate of implementing evidence-informed recommendations (of the WHO guideline that was based on a Cochrane Review) as measured by the rate of prescribing Intermittent iron and folic acid supplementation to non-anemic pregnant women in contrast to the routine daily supplements. The prescribing pattern was determined by checking outpatient prescriptions over 9 weeks in 2013. Results: A statistically significant difference in prescribing intermittent supplements between the two groups was observed. Cochrane Leadership increased the uptake of evidence informed recommendations and lead to a significant change in the prescribing pattern (Odds ratio 5.96 95% CI 2.70–13.14, P < 0.0001). Providers who are currently involved in the Collaboration significantly changed their prescribing pattern as compared to non-contributors (Odds ratio 2.72 95% CI 1.30–5.68, P < 0.01). A combined Cochrane supervisor and a Cochrane provider significantly increased the change in prescribing pattern (Odds ratio was 7.61 (95% CI 3.12–18.56, P < 0.0001)).

Conclusion: Cochrane contributors working in clinical practice are more likely to implement evidence-informed recommendations. A Cochrane contributor leadership improves the uptake and application of knowledge.

P4.057
Putting the issues on the table: summarising outcomes from reviews of reviews to inform health policy

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Background: Systematic reviews are increasingly used to inform health policy. These often employ rapid evidence assessment methods, involving reviews of reviews. Together, these result in particular challenges, since policy questions can be broad, and the time available more suitable for reviews with a more limited scope. Navigating these issues thoughtfully both precedes and supports a more downstream need: for knowledge translation to represent evidence in a way that is appropriate for policy use. Configurative reviews involving a qualitative comparison of consistency across reviews have been recommended, but few methods to undertake such comparisons have been reported. Objectives: To demonstrate a novel method of representing evidence from a systematic rapid evidence assessment (SREA). Methods: We undertook a SREA of cosmetic interventions which asked a broad research question under tight timelines. As a review of reviews supplemented by primary studies where review evidence was thin, statistical synthesis was not appropriate. Instead, we mapped in tabular format the effects (positive/no change/negative) for each outcome against each type of cosmetic intervention. We then compared overall effects by each cosmetic procedure and each outcome, to derive a narrative synthesis of effectiveness. Results: The tabular format (Table 1) illustrated the impact of cosmetic interventions on each outcome (e.g. satisfaction, self-esteem, anxiety etc.). It also allowed visualisation of the overall impact (i.e. all outcomes) of any one cosmetic intervention. These produced very different Results: for example, self-esteem improves across cosmetic interventions, but findings across abdominoplasty studies suggest small or no improvements across outcomes. Conclusions: This type of cross-tabulation adds depth to the SREA process since evidence on narrower (i.e. procedure-specific) interventions can be summarised visually to address broader policy questions of effectiveness while showing overall effectiveness. The use of systematic reviews enabled us to conduct a rigorous evidence synthesis within the limited policy timescale.

Attachments: SUBMITTED Putting the evidence on the table Abstract Table 1.pdf

P4.058
Critically Appraised Topic (CAT) one-day workshop—‘CAT in a day’

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Background: Critically Appraised Topics (CATs) are brief reviews of the best evidence that aim to generate a clinical bottom line for implementation in clinical practice. Potential topics are brought by clinicians to the CAT group, questions are defined and CAT teams (clinicians and researchers) are established. Structured literature searches are conducted and evidence is appraised and synthesized. CATs are disseminated locally to healthcare practitioners, managers and commissioners to inform decision-making. It can take months to produce a CAT as these activities fit around clinical workloads. Objectives: We wanted to see if it was feasible to develop CATs in a one-day workshop. Our aims were to speed up CAT development, highlight work of the group and engage new local clinicians by teaching new skills. Methods: Topics were chosen before the workshop based on interests of attendees and availability of evidence. Four specific CAT questions were discussed and refined within each group. Participants had opportunity to learn searching and critical appraisal skills. Facilitators from the CAT group helped to interpret research results and generate the clinical bottom line. We gave advice on how to disseminate and implement CATs when back in clinical practice. Structured searches were conducted after the workshop to evaluate the one-day CATs. Results: In the workshop, we found and appraised at least one research paper, often a systematic review, relating to each CAT. There was insufficient good quality evidence to instigate a change in clinical practice and gaps were highlighted in the evidence, particularly for early mobilisation after total knee replacement and steroid injections for plantar fasciitis. Conclusions: It seems feasible to develop a CAT in a one-day workshop for simple intervention questions. We will discuss the validity and limitations of this approach and how it can be used to support training clinicians and implementation of EBM.
P4.059
Developing a conceptual framework for going from evidence to coverage decision
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Background: DECIDE, a 5-year project funded by the European Commission’s FP7, aims at improving the dissemination of evidence-based recommendations by building on the work of the GRADE Working Group to develop and evaluate methods that address the targeted dissemination of guidelines. Within this project we are developing tools to assist policymakers, managers and their staff to systematically and transparently consider factors that should influence decisions about whether to pay for the introduction of an intervention/option in a specific healthcare setting (coverage decision).

Objectives: To inform the development of a conceptual framework for going from evidence to coverage decision, using input collected through a structured consultation of our target audience.

Methods: We developed a conceptual framework considering the following criteria: severity of the condition, benefits and harms of the proposed interventions, quality of evidence available, patients’ values, feasibility, equity and resource use. We consulted, through a structured feedback form, a convenient sample of 77 individuals from six Countries, collecting their opinions on the proposed framework.

Results: To date, 49/77 (63%) people responded: 82% of them found the framework adequate for the intended purpose, gave positive judgments about its simplicity (83%) and usefulness (71%) and found it applicable to different types of coverage decisions (61%). However, these preliminary results show that only 43% of the respondent considered the framework comprehensive: more detailed information are required for cost effectiveness, feasibility, production capacity, and contextual factors that impact on the decision-making process, such as ability to implement the procedure.

Conclusions: The preliminary results show that the majority of the respondents found the framework adequate for the intended purpose, although not always applicable to different types of coverage decisions. Potential improvements for comprehensiveness have been suggested. On the basis of the full results of this consultation, the conceptual framework will be refined and then re-tested for its effectiveness.

P4.060
Readability of Cochrane Breast Cancer Group plain language summaries

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Background: Readability is an objective measure of the reading skill required to understand a written text. Guidelines suggest that information be written at an education level not greater than grade six. The Cochrane Collaboration provides free online, plain language summaries of Cochrane systematic reviews for healthcare consumers. The readability of these plain language summaries is unknown.

Objectives: To assess if plain language summaries written by the Cochrane Breast Cancer Group (CBCG) meet recommended readability scores. A secondary aim was to improve plain language summary readability using: simpler language, shorter sentences and active voice.

Methods: Two reviewers independently evaluated the readability of all reviews published by CBCG. The same reviewers individually re-wrote all plain language summaries using simpler language, shorter sentences and active voice to improve readability. Reviews published as ‘withdrawn’ were excluded. Readability was assessed using Flesch Reading Ease and Flesch-Kincaid Grade Levels in Microsoft® Word 2010. Flesch Reading Ease generates a readability score from 0 (unreadable) to 100 (very easy). Flesch-Kincaid Grade Levels provide a readability score indicating the academic grade level required to read the text. Final average scores were calculated where a difference in scoring existed between reviewers.

Results: Mean Flesch Reading Ease and Flesch-Kincaid Grade Levels were 26.8 (SD = 11.3, range = 3.0–52.0) and 15.0 (SD = 2.3, range = 10.9–20.0) respectively. No individual plain language summary met the recommended readability level. Most articles (83.3%) were written at college level. Our writing techniques significantly improved readability (p < 0.001), mean Flesch Reading Ease was 52.5 (SD = 9.0, range = 34.1–72.5) and Flesch-Kincaid Grade Level 8.9 (SD = 1.3, range = 6.4–11.0).

Conclusions: CBCG plain language summaries did not meet recommended readability levels for healthcare consumers. Writing using simple language, short sentences and active voice are useful tools the Cochrane Collaboration could recommend to authors to improve readability. This may improve healthcare consumer access to the high quality information in Cochrane systematic reviews.

P4.061
Awareness and use of the Cochrane Library in internal medicine

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Background: Systematic Reviews (SR) are a fundamental tool for practicing Evidence Based Medicine. Since 1993 the Cochrane Collaboration’s mission is to produce SRs. However, awareness and use of Cochrane SR, varies in different countries and specialties.

Objectives: To describe the level of awareness and use of Cochrane RS among internists.

Methods: Among participants to the XXXII World Conference of Internal Medicine (WCIM) held in Santiago, Chile on November 2012, we recruit volunteers to reply an online survey consisting of 12 questions regarding awareness, access and uses of Cochrane SRs.

Results: 413 attendants to WCIM volunteered to participate in our survey; 202 (48.9%) replied. Responders were from 27 countries, 117 (57%) were chileans, 71 (34%) from other latinamerican countries and 16 (8%) were non latinoamericans. (North America, Europe and Oceania). 103 (51%) were Internists or internal medicine subspecialists, 53 (26, 2%) were residents, 33 (16, 3%) undergraduate students and 13 (6, 4%) other specialties. Most of them worked in hospitals (78%) and one third worked in an academic setting. 94% of responders report using SRs for decision making, of these 98, 5% use Cochrane SRs and 98, 8% considered them useful or very useful for healthcare decision. Frequency of Cochrane SRs use was once a week in 21%, at least once a month in 54%, 5% and 16% twice a year. The most common reasons to use Cochrane SRs...
were: clinical decision making (67.6%), keeping up to date (64.2%), teaching purposes (32%) and research (27%). Access to Cochrane SR was through Institutional affiliation in 44.9%, 38.1% use free access through Cochrane Library Plus, only 2.8% pays for personal access. **Conclusions:** Our survey shows that most internists use CL SRs very frequently, mostly for clinical decision making or updating purposes and considered them useful or very useful. Regarding access options, the most frequent was institutional affiliation.

**P4.062**
Dissemination of effective physiotherapy treatments - analysing the relevance and usefulness of a large database of evidence summaries

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**Background:** Matching care to strong evidence is essential for high-quality physiotherapy. However, many barriers hamper the implementation of evidence based physiotherapy. To promote evidence-based decision-making a Belgian national electronic point-of-care information service was initiated in September 2011. This database is free for Belgian healthcare providers and includes the comprehensive Duodecim database with clinical guidelines and concise evidence summaries of systematic reviews - often Cochrane Reviews. While this database is developed for general practitioners, information about physiotherapy interventions is included to inform physician referral decisions. Therefore physiotherapists might also benefit from these summaries when deciding on treatments and their parameters.

**Objectives:** To determine the relevance and usefulness of the available evidence summaries for physiotherapists dealing with musculoskeletal pathology. **Methods:** Evidence summaries related to musculoskeletal physiotherapy were selected by systematic screening of the summaries against the predetermined criteria. Relevant evidence summaries were evaluated for usefulness using four parameters: therapy modality, intensity, duration and frequency. Provided that a summary was not useful, the accompanying systematic reviews were further screened for details on these parameters. **Results:** Out of a total of 4 128 278 evidence summaries were relevant to musculoskeletal pathology and 106 were relevant to physiotherapy. Six evidence summaries contained sufficient information to be useful for physiotherapists. Usefulness of systematic reviews is still being analyzed. These results are expected by the end of May 2013. **Conclusions:** While the evidence summaries contain relevant information for musculoskeletal physiotherapy, essential therapy-parameters for physiotherapists are missing in most evidence-summaries. However, the first results of the evaluation of the full systematic reviews show that additional parameters from these reviews might be used to increase their usefulness towards physiotherapists.

**P4.063**
What is the most appropriate knowledge synthesis method to conduct a review? A scoping review


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**Background:** Though systematic reviews are often utilized to synthesize complex interventions, additional synthesis methods may be required in order to explore how and why interventions work in different settings. **Objectives:** To conduct a scoping review of non-traditional/novel knowledge synthesis methods across multi-disciplinary fields, compare and contrast the different knowledge synthesis methods, and develop an algorithm to match the most appropriate method to a research question. **Methods:** Systematic searches of electronic databases (e.g., MEDLINE, Philosopher’s Index, PsycINFO) and targeted Internet searches (e.g., Google) were conducted. Reports describing the development/use/comparison of non-traditional/novel methods for synthesizing qualitative or quantitative evidence on complex interventions within health (as per the World Health Organization definition) or philosophy were included. The screening criteria and data abstraction forms were tested a priori. Citations and full-text articles were screened, and data abstraction was conducted independently, by two reviewers. The evidence was synthesized according to the three objectives above. **Results:** We screened 17 996 titles and abstracts and 1045 full-text studies reporting on over 30 different knowledge synthesis methods. The five most common methods were: meta-ethnography, meta-synthesis, thematic analysis, realist review, and meta-study. Key methods articles were identified and specific steps were synthesized. Strengths identified across some methods included the ability to (1) combine qualitative and quantitative data, (2) move beyond aggregation to interpretation, (3) contextualize the knowledge synthesis results, and (4) make sense out of conflicting evidence. Based on these results, we developed a preliminary algorithm, which can be used to match a knowledge synthesis question to a specific knowledge synthesis method. **Conclusions:** Our results will allow funders, publishers, policy-makers, researchers, teachers, and students to identify the most suitable knowledge synthesis method for their knowledge synthesis questions. Future work will involve consulting with leaders in each of the methods areas to generate agreement on the typology and priorities for research.

**Attachments:** Cochrane abstract_KS methods_27MAR2013.pdf

**P4.064**
Assessing generalizability of findings in systematic reviews of public health interventions: methods of the US Community Preventive Services Task Force

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**Background:** Since 1996, the Community Preventive Services Task Force (Task Force) has developed over 220 recommendations about public health interventions across a broad range of topics, based on systematic reviews, and compiled in The Community Guide. Integral to this process is assessing the generalizability of Task Force findings.
P4.065
The reporting characteristic of qualitative study: a review
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Background: Although some searching strategies or filters have been reported and assessed, identifying appropriate qualitative research remains frustrating and difficult. Objectives: To review to what extent terms on qualitative study were correctly used. Methods: For each review, the Task Force considers three categories of potential effect modifiers (setting, population characteristics, and intervention characteristics), and identifies specific factors within these categories (e.g., ‘rural/urban/suburban’ under ‘setting’; ‘race/ethnicity’ under ‘population characteristics’; ‘tailoring’ under ‘implementation characteristics’) that are relevant to the intervention being reviewed. The Task Force draws conclusions on each potential effect modifier by considering: (1) an a priori hypothesis about the likely direction and magnitude of effect, developed by subject matter experts based on theoretical and experiential considerations for the intervention being studied (e.g., ‘likely effect modifier,’ ‘unlikely to be a substantial source of variability’); (2) the quality, quantity, and consistency of empirical evidence related to the factor of interest; and (3) the degree of concordance between the hypothesized relationships and the available evidence. The strength or tentativeness of Task Force conclusions regarding the generalizability of overall findings across settings, populations, and intervention characteristics vary based on these considerations. The two primary sources of evidence considered for assessing effect modification are between-study and within-study stratified analyses. Although the latter evidence has stronger internal validity (e.g., no collinearity problems), the former is much more commonly available in the public health literature, and is an important source of evidence on these vital issues. Conclusion: These methods might assist others considering generalizability of findings from systematic reviews.

P4.066
How rare are adverse drug effects? Assessing the frequency of harm effects of drug treatments for the management of sciatica in primary care
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Background: Adverse drug reactions (ADRs) are among leading causes of death in many countries and yet are often regarded as rare events. This misconception is usually a consequence of optimistic interpretations regarding their frequency. Moreover, even mild ADRs may be responsible for poor treatment adherence, the use of additional medication to control existing ADRs, and self-medication behaviours. Objectives: We aimed to investigate and classify the frequency of ADRs of drugs suggested to manage sciatica in accordance to standard categories by the World Health Organization - Uppsala Monitoring Centre (WHO-UMC) system. Methods: We assessed trials that detailed ADRs in a systematic review investigating the efficacy of drugs administered in primary care for the management of sciatica. The frequency of ADRs was classified according to WHO-UMC categories: very common when frequency > 10%, common when > 1% and < 10%, uncommon when > 0.1% and < 1%, rare when > 0.01% and < 0.1%. ADRs were grouped according to MedDRA terminology and we present data on a subset of ADRs usually labelled of mild or moderate severity. Results: Nine studies provided data on the frequency of 34 unique ADRs. Frequencies of ADRs ranged from 7.1 to 71.4% (constipation), 1.1 to 22.2% (nausea), 0.6 to 13.3% (dyspepsia), 0.9 to 35.7% (dry mouth), 0.9 to 14.3% (headache), 0.9 to 25% (drowsiness), 4.7 to 20% (epigastric pain), and 0.6 to 7.1% (dizziness). Conclusions: In accordance to WHO-UMC system, ADRs associated to drugs administered to manage sciatica are common or very common effects. Therefore, the assumption that ADRs are rare events in the management of sciatica is underestimated. Reporting often influence our judgment regarding adverse outcomes with the intervention appearing more favourable than it should and systematic reviews need to improve methods to address safety parameters with more precision and accuracy.

Reference
P4.067
Collating the knowledge base for the COMET (Core Outcome Measures in Effectiveness Trials) initiative - a systematic review

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Background: The COMET Initiative is developing an online resource to collate the knowledge base for core outcome set (COS) development and implementation. This will be used by trial funders and researchers to see what work has been done in their area of interest and by research funders wishing to fund new work in this area who want to avoid unnecessary duplication of effort. It will also help authors present their findings clearly and succinctly in Cochrane Reviews, such as within the Summary of Findings table. This requires the development and application of a search strategy to identify work related to the development of COS. Objectives: To identify studies that had the aim of determining which outcomes/domains to measure in all clinical trials in a specific condition. To identify and describe the methodological techniques used. Methods: We developed a multi-faceted search strategy to search electronic databases (MEDLINE, SCOPUS, Cochrane Methodology Register). We contacted Cochrane Review Groups across all areas of health care to request information on COS that they are aware of. We also completed a range of hand searching activities. Results: Databases were searched August 2012 for studies of the selection of outcomes for use in clinical trials. The search identified 24 804 potentially relevant abstracts. Screening is ongoing to identify the final set of included studies; it is expected this work will be completed in August 2013. Preliminary results will be presented. Conclusions: This systematic review has identified clinical areas where work has been undertaken, providing the knowledge base for COS development. This review also highlights clinical areas where gaps exist, providing opportunities for future COS development. This is the first step in establishing a database of COS. Ensuring that the database is as comprehensive as possible and keeping it up to date are key to its value for users.

P4.068
Development of a question-driven framework for evidence rating in the area of communicable diseases—a project of the European Centre for Disease Prevention and Control (ECDC)

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Background: ECDC provides independent scientific expertise to European Union (EU) bodies and Member States (MS) in the field of communicable diseases. Randomized controlled trials (RCT) are accepted as the gold standard to study the efficacy of interventions. They are not always feasible, however, in the public health context, including the area of communicable diseases where the typical questions potentially raised during the investigation and control of an outbreak (e.g. disease burden or risk of transmission) are more likely to be addressed by non-interventional studies. Effective policy-making and decision-making within this context should also be rigorous and transparent. Objectives: The aim of this ECDC project was to develop an evidence rating framework that would support a systematic and transparent methodology to appraise the evidence that would inform public health decisions—from non-randomized and/or non-interventional studies, to surveillance data, aetiology studies and case studies. Methods: A workshop was organized in 2009 and a working group established in 2010 that brought together experts in the fields of public health, epidemiology, communicable diseases and evidence-based methodology to identify the challenges in grading evidence in public health, particularly in infectious diseases prevention and control. In 2012, the ‘Project on a Framework for Rating Evidence in Public Health’ (PRECEPT) was initiated by ECDC and commissioned to a European consortium. Within PRECEPT, common research questions that usually arise during decision-making processes in public health were collected and matched against most appropriate study designs. Published quality appraisal and evidence rating systems were assessed to identify already existing and/or still missing components. Subsequently, a draft-framework on rating evidence in public health has been developed. Next steps: The draft framework will be peer reviewed and piloted in spring and summer 2013 in collaboration with international public health experts. First results from the peer review and pilot phase are expected in autumn 2013.

P4.069
From summary to synthesis: a review of statistical synthesis and presentation methods used in complex reviews

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Background: Systematic reviews evaluating policy, public health, and health service delivery interventions involve additional complexity compared with clinical reviews. This complexity arises from multifaceted interventions being evaluated across a wide range of settings, conditions, outcomes, and study designs. Application of meta-analytical methods in these reviews can be challenging, and the use of ad hoc approaches (e.g. counting the number of studies with statistically significant results) may under-utilise or misrepresent available research. To date, there has been no evaluation of the different synthesis and presentation methods being employed in complex systematic reviews. Objective: 1. To describe and estimate the prevalence of different synthesis and presentation methods used in a sample of complex systematic reviews. 2. To describe the advantages and disadvantages of each of the identified synthesis and presentation methods. Methods: Systematic reviews published between 2008 and 2012 were identified from the Health Systems Evidence Database and the Effective Practice and Organisation of Care Group. The resulting sampling frame was stratified by two types of reviews, those produced within, and externally to, The Cochrane Collaboration. A sample of 50 reviews from each stratum was randomly selected. Data extracted included: diversity of interventions, settings, conditions, outcomes, and study designs; use of outcome categories; synthesis and presentation methods; and
rationale for the choice of methods. Results will be summarised using descriptive statistics. The advantages and disadvantages of each of the identified methods will be sought from methods literature. **Results:** Data extraction is ongoing. Results will be available at the Colloquium. **Conclusion:** Systematic reviews used to inform policy and public health decision making have broad population impact. Synthesis and presentation methods are needed that offer effective and fair presentation of results, and make best use of available research. This research will describe and quantify the use of different methods, identifying where guidance is needed.

**P4.070 Using a theory driven mixed-method review to assess the benefits of complex environmental-health programmes. Cochrane Public Health Group review CD010351**

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**Background:** This presentation will describe our use of a novel approach to synthesising disparate bodies of quantitative and qualitative evidence to understand both the benefits and pathways to impact of outdoor environmental enhancement and conservation activities to health and wellbeing. **Objectives:** Environmental enhancement programmes are complex and heterogeneous, particularly in setting, intervention specifics, participant population and motivation, and evaluatory technique. We therefore sought to use an innovative model of synthesis suitable to assess the potential impacts of activities to health and wellbeing, whilst developing an understanding of how, why and where these impacts may occur. **Methods:** For this Cochrane Review (CD010351) we used a theory driven mixed-method approach. Evidence was sought through traditional database searches and, reflecting the origin of much of the evidence, through extensive searches of grey literature and direct contact with over 200 relevant organisations. Quantitative evidence was used to assess effectiveness, qualitative evidence to illuminate the processes and mechanisms contributing to the observed outcomes. Evidence was brought together to develop a conceptual model of impact with additional high-level evidence used to populate the potential pathways between intervention and impact. **Results:** We identified 30 papers referring to 21 unique interventions from the UK, Australia and Canada. The evidence identified was unsuitable for meta-analysis; we therefore used narrative synthesis which revealed limited quantitative evidence of positive impacts to health achieved, and qualitative evidence that allowed us to map potential mechanisms through which these might be achieved, as illustrated in the conceptual model (Fig. 1, Conceptual Model). **Conclusion:** The theory driven mixed-method review approach facilitated a more comprehensive understanding of the potential of environmental enhancement interventions to promote health and wellbeing than may have been possible using traditional review methodologies. Theory driven mixed-method reviews may therefore have potential as an effective approach in the synthesis of evidence relating to complex interventions.

**P4.071 Surgical trials and trial registries: a cross-sectional study of RCTs published in journals requiring trial registration in their author instructions**

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**Background:** Trial registries and results databases aim at preventing incomplete and delayed reporting, thus facilitating systematic reviews. **Objectives:** To assess 1. Whether RCTs published in surgery journals requiring trial registration in their author instructions were indeed registered, 2. Whether study results of registered RCTs were submitted to the registry, thus publicly available. **Methods:** Two authors analyzed author instructions of surgery-related journals with the highest impact factor (Journal Citation Reports 2011) regarding endorsement of trial registration in 01/2013. The 10 highest ranked journals requiring trial registration were chosen and a MEDLINE search for RCTs published in the included journals between June 1, 2012 and December 31, 2012 was conducted. Trials recruiting participants before 2004 were excluded because the International Committee of Medical Journal Editors first proposed comprehensive trial registration in September 2004. Then, the International Clinical Trials Registry Platform (ICTRP) was searched to assess whether RCTs identified were indeed registered and whether for registered RCTs results were available in the registry. **Results:** Our search retrieved 588 citations. 460 clearly irrelevant references were excluded. Further 25 of the remaining 128 citations were excluded by full-text screening, e.g. because they had started patient recruitment prior to 2004. A total of 103 RCTs was finally included. 85 of these RCTs (83%) could be identified in the ICTRP (see Table 1). 49 RCTs registered on ClinicalTrials.gov were clearly obligated to submit results (> 12 months since completion date), but for only 7 (14%) of them results had been submitted to the Results Database (see Table 2). **Conclusions:** Though still not fully implemented, trial registration in surgery has gained momentum. Nonetheless, further efforts should be made to achieve complete trial registration. Submitting study results to ClinicalTrials.gov remains poor. However, searching trial registers for results as part of a systematic review might complement information provided by journal publications.

**P4.072 Clinical trials of traditional Chinese medicine need core outcome sets**

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**Background:** Outcome measure is one of the most important factors about clinical trials. However, several problems with outcome
measures (e.g., selective reporting bias, heterogeneity among studies, and insignificant for health decision making) were ignored. As a consequence, it is difficult for systematic reviewers to perform meta-analysis. Core outcome set (COS), which should be measured and reported in all clinical trials of a specific condition, was proposed to solve these issues. There are similar problems in clinical trials of Traditional Chinese medicine (TCM). Objectives: To clarify the basis and problems with outcome measures in clinical trials of TCM.

Methods: Electronic databases in Chinese were searched to collect intervention reviews of TCM. Protocols and quality assessment papers were excluded. Information on outcome measures were extracted and summarized. Results: Problems with outcome measures in clinical trials of TCM were summarized as follows: (1) Outcome measures in clinical trials of the same condition varied greatly. (2) Measurement data was arbitrarily transformed into ranked data and reported by percentages. (3) Subjective outcome measures were in a dominant position; while objective outcome measures were less frequently adopted. (4) There were lack of standardized evaluation criteria for TCM-related outcomes (e.g., tongue and pulses). (5) Intermediate indicators not related to clinical practice and decision making, such as biochemical indicators, were widely adopted; while endpoint outcomes were rarely used. (6) Less attention has been paid to the adverse event associated with herbal medicines. Conclusions: It is necessary to use COS to improve the quality of clinical trials of TCM. Furthermore, the special characteristics of TCM should be concerned while developing COS for clinical trials of TCM.

P4.073 Generating empirical evidence to support methods for overviews of reviews

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Background: Overviews of reviews (overviews) compile data from multiple systematic reviews (SRs) and provide a single synthesis of relevant evidence for decision-making. Current methodological guidance for overviews is driven by personal experience and ‘good practice’. Objectives: To examine methodological considerations when conducting overviews focusing on inclusion criteria, statistical synthesis, and grading evidence. Methods: We selected four overviews published in Evidence-based Child Health: A Cochrane Review Journal (acute otitis media, group, bronchiolitis, gastroenteritis). We examined issues related to including SRs published outside of the Cochrane Database of Systematic Reviews (CDSR), including how to deal with multiple SRs of the same intervention. We explored the feasibility of conducting network meta-analyses and issues related to grading the evidence based on data reported in SRs. Results: We found a number of SRs published outside of the CDSR. For example, 6 Cochrane and 8 non-Cochrane SRs examined acute otitis media; and, 3 Cochrane and 15 non-Cochrane Reviews examined gastroenteritis. Some SRs overlapped in content while others examined different interventions or populations. Methodological questions that arose in selecting SRs for an overview were whether to include SRs on the same topic and the basis for selecting SRs (i.e., methodological quality, search dates, organization producing SR). We also identified issues about how to assess methodological quality of SRs and limitations of existing tools. Network meta-analyses were possible where there was clinical homogeneity; however, analyses were reliant on data presented in the SR and decisions made by SR authors. A challenge for grading the evidence based on SRs was inconsistency in methods used to assess risk of bias of primary studies. Conclusions: We identified a number of methodological issues when conducting overviews. Many issues stem from reliance on methods and decisions made at the SR level. These findings contribute to an evidence base to guide overview methods.

P4.074 Scoping reviews: a valuable first step in knowledge synthesis

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Background: Scoping reviews identify, collect and summarize knowledge in broad topics. We conducted a scoping review on the use of social media in healthcare to identify the extent and nature of available evidence. Objectives: To present the information we gained from the review and discuss its value in delineating the focus and methods for more in-depth systematic reviews (SRs). Methods: We conducted a comprehensive search and identified 371 studies. We mapped these according to user groups, types of evidence, clinical areas, purpose of social media, and outcomes examined. Results: This process was valuable for: (1) defining the search strategy; (2) defining the intervention and its scope; (3) identifying areas where in-depth synthesis is appropriate; and (4) providing a foundation to specify the focus and methods of subsequent SRs. Given the newness of this area, MeSH headings for searching were limited. We iteratively identified studies and examined their indexing to build a list of key words. We identified sources of grey literature and specific journals to hand-search. We found that research in this area is emerging at a rapid pace; therefore, timing of the search and updates is critical. Social media encompasses a number of different online applications, is not consistently defined, and is constantly evolving. This work allowed us to more clearly define terms and identify challenges that may be encountered in conducting a SR. Mapping identified the types of evidence available and areas where there is sufficient evidence to warrant further in-depth SRs. The scoping work provided a solid basis for successful grant applications to conduct SRs in specific clinical areas. Conclusions: A scoping review allowed us to map the evidence for a broad topic. This exercise was valuable in terms of delineating the search, defining terms, and identifying topic areas where further SRs are appropriate and worthwhile.

P4.075 Characteristics of published scoping reviews: a scoping review of scoping reviews

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Background: Scoping reviews are a type of literature review that aims to provide an overview of the type, extent and quantity of research available on a topic. By ‘mapping’ the existing research,
they can identify potential research gaps and future research needs. They employ systematic and transparent methods, and can thus be used as a standalone project or as a preliminary step to a systematic review. **Objectives:** The objective of this study is to describe the methodological characteristics and use of published scoping reviews, and the opportunities and challenges for their methodological standardization and wider use. **Methods:** A scoping review was conducted using the Arksey & O’Malley (2005) framework and ensuing recommendations by Levac et al. (2010). An initial search was conducted in four electronic databases and the grey literature to identify scoping reviews published up to June 2011. The search was updated in October 2012. Review selection and characterization were performed by two independent reviewers using pre-tested forms. **Results:** The initial search identified 182 scoping reviews published from 1999 to 2011. 162 additional reviews were identified in the updated search. The included reviews varied in terms of purpose, methodological rigor, and quality of reporting. A range of terms were used to refer to the methodology, with ‘scoping review’ being the most frequently reported (62%). 58% were conducted in the health sector. Study implementation varied from 2 weeks to 20 months, and 51% utilized a published methodological framework. Quality assessment of included studies was infrequently performed (22.38%). 40% consulted stakeholders or experts as part of the review process. **Conclusions:** Scoping reviews are a relatively new synthesis approach that can be useful for mapping broad public health topics. Due to variability in their conduct, there is a need for their methodological standardization to ensure the utility and strength of its evidence.

**Attachments:** Figure 1.pdf

**P4.077**

**Using a bibliometric approach for a clinical question that generates a large volume of literature**

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**Background:** Systematic reviews synthesize the highest quality evidence available pertaining to a given topic. Bibliometric reviews, on the other hand, seek to quantify aspects of the literature, without taking quality into account. **Objectives:** For this study, we ran a literature search with the intention of conducting a systematic review, the purpose of which was to assess the association between chronic oropharyngeal dysphagia and fibrosis in patients treated with radiotherapy for head and neck cancer. Because of the large volume of literature captured, we took a bibliometric approach to delineate common themes in the literature and to identify major knowledge gaps. **Methods:** Nine electronic databases were searched to find primary research articles published between 1980 and June 2011. Abstracts that met the selection criteria underwent full article review, during which the following data were extracted: first author, year of publication, university/research facility, country, journal name, and the presence or absence of specific dysphagia-related toxicities reported acutely (< 3 months post-radiation) and chronically (≥ 3 months post-radiation). **Results:** 7646 unique citations were retrieved. 5791 were rejected based on review of the citation/abstract. Of the remaining 1855 articles, 72 have to date been reviewed in full. 28 did not meet inclusion criteria and have been excluded. Data were collected from the remaining 44 studies. Using this data as a starting point, several trends and potential knowledge gaps have been identified. For example, the volume of literature has increased exponentially over time. However, very few articles report on toxicities considered to be ‘consequences of dysphagia’, such as pneumonia, malnutrition, or dehydration. **Conclusions:** Using a bibliometric approach to review a large volume of clinical literature can be beneficial to map common trends and identify areas where further research is needed.

**P4.078**

**Building a database of validated pediatric outcomes: an investigation of compliance with established reporting standards**

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**Background:** Pediatric populations have increasingly been included in clinical research, which relies on the availability and use of appropriate outcome measurement tools. **Objectives:** (i) To develop an inventory of valid and reliable pediatric outcome measurement tools and (ii) to identify gaps in outcomes reporting in publications of pediatric randomized controlled trials (RCTs). **Methods:** Electronic searches of MEDLINE, EMBASE and Cochrane Central Register of Controlled Trials databases were conducted. The top six general medicine journals and top four pediatric journals were searched for pediatric RCTs published since 2000. RCTs of a single phase/step in a single publication with outcome(s) measured solely in participants under 21 years of age were included. Diagnostic, screening and pilot studies were excluded. Two independent reviewers conducted screening and data extraction. Variables to be extracted included: journal, population age, sample size, condition of interest, intervention, control, primary outcome, outcome measurement tools, and information on psychometric testing. **Results:** Searches identified 2229 unique references. Most (76%) were identified from pediatric journals, with ages ranging from 23 weeks gestation to 20 years. Half (48.5%) reported one primary outcome, while 27% did not identify a primary outcome, and 24% identified more than one. Of the 100 trials reporting a single primary outcome, 20 used an instrument to measure their primary outcome, but only 7 (35%) reported its psychometric properties. **Conclusions:** A wide variety of pediatric outcome measurement tools are in use by researchers. Psychometric properties of measurement tools are inconsistently reported in pediatric RCTs, thus it is unclear to readers if the tools are of high quality. Developing a comprehensive database of validated pediatric outcome measures may facilitate use of high quality pediatric research.

**P4.079**

**A user-friendly alert service of high-impact, pre-filtered literature for obstetrics and gynaecology**

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Background: Medical specialty society members work and reside in geographically disparate and varied surroundings. Access to reliable, up-to-date, and publicly-accessible evidence-based information is variable. Objectives: To provide a timely and credible resource of current literature citations in obstetrics and gynaecology (OBGYN) in particular, and other topics (e.g., ethics, methodology, social media), when relevant; to build and maintain a database of best-evidence references for future consultation. Methods: Update services from the National electronic Library for Medicines (NeLM), BMJ, Health-evidence.ca, Centre for Reviews and Dissemination (CRD), Turning Research Into Practice (TRIP), AMEDEO, selected BMC journals, evidence-based listservs, and other ad hoc resources are monitored for potentially relevant items on an ongoing basis. Relevant citations are downloaded or entered into Reference Manager, date stamped, and broad categories assigned. Abstract or full-text URLs, when available, are included. Links to accompanying material, including editorials or evidence syntheses (e.g., ratings, critical appraisals, quality assessments) are also incorporated. Targeted alerts are sent to select committees or individuals as received. A formatted, monthly compilation, the ‘Scientific Review’, is circulated to members. Alerts include conclusions or key summary points when publicly available. Members are notified by email at the time of publication. Results: A manageable monthly list (approximately 60–80 items) of pre-filtered, high-impact citations and value-added links, arranged alphabetically or by category, is available for download. Separate packages grouped by broad topic are available on request. New categories are added as needed (e.g., technology). Conclusions: Ongoing monitoring and filtering of high-impact literature from existing scanning services is identified and formatted specifically for OBGYN. Member feedback is overwhelmingly positive. Journal club, rotating guest editors, blogs, continuing medical education (CME) accreditation, top ten list, and a mobile application for distributing content are all under exploration.

P4.080
A review of online evidence-based practice point-of-care information summary providers: an update

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Background: Reliable information to solve clinical doubts at the point-of-care is a pillar of modern practice. In 2008, a previous study assessing online evidence-based practice (EBP) point-of-care summaries showed that most products were deficient in respect to at least one dimension in breadth, content development, and editorial policy. Objectives: To review online EBP point-of-care summaries against their claims of being ‘evidence-based’ and assess whether there has been progress in 2012. Methods: We searched Medline, Google, and other sources from January 2009 to August 2012. We included English web-based point-of-care summaries designed to deliver pre-digested, rapidly accessible, comprehensive, periodically updated, and evidence-based information to clinicians. We independently extracted data on the general characteristics and content presentation of summaries. We assessed and ranked point-of-care products according to three desirable dimensions for medical information: coverage (volume) of conditions, evidence-based methodology, and editorial quality. We explored how these factors were associated. Results: We retrieved 42 eligible summaries; 21 products met our inclusion criteria, six of which were new products. Most summaries (n = 15) were produced in United States, a minority (n = 5) in Europe, one in Australia, and none in developing or poorest countries. Products top-ranked for desirable dimensions in 2008, again, scored among the best: Dynamed, EBM guidelines and UpToDate. Best Practice (formerly Clinical Evidence) largely improved its volume. The association between editorial quality and evidence-based methodology was statistically significant (p = 0.0093), whereas the other associations were not. Conclusions: The quality of medical information by point-of-care services improved over time, although many products are still unsatisfactory in basic desirable criteria. Publishers have the responsibility of providing users with the highest standard of editorial contents without over claiming their quality features. These results may have implications when developing new products, including the Cochrane Clinical answers.

P4.081
The CONSENSUS study—squamous cell carcinoma of the oropharynx: late phase clinical trials; core outcomes

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Background: Patients and those involved in their care are rarely involved in outcome selection in clinical trials. As a result, the outcomes chosen are often not relevant to patients or may have little clinical application. Furthermore, there is no standardisation of outcome selection and reporting, even amongst trials of comparable interventions. This reduces the data available for meta-analyses leading to difficulties in interpreting a treatment’s effectiveness and in making evidence based healthcare decisions. Outcome reporting bias has also been highlighted as a significant problem in the healthcare literature (1). Human Papillomavirus type-16 (HPV) related Oropharyngeal Cancers (OPSCC) have doubled in incidence in the UK over the last decade (2), and this trend is mirrored in other developed countries (3). These cancers occur in a younger patient population than HPV negative cancers, and have vastly better survival outcomes, with 5-year survival in some centres reported at > 90% (4). When assessing interventions for the treatment of these cancers, the measurement and reporting of clinically important and patient relevant outcomes is more important than ever, because more patients will live for longer with any side-effects of their treatment (5). It is therefore with some degree of urgency that efforts must be made to establish what the important outcomes are, and to ensure that these are measured. Objectives: To develop a Core Outcome Set (COS) for OPSCC clinical trials. Methods: A systematic review will identify which outcomes are reported in OPSCC
RCTs. Semi-structured qualitative interviews with patients and their carers will aim to establish which outcomes they deem most important. We will aim to achieve consensus on the contents of the final COS in a Delphi consensus survey and consensus meeting involving major stakeholders. **Results:** Outcomes identified through the systematic review will be presented along with the preliminary analysis of the UK interviews.

**Attachments:** Abstract Cochrane Colloquium 2013.pdf

**P4.082**
**What’s in ‘Dr Cochrane’ for family physicians? Evaluation of an online Cochrane Learning programme with the Information Assessment Method (IAM)**

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**Background:** ‘Dr Cochrane’ is an online Continuing Medical Education (CME) programme based upon Cochrane Reviews. The Information Assessment Method (IAM) systematically documents physicians’ reflections on the value of clinical information for practice. We adapted the IAM for incorporation into the Dr Cochrane CME programme to assess the relevance and use of clinical information from learning modules for patients, and patient health benefits of using this information, 6 months after physicians completed this learning activity.

**Objectives:** To determine the value of Dr Cochrane learning activities by deploying a modified IAM 6 months after completion of an online learning module. **Methods:** Group 1: 50 family physicians from Canada will be recruited to participate in at least one Dr Cochrane learning module, including a mandatory IAM evaluation 6 months after completion of the learning module. Group 2: all participants registered in Canada who complete a Dr Cochrane module will be sent a non-mandatory IAM evaluation 6 months after completion of the learning module. **Results:** The IAM was adapted to ensure participants reflected upon the clinical relevance, information-use and patient health benefits in the 6 months between learning activity and evaluation. We expect all 50 recruited physicians to complete at least 1 IAM evaluation. We will present descriptive statistics on the relevance, use and benefits associated with the application of clinical information from Dr Cochrane modules. **Conclusions:** When establishing an online learning programme it is essential to be able to measure the clinical value of the information in routine practice. In this regard, the IAM will be a valuable tool for incorporation into the Dr Cochrane CME programme to assess the value of clinical information for practice. We adapted the IAM for incorporation into the Dr Cochrane CME programme to assess the relevance and use of clinical information from learning modules for patients, and patient health benefits of using this information, 6 months after physicians completed this learning activity.

**P4.083**
**A study of evidence sources used in midwifery training and practice**

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**Background:** Reports across various settings show significant barriers still exist to the use of reliable evidence sources by health professionals in training and in practice. **Objectives:** (1) To describe the attitudes of midwifery students to evidence based practice (EBP). (2) To identify the evidence sources that midwifery students access most frequently. (3) To explore the views of midwifery students, teachers and practitioners to different summary evidence formats. **Methods:** A survey was completed by 118 student midwives training at a university in the UK to explore attitudes to EBP and evidence sources used. Three focus groups were also conducted with midwifery educators, midwifery students, and midwives in practice. Both the survey and focus group schedule contained examples of abstracts and plain language summaries of Cochrane Reviews to explore participants’ views on content and format. **Results:** Students were positive about EBP however lack of time (34%), lack of training (20%) and lack of awareness (11%) were perceived to be the biggest barriers to using evidence in practice. Out of a list of 17 possible sources of evidence, students reported using the following most often/always: professional guidelines (91%), NHS guidelines (90%), research articles (87%), hospital guidelines (84%), textbooks (80%), consulting with colleagues (71%), expert opinion (65%) and Cochrane Reviews (51%). Three common themes were identified across the focus groups: Conflict in Communicating Evidence, Barriers to Using Cochrane Reviews and Presentation of Review Evidence Summaries (content and format). **Conclusions:** Despite positive attitudes to using evidence in practice, barriers to using sources such as Cochrane Reviews need to be addressed. The content and format of evidence summaries were perceived to be important to enhancing use of review evidence and an RCT is currently being conducted to see what data midwives extract accurately from different summary evidence formats.

**P4.084**
**Strategies to fill knowledge gaps in health care—experiences from the Swedish Council on Health Technology Assessment (SBU)**

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**Background:** Eliminating knowledge gaps in health care is important to avoid spending resources on potentially ineffective or even harmful treatments. In 2010, the Swedish Government assigned the Swedish Council on Health Technology Assessment (SBU) to identify health technologies whose effects have been insufficiently assessed. The platform of this work consists of an official database on SBU’s website. However, a database alone has no intrinsic value unless the information is used either to stimulate new research that can fill the knowledge gaps or for setting priorities in health care. Here, some of SBU’s efforts to stimulate new clinical research are summarized. Collaboration with stakeholders: With the purpose of forming a strategy to fill knowledge gaps in specific medical fields SBU has gathered clinical experts, decision makers and patient associations on a national level. An example of this was a national workshop focusing on how to strengthen research in dental care in Sweden. This resulted in a national research school in clinical odontology. Based on this positive experience SBU aims to initiate similar working groups in other medical fields. Collaboration with the Swedish Research Council: SBU has also initiated collaboration with the Swedish Research Council (SRC).
SRC has an annual call for grant applications for research with the purpose of filling identified knowledge gaps in health care. The collaboration with SBU was initiated to ensure that applications fulfill the definition of a scientific uncertainty. The questions addressed must be submitted to SBU or registered in the UK Database of Uncertainties about the Effects of Treatments (DUETs). SBU will consider initiating similar collaborations with other research funds.

Conclusions: To fill identified knowledge gaps there is a need for collaboration on all levels in health care, as well as with research funds. Such collaborations will hopefully lead to a more effective health care.

**P4.085**

Sharing tacit knowledge to build capacity for knowledge translation: lessons learned from pan-Canadian public health webinars

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**Background:** The National Collaborating Centre for Methods and Tools (NCCMT) recently launched a webinar series, 'Spotlight on KT Methods & Tools' which features popular knowledge translation (KT) resources to support public health professionals in moving research evidence into practice. Webinars bring together the KT tool developer, who highlights the tool's development and implementation information, as well as a health practitioner, who shares how the resource has been used in practice. Sharing tacit knowledge and implementation information on KT resources may be a key prerequisite to use research evidence in public health.

**Objectives:** The aim of the webinar series is to build awareness and promote uptake of KT methods and tools among public health professionals.

**Methods:** An online survey was administered to NCCMT users to determine which KT methods and tools featured in the webinar series. NCCMT partnered with CHNET-Works!, University of Ottawa, to offer the webinars to a broad network of decision-makers, practitioners and researchers from across Canada and internationally. Post-event online surveys, with open and closed-ended questions, were administered to assess participant awareness and intentions to use KT resources in their work. Descriptive statistics were used to analyze quantitative data, and qualitative data were coded and analyzed by content analysis.

**Results:** NCCMT has hosted 6 webinars reaching more than 775 public health professionals. Feedback from 230 participants (30% response rate) revealed that 63% participants were unaware of the featured KT tool and 70% had not used the tool in their work prior to the webinar. Most participants (83%) reported the webinars increased their motivation to use research evidence in public health. Sharing tacit knowledge and implementation information on KT resources may be a key prerequisite to use research evidence in public health.

**Conclusions:** Webinars effectively increase accessibility of KT methods and tools by sharing tacit knowledge on how to apply KT resources in public health, and may increase resource uptake.

**P4.086**

Systematic reviews and meta-analyses in eyes and vision: first steps in identifying gaps in ophthalmology research

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**Background:** Systematic reviews are the highest level of research evidence. Identifying and characterizing all systematic reviews in eyes and vision will help to detect gaps in ophthalmology research.

**Objectives:** We developed a database of systematic reviews and meta-analyses in eyes and vision and described the reports. We identified systematic reviews, using a detailed search strategy in PubMed, EMBASE, and The Cochrane Library in 2009, and updated the search in 2012. We imported systematic reviews into an EndNote database and retrieved the full-texts. We considered a systematic review to be eligible if it examined a specific question and used explicit, pre-specified scientific methods to identify, select, assess, and summarize similar but separate studies. To ensure the identification of all systematic reviews, we considered reports with systematic review or meta-analysis in the title, subheading or text. We included co-publications and previous versions of Cochrane Reviews. One author assessed the characteristics of each report.

**Results:** Our search found 7676 citations, of which, we included 1005 systematic reviews. Nearly 19% of reports were current or previous versions of Cochrane Reviews. Most systematic reviews focused on glaucoma (18%), age-related macular degeneration (13%), cataract (9%), or diabetic retinopathy (7%). Systematic reviews were published from 1985 to 2012. The number of systematic reviews rose from four reports published in 1980–1989 to 58 reports available in 1990–1999 and 542 reports issued from 2000 to 2009. While nearly 68% of systematic reviews examined an intervention, 13% of reviews investigated etiology. Approximately 12% of reviews focused on diagnostic tests or prognosis. Only 7% of reviews had another focus (e.g. cost-effectiveness).

**Conclusions:** We developed a database of systematic reviews and meta-analyses in eyes and vision. Most reviews focused on common eye diseases and assessed interventions. The number of systematic reviews in ophthalmology has increased in recent decades.

**P4.087**

Finding research on websites—experiences and solutions from the field of international development

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**Background:** Previous analysis indicates a third of research studies for health-related reviews on international development topics are identified outside bibliographic databases(1). Searching websites is an important method to identify research and involves a range of techniques. There are no acknowledged standards for documentation of website searches.** Aims:** To promote debate on the challenges and solutions of website searching and promote standards of conduct and reporting.

**Methods:** We draw together our learning from undertaking and supporting reviews on a range of topics in international development since 2010, to inform recommendations for practice.

**Results:** We present some problems, share a range of solutions, and propose a template to aid the conduct and documentation when using these resources. Challenges include retrieving large numbers of records; identifying empirical research; using appropriate vocabulary. A taxonomy of techniques is proposed, including: browsing sections of web sites; searching an entire site; searching through a
database; searching with pre-defined keywords. Distinctions are drawn between research centres, international organisation, international development specialist resources, topics and government departments. **Conclusions:** A template could facilitate consistent searching, help aid transparency and quality assurance of the search process. Limited functionality of searching and exporting options pose challenges for the review. There is a need to raise awareness to websites and organisations in order to make their empirical research more accessible to reviewers. (1) Stansfield C, Dickson K (2011) Locating evidence for developing countries: a case study of three health promotion reviews (poster presentation) 19th Cochrane Colloquium, Madrid.

**P4.088**

What’s in it and how do users find it?—challenges of knowledge transfer through specialised registers of health promotion effectiveness  

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**Background:** Health promotion effectiveness studies are challenging to identify. Since 2004, the EPPI-Centre has populated two publicly available citation registers through quarterly searches: Trials Register of Promoting Health Interventions (TRoPHI) and Database of Promoting Health Effectiveness Reviews (DoPHER). Studies are coded with descriptive keywords. Coding is based on abstract for trials, and full text for reviews. Users can search using codes, freetext or both.  

**Aims:** To describe content coverage and user behaviour of the two registers. **Methods:** A retrospective analysis of (1) keywording on topic, study design, settings; and (2) user activity during 3 months in 2013. **Results:** (1) Trials: TRoPHI comprised of 70% (n = 4357/6232) RCTs. Over one-third from USA, almost a third (29%) from unspecified locations; 5% from UK; over 10% from developing countries. Top five topics contributing 8–10% of studies: healthy eating, physical activity, tobacco, mental health and sexually transmitted diseases. Intervention setting is unspecified in 44% of abstracts; where stated, the most common are in school, home, community or workplace. (2) Reviews: DoPHER contained (69% (n = 2171/3130)) systematic reviews (e.g. stated methods and inclusion criteria). A meta-analysis was undertaken in 29% of reviews. Topics followed similar trends to the trials. (3) Users searching: Over 75% (n = 285) of searches were freetext only. Incorrect syntax was common in wildcard card uses. Users were interested in diverse topics. Nine percent of searches were repeat visits. **Conclusions:** Health promotion effectiveness research covers a diversity of topics. Authors could improve abstracts by including more detail on the intervention setting, country and intervention provider. Opportunities exist to make users more aware of the ability to search more effectively using topic keywords and correct syntax.

**P4.089**

Searching for indirect evidence: advantages and challenges of extending the network of studies  

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**Background:** Methodological guidelines for conducting network meta-analysis (NMA) suggest that an iterative search of the literature, progressively including additional comparator treatments, may improve the identification of indirect evidence to be included for analysis (Haagelin 2011). **Objectives:** Using the case study of apixaban (Eliquis®), we explore the potential advantages of searching for indirect evidence and evaluate the impact of study identification methods and network size on indirect and mixed treatment comparisons in venous thromboembolism (VTE) prophylaxis following major orthopaedic surgery. We also compare our methodology and summary findings to the previously published example by Hawkins et al. (2009a). **Methods:** We adapted the breadth-first search strategy from Hawkins et al. (2009b) to perform a stepwise systematic search in Medline®, Medline-in-Process®, and EMBASE for indirect evidence in VTE prevention. Table 1 details the multiple search orders included. Fixed-effects NMA models were run in WinBUGS (Lunn 2000) for clinical outcomes of interest for three different network sizes. **Results:** Figure 1 summarises the search results. Additional search orders and wider selection criteria maximised the number of indirect comparisons identified between existing VTE interventions. The NMA showed precision was increased from base case to first order as additional studies generally reduced the uncertainty around mean odds ratios for deep vein thrombosis, all VTE/death, and all bleeds. Estimates became more stable as fewer studies were included in the networks with each subsequent search order. No increase in inconsistency was noted across network sizes. **Conclusions:** Using a search strategy designed to optimise the identification of indirect evidence allowed us to extend the network of relevant studies for analysis. However, we find the methodology to be highly dependent on the definition of comparators in the first search order and suggest that the incremental value of subsequent network orders in NMA should be weighed against the associated additional search and analytical burden.

**Attachments:** Figure 1 –Study selection flow diagram.png, Table 1 – Breadth-first search strategy.png

**P4.090**

Search filter for retrieving overviews of systematic reviews in The Cochrane Library  

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**Background:** Overviews of systematic reviews (OoRs), a new type of study, are considered as the ‘friendly front end’ to The Cochrane Library for healthcare decision-making. The Cochrane Library is a collection of six databases, one of which is the Cochrane Database of Systematic Reviews (CDSR) that is the leading resource for systematic reviews in healthcare. There are 7819 references in the CDSR until 2013 Issue 3, but find an OoR can be a challenge. **Objectives:** To develop and validate an optimal search filter for retrieving overviews of systematic reviews via The Cochrane Library. **Methods:** We performed an analytical survey in The Cochrane Library and performed a handsearch at 7779 systematic reviews (published reviews and protocols) recorded in the CDSR database until 2013 Issue 2. The main outcome measure was the search filter capacity retrieving OoRs assessed by the screening test of terms and its combinations. The 95% confidence interval was applied with the screening test. **Results:** The proportion of OoRs in the CDRS database was 0.39% (95% IC 0.27, 0.56). The first search
filter developed presented a high capacity for retrieving OoRs (Table 1). After combining terms the search filter capacity was maximized, reducing false positives and negatives (Table 1). **Conclusions:** New empirical search strategies have been validated to optimize retrieval from the Cochrane Database of Systematic Reviews (via The Cochrane Library) of a new type of study, the overview of systematic reviews, called as ‘friendly front end’ to The Cochrane Library for healthcare decision-making.

**Attatchments:** Table 1. Optimal search filter for retrieving overviews of systematic reviews via The Cochrane Library.pdf

**P4.091 Interobserver reliability for application of tools for assessing quality and susceptibility to bias in observational studies**

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**Background:** The decisions for medical practices are being encouraged based on scientific evidence from systematic reviews and meta-analyses. Usually, such reviews have concentrated exclusively on randomized trials. Indeed, some investigators have the opinion that non-randomized (or observational) studies should be excluded from all reviews because of the greater difficulties in assessing their methodological quality. However, in many areas of health care few randomized controlled trials exist and meta-analyses of observational studies may be important for healthy politics decision, mainly when the feasibility to perform randomized study is extremely difficult. For assessing the quality of evidence from observational studies and try to reduce potential bias numerous tools have been proposed for evaluation of methodological quality. **Objectives:** To evaluate two tools for assessing quality and susceptibility to bias in observational studies. **Methods:** Two authors independently applied questionnaires (Black instrument and Newcastle5) in three cohort studies from a systematic review of breast cancer group. Interobserver reproducibility was analyzed using kappa statistics. **Results:** The average of kappa values was 0.39 95%CI (0.12–0.46) for Black and Downs instrument and average of kappa for NOS 0.39 95%CI(0.01–0.79). **Conclusions:** The interobserver reliability was not observed in our study. The tools seem useful to increase in the search for evidence-based physical therapies that are effective and could therefore be useful for clinical practice. In order to identify these interventions, it is necessary to map the existing Cochrane Systematic Reviews on physiotherapy and select those that are effective. **Objectives:** Identify Cochrane Systematic Reviews in physiotherapy that report effective interventions from a clinical perspective. **Methods:** We developed a search strategy to identify complete Cochrane Reviews on physiotherapy published in the Cochrane Library up to Issue 2, 2013. Inclusion criteria: reviews related to evaluate the effectiveness and safety of physiotherapy techniques ['Physical Therapy Modalities' (Mesh)]. Exclusion criteria: invasive procedures, pharmacologic therapy and complementary therapies (i.e., acupuncture, antiinflammatories, balneotherapy, music therapy). Retrieved reviews were screened by two independent investigators (GP and MFST) to select potentially relevant reviews. Disagreement was arbitrated by a third author (VS).

**Results:** The search strategy identified 245 reviews, 66 were excluded and 181 reviews were selected for full-text reading resulting in 52 reviews (28.7%) with effective interventions that could potentially be used in clinical practice. **Conclusions:** Only 28.7% of Cochrane Systematic reviews on physiotherapy report effective interventions that could potentially be used in clinical practice.

**Attatchments:** Flow chart of the process of review identification and selection.pdf

**P4.093 Mapping the Cochrane evidence in infectious diseases**

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**Background:** Everyone engaged in research knows that systematic reviews are the best study to map existing knowledge on intervention, prognosis and diagnosis of a certain disease. However, few studies have raised attention for the large number of reviews with insufficient evidence to answer the questions around therapeutic strategies for treatment and prevention of diseases. Infectious diseases (IDs) are associated with high morbidity and mortality. The best scientific evidence is an essential tool to control IDs. **Objectives:** We evaluated the conclusions from all Cochrane systematic reviews related to IDs of randomized controlled trials (RCTs) in terms of their recommendations for clinical practice and research. **Methods:** A cross-sectional study of systematic reviews published in the Cochrane Library was conducted. We divided 5074 in two and did the selection in four authors (two pairs, disagreements settled by one author from the other pair) with the aim to select all reviews related to IDs. **Results:** We analyzed 718 (14.2%) of the completed systematic reviews published in the Cochrane Library, Issue 11, 2012. This study has found that the majority of Cochrane Reviews related to IDs highlight the absence or poor evidence, i.e., lack of RCTs around the questions on health care that has been covered by them. **Conclusions:** Cochrane systematic reviews related to infectious diseases are a great tool in the process of developing recommendations and making decision, however we cannot ruled out the overall absence of evidence found in our study and, we reaffirms the need for the conduction of higher-quality primary studies.
Background: Although adherence is an outcome in trials of patient decision aids (DAs), little is known about how it is defined or measured within these trials. Objectives: To assess the impact of DAs on patient adherence to the chosen treatment option, and to describe the definitions and measures for adherence used in these trials.

Methods: A sub-analysis of randomized control trials included in the 2011 Cochrane Review of DAs for people facing health treatment or screening decisions was conducted. Two reviewers independently screened 86 trials for eligibility (e.g., measured adherence), extracted data (e.g., study characteristics, type of DA, results), and assessed risk of bias. Reviewers also extracted data on adherence definitions and measures, length of follow-up, and use of adherence as the primary outcome and/or for calculation of the sample size.

Results: Eight eligible trials measured adherence to medications for menopause, atrial fibrillation, osteoporosis, depression, dyslipidemia, hypertension, and diabetes. Six trials compared DAs to usual care and two compared a detailed versus simple DA. Each trial defined adherence differently. Three measured adherence to the chosen option, and five measured adherence to taking prescribed medication. All trials measured patient-reported adherence using three different instruments or their own question, and two also used pharmacy records. Follow-up was 2–36 months (median 6). Sample size was not calculated for adherence despite being a primary outcome in four trials. Although near perfect in both groups, one trial showed adherence to diabetes medications at 6 months based on pharmacy records was significantly better in the usual care group; while patient-reported adherence did not differ. The other seven trials reported no significant differences on adherence between groups.

Conclusions: Adherence has been inconsistently defined and measured in trials of DAs. Therefore, the effectiveness of DAs for improving adherence to a chosen option remains unclear.

P4.096
Challenges in SDM education: the heterogeneity of SDM training programs and the search for consensus on core competencies

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Background: One obstacle to integrating shared decision making (SDM) into routine clinical practice is the lack of standardized training for healthcare professionals. No international consensus exists about core competencies required to involve patients in medical decision making. We present an update of an inventory of SDM training programs for healthcare professionals and share reflections on SDM core competencies that emerged during an international interdisciplinary workshop.

Methods: In 2010, we performed an international environmental scan to identify and analyze SDM training programs for healthcare professionals and share reflections on SDM core competencies that emerged during an international interdisciplinary workshop. Methods: In 2010, we performed an international environmental scan to identify and analyze SDM training programs for healthcare professionals and share reflections on SDM core competencies that emerged during an international interdisciplinary workshop.

Results: The inventory lists 80 training activities conducted between 1996 and 2012 in 15 countries and 11 languages. Fifty programs targeted licenced professionals, 15 targeted pre-licensure, 12 targeted both, and 3 did not report. Most programs (45/80) were developed after 2010.
Components of 54 programs were analyzed in detail. Teaching methods and program duration vary greatly. Few programs (12/80) were rigorously evaluated. The international working group did not reach a consensus on a core set of competencies for SDM training programs. Some participants believed that existing SDM models should now be translated into core competencies for training, while others argued that without consensus on the definition of SDM this is premature. In discussing the desirability and feasibility of developing core competencies, two essential skill categories nevertheless emerged: relational and risk communication. **Conclusions:** Rapid development of new SDM training programs worldwide and lack of evidence on their effectiveness represent a challenge for reaching a consensus on core competencies for SDM training. An international research strategy is needed to establish solid evidence for recommending core competencies for SDM training.

**P4.097**
**Presentation of continuous outcomes in meta-analysis: a survey of clinicians’ understanding and preferences**

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**Background:** When pooling results of trials addressing continuous outcome using different instruments to measure the same construct, authors typically report differences between intervention and control as a Standardized Mean Difference (SMD). Recently, authors have proposed alternative summary estimates that they postulate clinicians’ will more easily interpret than SMD (1–4). The GRADE Working Group recently provided an overview of methods for presenting pooled continuous data (5). Thus far, claims of improved understanding with allegedly clinician-friendly presentations are supported only by anecdotes. **Objectives:** To determine clinicians’ understanding and perceptions of six approaches (SMD, Minimal Important Difference Units, Natural Units, Relative Risk, Risk Difference and Ratio of Means) to the presentation of continuous outcomes from meta-analyses.

**Methods:** We invited 201 staff, residents, and trainees in family medicine and internal medicine academic programs in Canada, Switzerland and Lebanon to participate. Participants received paper-based self-administered surveys presenting summary estimates of hypothetical interventions versus placebo for chronic pain, with results demonstrating either a small effect or large effect for each of the six presentation approaches. We asked six questions addressing understanding and six questions addressing preferences. We randomized participants to size of effect and order. **Results:** 188 clinicians responded (Table 1), with 175 providing completed surveys (87% response rate). Risk Difference was the approach best understood by clinicians, followed by the Ratio of Means and Relative Risk (Table 2). Clinicians generally found dichotomous presentation of continuous outcomes (Relative Risk; Risk Difference) very useful, and other approaches less useful (Table 3). **Conclusions:** Clinicians best understood continuous outcomes when presented as dichotomies (relative and absolute risk differences) and found these presentations most useful. Presenting results as SMD, the longest standing and most widely used approach, was poorly understood and not perceived as useful. Data collection is ongoing and full results will be available at the colloquium.

**Attachments:** Johnston_Survey_Tables, References.pdf

**P4.098**
**Permutation based resampling for deriving p-values for pooled effect estimates in meta-analyses**

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**Background:** In meta-analyses as the number of trials in the pooled effect analyses decreases, the risk of false positives or false negatives increases. This is partly due to the assumption of normality that may not hold in small samples. Creation of a distribution from the observed trials using permutation methods to calculate P values may allow for less spurious findings. Permutation has not been empirically tested in meta-regression. **Objectives:** The objective of this study was to perform an empirical investigation to explore the differences in results for meta-analyses on a small number of trials using standard large sample approaches verses permutation-based methods for pooled effect estimates. **Methods:** We isolated a sample of systematic reviews with varying number of included studies. Finally, we performed meta-analyses on the primary outcome of meta-analysis, collected p-values and confidence intervals. Next we used permutation based resampling to arrive at p-values and bootstrapping to arrive at confidence intervals. We then compared final P values between methods. **Results:** We are currently collecting all meta-analyses and will conduct the analyses by June. **Conclusions:** We will present empirical data comparing permutation based resampling to standard methods on p-values for pooled effects in meta-analyses. These finding may influence methods.

**P4.099**
**Consistency of outcome and statistical reporting of time-to-event data: the impact on Cochrane Reviews and meta-analyses in epilepsy**

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**Background:** In the Cochrane Colloquium, the impact of outcome and statistical reporting methods on the presentation of time-to-event data was demonstrated. Most Cochrane reviews of epilepsy do not report standardized methods. **Objectives:** To determine the impact of outcome and statistical reporting methods on time-to-event data. **Methods:** We isolated a sample of studies in Cochrane Reviews of epilepsy. We then ran meta-analyses of time-to-event data for each review. We then compared final P values between methods. **Results:** We are currently collecting all meta-analyses and will conduct the analyses by June. **Conclusions:** We will present empirical data comparing all meta-analyses and will conduct the analyses by June.
Background: Inadequate reporting of time-to-event (censored) outcomes and statistical analyses in individual randomised controlled trials is well documented. Therefore, meta-analyses of such outcomes frequently require the re-analysis of individual participant data (IPD). This approach has been undertaken in seven Cochrane Reviews in epilepsy, with 60–100% of IPD made available by original trial authors for meta-analysis. When an IPD approach is not feasible or practical or if a proportion of IPD is unavailable for inclusion in meta-analysis as in the epilepsy reviews, methods of meta-analysing study level aggregate data, including indirect estimation methods, are required. The feasibility of indirect estimation methods also depend on the extent and quality of statistical reporting in individual trials.

Objectives: We aim to investigate the consistency and quality of reporting of outcomes and statistical analyses of time-to-event data in the context of published epilepsy monotherapy designed studies in order to determine if we can make use of any published summary statistics via indirect estimation or otherwise and therefore avoid biases related to unavailability of IPD. Methods: A systematic search of the Cochrane Epilepsy Group Specialised Register has been conducted to identify all epilepsy monotherapy designed studies which report at least one time-to-event outcome. Quality and consistency of reporting will be assessed according to ILAE recommendations for the reporting of outcomes in monotherapy studies and according to statistical recommendations for the reporting of survival analyses. Results and Conclusions (to date): 111 epilepsy monotherapy studies have been identified and the systematic review is underway. Updated results and conclusions will be presented at a later date.

P4.100
Framing minimal important difference in measuring of quality of life: absolute or relative?

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Background: Defining the minimal important different (MID) (the smallest improvement that would lead to consideration of an intervention) plays a crucial role in interpreting results of health related quality of life (HRQL) instruments. Some instruments frame the MID as an absolute difference (e.g. 10 points on a 100 point scale) and some as a relative difference (e.g. 15% change in score). Empirical evidence regarding the merits of the two approaches is unavailable. Objectives: To determine, optimal method of framing minimal important difference in measuring of quality of life outcome. Methods: We correlated the absolute and relative results with a global rating of change (GRC - a transition question that addressed the degree of improvement or deterioration from a prior visit, from much better to much worse). We judged that whatever standard (absolute or relative) on the target instrument (the HRQL measure of interest) had a higher correlation with the GRC would be preferable. We reviewed the pre-existing databases recording measures of HRQL available in the department of Clinical Epidemiology and Biostatistics at McMaster University and identified studies in which at least two serial measurements of HRQL and a GRC at follow-up were available. We extracted data from each eligible dataset and calculated the correlations between the target instrument and the GRC and generated a pooled estimate of correlations through a meta-analysis. Results: We identified 320 databases from 1987 till 2004 of which, thus far, 7 proved eligible. The meta-analyses thus far suggest no significant difference between correlation coefficient of absolute and relative difference on HRQL instrument with GRC on symptoms, emotional function, physical function, and cognitive function, but a significantly higher correlation with absolute differences in the fatigue subdomain. Additional data will be available at the Colloquium. Conclusions: This project will provide insight into the merits of relative versus absolute measures in determining MIDs.

P4.101
The current situation of the publication of Cochrane Systematic Reviews

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Background: Cochrane Systematic Reviews (CSRs) are highly structured and systematic, with evidence included or excluded on the basis of explicit quality criteria, to minimize bias. Cochrane Reviews are designed to facilitate the choices that practitioners, consumers, policy-makers and others face in health care. Objectives: To survey the current situation of CSRs published on Cochrane database of systematic reviews, so as to regulate the development of CSRs and provide recommendations for the improvement of Cochrane library. Methods: An electronic literature search of all CSRs from inception to December 2012 was conducted using the Cochrane Library and Web of Science. Two reviewers independently determined study eligibility and extracted details on published year, authors, country, funding agencies, institutions, and journal, group, citation information and search detail et al. Disagreements were resolved by the third author. Results: 5647 studies were included. Figure 1 showed that the frequency of CSRs were found to increase over time, as well as the involved authors, countries, institutions, majority authors of CSRs were UK (36.43%), Australia (14.73%), Canada (11.44%), USA (11.42%), 27.28% were Netherlands (6.50%), Scotland (5.14%), China (4.96%), Italy (4.07%), Germany (3.35%), New Zealand (3.26%); each year, about 80% of the authors published one article, the amount of involved authors reduced with the increase of the quantity of the published articles; the Cochrane Pregnancy and Childbirth Group accounts for the largest proportion (7.70%) of the reviews, followed by Cochrane Peripheral Vascular Diseases Group (4.86%), Cochrane Neonatal Group (4.06%), Cochrane Depression, Anxiety and Neurosis Group (3.99%), and Cochrane Airways Group 3.99% (Table 1). The average frequency of each CSR cited by other magazines is about 8.56. Conclusions: CSRs are relatively completed and still being refined. Although the number of CSRs showed an increased annual trend, the development of area distribution and group composition were imbalanced. Therefore, there are still many problems that need to be resolved.

Attachments: Table 1 the number of articles in different groups.pdf, Figure 1 the number of authors, institutions and articles from 2005-2012.pdf
P4.102
Accuracy of blood pressure data abstraction from graphs
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Background: Assessing hourly blood pressure (BP) measurements from graphs presents a challenge in making reliable measurements. The Hypertension Review Group has undertaken a series of time-course reviews to assess the temporal BP lowering efficacy of various antihypertensive medications. The majority of included studies represented 24-hour BP data only in the form of a graph. This would involve manually printing the graph and taking measurements with a ruler, which differed between two reviewers. Objectives: To develop a new electronic method for the reliable measurement of BP data from graphs. Methods: We developed a simple method of data extraction whereby the image of the graph from the PDF file of the study is captured via the ‘Snapshot’ tool in Adobe Acrobat (Fig. 1). The image is subsequently opened in Microsoft Paint, having enabled the ‘Rulers’ and ‘Gridlines’ options under the ‘View’ tab. This overlays a scaled grid on the image to take a direct measurement of the difference of BP and compare it to the scale that appears on the BP axis (Fig. 2). The Line Tool is used to draw horizontal lines from the data points to the graph axis, consistently choosing either the top or the bottom of the line itself as the marker and counting all the grid squares that appear in between the lines to measure the BP difference from baseline. Results: We anticipate that this new method will save time and improve the reliability of measurements of data taken from graphs. Two reviewers extracted identical data using this method (Fig. 3). Conclusions: This process may be a useful tool for Cochrane Reviewers when extracting graphical data from included studies.

Attachments: Figure1.png, Figure2.png, Figure3.png

P4.103
The challenges of establishing and maintaining a multilingual clinical trials register
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Background: One of the elective functions of a Cochrane Field is to establish and maintain a register of trials specific to the field’s specialty and to submit this register to the Cochrane Central Register of Controlled Trials. To ensure the register is comprehensive, non-English language sources can be searched and where necessary, translations of records are undertaken and incorporated into the register. Objectives: To develop and launch a multilingual clinical trials register for the nursing care community to inform nursing practice and to identify gaps in nursing knowledge. Methods: Funding was received to establish a trials register for the Cochrane Nursing Care Field (CNCF). Initial planning of the register included defining the scope and topics to be covered by the register, developing a search strategy, establishing the keywords and headings to be used in the search, determining the databases to be searched, deciding on the time period for studies to be included in the register, documenting the types of studies to be included in the register, determining the details to be included for each study entered into the register and entering the studies into the Cochrane Register of Studies. Results: The CNCF Trials Register was launched in 2013. While preliminary planning focused on standardization of processes, the next phase revolved around developing methods for incorporating data from non-English language sources. Collaboration with our Chinese colleagues to integrate simplified Chinese records resulted in a number of challenges. Issues regarding current variation in practice, criteria development, quality control, updating and communication arose. Conclusions: The CNCF has developed and launched a trials register that includes records from non-English language sources. Consequently a number of challenges have arisen as a result and may serve as a guide for other entities.

P4.104
Effectiveness of a brief course in evidence-based medicine for knowledge of the best sources of information in health care among health care workers: first results of the beginning of evidence-based medicine in the Amazonian region
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Introduction: The frequent absence of scientific rigor in expert opinions, textbooks, and the majority of scientific meetings limits effective, safe, and efficient decision making in public and private health care services. Objectives: To evaluate the effectiveness of a brief course in Evidence-Based Medicine that informs health care workers about the best sources of information to use when making decisions about health care. Methods: Sixty health care workers were evaluated before and after attending a 4-hour course in Evidence-Based Medicine at a teaching primary care health service in the Amazonian Region (Belém City, Pará State, Brazil). A multiple-choice question about the sources of information to use in decision making in health care was delivered before and 5 months after the course. The available alternatives were ‘congress’, ‘textbooks’, ‘expert opinions’, ‘Google’, and ‘other sources of information’ (an open-ended alternative). Because of the absence of personal identification in the questionnaires, we used the qui-square test for independent samples. Results: The participants were physiotherapists (23.3%), undergraduate students from different health courses (21.7%), occupational therapists (15%), physicians (5%), and other health professionals and administrative team members (35%). Only 51/60 participants provided information 5 months after the course. At that time, the percentage of answers that referenced ‘congress’ as a reliable source of health care information was reduced from 28.3 to 11.7% (p = 0.04), the choice of ‘text books’ and ‘expert opinions’ were reduced but without statistical significance from 75 to 58.8% (p = 0.07), and 8.3 to 3.9% (p = 0.35), respectively (Fig. 1). No participant referred evidence-based-guidelines, systematic reviews or randomized controlled trials as reliable sources of information when making health care decisions. Conclusions: According to our results, educational strategies on Evidence-Based Medicine should be continuously offered to health care workers, especially those in
P4.105
Online capacity building in translating research into practice for Latin American researchers

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Background: Researchers in Latin America and the Caribbean (LAC) encounter several constraints that hinder the better use of research for health improvement of the region’s population; research methodologies are not integrated in the medical school curricula and materials in Spanish are not available among others. To address this situation, the Pan American Health Organization (PAHO) partnered with Cochrane (the Iberoamerican and Canadian Cochrane Centres) and for the first time provided webinars on key research topics for non-English speaking researchers. Objectives: To allow LAC researchers with limited knowledge in health research methodologies and/or non-English speaking researchers to attend free online webinars, conducted in Spanish, from their desks. These activities are ultimately aimed at translating research into practice. Methods: Research training needs according to the national health priorities were identified. Specific topics were defined based on the PAHO research policy and surveying PAHO research focal points in LAC and potential participants. The Iberoamerican Cochrane experts designated tutors and a facilitator. The Blackboard Collaborate platform was used. The sessions were structured as 45-minute lectures with 15 minutes of Q/A. The recordings of the sessions were later posted online and the participants were surveyed on the quality and delivery of the webinar. Results: Twelve webinars delivered in 2 series of 6 each (2010 and 2011). Over 1000 participants from LAC and from outside the Americas attended the webinars; profiles ranged from students to seasoned researchers (over 5 publications in peer-reviewed journals); over 600 provided positive feedback. Conclusions: Online webinars are excellent for capacity building owing to their quality and convenience for the users who have rated the webinars as very useful for different reasons. In the future, a more encompassing strategy would be possible. Options for certification are being explored.

P4.106
Enhancing evidence-based health care (EBHC) knowledge and skills of medical student interns at Stellenbosch University’s Rural Clinical School in Worcester

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Background: Stellenbosch University (SU), via the Stellenbosch University Rural Medical Educational Partnership Initiative (SURMEPI), aims to enhance skills of medical professionals in HIV/AIDS and TB care, as well as increase research capacity in these fields. Strengthening evidence-based health care (EBHC) knowledge and skills is important within this context. Since 2011, final year medical students at SU have the opportunity to do their student internship at the Rural Clinical School in Worcester. As part of the SURMEPI project, we delivered five EBHC tutorials to these students in 2012. Objectives: To reinforce student interns’ knowledge and skills related to the basic principles of EBHC and the application thereof. Methods: The five 2-hour sessions covered the following topics: Principles of EBHC and formulating questions; searching scientific databases for relevant studies; and critical appraisal of randomised controlled trials, systematic reviews and clinical guidelines. Tutorials consisted of a combination of didactic input, hands-on class exercises and discussions. Students completed a questionnaire on their self-perceived confidence in practicing EBHC and their attitude towards EBHC before the first and after the last tutorial. Students also completed an evaluation form after each session. An online learning site was used as a repository of relevant resources, presentations and screencasts; and as a platform for discussions and sharing of new developments. Results: Tutorials were well received and students found it very useful. Most students accessed e-learning resources easily and participated in interactive e-learning. There was an overall increase in students’ self-perceived confidence in practicing EBHC as well as an increase in positive attitudes towards EBHC. Conclusion: EBHC tutorials were effective to teach EBHC to undergraduate students. Further sessions could be incorporated to expand the scope of principles taught and all final year MB,ChB students should be exposed to the programme.

P4.107
Attitudes towards evidence based medicine among medical students of Universidad Nacional del Sur Medical School of Argentina

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Background: It was proved that devolvement of competence in critical appraisal is more effective if it stars during undergraduate education. Most of developed instruments to assess knowledge are oriented to graduate professionals. Knowing students attitudes is important to plan strategies to improve critical appraisal skills of students. Objectives: To describe the attitudes and knowledge towards Evidence-Based Medicine (EBM) and Biostatistics among students in the middle and end of medical pregame at the National University of the South (UNS). Methods: Cross-sectional study. Voluntary and anonymous survey applied to third and sixth year students from UNS (problem-based community oriented program). Previous training in epidemiology (measured as participation on extracurricular courses), participation in research groups; hours per week devoted to reading of scientific journals; and an 11 instrument to assess understanding of statistical terms published in medical journals validated for graduated physicians were assessed. KR-21, were calculated j2 test was used to analyze differences. Results: 71 students completed the survey (Year 3 = 39; Year 6 = 34). Average age 23.17 (DS ± 1.37). 19.7% referred extracurricular course in statistics and 17.1% in EBM. 35.5% voluntary participate in research groups: Year 3 6/39 and Year 6 19/34
Agreement of understanding of statistical terms on a Likert scale was 3.15 (DS ± 0.84) no statistical difference among years. Knowledge instrument reliability KR-20 0.39. Average of correct answers 7.87 (DS ± 2.59) no statistical difference among years. Conclusions: Attitudes are not related with amount of knowledge. Low reliability suggest the need of specific instruments to assess students knowledge.

P4.108
Training Cochrane Systematic Reviews: challenges and benefits of online training

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Background: On line training has become an inseparable part of today’s learning and teaching efforts. Medical experts are facing many challenges in their everyday clinical and academic life many of which can be solved through online training. Traditional learning opportunities are plenty, but are not affordable by some because of financial and time constraints. Iranian scholars in particular are facing new challenges to travel abroad. Objectives: This paper discusses benefits and challenges of conducting Cochrane Systematic Review webinars for Iranian scholars. Methods: Iranian specialists from eight Medical Universities and Iranians living overseas were contacted to join the webinars. I have conducted weekly webinars for the last 2 years, using self-paid software at first, and then Blackboard platform offered by Australian Cochrane Centre. Results: Five series of standard author training (12 sessions each) were conducted. I have invited experienced Cochrane trainers and authors to encourage the audience and provide hints for a successful registration. The presenters became mentors for the registered titles. Sessions were recorded on CD and passed around to be used by those who do not have internet access. The webinars are free of charge and provide a strong bound between clinicians and researchers in Iran and overseas. They provide the opportunity to get involved with Iranians living abroad, to access search databases, and to supply a strong motivation to join the Collaboration activities. However, the efforts are not without challenges. Lack of speedy internet connection in Iran, inadequate access to databases, language barriers and lack of local support for the authors is some of the difficulties that Iranians are facing. Strategies to overcome some of these challenges will be discussed. Conclusion: On line training is not without challenge but is fruitful and necessary for countries that lack local support.

Attachments: Cochrane Systematic webinars with Iranian scholars.pdf

P4.109
Building Capacity of Indian Scientists in Conduct of Systematic Reviews: an Indian Council of Medical Research (ICMR) Initiative

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Background: The Indian Council of Medical Research (ICMR), New Delhi, the apex body in India for the formulation, coordination and promotion of biomedical research, initiated a program to facilitate the practice of Evidence-Based Medicine (EBM) at the national level. Objectives: To harness the translational potential of secondary research, by funding systematic reviews aligned to national health priorities selected through a national competitive process; and to provide training, mentoring, and quality assurance, in order to ensure the timely completion of high-quality reviews. Methods: In May, 2012, the ICMR advertised for letters of intent (LOIs) from Indian scientists interested in carrying out systematic reviews in maternal, perinatal, new-born, child, and adolescent health. A project review committee (PRC), consisting of clinicians with expertise in the area of EBM, critically evaluated the 36 LOIs received for their (1) suitability and relevance to current national priorities; (2) potential to identify evidence-gaps for initiation of primary research; (3) compliance with current best methods in research synthesis; and (4) the expertise of the review team, and their training needs. Results: Nine proposals reviewed were shortlisted for development of full protocols, with appropriate funding assured, contingent on the submission of the protocol. Twenty three prospective authors were trained in a two-day protocol development workshop, in using Review Manager (RevMan) and GRADE Profiler software. All nine authors submitted protocols using RevMan, within 3 months. A protocol-refinement workshop is scheduled to be held in April, 2013. Full reviews are expected 6 months hence. Conclusions: Adequate funding, careful pre-selection of review topics and author teams, the provision of suitable training, and quality assurance can result in short review production timelines. This ICMR initiative will help expand the pool of trained systematic reviews authors in India. It will also help identify knowledge gaps, and provide a list of research priorities to be evaluated in primary research.

P4.110
Current curriculum and training program of evidence-based health care (EBHC) for undergraduate students: Taiwan’s experience

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Background: Although evidence-based medicine has been promoted for 20 years, there is considerable variation in the methods and evidence-based health care (EBHC) curriculum in executive and administrative aspect. Objectives: To discover the problems encountered in teaching with current EBHC curriculum and in curriculum design in Taiwan. Methods: We conducted a nation-wide medical and nursing schools questionnaire survey of the current status of the curriculum and training of evidence-based health care (EBHC) for undergraduate students. Results: The questionnair return rate from 17 medical school, 68 administration unit and 388 executive department of teaching hospital was 94.1%, 63.2% and 47.7%. Among medical schools, 81.2% offered EBHC related curriculum. Among clinical departments, 74.3% provided teaching and training for undergraduate students where EBHC teaching was offered to clerks in 84.8% and to interns in 87.1%. The course evaluation was mainly based on feedback from students. The strategy for learning outcome assessment included written test, written report, oral presentation,
ability of collecting and integrating information, presentation skill, attending of the course, the degree of participation and interaction. The cognition and attitude of Taiwan educators towards current EBHC program (Table 1) showed the items of over 90% agreement included helpful in clinical practice, helpful in clinical practice, improving the quality of health care, adjustment to the limitation of their hospitals in the application of EBHC in clinical work, and helpful in clinical decision and those between 80 and 90% included their clinical work being evidence-based, and acceptance of patients’ participant and opinion in clinical practice based on EBHC. The degree of satisfaction with the teaching of EBHC was 50% less in teaching hospital in comparison with that of in medical school. **Conclusions:** These results will be valuable for the development of an EBHC centered new curriculum to promote the competency of EBHC for undergraduate medical and nursing students. **Attachments:** Table 1.pdf
Special Sessions

1.01 Wikipedia meets Cochrane: working to get better evidence into mass use

Panelists: Bastian H, Heilman J, Tharyan P

There are several million visits to medical-related Wikipedia pages every day. Surveys suggest that most doctors and medical students (over 90% in one study) rely on the Wikipedia for medical information. As Wikipedia expands in more languages, its critical importance as a source of free information globally is increasing. Wikipedia’s Project Medicine is eager to incorporate Cochrane reviews and contributors in the Wikipedia. Ensuring the quality of the Wikipedia is a community responsibility that is likely to be of interest to many Collaboration members. In this session, the first presentation (James Heilman from WikiProject Medicine) will focus on discussing the scope and use of Wikipedia, as well as explaining WikiProject Medicine, Wikipedia’s editorial processes and the opportunities for academic contributions to the development of the WikiProject. The second presentation (Hilda Bastian from Pubmed at the National Center for Biotechnology Information at the NIH) will discuss the quality of medically-related Wikipedia pages, and how to incorporate Wikipedia into research and knowledge translation work, using PubMed Health’s Wikipedia-related activities as an example. The third presentation (PrathapTharyan) will discuss the relevance of Wikipedia for the Cochrane Collaboration and the Collaboration’s plans for working with Wikipedia. He will describe the project between the South Asian Cochrane Centre and Wikipedia.

Target audience and level of expertise: Anyone interested in the Wikipedia. No specific level of expertise.

1.02 Preventing overdiagnosis—can Cochrane and systematic reviews help?

Chair: Henry D

Panelists: Henry D, Moynihan R, Moons KGM

Background: There is growing evidence that overdiagnosis presents an important health challenge, along with associated problems of overmedicalisation and overtreatment. Emerging evidence suggests the problem of overdiagnosis may be highly significant—not only in the screening setting, but also in clinical settings—across a range of diseases. There is a growing debate about the best ways to address its causes—which include expanding disease definitions and more sensitive diagnostic and prognostic tests—and how to advance solutions. The role of good evidence, either from primary studies or systematic reviews, will be vital in this debate. As one of the most trusted sources of high quality evidence internationally, the Cochrane Collaboration, its review groups and/or reviewers, could play important roles in helping to understand the nature and extent of the problem and how to best address it. Potentially the Collaboration could be engaged in more reviews of the evidence about overdiagnosis and/or overtreatment, either in reviews of therapeutic interventions, diagnostic tests and prognostic factors or models. More broadly, other types of reviews—for instance reviews of studies that seek to define disease boundaries—could help to provide reliable evidence on which to base more appropriate diagnostic criteria and disease definitions.

Target audience and level of expertise: Systematic review authors, guideline developers

1.03 Systematic reviews and guideline development

Chairs: Santesso N, Mustafa RA, Guyatt GH


Researchers in the field of evidence synthesis, guideline developers and policy makers have collaboratively achieved health care recommendations, in particular those in clinical practice guidelines, which ought to be based on systematic reviews. However, best practice of collaborating and implementing this laudable goal requires further work. Better coordination between guideline developers and systematic review authors is required to efficiently use resources (e.g. avoid unnecessary duplication of efforts, delays and non-credible evidence reviews). Conducting systematic reviews with the specific purpose of utilizing them for health care recommendations can enhance motivation of authors to conduct reviews, possibly open funding opportunities and improve the Collaboration’s interaction with other health care organizations. This, in turn, enhances the Collaboration’s profile by making sure reviews have a specific purpose. This session will explore these issues in-depth. It will be comprised of panellists addressing these specific areas and the discussion portion will focus on next steps: a) Examples of successful collaboration between systematic review authors and guideline developers and summary of challenges encountered b) What do guideline developers need (in addition to information in typical Cochrane reviews)? c) What do systematic review authors need and how can the collaboration deliver this? d) Proposal for solving the institutional barriers and challenges (two key stakeholders: Cochrane Collaboration and GIN or CTFPHC)

Target audience and level of expertise: Systematic review authors, guideline developers
1.04 Getting to grips with complexity in complex interventions

Chair: Noyes J
Panelists: Petticrew M, Lewin S, Thomson H

Many current evidence synthesis methods and processes have potential application to reviews where intervention complexity is considered important. There is however a critical lack of application of existing methods to better understand and synthesise/interpret evidence on complexity. There are considerable gaps in current methods and knowledge that require further methodological development and testing. The Cochrane Collaboration undertakes systematic reviews of complex interventions and interventions with varying degrees of complexity. The Collaboration is currently developing guidelines in the form of a handbook chapter led by Mark Petticrew and Laurie Anderson. Better understanding of these methodological and process issues is therefore of high importance. In addition to developing guidance for authors, the Methods Innovation Fund (MIF) has supported a number of projects to develop/apply appropriate synthesis methods and guidance for Cochrane authors. In January 2012, a meeting with methodologists was held in Montebello, Canada (partly funded by MIF), and a series of papers from this meeting will be published in parallel with the Quebec Colloquium. This proposed special session on complex interventions serves as an update to this work and an opportunity to disseminate key developments and future plans. We will set the scene, discussing why Cochrane is concerned with intervention complexity and complex interventions. We will give a brief update from the Montebello meeting and a series of papers published in JCE, and the Methodological Investigation of Cochrane Complex Interventions (MICCI) project. Mark Petticrew will speak to the current state of the art and science of synthesis methods to understand intervention complexity and synthesise evidence from complex interventions. This will be followed by a presentation on a new tool for unpicking intervention complexity using the iCAT_SR tool (Cochrane MIF project). Lastly, we will share case studies of recently published Cochrane reviews to show how complexity was identified and addressed and current gaps in methods.

Target audience and level of expertise: Any person with an interest in intervention complexity and complex interventions.

1.05 Using Cochrane Reviews in policy agenda setting, choice and implementation

Panelists: Lavis JN, Dagenais P, Ouimet M

There is inconsistent use of research evidence in policy agenda setting, choice and implementation. This is significant because policymakers make decisions about which programs, services and drugs to provide or cover, how to get these programs, services and drugs to those who need them, and how to strengthen health systems generally. Failures to find, use and contextualize the many types of research evidence needed in each step of policy agenda setting, choice and implementation can have negative consequences for citizens, patients, providers and the health system. The Cochrane Collaboration produces large numbers of reviews of effects that have tremendous potential to inform policy agenda setting, choice and implementation and its contributors could benefit from an understanding about how to better contextualize and support the use of their work in the policymaking process. Dr. John Lavis will speak on the policymaking process, types of decisions and options for supporting the use of Cochrane reviews and other types of research evidence. Pierre Dagenais will discuss using Cochrane reviews and other types of research evidence to support decision making about health technologies. Lastly, Mathieu Quimet will elaborate on selecting, assessing and packaging research evidence to support policymaking. There will be time at the end for questions and discussion with the delegates attending this session.

Target audience and level of expertise: Researchers interested in supporting evidence-informed policymaking, as well as health system policymakers and stakeholders. No past experience needed.

1.06 Synergy of systematic reviews of animal and clinical studies: towards evidence-based translational medicine

Chairs: Ritskes-Hoitinga M, Leenaars M
Panelists: Rovers M, Hooijmans C, Ritskes-Hoitinga M

The Cochrane Collaboration has mainly focussed on evidence-based medicine through systematic reviews (SR) and meta-analysis (MA) of clinical trials. Preclinical (animal) studies focus on mechanistic studies for research for medical purposes and establishing safety and efficacy of medical treatments for human patients. SRs and MA of animal studies are not yet the routine, even though there are very good reasons for doing so. For example, serious side effects occurring during trials in patients could have been predicted when a MA of animal studies had been performed (Horn et al. 2001, Pound et al. 2004). Within medicine, animal studies are used to predict efficacy and safety of new treatments, and establish possible mechanisms of human disease. Surprisingly, animal studies are not analysed to the full extent before clinical trials are performed, even though there are very good reasons for doing so: see e.g. (1) Drug side effects: Horn et al., 2001; Pound et al. 2004; (2) Evidence-based choice of animal model: de Vries et al. 2012, Van Drongeelen et al. 2012; (3) Translational value: Hooijmans et al. 2012; Sena et al. 2010, Macleod et al. 2012. By establishing synergy between SRs of animal and clinical studies, a significant contribution to translational medicine comes within reach. By performing SRs of animal studies, (1) transparency is created towards a more evidence-based choice of animal models in relation to clinical problems, (2) higher scientific quality of animal studies (more reliable results) will be induced and (3) a better basis for the design of clinical trials is created. Target audience and level of expertise: Anybody interested in the design and conduct of SRs in animal studies.

2.01 Patient-centred decision making: using evidence from bedside to health policies


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Although systematic reviews aim to improve patient outcomes, to achieve this aim evidence needs to be used to inform decisions by patients, the public, healthcare professionals, managers, and policy makers. Moreover, challenges interfere with this goal. First, current approaches to evidence production and dissemination typically focuses on reporting the evidence but not in formats or language that facilitates patient and public decision making. Second, patients and the public are not aware of systematic reviews as an important strategy for establishing best available evidence about interventions to improve patient outcomes. Increasing patient and public input into how systematic reviews or clinical practice guidelines are designed, conducted, or translated may provide solutions. Therefore, to ensure that reviews achieve their aim of improving patient outcomes, we need to consider: (a) how patients and the public can participate in the production of systematic reviews to ensure better alignment with their priorities; and (b) how we can better support the use of synthesized evidence to guide healthcare decisions from bedside to health policies. The special session is being planned by an interprofessional team including a patient and all team members will present during the symposium. It will begin with a short conversation between a patient and clinician discussing the evidence for management of low back pain. This clinical vignette will highlight the challenges in getting evidence to guide decisions in clinical practice through to health policies. Three brief presentations will propose solutions to address various challenges associated with engaging patients and the public in evidence production and use. The session will conclude with an open discussion/debate among the panel and the audience. Panelists will be: (1) Dawn Stacey RN, PhD who holds a University Research Chair in Knowledge Translation to Patients, is an Associate Professor at the University of Ottawa, and Scientist at the Ottawa Hospital Research Institute where she leads the Patient Decision Aids Research Group. She is the principal author on the Cochrane Review of Patient Decision Aids. (2) Ian Shrier MD, PhD is a practicing sport medicine physician, Associate Professor and researcher at the Centre for Clinical Epidemiology at the Jewish General Hospital, McGill University in Montreal. His research is focused on general epidemiological methods, and how people interpret systematic reviews. (3) François-Pierre Gauvin, PhD, is the Knowledge Broker for the Cochrane Policy Liaison Office and Lead Evidence Synthesis and Francophone Outreach of the McMaster Health Forum. His area of expertise includes deliberative dialogues, such as citizen panels and stakeholder dialogues, which are promising mechanisms to find innovative solutions to collective problems. (4) Antoine Boivin MD, PhD is a practicing family physician, associate professor, and researcher at Université de Sherbrooke. His research focuses on patient and public involvement in healthcare improvement. He led the first trial of patient and public involvement in healthcare priority-setting. (5) Jean Légaré is a retired business man, healthcare consumer, and patient advocate. He served as the co-chair of the Consumer Advisory Council for the Canadian Arthritis Network Centre of Excellence, Master Trainer with the Arthritis Self-Management Program, participant in the Patient Partners in Arthritis program, steering committee member of the Best Medicines Coalition, and is a patient representative on research studies. He founded the Canadian Arthritis Patient Alliance. In 2008, he received an honorary doctorate at Laval University for patient advocacy and partnerships in research.

**Target audience and level of expertise:** This session will be open to all Cochrane Colloquium attendees. There is no required level of expertise to participate.

### 2.02 Scaling up/boosting the production of scientific evidence in low and middle income countries

Panelists: Coren E, Cuervo LG, Ciapponi A, Nair S, Kredo T, Waters E

The challenges facing all countries are significant; however the challenges facing LMICs in terms of the economic, social and political contexts, funding drivers for evidence production and decision making, access to less than optimal evidence information systems, and the chasm between available evidence and context for its application, are particularly daunting. However, by comparison to 1993, the Cochrane Collaboration has made significant advances: relationship with WHO and PAHO, innovative active Centres, pan-country satellites and regional capacity development, methodological developments, equity oriented advocacy, reviews focused on needs of LMIC through stakeholder advisory groups, and partnerships with funders session.

**Session Objectives:**

Participants will: a) understand some of the opportunities, barriers and diversity of contexts that exist across the continents, cultures, populations and environments where LMICs are located. b) hear speakers’ experiences with opportunities to catalyse activities that both advocate for the use of transparent approaches of including research findings in decision making, and commit to contemporary evidence generation opportunities. c) discuss new directions that could be forged together over the following 10–20 years, and in particular, strategies that need to become embedded in available systems, and areas in which new strategies and ideas are called for.

This session will be a panel-format; participants will anchor their contributions and experience with a future orientation i.e. where will we be in 2018, 2023 and 2028. We will discuss: influences on evidence informed decision making, barriers and facilitators; examples of contemporary projects and reviews, and critical success factors; perspective from the South African Cochrane Centre—why reviews are stalled and how we can support authors in our reference countries; examples of collaborative projects to inform policies with current evidence; changes in the big picture in evidence in LMIC contexts; and, how new tools and policies can be used to frame Cochrane work in a way that presents it as a contribution to what society is demanding. This will include examples of how knowledge translation leading to new policies improved health and policy making processes, and many inputs came from Cochrane work (beyond just reviews).

**Target audience and level of expertise:** Participants with interest in LMICs at any level of experience and expertise.

### 3.01 Increasing access to trial data and the next generation of Cochrane Reviews: a panel and open floor discussion

Panelists: Stewart L, Dickersin K, Grimshaw JM, Rovers M, Tiemey J, Tovey D

A forward thinking ‘what if’ session comprising a series of short scene setting presentations followed by panel discussion. What if access to clinical study reports from industry sponsored trials becomes routine?

**Target audience and level of expertise:** This session will be open to all Cochrane Colloquium attendees. There is no required level of expertise to participate.
What if obtaining IPD becomes much more straightforward than at present? How will Cochrane respond? Should all Cochrane reviews use IPD, if available? Does the Collaboration have the expertise, skills and tools required to undertake IPD reviews? What will Cochrane reviews look like in 5–10 years’ time? There is intense ongoing debate about improving access to clinical trial information, results and data, including access to individual participant data (IPD). Several people within The Cochrane Collaboration are playing leading roles in this discussion and the Collaboration issued a policy statement in 2011 (currently under revision). It seems likely that in future there will be increased opportunities to obtain and use new and different sources of information, including IPD. Given widespread recognition of systematic reviews that use IPD as a gold standard approach, if trial IPD do become more readily available, best quality systematic reviews will use these data. As the world’s largest producer of systematic reviews in health care, the Cochrane Collaboration is supportive of access to trial results and to individual participant data. However, few Cochrane Reviews use IPD. It is timely for the Collaboration to consider how it will approach incorporating new types of data into its reviews and plan how to make the most of the opportunity afforded by more widespread release of IPD, should it happen. The session will begin with a series of short scene setting presentations (45 minutes) followed by a panel discussion (45 minutes). The panel will include a researcher with experience of investigating publication bias, a trialist with experience of making IPD available, a researcher with experience of undertaking IPD systematic reviews and meta-analyses, a Cochrane Co-ordinating Editor, a member of the Cochrane Editorial Unit, and a member of the Steering Group.

**Target audience and level of expertise:** Everyone interested in improving the reliability of Cochrane Reviews, improving access to data from trials, or both. No minimum level of expertise is required in the context of a Cochrane Colloquium as the presentations would not require more than a basic knowledge of systematic reviews and clinical trials.

### 3.02 Health behaviour change

*Chair: Shemilt I*

*Panelists: Godin G, Spence J, Marteau T, Waters E*

In 2008, non-communicable diseases (NCDs) caused 36 million (63%) of global deaths. A large proportion of NCD deaths occur prematurely, imposing large and avoidable costs in human, social and economic terms. Tobacco smoking, harmful use of alcohol, unhealthy diets and low levels of physical activity are common behavioural factors in the aetiology of the most prevalent and preventable NCDs, including cardiovascular diseases, diabetes, certain types of cancers and chronic respiratory diseases. Consequently, four of the five priority areas for intervention proposed by the Lancet NCD Action Group and the NCD Alliance (i.e. tobacco control, reduction of hazardous alcohol intake, salt reduction, improved diets and physical activity) and the UN Draft Political Declaration of the High Level Meeting on the prevention and control of NCDs target these four areas of health behaviour. Changing patterns of health behaviour to reduce the prevalence and burden of NCDs is therefore one of the most important global health challenges of the 21st Century. Correspondingly, the production and synthesis of reliable evidence on interventions to promote effective and efficient health behaviour change are major global challenges for the next 20 years of better knowledge for better health. This Special Session on Health Behaviour Change will aim to promote shared understanding of priority questions that need to be addressed to build the evidence base for interventions and policies to change people’s health behaviour at individual- and population-levels, and galvanise regional and international efforts to tackle them through primary research, systematic reviews and related evidence synthesis activities.

**Target audience and level of expertise:** Researchers interested in supporting evidence-informed policymaking, as well as health system policymakers and stakeholders. No past experience needed.

### 3.03 Developing evidence in a responsive approach

*Chairs: Becker L, Tugwell P*


The Cochrane Collaboration aims to help health care providers, policy makers, patients, their advocates and carers make well-informed decisions about health care, by preparing, updating and promoting the accessibility of Cochrane Reviews. The principles underpinning this work focus on how review teams and groups organise themselves to produce and promote systematic reviews. These do not include being responsive to important or urgent uncertainties that stakeholders face. Being responsive includes updating Cochrane reviews on topical issues, adopting methodologies that provide better insights into the questions stakeholders face or packaging reviews in a more accessible way. We have attempted to address these issues by looking at different aspects of our processes separately e.g. setting priorities for reviews, involving consumers in developing reviews. A more holistic approach would adopt a coherent structure for developing evidence in response to our stakeholders’ uncertainties. This session includes five presentations; the first three provide insight on methods and processes that other organizations have developed to be responsive to the needs of the stakeholders. The two last presentations provide an overview how two initiatives in the Cochrane Collaboration attempting to fill this gap: Cochrane Rapid Review response and the Agenda and Priority setting Methods Group. (1) Responsive Evidence Development: a Methodological Approach: Sandy Oliver—EPPI Centre (2) Responsive Evidence Development: a local approach: Chris Hyde, Joanna Thompson Coon, Rebecca Whear—PenCLAHRC (3) Responsive Evidence Development: a global approach: Claire Allen, Mike Clarke—Evidence Aid (4) Cochrane Rapid Reviews: David Moher—Cochrane Bias Methods Group/Cochrane Rapid Reviews workshop group (5) Prioritisation of topics in the Cochrane Collaboration: at the micro, meso and macro level: Mona Nasser, Vivian Welch, Tianjing Li, Sally Crowe—Cochrane Agenda and Priority Setting Methods Group (6) Discussion—‘How we can use our existing structures in the Cochrane Collaboration to build up a more responsive approach to evidence development?’: Chair: David Tovey, Mona Nasser.

**Target audience and level of expertise:** Members of the Cochrane Collaboration with any level of expertise.
3.04 Research issues in the evaluation and design of interventions to improve outcomes for patients with multimorbidity

Panelists: Boyd C, Smith S, Fortin M

Multimorbidity is defined as the co-existence of two or more chronic conditions in the same individual and is also sometimes referred to using the term ‘multiple medical conditions’ and includes both physical and mental health conditions. The term co-morbidity is sometimes used as well but implies an index conditions with associated and related other conditions. There is a growing literature on the epidemiology of multimorbidity and its impact on patients and healthcare systems. However, a recently published Cochrane review highlighted the lack of evidence regarding the effectiveness of interventions designed to improve outcomes in such patients. Prior work has shown that many reviews and guidelines focused on index conditions also inadequately address comorbidity and multimorbidity. Multimorbidity is rising in prevalence across all ages and will need to be considered by any researchers conducting systematic reviews on interventions for chronic conditions or on interventions designed to alter care delivery. It is therefore of relevance to many authors across the Cochrane Collaboration and it is important that both multimorbidity and co-morbidity are considered and addressed appropriately in ongoing reviews and review updates. This special session will discuss the issues related to multimorbidity and comorbidity for researchers and authors of Cochrane reviews.

This will be an interactive session that will start with brief presentations and be followed by an interactive panel discussion. The presentations will focus on four key areas: a) What is multimorbidity and how do we measure it? b) Potential interventions for patients with multimorbidity? c) How do we select appropriate outcomes in multimorbidity research? d) How can multimorbidity impact on the effectiveness of any intervention for chronic conditions and how reviewers of existing reviews could consider incorporating multimorbidity/comorbidity and its impact within their reviews?

The session will be led by Prof Susan Smith, Prof Martin Fortin and Prof Cynthia Boyd Each will give a 10 minute presentation to start the session and we will then move to the panel discussion. Participants will be encouraged to record one observation or question on paper provided, that will be presented by a nominated chairperson to the panel for the interactive discussion.

Target audience and level of expertise: The session will be designed for researchers new to the concept of mutimorbidity and related research.

4.01 Translation of Cochrane summaries: a realistic and timely goal for the collaboration?

Chair: Ravaud P

Panelists: Ravaud P, Yvon F, Rada G

From a linguistic point of view, the world is very diverse. The largest languages by native speakers are Mandarin (14%), Spanish (6%), and English (5%). Although in many countries most educated health professionals can read texts in English, many others are not capable of doing so. If we consider the general population as potential consumer of Cochrane materials, then the proportion of people who can be reached and influenced at the moment is actually surprisingly small. Furthermore, evidence from the usage statistics of the Biblioteca Cochrane Plus (the Spanish version of The Cochrane Library) has repeatedly demonstrated that universal access to content in the local language increases usage substantially, in this case reaching more than four million users every year. Lately, the addition of French content on Cochrane Summaries has showed this effect as well: Access to Cochrane Summaries by French-speaking users has tripled from September 2012 to February 2013, and France is now ranking third among the countries most accessing Cochrane Summaries. A number of projects translating Cochrane materials have been conducted, and several small or bigger projects are currently on-going or planned. All of them have been initiated, co-ordinated, funded and published by Cochrane Centres, Review Groups or Cochrane external organisation based in non-English speaking countries, without any resources, funding or infrastructure provided by The Cochrane Collaboration centrally. The results are spread over different platforms, many of them partially outdated and difficult to track. The most comprehensive and sustained project has been conducted by the Iberoamerican Cochrane Centre over the past 15 years, but other initiatives have also been, or are still, enabling access to Cochrane content in a variety of languages: French, Japanese, Simplified and Traditional Chinese, German, and Portuguese. This session will discuss this issue more deeply and debate different mechanisms to enhance translation support in Cochrane. Topics covered include: Translation of Cochrane summaries: necessary or accessory for users from developed countries, the Canadian view; Standardization of abstracts and Conclusions: Potential Benefits for English-native and non-native authors and readers of Cochrane reviews; Is Automatic translation of Cochrane summaries an achievable goal?; and, Translation using networks of volunteer translators.

Target audience and level of expertise: Centre Directors, Co Eds, Centres staff members, stakeholders with an interest in translation.
Oral Sessions

Oral Session 01.01: Online tools for dissemination and communication

The Cochrane Library for iPad—a new platform for dissemination

Stewart G
Wiley, UK

Background: The Cochrane Library iPad edition was launched in December 2012. Each issue contains an editorial and up to 12 specially abridged and enhanced Cochrane Reviews chosen by the Editor-in-Chief. The app was devised to provide a new platform for the dissemination of Cochrane Systematic Reviews and is free to download via the Apple iTunes Store. Objectives: Prior to launch, the primary aim was to offer an attractive new platform for reading Cochrane Reviews to existing users of The Cochrane Library and to entice a new audience to Cochrane Reviews. It was hoped that users of the app would ‘click through’ to access the full text Cochrane Reviews on www.thecochranelibrary.com. Methods: iTunes Connect and Google Analytics have been used to collect data on visitors to the app since launch. A short online survey of users will also be conducted. Results: In the first 4 months of release the app was installed 11 967 times. Is the iPad app proving to be popular with both new and existing users of The Cochrane Library? Are users visiting from the iPad app the full text versions of the Cochrane Reviews? The user survey will be analysed and presented together with usage data from the first six months following release of the app. Conclusions: As the app has been downloaded nearly 12 000 times since launch it is clear that it is appealing to a wide audience. Conclusions will be drawn from the analysis once the data is available.

Engaging with the next generation of ‘Cochranites’ through an international web-based community

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Background: The UKCC seeks to improve health by promoting the production, understanding and use of high quality research evidence by patients, healthcare professionals and those who organise and fund our healthcare services. Students in all healthcare disciplines are the practitioners of tomorrow and, potentially, the Cochrane contributors of tomorrow. Objectives: To promote the understanding of healthcare research amongst students in all health-related fields and amongst any students in any discipline, with an interest in health care. To do this on a global basis, inviting participation from any students in any country. Methods: Working with evidence-based design agency Minervation we have created an online community called ‘Students 4 Best Evidence’ (S4BE). This community is aimed at students from school to university age from any part of the world. It brings together relevant, useful resources about all aspects of evidence-based health care. Students can, for example, find out how to practice EBM and how to critically appraise a paper. The site signposts existing resources rather than creating new ones. It provides a space for students to interact with each other and discuss all aspects of EBM. Students are able to comment on the quality of resources and post links to material they have identified. Results: The site has been developed by 15 students from 7 different countries, based on a community first developed using Facebook. Phase I of the website goes live in late April 2013 and Phase II in September 2013. Our presentation demonstrates the features of the site and the lessons learnt in developing and refining it. Opportunity: Students for Best Evidence is supported and promoted by the UKCC but is not specifically or solely a Cochrane project. However, we invite any interested Cochrane groups or individuals to support the endeavour by encouraging students they know to engage and participate.

Using the Cochrane community site to support Cochrane work

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Background: The Cochrane Community site, established as a knowledge-sharing platform for Archie-registered Cochrane contributors, provides a useful collaborative and informational resource that can be a great asset for improving the quality of work and communication. However, potential users may be daunted by the volume of information and resources available, and may be unsure of the practical application of such information to daily routines of managing tasks. Objectives: (1) Familiarise participants with the organisation and contents of the Cochrane Community site, and how these relate to work functions. (2). Provide information on how the Community site was developed and plans for the future. (3) Provide practical information on how to use Community site to improve quality of contributors’ work and communication. This presentation will focus on exploring the Cochrane Community site: how it was developed; how it is organised; what it includes; and how to use it, including features such as discussion forums, role-based portals, and organisational resources. The presentation will include a demonstration of how contributors can use the Community site, and apply features to everyday tasks of communication and information management. It will also include a discussion of plans for future development of the site and its resources to support knowledge management in Cochrane and an opportunity for feedback from the audience.
Translating Cochrane Reviews to lay people through the web: the IN-DEEP project

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Background: The IN-DEEP project, Integrating and deriving evidence, experiences and preferences: Developing research-based health information applicable to decision making and self-management by people with multiple sclerosis (PwMS), is a collaboration between research teams in Australia and Italy, undertaking two parallel projects. The aim is to make high-quality evidence accessible and meaningful to PwMS and their families. Objectives: To discuss the implications of our project findings for the provision of evidence-based information to consumers. Methods: The Australian and Italian teams each conducted a mixed-methods study; drawing upon the information needs of PwMS to create a website that presented Cochrane Reviews (CR) of MS treatments. Extensive formal and informal user testing with consumers and other stakeholders was undertaken during development. The websites went live in 2012 with an online evaluation survey. Results: Due the iterative nature of the projects and differing information needs, the Australian and Italian websites took different approaches, but both were strongly endorsed by consumers. The Italian website as a first topic covered a lay people in the selection of treatment topics and in the production and dissemination of evidence-based information. Conclusions: Preparing accessible summaries of evidence for consumers identifies potential improvements for Cochrane Reviews, eg the importance of Summary of Findings tables, but also challenges of providing the full range of information which people need to manage their health. Working in partnership with consumer organisations will aid this process. Funding: Fondazione Italiana Sclerosi Multipla (Italian arm); Multiple Sclerosis Research Australia, Multiple Sclerosis Australia ACT/NSW/VIC (Australian arm).

Attachments: the IN-DEEP project_abs_2013.pdf

Oral Session O1.02: Publication/Reporting Bias

Epidemiology and publication of discontinued randomized trials—the DISCO study

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Background: Discontinuation of randomized clinical trials (RCTs) has ethical implications: Participants consent on the premise of contributing to new medical knowledge, non-publication of discontinued RCTs compromises systematic reviews, and precious resources are wasted. Little is known about the epidemiology and publication history of discontinued RCTs, especially those discontinued due to poor recruitment. Objectives: To (i) estimate the risk of trial discontinuation, (ii) identify risk factors for discontinuation due to poor recruitment, and (iii) identify risk factors for non-publication in journals. Methods: We established a multicentre cohort of RCTs based on protocols approved by six research ethics committees (REC) from 2000 to 2003 in Switzerland, Germany, and Canada. From included RCT protocols we extracted data on study design and planned recruitment. We determined completion status of RCTs using REC files, identified publications, and surveys of trials. We investigated factors associated with discontinuation due to poor recruitment and full publication using logistic regression. Results: We included 1080 RCT protocols; 956 (88.5%) enrolled patients or participants at risk, and 124 (11.5%) included healthy volunteers only. The latter were excluded from the present analysis. 52 RCTs (5.4%) were never started, 10 (1.0%) are still ongoing. Of the remaining 894 RCTs, 248 (27.7%) were discontinued; reasons thereof are summarized in the table. In multivariable analysis, industry-initiation was the strongest factor preventing discontinuation due to poor recruitment (adjusted odds ratio [OR] 0.24, 95% CI 0.14–0.40; p < 0.001). 532 (59.5%) RCTs were published in journals including 115 discontinued RCTs (46% of 248). Trial discontinuation was strongly associated with non-publication (adjusted OR 2.94, 95% CI, 2.12–4.10; p < 0.001). Conclusions: Discontinued RCTs are common, in particular if they are investigator-initiated. Data from discontinued RCTs are frequently not published and therefore compromise systematic reviews and meta-analyses.

Attachments: TABLE_DISCO.pdf

Understanding the process and impact of within-study selective reporting bias for harm outcomes (ORBIT II—outcome reporting bias in trials)

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Background: The prevalence and impact of outcome reporting bias (ORB), whereby outcomes are selected for publication on the basis of the result, has previously been quantified for benefit outcomes in randomised controlled trials (RCTs) on a cohort of Cochrane systematic reviews. Important harm outcomes may also be subject to ORB where trialists prefer to focus on the positive benefits of an intervention. Empirical evidence suggests that the reporting of harms data is likely to be less complete than that of efficacy measures. **Objectives:**

- To estimate the prevalence of selective outcome reporting of harm outcomes in a cohort of both Cochrane and non-Cochrane Reviews
- To consider the assessment of selective reporting of harm outcomes in both RCTs and non-randomised studies (NRSs)
- To investigate the impact of ORB on the benefit-harm ratio
- To understand the mechanisms that may lead to incomplete reporting of harms data.

**Methods:** A classification system for detecting ORB for harm outcomes in RCTs and NRSs was developed and applied to both a cohort of Cochrane systematic reviews and reviews identified via the Cochrane Database of Systematic Reviews (CDSR) and Database of Abstracts Reviews (DARE). In a subset of reviews where ORB is identified, benefit-harm ratios will be calculated based on (i) the original analyses reported in the review (ii) the adjusted estimates once ORB has been accounted for using a suitable sensitivity adjustment method.

**Results:** From 2007 onwards a total of 234 reviews were identified from the CDSR and DARE databases in which approximately three quarters showed evidence of ORB. Full study findings from the study will be presented at the conference. **Conclusions:** Making informed decisions that consider both benefits and harms of an intervention in an unbiased way is essential in order to make reliable benefit-harm predictions.

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**A selection model to explore whether publication bias is more likely in two-arm and placebo-controlled trials rather than in multi-arm and head-to-head studies**

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**Background:** Selection models are used to explore the potential impact of publication bias (PB) via sensitivity analysis by making assumptions for the probability of publication of trials conditional on their precision. Selection models have been previously extended for a star-shaped network where several treatments are compared to a common comparator but not between themselves. **Objectives:**

- To suggest a selection model for PB in a full Network Meta-Analysis (NMA) (b) to explore whether different trial designs (number of arms and nature of comparison) pertain to different levels of PB. More specifically, we explore whether multi-arm and head-to-head trials are less prone to PB than two-arm and placebo-controlled trials.

**Methods:** We developed a design-by-PB interaction model to describe the mechanism by which studies with different designs and precision are selected for publication. We measure the extent of PB by the correlation coefficient between propensity for publication and study results. We illustrate the methodology in a network including two-arm and three-arm trials that compare Placebo, Aspirin and Aspirin plus Dypiridamole for the failure of vascular graft or arterial patency.

**Results:** The correlation between probability of publication and effect size for the comparison Aspirin versus Placebo is larger in two-arm studies compared to three-arm studies. In our example, publication of a three-arm study is not dependent on the estimated relative treatment effects, unlike placebo-controlled trials for which publication is highly associated with the magnitude of the treatment effect. **Conclusion:** The suggested selection model accounts for the fact that larger studies, studies with more than two arms and head-to-head studies might have larger chances for publication independently of their findings. We suggest employing this sensitivity analysis across various scenarios for PB to infer about the robustness of the summary treatment effects and the ranking of the competing treatments.

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**Extent of publication bias in cohorts of studies approved by research ethics committees and included in trial registries**

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**Background:** The synthesis of published research in systematic reviews is increasingly important in providing evidence to inform clinical and health policy decision making. However, its validity is threatened if publications represent a biased selection of all studies that have been conducted (publication bias). **Objectives:** To investigate the extent of publication bias we conducted two systematic reviews of methodological research projects that determined publication rates and investigated factors associated with full publication of studies approved by (i) research ethics committees (RECs) or (ii) included in trial registries. **Methods:** We conducted electronic literature searches without language restriction to February 2012. Data were extracted for methodological research projects that reported the publication rate of studies approved by RECs or studies included in trial registries with a minimum follow-up of 24 months. For both reviews separately, we calculated weighted estimates of publication rates (random effects model). Pooled odds ratios (OR) were used to express associations between study characteristics and journal publication. **Results:** Fifteen methodological research projects following studies approved by RECs and 11 following studies included in trial registries were identified. After REC approval, the weighted publication rate was 45.0% (95%CI 36.7–53.6) and after inclusion in trial registries it was 49.5% (95%CI 35.8–63.2). REC-approved studies with significant results (compared to those without) were more likely to be published (pooled OR 2.8; 95%CI 2.0–3.9). In the cohort of studies followed after trial registration phase-III trials were more likely to be published than early-phase trials (pooled OR 1.9; 95%CI 1.6–2.3). **Conclusions:** Many studies approved by RECs or included in trial registries remain unpublished. As non-publication is not a random process, our findings support the notion that the dissemination of research findings is biased.
Oral Session O1.03: Statistical methods—intention-to-treat

The impact of modified intention-to-treat reporting randomised trials in meta-analyses

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Background: A modified intention-to-treat (mITT) analysis with multiple and inconsistent descriptions is increasingly being used in randomized clinical trials (RCTs). However, little is known about the impact of mITT reporting trials included in meta-analyses. In addition, mITT reporting RCTs are likely to be associated with post-randomization exclusions and funding. This evidence comes from trials published in few journals. Objectives: (1) To estimate the prevalence of the modified intention-to-treat reporting trials in meta-analyses; (2) to determine differences in terms of post-randomised exclusions among the types of intention-to-treat reporting; (3) to confirm whether mITT is associated with funding. Methods: We searched Pubmed for systematic reviews with at least one intervention RCT from 2006 to 2011. Trials were classified according to the type of intention-to-treat reporting as follows: (1) ITT, trials reporting the use of standard ITT analyses; (2) mITT, trials reporting the use of ‘modified intention-to-treat’ analyses; or (3) ‘no ITT’ trials not reporting the use of any intention-to-treat analyses. Trials reporting the use of ITT with descriptions or conditions different from the standard intention-to-treat definition were classified as mITT. Results: The prevalence of meta-analyses that included trials with mITT reporting ranged from 19 to 39%. Compared to ITT trials, the mITT trials were more likely to report post-randomization exclusions (OR 6.48 [95%CI, 4.11–10.21]). Moreover, there was a strong association between trials classified as mITT and for-profit agency sponsorship (OR 7.08 [95%CI, 3.70–13.56]) as well as the presence of authors’ conflicts of interest (OR 3.65 [95%CI, 2.1–7.89]). Trials classified as ‘no ITT’ were also associated with funding (OR 1.39 [95%CI, 1.07–1.82]; p = 0.016). Conclusions: The reporting of mITT is systematically present in meta-analyses. Trials reporting mITT are strongly associated with post-randomization exclusions, for profit funding and presence of conflict of interest.

Ethics of randomised controlled trials challenged: the selective cross-over in trials assessing efficacy of therapies for breast cancer patients

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Background: Selective cross-over (SCO), defined as the opportunity given to patients in a randomised controlled trial (RCT) to switch to the experimental arm, is an increasingly common phenomenon. Although there are various reasons justifying it, the equipoise principle is challenged and problems in the data analysis and interpretation may arise. Objectives: (i) To assess the prevalence of SCO in scientific literature concerning the efficacy of biological and hormonal therapies for breast cancer (BC); (ii) To identify the statistical methods used to manage it. Methods: RCTs assessing the efficacy of biological and hormonal therapies in both early and metastatic BC patients published between January 2000 and July 2012 were searched. For trials in which SCO has occurred, the following characteristics were recorded: primary end point, reason justifying the cross-over (i.e. interim analysis), total randomised patients, fraction of patients switching, statistical methods used. Results: Figure 1 shows the flow diagram of studies. Seventy-two RCTs were identified. Cross-over occurred in 14 RCTs (19.4%) (Table 1). When SCO occurred, the methods mostly used to analyse data were: (1) Intention To Treat (ITT) analysis (2) Censored analysis (3) Inverse Probability of Censoring Weighting (IPCW) analysis. All the studies in the early setting presented ITT analyses; two studies (BIG 1-98, HERA) conducted censored analysis; two studies (BIG 1-98, MA17) conducted IPCW analysis. All the studies in the metastatic setting reported the ITT analysis and two (EGF104900, Mouridsen 2003) conducted censored analysis. Censored and IPCW analyses led to results favouring the experimental drug compared to ITT (Table 2). Conclusions: SCO entails ethical and methodological issues: since different methods lead to different results, further research on the impact of the various strategies is needed. It is important to keep the phenomenon monitored—not just in BC.

Attachments: Figure 1.jpg, Table 1.jpg, Table 2.jpg

Treatment effects from the patient perspective: understanding the alternatives to intention-to-treat analyses

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Background: A regulatory agency or clinician is interested in the total causal effects of recommending an intervention, which is provided by the intention-to-treat (ITT) analysis. Differing adherence rates will create heterogeneous results in a meta-analysis, which may be considered part of the treatment effect. Alternatively, the individual patient is only interested in the total causal effect of taking versus not taking treatment (complier average causal effect)—how the average population causal effect changes when others decide not to adhere to treatment is of little interest. As these analyses become more frequent, meta-analyses of these patient-focused estimates will become more common. It is essential that meta-analysts understand the fundamental assumptions and limitations of these approaches. Objectives: To explain why and how non-ITT, patient-oriented treatment causal effects (complier average causal effects), and their underlying assumptions. This presentation will review and explain the different analytical methods currently being used to determine these causal effects with respect to (1) the different questions being addressed by different methods, and (2) underlying assumptions of each method. The results of the different...
analyses will be compared across two published RCTs to illustrate the strengths and weaknesses of different approaches.

Oral Session O1.04: Conflicts of Interest

Association between personal financial conflicts of interest and recommendation of medical interventions: systematic review

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Background: Financial conflicts of interest may influence scientific data presentation and therefore influence which treatments are recommended in review articles and clinical guidelines. Objectives: To determine whether authors of scientific opinion pieces or clinical guidelines with personal financial conflicts of interest related to drug, device or medical imaging companies were more likely to recommend the companies’ products. Methods: We searched The Cochrane Methodology Register, MEDLINE and EMBASE for eligible studies. In addition we searched similar systematic reviews, reference lists of included studies, Web of Science for studies citing the included studies and contacted experts for additional relevant studies. Two assessors independently included studies, extracted data, and assessed studies for risk of bias. We calculated pooled risk ratios (RR) for dichotomous data (with 95% confidence intervals). Results: Based on a preliminary search we included three studies (303 journal articles about drug treatments). Articles written by authors with any financial conflicts of interest were more likely to recommend a company’s drug than articles by authors without conflicts of interest, risk ratio: 6.31 (95% confidence interval: 1.66–23.92). Despite the inclusion of only three articles by authors without financial conflicts of interest, risk ratio: 6.31 (95% confidence interval: 1.66–23.92). Conclusion: Our preliminary findings suggest that recommendations to use a particular drug are associated with financial conflicts of interest of the authors of the recommendation.

Identifying and managing nonfinancial conflicts of interest for systematic reviews

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Background: Systematic reviews are increasing in number, and groups including the Institute of Medicine (IOM) emphasize the importance of attention to financial conflicts of interest. Little guidance exists, however, on how to manage the risk of bias for systematic reviews (SRs) from nonfinancial conflicts of interest (NFCOI) such as strongly held beliefs, personal relationships, and desire for career advancement. Objectives: To provide practical guidance on ensuring adequate clinical or content expertise while maintaining independence of judgment on SR teams by (1) defining NFCOI as it applies to SR teams, (2) developing guidance and an instrument to identify, characterize, and manage NFCOI, and (3) improve transparency of judgment regarding NFCOI for users of reviews. Methods: Fourteen workgroup members reviewed existing international guidance on managing conflicts, built on these approaches to define NFCOI, and developed practical guidance in the form of an instrument and examples for each potential source of conflict. Results: Our definition of NFCOI in the context of systematic reviews builds on the broader IOM definition of conflict of interest. In our instrument, we propose questions for funders and SR principal investigators to evaluate whether the SR topic is subject to intense advocacy, active policy debate, large interspecialty variations, and limited availability of clinical or content expertise. Responses to these contextual questions can serve as a guide to creating an SR team that appropriately balances critical clinical and content expertise with independence of judgment. Once the team is assembled, we suggest additional questions on personal beliefs, previously published opinions, institutional relationships, and career advancement. We also propose a range of approaches to managing identified conflicts. Conclusions: This work is a consensus effort attempting to achieve a balance between supplying needed expertise and minimizing NFCOI. However, the utility of this approach and barriers to implementation must be investigated.

Considering intellectual, in addition to financial, conflicts of interest proved important in a clinical practice guideline

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Background: The conflict of interest (COI) policy of the American College of Chest Physicians 9th iteration of the Antithrombotic Guidelines (AT9) restricted panelists from discussing recommendations on which they disclosed a primary COI. To what extent, beyond assessing financial COI, assessing intellectual COI affected management of COI is uncertain. Objectives: To describe financial and intellectual COI among AT9 panelists and assess how frequently intellectual COI would have, in the absence of financial COI, resulted in restrictions on participation in decision-making. Methods: We classified financial and intellectual COI into primary (leads to voting restriction) and secondary (no restrictions). We analyzed COI disclosures of panelists and in intellectual COI into primary (leads to voting restriction) and secondary (no restrictions). We analyzed COI disclosures of panelists and in recommendations as units of analysis. Results: Of 104 panelists, 102 made 4030 disclosures for 431 recommendations. The median number (and range) of recommendations for which the panelists disclosed COI was: 0 (0–33) for secondary financial COI, 0 (0–21) for primary financial COI, 1 (0–63) for secondary intellectual COI, and 0 (0–32) for primary intellectual COI. Of the 102 panelists, 37 (36%) disclosed a primary intellectual but no primary financial COI for at least one
recommendation. Among 431 recommendations, the median number (and range) of panelists per recommendation who disclosed COI was: 0 (0–4) for secondary financial COI, 0 (0–5) for primary financial COI, 1 (0–6) for secondary intellectual COI, and 0 (0–7) for primary intellectual COI. Of the 431 recommendations, 63 (14.6%) had at least one panelist with a primary intellectual COI but no primary financial COI.

Conclusions: There was relatively low prevalence of COI in AT9. The distribution of COI was skewed (many with none, some with many). In the absence of financial COI, a substantial number of disclosures would have resulted in restrictions based on intellectual COI. The Cochrane Collaboration should ask systematic review authors to disclose both their financial and intellectual COI.

The influence of pharmaceutical companies on guidelines—two examples from Germany

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Background: Recommendations in clinical guidelines are based on study results and the opinion of experts. Objectives: The influence of pharmaceutical companies on these two factors will be examined using two examples from Germany. Methods: Court records have shown that the marketing authorization holder of gabapentin manipulated the publicly available data. Therefore, gabapentin was chosen as an example to examine if German guideline recommendations are based on manipulated data. The guidelines published by the German Association of Scientific Medical Societies (Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften, AWMF) were searched for demonstrably false publications about gabapentin. The potential impact of financial connections between guideline authors and pharmaceutical companies was investigated by comparing the recommendations of the German S3 guideline for the treatment of psoriasis using efalizumab with guideline recommendations created by authors without conflicts of interest. This example was chosen because one of the authors noticed a difference in the prescribing practice of dermatologists, with prescribers of efalizumab referring to the S3 guideline.

Results: Recommendations for the prescription of gabapentin in guidelines published by the AWMF were based on data manipulated by the marketing authorization holder. Compared to the NICE-Guideline, efalizumab and its application were favorably assessed in the S3 guideline, i.e. the quality of the evidence was considered to be good, the use of efalizumab for induction and combination therapy in psoriasis vulgaris was advocated and the improvements in health-related quality of life were highlighted. Conclusions: Public access to all trial data must be ensured. Responsibility for the development of guidelines should lie with authors and organizations that are free from conflicts of interest. This requires more public funding, as does the implementation of industry-independent drug research. The research will be published in detail: Schott G et al.: Dtsch Arztebl Int 2013; 110: in print.

Oral Session O1.05: Searching and information retrieval—Session 1

Effective searching of LILACS database for systematic reviews

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Background: Information retrieval for systematic reviews needs to be comprehensive in order to identify those studies which will provide a reliable result. The range of databases used to identify those studies, and particularly the inclusion of regional databases such as LILACS—the Latin American and Caribbean Health Sciences database, varies across organisations. Information specialists and others involved in searching for studies for evidence syntheses such as systematic reviews need to be aware of regional databases such as LILACS and how best to search them to identify studies not included in other major bibliographic databases such as MEDLINE and EMBASE. Objectives: To enable participants to operate an effective searching on the LILACS database in order to retrieve relevant information to improve the conduct of Systematic Reviews. The presentation will include an overview of the LILACS database and will focus on issues such as journal coverage, multilingual searching (to identify records in English, Portuguese and Spanish), advantages of searching these resources in addition to other databases, search features, downloading records, any current limitations to the search interface and plans for future enhancements.

Data cleaning in the Cochrane Register of Studies

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Background: The Cochrane Register of Studies (CRS) contains over 2 million records, and represents a vital data repository for Cochrane. It is also the mandatory mechanism for submitting records to CENTRAL. Objectives: To give an overview of the role of the Cochrane Register of Studies (CRS) in cleaning and enriching the Cochrane Central Register of Controlled Trials (CENTRAL). The presentation examines how the CRS can help ‘clean up’ Specialised Registers from Cochrane groups and therefore CENTRAL. The elements of CRS functionality that will help facilitate data cleaning will be outlined. The audience will be encouraged to share their experiences and ideas, with the aim of developing more harmonised, uniform practices that will improve the quality of our global data set and ultimately drive, and improve the quality of Cochrane products. This oral session is aimed at users of the CRS and users of CENTRAL.
Peer review of literature search strategies: does it make a difference?

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Background: Peer review is an integral part of scientific research. For Information Specialists, peer review feedback is used to validate the quality of search strategies. Objectives: To determine whether the peer review of literature search strategies has an effect on the number and quality of articles included in Canadian Agency for Drugs and Technologies in Health (CADTH) rapid review reports. Methods: A total of 150 pairs of pre-peer-reviewed and peer-reviewed search strategies for CADTH rapid review reports related to health devices medical procedures, and pharmaceuticals were randomly selected and screened. For search strategies meeting specified selection criteria, pre-peer-reviewed and their corresponding peer-reviewed searches were run and the search results were compared. Unique articles retrieved solely by peer-reviewed searches and included in the final reports were identified and categorized according to publication type. Results: Of the 150 pairs of pre-peer-reviewed and peer-reviewed searches screened, 47 met the selection criteria. Of these 47 pairs of searches, 43% (20/47) of the peer-reviewed searches retrieved a total of 81 unique articles that were included in rapid review reports. The 81 articles consisted of 5 systematic reviews, 3 randomized controlled trials, 52 non-randomized studies, 1 guideline, 18 review articles and 2 other. Conclusions: The results of this study suggest that the peer review of literature search strategies can improve both the number and quality of relevant articles retrieved.

Oral Session 01.06: Investigating bias—Session 1

Addressing missing participant data for continuous outcomes assessed with different instruments: a guide for systematic review authors

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Background: We previously developed an approach to address the impact of missing participant data for continuous outcomes in meta-analyses of trials that used the same measurement instrument. Objectives: To extend our approach to meta-analyses including trials that use different instruments to measure the same construct. Methods: We reviewed the available literature, and conducted an iterative consultative process with nine methodologists. We applied our approach to an example systematic review of respiratory rehabilitation for chronic obstructive pulmonary disease. Results: Our approach involves first choosing a reference instrument, typically the one that is most familiar to the target audience and/or has the best measurement properties. Second, we convert scores from different instruments to the units of the reference instrument. Third, we impute the means for participants with missing data using five sources of data that reflect observed outcomes from the trials in the systematic review. These range from the best mean score among the intervention arms
of included trials to the worst mean score among the control arms of included trials. Fourth, we apply four increasingly stringent imputation strategies for addressing missing participant data (Table 1). To impute standard deviation (SD), we used the median SD from the control arms of all included trials. Finally, we calculate a pooled mean difference for the complete case analysis and each of the four imputation strategies. In the example review, pooled effect estimates diminished but lost significance only with the most stringent strategy (Strategy 4, Fig. 1). When judging the risk of bias as a result of missing participant data, one should consider both the plausibility of the more stringent strategies, and the importance of the apparent intervention effects. Conclusions: Our extended approach provides guidance for addressing missing participant data in systematic reviews of trials using different instruments to measure the same construct.

Attachments: Table 1.pdf, Figure 1.pdf

**Prediction study risk of bias assessment tool (PROBAST)**

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**Background:** Quality assessment of included studies is a crucial step in any systematic review. Review and synthesis of prediction modelling studies is a relatively new and evolving area. The QUIPS tool for prediction finding studies has been recently updated. However, a tool facilitating quality assessment for prognostic and diagnostic prediction modelling studies is needed. **Objectives:** To develop PROBAST, a tool for assessing the risk of bias and applicability of prediction modelling studies. **Methods:** Risk of bias addresses the extent to which reported estimates of the predictive performance/accuracy (e.g. discrimination, calibration and (re)classification estimates) of the prediction model are potentially biased. Applicability refers to the extent to which the reported prediction model and the population used to measure model performance matches the review question and intended use of the model. For PROBAST, we have adopted a domain-based structure supported by signalling questions similar to QUADAS-2, which assesses risk of bias in diagnostic studies. We are using a Delphi process to develop PROBAST. Existing initiatives in the field of prediction research such as the REMARK (Reporting Recommendations for Tumor Marker Prognostic Studies) guidelines and the TRIPOD prediction model reporting guidelines formed part of the evidence base for the tool development. The scope of PROBAST was determined with consideration of existing tools, such as QUIPS. Forty experts and review authors in the field of prediction research are taking part in the Delphi process. We anticipate about five rounds of this process will be needed until agreement on the content of the final tool. **Results and Conclusions:** The first rounds developing domains are now completed. The presentation will give an overview of the process, the current version of the tool (including the addressed domains and signalling questions) as well as an insight into underlying discussions.

Attachments: PROBAST references.pdf

**Exploring mechanisms of publication bias in systematic reviews of diagnostic test accuracy**

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**Background:** Selective publication can seriously threaten the validity of the results of a systematic review. For intervention studies various mechanisms of selective publication have been identified. The mechanisms underlying selective publication of studies on diagnostic test accuracy (DTA), however, are not well understood. There might be some analogies with intervention studies: small sample sizes tend to have a larger and more positive effect compared to studies with larger sample sizes. In addition, the first studies reporting results of a novel intervention, tend to have more positive findings, though subsequent publications commonly show less optimistic results. **Objectives:** To explore whether sample size or time of publication affects the results of DTA reviews. **Methods:** We have searched MEDLINE and EMBASE to identify DTA reviews with a meta-analysis published between May and September 2012. From the largest meta-analysis of every review we have extracted characteristics of the primary studies: total sample size, year of publication, and two-by-two tables. The existence of sample size effect or time effect will be investigated by meta-regression for each meta-analysis by the use of the bivariate model. The resulting regression coefficients and corresponding variances will be combined in a random effects model to investigate the overall association. **Results:** We have included 53 DTA reviews. So far, we have done data extraction for 28 reviews. The meta-analyses contained a median of 12 primary studies (IQR = 7–17) and a median sample size of 81 participants (IQR = 42–153). Median difference in publication year since first publication was 7 years (IQR = 4–11). Data collection is currently ongoing and results of the meta-regression will be presented at the Colloquium. **Conclusions:** This study aims to investigate sample size and time of publication as possible mechanisms of selective publication in the DTA setting. We will provide authors of DTA reviews with guidance regarding the investigation of publication bias.

**What is the probability of discovering breakthrough interventions in industry versus publicly sponsored randomized controlled trials**


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**Background:** Research efforts tested in randomized controlled trials (RCTs) have played a vital role in the development of new treatments in
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Germany; 3Cochrane Web Team, Germany; 4Cochrane Innovations, USA

be adopted immediately as a new therapeutic standard (= 6), and
tonation was so successful according to the original researchers that it should
were defined two ways: semi-quantitatively (score 1–6): the interven-
reviewed. Published and unpublished data were used. Breakthroughs
were defined two ways: semi-quantitatively (score 1–6): the interven-
the available translations via Cochrane communication channels and
the Wiley Usage Data Warehouse will be analysed to measure usage

Methods: All completed phase 3 RCTs conducted by 5 publicly
funded groups (820 trials, 1064 comparisons, 331 004 patients) and
GlaxoSmithKline (40 trials, 55 comparisons, 19 889 patients) were
reviewed. Published and unpublished data were used. Breakthroughs
were defined two ways: semi-quantitatively (score 1–6): the interven-
tion was so successful according to the original researchers that it should
be adopted immediately as a new therapeutic standard (= 6), and
quantitatively: the intervention effect resulted in a log odds ratio < -0.5
for the primary outcome. Results: Quantitatively, 14% (n = 149) of
comparisons resulted in breakthrough interventions in publicly funded
studies versus 34% (n = 19) in industry sponsored RCTs. According
to the original investigators, 15% (n = 124) of experimental testing were
breakthrough in the cohort of publicly funded versus 35% (n = 14)
in industry sponsored studies. Semi-quantitatively 12% (n = 15)
breakthroughs were for breast cancer in publicly funded studies
versus 78% (n = 11) in privately funded studies for chemo/radiation
induced emesis. Induction and curative therapies jointly resulted in
62% and 73% of breakthroughs by quantitative and semi-quantitative
assessment, in publicly funded RCTs versus 2% quantitatively and 0%
semi-quantitatively in industry sponsored RCTs. Conclusions: This is
the first comprehensive assessment of success of innovative therapies
in medicine tested in a cohort of public versus industry sponsored RCTs.
Majority of breakthroughs by publicly funded RCTs addressed curative
therapy strategies compared with supportive care in industry funded
RCTs. All stakeholders should understand what it takes to produce a
successful breakthrough intervention in medicine.

Oral Session O1.07: Accessing and disseminating Cochrane evidence

Impact of translations on access to Cochrane Reviews

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Background: Translations of Cochrane abstracts and plain language
summaries have been published centrally via Archie since September
org/. Croatian, French, Portuguese, Simplified Chinese, Spanish and
Traditional Chinese translations are currently available online or will be
made available in the coming months. Objectives: To measure the
impact of translations on access to and usage of Cochrane Reviews.

Methods: Data acquired from Google Analytics will be analysed
to determine the usage of translated abstracts and plain language
summaries via the Cochrane Summaries website; data acquired from
the Wiley Usage Data Warehouse will be analysed to measure usage
on The Cochrane Library website. A strategic approach to promoting
the available translations via Cochrane communication channels and
involving Centres and others in regional promotion in the respective
languages is planned. Usage statistics for the different languages
will be compared on both websites over a period of 4–5 months.

Results: Analysis of usage statistics from Cochrane Summaries has
demonstrated a tremendous increase in access from French-speaking
countries since the regular addition of French translations, including a
French interface, search and browse from September 2012. Similarly,
recent analysis of a sample of Simplified Chinese translations has
shown an increase in access to Cochrane Reviews on The Cochrane
Library by Chinese users. Strategic promotion as indicated above
and continued usage analysis will aim at answering the following
questions: Are the translations reaching their intended audience?
What effect do translations have on the overall usage of Cochrane
Reviews? How do people go to translations, and is that different to
English reviews? Have some languages proved more popular than
others? Conclusions: Based on the initial analysis of French and
Chinese translations, strategic promotion and further data analysis
should highlight the important usage of Cochrane translations and
their impact on the overall usage of Cochrane Reviews.

Issues in developing and disseminating summaries of Cochrane Reviews for specific external audiences

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Background: The role of Cochrane Fields is to provide links
between the Cochrane Collaboration and the stakeholders (clinicians,
researchers, and consumers) in the Field’s area of interest. Developing
and disseminating summaries of Cochrane Reviews is one way in which
Fields link between Cochrane and specific external audiences of Field
stakeholders. Objectives: To share two models of Cochrane Review
summary development and dissemination to specific stakeholder
groups. Methods: Examples of summaries of Cochrane Reviews
produced by two Cochrane Fields will be presented and analysed to
exemplify different successful models of summary development and
dissemination. The methods used by each Field, and the lessons
learned, will be described in detail. Issues addressed will include:
working with authors and Cochrane Review Groups, methods to
identify and work with collaborators in developing the summaries,
successful strategies for positioning Cochrane Review summaries in a
range of media, and evidence of impact of summaries upon targeted
groups. Results: Examples include summaries of Cochrane Reviews
published in topic specific international journals; journal commentaries
upon reviews; a handbook of summaries of Cochrane Reviews; and
bulletins with translated plain language summaries. Conclusions:
Cochrane Fields have considerable expertise in knowledge translation
activities related to Cochrane, including producing and disseminating
summaries of Cochrane Reviews. The variety of approaches leading to
successful knowledge translation for Field audiences, and the lessons
learned along the way, may serve as models for others wishing
to develop and disseminate Cochrane Review summaries and other
alternative products.
Cochrane goes green and gold: overview and impact of open access options for Cochrane Reviews

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1 John Wiley & Sons Ltd, UK; 2 Cochrane Editorial Unit, UK

Background: ‘Gold’ open access—known as ‘green’ open access. Secondly, authors can choose to make their Cochrane Review freely available immediately upon payment of an article processing charge—The Cochrane Collaboration aspires to prepare and publish high-quality research aimed at informing decision-making globally and to make this available via one-click access at the point of use. On February 1, 2013, two open access options were introduced for all Cochrane Reviews for the first time. Firstly, all new and updated Cochrane Reviews will be made freely available 12 months after publication. Objectives: To summarise the new open access options and provide analytics on their uptake and impact on usage and access, evaluate how ‘open’ the Cochrane Database of Systematic Reviews (CDSR) is according to the ‘How open is it?’ guide (www.plos.org/about/open-access/howopenisit), and describe how this relates to funder mandates. Results: The open access options and the analytics will be described. Figure 1 (modified from HowOpenIsIt? Open Access spectrum, 2013 SPARC and PLOS, licensed under CC-BY) shows where the CDSR currently fits onto the open-access spectrum. Conclusions: Open access is here to stay and the CDSR is responding to requirements of funders and authors to provide different options for making Cochrane Reviews open access. However, the open access landscape is still evolving and so it is important that anyone involved in producing Cochrane Reviews is aware of their funder’s particular requirements, and the publishing options available to them. Figure 1. How open is it? Gold and green access in the CDSR

Attachments: figure 1.png

Why should we translate Cochrane Reviews into French?

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Background: The efforts of the Cochrane Collaboration to produce up-to-date high quality health evidence are undermined by language barriers. People in many regions of the world where disease and poverty are rife do not speak English and therefore are unable to benefit from many Cochrane products. A number of translation efforts are underway but there are still many challenges to be overcome. What is the argument for translating reviews into French? The first reason is equity. It is unfair that something as surmountable as language should limit access and utilization of a resource as important as the Cochrane Library. The second is that if we hope to alleviate the burden of disease we must target the regions of the world where it is highest. This region is arguably Africa where the highest numbers of French speakers reside. Thirdly, French public health publications do not respond to the needs of French-speaking developing countries. What are the challenges in developing useful French translations for developing countries? The most important challenge is dedicated man-power for French translations. The second involves setting up a mechanism for establishing priorities, such that the translations are relevant to the people who need them the most. The third challenge is creating dissemination mechanisms that correspond to the users. The fourth challenge is collaboration between all the entities involved in translations such that efforts are not duplicated. The fifth is engaging more French-speaking researchers in the production of Cochrane Reviews so that the first four obstacles are less onerous. Conclusion: Despite current efforts, we can do more to reach non-English speakers, by enhancing and streamlining our efforts, and establishing priority topics for translation and dissemination.

Oral Session O1.08: International Approaches

Policy buddies: baseline assessment of the institutional capacity for evidence informed decisions in provincial health departments in South Africa

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Background: Robust evidence helps policy-makers shape effective and efficient health services, including what services to provide, how to deliver them, and how to shape the service. Helping policymakers understand what research can help with, and helping researchers understand what might be useful to policy makers, is central to effective research-user dialogue. We report on the initial analysis from the Policy BUDDIES—Building Demand for evidence in Decision making through Interaction and Enhancing Skills of policymakers funded by the World Health Organization. Aim: To understand policymakers’ capacity, as well as enablers and constraints related to demanding evidence during policy formulation and implementation, and map existing communication between policymakers, research intermediaries and researchers. Methods: We carried out key informant interviews of managers of health programmes related to delivery of Millennium Development Goals 4 (reducing child mortality), 5 (improving maternal health) and 6 (combating HIV/AIDS, malaria and other diseases). We recorded, transcribed and analysed the interviews formally, using framework analysis. Results: We will present the provincial policymakers’ priorities, and their knowledge and attitude to evidence informed decision-making. This will include an assessment of the contexts in which policies are formulated, enabling and constraining factors related to demanding evidence; roles, skills, and resources that provincial policymakers’ have towards evidence-informed decision-making; and priority areas for research and policy-making in provincial health departments; existing links between decision-makers, research intermediaries and researchers for obtaining research evidence; and policymakers’ opinions on existing knowledge translation tools. Conclusion: A thorough understanding of how policy process operates and policymaker priorities is essential.
Translating Cochrane abstracts and plain language summaries from traditional to simplified Chinese: feasibility assessment and user survey

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Background: Awareness of Cochrane Systematic Reviews is increasing in mainland China. To date, there has been no systematic effort to translate a substantive number of Cochrane abstracts into Simplified Chinese for mainland China. Objectives: To examine the feasibility of translating Cochrane abstracts and plain language summaries (PLSs) from traditional into simplified Chinese and to assess the work and resources involved in creating good quality translations. Methods: One hundred Cochrane abstracts and PLSs on a range of topics were selected to be translated into Simplified Chinese based on a pre-designed Standard Operating Procedure (SOP)(Annex 1). Resources including personnel, expertise, time, and financial cost were assessed during the translation process. User views on the translations were explored by qualitative interview with key informants using semi-structured topic guide (Annex 2). All the interviews were transcribed verbatim in Chinese characters and appropriately analysed using a simple thematic analysis approach. Results: We did the translation mainly based on the pre-designed SOP and made some adjustments according to the practical situation. The detailed resources we used included personnel, expertise, time, and financial cost see Annex 3. User views on the following three aspects were summarized: (a) the quality of translated abstracts and PLS; (b) whether investing in these translations is worthwhile; (c) whether it helps to disseminate Cochrane Review evidence in China. Conclusions: The translations are of good quality and easy to read. The SOP played an important role in the whole process of translation. The idea of converting from Traditional Chinese version into Simplified Chinese version needs to be reconsidered as it created reading and understanding problems and did not save our time and resources. For scale up of the project, we may firstly translate a selection of reviews and then formally evaluate on user views after the translations have been put on The Cochrane Library.


Development of user-friendly evidence summaries for the rational use of essential medicines and other complex drugs in the Americas

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Background: The Pan American Health Organization (PAHO) is promoting user-friendly summaries based on the best available evidence to inform policymakers on the use of essential medicines, drugs with high costs or under conditional approval by regulatory agencies. Objectives: To describe the methodology to develop evidence syntheses that integrates evidence on benefits and harms and aspects related to the use of resource use, to support policymaking. Methods: PAHO created the Regional Platform on Access and Innovation for Health Technologies (PRAIS) with the aim to improve access and rational use of essential medicines and other complex drugs. PAHO formulates specific clinical questions on relevant drugs for their use in the Americas. Each clinical question generates a search of a systematic review in the CDSR, DARE or PubMed. The review results on effectiveness and safety are summarised, classifying the quality of evidence according GRADE system. The summaries incorporate comments on economic studies retrieved from the NHS Economic Evaluation Database and a contextualisation about the applicability of the evidence. The evidence summaries are then included in the ‘Annotated medicines list’ section of the PRAIS as a support tool to decision making. Results and Conclusions: We have developed 65 evidence summaries about antibacterial agents, antineoplastics and cytotoxics, antiparasitotics, antivirals, antiretrovirals, antituberculosis medicines, contraceptives, and vaccines. These summaries are produced following a pragmatic and simplified methodology that provides technical support to policymakers in the decision making process. The integration of these summaries into PRAIS facilitates access to reliable knowledge and promotes rational use of drugs and governance of health technologies from a public health perspective. We plan to discuss how the Summary of Findings tables could ease the process of evidence synthesis by identifying patient important outcomes and the presentation of systematic reviews results.

IRIS—a tool for prioritising guidance development at the European Centre for Disease Prevention and Control (ECDC)

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Background: ECDC provides independent scientific expertise to EU bodies and Member States (MS) in the field of communicable diseases. Identifying topics of relevance for the European community in order to use the available limited resources in an efficient and equitable way becomes even more important in view of economic constraints. Objectives: The aim was to develop a priority setting framework that ensures transparency throughout the whole process and the involvement of stakeholders. Methods: A literature review was performed to identify examples of prioritisation exercises and guidelines. 155 publications were assessed in view of pre-defined objectives and 27 were used to inform the ECDC prioritisation framework IRIS. A matrix including four priority categories and three indicators each was created in collaboration with ECDC’s Advisory Forum (AF) (Tables). A commercially available survey tool was adapted to IRIS, piloted and revised, and firstly fully applied within the planning process for the work plan 2014. In a first step, each indicator was weighted. Project proposals provided by the Centre’s disease programmes were then ranked against the indicators by
the AF members. **Results:** 16/35 AF members participated in the weighting exercise, and 27/35 in the prioritisation of project proposals. However, the variation obtained in the weighting exercise was very wide with only a small preference given to ‘Saves MS resources when coordinated/perform at EU level’. 27 project proposals were then ranked against the weighted indicators. Within the possible range from −12 (no priority) to +12 (highest priority), the seven highest ranked projects were between 6 and 7. Only one project was ranked below zero. **Conclusions:** The wide variation of results obtained during the weighting of the indicators most probably reflects the diversity of interests and needs in the different MS, although the low participation does not allow final conclusions. The participation in the prioritisation of project proposals was higher and the feedback received with regard to usefulness and feasibility generally positive. The objectives of developing an easy-to-use and transparent tool were met, although the right balance between individual MS and European level needs remains a challenge.

**Attachments:** IRIS - attachment (2 tables).pdf

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**Oral Session O1.09: Knowledge Translation and Communicating the Evidence—Session 1**

**Workforce training in evidence-informed decision making**

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**Cochrane Public Health Group, Australia**

**Background:** Whilst public health practitioners and policymakers ideally should be using evidence to inform their decision-making, a range of barriers exist in practice, including time to access evidence, skills, and organisational culture. The Cochrane Public Health Group (CPHG) has instigated a range of knowledge translation (KT) strategies, including workforce development (training), to encourage utilisation of its reviews in public health decision-making. The CPHG has delivered tailored short-courses in evidence-informed public health (EIPH) since 2005 in collaboration with others. Whilst training programs that aim to increase knowledge and skills for evidence-informed decision-making show promise, few rigorous evaluations are available to determine their effectiveness. **Objectives:** To describe the methods and results of an ongoing evaluation to understand short-term and longer-term impacts of workforce EIPH training. **Methods:** Traditionally CPHG have evaluated participants’ experiences directly following each EIPH course. A more comprehensive pre-post evaluation to assess knowledge, confidence and attitudes was undertaken in 2012. Survey instruments were developed to suit the EIPH teaching process. Participants were invited to complete a pre and post impact evaluation survey within a week prior and immediately after each course was delivered. Participants were also invited to respond to a longitudinal assessment after 6 months to assess sustainability of training outcomes. **Results:** In addition to consistently high ratings of the course relevance, ease of understanding content, and facilitators’ performance, improvements across five core domains of evidence-informed practice have been observed from evaluation data collected pre and post training courses delivered in 2012. Data analysis is underway and longitudinal assessment is ongoing. This presentation will report results on participant experiences, and changes in confidence and attitudes to finding and utilising evidence to inform programs and policies. **Conclusions:** Evaluation of EIPH training will build knowledge about whether this strategy is effective for enhancing the use of evidence in public health decision-making.

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**Dietitian’s perspectives of systematically reviewed interventions enhancing adherence to dietary advice for preventing and managing chronic diseases in adults: a Delphi study**

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**Background:** Adoption of a healthy diet has been identified as the cornerstone for preventing and managing several chronic diseases. However, adherence to dietary advice is suboptimal, thus potentially hampering the effectiveness of dietary interventions. **Objectives:** To assess dietitians’ perspectives on the importance and applicability of interventions enhancing adherence to dietary advice for preventing and managing chronic diseases in adults in the Canadian context. **Methods:** By conducting a Cochrane systematic review, we identified eight promising interventions for enhancing adherence to dietary advice: telephone follow-up, feedback based on self-monitoring, portion sizes, exchange lists, individualized menu suggestions, behavioural contract, watching a video, and multiple interventions. Expert dietitians were recruited to participate to a Delphi study through an invitation email sent to various chronic diseases-related networks from Dietitians of Canada. They were invited to participate by completing an electronic questionnaire asking them to rate the importance and applicability on a seven-point Likert scale of each of these eight specific interventions in their practice. **Results:** Among the 32 dietitians who completed the three-round Delphi study, four interventions showed a strong consensus using a ≥ 75% level of agreement. Among those, feedback based on self-monitoring (6.97 ± 0.18 and 6.72 ± 0.46; means ± SD for importance and applicability respectively), multiple interventions (6.94 ± 0.25 and 6.81 ± 0.40), and portion sizes (6.69 ± 0.46; means ± SD) were found important and applicable, while video (4.75 ± 0.67 and 4.84 ± 0.72) was found neither important nor unimportant and neither applicable nor inapplicable. **Conclusions:** These findings could guide the development of educational training sessions for dietitians to help them provide interventions that are likely to be adhered to by their patients but also that are applicable to their practice. Further studies should validate these findings with
Communicating Cochrane Reviews: experiences with a review specific dissemination strategy

Cochrane Infectious Diseases Group Editorial Base, Liverpool School of Tropical Medicine, UK

Background: Effective communication of Cochrane Reviews helps people use our reviews to identify research priorities, to teach, to help clinical decision making, and to contribute to policy. What is more, if academics find the reviews helpful, they may cite them. The Cochrane Infectious Diseases Group (CIDG) has developed a Review Specific Dissemination Strategy that targets stakeholders on a case by case basis. Objectives: To report on our Review Specific Dissemination Strategy, and reflect on lessons learnt. Methods: The Editorial Team assess each review at the time of submission against a checklist of stakeholder categories such as ‘multilateral organizations’, ‘clinical specialists’, or ‘the general public’. Within each we might identify specific categories, organizations, and individuals, and decide on our dissemination strategy for each. In addition, we identify the lead authors of included trials published in the last 10 years and let them know the review has been published. For reviews that have high potential for impact, we may seek ways to ensure pickup by blogs or in editorials. Results: We have been applying this approach for the last 8 years. We will present case studies of review specific strategies, an analysis of the various strategies used across reviews, and report on the experiences emailing individual trial authors. We will also provide examples of particular impact with the public, medical press and other stakeholders. Conclusions: Cochrane Review Groups, with their knowledge of stakeholders in their topic areas, can develop and implement systematic, thoughtful review specific dissemination strategies. These could potentially increase the impact of Cochrane Reviews.

Hitting the right target—disseminating Cochrane Review findings for greatest impact

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Background: Knowledge translation and exchange (KTE) strategies aim to support evidence informed decision-making. Such strategies look to bridge the gap between research producers and end-users of research, building interactive communicative relationships between the two groups. The Cochrane Public Health Group (CPHG) produces reviews of a range of interventions focused on the social and structural determinants of health at population-levels. CPHG has used a variety of KT strategies, including stakeholder identification and engagement, knowledge brokering, targeted dissemination and workforce development to ensure that CPHG reviews are useful and utilised in public health decision-making. As new Cochrane Reviews are published, KTE strategies are required to ensure findings and recommendations from each review reach the people who need to act upon them. One such strategy focuses on dissemination through strategic communication. Objectives: CPHG has sought to understand how review groups can support authors develop and deliver dissemination strategies; ensuring findings and recommendations of reviews are targeted towards appropriate audiences and messages are tailored accordingly. Methods: Working with review authors, CPHG developed dissemination strategies addressing communication objectives. Extensive stakeholder lists were developed to determine key individuals and organisations that each review and its recommendations were relevant to. A variety of communication tools were developed to engage with these audiences. Results: Using case studies of recently published CPHG reviews; the process of developing and implementing a dissemination strategy will be discussed. Experiences will be described highlighting how review groups can support authors. Observations of the value of targeting dissemination to relevant stakeholders will also be reported. Conclusions: Dissemination strategies for Cochrane Reviews require time, resources and appropriate skillsets. By delivering well-considered strategies, the reach of review findings can be expanded and authors can develop communicative relationships with key stakeholders. These relationships can promote ongoing KTE, including the identification and funding of priority reviews.

Searching for black swans: critically assessing surrogate markers in Cochrane Reviews

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Background: The US Food and Drug Administration defines a surrogate as ‘a laboratory measurement or physical sign that is used in therapeutic trials as a substitute for a clinically meaningful end point that is a direct measure of how a patient feels, functions, or survives. Surrogate markers are expected to predict the effect of therapy’. Examples of surrogate markers are LDL cholesterol, glycated hemoglobin, and blood pressure. Despite their frequent use in healthcare intervention research, surrogate markers are not always useful as efficacy measures and can be misleading. Surrogate marker evidence appears in many Cochrane Reviews but is not always critically assessed. Objectives: To provide an understanding of the logic and systematic framework that is required to critically assess surrogate markers when used as measures of efficacy in healthcare intervention reviews. Methods: This presentation will introduce the concept of falsifiability (i.e. looking for ‘black swans’) and the logic required to assess the relationship between surrogate markers and the risk of morbidity and/or mortality as it relates to healthcare intervention efficacy. Participants will be given practical exercises to help answer the following questions when faced with surrogate marker evidence in the process of conducting a Cochrane Review: does a ‘worsening’ surrogate marker (e.g. increasing LDL cholesterol) indicate an increased risk of morbidity and mortality?; is it universally true that ‘improving’
the surrogate marker (e.g., lowering LDL) with a intervention leads to an improvement in a clinical condition or a decreased risk of M/M?; can we use surrogate markers to monitor the effect of interventions (i.e., if a surrogate marker is ‘improving’, does that mean the medication is working)? Participants will then be given guidance on including critical assessments of all surrogate marker evidence in their Cochrane Reviews. For readers of reviews, guidance will be given on interpreting this type of assessment.

Variation in outcome measure usage across Cochrane Systematic Reviews related to three common eye conditions

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Background: For meaningful comparisons of interventions across systematic reviews (SRs), including network meta-analyses, outcome measures in SRs should be consistently and clearly specified. Previous research has demonstrated substantial variation in specification of outcome measures across SRs addressing glaucoma. Objectives: To assess variation in outcome measure specification across Cochrane SRs addressing three common eye conditions: age-related macular degeneration (AMD), cataract, and diabetic retinopathy (DR). Methods: We first determined all outcomes assessed across the SRs addressing these conditions, and ranked the outcomes by frequency. Two abstractors independently extracted information from the methods sections of these SRs about the three most frequently assessed outcomes. For each outcome, we extracted the measure(s) used in the analysis, whether continuous (e.g., mean visual acuity at a follow-up time point) or discrete (e.g., percent of participants falling into a pre-specified category). Results: We identified 36 completed Cochrane SRs and protocols addressing AMD (n = 16), cataract (n = 16), and DR (n = 4). The most frequent outcomes were visual acuity (n = 35), quality-of-life (n = 32), and contrast sensitivity (n = 13). A variety of outcome measures were specified (Table). For example, for AMD, 8/16 SRs assessing visual acuity used mean visual acuity at a follow-up time point, 4/16 used mean change in visual acuity from baseline to a follow-up time point, 5/16 used number/percent of participants falling into pre-specified categories, and 6/16 reported that they would analyze visual acuity as provided in included studies (Box). Outcome measures were often not specified, for example, in 6/9 SRs on AMD assessing contrast sensitivity and in all 4 SRs on DR assessing quality-of-life. Conclusions: While certain outcomes (e.g., visual acuity) were assessed frequently in SRs, specific outcome measures were used in various ways and were often not specified. SR authors should be aided by review group editors to be more consistent and explicit in outcome measures used.

Attachments: Outcomes Abstract-Consistency_2013_Tables.pdf

Effect sizes in child health and association with unreported outcomes

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Background: Research has shown that half of randomized controlled trials (RCTs) included in Cochrane systematic reviews do not contribute to the meta-analysis of patient-important outcomes. Further, previous research showed an inverse relationship with effect size and the proportion of RCTs contributing to the meta-analysis. One potential explanation for this finding is selective outcome reporting. Objectives: To describe effect sizes in pediatric RCTs and the association between the proportion of relevant RCTs contributing to a meta-analysis and the magnitude of effect. Methods: Using the Cochrane Database of Systematic Reviews we identified systematic reviews relevant to child health. We identified the primary outcome for each systematic review and extracted data when a meta-analysis had been conducted (n = 432). We calculated an overall effect size for meta-analyses based on the proportion of relevant RCTs included using categories from previous research: <20, 20 to <40, 40 to <60, 60 to ≤80. Results: The median effect size across all meta-analyses was 0.35 (IQR 0.15,0.59) which is considered small to moderate. The mean proportion of relevant studies contributing to a meta-analysis was 0.49 (95% CI 0.47, 0.52). There was no association between effect sizes and the proportion of RCTs contributing to a meta-analysis. However, effect sizes were associated with the size of the meta-analysis with smaller effect sizes seen with larger meta-analyses (i.e., smaller confidence intervals). Conclusions: We found an association between effect sizes and the size of meta-analysis. This effect is similar to that seen for publication bias at the individual study level. Caution should be taken when interpreting meta-analyses based on small numbers of studies and patients, which is consistent with the GRADE recommendations for considering imprecision. Effect sizes were small to moderate overall. These data may provide a guide for sample size calculations in future pediatric trials.

Making results of patient-reported outcomes interpretable

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Background: Patient-reported outcomes include reports of symptoms, health-related quality of life, and patient satisfaction. In some areas, patient-reported outcomes are typically primary outcomes; in others, they complement measures of morbidity and mortality. Patient-reported outcomes often present unique challenges in interpretation faced to a considerably lesser extent by other outcomes. Many of those who use Cochrane Reviews will be unfamiliar with the instruments used to measure patient experience, and they will find the significance of the differences expressed in natural units (the pooled differences between intervention and control was five units on instrument x) obscure. The challenge is compounded when several instruments using different units measure the same construct requiring standardized units for aggregation across studies. Objectives: The presentation will describe the tools to make patient-reported outcomes interpretable to the audiences of their Cochrane Reviews. This presentation will address the methods available for making patient-reported outcomes readily understandable to the audience of Cochrane Reviews. Concepts that will be introduced include the minimal important difference (the smallest difference that would motivate a patient to use an intervention), the dichotomization of outcomes (e.g.
proportion of patients who achieve a minimal important difference), and alternatives to the standardized mean difference as an approach to aggregating across different instruments measuring the same construct.

**Oral Session O1.11: Qualitative evidence**

**Integrating findings from a Cochrane Systematic Review of effectiveness and a Cochrane qualitative evidence synthesis: methods and lessons learnt**

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**Background:** There is a growing interest globally and within the Cochrane Collaboration in conducting qualitative evidence syntheses to complement reviews of intervention effectiveness. Qualitative data synthesis can be used, for instance, to explore diversity in populations and interventions included in reviews of effectiveness and to shed light on processes behind the results of these reviews. However, there is very little knowledge or experience on how to integrate these two sources of evidence. **Objectives:** To describe an approach used to integrate evidence from a Cochrane Review of the effectiveness of lay health worker programmes with evidence from a Cochrane qualitative evidence synthesis exploring barriers and facilitators to the implementation of these programmes. **Methods:** Based on the draft qualitative evidence synthesis, we produced a summary of qualitative findings table of factors that appear to affect lay health worker programme implementation. We are currently using this summary of findings to build a logic model that indicates how these factors might relate to each other and how they might lead to specific lay health worker programme outcomes, such as changes in health care utilization or health outcomes. Our next step is to examine the effectiveness review to see whether this includes outcomes that correspond to the various stages of the model, and to identify where we have gaps in both outcome assessment and evidence regarding specific explanatory pathways within the model. **Results:** In our presentation we will describe our experiences when moving from the summary of qualitative findings table to the logic model, including the challenges encountered in linking together specific qualitative findings in a relational model; in the development of methods for indicating the certainty of each finding or factor, as well as the certainty of the relationship between each factor; and in bringing together the logic model and the effectiveness review data.

**Assessing how much certainty to place in findings from qualitative evidence syntheses: the CerQual approach**

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**Background:** Qualitative evidence syntheses are increasingly used to bring together findings from qualitative studies. However, it is difficult to use these findings alongside Cochrane effects reviews, or to inform policy development, because methods to assess how much certainty to place in these synthesis findings are poorly developed. **Objectives:** To describe a novel approach for assessing how much certainty (or confidence) to place in the findings of qualitative evidence syntheses. **Methods:** The certainty of the qualitative evidence (CerQual) approach was developed through review of existing tools in this area; discussions within a working group; and piloting of the tool on three qualitative evidence syntheses. **Results:** The CerQual approach bases assessments of certainty on two factors: the methodological limitations of the individual studies contributing to a review finding and the coherence of each review finding. Methodological limitations are assessed using a quality-assessment tool for qualitative studies. Coherence is assessed by looking at the extent to which it is possible to identify a clear pattern across the individual study data. Coherence may be further strengthened if the individual studies contributing to the finding are drawn from a wide range of settings. We propose three levels of certainty: high, moderate and low. Findings drawn from generally well-conducted studies with few methodological limitations—and showing high levels of coherence—are rated as ‘high’ certainty. Findings are assessed as ‘moderate’ certainty where there are concerns regarding either the methodological limitations of the studies or the coherence of the review finding. Where the studies have important methodological limitations and there are concerns regarding the coherence of the review finding, the certainty is assessed as ‘low’. **Conclusions:** The CerQual approach provides a transparent method for assessing the certainty of evidence from qualitative syntheses and may facilitate the use of these findings alongside Cochrane Reviews of effects.

**Using qualitative research to explore heterogeneity in a Cochrane Review**

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**Background:** The Cochrane Handbook suggests several ways in which qualitative research can contribute to Cochrane Reviews.
Supplemental guidance to the Handbook suggests that one way of doing this is by providing information, for instance on diversity in population characteristics, that can contribute to decision making about subgroup analyses, and thereby offer explanations for heterogeneity on study findings. **Objectives:** To describe how a systematic review of qualitative research was used to explore heterogeneity in a Cochrane Review. **Methods:** The Cochrane Review on the effects of audit and feedback on professional practice and healthcare outcomes offers a large body of evidence. However, the included studies showed large variation in effectiveness. When updating the review, the authors therefore explored factors that might explain this heterogeneity and provide a basis for exploratory analysis. A systematic review of qualitative research exploring GPs’ attitudes to clinical practice guidelines concluded that GPs’ reasons for not following guidelines differed according to whether the guideline in question was prescriptive, in that it encouraged a certain type of behaviour or treatment, or proscriptive, in that it discouraged certain treatments or behaviours. These findings were used as a basis for exploratory analysis in the Cochrane Review. The authors examined the direction of change required in each trial, i.e. whether feedback aimed to increase or decrease current behaviour. In addition, four other intervention characteristics (format, source, frequency and instruction for improvement/action plan) were identified through an additional meta-analysis and qualitative research, from theories for change (Control Theory, Feedback Intervention Theory) and common sense. **Results:** The direction of change required, along with the other four characteristics of the intervention, helped explain variation in effects (expected difference in adjusted RD = 6%). **Conclusions:** This experience supports the suggestion that qualitative data may provide a useful source of information when preparing systematic reviews of effectiveness.

**Enhancing transparency in reporting the synthesis of qualitative research: the ENTREQ statement—discussion and debate**

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**Background:** The ENTREQ statement was developed to assist reviewers report the stages most commonly associated with the synthesis of qualitative health research. It consists of 21 items, has undergone some pilot testing, been published in a peer-reviewed journal and posted on the EQUATOR web-site. **Objectives:** (i) To obtain feedback on the ENTREQ statement (Enhancing Transparency in Reporting the synthesis of Qualitative research); (ii) To explore and debate issues related to the 21 items in the statement; (iii) To obtain general consensus on the included items. **Description:** However, the synthesis of qualitative research is an evolving methodological area and some steps in qualitative synthesis such as quality appraisal have been contested. This presentation will present the development of ENTREQ to an audience with an interest in qualitative synthesis, and discuss and debate these issues. The obtained feedback will inform the next phase of development of the ENTREQ statement.

**Oral Session O1.12: Diagnostic Test Accuracy Review Methods**

**Estimating a test’s accuracy using tailored meta-analysis—the potential of setting-specific data in aiding study selection**

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**Background:** The decision on whether a diagnostic test accuracy study is applicable to practice is largely a qualitative process. Consequently, the summary estimates provided by meta-analysis may be, in some cases, completely inaccurate for a particular setting. **Objectives:** To develop a new method in which the selection of applicable studies is based on more quantitative criteria. **Methods:** It is shown how routine data collected on the test positive rate and prevalence from the setting of interest may be used to define an ‘applicable region’ for studies in ROC space. Studies are selected based on both qualitative criteria and the probability that their study estimate for the false positive rate and sensitivity arise from their parameters lying in the applicable region. Three methods for calculating these probabilities are developed and used to tailor the selection of studies for meta-analysis. The Pap test applied to the NHS cervical screening programme provides a case example. **Results:** The original meta-analysis included 68 studies. In contrast, tailoring the selection using NHS data resulted in at most 17 studies being considered plausible for the NHS. From conventional meta-analysis the sensitivity and specificity for the Pap test were estimated to be 72.8% (95% CI: 65.8–78.8) and 75.4% (95% CI: 68.1–81.5) compared with 50.9% (35.8–66.0) and 98.0% (95% CI: 95.4–99.1) from tailored meta-analysis using a binomial method for selection. The positive likelihood ratio increased from 3.0 (95% CI: 2.4–3.7) to 25.6 (95% CI: 10.1–65.0) between the conventional and tailored meta-analysis. Thus, for a background prevalence for CIN 1 of 2.2%, the post-test probability for CIN 1 increases from 6.2 to 36.6%. **Conclusions:** Tailored meta-analysis provides a method for augmenting study selection based on their applicability to a setting. As such the summary estimate is more likely to be plausible for a setting and could improve diagnostic prediction in practice.

**Reporting and methods in systematic reviews of comparative accuracy**

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**Background:** Systematic reviews in which the accuracy of two or more tests are compared can provide evidence to support the clinical validity of each test and aid test selection. Because test evaluation is often limited to the assessment of test accuracy, it is vital that in the rapidly expanding evidence base, reviews and meta-analyses that compare the accuracy of multiple tests are conducted and reported appropriately to avoid misleading conclusions and recommendations. **Objectives:** To provide a descriptive survey of current practice
with a view to identifying good practice and problems, and to make suggestions for the improvement of future reviews. Methods: Systematic reviews of test accuracy in the Database of Abstracts of Reviews of Effects published between 1994 and October 2012 were identified. We placed no restrictions on language of publication, test type, purpose of the test (screening, staging, diagnostic, etc), setting, or disease area. We extracted information on the target condition, patient population, tests evaluated, purpose of the tests, analysis methods and reporting characteristics of each review. Descriptive statistics were computed. We also compared reporting characteristics with the most relevant reporting guideline—the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist. Results: We included 248 reviews that evaluated the accuracy of two or more tests. The reviews contained 6915 studies (studies may appear in more than one meta-analysis). Initial results indicate that tests are not often formally compared in the same meta-analysis but instead a separate meta-analysis is performed for each test and comparisons are made informally by comparing summary estimates between meta-analyses. Data analysis is still ongoing and results will be available for presentation at the colloquium. Conclusions: Initial findings highlight the need for better understanding of methods and strategies for comparing tests in meta-analysis and specific guidance for reporting reviews of comparative accuracy.

Why do diagnostic tests differ in performance between different settings?

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Background: Whether the findings from a diagnostic test accuracy (DTA) study may be applied to another setting is important to evidence-based practice. First, the study should have internal validity: the results are a true representation of the test’s performance within the study setting. However, internal validity does not beget external validity, where the results may be generalised to other clinical settings. Further, we know from meta-analyses that widespread variation in DTA studies are affected by both artefactual and real variation. Predominantly, in artefactual variation, the design differs between studies and this affects the internal validity of results. However, even ‘internally valid’ studies evaluating the same test and target disorder may report different test accuracies due to there being real variation. This has three sources. The test’s execution may vary between studies due to poor reliability, cognitive errors by the operators and changes in prevalence. Similarly, cognitive biases and the disease prevalence may affect the test’s threshold. Patient spectrum, which reflects the mix of patients with and without disease, may also change between studies. Conclusion: A number of conditions need to be met if the results of a DTA study are to be applicable in practice. Although it is unclear to what extent these conditions vary in practice, there is an obvious difficulty in ensuring they are similar to the reported study. This has implications for the concept of external validity. If test settings, test execution, and thresholds do vary in practice then designing a study to be applicable in multiple settings may be unattainable in large number of cases.

Enhancing the acceptance and implementation of GRADE summary of findings tables for evidence about diagnostic tests

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Background: The Grading of Recommendations Assessment, Development and Evaluation (GRADE) Working Group developed Summary tables adapted to summarise and present evidence from diagnostic test accuracy (DTA) systematic reviews. Objective: To develop guidance on what information to include in these summary tables and to determine the best method(s) for presentation for different end users, including healthcare providers, systematic reviewers and guideline developers. Methods: We presented a number of alternative summary tables to different users of the Cochrane library including authors of diagnostic systematic reviews, physicians and guideline developers. We conducted questionnaires and one-on-one user testing interviews with target end users. We presented printed copies of summary tables and asked open-ended and seven-point Likert-scale questions to obtain information about users’ understanding and preferences. Results: All participants (n = 60) agreed that using summary tables to present results of DTA reviews is helpful. Presentation of several disease prevalence values was identified as a source of confusion. There was an overall preference for placement of sensitivity and specificity values inside summary tables to allow making a link to individual test results (TP, FN, TN, FP). A third of the participants read explanatory content in table footnotes. Two thirds of the participants noted that additional data, including adverse effects, costs, and treatment consequences, would be helpful for making appropriate conclusions and decisions about diagnostic tests. Conclusion: As results of DTA reviews are conceptually complicated, presenting the data in a clear, comprehensive, comprehensible way that is tailored to different end users is critical. To respond to different end users needs, we are developing a 3-layer approach, with varied content in summary tables.

Oral Session 01.13: Evidence Packaging

Evidence packaging to support public deliberation

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Background: The use of deliberative dialogues to address pressing health challenges has generated a lot of interest in recent years as a promising way to engage citizens and stakeholders. Deliberative dialogues are usually informed by a pre-circulated evidence brief that mobilizes relevant research evidence in order to spur discussion among participants about problems, policy options and implementation considerations. While there is an increasing body of evidence regarding policymakers’ preferences regarding the formats used for evidence packaging, little is known about how to effectively package research evidence to support deliberations with the public. Objectives: Drawing from the McMaster Health Forum’s experiences with stakeholder dialogues and citizen panels, this presentation aims to: (1) introduce the evaluation platform that will be launched to assess citizens’ views and experiences about evidence packaging as part of the Forum’s citizen panel program; (2) identify criteria to guide the preparation of briefs to support public deliberation; and (3) compare features of briefs targeted to policymakers and the public. Methods: The evaluation platform was developed, and a preliminary list of normative criteria identified, based on a review of the public literature on citizen engagement evaluation research (both empirical and non-empirical) and following consultation with selected organizations that have long-standing experience with citizen engagement. These criteria will be compared with those used to appraise the effective packaging of research evidence for policymakers. Results: The current state of the citizen engagement evaluation research reveals that a key challenge is to provide the right balance of evidence support to the creation of an ‘expertise space’ for citizens. Conclusions: Cochrane Reviews constitute an invaluable source of research evidence on pressing health challenges. This project offers a natural laboratory to learn about the citizens’ views about the most effective way to package research evidence in order to support and nurture public deliberation.

Comparison of alternative evidence summary and presentation formats in clinical guideline development: a mixed-method study

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Background: Best formats for summarising and presenting evidence for use in clinical guideline development remain less well defined. Objectives: We aimed to assess the effectiveness of different evidence summary formats for use in clinical guideline development. Methods: Healthcare professionals attending a one-week Kenyan, national guideline development workshop were randomly allocated to receive evidence packaged in three different formats: systematic reviews (SRs) alone, systematic reviews with summary-of-findings tables (SR with SoF tables), and ‘graded-entry’ formats (a ‘front-end’ summary and a contextually framed narrative report plus the SR). The influence of format on the proportion of correct responses to key clinical questions, the primary outcome, was assessed using a written test. The secondary outcome was a composite endpoint, measured on a five-point scale, of the clarity of presentation and ease of locating the quality of evidence for critical neonatal outcomes. Interviews conducted within 2 months following completion of trial data collection explored panel members’ views on the evidence summary formats and experiences with appraisal and use of research information. Results: 65 (93%) of 70 participants completed questions on the pre-specified outcome measures. There were no differences between groups in the odds of correct responses to key clinical questions. ‘Graded-entry’ formats were associated with a higher mean composite score for clarity and accessibility of information about the quality of evidence for critical neonatal outcomes compared to systematic reviews alone (adjusted mean difference 0.52, 95% CI 0.06–0.99). There was no difference in the mean composite score between SR with SoF tables and SR alone. Findings from interviews with 16 panelists indicated that short narrative evidence reports were preferred for the improved clarity of information presentation and ease of use. Conclusions: Our findings suggest that ‘graded-entry’ evidence summary formats may improve clarity and accessibility of research evidence in clinical guideline development.

A systematic review of the use of narrative storytelling and visual arts-based approaches as knowledge translation tools in healthcare

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Background: The arts are powerful, accessible forms of communication that have the potential to impart knowledge by attracting interest and developing meaningful connections. Knowledge translation aims to reduce the ‘evidence-practice’ gap by developing, implementing and evaluating strategies designed to enhance awareness and promote behaviour change congruent with research evidence. Increasingly, innovative tools such as narrative storytelling and other arts-based interventions are being investigated to bridge the research-practice gap. This study is the first to systematically identify and synthesize current research on narrative storytelling and visual art as a knowledge translation strategy in healthcare. Two reviewers independently performed study selection, quality assessment, and data extraction using standard forms. Disagreements were resolved through discussion or third party adjudication. Data was grouped and analyzed by research design, type of knowledge translation strategy (i.e., narrative storytelling or visual arts-based approach), and target audience. Currently, an overall synthesis across all included studies is ongoing to determine the success of narrative storytelling and visual arts as translation and dissemination tools in health research. Discussion: Narrative and arts-based approaches are innovative tools that have the potential to facilitate dissemination and stakeholder involvement, while simultaneously crossing boundaries of literacy and language. The findings from this research project will describe the ‘state of the science’ regarding the use of narrative storytelling and visual art as tools to translate and disseminate health research. We intend to share
Background: One of missions of the Cochrane Collaboration is to promote access to its outputs. Although the Collaboration has emphasised the role of online continuing medical education (CME) in the dissemination of systematic review (SR) findings, it has not proposed specific strategies for the incorporation of SR contents into CME programs. Objectives: We developed a suite of online CME modules targeting Canadian family physicians based upon Cochrane SRs. Methods: The CME modules are based upon published Cochrane SRs addressing gastrointestinal, back, inflammatory bowel, and musculoskeletal conditions. Each module includes five multiple choice questions plus a fictional and memorable vignette featuring ‘Dr. Cochrane’. Vignettes are produced through a multi-step editorial process to ensure scientific, editorial, and educational rigour. This process conforms to the requirements of several CME accreditation authorities in North America. We reviewed the experience of the editorial unit who completed the program. Results: To date, 64 Cochrane vignettes have been developed. Abstracts, Summary of Findings Tables, and primary results were the sections of Cochrane SRs most useful for developing CME activities; methods and secondary results sections were rarely used. The relevance of certain reviews for primary care and educational purposes was challenged during peer review, and a few vignettes raised questions of the social, cultural, and clinical suitability of interventions and patient-physician interactions. We also encountered tensions between the accreditation requirements and the design of the Dr Cochrane programme, most of which were solved to meet the accreditation criteria. Conclusions: CME programs represent an opportunity to improve the relevance and accessibility of Cochrane SRs to health professionals. Progress in the development and dissemination of Cochrane-based CME programs will require innovation leadership, sufficient resources to maintain top scientific and editorial standards and the expansion to other countries and health professionals. Funding Sources: A CIHR Knowledge Translation Supplement Grant provided funding.

Background: Neuro-Oncology is the multi-disciplinary subspecialty dealing with the effect of cancer or cancer treatments on the nervous system. To date, these reviews have been published through the Cochrane Gynaecological Cancer Group (CGCG) under its ‘orphan’ cancer remit. With the retirement of the CGCG Co-coordinating Editor and increasing numbers of trials, a Cochrane Neuro-Oncology Group (CNOG) was formed in mid 2012. Here we discuss the development of the new group. Objectives: Develop a responsive, outward facing group, integrated into existing professional and Cochrane networks, to provide a high quality review process and encourage new reviews in Neuro-Oncology. Methods: To establish an expert group of evidence based contact editors we approached members of the European and North American Neuro-Oncology groups with particular expertise in the breadth of neuro-oncology fields and the International patient organisations. Meetings were held with Executive Board members of these organisations to promote Cochrane links at Board level and through their membership. Relationship building with CRGs where there is overlap. Involve contact editors and interested staff in local Cochrane training. Trial cross-continent collaboration on reviews and new potential review topics. Results: 12 contact editors who have either undertaken a Cochrane Review or have established evidence based interest were enrolled. CNOG articles were published in the professional organisations websites and newsletters, including patient organisations, to publicise CNOG. A Neuro-Oncology webpage has been established. Meetings have been held to explore links and training in US/Canadian Cochrane Centers. There is a four fold increase in new titles and a hit list of potential review topics scored by Contact Editors. Neuro-Oncology James Lind Alliance Partnership in planning stages to identify unanswered questions. Conclusions: Small subspecialty CRGs may benefit from linkages with ‘overlap’ Cochrane CRGs and ‘it’s a small world’ international contacts to promote Cochrane.

Background: Neuro-Oncology is the multi-disciplinary subspecialty dealing with the effect of cancer or cancer treatments on the nervous system. To date, these reviews have been published through the Cochrane Gynaecological Cancer Group (CGCG) under its ‘orphan’ cancer remit. With the retirement of the CGCG Co-coordinating Editor and increasing numbers of trials, a Cochrane Neuro-Oncology Group (CNOG) was formed in mid 2012. Here we discuss the development of the new group. Objectives: Develop a responsive, outward facing group, integrated into existing professional and Cochrane networks, to provide a high quality review process and encourage new reviews in Neuro-Oncology. Methods: To establish an expert group of evidence based contact editors we approached members of the European and North American Neuro-Oncology groups with particular expertise in the breadth of neuro-oncology fields and the International patient organisations. Meetings were held with Executive Board members of these organisations to promote Cochrane links at Board level and through their membership. Relationship building with CRGs where there is overlap. Involve contact editors and interested staff in local Cochrane training. Trial cross-continent collaboration on reviews and new potential review topics. Results: 12 contact editors who have either undertaken a Cochrane Review or have established evidence based interest were enrolled. CNOG articles were published in the professional organisations websites and newsletters, including patient organisations, to publicise CNOG. A Neuro-Oncology webpage has been established. Meetings have been held to explore links and training in US/Canadian Cochrane Centers. There is a four fold increase in new titles and a hit list of potential review topics scored by Contact Editors. Neuro-Oncology James Lind Alliance Partnership in planning stages to identify unanswered questions. Conclusions: Small subspecialty CRGs may benefit from linkages with ‘overlap’ Cochrane CRGs and ‘it’s a small world’ international contacts to promote Cochrane.

The Cochrane collaboration ‘in the making’: an actor-network perspective

Hannes K1, Decuyper M2

1 KU Leuven - Methodology of Educational Sciences Research Group; 2 KU Leuven - Education, Culture and Society Research Group
Background: Drawing on the Actor-Network Theory (ANT), we will explore the dynamics of the Cochrane Collaboration (CC); how different agencies and mechanisms have translated CC from a bunch of 80 likeminded people from around the world that attended the first Cochrane meeting in Oxford (October 1993) in what CC is today. Objectives: To visually map the development process of CC, with a particular focus on some of the ‘ancient’ and ‘recent’ methodological developments. To critically explore the role of non-human agencies such as methodological standards, systematic reviews, computer software, impact factors and libraries in shaping CC. Methods: Our methodological stance towards exploring CC’s development is an Actor-Network perspective. Actor-Network Theory (ANT) aims to explore how particular practices are being fabricated by means of actors populating these practices and more precisely by means of the interactions and relations between all these actors. ANT is then used as both a conceptual and a methodological lens in order to describe the concrete assemblage of CC. Results: A visual map of the CC that emphasizes its role as both an actant and a network is displayed. Attention will be focused on the initial interessement phase initiated by lain Chalmers, the enrolment and mobilisation process of different human and non-human actors into the collaboration. We particularly focus on the standardisation of methodological procedures for reviews and assisting software, which we consider the policy vehicles that highly influence the further (non)enrolment of particular agencies. Conclusions: The insights of ANT are used to place the ‘successful story’ of the Cochrane Actant-Network into a more realistic perspective, visually emphasizing the many agencies that did not (yet) fully make it into the CC actor network and as such affecting its stabilisation process (visual mapping work currently in progress — small fragment included for review purposes).

The complex and challenging role of Cochrane fields: moving Cochrane evidence into practice

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Background: As the Cochrane Collaboration celebrates its 20th anniversary, this is an opportunity to reflect on the many innovative parts of its mission. The establishment of Cochrane Fields early in the Collaboration’s history was an acknowledgement of the crucial importance of moving evidence into practice — taking the findings of Cochrane Reviews and connecting them with those making practice and policy decisions. Fields have played a crucial bridging role in moving Cochrane evidence out into the world. Objectives: To review the development and contribution of Fields to the Cochrane Collaboration. Geographic and disciplinary spread of Fields: Fields focus on a dimension of health care other than a specific healthcare problem — such as the setting of care, the type of consumer, the type of provider, the type of intervention, or a major division of health care which embraces an area too large to be covered by a single Review Group — and represents its interests (Cochrane Policy Manual). The current geographic and disciplinary spread of Fields is displayed in Table 1. Ongoing activities: Cochrane Fields take the evidence produced by Cochrane Review Groups and connect it with the practitioners and policy makers who need it. We engage in a range of knowledge translation activities, including: podcasts; overviews of reviews; briefings to legislators and policy makers; summaries; commentaries; reformatting reviews; training; journals and journal supplements; etc. All of these activities are customized to the individual Field’s audience and area of focus. Conclusions: Fields are Cochrane’s resident experts in moving knowledge into practice, in identifying gaps in information, and advocating for evidence in health care research and practice. As such, Fields represent a vital part of the Collaboration and their activities may serve as guides for others wishing to bridge gaps between Cochrane evidence and the needs of consumers, clinicians and policy-makers.

Improving the efficiency of updating Cochrane Reviews: a joint pilot project of the McMaster PLUS database team and the musculoskeletal review group

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Background: Reviews updating is a primary goal for the Collaboration, yet a common challenge for most Groups due to the workload associated with identifying new relevant content. There is currently no systematic mechanism for efficiently managing the update process without periodically repeating a full-gauge literature search. Objectives: To create a service that detects clinically relevant new studies likely to prompt review updates and that includes features to assist editors and authors with the task of organizing those references to streamline the update process. Methods: We used the continuously updated McMaster Plus database to feed a service aimed at efficient and timely management of new trials published in top journals topical to the Cochrane Musculoskeletal Review Group (CMSG). The studies are indexed according to clinical topics, and made available to the editorial team on a dedicated software platform for manual assignment to individual reviews. The assignment in turn triggers automatic alerts to the reviews’ corresponding authors. Authors are offered a simple management tool to help decide on subsequent actions regarding the alerted study, e.g., filing for inclusion in the update, linking it with the review until incorporated into the update, as well as providing feedback regarding any article’s non-appropriateness. Results: The system has been piloted with CMSG. Between 7 and 15 new studies per topic were identified on a weekly basis, half of which were assigned to reviews. Analysis of whether matched studies trigger an update is underway. As well, highly relevant articles not filed to existing reviews are being logged and may serve to suggest new titles for the CMSG group. Conclusions: Ease of use and efficiency are being tested in the pilot toward the timely identification of reviews in need of an update, as well as the prompting of topics not covered by the current CRG knowledge base.
Oral Session O1.15: Tools for Review Authors

Superfilters website: a searching tool for review authors

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Background: Reviewers could benefit from more efficient study retrieval tools than currently exist. Having an online, ‘1-stop’ federated search facility providing empirically derived and validated search filters and filtering aids to retrieve and collate all pertinent studies would help. Objectives: To develop a ‘superfilters’ website that provides review authors with the opportunity to search across several electronic databases simultaneously with empirically derived, high performance, search filters. To add ‘capture-mark-recapture’ (CMR) statistical modeling to this superfilters site to help those searching for all available evidence to determine whether to continue or stop searching, for example, when conducting systematic reviews.

Methods and Results: We designed a website that has federated search capabilities, enabling users to select from a host of search filters and search in large, bibliographic databases including PubMed, Ovid Medline, Ovid Embase, EBSCO CINAHL, Ovid PsycINFO and MacPLUS. These filters retrieve articles of higher methodological rigor from various disciplines of medicine, and do so according to the research methods used. The user can turn the search filters on or off when performing a single search across multiple bibliographic databases simultaneously. Searches can be limited by type of article (e.g., treatment, diagnosis), age of study participants (e.g., adult, geriatric), and date of publication. Searches include options for breadth: broad (highly sensitive), balanced or narrow (highly specific). The retrieved set of citations is collated with duplicate citations removed. In the process of identifying duplicate citations, CMR statistical modeling is performed and an estimate of the total theoretical size of a collection of literature is provided. This automated statistical technique can provide searchers with evidence that their searching can stop or should continue. Conclusions: A superfilters website has been developed that can aid researchers when conducting comprehensive and targeted searches of the medical literature.

Epistemonikos: a comprehensive, systematic, collaborative and multilingual database for evidence-based health care

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Background: Epistemonikos (www.epistemonikos.org) is a user-friendly, multilingual, collaborative database of evidence. One unique feature of this database is that connects different types of evidence and allows to compare different systematic reviews addressing a similar question. Methods: Systematic reviews (SR), overviews and structured summaries of reviews are searched for in over 20 databases, and information is uploaded into a single database. Primary studies included in SR are also uploaded, independent of the publication or language status. All information is collaboratively classified and a direct connection between systematic reviews, overviews of reviews and their included studies is added, making it easy to get an overview of the evidence and find what is being looked for. A tool for comparing reviews that share primary studies and to maintain an updated body of evidence for a specific question has been recently released. Results: The database contains over 160,000 records, including 29,000 systematic reviews and more than 100,000 primary studies. Using software and a network of collaborators, titles and abstracts are translated into nine languages. More than 20,000 official translations to Spanish, French, Chinese, German, Dutch, Arabic, Portuguese and Italian have been compiled from the internet. Over 1000 translations to Spanish have been generated by collaborators of Epistemonikos. It is possible to search in those nine languages, using both intuitive (i.e. google-like) and traditional (i.e. boolean) strategies. More than 150,000 connections between related articles are available which makes possible to navigate between different types of evidence (e.g. from primary studies to systematic reviews) and to compare different reviews that share primary studies. Conclusion: Epistemonikos allows user to obtain relevant evidence in an easy way, and can also help Cochrane reviewers and CRGs to search for studies, decide upon updating reviews or prioritising new reviews. The tool to compare reviews has potential to improve Cochrane Reviews.

Shortening the pipeline: the use of data mining to link new trials to Cochrane Reviews

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Background: It’s estimated that at least 500 reports of trials are published every week. The pipeline by which these trials find their way into existing Cochrane Reviews (often via the Cochrane Central Register of Controlled Trials and the specialised registers of Cochrane Review Groups (CRGs)) can be lengthy and inefficient. Data mining offers the prospect of the automated distribution of trials upon publication in major databases (e.g. PubMed). The advent of the Central Register of Studies makes it possible to test the feasibility of data mining approaches. Objectives: To test the feasibility and accuracy of introducing an automated process for assigning newly published trials to (1) the relevant Cochrane Review Group, and (2) the relevant Cochrane Review(s) using data mining approaches. Methods: Using the Central Register of Studies, we created a dataset consisting of the titles, abstracts and keywords (where available) of reports of all included studies in all Cochrane Reviews. We then trained a classifier using the LibSVM Support Vector Machine based on the included studies of reviews from the Cochrane Incontinence Group. Over a 3 month period we automatically identified potentially relevant studies for that Group that had been published on PubMed. Results: The studies identified using the datamining system were compared with those which the Group identified using its standard practices. Metrics of sensitivity and precision were calculated, as well as yield and burden of the datamining system. Conclusions: The usefulness of
Cochrane Reviews and the efficiency of the review process would be improved if relevant reports of trials could be identified and linked to reviews on a prospective basis using automated approaches, such as data mining. This system demonstrates the potential of such technologies, though further work will be needed in order to optimise its precision.

**Surveillance system assessing the need for updating systematic reviews**

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**Background:** Systematic reviews (SRs) go out of date as new evidence emerges. Instead of fixed periodic updating, an efficient SR currency surveillance program could be less resource intensive.

**Objectives:** Based on methods we developed previously, three Evidence-based Practice Centers were tasked to establish and execute a surveillance program to identify the need for updating a cohort of Comparative Effectiveness Reviews (CERs) commissioned by the Agency for Healthcare Research and Quality. **Methods:** We incorporated two existing methods of updating signal detection into a step-by-step surveillance approach and assessed the currency of 24 CERs. New evidence was identified from: (a) literature searches, (b) expert opinion, and (c) safety alerts. We determined the currency of conclusions in the reviews, and, based on their potential impact on decision-making, the updating priority (low, medium, or high) of CERs. Low or medium priority CERs were reassessed every 6 months (Fig. 1). We did not update the reviews. **Results:** The CERs mainly compared effectiveness and safety of pharmaceuticals and surgical procedures for various health conditions (Table 1). The median number of studies in the original SRs was 104 (range, 8–436), new studies were 15 (range, 0–35), and the expert response rate was 35% (71% for re-assessed CERs). Of the nine identified safety alerts only one influenced the updating priority of one CER. Of the 24 CERs, 2 were classified as high (8%), 5 as medium (21%), and 17 as low (71%) priority for updating from 11 to 62 months after their last search date. Of the 10 re-assessed CERs reassessed after 6 months, updating priority changed for only 1 CER. **Conclusions:** We established a surveillance program and evaluated 24 CERs. The application of the program is practical and efficient for assessing the need for updating SRs across a wide range of health interventions.

**Oral Session 01.16: New tools of dissemination**

**Searching a database of knowledge translation resources for public health: The Registry of Methods and Tools**

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**Background:** Developed by the National Collaborating Centre for Methods and Tools (NCCMT), the Registry of Methods and Tools is a searchable, online database of knowledge translation (KT) resources for public health. The Registry of Methods and Tools contains summary statements of KT resources, in French and English, which address at least one KT activity (synthesis, dissemination, exchange and application). Knowledge translation methods and tools provide a systematic approach to using research evidence, along with other forms of evidence, in program and policy decisions. **Objectives:** This presentation will provide an overview of the Registry and how it can be used by public health practitioners to identify relevant KT resources. This interactive session will employ a mix of large group didactic and problem-based learning in small groups. Workshop participants will work in small groups to explore the database online and conduct searches to retrieve relevant KT resources using case-based scenarios. In small groups, participants will interact with the database online to learn what knowledge translation resources are available, how resources are organized to increase ease of use, and develop search strategies to access methods and tools. Features and additional supplemental resources included in summary statements of KT resources will also be discussed.

**DynaMed summaries and Cochrane Reviews: a dynamic collaboration!**

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**Background:** Providing better knowledge for better health requires collaboration and rapid responsiveness to changing evidence. The Cochrane Collaboration has established internal collaborative networks and external partnerships, but none that systematically contribute to review updating. An innovative and dynamic collaboration is developing between DynaMed and the Cochrane Collaboration, blending expertise in evidence analysis and just-in-time updating to improve the quality (comprehensive, accurate, and clarity) of Cochrane Reviews (CRs) and point-of-care summaries. **Objectives:** To explore and develop the use of a balanced, bidirectional and mutually beneficial feedback mechanism to improve both products in terms of their currency, accuracy, and overall quality. **Methods:** Unrestricted DynaMed access was given to a CR team who provided feedback on DynaMed summaries relevant to their ongoing review. Selection of clinically important outcomes for the review, methodologic issues relating to the
Making Cochrane Reviews more clinically accessible: the new Cochrane clinical answers derivative product

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Background: One of the Collaboration’s strategic goals is ‘to promote access to Cochrane Reviews and other products of The Cochrane Collaboration’. Cochrane Clinical Answers (CCAs) http://cochrane clinicalanswers.com/aims to provide an entry point to Cochrane Reviews that supports decision-making at the point of care. Objectives: To develop a new format that brings to the forefront the Population, Intervention, Comparison, and Outcome (PICO) data that allow results of a review to be individualized to the patient. Methods: Detailed PICO data are extracted from Cochrane Reviews: in terms of population: age, co-morbid conditions; intervention: drug dose, intensity and duration of intervention (walking or kick-boxing?); comparison: with alternative treatment options or with placebo; and outcome—if weight was reduced, how much by, and how long did weight loss take? Finally, can clinicians have confidence that the trial evidence mirrors what will happen in practice? Results: A key challenge of translating Cochrane Reviews into CCAs relates to the lack of standardized presentation of PICO data. Summary of findings tables greatly facilitate the creation of CCAs and there are many small changes that could be made that would both enhance the user experience of Cochrane Reviews and facilitate usage of Cochrane content in derivative products.

Development and evaluation of a point-of-care tool for providers based on a meta-analysis and clinical practice guideline

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Background: Our group recently updated a meta-analysis of opioids for chronic non-cancer pain, which was released in 2010. However, the guideline is long and not practical to be used at the point of care by busy physicians, nurses or pharmacists. Our group decided to develop, evaluate, translate and adapt a tool which condenses the key elements from the guideline that could be used as a chart insert. Objectives: To present the steps used to develop, evaluate, translate and adapt the Opioid ManagerTM, a two-page, colour document that was developed based on the opioid guideline. Methods: We obtained funds from the Ministry of Health. In 2010, we developed a ‘draft Opioid Manager’ that was pilot tested over 9 months. We received feedback from 70 users. The final Opioid ManagerTM was released in February 2011. We integrated the Opioid Manager to various Electronic Medical Record (EMR) platforms. We used quantitative and qualitative methods to survey and interview users of the Opioid Manager. Results: The Opioid Manager is free of charge and can be downloaded from the guideline’s website. (See Fig. 1) As of April 2013, there are 4957 registered users who downloaded the tool. The Opioid Manager is integrated to six EMR platforms. It is translated to five languages (French, Spanish, Portuguese, Farsi and Italian). The Opioid Manager is available as an App for iOS and is Trade-Marked in Canada. See Figure 2 for the most common use by family physicians. Conclusions: The development of a point of care tool is time and resource consuming. It is essential to develop tools to assist practitioners to apply the recommendations from clinical practice guidelines that are based on evidence from systematic reviews.

The Healthcare Knowledge Integrity Framework: a conceptual map of the synergy, mediators, and threats to integrity within the healthcare research/practice continuum

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Background: The quality of health services delivery and patient care depend heavily on the integrity of the research process, the complete and transparent reporting of research findings, and the effective translation of research knowledge into evidence-based practices. However, few educational resources exist that take into account the entire research/practice cycle. In addition, there is little documentation of the interrelated factors that may influence the integrity of healthcare knowledge throughout its life cycle, from the conception of a research idea to the outcome(s) of patient care. Objectives: The objective of the Healthcare Knowledge Integrity Framework (HKIF) is to provide a conceptual map for understanding and discussing different factors that may impact the integrity of the research/practice cycle of healthcare knowledge. Methods: The HKIF outlines optimal factors and training that promote a synergistic relationship between healthcare research and practice while also highlighting potential internal (personal) and external threats to integrity that can lead to wasteful practices and other negative downstream effects. Results: In this presentation, specific attention will be focused on the areas of knowledge dissemination and knowledge translation, highlighting best practices, training, and
threats to integrity at these particular points in the research/practice cycle. In addition, the course of events related to well-known cases of misconduct and poor research practices will mapped onto the HKIF to demonstrate its utility as a teaching and learning tool. **Conclusions:** The HKIF may help researchers, practitioners, and decision-makers to take into account the multitude of factors that may influence the integrity of knowledge creation, reporting, translation, and utilization within the healthcare field. It is hoped that the framework will act as a tool for these groups to analyze systemic weaknesses in current practices and engage in a collaborative dialogue on how to improve the integrity of healthcare knowledge, and ultimately the care of patients.

**Oral Session O1.17: Methods for improving review efficiency**

**Systematic Review Data Repository (SRDR): beyond old school data abstraction**

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**Background:** The Systematic Review Data Repository (SRDR) is a Web-based open-access tool that supports electronic data abstraction and entry by multiple users, data comparison and exporting, progress monitoring, and data archiving and sharing. SRDR has a great potential to reduce the burden of conducting systematic reviews (SRs), while improving data quality and transparency of the process. The development of SRDR is funded by the AHRQ and is being maintained by the team at Brown University. **Objective:** To introduce the audience to SRDR and its tools, share user experience, and invite feedback and discussion. **Methods:** The steps to initiate a systematic review project in SRDR include creating the project and abstraction forms, adding users to the project, and assigning roles. The systematic reviewers then extract and enter data directly from study reports into SRDR for seamless data storage and processing. The Data Comparison and Adjudication tool allows identification and adjudication of discrepancies between data abstractors. The Data Exporting tool enables users to export data from SRDR into an analyzable format for further processing. The Summary Table Creation tool can also be used to generate reports and descriptive information about data collected in SRDR. **Results:** SRDR was launched in June 2012, and since then over 50 SR projects have been initiated with over 200 users (from EPCs, Cochrane, and other organizations) entering over 2000 study records. The creation of a central database of SR data enables data sharing among organizations and individuals producing SRs worldwide. The Cochrane Eyes and Vision Group will present their experience using SRDR for their large network meta-analysis of over 500 studies and other projects. **Conclusions:** SRDR can facilitate efficient data collection, adjudication, preparation of a dataset for analysis, and archiving. Future efforts must focus on linking SRDR to RevMan and further testing by multiple Cochrane groups conducting systematic reviews in diverse topics.

**Enhancing the efficiency of the systematic review process for evidence-based medicine**

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**Background:** Systematic reviews are widely recognized as the best means of synthesizing clinical research; however traditional approaches can be costly and time-consuming and are often subject to selection and judgment bias. It can be difficult to interpret the results of a systematic review in a meaningful way in order to make research recommendations or clinical decisions about implementation. **Objectives:** In order to maximize efficiency in the execution and dissemination of synthesized literature, there is a need for a streamlined, coordinated international effort among researchers and healthcare professionals to provide regular, up to date, objective, high quality information on healthcare practices, interventions and treatments. **Methods:** Samueli Institute has developed a systematic review process known as the Rapid Evidence Assessment of the Literature (REAL®) that not only makes the systematic review process more reliable and objective but also streamlines the process without compromising quality. **Results:** The REAL uses a clearly described and reliably applied set of steps embedded in standard rule books and customized, automated software for efficient evaluation and remote subject matter expert input. **Conclusions:** The efficiency of the REAL process is such that it can facilitate the conduct of rigorous, high quality, transparent evidence-based systematic reviews more rapidly (approximately half the time) and at lower cost (approximately 30–50% less) than other standard methods. In addition to increased efficiency, the REAL process incorporates an assessment of the overall literature pool and its current implications for research and practice. Thus, a REAL provides a basis allowing subject matter experts to determine the quality of the research as a whole, gaps in the literature, effectiveness of the intervention, the confidence in that effectiveness estimate, and the appropriateness of clinical use of the intervention. Using this process enables researchers, clinicians and patients to be better informed as to the current state-of-the-science for any intervention.

**Many hands make light work—or do they? Results of two pilot studies looking at the effects of crowdsourcing**

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**Background:** The production and maintenance of Cochrane systematic reviews is no small undertaking. It is a process made up of many steps and frequently author teams stall or lose momentum. These two studies sought to assess whether it is feasible to recruit individuals to perform one task necessary to Cochrane Reviews and CENTRAL in a way that would enable the task to be performed successfully, in a timely way and with no compromise to the methodological rigours required for Cochrane Reviews. **Methods:** Two studies were...
Conducted. Each looked at using ‘a crowd’ for the completion of a task vital to the maintenance of Cochrane Reviews and CENTRAL. Trial Blazers gave participants 200 citations to screen for potential inclusion in CENTRAL. The gold standard: whether those citations selected were indeed reports of randomised or controlled trials (thereby suitable for inclusion in CENTRAL); the second study gave a different cohort of subject 250 citations to screen for potential inclusion within a Cochrane diagnostic test accuracy (DTA) review. Gold standard: those studies that went on for inclusion within the review as selected by the expert author team. Outcomes: efficacy—were randomised trials and DTAs correctly identified and were those which were not trials or diagnostic test accuracy studies, correctly discarded? Participant motivation to take part; participant perceptions of the task in terms of difficulty or perceived skills required, and an assessment of ease of performing the task using the technology provided (a mobile screening tool for one, tradition PC based bibliographic software for the other study). Results: Sensitivity and specificity of both studies was very good for those who completed the task. However, drop-out was high raising questions around participant incentive and motivation to perform the task, the importance of accessible support and guidance provided and the vital need to provide a smooth and user-intuitive pathway regarding the use of mobile technologies to perform the task. Conclusions: Non-traditional contributors can be recruited and can successfully perform this task which is vital for both Cochrane Reviews and for CENTRAL. However, crowdsourcing is not an easy option. High drop-out is to be expected but chance of success on a large scale will rely heavily on reliable technologies, accessible guidance and ultimately an excellent understanding of user incentives and motivations.

A cloud computing database for data extraction in a Cochrane Review

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Background: An online database was needed for the Cochrane Review ‘Taxanes for the treatment of platinum pre-treated epithelial ovarian cancer’ for several reasons. Firstly, a large amount of clinical parameters were to be extracted from 68 identified studies and the data was to be subdivided into 16 different subgroups. Secondly, there were six authors performing data extraction for this Cochrane Review, working at four different institutions. Therefore data could not be entered and stored centrally at one institution. Objectives: Development of a cloud computing database accessible online for all authors performing data extraction. Methods: The database utilises cloud computing, such that the information is stored online and can be accessed from anywhere and is populated through a web-based user interface. Results: Using an online database-as-a-service and cloud computing to query and compare data allows the elimination of transaction concurrency conflicts. That is, the two authors can simultaneously review the same study without breaking the database. In the data extraction phase the cloud computing model allows authors to all work remotely. Each study in our review must have the data extracted by two review authors. The database will crosscheck information entered by two authors and flag discrepancies that need to be resolved by discussion. In the analysis phase the database allows each relevant paper containing data for each subgroup to be easily identified amongst the identified studies. Data to be presented will include a demonstration of functionality of the database and excerpts of results highlighting the usefulness of the database in complex subgroup categorisation. Conclusions: The cloud computing database was invaluable for performing this Cochrane Review as the subgroups overlapped in many publications. Many complex Cochrane Reviews could benefit from this approach to data extraction which facilitates collaboration across multiple institutions.

Oral Session 01.18: Complexity

Methods for configurational synthesis: extensions to traditional meta-analysis for addressing intervention complexity and contextual variation in reviews

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Background: One of the underlying principles of meta-analysis is that sufficiently similar trials are aggregated in order to gain greater precision of effect size estimate and confidence around that estimate. This assumption breaks down outside clinical settings where interventions tend to be complicated and complex; they are also rarely replicated. In order to identify what works for whom in what situation, we need methods that ‘aggregate’ findings statistically and ‘configure’ (i.e. arrange, or compare and contrast) findings from different contexts. Objectives: To investigate the utility of a range of methods that might be useful for complex topics that lie on different points of the ‘aggregate—configure continuum’. Methods: We consider four methods that use quantitative or semi-quantitative approaches to synthesising quantitative data for different types of research questions: a) Multivariate meta-analysis; b) Path analysis, including structural equation modelling; c) Qualitative comparative analysis; and d) Factor analysis, including principal components analysis. We discuss the conceptual basis and potential limitations of each. Examples are provided from a recent systematic review on a complex public health topic. Results: In addition to aggregation to determine a point estimate, we identified the following types of analytical questions that might be considered by systematic reviewers as relates to the synthesis of quantitative data: a) Identifying confounding variables; b) The personality of studies (i.e., profiles of interventions); c) Defining theoretical constructs using indicator variables; and d) Construct validation. The four methods discussed show promise in addressing these different research questions, which lie on different points of the aggregate-configure continuum. In our example systematic review, we were able to address a broader range of research questions. Conclusions: Meta-analysis alone is insufficient in some situations when variation is encountered—and is indeed part of the purpose of the analysis. While there are alternatives, they each have particular limitations, and further methodological development is required.
Key domains of context and implementation and their assessment in systematic reviews of complex health interventions

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Background: The effectiveness of complex interventions is critically influenced by implementation and context. To date, limited information on implementation and contextual factors is included in primary studies and, consequently, in systematic reviews. This constitutes a major barrier to the appraisal of the generalizability of the findings of a systematic review and their applicability in a specific setting and context. To our knowledge, no framework exists that describes key domains of context and implementation comprehensively. Objectives: To review concepts of setting, context and implementation, to propose a comprehensive framework, and to operationalize this in an assessment template for systematic reviews. Methods: We conducted literature reviews on terminology, concepts and frameworks of context and implementation, their constituent components and the use thereof in primary research and systematic reviews. In a first step, constituent components recurring under various labels across different frameworks were collected and reviewed. In a second step, existing components were selected for inclusion and supplemented with additional components, and structured under clearly defined key domains and integrated in a consolidated, comprehensive framework. Results: We propose a multi-layered framework comprising implementation and context—with setting being one domain of context—as distinct dimensions. Implementation embraces the key domains programming and delivery; context includes setting, community and key domains related to social, cultural, political and other aspects. Based on this framework, we developed a matrix to assess generalizability and applicability, which allows the assessment of each of these domains for systematic review authors. Conclusions: This guidance is designed to complement existing reporting and evaluation guidelines on context and implementation in primary as well as in synthesis research of complex interventions. The guidance will be tested in several systematic reviews of complex interventions and revised as needed.

Systematic reviews on multimorbidity: methodological challenges

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Background: Health care systems are undergoing dramatic transformations in response to the rise of chronic diseases in populations. In most cases, such system transformations have been driven by single-disease approaches to chronic care management and improvement. A wave of evidence in the past decade has shown however that a significant proportion of the population lives with multiple chronic diseases, i.e. multimorbidity. Given this reality, it is important that high-quality evidence related to services or interventions for people with multimorbidity be available to decision-makers.

Systematic reviews examining populations with multimorbidity have the potential to inform current quality improvement efforts, yet such reviews are challenging to conduct on a number of levels. Objectives: To present several methodological challenges related to the conduct of systematic reviews on the topic of multimorbidity. Approach: The challenges encountered at each stage of the review process will be presented. First, defining review questions and inclusion criteria can be difficult, as review authors must weigh the relevance of the concepts of multimorbidity versus comorbidity, identify a clear population of interest among many possibilities, and decide on an appropriate scope for the review. This is a highly iterative process that occurs while attempting to search for studies. Searches are time- and resource-intensive given the importance in this case of searching multiple databases and using multiple data sources. Designing effective search strategies is complicated by the relative novelty of the multimorbidity concept. Study selection and data analysis is challenged by a lack of consistency in multimorbidity definitions and measures, and heterogeneity between studies makes data comparisons and quality assessment difficult. Conclusions: There is a rapidly growing literature related to services and interventions for people with multimorbidity. Reviews of this literature can be challenging, but are urgently needed to inform efforts to improve care and outcomes for this large, vulnerable population.

Oral Session O1.19: Investigating bias—Session 2

Incorporation of assessments of risk of bias of primary studies in systematic reviews of randomized trials: a cross-sectional review

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Background: Assessment of the validity of individual studies included in a systematic review, and the risk that they might overestimate the true intervention effect, is a critical part of the systematic review process. Objective: We examined how assessments of risk of bias (RoB) of primary studies are carried out and incorporated into the statistical analysis and overall findings of a systematic review. Methods: We assessed 200 systematic reviews of randomized trials published 2012; Cochrane (n = 100), non Cochrane (n = 100). Our primary outcome was a descriptive analysis of how assessments of RoB are carried out, methods used, and the extent to which such assessments were incorporated into the statistical analysis and review findings. We also evaluated differences between Cochrane and non
Cochrane Reviews. **Results:** Most Cochrane Reviews (90%) assessed individual methodological components using the Cochrane RoB tool whereas non Cochrane Reviews (38%) were more likely to use a quality assessment scale; 20% of non Cochrane Reviews did not report the method used. Based on the assessment carried out by the authors of the systematic review, 58% (n = 116) of reviews had ≥ 1 trial at high RoB; median proportion of trials per review at high RoB was 50% (IQR 31 – 89%). Despite this only 56% (n = 65/116) incorporated the RoB assessment into the interpretation of the results in the abstract and assessments into account in the statistical analysis and conclusions of studies were carried out, however both frequently failed to take such assessments into account in the statistical analysis and conclusions of the systematic review.

**Conclusion:** Cochrane Reviews were more likely than non Cochrane Reviews to report how RoB assessments of primary studies were carried out, however both frequently failed to take such assessments into account in the statistical analysis and conclusions of the systematic review.

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**Reporting, dealing with, and judging risk of bias associated with missing participant data in systematic reviews: a methodological survey**

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**Background:** When conducting a meta-analysis, systematic review authors need to deal with trials reporting missing participant data including an assessment of the risk of bias associated with missing participant data in the body of evidence. **Objectives:** To describe how authors of systematic reviews are reporting, dealing with, and judging the risk of bias associated with missing data for dichotomous outcome. **Methods:** We searched Medline and the Cochrane Database of Systematic Reviews for systematic reviews of randomized controlled trials published in 2010 and reporting a meta-analysis of dichotomous outcome. We randomly selected 101 Cochrane systematic reviews and 101 non-Cochrane systematic reviews. Teams of two reviewers selected eligible studies studies and abstracted data independently and in duplicate using standardized, piloted forms with accompanying written instructions. The Cochrane Collaboration Methods Innovation Fund funded this study. **Results:** Of the 202 systematic reviews, 187 (93%) reported a standard meta-analysis, 166 (82%) addressed a medical topic, 130 (64%) assessed pharmacological interventions; they included a median of 5 trials (IQR 2–8). The table shows the percentage of systematic reviews that reported, dealt with, and judged the risk of bias associated with participant with missing data. In general, Cochrane Reviews performed poorly (approximately 50% or less for all key criteria other than judging the risk of bias associated with missing participant data) and non-Cochrane Reviews very poorly (20% or less for all key criteria with the exception of 52% for judging risk of bias associated with missing participant data). **Conclusions:** Both Cochrane and—particularly—non-Cochrane Reviews need to do far better in attending to issues of reporting and handling missing participant data.

**Attachments:** Table.pdf

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**Do prominent biomedical journals have methods for detecting outcome reporting bias? (survey of the top 30 journals by impact factor)**

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**Background:** Outcome reporting bias (ORB) is an increasingly recognized source of bias within primary research with the potential to negatively influence systematic reviews and healthcare in general. Literature is arising regarding outcome reporting bias’ effect on research but no studies have been conducted to determine if biomedical journals have processes to minimize the impact of ORB. **Objectives:** To investigate the top 30 biomedical journals ranked by impact factor for their methods, if any, on the detection and management of outcome reporting bias. **Methods:** For each journal who agreed to participate, we administered a standardized set of survey questions via e-mail or telephone. **Results:** 24 (83%) journals responded to our initial inquiry of which 14 (58%) responded to our questions and 10 (42%) declined participation. 5 (36%) journals indicated they had a specific method to detect ORB whereas 9 (64%) journals did not. 6 (43%) journals delegated this responsibility to both peer reviewers and editors, while 4 (28.5%) relied solely on peer reviewers. The remaining 4 (28.5%) journals did not indicate either peer reviewers or editors as responsible for detecting ORB. 4 (29%) journals indicated ORB was found commonly in the review process whereas 7 (50%) indicated ORB was uncommon or never detected by their journal previously. **Conclusions:** Many prominent medical journals lack a method with which to detect outcome reporting bias. Improvements at the medical journal level for detecting outcome reporting bias are needed. We recommend that journals mandate the submission of the original trial protocol by researchers. In addition, diligent cross-referencing of the manuscript and data set to the protocol by editorial staff and peer reviewers should be routinely performed to minimize the influence of ORB on both primary research and systematic reviews.

**Reporting of industry-funded trial outcome data: a comparison of journal publications with confidential individual patient data and clinical study reports**

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Background: There is increasing concern about selective non-reporting of outcome data, particularly from industry funded clinical trials. Controversy around the use of recombinant human bone-morphogenetic protein-2 (rhBMP-2) for spinal fusion has stemmed from this issue. Objectives: To investigate whether published results of industry-funded trials of rhBMP-2 in spinal fusion accurately reflect the underlying trial data. Methods: We compared three different data sources: (1) publicly available journal publications and conference abstracts; (2) confidential individual participant data (IPD); (3) confidential clinical study reports (CSRs). The manufacturer of rhBMP-2 products (Medtronic Inc.) provided complete IPD and CSRs for all their trials of rhMMP-2 in spinal fusion. We identified publications and conference abstracts through comprehensive literature searches. Across the three data sources we compared meta-analyses of effectiveness outcomes and the number and type of reported adverse events. Results: Eleven of 17 manufacturer-funded studies were published; between 56 and 88% of collected effectiveness outcomes were reported in these publications. Despite some missing data from publications, meta-analyses of primary pain outcomes were almost identical across the three data sources. Only 23% of the total adverse events collected in published RCTs were reported in the published literature. RCTs evaluating the licensed preparation of rhBMP-2 (INFUSE®) reported just 11% of their collected adverse events. Several journal articles reported only ‘serious’, ‘related’, or ‘unanticipated’ adverse events, without defining these terms. Confidential CSRs presented considerably more adverse event data than did publications.

Conclusions: The published literature only partially represents the total data known to have been collected on the effects of rhBMP-2. While this did not substantially influence meta-analyses of primary effectiveness outcomes, reporting of adverse event data was inadequate and inconsistent. In the absence of IPD, access to full CSRs can produce more accurate, reliable and robust findings with less time and effort than relying on incomplete published data.

Oral Session O1.20: Using Cochrane Systematic Reviews

Towards an optimal use of the Cochrane Systematic Review to support decision making in a hospital setting

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Objectives: • Exchange of experience in the hospital environment by Health Technology Assessment Units (UETMIS) in Québec, grouped into a Community of Practice (CoP), regarding the use of evidence generated through the Cochrane Collaboration; • Initiation of a discussion on the use of this data by hospital UETMIS through the perspective of local decision making. Results: This presentation will present a synthesis of the results of a survey of members of the health technology assessment CoP in Québec, reflecting their use of systematic reviews of health technology projects in care facilities generated by the Cochrane Collaboration. It will also outline the facilitating factors and barriers to the implementation of the conclusions of these systematic reviews in clinical practice. The presentation will present strategies that can be implemented to promote more consultation of the systematic reviews generated by The Cochrane Collaboration, supporting decision makers in health care facilities in their choice of technologies and methods of intervention. Possible solutions to facilitate uptake of information generated by the Cochrane Collaboration among health care institutions, taking into account the context, needs and expectations of the environment will be presented.

Using Cochrane Systematic Reviews in real life—experiences from teaching health science students and professionals to access and utilize Cochrane Reviews

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Background: Medical students, nursing students, pharmacy students and other health professional students have heard of the Cochrane Collaboration, but seldom access reviews to answer clinical questions. We have tried to encourage our students to do so, but encountered significant problems. Objectives: Encourage health professional students to utilize the scientific knowledge available in Cochrane systematic reviews and to understand both its strenghts and limitations. Methods: Since 2005 we have routinely taught elective medical students and other health professional or science students and post-graduate trainees how to read and evaluate Cochrane systematic reviews. At the same time, we have introduced them to critical appraisal of the primary RCT reports, and encouraged students to assess whether Cochrane systematic review authors have followed standard Cochrane methodology so as to reach believable conclusions. Over this interval, understanding of publication bias and other biases has expanded, so we have placed increasing evidence on assessing the quality of systematic reviews and of the authors’ critical appraisal of the primary evidence. Results: Our experience has shown that Cochrane systematic reviews vary in quality from very useful and apparently reliable to virtually irrelevant to the apparent clinical issue or clearly unreliable. We will show examples where students could recognize flaws that apparently evaded the authors, peer reviewers, and Cochrane editorial groups, as well as examples which encouraged students to access Cochrane Reviews again to explore evidence as opposed to ‘expert opinion’, ‘consensus’, or guidelines.. Conclusions: Cochrane systematic reviews vary substantially in quality. While a high quality review may encourage health professionals to utilize this unique source of scientific information, low quality reviews can discourage even a Cochrane enthusiast. Authors and editorial groups need to listen the experience of systematic review users in order to ensure that the Cochrane Collaboration meets its idealistic goals.

The use of Cochrane evidence and guidance in World Health Organization guidelines

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Background: One of the key functions of the World Health Organization (WHO) is the preparation of global guidelines to address public health questions. Guidelines comprise recommendations that can impact upon health policies or clinical interventions. As The Cochrane Collaboration (Cochrane) is a leader in producing high-quality reviews for policy and practice decisions, it is important to assess the degree to which guidance and evidence from The Cochrane Collaboration are used in the formulation of WHO guidelines. Objective: To assess the extent to which Cochrane’s guidance and evidence is cited in WHO guidelines.

Methods: We identified all currently available WHO guidelines (n = 76) and reviewed them for references to Cochrane guidance (e.g. The Cochrane Handbook for Systematic Reviews of Interventions, assistance from a particular Cochrane Review Group) and evidence (Cochrane Reviews). We analyzed guidelines overall and categorized topics as pertaining to children (n = 19), mixed adult and child (n = 6), and adult-only (no specific reference to children) (n = 51). Results: 53% of all WHO guidelines contain references to The Cochrane Collaboration. 90% of these references are to one or more Cochrane Review; 10% are to Cochrane guidance. Adult guidelines: 47% reference the Cochrane Collaboration. There is an increasing use of Cochrane evidence from 2008 (20%) to 2012 (78%). Mixed adult and child guidelines: 83% reference The Cochrane Collaboration. Child guidelines: 58% reference the Cochrane Collaboration. More detail about the citations in various disease and topic areas will be presented at Colloquium. Conclusions: There is considerable use of Cochrane evidence in WHO guidelines, and some use of the guidance provided by the Collaboration. More research would be useful in detailing how and why Cochrane Reviews are cited, the use of non-Cochrane Reviews, and areas where systematic reviews are needed but are not available. This could serve to identify and prioritize topics for future Cochrane Reviews.

20 ways to move Cochrane evidence into practice: a celebration of 20 years of disseminating Cochrane’s research to the world—and how you can use what we’ve done!

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Background: Cochrane Fields are the Collaboration’s KT experts, employing a range of strategies to get Cochrane evidence used in practice and policy decisions. We customise our strategies based on the patient population (e.g. children), type of health care professional (e.g. nurses) and/or the type of intervention (e.g. complementary medicine). Objectives: • To review examples of a wide range of knowledge translation (KT) tools based on Cochrane evidence. • To develop, in the course of the workshop, a range of KT strategies for the case studies that will be presented—or we will work with situations raised by participants. Results: In this presentation, in honour of the Collaboration’s 20th anniversary, we will first demonstrate 20 different KT strategies that Fields have used, from summaries to podcasts to Congressional briefings and beyond. Then we will draw on our experience to work through three case studies—one addressing a particular group of patients, a second tailored for a particular type of health care professional, and the third targeted on a specific intervention to narrow down their audience, develop strategies, and address how to measure impact.

Oral Session 02.01: Review Methods

Talking to librarians: how to get the most out of library staff and make your Cochrane Review process easier and more successful

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Background: A successful Cochrane Review requires the participation of someone who can be designated as a medical librarian. This often requires obtaining the services of a medical librarian who is not part of your research team. Objectives: How to get the most out of a medical librarian. This presentation will be a guide to getting the best help from a medical librarian. This includes: (1) How to request the aid of a medical librarian (a) What to bring to a first meeting (b) What questions to ask them (c) How to answer the questions that they will ask you (d) How to overcome political/temporal barriers to the participation of your librarian (2) How to assess the abilities and training of a medical librarian (a) How to find out how much they know about systematic reviews and Cochrane Reviews (b) How to help your medical librarian provide the best service possible (training, materials, peer resources) (3) What you want from a medical librarian’s contribution to your Cochrane Review. (a) Reporting results (b) Screening administration (c) Grey literature and hand-searching (d) Guidance on materials and databases (e) Writing appendixes and the Methods section of the Review (f) Tables and figures.

Documenting the search process: an update of different methods?

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Background: In order to comply with the standards laid out in Methodological Expectations of Cochrane Intervention Reviews (MECIR) Cochrane authors are expected to provide detailed reporting of the search process including search strategies for each database searched. Objectives: To discuss methods to incorporate and keep track of the literature search documentation during the search process, and identify barriers to adhering to the MECIR standards. Methods: To report an audit of search strategy reporting in new and updated Cochrane Reviews in a recent issue of the Cochrane Library. We will examine results from a survey conducted amongst Trials Search Coordinators, Information Specialists and review authors. We will highlight some of the challenges faced such as incorporating search strategies from various databases. Results: The survey revealed an inconsistency in information that...
was documented and reported by those responsible for search documentation. The recent audit revealed that the MECIR standards related to the search documentation are still presenting challenges to some authors. This includes, incorporating search strategies from bibliographic databases, websites, and documentation relating to carrying out update searches. **Conclusions:** Keeping track of the search documentation is applicable to any extensive search, including Cochrane and non-Cochrane systematic reviews, health technology assessments and guidelines.

**Incorporating the economic evidence in systematic reviews of interventions: an example from a systematic review in prophylaxis of respiratory syncytial virus infection**

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**Background:** In order to address economic issues within a systematic review (SR) of interventions, a SR of economic evaluation (EE) studies focusing on the same interventions might be carried out. The value of a SR of EEs is still open to debate. However, in some cases undertaking a SR of EEs is fundamental due to the economic impact that the new intervention could have, and the number of EE assessing its cost-effectiveness that are published. In those cases the synthesis of evidence will be more useful than that available from individual studies. **Objectives:** To describe methodological challenges of synthesizing the economic evidence, given the disparities across EEs, while performing a SR of interventions. To illustrate a coherent way of incorporating economic evidence into the SRs. **Methods:** Selection of studies, its critical appraisal and the data extraction from included studies was performed independently by two reviewers and disagreements were resolved by a third reviewer. Only full EE (cost-effectiveness/cost-utility analyses) were included. The quality was assessed using an adapted Drummond’s checklist. Characteristics and results of EEs were presented in a descriptive way in tables, separately for three subgroups, according to the baseline risk of population. The values of incremental cost-effectiveness ratios provided by authors were adjusted for the time value of money, by using the appropriate gross domestic product deflator, and were presented in 2011 EUR. **Results:** A total of 34 EE studies were included. The procedures undertaken for implementing the above mentioned methods in a SR assessing the effect of immunoprophylaxis in preventing the severe respiratory syncytial virus infection, will be presented. **Conclusions:** This example could be used as a guide to non-health economist reviewers within the Cochrane Collaboration, in terms of issues to be considered when undertaking a systematic review of economic evaluations as part of their SR of interventions.

**Assessment of the evidence for diagnostic tests and strategies: a systematic review of available tools**

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**Background:** The challenges facing systematic reviewers and guideline developers when drawing conclusions and making recommendations about diagnostic tests and strategies (DTS) are considerably different when compared to treatment decisions. **Objectives:** To identify, describe and compare all available instruments, checklists, critical appraisal tools, and indices designed for assessing the quality of evidence (QoE) or strength of recommendations (SoR) dealing with diagnostic tests and strategies. **Methods:** We conducted a comprehensive systematic search of electronic databases and websites of major international organization to identify state of the art diagnostic guidelines, methods papers, and diagnostic systematic reviews. We also contacted international experts in the field to identify any additional tools. **Results:** We identified 45 tools and modifications of existing tools to assess the QoE of DTS. Most tools acknowledge the importance of assessing the QoE and SoR separately. Only two tools explicitly consider factors that increase the confidence in the evidence and only one tool considered publication bias. When moving from evidence to making decisions, patient values and preferences and resources were rarely considered. There is confusion about the terminology that describes the various factors that influence the QoE and SoR. **Conclusions:** The GRADE approach is the most complete approach encompassing all domains to evaluate the QoE for diagnostic test accuracy systematic reviews. However, users will benefit from a more detailed guidance about how to judge these domains. Users will also benefit from a better description of GRADE’s framework about using evidence from these systematic reviews to making decisions and developing recommendations about medical tests.

**Oral Session 02.02: Skill development**

An environmental scan for training programs in medical writing and publishing and a systematic review of their effectiveness

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**Background:** Approximately $100 billion is lost to ‘waste’ in biomedical research globally, annually, mainly due to the poor quality of published research. In response, there has been an upsurge in interest regarding the scientific process of writing, editing, peer reviewing, and publishing (i.e., Journalology). However, little research has taken stock of Journalology training opportunities or related evaluations of their effectiveness. **Objectives:** To create a database of training opportunities in Journalology and conduct a systematic review to investigate whether training in medical writing and publishing effectively improves educational outcomes. **Methods:** A focus group and environmental scan were conducted to uncover resources for a training database. Subsequently, a systematic review was conducted, involving forward-searching using SCOPUS and conducting searches of pre-MEDLINE, MEDLINE, EMBASE, ERIC and PsycINFO databases. **Systematic Review—Population:** Those centrally or peripherally involved in medical writing and publishing (e.g., authors, editors, peer reviewers). **Intervention:** Evaluations of training in any specialty or subspecialty of medical writing and publishing targeted at the designated population(s). **Comparators:** (1) before and after administration of training, (2) between two or more training opportunities, or (3) between training and any other intervention(s) or no intervention. **Outcome(s):** Any measure of effectiveness of training, including: measures of knowledge, intention to change behavior, measures of excellence in Journalology training domains, however reported. Since this review is largely exploratory, other meaningful outcomes were included as well. **Study design(s):** Comparative studies evaluating at least one training opportunity of interest. **Results:** The preliminary results of this review will be presented. **Conclusions:** The results of this research will provide authors, editors, peer reviewers, and other potential trainees with a database of training opportunities in medical writing and publishing, as well as evidence of their effectiveness. **Acknowledgements:** Funded by the Canadian Institutes of Health Research. The funder has no role in the research and publication.

**Getting Cochrane into schools**

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**Background:** The ALOIS Community volunteer project (September 10 to June 12) was an NIHR-funded Cochrane-NHS engagement project which demonstrated that it was feasible to recruit and train lay volunteers to read trial reports and extract the information needed to maintain the Cochrane Dementia Group’s register of controlled studies—ALOIS. It also demonstrated that schoolchildren could do this task given suitable support and guidance. There could be enormous benefits of volunteering to this age-group in terms of gaining a practical understanding of the work of Cochrane through hands-on experience, telling the difference between good and bad research, an appreciation of the challenges facing those seeking the truth about treatments, and building confidence to pursue a career as a doctor or clinical researcher. **Objectives:** To develop and pilot an educational programme targeting UK state schools, which will allow schoolchildren to contribute directly to Cochrane and learn about research and systematic reviews at the same time. A key measurable outcome might be the number of applications to university medical courses by students from participating schools. **Methods:** (1) Case-study of a schoolchild who has undertaken the coding task. (2) Report on Trial Blazers—a crowd-sourcing study which recruited a subset of laypeople via social media to screen citations using an iPhone app (3) Report on a subset of schoolchildren recruited to screen references from EMBASE for publication in CENTRAL. (4) Development of relationships with relevant stakeholders and educational experts to explore strategies to facilitate Cochrane’s engagement with schools and to motivate schoolchildren to participate. **Results:** Present evidence for the feasibility of Cochrane engaging meaningfully with this age-group, and a draft strategy on how to achieve it. **Discussion:** Audience will be encouraged to comment on a SWOT (strengths, weaknesses, opportunities, threats) analysis of a draft schools’ engagement strategy, and invited to contribute further ideas.

**Opportunities for knowledge translation skill development through online learning**

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**Background:** The National Collaborating Centre for Methods and Tools (NCCMT) aims to build capacity in knowledge translation for public health in Canada. In addition to in-person training, NCCMT offers online learning resources for skill development in English and French. These include online learning modules, searching pyramids and a Learning Centre for users to monitor their learning. **Objectives:** To describe how online learning resources are being accessed by public health professionals, and to assess the impact of online learning resources on self-efficacy, knowledge and skill development for evidence-informed public health practice. **Methods:** Public health professionals’ preferences for knowledge translation training were identified through an environmental scan, online surveys and evaluation reports on current products and services. Content for the online learning resources were developed by NCCMT staff and McMaster faculty, and pilot-tested with public health professionals. Data on users’ access and use of online learning resources were collected through website analytics. Users’ knowledge was assessed through completion of pre- and post-assessment questionnaires. Evaluation forms provided information on effectiveness of module content, design and format to support users’ learning. **Results:** Online learning resources have been accessed by over 2700 users in Canada and abroad. Pre- and post-assessment data indicate users experienced a statistically significant increase in self-efficacy scores for using research evidence in decision making and critical appraisal of intervention studies. **Conclusions:** Online learning resources may be an effective strategy to meet the learning needs of public health professionals to develop skills and capacity for knowledge translation.
Using Cochrane Reviews to improve critical appraisal skills and clinical decision making in problem-based learning

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Background: Problem-based learning (PBL) is a student-centered pedagogy in which students learn about a subject through the experience of problem solving. Cochrane Reviews are systematic reviews of primary research in human health care and health policy, and are internationally recognized as the highest standard in evidence-based health care. However, the effectiveness of using Cochrane Reviews in PBL has not been well evaluated. Objectives: To assess the learning efficacy of using Cochrane Reviews in PBL. Methods: PBL is held on a biweekly basis in Department of Internal Medicine in Taipei Medical University-Shuang Ho Hospital in Taiwan. The participants include medical students, resident doctors and primary care faculty members. Cochrane Reviews are selected based on a clinical based question. During to the session, the moderator (a Cochrane Reviews expert) helps the participants to understand the history of Cochrane collaboration, the concept on meta-analysis, and the critical appraisal skills. After using Cochrane Reviews for an 1-month period, the effectiveness of the PBL is being evaluated based on the survey among participants. Results: Among 28 respondents, 85.7% agreed that Cochrane Reviews using in PBL can improve overall learning quality, 85.7% approved it can help to understand meta-analysis, 78.6% agreed it helped to stimulate critical appraisal skills, and 67.9% thought Cochrane Reviews can facilitate problem-solving based on evidence. For future implementation, 82.1% of them recommended that Cochrane Reviews should be used in future PBL. Conclusion: Using Cochrane Reviews in PBL was appreciated by most of the participants and may improve critical appraisal skills and provide evidence-based decision making. Thus, we suggest the use of Cochrane Reviews regularly in PBL.

Individual participant data meta-analysis for a binary outcome: one-stage or two-stage?

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Background: A fundamental aspect of epidemiological studies concerns the estimation of factor-outcome associations to identify risk factors, prognostic factors and potential causal factors. Because reliable estimates for these associations are important, there is a growing interest in methods for combining the results from multiple studies in individual participant data meta-analyses (IPD-MA). When there is substantial heterogeneity across studies, various random-effects meta-analysis models are possible that employ a one-stage or two-stage method. These are generally thought to produce similar results, but empirical comparisons are few. Objectives: To describe and compare several one- and two-stage random-effects IPD-MA methods for estimating factor-outcome associations from multiple risk-factor or predictor finding studies with a binary outcome. Methods: One-stage methods use the IPD of each study and meta-analyse using the exact binomial distribution, whereas two-stage methods reduce evidence to the aggregated level (e.g. odds ratios) and then meta-analyse assuming approximate normality. We compare the methods in an

Oral Session 02.03: Individual Participant Data

Development and validation of a novel instrument for assessing the quality of individual patient data meta-analysis

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empirical dataset for unadjusted and adjusted risk-factor estimates.

Results: Though often similar, on occasion the one stage and two-stage methods provide different parameter estimates and different conclusions. For example, the effect of erythema and its statistical significance was different for a one-stage (OR = 1.35, p = 0.03) and univariate two-stage (OR = 1.55, p = 0.12). Estimation issues can also arise: two-stage models suffer unstable estimates when zero cell counts occur and one-stage models do not always converge. Conclusions: When planning an IPD-MA, the choice and implementation (e.g. univariate or multivariate) of a one-stage or two-stage method should be prespecified in the protocol as occasionally they lead to different conclusions about which factors are associated with outcome. Though both approaches can suffer from estimation challenges, we recommend employing the one-stage method, as it uses a more exact statistical approach and accounts for parameter correlation.

PLUGGED-IN (providing likeable and understandable guidelines using GRADE in the EMR with direct links to individual patient data) phase 2

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Background: Traditional clinical decision support systems in Electronic Medical Records (EMR) use algorithms with inclusion/exclusion criteria to provide direction to clinicians. Improved systems for developing trustworthy guidelines (e.g. GRADE) typically include many weak recommendations unsuited for clear inclusion/exclusion criteria, and in which the right decision varies from patient to patient. Through PLUGGED-IN phase 1 we developed a conceptual framework and a guideline authoring/publication platform to allow use of trustworthy guidelines directly as decision support in EMRs, not dependent on traditional algorithms. Our framework is based on a multilayered guideline presentation format developed together with the DECIDE project. At the center of this framework you find the structured clinical questions (PICO). Objectives: To implement and test our novel approach to decision support where relevant patient specific information is shown alongside evidence based recommendations in EMRs. Methods: We used a web guideline published through the MAGIC (Making Grade the Irresistible Choice) application, which allowed our EMR partner to make use of it’s structured content, ontology-coded clinical questions (PICO questions) and recommendation-specific EMR elements. Results: The EMR system was able to interact with the guideline and the PICO questions, suggest relevant recommendations displayed along with relevant patient specific information (lab tests, measurements, medications), and offer these to facilitate direct ordering. We will show real examples and live products. Discussion: Results suggest we can offer a complementary approach to traditional algorithm-based systems that is compatible with a large number of EMRs. Implications for guideline developers/users PLUGGED-IN provides a model for direct use of guidelines and it’s underlying content as decision support in EMRs.

Individual participant data meta-analysis to examine the accuracy of serum mesothelin for diagnosing malignant pleural mesothelioma

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Background: Individual participant data (IPD) meta-analyses have several advantages when examining the diagnostic accuracy of a continuous marker. These include the direct estimation of the summary ROC curve and greater flexibility, validity and power to investigate differences in accuracy between clinical subgroups. However, no preferred statistical approach exists. Objectives: To illustrate our approach based on ROC regression modelling using standardised marker values. Methods: Our IPD meta-analysis approach consisted of the following steps: (1) determine the cumulative marker distribution among controls stratified by study; (2) use this distribution to standardize marker values for corresponding cases, known as placement values; (3) the cumulative distribution of 1 minus the placement values in cases will produce the summary ROC curve; (4) the mean value of the placement values in cases will produce the AUC; (5) covariates can be added to the binary regression model to examine whether they affect discrimination. Results: The IPD data of 16 studies were available, including a total of 1026 patients with mesothelioma (cases) and 4491 without (controls). Most studies applied a case-control design, often with multiple control groups per study. At a common threshold of 2 nmol L⁻¹, the sensitivities and specificities of mesothelin across studies ranged widely from 19 to 68% and 88 to 100%, respectively. Heterogeneity was largely attributable to differences in study population, because type of control group, mesothelioma stage, and histologic subtype significantly affected the diagnostic accuracy. For mesothelioma patients with stage 1 and 2 compared to symptomatic controls, the area under the ROC curve was 0.77 (95% CI: 0.73–0.81). At 95% specificity, the corresponding sensitivity of mesothelin was 32% (95% CI: 26–40%). Conclusions: IPD meta-analysis enables more insightful examination of the accuracy of a continuous marker, in particular to investigate differences in accuracy between patient subgroups.

Oral Session O2.04: New developments in training

Conducting a needs assessment for Cochrane learning

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Background: Conducting a needs assessment is the essential first step in creating accredited educational content. All educational activities
within Cochrane Learning will follow this rigorous process to ensure the educational materials created are of the highest educational quality. The needs assessment will inform both the selection of Cochrane Reviews included in the Cochrane Learning programme and also the activity type—multiple-choice questions, patient vignettes, webinars, and so on. Objectives: To highlight the needs assessment process as the first step to creating high quality educational content. To conduct a needs assessment and report upon the number of Cochrane Reviews selected for inclusion in a Cochrane Learning programme together with the appropriate activity type recommended. Methods: We conducted needs assessments for the Cochrane Learning programme, based upon the criteria from the Accreditation Council for Continuing Medical Education (ACCME) and selected both the relevant Cochrane Reviews and the appropriate activity type to meet any discovered needs. Results: The needs assessment process was followed for two topic areas. We will present a description of the process followed, including insights from the Editorial Team. We will also present the results of the needs assessments, including the number of Cochrane Reviews meeting the stated needs and also the activity types recommended. We aim to present a matrix to assist in the selection of activity type based upon our experiences. Conclusions: When establishing an online learning programme it is essential to select content that meets the needs of participants to ensure that the participant can make the best use of the new information in their clinical practice. Needs assessments are therefore an essential part of high quality learning programmes. We will learn from our initial experiences to ensure that we are able to apply the needs assessment process to all programmes within Cochrane Learning.

If you plan it, will they come? Lessons learned about participant recruitment and retention for Cochrane webinars

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Background: Cochrane Canada released The Cochrane Collaboration’s first webinar series in 2009. Since then, we have covered a wide range of topics that are relevant to people with beginner or advanced knowledge of The Cochrane Collaboration, Cochrane Reviews and The Cochrane Library. Though participants consistently gave positive evaluations and said that webinars were their medium of choice for Cochrane training, attendance levels had not increased substantially since 2009, and a significant proportion of registrants did not actually attend. Objectives: To improve recruitment (i.e. number of registrants) and retention (i.e. number of registrants who actually attend) for our webinars. Methods: To increase our registrations, we have made a concerted effort to expand our audience beyond current Cochrane contributors. We have significantly scaled up our advertising campaigns: we post on Cochrane and external websites; we send advertisements to Canadian medical schools; we post on social media sites; we send to Cochrane and external listservs; and we send targeted emails to key stakeholders asking them to invite their constituents. To improve retention, we’ve made numerous changes to our registration process. For example, participants can add events directly to their Google or Outlook calendars, we send reminders to all registrants before the webinar, and we’ve emphasized time zone converters in our materials to prevent people from registering at unrealistic times (e.g. showing those in Melbourne that our webinars are at 4:00 AM local time). We have automated many of these changes using Drupal web forms. Results: We have significantly increased the numbers of both registrants and attendees, and have seen substantial uptake for those webinars for which we have set up Facebook events; data will be presented. Conclusions: Our advertising/marketing strategies have improved our recruitment and retention. These strategies can be—and have been—adopted by other groups organizing online Cochrane training.

MetaLight: freely available online software for teaching and learning meta-analysis

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Background: While there are many courses and resources for meta-analysis available and numerous software applications to run meta-analyses, there are few pieces of software which are aimed specifically at helping those teaching and learning meta-analysis. Valuable teaching time can be spent learning the mechanics of a new software application, rather than on the principles and practices of meta-analysis. MetaLight is a freely available online software application that runs simple meta-analyses and contains specific functionality to facilitate the teaching and learning of meta-analysis (URL: http://eppi.ioe.ac.uk) Discussion: The screen of MetaLight is split into three main areas as displayed in Figure 1. Across the top of the window is a grid that lists all the studies in the meta-analysis along with statistics that enable effect sizes to be calculated for each. Occupying the largest area of the screen is a panel that displays the results of the meta-analysis in the form of forest and funnel plots; its pooled effect sizes and heterogeneity statistics are displayed to the left of this. The MetaLight interface (Fig. 1) has been designed to develop understanding of: the relationship between effect sizes and their appearance on the forest plot; the impact on results of selecting a fixed or random effects model; and how funnel plots are constructed (Fig. 3). It also contains a forest plot exercise feature that enables students to ‘draw’ a forest plot based on descriptive text, rather than being presented with one to interpret (Fig. 2). MetaLight runs using the Microsoft Silverlight browser plugin and is therefore easily deployable to most PC/Mac desktops which facilitates its use in PC lab teaching situations. Conclusion: MetaLight was developed specifically as a tool to facilitate the teaching and learning of meta-analysis; we have presented here some of the ways it might be used in a training situation.

Attachments: MetalightFig1.tif, MetalightFig2.tif, MetalightFig3.tif

Learning and teaching risk of bias using a mock trial with interactive voting technology

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Background: Teaching the concepts and components of randomised controlled trials (RCT) and risk of bias assessment can be challenging. For many people, learning is enhanced when knowledge is able to be acquired from an active-learning, hands-on experience. Unfortunately, teaching these concepts is often lecture-based and distant from a real-life setting. Objectives: We developed an innovative teaching module by conducting a mock RCT ‘Live the Trial’ utilising audience response technology and candy to demonstrate the steps of a RCT. This enables collection of trial data in real-time, and identify and demonstrate risks of bias. We sought to assess whether the experience increased learning and confidence. Methods: Within a classroom setting, participants were randomised and blinded to one of two candy preparations. The steps of a RCT were followed and the risks of bias identified and discussed throughout the class which was then integrated with a critical appraisal tool. Participants’ knowledge, outcome measurements and opinions were obtained with the innovative use of wireless interactive voting devices that were synchronised with the randomisation. Results: We report the experience of a class of post-graduate students. The percentage of students ‘confident’/ ‘very confident’ in identifying the steps of an RCT increased from 25% and 4% respectively, to 73%. Confidence in identifying risks of bias also increased. At the onset 27% of participants indicated they were ‘confident’ while none indicated they were ‘very confident’. Upon conclusion 79% reported ‘confident’/ ‘very confident’. Students also reported the use of interactive voting helped them learn, feel more engaged and increased their opportunity to interact with the lecturer. Conclusions: The mock RCT is a fun approach which increased student’s knowledge and confidence in risk of bias assessment. The use of technology to facilitate interactive voting provides an instant response and participation of everyone to enhance the classroom experience.

Oral Session O2.05: Conducting risk of bias assessments

Risk of bias assessment of studies included in multiple Cochrane Reviews: agreement between different reviews

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Background: Cochrane systematic reviews (SR) must include an assessment of the risk of bias (RoB) of included studies. Although there are numerous tools to assess the RoB of any given study, the Cochrane Collaboration endorses the RoB tool since 2008. Despite this standardization effort, the tool is based on subjective judgments and requires access to all relevant methodological information of each included study. Objectives: To assess whether different Cochrane Reviews assessing the same included studies agree in their use of RoB criteria. Methods: We entered all Cochrane Reviews and their corresponding included studies into the Epistemonikos database (www.epistemonikos.org). Epistemonikos links SRs to all their included studies. We selected a random sample of studies included in two or more Cochrane SR published since 2008. For each included study we extracted the RoB assessment provided in the corresponding section of the Sr. This yielded at least two RoB assessments per study. Finally, we calculated agreements between the assessments made by different reviews for the same RoB item. Results: Our search was conducted in January 2013. We identified 5765 studies included in 2 or more Cochrane SRs from which we selected a random sample of 40 records. The RoB item most consistently assessed was ‘randomisation’, assessed in all studies. For 33 studies (82.5%) its assessment was concordant. Concordance was observed in 72.5% of studies for ‘allocation concealment’, and 67.5% for ‘attrition bias’. On the other side of the spectrum, concordance was only 20% for performance bias and detection bias. Complete results, including a larger sample will be presented at the Colloquium Conclusions: The Cochrane Collaboration has made efforts to standardize risk of bias assessment of included studies across SRs. However, our analysis shows that RoB assessment is still inconsistent and might lead to equivocal appraisal of the available evidence.

The value of author contact in determining risk of bias in included studies in a systematic review

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Background: Cochrane Review methodology suggests that review authors consider contacting authors of included studies to obtain further information where risk of bias cannot be adequately assessed using published reports. This approach is not usually recommended in non-Cochrane Reviews. It is unknown what difference author contact makes to this assessment, and whether this may affect the conclusions of a review. Objectives: Compare difference in risk of bias rating when rating is made based solely on published report versus published report and author contact. Methods: During the conduct of a Cochrane Review on email for communication between healthcare professionals and patients, authors kept a record of study author contacts in relation to assessment risk of bias and whether clarification was obtained. This allowed for comparison between the risk of bias rating for each study before and after author contact. Results: Author contact was necessary in all nine included studies, as elements of study design were unclear/not described in all. Before author contact, 34 of 54 domains were unclear. Allocation concealment was unclear in all studies, random sequence generation in five, blinding in seven, incomplete outcome data in four and selective reporting in two. After author contact was completed 3/54 domains remained classified as ‘unclear’, because three authors could not provide all detail requested. Eight authors were contactable via email; one author, of a study published in 1995, was only contactable via postal-mail. Conclusions: In our review, author contact reduced uncertainty when assessing risk of bias and was successful even for a study published more than 17 years ago. The conclusions of the review, that low quality of the included studies meant that effects of email could not be adequately assessed, was further supported by clarification of risk of bias status. We suggest further studies to establish the added value of this activity.
Planning and reporting of subgroup analyses in randomized trials—between confidence and delusion

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Background: Credibility of subgroup analyses in randomized trials (RCTs) depends on several factors, in particular subgroup prespecification. Little is known about subgroup planning in trial protocols and their reporting in subsequent publications. Objectives: To describe (i) the planning of subgroup analyses in RCTs, and (ii) to determine the agreement between planning of subgroups and their reporting in subsequent publications. Methods: We established a multicentre cohort of RCTs based on protocols approved by six research ethics committees from 2000 to 2003 in Switzerland, Germany, and Canada. From included protocols we extracted data on study design and planning of subgroup analyses. We identified subsequent full publications by literature searches and surveys of trialists. We calculated the proportion of protocol/publications that planned/reported subgroup analyses, provided hypotheses, anticipated direction of effect, and planning/application of an interaction term. We investigated the agreement between subgroups stated in protocols and reported in publications using 2 \times 2 tables. We used logistic regression to investigate whether characteristics of subgroup reporting and trial initiation (industry vs. investigator) were associated with subgroup prespecification. Results: We included 894 protocols and 520 journal publications. The table summarizes the proportions of planned/reported subgroup analyses and the agreement between planning and reporting. In 96 publications authors stated that at least 1 of their reported subgroup analyses was prespecified, but only 51 (53%) corresponding protocols reported subgroup planning. In 13 instances the number of subgroup analyses in protocol and corresponding publication(s) was identical. Reported subgroup hypothesis, direction of effect, and interaction term were not associated with subgroup prespecification in the protocol. Industry-initiated trials were more likely to prespecify subgroup analyses. Conclusions: Trial protocols commonly describe planned subgroup analyses, but hypotheses, anticipated direction of effects, and planning interaction tests are rarely specified. Systematic review authors cannot rely on statements of subgroup prespecification in RCT reports.

Attachments: TABLE_SG_REPORTING.pdf

Assessing baseline imbalance in randomised trials: implications for the Cochrane risk of bias tool

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Background: The Cochrane Collaboration’s risk of bias tool for critically evaluating randomised trials currently addresses selection bias through scrutiny of randomisation methods (sequence generation and allocation concealment). Assessment of baseline imbalances in demographic and clinical characteristics—particularly those known to be prognostically important—can indicate whether the randomisation methods successfully achieved comparability across the randomised groups. Such assessments are however not recommended in the Handbook, and when performed are seldom linked explicitly with selection bias. Proposal: An assessment of baseline imbalances between groups should form a key and prominent part of the selection bias domain of the Cochrane risk of bias tool. To inform this, important prognostic factors, and the magnitude of the difference between groups that would be sufficient to raise concern, should be pre-specified in the review protocol. Considering baseline imbalance in addition to randomisation methods will allow many ‘Unclear’ risk judgements—which are currently made frequently—to be resolved into ‘Low’ or ‘High’ risk judgements. ‘Low’ and ‘High’ risk judgments may also be re-classified accordingly. Rationale for proposal: During recent systematic reviews we recognised that failure to assess baseline imbalance can lead to review conclusions being either unnecessarily conservative or over-optimistic. Methods: From included protocols we extracted data on study design and planning of subgroup analyses. We identified subsequent full publications by literature searches and surveys of trialists. We calculated the proportion of protocol/publications that planned/reported subgroup analyses, provided hypotheses, anticipated direction of effect, and planning/application of an interaction term. We investigated the agreement between subgroups stated in protocols and reported in publications using 2 \times 2 tables. We used logistic regression to investigate whether characteristics of subgroup reporting and trial initiation (industry vs. investigator) were associated with subgroup prespecification. Results: We included 894 protocols and 520 journal publications. The table summarizes the proportions of planned/reported subgroup analyses and the agreement between planning and reporting. In 96 publications authors stated that at least 1 of their reported subgroup analyses was prespecified, but only 51 (53%) corresponding protocols reported subgroup planning. In 13 instances the number of subgroup analyses in protocol and corresponding publication(s) was identical. Reported subgroup hypothesis, direction of effect, and interaction term were not associated with subgroup prespecification in the protocol. Industry-initiated trials were more likely to prespecify subgroup analyses. Conclusions: Trial protocols commonly describe planned subgroup analyses, but hypotheses, anticipated direction of effects, and planning interaction tests are rarely specified. Systematic review authors cannot rely on statements of subgroup prespecification in RCT reports.

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Oral Session O3.01: Advanced Review Methods

Waiting list may be a ‘nocebo’ condition in psychotherapy trials

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Background: Appropriate control conditions in psychotherapy trials have long been a focus of much discussion. Broadly speaking we may think of three categories: (i) placebo interventions (ii) no treatment, and (iii) treatment as usual. Waiting list, on which the participants do not receive the treatment until after the trial is over, is usually regarded as a form of no treatment. For example, when Hrobjartsson and Gotzsche meta-analyzed the magnitude of placebo effect, they compared placebo interventions against both no treatment control
(NTC) and waiting list control (WLC) indiscriminately [1]. However, there is growing suspicion that NTC and WLC may be substantively different as a control condition. Objectives: To assess the difference in the effect sizes of NTC and WLC in psychotherapy trials Methods: We have been conducting a systematic review of all available evidence for all psychological therapies for treating depression. This corollary study applied random-effects Bayesian network meta-analysis on the quadrangular network of cognitive-behavior therapy (CBT: the best researched of all psychotherapies for depression), psychological placebo (PP), NTC and WLC. Results: The comparison CBT vs WLC showed extreme funnel plot asymmetry. After excluding 12 studies contributing to this asymmetry, the consistency model showed adequate fit to the data (41 studies). CBT consistently beat PP (OR for response: 1.6, 95%CrI: 0.92–2.6), NTC (2.2, 1.5–3.3) and WLC (3.0, 2.1–4.3) in this order. The comparison between NTC and WLC was not statistically significant (1.3, 0.8–2.3). Conclusions: The effect size of CBT against WLC was consistently but non-significantly bigger than that against NTC. The effectiveness of CBT, and other psychosocial interventions, may be overestimated if WLC was used as a control condition.

Reference

Categorising continuous risk factors: issues and implications

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Background: Grouping continuous variables into two or more categories for the purposes of simplicity and ease of analysis and interpretation is a widely used approach in medical and epidemiologic research. Categorisation, however, has been found to lead to loss of power and efficiency, to affect internal validity, and to produce biased results. Objectives: To highlight the bias produced by categorising continuous variables and its impact on evidence synthesis. Methods: A literature review of the effects of categorisation is performed with a discussion of the alternative methods proposed to model outcome-exposure relationships. The impact of modelling body mass index (BMI) as a continuous variable versus the categorisation of BMI is compared using examples from the literature. Results: Categorisation of continuous variables is statistically unnecessary and can result in loss of efficiency. Dichotomisation has been found to hinder meta-analyses of observational studies and to pose several drawbacks such as loss of power, residual confounding, and assumptions of linearity. Several alternative modelling methods have been proposed, such as spline regression and smoothing techniques and generalised additive models. These methods have higher power, but require adequate sample size and sufficient data on ranges of exposure. For meta-analyses of dose-response relationships, a number of techniques have been developed for the synthesis of summary regression slopes. We review the complexities, limitations, and challenges posed by these methods. In relation to BMI, some research suggests that different modelling techniques considerably influence estimates of the relationship between BMI and mortality, with categorisations yielding biased results. Yet, other researchers have found BMI categorisation to produce good fit estimates. Conclusions: Grouping of continuous variables produces inconsistent and biased risk estimates. When modelling epidemiological and medical data, researchers should be aware of the trade-offs between proper statistical approaches and simple interpretation of results.

A framework to interpret external validation studies of prediction models

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Background: It is widely acknowledged that newly developed diagnostic or prognostic prediction models should be externally validated to assess their performance. It is recommended to test the model in ‘different but related’ subjects, but criteria for ‘different but related’ are lacking. Objectives: To propose a framework of methodological steps for analyzing and interpreting the results of validation studies of prediction models. Methods: We identify whether the validation sample evaluates the model’s reproducibility or transportability by quantifying case mix differences with the development sample. We hereto use an adaptation of the Mahalanobis distance metric and compare the distribution of the linear predictors. We quantify the model’s performance with standard metrics for discrimination and calibration. Finally, we illustrate this approach with three validation datasets for a previously developed prediction model for Deep Venous Thrombosis. Results: The first validation study had a similar case mix distribution (p = 0.752) and should therefore be interpreted as evaluating model reproducibility. Model performance was adequate (C = 0.78, calibration slope = 0.90), except for the model intercept (calibration-in-the-large = −0.5, p < 0.0001). In the other two validation studies, we found substantial case mix differences (p < 0.0001) and reduced model calibration (such as non-linear calibration slopes). These validation samples evaluated the model’s transportability and revealed the need for more extensive updating strategies. Conclusions: The proposed framework enhances the interpretability of validation studies of prediction models. The steps are straightforward to implement and may enhance the transparency of prediction research.

Attachments: Figure1.pdf, FigureResults.pdf

An ‘all-in-one’ meta-analysis model: joint synthesis of multiple outcomes to compare multiple interventions

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Background: The joint meta-analysis of two or more correlated outcomes, known as multivariate meta-analysis, is expected to improve...
Oral Session O3.02: Partner/knowledge user engagement

Bridging the gap between science and policy at the agri-food and public health interface through a knowledge synthesis, transfer and exchange handbook

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Background: Several knowledge synthesis, transfer and exchange (KSTE) resources, guidelines and toolkits have been developed, primarily in the context of the healthcare, health services, and broader public health sectors. However, there is currently no guidance about how to conduct these methods in the agri-food public health sector, which we denote as a field of activity characterized by the overlap of veterinary public health, food safety and ‘One Health’. Objectives: We developed a comprehensive KSTE Handbook to serve as a guide for science and policy professionals working at the agri-food and public health interface. Methods: We conducted a mixed-method systematic review of the global literature to identify key recommended principles and methods to support KSTE initiatives. Results from the review were used as a foundation to develop the Handbook. The first edition of the Handbook was piloted as part of an interactive training workshop in Guelph, Canada, on March 7, 2013, with 50 science and policy professionals from provincial and federal agri-food public health government departments and other agencies. Results: The Handbook provides detailed guidance for key KSTE methods and practices and their applicability to the agri-food public health context. Throughout each chapter, unique and illustrative examples, case studies and insights are provided. Each chapter also includes practical exercises to apply the methods and concepts on a real-world agri-food public health issue and key methodological references that are applicable across sectors. Conclusions: We believe that the Handbook will help to raise awareness and serve as a key resource about KSTE among science and policy professionals working in the agri-food public health sector and other related fields about how to ensure that relevant and credible research is generated and utilized to inform decision-making in times of increasingly scarce resources and when the value and utility of this knowledge is increasingly recognized.

Partnering with Canadian Public Health departments to explore the impact of a tailored, collaborative approach to evidence-informed decision making

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Background: Health Evidence partnered with three Canadian Public Health departments, with funding from the Canadian Institutes for Health Research’s (CIHR) ‘Partnerships for Health System Improvement’ program, to study the impact of tailored knowledge translation and exchange (KTE) interventions on developing capacity and facilitating evidence-informed decision making (EIDM) in Public Health. (CIHR Funding Reference Number 101867). Objectives: The purpose of this study was to work collaboratively with Public Health partners to explore the impact of KTE strategies (e.g. knowledge broker mentoring, large group training, virtual support, etc.) on organizational capacity and staff knowledge, skills and behaviour related to EIDM. The study also examined contextual and organizational factors that facilitate or impede this impact. Methods: This study used case study methodology with several embedded units of analysis (individual staff, project teams, entire organization) and a mixed-methods approach to data collection and analysis. A 22-month intervention was tailored to the needs and circumstances of each of the three unique Public Health departments (i.e. cases). Data collected and analyzed throughout the project further informed the intervention. Results: The tailored KTE strategies implemented in this study improved department capacity for EIDM by improving staff knowledge, skill and confidence related to accessing, interpreting, and applying research evidence to their decision making. Several contextual factors were identified that appeared invaluable to implementing EIDM in practice: strong senior leadership and ‘buy-in’; support from management who have an understanding of EIDM and what is required of staff; and an organizational culture that offers peer support, opportunities for sharing within the organization, and the ongoing support of mentors or ‘internal’ knowledge brokers. Conclusions: Tailored KTE strategies, developed through partner engagement, impacted organizational capacity for evidence-informed public health decision making by enhancing individual staff capacity
and through addressing organizational factors to facilitate a culture conducive to EIDM in practice.

Knowledge translation and partner engagement through a national workshop with interactive voting technology

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Background: A 1-day workshop intended to be a practical session for public health professionals representative from across Canada sought to enhance the translation of research evidence and develop evidence-informed work plans for preventing childhood obesity. Objectives: To describe participants’ knowledge and their readiness to progress with an evidence-informed plan of prevention. Methods: 95 public health professionals involved in direct service provision or program development and implementation at a local or regional level participated in the January 2013 workshop. Included were presentations on knowledge translation, an overview of evidence from systematic reviews, an example of a public health department applying the principles to inform policy, and another health region’s experience of using evidence to address health inequalities. Participants engaged in small group discussions and commenced development on work plans. Polling with wireless ‘clickers’ assessed participant’s knowledge, views and their readiness to progress with evidence-based work plans. Polling was undertaken throughout the day. Results: 89 persons participated in the polling, although decreased at the end of the day. 72% of participants came to identify what works to address childhood obesity. 35% of participants reported that they had not previously heard of PICO for answerable questions. Participants reported increased confidence in identifying an evidence-based program or service: 71% ‘some confidence’ and 23% ‘fully confident’. When asked to what extent they were leaving with a plan for moving forward: 39% ‘some confidence’ and 42% ‘good extent’/‘confident’. The participants reported that interactive voting enabled active participation and real-time assessment. There is further need and opportunity to engage and support decisions makers in translating evidence to practice.

Conclusions: Clickers helped them feel more engaged and recommended future use.

Results:

Objectives:

Conclusions:

Canadian Cochrane Centre Partners Forum: strengthening partnerships to increase evidence-based decision-making

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Background: Cochrane Centres promote The Cochrane Collaboration and act as a central contact point. Centres develop and maintain relationships with partner organizations to promote awareness, access and use of Cochrane Reviews. The Canadian Cochrane Centre (CCC) hosted a 1-day Partners Forum with 25 partner organizations across Canada to promote Cochrane and discuss how to work together to impact evidence-based decision-making. Objectives: The Forum provided a face-to-face opportunity to update partners on expanded Cochrane resources in education and knowledge translation, discuss current partner relationships, have active partners present examples of joint activities/projects, strengthen organizational linkages and brainstorm future collaboration. Methods: The Canadian Cochrane Centre invited its partner organizations’ representatives to attend the 1-day Partners Forum, November 2012. All 25 partners responded enthusiastically and 18 representatives attended. Before the Forum, representatives were asked to consider key areas and questions for discussion. After the Forum, representatives offered their feedback about discussion content and timing. Results: Key discussions at the Forum included: partnership expectations and commitment; how to support evidence-based decision-making in Canada together; how to support a national Cochrane Library license; partner knowledge translation and training needs; developing a partner Cochrane Resource Menu; linking CCC partners with similar or complimentary interests; and agreeing to sustain active and regular communication between the CCC and its partner representatives. Conclusions: The CCC Partners Forum was successful in bringing together partner representatives by openly brainstorming, discussing needs and developing strategies to meet these needs. Since the Forum, partnerships have been formalized, the Cochrane resource menu has been developed and disseminated to partners, and an annual teleconference to exchange ideas and discuss is being arranged. Active partnerships and commitment help meet the needs of Cochrane Centres and their partner organizations. The forum model may meet the needs of other Cochrane Centres seeking increased engagement with partners and stakeholders.

Oral Session 03.03: Statistical Methods—Advanced, Session 1

Higher-order asymptotics for random effects meta-analysis: an empirical evaluation

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Background: A random-effects model is often used to dealing with unexplained heterogeneity in meta-analysis. However, typical applications use a small number of studies suggesting that statistical inference based on first-order asymptotic theory may lead to inaccurate results. Objectives: To empirically evaluate performance of higher-order asymptotic methods in random effects meta-analysis. Methods: We applied higher-order asymptotic methods to a series of meta-analyses using data extracted from the Cochrane Library. We focused on continuous outcomes and compared traditional methods with a second-order likelihood method based on Skovgaard’s statistic. We have also used a signed-likelihood ratio test approach. Three effect measures mean difference (MD), standardized mean difference (SMD), Ratio of Means (RoM), and three methods of estimation for the heterogeneity parameter DerSimonian-Laird (DL), Maximum Likelihood
A simple adaptation considerably improves the performance of the standard method for random effects meta-analysis

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Background: The DerSimonian and Laird approach (DL) is widely used for random effects meta-analysis, but this often results in inappropriate type I error rates. The method described by Sidik and Jonkman (SJ) is known to perform better when trials of similar size are combined. However evidence in realistic situations, where one trial might be much larger than the other trials, is incomplete. Objectives: We aimed to evaluate the relative performance of the DL and SJ methods when studies of different sizes are combined, and to develop a simple process to convert results from DL to SJ. Methods: We evaluated the performance of the SJ versus DL approach in meta-analyses of 2–20 trials with varying sample sizes and between-study heterogeneity, and allowing trials to have various sizes, e.g. 25%, 50% or 75% of the trials with varying sample sizes and between-study heterogeneity, and performance of the SJ versus DL approach in meta-analyses of 2–20 trials with varying sample sizes and between-study heterogeneity. Results: The SJ method consistently resulted in more adequate error rates than the DL method. When the statistical significance level was 5%, the SJ error rates remained below 12%. For DL they could be over 30%. DL, and, far less so, SJ had more inflated error rates when the combined studies had unequal size and there was between-study heterogeneity (Figs 1 and 2). We also show how DL results can be easily converted into SJ. Conclusions: The SJ method performed consistently well, and can easily be applied routinely in meta-analyses. Extra caution is needed when there are ≤ 5 studies of very unequal sizes.

Figure 1. Error rates for ratio ratios, for the DerSimonian-Laird (DL) and Sidik-Jonkman (SJ) meta-analysis methods, different values of I2 and one large trial (10 times larger than other trials). Vertical bars refer to the minimum and maximum error rates over the group sizes. The lines connect the means of these error rates.

Attachments: Figure_3D_DL.tif, Figure_3D_SJ.tif

Instrumental variable methods to adjust for treatment non-compliance and contamination in meta-analyses of randomized controlled trials

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Background: In systematic reviews of randomized controlled trials (RCTs), intention-to-treat (ITT) is the standard data analysis method which minimizes bias by including all patients regardless of the treatment received. Instrumental variable (IV) methods have been proposed as a technique to adjust ITT estimates for treatment non-compliance and contamination so that treatment effects in compilers may be estimated. Objective: To illustrate the value of IV methods by applying them to a published meta-analysis on the screening for breast cancer. Methods: We used ITT and IV meta-analytic pooled estimates of relative risk (RR) together with baseline risk to calculate number needed to treat to benefit (NNTB) one patient and their 95% confidence intervals. In the context of IV meta-analysis, NNTB can be interpreted as a number of assigned patients needed to comply to benefit one patient. Results: No heterogeneity was detected for ITT and IV pooled estimates for both non-compliance and contamination adjusted meta-analysis (I-sq = 0%, tau-sq = 0). The patient compliance rate ranged from 65 to 100% and contamination from 3.9 to 19%. The overall ITT estimate RR = 0.85 (95% CI: 0.75–0.96) translates to NNTB = 1904 (95% CI: 929–6378). Under non-compliance alone, for IV the overall RR = 0.81 (95% CI: 0.69–0.95), NNTB = 1645 (95% CI: 980–4348), which is 14% reduction from ITT estimate. Under non-compliance and contamination, for IV the overall RR = 0.78 (95% CI: 0.64–0.95), NNTB = 1421 (95% CI: 806–4167), which is 25% reduction from the ITT estimate. Conclusions: Given that the U.S. Preventive Services Task Force’s recommendation against screening mammography in women aged 40–49 years were partly influenced by NNTB, the differences of 14% and 25% are not trivial. IV estimates appeal to patients who are eager to comply with their treatment assignment and to clinicians who wish to establish the efficacy of treatment received.

A Bayesian approach facilitates interpretation of results in meta-analysis: the example of periodontal disease

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Background: Systematic reviews and meta-analysis about the treatment for periodontal disease have demonstrated statistically significant benefits of antibiotics as adjuvant therapy. However, the magnitude of the treatment effect has a clinical significance that

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is questionable. In this context, the more natural inferences provided by the Bayesian approach seem particularly helpful. As a result of a Bayesian meta-analysis, questions with direct application to clinical decision-making can be answered. Objectives: To illustrate the benefits of the use of Bayesian meta-analysis, and how it enhances the interpretation of the systematic review results, through the use of an example in dentistry (periodontal disease treatment). Methods: We performed a systematic review of the literature. We conducted searches in PubMed and EMBASE up to January 2013 to retrieve all randomized clinical trials studying the effectiveness of metronidazole as an adjunctive therapy in patients with chronic periodontitis. Two independent reviewers screened abstracts, full-text articles and extracted data. The results of the eligible trials were combined using a Bayesian Meta-analysis, using the software WinBUGS. Results: We will present the main findings of the meta-analysis. The point estimate and credible interval of the treatment effect, and inferences such as the probability of specified treatment effects or the probability of a range of treatment effects will be used to illustrate how Bayesian meta-analysis enhances the interpretation of results. Finally, we will contrast the applicability of these inferences with those from the traditional meta-analysis. Conclusions: Bayesian meta-analysis provides inferences more compatible with decision-making. These inferences can have an even higher value in settings in which the clinical significance of the results is in question.

Oral Session O3.04: Rapid Response

Rapid reviews to inform health policy decisions using Cochrane Systematic Reviews

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Background: Medicaid is a US federal-state partnership providing healthcare benefits for low income children and adults. Several states began collaborating in 2006 as the Medicaid Evidence-based Decisions (MED) Project to commission evidence reviews to inform policy decisions. Objectives: To describe the development of rapid reviews (RR) using Cochrane Reviews to inform policy decisions by US Medicaid programs. Methods: Systematic review (SR) methods did not meet policy makers’ needs for rapid turnaround and fiscal requirements and as a result, the MED project developed a RR methodology. A list of 10 reliable core evidence sources, including the Cochrane Library was developed. High quality SRs are the primary evidence source for reports. Additional searches are conducted to update included SRs and identify nonrandomized studies addressing harms. MEDLINE searches are conducted when no SRs are identified among the core sources. Quality assessment is performed along with an overall strength of evidence rating using the GRADE framework. Results: MED has completed 47 RRs using this methodology. Forty of these were based on an existing recent, high quality Sr. The most common topic areas are oral health (6), health services delivery (5), mental health and behavioral conditions (5), musculoskeletal (5), and radiologic imaging (5). Cochrane Reviews were included in 23 RRs. Seven RRs contained more than five Cochrane Reviews each. Twelve out of 19 RRs that included Cochrane Reviews did not include sufficient information on harms, requiring a 10 year MEDLINE search. Conclusions: Achieving a ‘good enough’ RR methodology using existing high quality SRs allows Medicaid policy decisions to be based on best evidence of effectiveness within a fast-paced and resource constrained environment. Cochrane Reviews are relevant to the needs of policy makers, but about half the time lack sufficient information regarding harms.

Attachments: Rapid Reviews to Inform Health Policy Decisions__Cochrane_Final_2013.pdf

Applicability and usability of rapid systematic reviews for rapid guidance development in health care and policy settings

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Background: Conducting systematic evidence reviews on a set of focused clinical questions has become one of the ‘gold standards’ for development of ‘trustworthy’ clinical guidance. Time, resource constraints, urgent public health needs and other issues, however, may require the application of more pragmatic means for reviewing the evidence to support rapid guidance development. Format: Parallel Panel Session Objectives: To actively engage panelists and session participants in a discussion of the role of rapid systematic reviews in the development of rapid guidance, the strengths and limitations of rapid versus full/complete systematic review methods, and the applicability and usability of rapid review products in the health care and health policy settings. Methods: Panelists will present the results of rapid reviews conducted for technology assessment and rapid guidance development in hospitals and health care system settings, as well as for professional medical societies/organizations and public health entities. Presentations will focus on engagement with stakeholders to clarify the relevant clinical questions and scope of the rapid review, methods used in conducting rapid systematic reviews versus full/complete systematic reviews, and the application and usability of rapid guidance products. Implementation of the Cochrane Collaboration’s new ‘Cochrane Response’ rapid review methodology in health care settings will also be discussed. Results: The applicability and usability of rapid systematic reviews across a range of recent national and international rapid review and guidance development efforts will be presented. Conclusions: Rapid systematic reviews are an important tool for evidence-informed decision making and guidance development, especially in the setting of time and resource constraints, and urgent public health needs.

Cochrane response rapid reviews: What are they about, how to get involved and what’s in it for Cochrane groups

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Background: Cochrane Response is a Cochrane Innovations programme that aims to undertake commissioned reviews rapidly, to meet the specific needs (questions, issues and contexts) of those commissioning the review (e.g., policy makers and funders). A consortium, including representatives of the Cochrane Editorial Unit and Cochrane groups, have been working to develop standard methods, procedures and timelines for these reviews, while simultaneously undertaking our first commissioned reviews. Cochrane CRGs, Centres, Methods Groups and Fields have methods and content expertise, and knowledge of regional or disciplinary priorities that can be extremely valuable in the production of rapid reviews; and participation in Response reviews could provide an additional source of income for CRGs Objectives: To discuss methods and procedures for undertaking Cochrane Response rapid reviews using a recently completed review on regionalization for pediatric surgery as an example. To discuss issues and limitations uncovered during the process and potential for involvement of Cochrane CRGs or other entities in future rapid reviews.

Conclusions: The methods developed for Cochrane Response have allowed us to complete our first review within a brief (10 week) time frame. The methods appear to be applicable to a wide range of questions and we anticipate taking on additional rapid review projects in future.

Rapid reviews: one size fits all?

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Background: Health care decision-makers increasingly require quality evidence in a reduced timeframe to support informed decision-making. Innovative rapid review methods for evidence synthesis are emerging to meet these demands. Rapid review methods are not well-known, lack consistency, and are supported infrequently by published scientific literature. Objectives: To present the different rapid review methods used to address numerous policy, procurement, and clinical practice questions that will impact health care delivery and patient outcomes. The presenters will describe the methods employed by CADTH’s Rapid Response Service, the Cochrane Response Rapid Reviews, The Ottawa Hospital Technology Assessment Program, and the Center for Evidence-based Policy in Oregon, US to provide an immediate response to their stakeholders. Some topics for consideration are: the appropriateness of the literature search strategy and selection criteria, data analysis and synthesis conducted, report layout and transparency, and policy implications discussed according to the evidence.

Oral Session 03.05: Heterogeneity

Investigating clinical heterogeneity in systematic reviews

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Background: It has been argued that systematic reviews fail to inform clinical decision-making due to their results being far too general such that the findings do not apply to individual clinical cases. Few systematic reviews investigate clinical reasons for heterogeneity and when they do often fail to use valid methods. We will provide detailed guidance on how to investigate clinical characteristics when performing systematic reviews. Objectives: To provide a detailed overview of the methods for investigating clinical heterogeneity in systematic reviews The presentation will describe how and when to identify variables, how to examine the influence of these variables on pooled effect estimates, statistical and non-statistical methods for investigating clinical variables, how to present and interpret the findings.

Hypertension, drug treatment, and sub-group analysis: a case for updating Cochrane Handbook?

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Background/Objectives: The non-release of clinical trial results potentially contributes to publication bias of meta-analyses. Our goals were to use information found in clinical trial registries on the number of and the enrollment of unpublished studies to gauge the sensitivity of a meta-analytic summary to the non-publication of studies and to develop a user-friendly open-source software to facilitate such sensitivity analysis. Methods/Results: Our software, the R package SAMURAI, can handle meta-analytic data sets of clinical trials with two independent treatment arms. The outcome of interest can be binary or continuous. For each unpublished study, the data set only requires the sample sizes of each treatment arm and the user predicted ‘outlook’ for the studies. Outlooks are chosen by the user from among pre-defined outlooks that vary from those strongly favoring the intervention treatment to those strongly favoring the control treatment. SAMURAI assumes that control arms of unpublished studies have effects similar to the effect across control arms of published studies. For each intervention arm of an unpublished study, utilizing the user-provided outlook, SAMURAI randomly generates an effect estimate using a probability distribution, which may be based on a summary effect across published trials. SAMURAI then calculates the estimated summary intervention effect using a random effects model using the DerSimonian-Laird method, and outputs the results as forest plots. Conclusion: By utilizing information about sample sizes of treatment groups in registered but unpublished clinical trials, SAMURAI has an advantage over other assessments of publication bias, such as the trim and fill method, which come with more stringent assumptions about the number and enrollment of unpublished studies. The forest plot provides the end-user an easy way to see how the inclusion of unpublished studies could change the meta-analytic summary intervention effect.
Background: Mild hypertension has been recently precisely defined as blood pressure (BP) level of systolic 140–159 mmHg and/or diastolic 90–99 mmHg. It represents about half of the hypertensive population. Several old trials suggested that antihypertensive drugs were beneficial ‘in mild hypertension’. These trials recruited also participants with higher BP levels. We published in 2012 a Cochrane Review focused specifically on mild hypertension participants without a previous cardiovascular event. Our review casted doubts about the rationale of currently large prescription habits. Objectives: Our interpretation contradicts the Cochrane Handbook recommendation for subgroup analyses. We discuss here the need for updating the Handbook. Methods: Systematic sub-group review of RCTs. Results: Data on >8000 people followed for 5 years suggested no reduction in total cardiovascular events, RR 0.97 [0.72, 1.32], in stroke, RR 0.51 [0.24, 1.08] or in mortality RR 0.85 [0.63, 1.15]. This amount of data was limited compared to that available in more severe hypertension and in secondary or high risk prevention, in which a significant benefit was abundantly demonstrated. There was no significant interaction of treatment effect estimates between mild hypertensive and other hypertension categories. Two interpretations were possible: (1) the lack of interaction authorizes generalizing the results to mild hypertensive patients: this is the usual recommended way to interpret the results from subgroup analyses; (2) the lack of evidence within the mild hypertension subgroup prevents prescribing these drugs in these individuals. We adopted this latter interpretation, for two main reasons: (1) The numerical importance of the subgroup, in fact the majority of hypertensive individuals. We adopted this latter interpretation, for two main reasons: (1) The numerical importance of the subgroup, in fact the majority of hypertensive patients; and (2) the lesser benefit to be expected in these lower risk individuals, opening largely the possibility of unfavorable benefit to risk ratio. Conclusions: The lack of certainty regarding the effect of treatment within a numerically dominant sub-group should be disclosed to the patient.

Does hierarchical meta-regression provide key insights for exploring the effectiveness of complex quality improvement interventions in diabetes?

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Background: We recently published a systematic review of 142 randomized controlled trials (RCTs) of quality improvement (QI) interventions for diabetes care. We performed meta-analysis and meta-regression of RCTs comparing QI interventions that included a specific component of interest (and 0, 1, or more other QI components) versus usual care. While easier to specify, this analytical approach has a number of limitations. We found that QI interventions improved diabetes care in general, but could not clearly distinguish the effectiveness of various components within QI interventions. Objectives: To determine whether hierarchical meta-regression analyses lead to different interpretations than meta-analysis or simple meta-regression. Methods: We performed hierarchical meta-regression analyses to estimate additive intervention effects, test for non-additive (e.g., synergistic or antagonistic) intervention effects and test for effect modifiers. At the first level, we modeled the outcome of interest (e.g., mean HBA1c value) within each arm of each RCT. At the second level we modeled between study variability (heterogeneity). The mean effect in each study arm is regressed against the 12 QI component interventions of interest plus usual care. We then extended the model to include interaction terms. We tested each of the 66 possible pairwise interactions. Results: In the meta-analysis, QI interventions were found to reduce HBA1c by 0.37% and a subgroup analysis found that baseline HBA1c was a significant effect modifier. In the simple meta-regression, the mean reduction in HBA1c was 0.36%. Examining pairwise interactions revealed that interventions with case-management, team change, patient education, and promotion of self-management had greater effects in patient groups with higher baseline A1c. Conclusions: In reviews of complex interventions, hierarchical meta-regressions may provide additional insights and generate new hypothesis for further study than traditional meta-analytical techniques.

Oral Session O3.06: Shared decision-making

L’évaluation des outils d’aide à la pratique médicale de 1ère ligne : la perspective du transfert de connaissances

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Background: Les praticiens de la santé sont aujourd’hui confrontés à une quantité croissante d’informations sur les différents domaines de la médecine et la mise à jour de leurs connaissances devient une tâche de plus en plus difficile. Pour supporter leur pratique professionnelle, des lignes directrices de pratique clinique ont été développées. Toutefois, ces lignes directrices ne sont pas suffisamment appliquées dans les soins de santé primaires. Des recherches antérieures sur l’application des connaissances ont identifié des outils pratiques tels que des rappels et des résumés comme moyens efficaces d’aider la mise en œuvre des recommandations-clés des lignes directrices dans les soins et modifier la pratique du médecin. Toutefois, nous avons encore besoin d’améliorer la qualité de ces outils et il est nécessaire d’évaluer la façon dont ces outils sont utilisés. Objectives: cette étude vise à évaluer neuf outils de synthèses de connaissances développés pour la prise en charge de maladies chroniques couramment traitées en soins de 1ère ligne. Methods: Les données de cette étude ont été colligées dans le cadre d’une enquête par questionnaire auprès de médecins de première ligne. Quatre aspects de l’utilisation des outils de 1er ligne ont été abordés: (1) leur fréquence d’utilisation, (2) leur pertinence pour la pratique médicale, (3) la qualité du format et (4) les barrières à leur utilisation.
Cochrane Review of interventions for improving adoption of shared decision making by healthcare professionals: an update

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Background: Shared decision making (SDM) has not yet been widely adopted in clinical practice. Effective interventions for improving the adoption of SDM by healthcare professionals need to be identified.

Methods: An update of the 2010 Cochrane systematic review was performed by searching Cochrane Library, Medline, Embase, Cinahl, Epoc, PsycInfo, clinicaltrials.gov registry, and relevant conference proceedings up to March 31, 2012. Authors of relevant studies were also contacted. We included randomized controlled trials or well-designed quasi-experimental studies, eligible if the outcome was evaluated with an observer-based outcome measure (OBOM) or if the occurrence of SDM was a patient-reported outcome measure (PROM). Two authors independently screened titles and abstracts, assessed studies for eligibility, assessed risk of bias and extracted data. Statistical analysis considered categorical and continuous data for primary outcomes and we computed the standard effect size for each outcome separately with a 95% confidence interval. We also evaluated global effects by calculating mean effect size and the range of effect sizes across studies.

Results: Combining this update with the last review, 39 studies were included: 9 OBOMs, 27 PROMs and 3 studies using both. Most did not have significant results. Seven OBOMs and 7 PROMs had significant effect size, indicating occurrence of SDM. Interventions evaluated were diverse. A significant effect was found in 0.14% of studies targeting the patient, 0.27% of studies targeting the healthcare professional and 0.41% of studies targeting both (p < 0.11). Educational meetings, use of patient decision aids and distribution of educational materials were elements most used to enhance adoption of SDM in all included studies. Conclusions: Robust conclusions could not be drawn by this review due to the variability in interventions. The conclusions of this update concur with the earlier review. More studies are needed to identify interventions that improve adoption of SDM by healthcare professionals.

Shared decision making does not influence physicians against clinical practice guidelines

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Background: While shared decision making (SDM) and adherence to clinical practice guidelines (CPGs) are important, some believe they are incompatible. Objectives: This study explored the mutual influence between physicians’ intention to engage in SDM in their intention to follow CPGs. Methods: Embedded within a clustered randomized trial to assess the impact of training physicians in SDM about using antibiotics to treat acute respiratory tract infections, this study evaluated physicians’ intentions to both engage in SDM and follow CPGs. A self-administered questionnaire based on the Theory of Planned Behavior evaluated both behavioral intentions and their respective determinants (attitude, subjective norm and perceived behavioral control) at study entry and exit. We used path analysis to explore the relationships between the intentions. We conducted statistical analyses using the maximum likelihood method and the variance-covariance matrix. Goodness of fit indices encompassed the chi-square statistic, the comparative fit index and the root mean square error of approximation. Results: We analyzed 244 responses at entry and 236 at exit. In the control group, at entry we observed that physicians’ intention to engage in SDM (r = 0.0, t = 0.03) did not affect their intention to follow CPGs; however, their intention to follow CPGs (r = −0.31, t = −2.82) did negatively influence their intention to engage in SDM. At exit, neither behavioral intention influenced the other. In the experimental group, at entry neither behavioral intention influenced the other; at exit, the intention to engage in SDM still did not influence the intention to use CPGs, although the intention to follow CPGs (r = −0.15, t = −2.02) slightly negatively influenced the intention to engage in SDM, but this was not clinically significant.

Conclusions: Physicians’ intention to engage in SDM does not affect their intention to adopt CPGs even after SDM training. Physicians’ intention to adopt CPGs had no clinically significant influence on intention to engage in SDM.

Sharing evidence with clinicians in ethically sound environment

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Background: Continuing education activities for clinicians are often not based on best evidence and rely heavily on pharmaceutical industry support which is problematic. The Therapeutics Initiative (TI) and the Hypertension Review Group (HRG) have developed a strategy to overcome these issues. Objectives: • Provide ethically sound knowledge based on systematic reviews which is independent of industry funding. • Establish a sustainable and collaborative knowledge exchange environment between groups of knowledge-users (physicians and pharmacists). • Develop tools to transfer evidence from systematic reviews into practice accommodating different learning styles and access to educational opportunities. Methods: (1) Creation of a team of knowledge-users, academic researchers, and educators to develop a comprehensive multi-faceted continuing education strategy. (2)
Create learning environment that enables physicians and pharmacists to learn together. (3) Develop a varied approach catering to the needs of clinicians with different learning styles and differing access to continuing education. • Website • Medical evidence podcasts • Evidence summaries • Case-based workshops • Critical appraisal courses (4) Finding alternative models of funding and have no pharmaceutical industry input. Results: (1) Six educational events with 15 of topics and over 500 practitioners in which over 90% of participants thought: • the information was practical, • productive to work with interdisciplinary colleges, • excellent information • would attend again (2) Material for these events was used subsequently for over 50 presentations with smaller groups at the hospitals in British Columbia (BC) Canada. (3) Over 20 presentations on how to critically appraise the literature (4) Four Therapeutic Letters which go physically to over 14 000 physicians and pharmacists in BC and over 6500 online users. (5) Five podcast which elaborate on the systematic reviews and newsletters. Conclusions: The TI and the HRG have been successful in providing best evidence to front-line clinicians in an ethically sound environment.

Oral Session O3.07: Challenges in Review Methods

A discussion of the challenges in conducting a systematic review of adverse effects including randomized trials and non-randomized studies

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Objectives: To discuss the challenges faced by reviewers conducting a systematic review of adverse effects of a pharmacological intervention, and the solutions to each of these challenges that our team used in conducting a review for the Cochrane Back Review. Results: We will use the example of a review of adverse effects of long-term use of opioids for patients with chronic non-cancer pain. We limited the adverse effects to: overdose, addiction, falls and fractures, function, quality of life and return to work. Many Cochrane Reviews have been published assessing the efficacy and effectiveness of opioids for various types of chronic pain, however these reviews are limited to RCTs which are short duration, whereas ours focuses on the long term effects. Conclusions: The challenges we faced include: (1) searching for studies of adverse effects; (2) Selecting study designs of NRSs (with control group, without control group, case series, and case reports); (3) Assessing ROB in RCTs and NRSs; (4) Summarizing the findings using GRADE. By the end of the presentation, we hope that there will be a better understanding of some potential solutions to these challenges when conducting reviews of adverse events.

Non-randomised studies in systematic reviews of intervention effectiveness: a content analysis of Cochrane Systematic Reviews

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Background: Non-randomized studies (NRS) are increasingly used as evidence for effectiveness of interventions in Cochrane Reviews. How and why NRS are included has not been evaluated to date

Objectives: to conduct an overview of practice of including NRS within the CC

Methods: We included all Cochrane Reviews that included one or more NRS. We conducted study selection and data collection in duplicate. We interpreted and categorized, via an iterative process, the reasons for including NRS, the way Risk of Bias was assessed and how this was influenced by other review characteristics

Results: We included 202 reviews. All but one review included RCTs as well as NRS. NRS types that were specified were quasi-RCTs (45%), CCT (55%), controlled-before after studies (60%), interrupted time-series (52%), cohort-studies (37%), case-control studies (26%) and various other. Fifty percent of the reviews did not cite a reason for including NRS. For those that did, reasons could be divided into: RCTs are wanted but not available and RCTs are not needed because NRS provide good evidence. Unavailability was underpinned with: lack of RCTs based on a pilot search, randomization not feasible because of complex intervention, setting or aggregate level and randomization not ethical because of a vulnerable population. The claim that RCTs are not needed was supported by: restriction to RCTs is too dogmatic, NRS maximize the available data, NRS are needed to compare with RCTs and infrequent and long-term outcomes can only be studied in NRS. Risk of bias was based on EPOC-criteria in 38% the reviews. The rest used a variety of checklists and self-constructed tools. Conclusions: Most reviews don’t specify reasons for including NRS. Where they do, there is a wide variation in reasons that are not always supported by valid arguments. Risk of bias assessment of NRS also varies and needs urgent improvement.

Cochrane Review authors’ reporting of blinding in included studies: a descriptive study

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Background: Blinding is a key issue in studies assessing the effectiveness of health care interventions, especially in a randomised controlled trial (RCT). The extent to which blinding influences the direction and magnitude of the effects of an intervention is influenced by the type of intervention, the study design and the type of outcome that will be assessed. The Cochrane Risk of Bias Tool for reviews of RCTs, has three categories of individuals must be considered in the blinding process: the participants, health personnel and the outcome assessors. This implies that authors have to report on the blinding process since it is not always possible to blind participants, health personnel and outcome assessors with regards to the intervention under study. Objectives: To evaluate whether blinding of participants, personnel and outcome assessors is accurately reported in Cochrane Reviews of randomised controlled trials.

Methods: We searched the Cochrane library for all new or updated reviews of RCTs in issue 1 and 2 of 2013. Two authors independently read through the included reviews for information on assessment of blinding in included studies. We resolved discrepancies through discussions and by consulting the
third author. Results: There were a total of 158 new or updated reviews. One or more RCTs were included in 131 of the reviews. In 124 (94.7%) of the reviews the authors specified who was blinded in the included studies. However, 31% of reviews did not clearly report on blinding of the participants, personnel and outcome assessors. Terms like ‘double-blind’ or ‘investigators’ were frequently used and it was not clear who exactly was blinded. Conclusions: Some Cochrane authors do not correctly report on blinding in the included studies. It is important for authors to specify the different individuals blinded and state, where appropriate, if blinding of participants or study personnel was not possible.

Oral Session 03.08: Review Impact

Informing change: Cochrane Reviews helping to guide cancer prevention research priorities

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Background: The Canadian Cancer Research Alliance engaged the Canadian Partnership Against Cancer and the Canadian Cancer Society to implement an action item on cancer prevention research arising from the Pan Canadian Cancer Research Strategy—to develop a framework for collaborative action and investment. Informing the development were a research funding analysis and literature reviews complimented with stakeholder consultations and report review. A resulting set of recommendations identifying priority areas were proposed to guide next steps. Objectives: As part of a focused literature review, Cochrane systematic reviews were analyzed to identify any common questions that could inform research. Methods: Search terms were based on a set of predefined risk categories and included: activity level, body composition and metabolism; alcohol; air, water, soil contaminants; diet and nutrition; ethnicity, sex and social environment; gene environment interaction; genetic susceptibilities, hormones, infectious agents; occupational exposure; precursor lesions; tobacco and treatments/diagnostic. 75 reviews from 2006 to 2011 were evaluated; the recommendations in the Implications for Research sections were analyzed to pull out common themes. Results: Research implications were grouped into methodological, population, economic, intervention, observational and etiological categories. However, there was great variability in terms of specificity and number of research recommendations between reviews making them difficult to synthesize. The largest number of recommendations fell into the methodological category. Conclusions: Individual Cochrane Reviews include a section on implications for research. When these sections are analyzed collectively, there is the potential not only to inform further individual studies, but research directions at a higher level. However, improved consistency in questions included in this section and how they are framed would facilitate the use of this valuable information by funding agencies. A recommendation of the report was for research funders to commission systematic reviews prior to launching RFPs to ensure that future investment in prevention research informs effective change.

Measuring impact of systematic reviews using individual participant data: evidence from clinical guidelines

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Background: Systematic reviews (SRs) based on individual participant data (IPD) are often referred to as the gold standard due to improved precision and reliability. Furthermore, IPD SRs may identify treatment by participant subgroup interactions, enabling treatments to be better targeted. This gives IPD SRs enormous potential to influence clinical guidelines. However, uptake by guideline developers, as Level 1 evidence, is unclear. Objectives: We aimed to assess the impact of IPD SRs of interventions on clinical guidelines across a variety of healthcare areas. Methods: A sample of IPD SRs published between 2008 and 2010 that evaluated treatment interventions across a number of healthcare areas was identified, largely from records kept by the Cochrane IPD Meta-analysis Methods Group. Relevant clinical guidelines published or revised since 2010 were searched for citations of these IPD SRs. Details of specific recommendations based on results of the IPD SRs and details of citations of any SRs of aggregate data were also collected. Results: 30 eligible IPD SRs in a number of clinical areas including cancer, cardiovascular disease, and epilepsy were identified and included in the study. 227 potentially relevant clinical guidelines based on disease or treatment types were identified from 4 sources. Preliminary findings are based on 4 IPD SRs in cancer, for which 65 relevant guidelines had been identified. Each IPD SR had been cited in guidelines (2–5 citations per IPD SR), with time from publication to inclusion in a guideline ranging from 6–18 m. However, only 14 guidelines (22%) had cited a relevant IPD Sr. Further results based on all 30 IPD SRs will be presented. Conclusions: Results of this study will help to guide both those conducting IPD SRs, as well as guideline developers, regarding how best to use IPD SRs to inform guidelines and thus impact on clinical practice.

The antenatal magnesium sulphate for fetal neuroprotection research cycle: beyond the meta-analysis

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Background: Well-designed and conducted randomised trials and systematic reviews provide reliable evidence of the effectiveness of treatments; however they form only part of a ‘research cycle’. While the 2009 Cochrane Review ‘Magnesium sulphate for women at risk of preterm birth for neuroprotection of the fetus’, showed that magnesium sulphate given to women at risk of preterm birth can substantially reduce the risk of cerebral palsy for the children (RR 0.68, 95% CI 0.54–0.87; five trials, 6145 infants), real-life health impacts rely on the...
Evidence on tap: youth suicide prevention

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Objectives: We partnered with Government of Canada policy-makers through the Canadian Institutes of Health Research (CIHR) Evidence on Tap program to conduct an expedited knowledge synthesis (EKS) on youth suicide prevention. The goal was to inform a national suicide prevention strategy with respect to (i) school-based strategies; and (ii) interventions for high-risk youth who have attempted suicide.

Methods: Our EKS included two stages: (1) Overview of reviews: Review inclusion criteria were: (i) systematic review or meta-analysis; (ii) prevention in youth aged ≤ 24 years; (iii) peer-reviewed English language. Quality was assessed using AMSTAR. (2) Consideration of primary studies published after eligible reviews: Inclusion criteria were: (i) recommendation from advisory team member; (ii) peer-reviewed English language RCT or controlled cohort study. Quality was assessed using Cochrane risk of bias criteria. Results: Six reviews of school-based interventions (e.g., awareness curriculums, gatekeeper training, screening) received moderate-high AMSTAR scores and reported positive impacts on risk and protective factors. Only one trial (suicide awareness and screening) showed reductions in suicide related behaviours (SRB; youth reported suicide attempts). Thirteen reviews relevant to youth with ≥ 1 suicide attempt received moderate—high AMSTAR scores. Emergency department transition programs and health-care provider training were promising strategies for reducing SRB. Eligible reviews did not address gender differences in intervention effects. Effective treatment of mental health problems, particularly depression, is recommended but has not yet been demonstrated to mediate reductions in SRB. Conclusions: CIHR, the Public Health Agency of Canada (PHAC) and Health Canada knowledge-users rated our findings as highly useful following a 1-day knowledge exchange workshop, and will use them to implement Bill C-300 (An Act respecting a Federal Framework for Suicide Prevention). Uncertainties regarding the impact of these activities on youth SRB can be reduced by implementing promising interventions within a national collaborative youth suicide research network.

Oral Session 03.09: Future Tech

Future Tech: linked data

Mavergames C
Cochrane Collaboration Web Team

Background: This abstract is proposed as one of a four-part session called ‘Future Tech’, comprising submissions from Gordon Dooley (CRS), Chris Mavergames (Web, Linked Data), and Jessica Thomas (IMS). The process of producing Cochrane Reviews relies heavily on technologies. But, are these technologies serving us as well as they could? This oral presentation will discuss how linked data technologies could assist with the production of Cochrane evidence. Objectives: To present the potential and possibilities of using linked data technologies to improve data sharing and re-use, intelligence about our data and the gathering, curating and integrating of others’ datasets into our processes. Participants will have a good understanding of the direction of travel the Collaboration is headed with regards to using semantic technologies in our work. Methods: I will use the Cochrane linked data demonstrator site and other related resources to walk attendees through how we’re approaching leveraging linked data technologies (ontologies, RDF and SPARQL and semantic annotation tools) to improve our authoring processes. Results: N/A. Conclusions: Linked data technologies hold great promise for Cochrane. This presentation aims to provide a broad strokes overview of how this transformation in how we think about our data and how we put it together to produce our content.

Future Tech: IMS

Thomas J, Riis J
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This abstract is proposed as one of a four-part session called ‘Future Tech’, comprising submissions from Gordon Dooley (CRS), Chris Mavergames (Web, Linked Data), and Jessica Thomas (IMS). The IMS team has been working on software to support the writing of Cochrane Reviews almost as long as the organisation has been in existence. This oral session will show briefly what we have achieved so far on behalf of the Collaboration ie primarily the development of RevMan, the review writing software and Archie, the production system that includes online storage of reviews, editorial workflows and contacts database. We will also show some of our current developments, and where we see the software heading in the future including—moving RevMan to an online browser-based environment, and what this will mean for the user;—how we will reinstate ourselves as the central storage system for the Collaboration;—how we are improving our...
interactions with other software such as ReGroup, EROS etc.—how we could make improvements to the systems by which people feed into the development process; and—we will also explore ideas around changing our development cycles to a more ‘agile’ approach using methods such as SCRUM ie with more frequency and opportunity for feedback. We will look at how all these changes along with the integration of Linked data will improve the overall user experience and enable improved interactions with the Cochrane Web and CRS interfaces.

**Future Tech: Cochrane’s web presences (including The Cochrane Library)**

Mavergames C, Becker L

*Cochrane Collaboration Web Team*

**Background:** This abstract is proposed as one of a four-part session called ‘Future Tech’, comprising submissions from Gordon Dooley (CRS), Chris Mavergames (Web, Linked Data), and Jessica Thomas (IMS). The way we present our knowledge to end-users is very much tied to the ‘container’ of the systematic review. Linked data technologies offer great potential for freeing our content from this one-size-fits-all document format (PDF and html presentation) and providing richer experiences in navigation and discoverability of Cochrane evidence. This oral presentation will discuss how linked data technologies will be used in the near-future to improve user experience of Cochrane content and products. **Objectives:** To present the potential and possibilities of using linked data technologies to improve the user experience of our products. To offer concrete examples from the Cochrane linked data demonstrator site on how our content can be made more navigable and discoverable. **Methods:** I will use the Cochrane linked data demonstrator site to walk attendees through how we’re approaching leveraging linked data technologies to improve user experience of our content, including browsing by PICO, cross-review views of analyses and study quality assessments, and linking studies, references and the reviews that included them, among others. **Conclusions:** Linked data technologies hold great promise for Cochrane. This presentation aims to provide a broad strokes overview of how this transformation in how we think about our content can improve end-user experience within our products.

**Future Tech: CRS**

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**Background:** This abstract is proposed as one of a four-part session called ‘Future Tech’, comprising submissions from Gordon Dooley (CRS), Chris Mavergames (Web, Linked Data), and Jessica Thomas (IMS). **Objectives:** To illustrate how the Cochrane Register of Studies (CRS) fits into the wider technical environment of The Cochrane Collaboration. Abstract: The CRS is both a data repository of studies and software to manage those records, including their publication in CENTRAL. This presentation will show how the CRS is being used to standardise record formatting in Cochrane Reviews, to clean records in CENTRAL, to streamline literature searching activities at editorial base level and to increase discoverability of studies for inclusion in reviews. One of the key features of the CRS is that it captures the links between study reports and the Cochrane Reviews they relate to, thus making it central to developments such as the Linked Data project. For two decades Cochrane authors and CRG staff have been creating links between references, studies and reviews. The CRS captures this work, thus creating opportunities to develop innovative new products and more efficient methods of review production. The CRS is part of the suite of Cochrane technological developments and we will discuss how the different parts of that infrastructure fit together now and how we can maximise technological synergies to create better products for our customers and a better user experience for our contributors.

**Oral Session O3.10: Statistical Methods—Advanced, Session 2**

**Sufficiently stable systematic reviews using random order cumulative meta-analysis**

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**Background:** Exhaustive systematic reviews require substantial time and other resources to conduct. The time-to-results often exceed the time-to-decision and thus may delay and/or impede evidence-based policy. This impediment has resulted in dialogue and exploration of rapid reviews, albeit with minimal impact on evidence-based policy. Cumulative meta-analysis has been characterized as a means for reviewing evidence as it is created, e.g., the second, then the third study, etc. until a consistent effect has been revealed and then theoretically additional studies would no longer be necessary. It hasn’t caught on—enough said! Recently, statistics have been developed that use cumulative meta-analysis that provide measures of sufficiency (of evidence) and stability (of cumulative effect size). Cumulative meta-analysis incorporating sufficiency and stability statistics may provide a pathway for reducing time-to-results and therefore enhance evidence-based policy. **Objectives:** Examine the utility of sufficiency and stability statistics in cumulative meta-analysis in reducing time-to-results when studies are added randomly without respect to date of publication. **Methods:** Fifteen published meta-analyses were selected and the studies within were used to develop five random sorts. Cumulative meta-analyses were conducted with Stata on each of the random sorts, and were also performed on both forward and reverse sorting by date of publication. Sufficiency and stability statistics were then calculated for each wave of each cumulative meta-analysis. **Results:** Sufficiency and stability of studies were obtained (for some but not all of the selected systematic reviews used in this study) with fewer n-of-studies that had been included in the published exhaustive review. Sufficiency and stability did not appear to be affected by sort. **Conclusions:** Cumulative meta-analysis, when incorporating sufficiency and stability statistics may reduce time-to-results compared to exhaustive reviews. Additional statistical parameter research is suggested for this methodology.
Use of outcome data hierarchies to deal with multiplicity in trials: survey of systematic reviews

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Background: For a particular outcome in a systematic review, there may be a multiplicity of data available in the trial reports (e.g. multiple scales, time points, and analyses). Multiplicity can potentially lead to data driven decisions regarding which data to include. Pre-specified decision rules known as ‘outcome data hierarchies’ (e.g. listing eligible scales in order of preferred inclusion) are a suggested method to deal with multiplicity. Objective: To investigate how often systematic reviewers pre-specify outcome data hierarchies and the impact of such hierarchies on the extent of data available for inclusion in a meta-analysis. Methods: Cochrane and non-Cochrane systematic reviews published from January 2010 to January 2012 were randomly sampled. All trial data that were compatible with (i) the review definition of the first meta-analysed continuous outcome, and (ii) the hierarchies reported in the review protocol, where available, were extracted. The proportion of (i) trials with multiplicity, (ii) reviewers pre-specifying hierarchies, and (iii) reviews including at least one trial with multiplicity, were quantified. Results: Forty-four reviews including 276 trials were evaluated. Multiplicity was present in half the trials 95% confidence interval (CI) 44–57%; multiple scales and intervention groups were most common. In reviews with a published protocol (N = 21), hierarchies were pre-specified in relation to the following: intervention groups (0%); scales (19%); time points (62%); intention-to-treat versus alternative analyses (71%); and final versus change from baseline values (29%). Reviews with at least one pre-specified hierarchy had a lower chance of including a trial with multiplicity compared to reviews with no pre-specified hierarchies (9/17 vs. 23/27; risk difference =-0.32, 95%CI =-0.59 to =-0.05). Conclusion: Use of outcome data hierarchies varies across systematic reviews. Pre-specifying hierarchies can reduce the number of trial effect estimates available for inclusion in a meta-analysis, and prevent selective inclusion based on the results.

An empirical comparison of univariate and multivariate meta-analysis for categorical outcomes

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Background: Treatment effects for multiple outcomes can be meta-analyzed separately or jointly, but no systematic empirical comparison of the two approaches exists. Objectives: To compare separate (univariate) and joint (multivariate) meta-analysis of categorical outcomes that have known within-study correlation structure. Methods: From the Cochrane Library of Systematic Reviews (2012, first quarter), we identified 45 reviews, including 1473 trials and 258,675 patients, that contained 2 or 3 univariate meta-analyses of categorical outcomes for the same interventions that could also be analyzed jointly. All meta-analyses had at least seven trials from which the cross-classification tables for all outcomes were exactly recoverable [e.g., outcomes were mutually exclusive (5 reviews), or one was a subset of the other (40 reviews)]. This ensured known correlation structures. We analyzed these data with univariate and multivariate models based on discrete and approximate likelihoods. For computational convenience, the discrete models were fit in the Bayesian framework using slightly informative prior distributions. Results: Overall, the summary effects for each outcome and the accompanying confidence/credible intervals were similar with univariate and multivariate meta-analysis (both using the approximate and the discrete likelihood). However, the multivariate model gave smaller between-study variance estimates. The two models differed much more when estimating the relative treatment effects of the outcomes than when estimating the effect of each outcome alone. Multivariate models gave similar summary odds ratio estimates, but slightly shorter uncertainty intervals for each outcome individually, compared with univariate models. Positive (negative) correlations between outcomes led to considerably longer (shorter) uncertainty intervals with multivariate models. Conclusions: It is likely that in all 45 topics conclusions about summary effect estimates would remain qualitatively similar with either approach, but predictive intervals for new studies would be shorter with the multivariate model.

A framework for individual participant data meta-analysis in the presence of missing data

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Background: Individual participant data meta-analyses (IPD-MA) are an increasingly popular approach for developing multivariable risk prediction models. Recently, a framework was proposed to develop, implement and validate such models when baseline risks are heterogeneous across studies. Because this framework requires complete data to identify a homogeneous set of predictor effects, its implementation may be problematic when some predictor variables are systematically missing in one or more studies. Objectives: To describe a strategy for developing a prediction model from an IPD-MA when some predictors are (systematically) missing in one of more studies. Methods: The proposed strategy imputes missing data using a multilevel imputation model, and subsequently searches for a homogeneous set of predictors to ensure model generalisability. We compare the strategy to exclusion of studies that are affected by systematic missingness for important predictors. Results: Results from a real-life example indicate that imputation leads to an improved model performance and smaller standard errors for estimated predictor effects. The exclusion of studies tends to identify other sets of predictors with a decreased model performance. Conclusions: Our study demonstrates that an IPD-MA with systematically missing predictors does not need to discard studies or predictors. The generalisability of the resulting model is, however, not guaranteed to studies where some of the model predictors are systematically missing.
Oral Session O3.11: Global Health and Equity—Session 1

Are men difficult to find? Identifying sex-specific studies in MEDLINE and Embase

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Background: Systematic reviews often investigate the effectiveness of interventions for one sex but identifying reports of interventions with data presented according to the sex of study participants can be challenging due to suboptimal indexing in bibliographic databases and poor reporting in titles and abstracts. Objectives: To investigate the performance of a range of search terms in identifying studies where data are presented specifically separately for men and women, or for men only. Methods: Several comprehensive electronic searches were undertaken across a range of databases to inform a series of systematic reviews investigating obesity management in men. The included studies formed a reference standard set. Combinations of controlled vocabulary terms and free text search strings, designed to identify studies with male participants, were investigated in MEDLINE and Embase. Results: The reference standard set comprised 87 papers. Searching without sex-specific terms returned 31 897 results in MEDLINE and 37 351 in Embase and identified 82% of the reference standard set in both databases. Excluding records indexed with the MESH/Emtree term ‘female’ reduced the yield by 71% (MEDLINE) and 62% (Embase) and achieved a sensitivity of 47% and 51% respectively. Excluding records indexed with the MESH/Emtree term ‘female’ but not with ‘male’ reduced the yield by 18% (MEDLINE) and 17% (Embase) and achieved 100% and 98% sensitivity respectively. The free text search string ‘male or males or men’ reduced the yield by 76% and achieved 77% sensitivity in both databases. Conclusions: Excluding records indexed female but not male is more sensitive than searching specifically for male. Using sex-specific index terms substantially reduces the amount of records to be screened but can compromise sensitivity and should be used with caution. Further analysis will demonstrate which combinations of sex-specific terms achieve the best balance between sensitivity and specificity.

Effectiveness of interventions on reducing inequities in maternal and child health in low-and middle-income settings

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Background: The deadline for achieving the Millennium Development Goals 4 and 5 is approaching, but the inequity between disadvantaged and other populations is a significant barrier for progress towards achieving these goals. Objectives: This systematic review aims to collect evidence about the differential effects of interventions on different socioeconomic groups in order to identify interventions which were effective in reducing maternal or child health inequalities. Methods: We searched the PubMed, EMBASE and other relevant databases. The reference lists of relevant reviews were also screened to find more relevant studies. We included experimental or observational studies that assessed the effects of interventions on maternal and child health, but only studies that report quantitative outcomes for groups with different socioeconomic characteristics were finally included for analysis. Results: 17 articles about effectiveness of intervention on equity in maternal and child health were finally included. These studies covered five kinds of interventions: immunization campaigns, nutrition supplement programs, health care provision improvement interventions, combined nutrition and health care provision, and health insurance programs. The outcome indicators covered all MDG 4 and three MDG 5 outcomes. Stronger or moderate evidence showed that all kinds of the included interventions may be more effective in improving maternal or child health for disadvantaged populations. Conclusions: We noted these interventions which were effective in reducing inequity were all related to basic health care for pregnant women or children. These interventions were usually delivered by outreach methods, using human resources in local areas or provided at the community level nearest to residents.

An equity focused approach for systematic reviews: using community dialogue to interpret the implications of findings for safety and security of immigrant children and youth

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Background: When languages and cultures clash there may be implications for safety and security of immigrant children and youth. Objectives: This systematic review synthesizes literature examining the impact of cultural discordance on bullying and violence (physical and sexual) of immigrant children and youth. Methods: Design: Equity focused Cochrane systematic review of published observational studies (OS) using the PRISMA- E 2012. We also used a community dialogue with immigrant parents from communities to explore our results and their practical implications. Data sources: Search of Medline, Embase, AIDSearch, LILACS, Global Health, Medline Africa, PsychInfo, CINAHL, Cochrane CENTRAL, Cochrane HIV/AIDS Group Specialized Register, abstracts of important meetings from 2001 to date without language restriction. Review/quality assessment: We selected OS that compared the safety and security of immigrant and refugee second or subsequent generation children or compared them to non-immigrant children. Data were extracted by two reviewers. The quality of each outcome was assessed using both Newcastle-Ottawa and the GRADE frameworks. The validity and reliability of the primary results was explored using a dialogue with parents from three different immigrant groups. Results: Twenty eight papers met our inclusion criteria. Immigrant children and youth were at increased risk for bullying and physical violence. In addition immigrant girls were at increased risk for sexual violence. Preliminary results from community dialogue suggested that immigrant parents are often unaware of bullying and violence in their new country.
Sex and gender analysis (SGA) is an analytic framework used to guide systematic review authors, policy makers and consumers in determining the applicability of health evidence to diverse populations. There is a growing consensus amongst various stakeholders, including journal editors, health practitioners, researchers and consumers, that SGA is essential to informed decision making, reduction of harm, and the promotion of health equity in both primary research and systematic reviews. Our multidisciplinary team has developed guidance for systematic review authors in the implementation of SGA throughout the review process. In this presentation, the basic theoretical considerations of sex/gender and the relevance of SGA to systematic reviews will be briefly introduced followed by an overview of the applicability of health evidence to diverse populations. There is a growing consensus amongst various stakeholders, including journal editors, health practitioners, researchers and consumers, that SGA is essential to informed decision making, reduction of harm, and the promotion of health equity in both primary research and systematic reviews. Our multidisciplinary team has developed guidance for systematic review authors in the implementation of SGA throughout the review process. In this presentation, the basic theoretical considerations of sex/gender and the relevance of SGA to systematic reviews will be briefly introduced followed by an overview of newly developed tools to guide the appraisal, conduct and reporting of SGA. A tool for systematic review authors, which has been piloted with the Cochrane Hypertension, HIV/AIDS and Musculoskeletal Review Groups will be presented. The presentation will close with a discussion on some of the methodological challenges in conducting SGA, and ways to improve SGA guidance and methods.

**Integrating sex and gender analysis into systematic reviews**

Puill, Tudor, Doull, Welch, Shean, Boscoe, Runnels, O'Neill

Sex and gender analysis (SGA) is an analytic framework used to guide systematic review authors, policy makers and consumers in determining the applicability of health evidence to diverse populations. There is a growing consensus amongst various stakeholders, including journal editors, health practitioners, researchers and consumers, that SGA is essential to informed decision making, reduction of harm, and the promotion of health equity in both primary research and systematic reviews. Our multidisciplinary team has developed guidance for systematic review authors in the implementation of SGA throughout the review process. In this presentation, the basic theoretical considerations of sex/gender and the relevance of SGA to systematic reviews and health equity will be briefly introduced followed by an overview of newly developed tools to guide the appraisal, conduct and reporting of SGA. A tool for systematic review authors, which has been piloted with the Cochrane Hypertension, HIV/AIDS and Musculoskeletal Review Groups will be presented. The presentation will close with a discussion on some of the methodological challenges in conducting SGA, and ways to improve SGA guidance and methods.

**Oral Session 03.12: Reporting evidence**

**Preferred reporting items for systematic reviews and meta-analyses for protocols (PRISMA-P) 2013**

Shamseer, Moher, Clarke, Gherzi, Liberati, Petticrew, Sheikh, Stewart

**Background:** Systematic reviews (SRs) should build on a protocol describing the rationale, hypothesis and planned methods of the review. While established organizations such as the Cochrane Collaboration mandate and offer guidance on protocol preparation, the majority of SRs are published in peer-reviewed journals where guidance and requirements to document the a priori methodological approach for the SR are lacking. **Objectives:** To describe the rationale, development and resulting checklist for the Preferred Reporting Items for Systematic reviews and Meta-Analyses for Protocols (PRISMA-P) 2013. **Methods:** Development of PRISMA-P 2013 followed a systematic, consensus-based approach recommended by the EQUATOR (Enhancing the QUAlity and Transparency Of health Research) Network (Table 1). Items from the PROSPERO registry for SRs, the PRISMA checklist, the SPIRIT (Standard Protocol Items: Recommendations for Interventional Trials) checklist, and the Institute of Medicine Standards for Comparative Effectiveness Reviews were collated for consideration at a June 2011 consensus meeting. Meeting attendees, including experts in SR methodology, guideline development, knowledge translation, and journal editors, discussed and debated potential checklist items, later refined by the steering committee. A guidance document containing rationale and examples of good reporting for each checklist item was developed. PRISMA-P documents were further refined through multiple rounds of revision and participant feedback following the meeting. **Results:** The final PRISMA-P 2013 checklist (Table 2) contains 17 items, 5 of which include sub-items, considered essential to include in protocols for systematic reviews and meta-analyses. Items are categorized into three main sections: administrative information, introduction and methods. Impact: Funding agencies and those commissioning SRs might consider mandating use of PRISMA-P 2013 to facilitate the submission of relevant protocol information in funding applications. Similarly, editors and peer reviewers can use the guidance to gauge the completeness and transparency of a systematic review protocol submitted for publication in a journal or other medium.

**Attachments:** Cochrane - Table 1.pdf, Cochrane Table 2 - PRISMA-P checklist.pdf

**Developing a checklist to assess quality of reporting of knowledge translation interventions using the WIDER Recommendations**

Albrecht, Archibald, Arseneau, Scott

**Background:** Influenced by an important paper by Michie and associates, outlining the rationale and requirements for detailed reporting of behaviour change interventions now required by Implementation Science, we created and refined a checklist to operationalize the Workgroup for Intervention Development and Evaluation Research (WIDER) Recommendations in systematic reviews. The WIDER Recommendations provide a framework to identify and provide detailed reporting of the essential components of behaviour change interventions in order to facilitate replication, further development and scale-up of the interventions. **Findings:** The checklist was developed, applied, and improved over the course of four systematic reviews of knowledge translation (KT) strategies in...
Do problems in the conduct and reporting of Cochrane Reviews limit the reliability of clinical conclusions?

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Background: Cochrane Reviews (CRs) are considered exemplars of quality. DynaMed is an evidence-based clinical reference which systematically summarizes CRs for point-of-care use. DynaMed summaries include a basis statement which reports the type of study supporting the conclusion and the major risk of bias (unless the conclusion is supported by level 1 evidence). This provides a unique opportunity to evaluate how often problems with the conduct and reporting of CRs hinder evidence assessment for clinical use.

Objectives: To determine how often the level of evidence for conclusions derived from CRs is downgraded due to deficiencies in the CR conduct and reporting. Methods: We evaluated all the DynaMed basis statements referring to CRs. Each basis statement suggesting a downgrade due to deficiencies in the CR conduct or reporting (rather than deficiencies in the underlying evidence) was assessed against the CR by a senior editor from DynaMed and an experienced CR author to confirm such deficiencies. Results: On March 10, 2013 there were 5142 basis statements in DynaMed referring to CRs. Thirty-nine (0.76%) were confirmed to have clinical conclusions graded level 2 or level 3 evidence because of deficiencies in the CR conduct or reporting. This analysis includes 4743 unique CRs, of which 33 (0.7%) were found to have limitations in their conduct or reporting affecting reliability for clinical interpretation. In the corresponding DynaMed summaries we could neither clearly criticize the underlying evidence nor confirm high-quality evidence. Conclusions: CRs in general provide high quality assessment and synthesis of evidence which facilitates summarizing best current evidence for clinical decision-making. Implementation of the Methodological Expectations of Cochrane Intervention Reviews (MECIR) standards will improve compliance with conduct and reporting so that future reviews reliably match the expectations of both internal and external audiences to the Collaboration.

An overview of reports evaluating the quality or reporting of systematic reviews

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Background: Similar to primary studies, the assessment of quality or reporting of systematic reviews (SRs) is of importance. A means of reviewing the way in which quality or reporting of SRs is assessed is to conduct an overview of reports evaluating the quality of SRs.

Objectives: The objective of this study is to retrieve reports assessing the quality or the reporting of SRs to evaluate their number, the specified characteristics of SRs, reported methodology over time and in particular to consider how these reviews assessed quality of SRs.

Methods: The Cochrane Library, PubMed, Embase were searched from 1990 to 2012 for such studies considering the quality or reporting of SRs. Independent, duplicate title and abstract screening, and full text screening were conducted. Several outcomes were extracted from the identified studies including: journal of publication, year of publication, affiliation with epidemiological centers or experts, aims of the study, search strategy, selection of systematic reviews, reviewers, assessment of quality and statistical analyses. All primary results are reported descriptively, however, where appropriate adherence to specified quality or reporting items were reported across SRs.

Results: Of 11 606 independent reports retrieved from electronic searching, 99 methodological overviews were eligible for inclusion. Eleven scales or checklists were used to assess methodological or reporting quality in 69/99 reports, the remaining 30/99 developed their own criteria to assess SR quality. Only 11/99 reports assessed quality in Cochrane Reviews specifically. Almost one third (32/99) of reports did not define SRs included. Heterogeneity was considered as assessment criteria in 55/99 reports. Across reports, 259/496 (52%) SRs reported source of funding and 240/316 SRs reported review limitations. Conclusions: Literature exists evaluating the quality and, or reporting of SRs across a number of fields, how quality is assessed varies and raises questions about how SRs should be critically appraised.

Oral Session O3.13: Knowledge Translation and Communicating the Evidence—Session 2

The communication assessment checklist in health (CATCH): moving forward with research on the usability of health information resources

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1 University Laval, Canada; 2 University of Ottawa, Canada; 3 University McMaster, Canada; 4 University of Toronto, Canada
Formulating recommendations to increase appropriateness and efficiency in healthcare: the MAPAC initiative

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Background: Appropriateness in healthcare is not always warranted and some clinical practices do not integrate the available evidence with the resources required to implement it. For these reasons it is essential to promote initiatives that try to reduce inefficiency. Objectives: To describe an initiative set at an University Hospital in Barcelona (Spain) that aims to reduce inappropriate clinical practices in terms of: (i) lack of effectiveness or supported by inconclusive evidence; (ii) lack of efficiency or with an unclear trade-off between desirable (benefits) or undesirable (harms or costs) effects. Methods: The Committee for the Clinical Practice and Healthcare Appropriateness (MAPAC for the acronym in Spanish) is a multidisciplinary working group that, with the support of the iberoamerican Cochrane Centre and the Hospital’s Epidemiology Department, aims to identify inappropriate clinical practices and formulate explicit recommendations to reduce inefficiency. The Committee identifies and prioritises the practices to be evaluated in collaboration and with the involvement of Hospital healthcare professionals. Each clinical practice derives in a clinical question that originates recommendations formulated following GRADE methodology to classify the quality of evidence and to grade their strength. The recommendations also incorporate local factors as the availability of alternative guidelines or the burden and direct costs derived from the use of each clinical practice at the Hospital. All recommendations are submitted to the Hospital Management Board with a set of actions to improve the appropriateness of the assessed practices. Once approved the actions are widely disseminated within Hospital healthcare professionals. The actions are periodically monitored to value possible additional actions. Results and Conclusions: So far the Committee has produced recommendations for 22 clinical practices in advanced cancer, medication utilisation, diagnostic and laboratory tests, or surgical procedures. We will select some illustrative examples of the working experience and will discuss strengths and drawbacks of the initiative.

Methods for the assessment of the effectiveness of treatment sequences for clinical and economic decision making

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Background: Treatment sequences relate to the order in which interventions are administered within treatment pathways. For many conditions several alternative treatments are available should patients respond poorly. The potential effectiveness of each may differ according

Linking knowledge translation methods and tools to support evidence-informed public health

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Background: Using research evidence in public health is challenging given the complex nature of public health issues and diversity of public health settings. In addition, public health professionals are very heterogeneous with respect to their need for KT skills. The National Collaborating Centre for Methods and Tools (NCCMT) strives to build capacity for knowledge translation in public health. Objectives: This presentation will describe a user engagement strategy of linking knowledge translation (KT) methods and tools to support an evidence-informed public health (EIPH) framework. This strategy provides public health professionals with an overarching, organizing framework to guide their use of research evidence (EIPH), along with KT resources to accomplish specific sub-steps in the process of changing public health practice. This presentation will link methods and tools to each step of the EIPH process. This approach to user engagement and capacity building is generalizable across multiple health content areas and can be tailored with case examples and scenarios to specific target audience to enhance learning.

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to its position in the treatment pathway. When a new drug is introduced it is necessary to compare its value and determine its optimum point of delivery. Subgroups of patients may benefit more, or experience greater benefit if the new treatment is used earlier; new drugs are generally evaluated at later stages. **Objectives:** To identify quantitative methods developed to estimate the treatment effect of interventions conditional on previous treatments in the sequence being ineffective, or only partially effective. **Methods:** A comprehensive literature review to identify studies describing methods assessing treatment sequences, and Health Technology Appraisals implementing them. Due to scarce relevant indexing terms and no clear methodological taxonomies, a conventional systematic search was insufficient. A more pragmatic and iterative process based on ‘pearl growing’ was used. Included analyses were summarised as a narrative and appraised using predefined criteria. **Results:** Most commonly, treatment sequences were evaluated in a limited way as part of an economic evaluation. These evaluations used simplistic assumptions for sequence specific treatment effects. Importantly, they tended to consider isolated decision points, ignoring potential impact of upstream events or treatment decisions. Main challenges include lack of directly matching evidence and poor reporting of previous treatments. Recent developments such as multi-parameter evidence synthesis, individual patient data meta-analysis, and whole disease modelling could potentially be extended to address these and incorporate treatment sequences. **Conclusions:** There is a growing need for policy and practice decision-making to consider evidence on treatment sequences for chronic conditions. No current guidance or empirically tested methods exist for conducting quantitative evidence synthesis to develop effect sizes conditional on previous treatment used.

**Oral Session 04.01: Quality of Guidelines**

**The quality of the evidence base for clinical pathway effectiveness: room for improvement in the design of evaluation trials**

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**Background/Objectives:** The purpose of this presentation is to report on the quality of the existing evidence base regarding the effectiveness of clinical pathway (CPW) research in the hospital setting. The analysis is based on a recently published Cochrane Review of the effectiveness of CPWs. **Methods:** An integral component of the review process was a rigorous appraisal of the methodological quality of published CPW evaluations. This allowed the identification of strengths and limitations of the evidence base for CPW effectiveness. We followed the validated Cochrane Effective Practice and Organisation of Care Group (EPOC) criteria for randomized and non-randomized clinical pathway evaluations. In addition, we tested the hypotheses that simple pre-post studies tend to overestimate CPW effects reported. **Results:** Out of the 260 primary studies meeting CPW content criteria, only 27 studies met the EPOC study design criteria, with the majority of CPW studies (more than 70%) excluded from the review on the basis that they were simple pre-post evaluations, mostly comparing two or more annual patient cohorts. Methodologically poor study designs are often used to evaluate CPWs and this compromises the quality of the existing evidence base. Considering the second objective of this presentation, the meta-analytic comparison supports other evidence that simple pre-post study designs tend to overestimate intervention effects reported. **Conclusions:** Cochrane EPOC methodological criteria, including the selection of rigorous study designs along with detailed descriptions of CPW development and implementation processes, are recommended for quantitative evaluations to improve the evidence base for the use of CPWs in hospitals.

**Attachments:** Rotter et al 2012.pdf

**Relative paucity of high-quality or moderate-quality evidence to inform World Health Organization guidelines on antiretroviral therapy**

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**Background:** Guidelines development hinges on identifying evidence for specific interventions. When the World Health Organization (WHO) updates its guidelines, the process requires narrowly constructed PICO questions, which are designed to update specific recommendations. Because randomized controlled trials (RCTs) are generally designed and conducted without reference to WHO’s specific concerns, it is often not possible to obtain high-quality evidence directly addressing WHO’s questions of interest. **Objectives:** To inform the 2013 update of WHO’s antiretroviral therapy (ART) guidelines, we were asked to conduct systematic reviews with 44 PICO questions specifying 306 outcomes. **Methods:** We searched the Cochrane Central Register, EMBASE, PubMed, Web of Science, and WHO’s Global Index Medicus, as well as abstracts from key scientific conferences. We used standard Cochrane methods for the reviews. In addition to RCTs, observational studies with comparators were eligible for inclusion. We used GRADE methodology to classify evidence quality for each outcome. **Results:** We identified 145 publications, 68 (49%) of which were reports of RCTs. Of the 306 outcomes for which we gathered evidence (including assessments at different time-points), 37 (12.1%) were addressed by high-quality RCT data, 50 (16.3%) by moderate-quality RCT data, 87 (28.4%) by low-quality RCT data and 72 (23.5%) by very low quality RCT data. Observational studies provided low and very low-quality evidence for 60 (19.6%) outcomes. Indirectness and imprecision were particular problems, which resulted in downgrading of evidence quality for 244 (79.7%) outcomes. **Conclusions:** There was relatively little high-quality or even moderate-quality evidence to inform the new ART guidelines. In the absence of large RCTs that specifically inform PICO questions, we suggest that analyzing unpublished cohort data from large registries (such as that of the International Epidemiological Databases to Evaluate AIDS) may be an important adjunct to reviewing data from published RCTs and individual observational studies.
Quality appraisal of clinical guidelines and consensus statements on computed tomography for coronary artery disease

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Background: To improve diagnostic standardized and diagnostic accuracy on computed tomography (CT) for coronary artery disease (CAD). However, little is known about the methodological quality of these guidelines in CT for CAD. Objectives: To evaluate the methodological quality of existing guidelines on CT for CAD according to the AGREE instrument, so as to regulate the development on CT for CAD guidelines and provide recommendations for these guidelines and consensuses. Methods: Eight databases, three main websites of guideline and Google engines were searched for CAD on CT. Guidelines included were published by December 2012. The methodological quality of the guidelines and consensuses was assessed by one author independently using the AGREE II instrument. Results: (a) 19 guidelines of CAD on CT were included for evaluation, Of 10 were consensuses, 9 were clinical guidelines; (b) the number of guidelines was increasing each year and reached a peak in 2010, 5 guidelines in 2010; (c) Table 1 shows that the stratification analysis of the AGREE II quality evaluation results on 6 domains of 9 clinical guidelines and 10 consensuses, (10 guidelines were not recommendation, 2 guidelines were moderate recommendation, 7 guidelines were positive recommendation); (d) there were any differences between more than 10 experts and less than 9 experts in clinical guidelines and consensuses (P > 0.05); (e) The quality of clinical guidelines was not obviously different with the quality of consensuses; (f) there were statistical differences between before the AGREE II released (< 2009 years) and after the AGREE II released (≥2010 years) on five domains besides the applicability domain of clinical guideline on CT for CAD (P < 0.05). Conclusions: The quality and transparency of the guideline development process and the consistency in the reporting of CAD on CT guidelines need to be improved. The quality of reporting of guidelines was low.

Attachments: Quality appraisal of clinical guidelines and consensus statements on computed tomography for coronary artery disease.pdf

Systematic reviews and Chinese guidelines: an a cross-sectional study

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Background: The development of clinical practice guidelines should be based on systematic reviews and other high quality of evidence such as RCTs. Little is known about how many systematic reviews cited by Chinese clinical practice guidelines. Objectives: To conduct a cross-sectional study to investigate the number and types of systematic reviews cited by Chinese clinical practice guidelines. Methods: We searched CNKI (China National Knowledge Infrastructure/Chinese Academic Journals full text Database), VIP (a fulltext database of China), WANFANG (a fulltext database of China) and CBM (China Biomedicine Database). Two groups of review authors independently applied inclusion criteria, assessed trial quality, and extracted data. Results: We included 269 Chinese clinical practice guidelines published in Chinese medical journals. There were 3791 citations and only 3.5% (133) are systematic reviews. Each guideline cited 0.49 systematic reviews, ranging from no citations to 15 citations. A total of 37 Cochrane systematic reviews were cited, with a mean of 0.14 in each guideline, compared with 6.9 in NICE clinical guidelines. Conclusions: Very few Chinese clinical practice guidelines used systematic reviews. The use of Cochrane systematic reviews in NICE clinical guidelines is 49 times than Chinese clinical practice guidelines. Chinese guideline developers should routinely search for existing relevant systematic reviews when they develop guidelines, especially Cochrane systematic reviews.

Oral Session 04.02: Statistical Methods—Network Meta-Analysis

Exploring increasing levels of complexity and reduction of uncertainty in network meta-analysis

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Background: Network Meta-Analysis (NMA) pools direct and indirect evidence on relative treatment effects in a simultaneous analysis. NMA is increasingly applied in the evaluation of multiple competing treatments, however it requires substantially more systematic review resources. One frequently asked question is ‘how far should I extend the network?’ Objectives: To assess the benefit, in terms of precision of effect estimates for AvB, from extending the network. Methods: We consider hypothetical networks with six-treatments, beginning with a ‘star-shaped’ network. We then increase the complexity of the network, first to form an ABC triangle, and gradually add more evidence connecting treatments in the network. We explore the effects of varying the relative strength of direct compared to indirect evidence, and the impact of heterogeneity. Results: In all scenarios extending the network increased precision of the AB treatment effect. Under a fixed effect model, gain in precision was modest (53% increase) when the direct evidence was already strong and was substantial when the direct evidence was weak (1143%). Under a random effects model, gain in precision was lower when heterogeneity was high (449% gain with $\tau^2 = 1$ compared with 933% gain when $\tau^2 = 0.1$). In all scenarios there was a ‘ceiling effect’ beyond which additional indirect evidence did not contribute increased precision for the AB estimate. This occurred when the AB comparison was fully connected with all other treatments (although not a complete network). Conclusions: Including additional treatments in a connected network increases precision. However, the gain in precision is only modest if the direct evidence is already strong, or if there is a high degree of heterogeneity. Once the focal treatment comparisons of interest have been connected to all of treatments that have been trialled for the indication, there is no additional benefit in extracting further information.
How to design future studies based on conditional power of network meta-analysis

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Background: It has been suggested that future studies should not be considered in isolation but designed with an aim to inform a meta-analysis. However, a trial between the interventions of interest (say AvsB) might be expensive or difficult and investigators are interested to know whether another comparison (e.g. BvsC) could add power to the evaluation of AvsB when included in an ABC network of studies. Objectives: To provide guidance for the design of future studies based on the results of Network Meta-Analysis (NMA): which treatments to compare, in how many studies and with what sample size in order to achieve a pre-defined level of power for a specific comparison. Methods: We extend the idea of Conditional Power (CP) in the presence of indirect evidence and we derive a formula for the sample size under fixed and random effects. We illustrate the method in a network that compares resynchronization devices (RD), RD with defibrillation (RDD) and pharmaceutical therapy (P) for all-cause mortality. We plot CP versus sample size under various hypotheses for the ratio of direct to indirect evidence and the amount of heterogeneity. Results: We found that CP is highly dependent on the magnitude of heterogeneity and on the ratio of direct to indirect evidence. We demonstrate that future direct evidence increases CP more than indirect evidence in some, but not all cases, depending on the amount of indirect evidence already included in the network. In our example, to detect a 20% reduction in mortality in RDDvS with 80% power we need either 3300 patients in direct studies or 7070 patients distributed in indirect studies (4700 in RDDvS and 2370 in RDDvP). Conclusions: CP based on updated NMA can help investigators planning a future study, decide which treatments to compare and with what sample size.

Evaluating the transitivity assumption when constructing network meta-analyses: lumping or splitting?

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Background: In conducting a network meta-analysis of medical interventions for open-angle glaucoma including 311 trials and 139 interventions, our first task was construction of the network. The transitivity assumption, which says that the comparative effectiveness of treatments A versus B can be derived from comparisons of treatments A versus C and B versus C, is key to network construction. In order for this assumption to hold, each treatment group, or node in the network, must be comparable within itself. Failure of the transitivity assumption manifests as statistical inconsistency. Objectives: To examine methodological and clinical factors that may affect the transitivity assumption when constructing a network of first-line drugs for open-angle glaucoma. Methods: We catalogued pre-specified factors that may affect the comparability of treatment groups (or nodes) in a network. We consulted a glaucoma specialist on how best to combine specific treatments within the network. We considered how decisions to group treatments could affect the transitivity assumption and interpretation of the analysis. This process is in many ways analogous to evaluating heterogeneity in a pair-wise meta-analysis. Results: Factors potentially affecting the transitivity assumption included class, type, concentration, frequency, and route of administration of drug. Medical interventions could be grouped into 4 classes, 11 drug types, and 24 concentrations (Table 1). We constructed two network graphs by splitting or lumping drug concentrations (Fig. 1). Conclusions: By definition, a split network carries less inconsistency. However, lumping results in broader questions, which generally is the goal of network meta-analysis. It also allows for more use of direct comparisons which enhances the reliability of the findings. The clinical question of interest ultimately directs the construction of the network. Our next steps will encompass analyzing outcomes quantitatively, implementing various approaches for handling inconsistency, and performing sensitivity analyses to evaluate the impact of decisions made while constructing the network.

Empirical evidence about inconsistency in complex networks of interventions

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Background: Network meta-analysis relies on the agreement between direct and indirect evidence defined as consistency. Empirical evidence about the prevalence of inconsistency is limited to simple loops of evidence about three interventions. Objectives: To evaluate empirically the prevalence of inconsistency in full complex networks and explore factors that might control its statistical detection. Methods: We evaluated inconsistency in 40 published networks with dichotomous outcomes (303 loops of evidence). We employed four different approaches: (1) loop-specific: we evaluated each loop in the network separately by contrasting direct and indirect estimates (2) separating direct and indirect evidence (SIDE): we evaluated the agreement between a particular comparison and the rest of the network (3) Lu and Ades model: we jointly assessed all possible inconsistencies in the network to obtain an omnibus test (4) Design-by-Treatment interaction model (DbT): we evaluated the agreement between estimates from different study designs in the network. In each approach we assessed the assumption of consistency using odds ratio, risk ratio, and risk difference, and we considered different estimators for the heterogeneity. Results: The loop-specific method showed that inconsistency was prevalent in up to 10% of the tested loops. Loops including comparisons informed by a single study were more likely to show inconsistency. The SIDE method showed that about 10% of the tested comparisons were inconsistent. The Lu and Ades model yielded two (5%) inconsistent networks in total. The DbT model suggested inconsistency in 13% of the networks. Important heterogeneity was associated with a small decrease in statistical inconsistency. Different effect measures had no important impact on the detection of inconsistency. Conclusions: Inconsistency can occur in 1 in 10 of the loops and in 1 in 8 networks. A sensitivity analysis for the estimation of heterogeneity might be needed before reaching a conclusion about consistency.
Oral Session O4.03: GRADE and Summary of Findings Tables

Harmonization of explanations for common judgments about the quality of evidence in summary of findings tables

Langendam M^1, Mustafa RA^2, Santesso N^3, Carrasco A^2, Moustgaard R^3, Ventresca M^2, Heus P^4, Brozek J^2, Lasserson T^5, Schünemann H^2

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Background: Assessing the quality of the body of evidence (QoE) using the GRADE criteria, justifying and documenting these assessments are desirable for new Cochrane Reviews as part of Summary of Findings (SoF) tables (MECIR standards). In an evaluation of SoF tables, we observed variability in how authors of Cochrane Reviews report their assessments in footnotes and comments. Harmonization of explanations for common judgments is one of the aims of this Methods Innovation Fund project. Objectives: To provide templates of standardized wording of footnotes and comments in SoF tables in order to enhance their usefulness and facilitate interpretation. Methods: Standardized footnotes and related guidance are currently being developed based on a database of footnotes and comments from SoF tables published in the Cochrane Library Issue 3, 2012 (n = 502). The footnotes and comments will be aggregated by pre-defined and newly discovered themes. Preliminary pre-defined themes are justification for judgments about each of the GRADE QoE domains (reasons for downgrading and not downgrading as well as upgrading the evidence), judgments across domains, explanations in the face of single RCTs, no meta-analysis and refraining from grading the evidence. The method for evaluating the usefulness of footnotes is in development but will include assessments by experienced GRADE users as well as by a representative sample of users of SoF tables. Selected anonymized examples will be included in training materials and GRADEpro software. Results: Preliminary results indicate that Cochrane authors used different styles in reporting footnotes and sometimes provide reasons for their judgments that contradict current guidance (e.g. for single study evidence and upgrading of RCTs). Final results will be presented at the Colloquium. Conclusions: Knowing how authors approach footnotes is a useful indicator of possible areas where more training or guidance is needed, e.g. in the Cochrane and GRADE Handbook and GRADEpro software.

GRADE in summary of findings tables: how to formulate informative footnotes on the assessment of the quality of evidence

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Background: Assessing the quality of the body of evidence (QoE) using GRADE criteria and justifying and documenting these assessments are highly desirable for new Cochrane Reviews as part of Summary of Findings (SoF) tables (MECIR standards). Footnotes and explanations should be used to justify and document the QoE assessment. In an evaluation of SoF tables, we observed variability in how authors of Cochrane Reviews report their assessments. In order to help review authors to formulate understandable and informative reasons for downgrading and upgrading the QoE we developed a set of footnotes templates and a checklist. Methods: The templates and checklist are developed based on information from a database of footnotes and comments from SoF tables published in the Cochrane Library Issue 3, 2012 (n = 502) in combination with current GRADE guidance. By analyzing the SoF tables database we identified specific areas where more guidance is needed, for example making judgments across domains, explanations in the face of single RCTs and in situations where meta-analysis was inappropriate. User-testing of the templates and checklist will take place in GRADE workshops. The templates and checklist will be included in training materials and GRADEpro software. Development of the guidance is part of the Method Innovation Fund project on SoF tables. Results: We will present the footnotes templates and checklist, including the development and the results of user-testing. Conclusion: We expect that providing specific and concrete guidance on the wording of footnotes and comments in SoF tables will enhance their usefulness and facilitate interpretation.

Upgrading the quality of evidence from RCTs? Examples from published summary of findings tables

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Background: Summary of Findings (SoF) tables present key information about each important effect of an intervention, including the size of the effect and the certainty (quality) of the evidence. While there are advantages to having a standard SoF format, it is unlikely that the same format is optimal across different audiences. Moreover, static SoF tables that present all information at the same time may overwhelm users. Conversely, static tables with restricted information may leave out information that is critical for some users. In addition, some users may better understand text or visualizations rather than numbers. DECIDE (a project funded by the European Union’s 7th Framework Programme) and the GRADE Working Group are developing an interactive SoF table. Objectives: To introduce people to the first working prototype of the interactive Summary of Findings (iSoF) table and gather feedback. The iSoF table allows producers to tailor a presentation to a target audience and users to interact with the presentation by viewing more or less information, effects presented as numbers, words or visualizations, and cursor over explanations. The presentation will demonstrate the functionality in the current prototype and provide forms for audience feedback.
Background: Assessing the quality of the body of evidence (QoE) using GRADE criteria and justifying and documenting these assessments are highly desirable for new Cochrane Reviews as part of Summary of Findings (SoF) tables (MECIR standards). Although—in theory—possible, examples for upgrading a body of evidence from RCTs are elusive. Our experience in working with authors of systematic reviews and guideline developers is that interpretation of this guidance is often challenging. Objectives: To summarize if, and how Cochrane authors use upgrading the quality of RCT evidence in Cochrane Reviews. Methods: We reviewed all SoF tables published in the Cochrane Library Issue 3, 2012 (n = 502) and selected those tables in which the quality of RCT evidence was upgraded. These were studied in detail to see whether upgrading was appropriate (using the criteria of the GRADE JCE paper on upgrading). Results: In three SoF tables upgrading of downgraded RCTs was used explicitly, in six SoF tables implicitly. In eight tables the QoE was upgraded because of a large magnitude of effect; in one because of a dose-response association. In all nine tables risk of bias was the downgrading factor (unclear allocation concealment, incomplete outcome assessment, early stopping, no ITT analysis, outcome reporting bias), in one table in combination with imprecision and in two tables in combination with heterogeneity. Studying these SoF tables revealed that in all cases upgrading was not appropriate or at least questionable. In some SoF tables downgrading for imprecision was overlooked. Conclusions: Upgrading of RCTs affected by study limitations was considered appropriate by Cochrane authors in 2% of the reviewed SoF tables, mostly because of a large magnitude of effect. According to the current GRADE guidance on upgrading, the upgrading was at least questionable. More detailed guidance and worked out examples are needed. These will be presented at the Colloquium.

Oral Session O4.04: Mixed methods and realist reviews

Promoting health literacy through community based peer support: a worked example of innovative methods in integrating qualitative and quantitative research in evidence synthesis

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Background: Evidence based practice relies on robust methods of integrating research evidence. Traditional methods which rely on synthesis of trial data have limited ability to explain why or how an intervention exerts an effect. Recent years have witnessed sustained growth in methods to synthesise qualitative data, seeking to address this gap in understanding. However, exploring complete understanding of intervention effectiveness requires an approach that allows the synthesis of both qualitative and quantitative data. Methods of integration are in their infancy. Some methods, such as those pioneered by Harden and Thomas (2005), bring the results of a synthesis of qualitative and quantitative data together in the final stages of the review process. The qualitative data is used to explain the findings of the quantitative data. However, such approaches may not optimise the use of qualitative findings to inform the quantitative analysis. They may also inaccurately assume that findings from one setting can be transferred to another Methods: We carried out a participatory realist review which synthesized quantitative and qualitative published evidence with unpublished expertise from practitioners on culturally supported approaches to promoting health literacy. Findings from this review were used to co-produce a model of how community engagement and peer support promote health literacy. Results and Conclusions: We shall present existing models of integrating qualitative and quantitative evidence, their strengths and weaknesses, and use our worked example to describe an innovative method used in the synthesis of quantitative and qualitative research to evaluate models of peer support to improve health literacy. The methods adopted in the worked example allowed us to integrate qualitative data in a way that informed subsequent data selection and analyses. Advantages and disadvantages of these methods will be presented.

The mixed methods appraisal tool for assessing studies with diverse designs: example from a systematic mixed studies review on the key processes and outcomes of participatory research with health organizations

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Background: Participatory Research with Health Organizations (PRO) is conducted with organization members, blending research and action to improve organizational practice. No systematic review of the PRO literature exists. There is a need to identify evidence about benefits and pitfalls of PRO. This will entail reviewing all types of evidence. Problem: Appraising the methodological quality of evidence derived from diverse study designs remains challenging. The Mixed Methods Appraisal Tool (MMAT) is the only critical appraisal tool for assessing the most common types of study designs, including mixed methods (tool tested for efficiency and reliability). Objective: To illustrate how the MMAT can help overcome the challenges associated with appraising the quality of studies with diverse study designs. Design: Participatory systematic mixed studies review on the key processes and outcomes of PRO. Type of studies: Qualitative, quantitative, and mixed methods PRO studies. Eligibility criteria: Participatory health research; Health organizations; English and French. Critical appraisal: Using the MMAT, two independent reviewers will appraise included studies. Data extraction and analysis: The MMAT checklist includes 2 screening questions and 19 questions corresponding to 5 types of studies: qualitative research, randomized controlled trials, non-randomized studies, quantitative descriptive, and mixed methods studies. For each included study, reviewers will code for all MMAT items. When disagreements between reviewers cannot be easily resolved, a third party will do arbitrage. For each item, pre-discussion inter-reviewer reliability will be estimated (kappa statistic). Results: We will present the current version of the MMAT (checklist and tutorial) and results of the critical appraisal of studies included in our systematic review.
Conclusion: Results will illustrate the MMAT’s utility to overcome the stated challenges, inform subsequent research to explore its ease of use, and develop a user-friendly online manual. Ultimately, we anticipate our partners will disseminate our synthesis results, and implement them to improve organizational practices.

An analysis of theory building in realist synthesis: perspectives from the literature

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This presentation will be made jointly by Rebecca Hardwick and Harriet Hunt from the University of Exeter Medical School, UK. Background: Realist reviews offer an approach to evidence synthesis which moves beyond describing whether something works, to explaining who it works for, in what circumstances and why. Theory-driven in approach, Realist review sees evidence synthesis as an iterative process of theory building and refinement. Whilst the theoretical and methodological approach to theory building has been comprehensively described elsewhere, the practical tasks of theory building and refinement are less well defined within the literature. Objectives: We aim to analyse existing realist reviews to explore how authors describe what they did when theory building, and provide examples and guidance to others wanting to apply the method. Methods: We analysed a list of sources previously assembled by the authors of the RAMESES publication standards for realist syntheses and meta-narrative reviews (N = 29). We were looking for evidence of whether and how authors describe the process of theory building within their review. We based the data extraction form on the identified sources and piloted the form on one source. Results: Very few sources described theory building within their abstracts, although many more detailed the product of their theory building activities, i.e. the theoretical frameworks that were developed via an undefined process. We provide a detailed breakdown of the descriptions of theory building within the identified sources. Conclusions: Practical theory building takes place in a multitude of ways, yet here we have shown that within a purposive sample the descriptions of these steps not only lack detail but are often not mentioned at all. For realist reviewers this omission is unhelpful in both designing and evaluating realist syntheses. For this reason we intend to create a companion to theory building within realist synthesis, using two practical examples from the authors’ own work.

Configurational ‘qualitative’ synthesis for evidence-based policy and practice: breaking down the qualitative/quantitative divide

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Background: Since the 1990s, researchers have sought to highlight the potential, or perhaps essential, contribution that qualitative studies could make to evidence based policy and practice. Progress is being made, but is hampered by old divisions between ‘qualitative’ and ‘quantitative’ paradigms of knowledge production. Aims: To argue that ‘configuration’ is a more meaningful conceptualisation of the contribution that ‘qualitative’ studies can make to research synthesis, rather than thinking in terms of the qualitative/quantitative divide. Discussion: ‘Qualitative’ evidence in mixed-methods reviews has supported understanding by: helping to understand how complex interventions work; revealing features of interventions to test for variation in effects; helping to explain why interventions don’t work; revealing issues or barriers and facilitators that are not being addressed in intervention (or other) research. ‘Qualitative’ synthesis can consolidate evidence about the views, experiences and needs of various stakeholders by revealing complexity and multiplicity of perspective; and by privileging the voices and views of marginalised groups often not seen in research. The findings on which the example reviews are based originated from both qualitative and quantitative data. However, the type of originating data does not determine how they make a useful contribution to knowledge: this lies in the way in which findings are arranged (or ‘configured’), enabling us to understand and explain variation in context, perspective, participants and intervention. Conclusion: ‘Qualitative synthesis’ has made demonstrable contributions to knowledge, often in ways which transcend the old paradigm division. We argue that it is more helpful to consider the mode (or ‘logic’) of synthesis (Sandelowski et al 2011; Gough, Thomas, Oliver 2012): the way in which both qualitative and quantitative data enable us to understand how findings may vary according to complex situations. The systematic configuration of ‘qualitative’ studies facilitates consideration of the applicability of reviews to other situations and contexts.

Oral Session 04.05: Global Health and Equity—Session 2

How to addressing equity in guidelines: a review

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Background: Over the past decade, clinical practice guidelines (CPGs) have increased to assist practitioner and patient decisions for specific clinical circumstances. And they also have focused on the effectiveness and cost-effectiveness of interventions to balance benefits versus harms and cost. However, equity rarely is addressed in CPGs. Objectives: To review methodologies on how to incorporate equity into CPGs. Methods: We electronically searched MEDLINE, retrieved references and browsed guidelines development organizations’ websites to identify eligible studies that described how, and to what extent equity should be incorporated into CPGs. Then, general characteristics and checklists/frameworks from included studies were investigated. Ignoring the irrelevant content of studies, we only retrieved all questions/items on equity issues from checklists/frameworks and grouped them into different themes. Finally, according to these checklists/frameworks, content analysis was independently conducted...
The importance of implementation evaluation. Case study of a review on preschool feeding programmes to improve the health of disadvantaged young children

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Background: 35% of deaths and another 35% of the disease burden in children under 5 years old are attributable to under nutrition. Throughout the life cycle, under nutrition contributes to increased risk of infection, lowered cognitive performance, chronic disease, and mortality. It is vital for funders to have evidence about the effectiveness of nutrition interventions for young children

Objectives: To understand effectiveness and factors that impact on effectiveness for feeding interventions which provided energy through food or drink to improve the health of disadvantaged children aged 3 months to 5 years. Methods: Our implementation analysis was based on our logic model and issues identified in the review process. We included randomized controlled trials, controlled before after and interrupted time series studies that assessed feeding interventions with or without co-intervention. Children had to be aged 3 months to 5 years. Results: 29 387 articles were identified through searches: 290 were retrieved and 29 studies met inclusion criteria; 26 of these from LMIC. The results showed small (0.67 cm per year) and significant effects on height and small, significant effects on weight (0.25 kg per year), and medium effects on psychomotor development (Standardized mean difference = 0.62, 95% C.I. = 0.23–1.02). Our implementation analysis was critical in identifying subpopulations for whom the intervention was more effective: children with greater need, girls, and younger children. We also found out that the target children only ingested 36–75% of the total energy of the supplement; this was partly due to redistribution within the family. Implementation analysis showed that interventions with greater than 30% of RDA for energy were more effective. Greater supervision increased effectiveness. Conclusions: This review highlights the importance and policy relevance of implementation evaluation as part of a systematic review, and we will discuss implications for how to conduct implementation analysis in other reviews.

Assessing ethics and equity issues in systematic reviews and primary studies of nutrition interventions

Welch V1, Petticrew M2, Tugwell P3, Christie T4, Moher D5, Ueffing E6, Nickerson J1, Sculthorp M7

1Bruyere Research Institute, University of Ottawa, Canada; 2London School of Hygiene and Tropical Medicine, UK; 3Department of Medicine, University of Ottawa, Canada; 4Faculty of Arts, University of New Brunswick (St John), Canada; 5Ottawa Hospital Research Institute, University of Ottawa, Canada; 6Canadian Cochrane Centre, Ottawa Hospital Research Institute, Canada; 7University of Ottawa, Canada

Background: Public health policy decisions require evidence about ethics, equity and tradeoffs in moral values. For example, taxes on sugar-sweetened beverages may produce overall reductions in sugar consumption but may be regressive by penalizing the poorest and most disadvantaged. Choices about systematic review methods influence the ability to inform decisions about ethics and equity. Objectives: We aim to assess the extent to which systematic reviews provide evidence to assess ethics, equity and tradeoffs in moral values and compare this with evidence from their included primary studies. Methods: We selected a purposeful sample of 21 systematic reviews on nutrition interventions, with a balance of individual, health systems and regulatory interventions; and whether they were Cochrane (n = 10) or non-Cochrane Reviews (n = 11). We extracted data from the systematic reviews and their primary studies on justification of methodological choices (e.g. eligible study designs, populations, outcomes, and analysis methods such as process evaluation) and the discussion of whether these choices influenced the generalizability to disadvantaged populations and ability to inform decisions about tradeoffs in justice, respect for persons and concern for welfare. We used duplicate data extraction and a pre-tested form. Results: The systematic reviews assessed a range of interventions such as education, health system integration, and taxes for sugar sweetened beverages. The justification of methods for the systematic reviews such as eligibility of different study designs, choice of outcomes and use of implementation or process evaluation was rarely described. Implications on ability to inform tradeoffs such as between population health and personal autonomy were rarely discussed. The results of the
514 primary studies will be presented and compared to the systematic reviews. **Conclusions:** There is a need to improve the justification of methods in systematic reviews and for greater reflection on the influence of methodological choices on informing ethics and tradeoffs in moral values.

**Closing the health equity gap: a social determinants focus for population level Cochrane Reviews**

Doyle J, Waters E, Armstrong R  
Cochrane Public Health Review Group, Australia

**Background:** In 2005 the World Health Organisation (WHO) convened the Commission on Social Determinants of Health to determine the available evidence globally on health inequities with an ultimate goal of identifying strategies to curb the increase in inequities. Results suggested that inequities were not naturally occurring and could be avoidable by improving policy choices - acting on the social and structural determinants of population health. **Objectives:** The Cochrane Public Health Group (CPHG) was registered with the Collaboration in 2008, with a mandate to produce reviews of interventions that sought to address these ‘upstream’ determinants of health, filling a gap in the existing coverage of review topics relevant to global health. **Methods:** CPHG authors, guided by the editorial team, have utilised methods to identify the ability of these interventions to reduce inequities, as well as pointers to potential ineffectiveness (and inequities) due to implementation or resource issues. Review authors are also asked to highlight issues for LMICs, often in the absence of good quality evidence in these countries. **Results:** We will present an overview of the reviews published and underway within the CPHG, using case studies to highlight reviews of interventions that are characterised by multi-sectoral involvement, and those looking to reduce health inequities for disadvantaged populations in particular. **Conclusions:** Disease prevention and control strategies will continue to have sub-optimal impact on the health prospects of the most vulnerable groups unless the root causes of poor health are also addressed. The CPHG will continue to facilitate and promote methods to highlight reasons and solutions to disparities in health as it focuses on reviews of the effects of interventions seeking to act on the social and structural determinants of population health globally.

**Empty review reporting practices and policies: a survey of Cochrane Review Group editors and other key systematic review producers**

Montgomery P1, Yaffe J2, Morton M1, Shepard L2, Hopewell S1  
1University of Oxford, UK; 2University of Utah, USA

**Background:** The reporting of systematic reviews with no included studies, that is, ‘empty reviews’, has received little attention in published literature and in systematic review reporting guidelines. **Objectives:** This qualitative study identifies policies and procedures across Cochrane Review Groups and other key producers with respect to the publication of empty reviews, the handling of excluded studies in empty reviews, and the reporting of empty review ‘Implications for Practice’. **Methods:** A survey with closed and open-ended questions was administered to managing editors across all 53 Cochrane Review Groups, Campbell Collaboration Coordinating Groups, the World Health Organization (WHO), Joanna Briggs Institute (JBI), What Works Clearinghouse (WWCH), and Social Care Institute for Excellence (SCIE). Editors were contacted by email three times to ensure maximal coverage and saturation. Responses were coded and analyzed independently by two investigators. **Results:** Campbell Collaboration respondents indicated no specific policies for empty reviews and the WHO, JBI, WWCH, and SCIE reported not publishing empty reviews. Of the 53 Cochrane Review Groups, 46 (87%) reported publishing and 5 (9%) reported not publishing empty reviews, with 2 (4%) groups indicating no known policies. Forty (75%) Cochrane groups indicated no standard policies for the reporting of excluded studies. However, 58% of respondents stated that they would permit the provision of evidence from excluded studies within empty reviews and 30% said that promote and coordinate evidence synthesis activities, such as the Cochrane Collaboration and Joanna Briggs Institute, struggle to increase the production of high quality systematic reviews. While research has already shown that the conduct of systematic reviews in a supervised environment, as defined and guided by these and similar organizations, increases the quality of reviews when compared those published outside of this setting, the factors that determine the efficiency of methods for conducting systematic reviews are understudied. **Objectives:** This project seeks to elucidate the factors that influence the efficiency of systematic review production methods, and more specifically, to identify those that limit or increase the rate at which high quality systematic reviews are conducted and published. **Methods:** This study uses a comparative, mixed methods assessment of the systematic review-related activities of one US-based center for evidence synthesis. The center consists of two physically distinct sites, each located in a different academic institution. Known quality-related factors (ex. training of reviewers, editorial support for on-going systematic reviews) are identical across sites. **Results:** The systematic review production rate appears to be heavily influenced by institutional factors such as research expectations and policies related to the publication of systematic reviews, faculty perceptions, graduate student involvement, and type of mentorship. **Conclusions:** This pilot study suggests five factors that could be modulated to increase the systematic review production rate of evidence synthesis centers. More comparative effectiveness research is needed to identify other factors and to test their impact on institutional evidence synthesis capacity.

**Oral Session O4.06: Editorial processes and supporting review authors**

**Project TAKE 5—transforming the antecedent ‘know-how’ for evidence synthesis: 5 factors to consider when conducting systematic reviews!**

Jadotte Y, Holly C, Salmond S  
University of Medicine and Dentistry of New Jersey

**Background:** The need to increase the number of high quality systematic reviews published annually is clear. Federally funded evidence-based practice centers in the US and worldwide bodies
they would not. Forty-four (83%) groups indicated not offering any particular guidance for reporting the ‘Implications for Practice’ section in empty reviews. Forty-six (87%) groups responded that they do not aim to update or withdraw empty reviews faster than other reviews. Conclusions: This study demonstrates inconsistency across policies for the publication and reporting of empty reviews. Guidelines for the publication and reporting of empty reviews appear needed to guide review developers and promote consistency.

Barriers and facilitators to completing a Cochrane Review: a survey of authors in the African region

Oliver J, Kredo T, Zani B
South African Cochrane Centre, South African Medical Research Council, South Africa

Background: Cochrane Centres provide support and training to authors to complete and update their Reviews. Despite this, many authors face challenges, resulting in stalled reviews. In order for the South African Cochrane Centre (SACC) to respond appropriately, an assessment of support activities was required. Objectives: Identify the barriers and facilitators to timely completion of Cochrane Reviews for authors based in countries for which the SACC is the reference Centre. Methods: A cross-sectional survey was conducted in November 2012. Eligible participants included Cochrane Review contact authors based in countries for which we are the reference Centre. Archie, the Cochrane Collaboration’s contact database was searched identifying 183 eligible authors. Participants were invited to participate in the anonymous web-based survey. Participation was voluntary and informed consent was obtained electronically. Data was analysed in Microsoft Excel and open-ended responses were thematically categorized. Results: Fifty-two (28%) authors responded to the survey. Most respondents were from South Africa (19/52) and Nigeria (16/52). Eighty-four percent were employed full-time and 58% worked on their Cochrane Reviews after hours. The majority (46/49) knew who to contact for support, including time-out and mentoring from experienced authors, is required to ensure timely completion of their Reviews.

Proposal to improve the ‘implications for research’ section of Cochrane Reviews

Brazilian Cochrane Centre, Brazil

Background: Although Cochrane systematic reviews are considered the highest level of evidence for decisions in therapy, they are often criticized for giving no final straightforward clinical recommendation. Approximately 50% of all Cochrane Reviews reach the conclusion that there is a lack of evidence to make clinical recommendations for treatment or prevention of diseases and more research is needed. Cochrane Review authors know exactly what are the strong points and limitations of the existing trials related to their review question. As such, Cochrane authors are in a privileged position to write the ‘ideal’ protocols for future trials, with the relevant methodological details to ensure a high quality study and thus contribute to the advancement of evidence-based health care. Objectives: We present a proposal for improving the section ‘Implications for Research’ of Cochrane Reviews. Results: The proposal would be at the end of every Cochrane Review that recommended the need for more studies. Review authors would include a brief description of the study that needs to be carried out in the future, to help answer the clinical question that remained unanswered. We suggest using the CONSORT checklist for Abstracts (Hopewell 2008). The use of a simple and easy to fill template model (Table 1) would help review authors to provide all the necessary details essential for the design and conduct of future high quality trials. Conclusions: The possible benefits of improving the Implications for Research section of Cochrane Reviews are many fold: (a) improve evidence-based health care; (b) stimulate investigators to pursue relevant research questions; (c) ensure the production of high quality protocols; (d) Cochrane Review authors could be commissioned as consultants to draft high quality protocols; (e) enhance and promote the role of the Cochrane Collaboration as an important partner in the creation and development of high quality primary studies.

Attachments: Table 1.pdf
Workshops

1.01 [Consumer stream]
Making sense of scientific evidence: how consumers can contribute to Cochrane Reviews – Part 1

Facilitators: Gyte G\(^1\), Horey D\(^2\), Crowe S\(^3\)
\(^1\)Cochrane Pregnancy & Childbirth Group and CCNet, UK; \(^2\)Cochrane Consumers and Communication Review Group, Australia; \(^3\)Agenda and Priority Setting Methods Group, UK

Abstract: Objectives: To help consumers make sense of scientific evidence through discussion on (i) different ways of testing whether health treatments work, (ii) different types of evidence about healthcare and (iii) how consumers can help to improve Cochrane Reviews. Participants will work on a practical example by commenting on a Cochrane Plain Language Summary (PLS). Description: This friendly and interactive workshop aims to help consumers develop the skills needed to make sense of scientific evidence, and understand how they can contribute to a Cochrane Review. This workshop will assist in explaining issues around evidence-based care in a way that consumers can understand and discuss the ways that consumers can contribute to Cochrane Reviews. Participants will work in small groups to look at a Cochrane PLS from a consumer perspective and, using a newly modified checklist, offer suggestions on how the PLS might be improved. Participants will also be able to give feedback on the checklist. All consumers are welcome and should be able to enjoy the workshop and learn more about Cochrane Reviews and the role of consumers.

Target audience: Consumers

Level of knowledge required: Any

Type of workshop: Training

Access: Open

1.02
Establishing a Cochrane roadmap to data models for asking relevant clinical questions and finding the best answers individually for each patient

Facilitators: Kunnamo I\(^1\), Maevgames C\(^2\), Brandt L\(^3\), Rada G\(^4\)
\(^1\)Duodecim Medical Publications Ltd., Finland; \(^2\)Cochrane Collaboration Web Team, Germany; \(^3\)Department of Medicine, Inlandet Hospital Trust, Gjøvik, Norway; \(^4\)Department of Internal Medicine and Evidence Based Health Care Program, Faculty of Medicine, Pontificia Universidad Católica de Chile., Chile

Other Contributors: Moja L\(^1\), Vander Stichele R\(^2\), Becker L\(^3\)
\(^1\)Mario Negri Institute, Italy; \(^2\)EBMPracticeNET, Belgium; \(^3\)Cochrane Innovations, USA

Abstract: Objectives: Inform the attendants of the following development and Cochrane Innovations teams, the GRADE group, the DECIDE Collaboration, the MAGIC group, publishers of guidelines, point-of-care tools and clinical decision support have identified the need for continuity in data models and structures across all steps of knowledge management. A controlled PICO taxonomy, agreed structures for clinical data, evidence, recommendations, guidelines and decision support rules would allow authoring and sharing of knowledge from international repositories maintained and accessed by various tools and apps. Description: The ongoing work is described in brief presentations. The data model consists of gathering data from electronic health records (EHRs) and making it suitable for individual patient meta-analyses and ‘big data’ repositories, searching for high-quality evidence, authoring systematic reviews, evidence summaries, summary of findings tables, and recommendations in guidelines, publishing them in various formats, platforms and languages for different users in a semantic web, and integrating them with EHRs and personal health records (PHRs) to assist in individualized decisions. The participants discuss in small groups the role of the Cochrane collaborators and other stakeholders in this framework to identify resources, set priorities, and plan the next steps.

Target audience: Review authors and methodologists, guideline developers, medical publishers, ICT developers, informaticians

Level of knowledge required: Intermediate

Type of workshop: Discussion

Access: Open

1.03 [DTA stream]
Introduction to diagnostic test accuracy (DTA) reviews

Facilitators: Leeflang MM
University of Amsterdam, Netherlands

Other Contributors: Hyde C
University of Exeter, UK

Abstract: Objectives: a) To introduce participants to the concept of test accuracy and primary study designs used to estimate it. b) To outline the potential contribution of Diagnostic Test Accuracy (DTA) reviews to evidence based practice c) To explain which applications of tests fit within the structure of a DTA review d) To define the components of a DTA review question and the process of question formulation. Description: Primary test accuracy studies vary markedly in their design and characterised by non-comparative evaluations. This poses challenges when formulating DTA review questions; in particular delineating the role of a test in a clinical pathway and the most informative comparator test or testing strategy. This workshop will provide an opportunity for those who are not familiar with DTA evidence to learn about primary study designs, the contribution of DTA reviews to the test accuracy evidence base and the process of DTA review question formulation. The workshop will start with an introduction to primary test accuracy study designs, the potential application and role of tests in clinical practice and the key components of a DTA review question. Learning will be consolidated using small group exercises to illustrate the process of DTA review question formulation.
Target audience: Authors interested in conducting diagnostic test accuracy systematic reviews

Level of knowledge required: Basic

Type of workshop: Training

Access: Open

1.04
Closing the gap between ‘mean effect size’ and data desired by decision makers—exploring heterogeneity in complex interventions

Facilitators: Ivers N1, Grimshaw J M2, Tricco A3, Trikalinos T4, Straus S3
1Women’s College Hospital, University of Toronto, Canada; 2Director of the Canadian Cochrane Centre, Canada; 3Li Ka Shing Knowledge Institute of St Michael’s Hospital, Canada; 4Center for Evidence-based Medicine, Brown University, USA

Other Contributors: Dahabreh I1, Yu C2, Lavis J N3
1Brown University, USA; 2Li Ka Shing Knowledge Institute, Canada; 3McMaster University, Canada

Abstract: Objectives: To discuss the role of engaging decision makers to better understand their informational needs when reviewing complex interventions. To introduce novel statistical approaches for exploring heterogeneity of complex interventions. Description: Limitations in the reporting of primary studies of complex interventions and in the commonly used meta-analytical methods (including approaches for exploring heterogeneity) restrict the utility of existing systematic reviews for decision makers who wish to identify and optimize the design of new initiatives for their own context. Our recent systematic review of complex QI interventions for diabetes care, will serve as the foundation for these topics. We will introduce the role of and discuss methods for engaging stakeholders. Participants will briefly play the role of various stakeholders, including patients, providers, and policy makers, as an exercise in prioritizing key questions beyond ‘mean effect size’. We will demonstrate analytical approaches, including combinatorial meta-analysis techniques and hierarchical meta-regression that can be used to pursue answers of interest to decision makers. The pros and cons of agnostic/inductive and deductive approaches to explore heterogeneity will be examined, and the role of data enrichment through author surveys will be discussed. Broad application of these techniques in reviews of heterogeneous, complex interventions will be considered.

Target audience: Review authors and researchers focusing on complex interventions

Level of knowledge required: Intermediate

Type of workshop: Discussion

Access: Open

1.06
Planning and conducting a priority setting exercise for a Cochrane entity

Facilitators: Nasser M1, Crowe S2, Wilson E1, Welch V3, Ueffing E4, Li T5
1Cochrane Agenda and Priority Setting Methods Group, UK; 2Agenda and Priority Setting Methods Group, UK; 3Bruyere Research Institute, Canada; 4Canadian Cochrane Centre, Canada; 5US Cochrane Center; Cochrane Eyes and Vision Group; Comparing Multiple Interventions Methods Group, USA

Abstract: Objectives: At the end of the workshop, we expect that the participant will be familiar with the basic structure of a research priority setting exercise (RPS) and different (quantitative and qualitative) strategies available to prioritise topics for systematic reviews; strategies that they could use in prioritising the work of their own group. We will also introduce them to the currently available frameworks to evaluate the quality and success of RPS exercises. Description: The workshop will start with presentations about the structure of a RPS exercise, different methods used for prioritising topics for systematic reviews and the currently available frameworks to develop or evaluate a priority-setting exercise. We will provide examples used to set priorities in Cochrane entities as well as other agencies such as AHRQ and James Lind alliance or models like the Dialogue model. We will also provide examples of criteria used to prioritize research such as burden of disease, equity and controversy. The workshop will follow with a hands-on exercise that participants will be given a report of a RPS exercise (or they could bring their own example of a RPS) and appraise it using one of the frameworks for evaluating quality and success of RPS exercises.

Target audience: Cochrane entities and any one interested in priority setting

Level of knowledge required: Any

Type of workshop: Training

Access: Open

1.07
Comparing multiple treatments: — intervention review or overview – Part 1

Facilitators: Li T
US Cochrane Center; Cochrane Eyes and Vision Group; Comparing Multiple Interventions Methods Group, USA

Abstract: Objectives: a) To introduce key issues in the use of indirect comparisons in Cochrane Reviews, including the identification of an appropriate question, the construction of a network map, and the decision of whether an intervention review or an overview is the better format. b) To discuss methodological considerations when undertaking such reviews. Description: Indirect comparisons can be useful in the synthesis of evidence on comparative effectiveness, particularly when the evidence from head-to-head trials is lacking or insufficient. A variety of methods are available, ranging from simple narrative methods to formal network meta-analysis. This is the first of two related workshops. It will focus on non-statistical aspects and will draw upon the results of a special meeting on this topic organized by
the Comparing Multiple Interventions Methods Group in April 2012. We will introduce the concept of indirect comparison and describe the construction of a network of interventions. We will discuss appropriate questions for a review involving indirect comparisons and present a roadmap for deciding whether an intervention review or overview fits best. Lastly, we will discuss methodological considerations when undertaking such reviews. We will encourage participants to share their experiences and perspectives on this rapidly developing area of methodology.

**Target audience:** Review Authors, Editors, Managing Editors

**Level of knowledge required:** Intermediate

**Type of workshop:** Training

**Access:** Open

### 1.08
How to include economics in Cochrane Review protocols: background, objectives, outcome measures and types of studies – Part 1

**Facilitators:** Shemilt I  
Cambridge University, UK

**Abstract:** Objectives: Incorporating health economics evidence into Cochrane Reviews can facilitate decision making which takes account of costs and provide the international context within which previously published evidence can be interpreted and assessed as a preliminary to economic evaluation. This is the first of a pair of workshops aiming to provide an introduction to the techniques needed to develop a protocol for a Cochrane intervention review that will include health economics perspectives and evidence. Participants are strongly encouraged to also attend the second workshop of this pair. Description: Part 1 will enable participants to: a) Incorporate economics perspectives into the background section; b) Formulate an objective for the economics component; c) Identify measures of resource use, costs and cost-effectiveness to be included as outcome measures; and d) Identify studies likely to contain evidence on resource use, costs and cost-effectiveness. This workshop is consistent with guidance on the use of economics methods in the preparation and maintenance of Cochrane Reviews, published in the Cochrane Handbook for Systematic reviews of interventions. It will comprise a didactic presentation, a practical small-group exercise and opportunities for questions and discussion.

**Target audience:** Authors interested in including coverage of economics aspects of interventions in Cochrane Reviews and protocols. Editorial staff who may encounter protocols with economics components. Health economists who may be asked to advise or peer review economics components of protocols. Any level of knowledge is appropriate.

**Level of knowledge required:** Any

**Type of workshop:** Training

**Access:** Open

### 1.09
Calculation and interpretation of the number needed to treat (NNT)

**Facilitators:** Bender R  
Department of Medical Biometry, Institute for Quality and Efficiency in Health Care (IQWiG), Germany

**Abstract:** Objectives: To provide review authors with the knowledge and skills needed to calculate NNTs from trial reports and Summary of Findings (SoF) tables of Cochrane Reviews; to verify whether reported NNTs are adequate and to interpret the results. Description: The number needed to treat (NNT) is widely used to present the results of clinical trials. However, incorrect calculations, misuse in specific study situations and misleading interpretation of NNTs are not uncommon in practice, for example in the case of non-significant results or in the situation of survival time data. This workshop will provide an introduction to the use and interpretation of NNTs as effect measure in clinical trials and systematic reviews. It will be shown how to calculate NNTs with corresponding confidence intervals from Summary of Findings (SoF) tables. We will discuss in particular the limitations of NNTs including problems associated with the inconvenient scale, the sensitivity to changes of the baseline risk and the dependence on the follow-up time. Small group practical work will be an integral part of the workshop focusing on adequate calculation and interpretation of point and interval estimates of NNTs in practical examples. Participants should bring pocket calculators, pens and paper.

**Target audience:** Review authors, editors and referees

**Level of knowledge required:** Basic

**Type of workshop:** Basic

**Access:** Open

### 1.10 [Core]
Using the new online GRADEpro to create summary of findings tables ***in computer lab; no need for personal laptops

**Facilitators:** Schünemann HJ  
McMaster University, Canada

**Abstract:** Objectives: Participants will learn using the new online GRADEprofiler (GRADEpro) software released in April 2013 to prepare Summary of Findings Tables for Cochrane Reviews. This is a guided hands-on workshop using GRADEpro. Description: Summary of Findings (SoF) tables are a relatively new important addition to Cochrane Reviews and strongly recommended for Cochrane Reviews. Recently, the new online GRADEpro was released. It is a simple online application that can import data and analyses from RevMan 5, facilitate the creation of SoF tables, and export SoF Tables to RevMan. The main feature of GRADEpro is to facilitate the assessment of the quality of evidence (risks of bias, limitations, directness of evidence and sparseness of data) and the conversion and summary of results into relative and absolute effects for individual outcomes. This—very hands on and step-by-step—workshop takes participants through the entire
1.11 [Consumer stream]
Making sense of scientific evidence: how consumers can contribute to Cochrane Reviews – Part 2

Facilitators: Gyte G1, Horrey D2, Crowe S3
1 Cochrane Pregnancy & Childbirth Group and CCNet, UK; 2 Cochrane Consumers and Communication Review Group, Australia; 3 Agenda and Priority Setting Methods Group, UK

Abstract: Objectives: To help consumers make sense of scientific evidence through discussion on (i) different ways of testing whether health treatments work, (ii) different types of evidence about healthcare and (iii) how consumers can help to improve Cochrane Reviews. Participants will work on a practical example by commenting on a Cochrane Plain Language Summary (PLS). Description: This friendly and interactive workshop aims to help consumers develop the skills needed to make sense of scientific evidence, and understand how they can contribute to a Cochrane Review. This workshop will assist in explaining issues around evidence-based care in a way that consumers can understand and discuss the ways that consumers can contribute to Cochrane Reviews. Participants will work in small groups to look at a Cochrane PLS from a consumer perspective and, using a newly modified checklist, offer suggestions on how the PLS might be improved. Participants will also be able to give feedback on the checklist. All consumers are welcome and should be able to enjoy the workshop and learn more about Cochrane Reviews and the role of consumers.

Target audience: Consumers
Level of knowledge required: Any
Type of workshop: Training
Access: Open

1.12
Searching for studies for inclusion in Cochrane Reviews

Facilitators: Lefebvre C1, Glanville J2
1 Information Retrieval Methods Group, UK; 2 Cochrane Information Retrieval Methods Group, UK

Abstract: Objectives: To help Cochrane Review authors with guidance on searching for studies for inclusion in a Cochrane Review. Questions to be considered will include: where to search for studies; how to search efficiently and what to do with the search results. Description: This session is primarily aimed at Cochrane Review authors and will focus on Cochrane Collaboration policy for searching for studies as described in Chapter 6 of the Cochrane Handbook for Systematic Reviews of Interventions (Searching for Studies) and the recently published MECIR standards (http://www.editorial-unit.cochrane.org/mecir). The workshop will highlight each area addressed in the Handbook chapter including: developing a search strategy using PICO; sensitivity versus precision; Boolean operators and controlled vocabulary; going beyond MEDLINE—identification and comparison of resources; organizing and managing the search results and documenting and reporting the search process. The facilitators for this workshop are both Co-Convenors of the Cochrane Information Retrieval Methods Group and authors of the Cochrane Handbook Chapter (Searching for Studies). The session will include presentations, demonstrations, group discussion and practical exercises. Due to the limited availability of computer labs at the Colloquium, please note that this will NOT be a hands-on workshop.

Target audience: Cochrane Review authors with an interest in searching for studies
Level of knowledge required: Basic
Type of workshop: Training
Access: Open

1.13
Understanding, appraising and reporting systematic reviews that use individual participant data

Facilitators: Tierney J1, Stewart L2, Rovers M3
1 IPD Meta-analysis Methods Group, UK; 2 IPD Methods Group, UK; 3 Radboud University Medical Center Nijmegen, Netherlands

Abstract: Objectives: Promote better understanding and appraisal of systematic reviews based on individual participant data (IPD), and highlight how improved reporting standards could help. Description: Systematic reviews are commonly based on data from publications or trial investigators, and can be limited by the availability and quality of data. Those based on IPD instead tend to be international, collaborative projects involving the central collection and re-analysis of original data from all relevant trials. This can bring about substantial improvements to the quality of data and analyses, providing more reliable and detailed results. Unsurprisingly then, IPD reviews are becoming increasingly widely used. However, collecting, checking, analysing and interpreting an IPD review is more complex than for a standard systematic review. Furthermore, some IPD meta-analyses are not systematic reviews, but represent pooling of IPD from selected studies. These issues can present difficulties for users (including healthcare professionals,
guideline developers, policy-makers, journal editors and peer reviewers) to judge the quality of IPD reviews. This is further hampered by variable reporting. Based on real examples, this semi-interactive workshop will draw on current initiatives to promote better understanding and appraisal of IPD reviews, and improve their reporting through ongoing development of an extension to the PRISMA guidelines.

Target audience: Review authors and users of systematic reviews (including journal editors, peer reviewers, guideline developers)

Level of knowledge required: Any

Type of workshop: Training

Access: Open

1.14 [DTA stream]
Developing search strategies for systematic reviews of diagnostic test accuracy (DTA) (restricted)

Facilitators: Glanville J1, Noel-Storr A2, Mitchell R3
1 Cochrane Information Retrieval Methods Group, UK; 2 Cochrane Dementia Group, University of Oxford, UK; 3 Cochrane Renal group, Australia

Other Contributors: Eisinga A

UK Cochrane Centre, UK

Abstract: Objectives: To enhance the competencies of Trials Search Co-ordinators in developing search strategies for systematic reviews of DTA studies using a practical exercise-based approach. Description: The workshop will be based around a small-group exercise to develop a search strategy for a complex DTA systematic review. Participants will work in pairs, and there will be opportunity for discussion and feedback to the wider group during the exercise. Participants will have an opportunity to gain skills in areas such as: a) Using the review protocol to find initial information about the main search concepts b) Alternative ways of structuring search strategies for DTA reviews c) Techniques for preliminary gathering of MeSH terms and text words d) Overcoming problematic terminology e.g. for tests and target conditions where there are no MeSH terms, where there is a wide range of alternative terms, MeSH terms vs Subheadings etc. e) Advanced techniques for optimising sensitivity and precision f) Careful use of DTA filters as part of a multi-stranded approach.

Target audience: Trials Search Coordinators (TSCs) and other information specialists. It is assumed that participants will already have a basic knowledge of DTA studies, and at least an intermediate understanding of the principles and practice of searching for DTA studies, gained through attendance at previous workshops or experience of undertaking Cochrane DTA reviews

Level of knowledge required: Basic

Type of workshop: Training

Access: Restricted

1.15 Training for Managing editors – Part 1 (restricted)

Facilitators: Shah A
Cochrane Eyes and Vision Group, UK

Abstract: Objectives: To provide support to Managing Editors and Assistant Managing Editors in their role and to identify any training needs and support requirements. Description: This workshop will cover editorial issues that relate to the role of Managing Editor. The specific topic will be shared following the needs assessment that the ME Support team, Mes’ Exec and TWG coordinators are working on together (and will include at least IMS-related workshop). The workshop will be a mixture of presentation and discussion.

Target audience: Managing Editors

Level of knowledge required: Basic

Type of workshop: Training

Access: Restricted

1.16 Introducing theory into systematic reviews: a discussion workshop

Facilitators: Cargo M1, Harris J2, Jagosh J3, Pearson M4, Greenhalgh J5
1 University of South Australia, Australia; 2 University of Sheffield, UK; 3 McGill University, Canada; 4 University of Exeter Medical School, UK; 5 University of Leeds, UK

Abstract: Objectives: for systematic reviews to discuss—What is theory? Why and how theory may help—Different ways theory can be incorporated—Challenges in using theory. Description: Evidence synthesis of many healthcare and public health interventions is challenging as they are ‘complex’-consisting of long implementation chains, multiple components interacting independently, inter-dependently and/or non-linearly with emergent effects and context dependent outcomes. Increasingly, there are calls for using theory in systematic reviews as one approach to understanding how complex interventions work to achieve outcomes. However, there is confusion as to what is meant by ‘theory’, why it is needed in the first place and how it can be incorporated. Even when theory is incorporated, methodological challenges arise. In this workshop we will discuss the different conceptualisations of theory, why and how theory can assist reviews and the methodological challenges of doing so. Structured workshop plan—Introductions and objectives: 5 minutes presentation—What is theory? 10 plus 10 minutes for questions—Why use theory? 10 plus 10 minutes for questions—Applying theory in different systematic review types: Examples from completed reviews where theory has been used (20 minutes, small facilitated groups).—Feedback to larger group: 20 minutes—Summary and closing: 5 minutes.

Target audience: This workshop is suitable for researchers interested in learning about how theory can help in systematic reviews (e.g. effectiveness and implementation). No preparation or prior experience required.
Level of knowledge required: Any

Type of workshop: Discussion

Access: Open

1.17
Comparing multiple treatments: statistical methods for network meta-analysis – Part 2

Facilitators: Salanti G1, Mavridis D1, Chaimani A2, Higgins J3
1 University of Ioannina, Greece; 2 Department of Hygiene and Epidemiology, University of Ioannina School of Medicine, Greece; 3 Methods Executive, UK

Abstract: Objectives: To understand the statistical methodology of network meta-analyses and the assumption of consistency. Description: This is the second out of two workshops on how to conduct Cochrane Reviews that aim to compare more than two interventions and it is focused on statistical methodology for network meta-analysis. Network meta-analysis is the statistical methodology used to combine evidence in a network of trials that compare more than two interventions. The workshop will provide insight to network meta-analysis models that can be used to derive estimates for the relative effects of all treatments of interest. We will explore the different implementation alternatives through worked examples and we will discuss extensively the underlying assumption of consistency. We will present approaches to check for and incorporate inconsistency in the results and we will present applications of multiple-treatments meta-regression models. Finally, we will discuss concerns regarding the role of bias in network meta-analysis.

Target audience: review authors and statisticians

Level of knowledge required: Intermediate

Type of workshop: Training

Access: Open

1.18
How to include economics in Cochrane Review protocols: searches, risk of bias and methodological quality, data collection and analysis – Part 2

Facilitators: Shemilt I
Cambridge University, UK

Abstract: Objectives: Incorporating health economics evidence into Cochrane Reviews can facilitate decision making which takes account of costs and provide the international context within which previously published evidence can be interpreted and assessed as a preliminary to economic evaluation. This is the second of a pair of workshops aiming to provide an introduction to the techniques needed to develop a protocol for a Cochrane intervention review that will include health economics perspectives and evidence. Participants are strongly encouraged to also attend the first workshop of this pair. Description: Part two will enable participants to: a) Formulate a protocol for searches for health economics studies; b) Identify tools to inform assessments of risk of bias and methodological quality of health economics studies; c) Formulate a protocol for collecting data on resource use, costs and cost-effectiveness; and d) Formulate a protocol for analysis and presentation of results. This workshop is consistent with guidance on the use of economics methods in the preparation and maintenance of Cochrane Reviews, published in the Cochrane Handbook for Systematic reviews of interventions. It will comprise a didactic presentation, a practical small-group exercise and opportunities for questions and discussion.

Target audience: Authors interested in including coverage of economics aspects of interventions in Cochrane Reviews and protocols. Editorial staff who may encounter protocols with economics components. Health economists who may be asked to advise or peer review economics components of protocols. Any level of knowledge is appropriate.

Level of knowledge required: Any

Type of workshop: Training

Access: Open

1.19
PROBAST: an opportunity to pilot test a new risk of bias tool for prediction modelling studies

Facilitators: Wolff R1, Moons KGM2, Mallett S3, Whiting P4, Kleijnen J1
1 Kleijnen Systematic Reviews Ltd, United Kingdom; 2 Julius Center for Health Sciences and Primary Care, UMC Utrecht, The Netherlands; 3 University of Oxford, United Kingdom; 4 Kleijnen Systematic Reviews, United Kingdom

Abstract: Objectives: Quality assessment of included studies is a crucial step in any systematic review. Review and synthesis of prediction modelling studies is a relatively new and evolving area. The QUIPS tool for prediction finding studies has been recently updated. However, a tool facilitating quality assessment for prognostic and diagnostic prediction modelling studies is needed. We are currently developing PROBAST, a tool for assessing the risk of bias and applicability of prediction modelling studies. Description: The workshop will be split into two sessions. The first session will be an overview of the development and structure of PROBAST. We have used a Delphi process, including thirty-nine experts in the field of prediction research. Feedback from the first rounds of our survey suggests that a domain-based approach similar to that implemented in QUADAS-2 will be used. The presentation will give an overview of the process, the current version of the tool (including the domains covered and signalling questions) as well as an insight into underlying discussions. In the second half of the workshop, participants will have the opportunity to discuss and pilot-test PROBAST. Feedback gathered during the workshop will contribute to the evaluation, and possible revision, of PROBAST.

Target audience: Authors conducting systematic reviews of prediction studies
Level of knowledge required: Intermediate
Type of workshop: Discussion
Access: Open

1.20 Assessing the risk of selection bias in a systematic review which includes non-randomised studies (NRS)

Facilitators: Shea B
Cochrane Non-Randomised Studies Methods Group, Canada

Abstract: Objectives: The workshop aims to improve awareness of key issues about the risk of selection bias when including NRS in systematic reviews of interventions. Description: This workshop (and another) is aimed at review authors intending to include non-randomised studies (NRS) in Cochrane systematic reviews and editors involved with such reviews. The Collaboration recommends that review authors consider and justify whether or not to include NRS for all research questions. Decisions to include NRS may arise when there are inadequate or no RCTs but where the question addressed by the review is a considered priority. Evaluations of public health and non-pharmacological interventions may have these characteristics. Participants will mainly work in small groups to apply a NRSMG checklist highlighting important considerations, including prior specification of relevant confounding domains, whether or not a domain is likely to give rise to confounding in a study and, if yes, the care with which findings were controlled the confounding domain. The implications of varying amounts and quality of information from primary NRS will be discussed. Varying amounts and quality of information is also the norm for systematic reviews of RCTs, so the discussion will contrast the implications for systematic reviews of NRS and RCTs.

Target audience: Review authors intending to include non-randomised studies (NRS) in Cochrane systematic reviews to answer questions about beneficial effects and editors involved with such reviews.

Level of knowledge required: Intermediate
Type of workshop: Training
Access: Open

1.21 [Core] RevMan 5.2 for Cochrane intervention review authors—how using all the new features can make life easier ***in computer lab; no need for personal laptops

Facilitators: Pienaar E
South African Cochrane Centre, South Africa

Other Contributors: Oliver J
South African Cochrane Centre, South Africa

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Abstract: Objectives: The purpose of this workshop is to demonstrate the enhanced features of RevMan 5.2 to review authors and provide an opportunity for participants to practice the steps themselves. Description: Review Manager (RevMan) is the Cochrane Collaboration’s own software, which is developed to assist review authors in writing systematic reviews in the Cochrane format. The latest version, RevMan 5.2, has been updated with a host of new and improved features. Many of the text editing features have been improved, such as extended text character support, including Arabic and Chinese. Multiple links can be added with fewer clicks of the mouse. Features to enhance data entry and analysis include a Calculator tool as well as quick toolbar buttons for switching between effect measures. The Risk of Bias names and descriptions have been reworded and items can now be reordered. It is now also possible to edit Summary of Findings (SoF) Tables within RevMan. A PRISMA flow-diagram to show the flow of references through a review can be created within RevMan During this practical session participants will be shown how to use the software and get hands-on experience with the software. Workshop format will be a demonstration and practical session.

Target audience: All Cochrane intervention review authors

Level of knowledge required: Basic
Type of workshop: Training
Access: Open

1.22 Realist review: an introductory workshop

Facilitators: Cargo M 1, Harris J 2, Jagosh J 3, Pearson M 4, Greenhalgh J 5
1 University of South Australia, Australia; 2 University of Sheffield, United Kingdom; 3 McGill University, Canada; 4 University of Exeter Medical School, United Kingdom; 5 University of Leeds, United Kingdom

Abstract: Objectives: Explain the logic and key ingredients of realist review—Practice applying realist logic Explore when and why a realist review is useful—Address participants’ questions concerning realist review. Description: Synthesising evidence on many healthcare and public health interventions is challenging as they are ‘complex’—consisting of long implementation chains, multiple components that interact independently, inter-dependently and/or non-linearly with emergent effects and context dependent outcomes. One approach to making sense of complex interventions is by using theory. Realist review identifies and refines theories that explain how and why outcomes occur. Specifically it seeks to unpack and understand causation using a realist philosophical lens. Briefly, causation is generative-outcomes occur because mechanisms cause them to. Context influences if a mechanism is triggered and interventions and/or programmes work through altering context. In this workshop we will explain what realism and a realist review is, when it might be used and provide attendees with hands on ‘practice’. Structured workshop plan: Introductions and Objectives: 5 minutes presentation—What is realism? 10 plus 10 minutes for questions—What is a realist review? 10 plus 10 minutes for questions—Practice applying realist logic: 20 minutes—in small facilitated groups—Feedback to larger group: 20 minutes—Summary and closing: 5 minutes.
Target audience: This workshop is suitable for researchers interested in learning about the principles underlying realist reviews. No preparation or prior experience required

Level of knowledge required: Any

Type of workshop: Training

Access: Open

1.23 Search strategies and data sources for adverse effects reviews

Facilitators: Golders S1, Zorzela L2
1CRD, United Kingdom; 2University of Alberta, Canada

Abstract: Objective: To give guidance for review authors on the available data sources on adverse effects, and how to retrieve data for incorporation into a systematic review. This will include the development of optimal search techniques and discussion of the diverse formats of adverse effects data sources. Description: Participants will receive a number of scenarios, and will then work together in small groups to plan a search strategy for a comprehensive evaluation of adverse effects. The scenarios will be drawn from real-life situations to cover a wide range of potential adverse effects, such as: (1) There have been safety concerns arisen about the risk of fractures with thiazolidinediones. (2) Patients with epilepsy often have to take long-term medication to control their symptoms, and there are concerns over the safety and tolerability of the drugs. At the end, groups will feedback on their protocols, and any points raised will be discussed further. Examples from existing reviews will be provided by the facilitator, as well as tips and tricks to solve specific issues.

Target audience: intermediate

Level of knowledge required: Intermediate

Type of workshop: Training

Access: Open

1.24 [DTA Stream]
Systematic reviews of diagnostic accuracy studies. Assessment of methodological quality

Facilitators: Leeflang MMG
University of Amsterdam, Netherlands

Other Contributors: Whiting P1, Rutjes AW2, Reitsma H3
1Kleijnen Systematic Reviews Ltd, UK; 2Institute for Social and Preventive Medicine, University of Bern, Switzerland, and Clinical Center for Aging Sciences (Ce.S.I.), University "G. d'Annunzio" Foundation, Chieti, Italy; 3Julius Center for Health Sciences and Primary Care, University Medical Center Utrecht, The Netherlands

Abstract: Objectives: The workshop will provide an introduction to the methodology of quality assessment of diagnostic accuracy studies. The aim is to provide an overview of the key steps involved in the assessment of methodological quality in a diagnostic systematic review. Description: The Cochrane DTA Working Group has developed a handbook and software to guide the process of conducting diagnostic reviews, as well as a series of workshops. This workshop concerns quality assessment of diagnostic accuracy studies, and will include an introduction to the five dimensions of quality assessment: (a) concepts of quality, (b) empirical evidence of bias, (c) how to assess quality, (d) how to incorporate quality into systematic reviews, (e) limitations of measuring and incorporating quality. Statistical methods to deal with design related sources of bias and variation are discussed in a separate workshop. The workshop will include interactive exercises involving the assessment and discussion of some design characteristics by reviewing published articles.

Target audience: Review Authors

Level of knowledge required: Basic

Type of workshop: Training

Access: Open

1.25 Sharing evidence through Twitter

Facilitators: Chapman S, Millward H
UK Cochrane Centre, United Kingdom

Abstract: Objectives: To enable participants to share evidence, engaging with different audiences, for maximum effect and impact, through Twitter. Description: We are now engaging with consumers, health professionals and voluntary organisations every day, disseminating and discussing Cochrane Reviews through Twitter, an increasingly important forum for sharing evidence. With a small amount of training and few resources, Twitter users can increase the reach of reviews through this fast and responsive platform. We will focus on Cochrane Reviews but the skills learned at this workshop can be applied to other types of evidence. The workshop will begin with a presentation showing how to construct tweets for maximum impact. It will include how to extract information from a review and translate this into tweets; how to reach different audiences through the language used and the information selected and by using Twitter conventions such as hashtags and Twitter handles. We will consider how to fit this into the daily workload and how to use Twitter in both a planned way and responsively for maximum impact. Participants will be divided into small groups for a hands-on activity building Tweets from Cochrane Review abstracts. This will be followed by feedback and an opportunity for discussion and questions.

Target audience: All interested in using Twitter to disseminate reviews, basic knowledge of Twitter needed as well as a Twitter account.

Level of knowledge required: Basic

Type of workshop: Training

Access: Open
1.26 [Core] 
Introduction to meta-analysis: basic ideas for novices – Part 1

Facilitators: Beyene J
McMaster University, Canada

Abstract: Objective: The Cochrane Statistical Methods Group has developed a series of workshops addressing statistical guidelines as formulated in the Cochrane Handbook for Systematic Reviews of Interventions. This workshop will cover the basic ideas of meta-analysis at an accessible level. Description: Topics to be covered include: a) What is a meta-analysis? b) What is a ‘forest plot’? c) What are ‘odds ratios’, ‘risk ratios’ and ‘risk differences’? d) What is heterogeneity? e) What do ‘fixed-effect’ and ‘random-effects’ mean? The emphasis of the workshop will be on obtaining a broad understanding of the differences between the various methods available in RevMan, with advice on which might be used when, and why, and what the results mean.

Target audience: Review authors
Level of knowledge required: Basic
Type of workshop: Training
Access: Open

1.27 
Core outcome measures for randomised controlled trials and Cochrane Reviews

Facilitators: Gargon E1, Williamson P2
1University of Liverpool, United Kingdom; 2University of Liverpool, Afghanistan

Abstract: Objectives: I ll health and treatments can affect people in different ways, making it difficult to select the most appropriate outcomes for research. The development of standardised core outcome sets for all trials of effectiveness in a particular condition would make this easier. Description: This workshop will comprise a mixture of presentations and participant discussion. A presentation will set the scene for several key issues and the participants will then be given specific Cochrane Reviews to look at. They will work in groups to identify examples of non-standardised selection, measurement and reporting of outcomes, and to discuss problems this may cause for authors of systematic reviews. Subsequent presentations and group discussion will focus on existing work to design core outcome sets for clinical trials, and to identify outcomes of most importance to patients, families and carers. Participants will discuss how similar research could identify appropriate outcomes for Cochrane Reviews, and how core outcome sets can be used to help authors present their findings clearly and succinctly, such as within the Summary of Findings table.

Target audience: Review authors, review editors, consumers, statisticians, methodologists, trialists
Level of knowledge required: Any

1.28 
Extending the assessment of outcome reporting bias to harms

Facilitators: Kirkham JJ1, Saini P1, Dwan K2, Williamson P3
1University of Liverpool, United Kingdom; 2The University of Liverpool, United Kingdom; 3University of Liverpool, Afghanistan

Other Contributors: Loke Y1, Altman DG2, Gamble C3
1University of East Anglia, UK; 2University of Oxford, UK; 3University of Liverpool, UK

Abstract: Objectives: a) To discuss how reviewers decide what harm outcomes to include in their reviews. b) To provide the reviewer with a background to the problem and mechanisms that may lead to incomplete reporting of harms data. c) To discuss how a reviewer might identify outcome reporting bias (ORB) for harms in their review. d) To present techniques for assessing the robustness of the meta-analysis to such bias. Description: Empirical research has demonstrated that harms are poorly reported in clinical trials. Important harm outcomes maybe subject to outcome reporting bias (ORB) where trialists prefer to focus on the positive benefits of an experimental intervention. Methods for the identification of ORB in harm outcomes for an individual study will be described and illustrated using examples. We will also remind reviewers about assessing ORB for benefit outcomes. Participants will be encouraged to undertake such assessments for examples provided and to discuss issues for their reviews. Sensitivity approaches for adjusting for this form of bias will be described and methods for implementation will be provided. Considerations for the impact ORB can have on the benefit-harm ratio with and without adjustment will also be presented.

Target audience: Review authors, policy makers, researchers with an interest in bias and adverse effects
Level of knowledge required: Intermediate
Type of workshop: Training
Access: Open

1.29 
Assessing the risk of within-study selective reporting in a systematic review which includes non-randomised studies (NRS)

Facilitators: Shea B
Cochrane Non-Randomised Studies Methods Group, Canada

Abstract: Objectives: The workshop aims to improve awareness of key issues about the risk of within study selective reporting when including NRS in systematic reviews of interventions. Description: This workshop (and another) is aimed at review authors intending to include non-randomised studies (NRS) in Cochrane systematic reviews...
and editors involved with such reviews. The Collaboration recommends that review authors consider and justify whether or not to include NRS for all research questions. Decisions to include NRS may arise when there are inadequate or no RCTs but where the question addressed by the review is considered a priority. Evaluations of public health and non-pharmacological interventions may have these characteristics. Participants will mainly work in small groups to apply a NRSMG checklist to a small number of NRS, highlighting important considerations, focusing on the various ways in which multiple findings may be generated from which a selection of findings may be reported. Selective reporting and failure to report will be contrasted. The availability of information to detect selective reporting, and varying amounts and quality of information across primary studies, are problems affecting both NRS vs. RCTs. These problems will be discussed, contrasting the implications for systematic reviews of NRS and RCTs.

**Target audience:** Reviewer authors intending to include non-randomised studies (NRS) in Cochrane systematic reviews and editors involved with such reviews

**Level of knowledge required:** Intermediate

**Type of workshop:** Training

**Access:** Open

### 1.30 [Consumer stream]
The stats café (today’s special: statistics for the terrified)

**Facilitators:** Trivella M¹, Hopewell S², Takwoingi Y³, Rader T⁴, Vilis E⁵

¹Cochrane Collaboration, United Kingdom; ²French Cochrane Centre, France; ³Screening and Diagnostic Test Methods Group, United Kingdom; ⁴Cochrane Musculoskeletal Group; ⁵Canada Canadian Cochrane Centre, Canada

**Other Contributors:** Drahota A¹, Clarke M²

¹University of Portsmouth, UK; ²Queen’s University, Belfast

**Abstract:** Objectives: To gain an understanding of common statistical concepts such as: risks; odds; p-values; confidence intervals; and sample size. Description: This workshop involves working in small groups and rotating around the room to undertake a range of activities. On each table we will place tasters of statistical concepts in easy-to-swallow, bite-sized pieces. Activities on the menu include—'Chef’s Speciality Sparks Media Mayhem’. Explore the use of risks and odds, and how to express the meaning of the numbers in words—’Pea-value Platter’. Interpret the results of studies by exploring the meaning of p-values—’Peppé’s losing the L’Abbé Plot’. Conduct a mini experiment and see the influence of sample size on study results—’Sampling Sweets with Confidence’. Explore the concept of confidence intervals and how this influences decision-making. It’s all fun and games as Peppé (that’s the café owner) is losing the plot, his chef is playing up again, and the Chef’s Special has sparked a media mayhem. But all Peppé really wants to know is—what sweets should he buy?

**Target audience:** Anyone terrified of basic statistical definitions and techniques

### 1.31 [Core]
Navigating The Cochrane Library

***PARTICIPANTS: Please bring your laptops to this session

**Facilitators:** Stewart G
Wiley, United Kingdom

**Abstract:** Objectives: To provide users with a better understanding of the techniques available for navigating The Cochrane Library. Description: The workshop will provide basic and intermediate level users with an understanding of the most useful techniques for navigating The Cochrane Library online via www.thecochranelibrary.com. It will demonstrate the most useful tools as well as the most effective ways of using the improved search interface. Workshop attendees will receive a demonstration in how to interpret search results, how to construct a multi-line search strategy, saving searches and combining basic, advanced and MeSH searches to use in Search Manager. An overview of recent and forthcoming search enhancements will also be featured. The session will include an online demonstration and participants will be able to complete a series of exercises and practice during the workshop.

**Target audience:** Review authors, consumers, researchers

**Level of knowledge required:** Basic

**Type of workshop:** Training

**Access:** Open

### 1.32
EROS dialogues with RevMan: data extraction, quality assessment and more

***in computer lab; no need for personal laptops

**Facilitators:** Glujsovsky D¹, Ciapponi A²

¹Institute for Clinical Effectiveness and Health Policy (IECS), Argentina; ²Argentine Cochrane Center IECS, Argentina

**Abstract:** Objectives: To review how EROS (Early Review Organizing Software) works at the initial phases of a systematic review (SR). To show the important updates that have been developed in EROS: data extraction and quality assessment. Description: Study selection and its distribution for independent quality assessment and data extraction is not only time-consuming, but it is also complicated, tiresome, and prone to mistakes, especially if we have to deal with a great number of references retrieved from the search strategy. EROS has become a very commonly used tool, mainly because it helps reviewers with some issues before data go into Revman, and because it has been a free tool for Cochrane Reviews. After a brief demonstration about how to generate a SR project, define inclusion/exclusion criteria, import citations from reference manager software or directly from electronic databases and allocate citations with title/abstract and full-text to
2.01 [Core]  
**Introduction to meta-analysis: meta-analysis of binary and continuous outcomes – Part 2**

**Facilitators:** McKenzie JE  
*School of Public Health and Preventive Medicine, Monash University, Australia*

**Abstract:** Objective: The Cochrane Statistical Methods Group has developed a series of workshops addressing statistical guidelines as formulated in the Cochrane Handbook for Systematic Reviews of Interventions. This workshop will provide review authors with the knowledge of issues surrounding meta-analysis of binary and continuous outcomes. Description: Binary and continuous data are commonly encountered in health care. Pooling intervention effects from binary and continuous data presents unique methodological issues. Some of these issues will be discussed in this workshop. A brief introduction to meta-analysis of binary and continuous outcomes will be included, consisting of data extraction (extraction of event frequencies and/or effect estimates, and extraction of standard deviations from standard errors, confidence intervals, test statistics and P values); and dealing with outcomes measured on different scales. More complex issues will be discussed including options for pooling estimates of intervention effect when a mix of results from analyses using change from baseline and final values have been reported; and use of the generic inverse variance method. Issues will be illustrated by examples.

**Target audience:** Review authors  
**Level of knowledge required:** Intermediate  
**Type of workshop:** Training  
**Access:** Open

2.02  
**Methodological requirements for searching for studies for Cochrane Reviews: an update on the MECIR standards**

**Facilitators:** Lefebvre C¹, Noel-Storr A²  
¹Information Retrieval Methods Group, United Kingdom; ²Cochrane Dementia Group, University of Oxford, United Kingdom

**Other Contributors:** Clarke M¹, Glanville J²  
¹Methodology Review Group; ²Information Retrieval Methods Group

**Abstract:** Background: The Methodological Expectations of Cochrane Intervention Reviews (MECIR) project was established to specify methodological expectations, or standards, for Cochrane Reviews and to ensure that these standards are implemented across the Collaboration. Standards have been published for the conduct and for reporting of new Cochrane intervention reviews (http://www.editorial-unit.cochrane.org/mecir). Each standard is considered to be either mandatory (compliance required for publication) or highly desirable (expected but may be justifiably not done). Objectives: This workshop will focus on these standards with respect to searching for studies. It will increase awareness amongst participants of the new requirements and provide an opportunity for Trials Search Co-ordinators and others responsible for searching for studies to discuss these standards with their peers and debate implementation issues. Description: This workshop will consist of: an overview of the background to reaching consensus on the standards; discussion of the standards; and consideration of implementation issues. It will be interactive with small-group and across-group discussion, followed by whole-group feedback and debate. Participants will have the opportunity to assess examples from anonymised reviews and consider whether they meet the standards followed by a user-perspective presentation of some of the implementation challenges and group discussion on how those challenges might be met.

**Target audience:** Trials Search Co-ordinators, other Information Specialists and review authors with experience of searching for studies  
**Level of knowledge required:** Intermediate  
**Type of workshop:** Training  
**Access:** Open

2.03 [DTA Stream]  
**Diagnostic test accuracy reviews: introduction to meta-analysis**

**Facilitators:** Takwoingi Y, Deeks J  
*Screening and Diagnostic Test Methods Group, United Kingdom*

**Abstract:** Objectives: The Cochrane Screening and Diagnostic Test Methods Group has developed a series of workshops addressing guidelines as formulated in the Handbook for Diagnostic Test Accuracy reviews. This workshop is designed to introduce the principles of meta-analysis of diagnostic test accuracy studies. Description: The framework for meta-analysis of diagnostic accuracy studies as implemented within Cochrane diagnostic test accuracy reviews will be presented. We will start with an overview of common statistics used to express the diagnostic performance of an index test, such as sensitivity, specificity, likelihood ratios and diagnostic odds ratios. Then methods for graphically summarising results from original studies will be presented: forest plots of sensitivity and specificity, and the ROC plot for presenting paired sensitivity-specificity results. Basic methods for estimating a summary ROC curve will be presented as they are implemented in RevMan 5, and the rationale for using these methods explained. The workshop will conclude with an overview of possible sources of heterogeneity and methods for assessing heterogeneity, and comparisons of tests.

**Target audience:** Review authors and researchers with an interest in test accuracy meta-analysis

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**Level of knowledge required:** Basic  
**Type of workshop:** Training  
**Access:** Open

### 2.05 [Core]  
Interpreting results of Cochrane Reviews and Summary of Findings Tables

**Facilitators:** Schünemann HJ  
*McMaster University, Canada*

**Abstract:** Objectives: To learn how to use GRADE to interpret findings and create a Summary of Findings Table. This workshop involves small group work, with groups lead by workshop trainers. Description: The GRADE approach has been adopted by the Cochrane Collaboration to evaluate the quality of evidence for outcomes reported in systematic reviews, interpret findings and draw conclusions. This information as well as the magnitude of the effect for each outcome, is presented in a Summary of Findings (SoF) table. This workshop describes the GRADE criteria to assess the quality of evidence (risk of bias, indirectness, imprecision, inconsistency, publication and others) and the process to create a SoF (choosing outcomes and comparisons; grading the evidence; and presenting effects in user friendly numbers). Participants will then apply these concepts to create a SoF in small groups.

**Target audience:** Authors, editors, and entity and Centre staff  
**Level of knowledge required:** Basic  
**Type of workshop:** Training  
**Access:** Restricted

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### 2.06  
Enhanced interrogation techniques—making Archie cough up the answers you need (restricted)

**Facilitators:** Champion C, Welsh E, Dooley L  
1*ME, CCDAN, United Kingdom; 2Airways, United Kingdom; 3ARI Group, Australia*

**Other Contributors:** Riis J  
*Cochrane IMS, Denmark*

**Abstract:** Objectives: This Archie workshop will assist Cochrane entity staff (primarily Super Users) in using the Advanced Search and Reports functions. There will also be an opportunity for users to feed back into development of the systems to improve the reporting and searching functionality. Description: The workshop will include: (1) A demonstration on using the Archie Advanced Search function and running a selection of Reports. (2) A competition between the workshop group and two ‘expert Super Users’ to find information from Archie, with prizes for winners! Please bring your laptop to take part! (3) A break-out session where groups will run through a list of questions around the use of both the Reports and the Advanced Search functionality. The groups will be asked to consider the following: what current searches users find useful, what new reports and search functions are required to support the work of the Collaboration, as well as—share ideas around how the current system could be made more accessible to the user. (4) All small groups will be given an opportunity to feedback to the full workshop and a final report will be shared by the IMS team with the attendees after the event.

**Target audience:** review authors, consumers, or researchers  
**Level of knowledge required:** Any  
**Type of workshop:** Discussion  
**Access:** Open

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### 2.07  
Ensuring Cochrane Reviews drive improvement in the design and delivery of health services

**Facilitators:** Grimshaw JM, Lavis JN  
1*Director of the Canadian Cochrane Centre, Canada; 2McMaster University, Hamilton, Canada, Canada*

**Abstract:** Objectives: To discuss how a more effective collaboration between The Cochrane Collaboration and organizations engaged in healthcare improvement initiatives could become an important conduit to connect healthcare leaders with existing Cochrane Reviews and, more significantly, provide valuable feedback to The Cochrane Collaboration on emerging issues for potential new systematic reviews in health services. Description: Workshop participants will have an opportunity to hear from and engage in discussion with a panel of healthcare delivery CEOs, healthcare improvement leaders and systematic review methodologists/experts to: (1) Discuss the role and importance of systematic reviews and meta-analyses in healthcare improvement work and major change initiatives. • Are there emerging issues and topics that could be supported by systematic reviews of evidence to advance change initiatives and improvement work in health services? (2) Discuss and explore the current and potential relationship between The Cochrane Collaboration and organizations engaged in creating and supporting healthcare improvement initiatives like the Canadian Foundation for Healthcare Improvement (CFHI). • Can we envisage a more effective collaboration between Cochrane’s role in providing the best evidence for healthcare (through systematic reviews) and CFHI’s role in helping decision-makers use that information to better manage health services (through collaborations, leadership programs and improvement projects)?

**Target audience:** review authors, consumers, or researchers  
**Level of knowledge required:** Any  
**Type of workshop:** Discussion  
**Access:** Open
2.08
Using social media for effective communication with Cochrane stakeholders

Facilitators: Owens N
Cochrane Collaboration Web Team, Australia

Other Contributors: Helmers M
Wiley, US

Abstract: Objectives: (1) Demonstration on use of social media: (a) Familiarise participants with different types and functions of social media. (b) Provide practical information on using social media to disseminate information and communicate effectively. (2) Workshop session: (a) Follow step-by-step guides to using social media tools. (b) Supported hands-on opportunity to explore and ask questions.

Description: Are you looking for ways to get the word out more effectively about Cochrane activities and evidence? Social media tools (Facebook, Twitter, LinkedIn) and internal Cochrane initiatives (news channels, blogs, discussion forums) each provide opportunities to push information out to and connect with current and prospective Cochrane users and contributors. However, potential/new users of social media may be daunted by the volume of information and resources available, and the prospect of integrating social media engagement into already overloaded work schedules. This workshop will focus on familiarising participants with the social media landscape: the most popular platforms, and how each can be used to disseminate content and engage particular audiences. It will also offer solutions for incorporating social media into daily tasks. The session will provide the opportunity to explore social media in a supported environment, including hands-on exercises in disseminating content across multiple platforms.

Target audience: Anyone in the Collaboration seeking information on how to use social media more effectively

Level of knowledge required: Any

Type of workshop: Training

Access: Open

2.09
Writing Complex Search Strategies

***PARTICIPANTS: Please bring your laptops to this session

Facilitators: Noel-Storr A1, Fiander M2
1 Effective Dementia Group, University of Oxford, United Kingdom; 2 Effective Practice & Organisation of Care Group, Canada

Abstract: Objectives: To present and discuss practical approaches to developing and optimising complex search strategies for health care interventions. Description: This session is directed at professional searchers—Information Scientists/Specialists, Trials Search Co-ordinators, Librarians, who develop search strategies for systematic reviews. Using sample topics from Cochrane Systematic Reviews, we will explore using and exploiting Medical Subject Headings, MeSH (NLM) and EMTREE (EMBASE). We will consider the differences between MeSH and EMTREE for the purposes of building and translating search strategies. OVID will be the assumed platform for Medline and EMBASE; Wiley for the Cochrane Central Database of Controlled Trials; and Ebsco for CINAHL. Pubmed will be discussed as an adjunct to searches of Medline, but will not be the focus of this session. Participants will be asked to register in advance and submit questions or comments related to challenges they have encountered when constructing search strategies. While the presenters will deliver information, we hope to also draw on experiences of attendees to inform and expand the methodology presented in this session. Late registrants will gladly be accepted, but questions/challenges posed in advance of the session may take precedence as discussion items.

Target audience: Information Specialists & Trials Search Co-ordinators

Level of knowledge required: Advanced

Type of workshop: Training

Access: Open

2.10
Going from evidence to dis-coverage decisions

Facilitators: Parmelli E1, Davoli M2, Amato L3, D’Amico R4
1 Italian Cochrane Network, Italy; 2 Drugs and Alcohol Group-Dept Epidemiology Rome, Italy; 3 Cochrane Drugs and alcohol Group: Department of Epidemiology Lazio Regional Health System, Italy; 4 Italian Cochrane Centre - University of Modena and Reggio Emilia, Italy

Other Contributors: Moja L1, Pregno S2, Brunetti M3, Saitto C3
1 University of Milan, Italy; 2 Local Health Unit, Modena, Italy; 3 Local Health Unit, Rome, Italy

Abstract: Objectives: To introduce, discuss and further develop a framework for going from evidence to decisions about disinvesting partially or completely on drugs, tests, devices, procedures or services that are considered of low clinical-value (dis-coverage decision).

Description: The workshop will include brief presentations and group discussions. A conceptual framework will be presented, developed based on a review of the literature and stakeholder consultations, that incorporates key dimensions for taking coverage decisions and that will be applied to practical case studies of low clinical-value interventions (LCVIs). Participants will discuss evidence and its quality and then make dis-coverage recommendations mimicking real panel decision making. The application of the framework to decisions about disinvesting on LCVIs pertains to the need of an explicit and transparent way to rationalise national healthcare systems’ resources. We will conclude by discussing ways in which the framework could be further improved and how it could be presented to facilitate dis-coverage decisions informed by research evidence. The workshop will contribute to DECIDE (www.decide-collaboration.eu), a 5-year project funded by the European Commission’s FP7 that, building on the work of GRADE, aims at improving the dissemination of guidelines. Partners in DECIDE include members of the GRADE Working Group and four Cochrane Centres.

Target audience: Policy makers and managers

Type of workshop: Discussion

Access: Open
2.11 [Consumer Stream]
Demystifying clinical trials and systematic reviews for the public ***in computer lab; no need for personal laptops

Facilitators: McIlwain C, Struthers C, Parris K, Gyte G
1 Consumer Coordinator, The Cochrane Collaboration, United Kingdom; 2 Cochrane Training, United Kingdom; 3 Cochrane Collaboration, United Kingdom; 4 Cochrane Pregnancy & Childbirth Group and CCNet, United Kingdom

Other Contributors: Burls A, Penfold M
University of Oxford, UK

Abstract: Objectives: to engage consumers in user testing of web-based information on clinical trials and systematic reviews intended for the public by: (1) assessing and scoring explanations of clinical trials and systematic review terminology and (2) contributing to the development of new suggestions. Description: This will be an interactive workshop with an initial introduction to the topic and the plan for the workshop. Participants will work in small groups and be asked to comment on web-based materials which aim to explain clinical trials and systematic reviews in lay terms. Participants will be asked what explanations are useful and what are hard to understand. Scoring will use an on-line test devised for this purpose. It is anticipated that improvements will be needed and the workshop will provide opportunity for this process. The facilitators will work with participants in small groups to improve the materials. Explanations generated in the workshop on The wonders of randomization will be tested if available. All the ideas generated will contribute to current work on this topic, and interested participants will be able to continue their involvement in the development of these materials beyond the workshop.

Target audience: Consumers and the public
Level of knowledge required: Any
Type of workshop: Discussion
Access: Open

3.01
Introducing the new Cochrane Handbook chapter on equity—methods for systematic reviews with a focus on equity

1 London School of Hygiene & Tropical Medicine, United Kingdom; 2 Bruyere Research Institute, Canada; 3 Department of Medicine, University of Ottawa, Canada; 4 Campbell and Cochrane Equity Methods Group, Canada; 5 University of the West Indies, Mona, Jamaica; 6 Institute of Population Health, University of Ottawa, Canada

1 University of Alberta, Canada; 2 University of Ottawa, Canada; 3 Manitoba Institute of Child Health, Canada; 4 Cochrane Musculoskeletal Group, Canada; 5 Royal Children's Hospital, Australia; 6 Canadian Cochrane Centre, Canada; 7 University of Melbourne, Australia; 8 University of Glasgow, UK

Abstract: Objectives: The workshop aims to introduce systematic review authors and researchers interested equity to the draft guidance being prepared for the Cochrane Handbook for Systematic Reviews of Interventions. Description: A future release of the Cochrane Handbook will include new guidance on additional methods for equity-focused systematic reviews. We have defined these reviews as those that meet one or more of the following criteria: (1) the intervention is targeted at a disadvantaged population; (2) the intervention is aimed at reducing the social gradient in health across populations; or (3) the intervention is not aimed at reducing inequity but important equity effects are likely. Participants will be introduced to the draft guidance. We will present the proposed methods and participants will work in small groups to discuss the new guidance on equity as applied to Cochrane Review examples. Groups will discuss the methods available for considering equity as included in the example systematic reviews. This workshop will allow participants to develop their skills in equity methods so that they may consider adding equity into their next systematic review.

Target audience: Review authors, researchers with a particular interest in equity
Level of knowledge required: Any
Type of workshop: Training
Access: Open

3.02 [Core]
Using MECIR standards in the interpretation and presentation of results in Cochrane Reviews of interventions – Part 1

Facilitators: Lasserson T, Trivella M
1 Cochrane Editorial Unit, United Kingdom; 2 Cochrane Collaboration, United Kingdom

Other Contributors: Chandler J, Churchill R, Tovey D, Higgins J
1 The Cochrane Collaboration, UK; 2 University of Bristol, UK

Abstract: Objectives: To provide participants with practical guidance on applying MECIR standards in the reporting of Cochrane Reviews of interventions. Description: This workshop will focus on the application of the Methodological Expectations of Cochrane Intervention Review (MECIR) standards. Participants will be encouraged to draw on their own experience of review or editorial processes. The workshop will comprise three parts: • A background presentation on the development of the current set of standards for the interpretation and presentation of results. • Practical small group exercises involving the use of standards. The exercise will involve discussion of various sections of text which are typically seen in Cochrane Reviews. The groups will be given examples where the optimal approach to review reporting are well-established, as well as areas where there is less consensus and more than one approach is justifiable. • A discussion of strategies to improve uptake and familiarity with the standards and consider different ways in which they can be applied in evaluating reviews and reporting of results. We intend that participants will gain knowledge of the standards and how they can be incorporated in to the evaluation of reporting.

Target audience: CRG editorial base staff, review authors, Cochrane editors
Abstract: Objectives: The Cochrane Diagnostic Test Accuracy Working Group has developed a series of workshops addressing guidelines as formulated in the Handbook for Diagnostic Test Accuracy reviews. This workshop aims to: (1) Explain the recommended statistical models used for diagnostic test accuracy meta-analysis and their underlying concepts. (2) Illustrate the methods and their interpretation using examples. Description: This workshop will cover advanced statistical methods for the meta-analysis of diagnostic test accuracy studies that report estimates of sensitivity and specificity. We will cover the recommended, commonly used hierarchical models (and the relationship between them): (1) The bivariate model, which focuses on the estimation of a summary operating point (i.e. summary estimates of sensitivity and specificity). (2) the Hierarchical Summary ROC model of Rutter and Gatsonis, which focuses on the estimation of a summary ROC curve. Both methods will be illustrated with examples, and the choice of method will be discussed. The use of these models for investigating sources of heterogeneity through the inclusion of study level covariates will be described and discussed. The application of this approach to comparing the performance of alternative tests will also be covered, and the use of RevMan to display results will be illustrated.

Target audience: Statisticians and review authors who have an interest in statistical methods for reviews of diagnostic test accuracy

Level of knowledge required: Intermediate

Type of workshop: Training

Access: Open

3.04 Translating critical appraisal of a systematic review to meaningful peer review

Facilitators: Wormald R1, Dickersin K2, Jørgensen KJ3, Lindsley K4
1 Cochrane and Eyes and Vision Group, United Kingdom; 2 US Cochrane Center, USA; 3 The Nordic Cochrane Centre, Denmark; 4 Cochrane Eyes and Vision Group, USA

Other Contributors: Wormald R1, Shah A1, Ervin A2, Li T2
1 Cochrane and Eyes and Vision Group, UK; 2 Cochrane Eyes and Vision Group, US Satellite

Abstract: Objectives: To describe the steps and expectations for peer review of a systematic review manuscript, to provide useful resources for peer review, and to help participants translate critical appraisal into meaningful feedback that can be used by authors and editors to improve manuscript quality. Description: During the workshop we will present an overview of the peer review process and what is expected of peer reviewers. We will introduce and provide participants with useful tools for peer review, such as the Collaboration’s Good Practice Documents, reporting standard checklists, and links to web-based training. As a practice exercise, participants will work in small groups to critically appraise a systematic review. Together, we will work to translate each group’s feedback into meaningful peer review comments, identify better ways to structure and phrase comments so as to be helpful to authors and editors, and discuss common issues that arise during the peer review process. Participants are asked to read and comment on the exercise manuscript prior to attending the workshop in order to facilitate discussion of issues.

Target audience: Individuals who are involved or interested in peer review

Level of knowledge required: Any

Type of workshop: Training

Access: Open

3.05 Extending the risk of bias tool to allow for assessment of non-randomised studies, cluster-randomised trials and cross-over trials: a Cochrane methods innovation fund project

Facilitators: Sterne J1, Higgins J2, Reeves B1
1 University of Bristol, United Kingdom; 2 Methods Executive, United Kingdom

Other Contributors: Savovic J1, Turner L2, Members and leads of eight other working groups T3
1 University of Bristol, England; 2 Ottawa Hospital Research Institute, Canada; 3 Bias Methods and Non-randomised Studies Methods Group

Abstract: Objectives: To introduce a proposed extension to the Cochrane risk of bias tool allowing risk of bias assessment of non-randomised studies, cluster-randomised trials and cross-over trials, and to solicit feedback and identify potential areas for improvement which should be addressed. Description: The Collaboration needs a tool to assess the potential risk of bias in non-randomised studies. The Cochrane Methods Innovation Fund has commissioned a project, led by the Bias Methods Group and the Non-Randomised Studies Methods Group to extend the existing Risk of Bias tool to address non-randomised studies, as well as to address variations on randomised trial designs not well covered by the existing tool (specifically cluster-randomised trials and cross-over trials). Working groups have been focusing on different aspects of bias or study design, and a provisional tool has emerged. This discussion workshop will introduce the project, present the current version of the extended tool and provide an opportunity for discussion of potential concerns or questions. The objective of the workshop is to highlight areas for development which have not already been addressed and which should be considered prior to the tool being disseminated collaboration wide. Considerations for discussion will include scientific issues, feasibility issues, roll-out and training opportunities.
3.06 Helping Cochrane Reviews soar: a workshop to create a communication and dissemination strategy for every Cochrane Review

Facilitators: Pentesco-Gilbert D¹, Jones B²
¹John Wiley & Sons Ltd, United Kingdom; ²Cochrane Infectious Diseases Group, United Kingdom

Other Contributors: Maclehose H
Cochrane Editorial Unit, UK

Abstract: Objectives: In 2013, the CDSR will move to a ‘publish when ready’ publication frequency, from monthly, affording the Collaboration a new opportunity to look at establishing a communication and dissemination plan for every Cochrane Review. This workshop will aim to share the various communication channels and dissemination options available to Cochrane authors and Cochrane Review Groups (press releases; Cochrane journal club; podcasts; ipad edition; special collections; social media; email alerts; etc) and to provide analytics on their uptake and impact on usage and access. It will also be used to gather feedback from delegates on useful tools to help inform the development of new methods of disseminating Cochrane evidence. Description: A hands-on workshop to engage delegates in the communications and dissemination planning for a series of Cochrane Reviews by sharing some tools for establishing the best channels to deliver the message to the right users at the right time. Delegates will be invited to contribute their own ideas and experiences and the workshop will be used to inform future communications policies. The workshop will be a combination of slide presentation, practical work and discussion.

Target audience: review authors, review group managing editors and people interesting in communicating their Cochrane research

Level of knowledge required: Intermediate

Type of workshop: Discussion

Access: Open

3.07 Addressing missing participant data in systematic reviews: dichotomous outcomes – Part 1

Facilitators: Akl EA¹, Ebrahim S², Johnston B³, Alonso P⁴, Briel M⁵, Guyatt GH²
¹American University of Beirut, Lebanon; ²McMaster University, Canada; ³Hospital for Sick Children Research Institute, Canada; ⁴Iberoamerican Cochrane Center, Spain; ⁵Basel Institute for Clinical Epidemiology, University Hospital Basel, Switzerland

Other Contributors: Cook DJ
¹McMaster University, Canada

Abstract: Objectives: To describe how to use an innovative approach to addressing missing participant data for dichotomous outcomes in systematic reviews of randomized trials. Description: The workshop will consist of the following: (1) A didactic presentation of methods being used by SRs for dealing with and judging risk of bias associated with missing participant data (10 minutes). (2) An interactive presentation of the proposed approach: for the primary analysis, we propose either a complete-case analysis or making plausible assumptions about the outcomes of participants with missing data. The sensitivity analyses may use relatively extreme assumptions that vary in plausibility. More plausible assumptions draw on the outcome event rates within the trial or in all trials included in a meta-analysis. We will also discuss how to judge risk of bias associated with missing participant data (20 minutes). (3) A hands-on exercise will cover conducting primary and sensitivity analyses (using an Excel sheet), and judging the risk of bias. The participants will use their own laptops. They may bring their own data or use data provided by facilitators (40 minutes). (4) An open discussion of the advantages and limitations of the proposed approach (15 minutes) Project funded by the Cochrane Methods Innovation Fund.

Target audience: Review authors

Level of knowledge required: Intermediate

Type of workshop: Training

Access: Open

3.08 [Core] Mastering the art of the plain language summary

Facilitators: McIlwain C¹, Struthers C²
¹Consumer Coordinator, The Cochrane Collaboration, United Kingdom; ²Cochrane Training, United Kingdom

Abstract: Objectives: Participants will have the opportunity to discuss the new standards, and use them to develop their skills in writing and critiquing PLSs. A selection of real reviews will be used, with permission of the authors, and participants will be guided through the process of writing a PLS using these real examples. The session will provide practical experience in producing a good-quality PLS, and on providing constructive criticism to PLSs written by others. The workshop will also involve participants in judging the entries to a PLS-writing competition,
the winners of which will be announced during the Colloquium.

Description: The plain language summary (PLS) is arguably the most visible and widely read part of a Cochrane review. It is intended to be easily understandable by the general public, is freely available globally, frequently translated, and reproduced in the press and in health-related websites. The PLEACS (Plain Language Expectations for Authors of Cochrane Summaries) initiative has resulted in the publication of a set of standards to help those involved in writing the PLS. It aims to ensure that review findings are consistently and clearly presented in a standard format which is helpful to those making decisions about healthcare.

Target audience: This meeting is intended for consumers, authors, managing editors, professional writers and anyone interested in writing, understanding, improving, and disseminating PLSs.

Level of knowledge required: Basic

Type of workshop: Training

Access: Open

3.09 [Consumer Stream]

The wonders of randomisation—workshop for consumers

Facilitators: Crowe S1, Gyte G2, Horey D3
1Agenda and Priority Setting Methods Group, United Kingdom; 2Cochrane Pregnancy & Childbirth Group and CCNet, United Kingdom; 3Cochrane Consumers and Communication Review Group, Australia

Abstract: Objectives: a) For consumers to be able to describe the concept, process and outcomes of randomisation in clinical trials in order to reduce bias b) For Cochrane to gain understanding in how to communicate randomisation to the public in an accessible way to support consumers contributing to the Cochrane review process. Description: This interactive workshop will, using adverts from magazines (that claim benefits or clinical effects) and working in small groups, ask participants to design a study that would address the claim made in the advert. Discussion will progress to the concept of randomisation and the biases that can be reduced through it use in clinical trials. In the final part of the workshop, participants will develop statements describing randomisation to someone invited to participate in a clinical trial. These statements will be discussed by all workshop participants and modifications suggested. Final suggestions will, if possible, be user tested in the workshop on ‘Demystifying clinical trials and systematic reviews’. All consumers are welcome and should be able to enjoy the workshop and learn whatever their current level of knowledge.

Target audience: Consumers

Level of knowledge required: Any

Type of workshop: Training

Access: Open

3.10

Quality in reporting adverse events and the PRISMA Harms Extension

Facilitators: Zorzela L1, Vohra S1, Golder S2
1University of Alberta, Canada; 2CRD, United Kingdom

Other Contributors: Loke Y1, Moher D2, Altman DG1, Ioannidis JP4, Vandenbroucke J3, Santaguinda L6, Golder S7
1University of East Anglia, UK; 2Ottawa Health Research Institute, Canada; 3Oxford University, UK; 4Stanford University, United States; 5Leiden University, Netherlands; 6McMaster University, Canada; 7York University, UK

Abstract: Objectives: (i) Enable participants to identify the pitfalls/difficulties/problems in reporting adverse events. (ii) Provide guidance on how to report adverse effects in reviews (PRISMA Harms Extension). (iii) Allow participants to practice methods of clear reporting of adverse events in reviews. Description: Present the quality issues in reporting adverse effects using ‘Quality in reporting in systematic reviews of adverse events. A systematic review’. (15 minutes) Present a tool to assess the quality of reporting in reviews: The PRISMA Harms Extension + final checklist items. (15 minutes) The participants will break into small groups to apply the PRISMA Harms Extension checklist in systematic reviews of adverse events. They will assess 2–4 published reviews. The example reviews will include reviews with good reporting quality and reviews with fair (not good) reporting of adverse events (60 minutes). After each assessment the participants will discuss the application of the guidance and issues raised in assessing the reporting of adverse effects in reviews. This section will be an open for questions/discussion among participants.

Target audience: review authors, consumers, researchers with interest in adverse events

Level of knowledge required: Any

Type of workshop: Training

Access: Open

3.11

Graphs to enhance understanding and improve interpretability of the evidence from network meta-analysis: a hands-on tutorial in STATA

***In computer lab; no need for personal laptops

Facilitators: Chaimani A1, Mavridis D2, Salanti G2
1Department of Hygiene and Epidemiology, University of Ioannina School of Medicine, Greece; 2University of Ioannina, Greece

Other Contributors: Higgins JP
University of Bristol, School of Social and Community Medicine, Bristol, United Kingdom

Abstract: Objectives: To present and explain a series of graphical and numerical tools that can be used in Network Meta-Analysis (NMA) in order to a) present the evidence base b) evaluate the assumptions and c) present the results. We offer STATA routines that can be
used to produce the suggested graphs. Description: This hands-on workshop begins with a brief presentation of the NMA model, its main assumptions and how network meta-analysis can be performed in STATA. We introduce network plots that offer an overview of the evidence base and its characteristics. We present graphs that can be used to evaluate important assumptions of network meta-analysis; the presence of important inconsistency (disagreement between direct and indirect evidence), small-study effects (by extending the standard funnel plot) and heterogeneity (prediction plots). Finally, we discuss several graphical options for the presentation of NMA findings and for treatment ranking (such as plots of the cumulative ranking curves). STATA routines are provided for all graphical tools. Participants could bring their laptops with STATA version 9 or later installed.

Target audience: CRG statisticians and experienced authors and editors

Level of knowledge required: Intermediate

Type of workshop: Training

Access: Open

3.12
Presenting evidence-based recommendations to patients and the public—what do people want and how should we provide it?

Facilitators: Santesso N1, Agoritsas T2
1Cochrane Applicability and Recommendations Methods Group, Canada; 2McMaster University, Canada

Abstract: Objectives: 1) To summarise what DECIDE has learnt from a literature review, surveys (involving ~1900 participants), focus groups (~50) and user-testing (~20) involving a diverse range of people; 2) To contribute to the evaluation of alternative presentations of evidence-based recommendations intended for use in both self-management and shared decision-making situations. Description: DECIDE (http://www.decide-collaboration.eu) is a 5-year project that aims to develop and evaluate methods that improve the dissemination of evidence-based guideline recommendations to a range of stakeholders, including patients and the public. The workshop will open with a brief introduction to DECIDE, followed by a summary of our findings from the review, survey, focus groups and user-testing with patients and the public. For example, patients’ and the public have issues with the whole concept of ‘evidence’ and associated issues around trust. One of the key things to address in this context is the idea of confidence—how sure we are in the conclusions derived from the evidence. The bulk of the workshop will be an interactive session where participants are invited to test and give feedback on DECIDE materials developed from real guidelines and intended public use. Part of the workshop will be a randomised evaluation of alternative DECIDE presentations, which we aim to complete, analyse and present before the end of the workshop. Workshop participants will therefore not only hear about our work but contribute directly to our ongoing research.

Target audience: Anyone with an interest in communicating evidence to patients and the public

Level of knowledge required: Any

Type of workshop: Discussion

Access: Open

3.13 [Core]
Using MECIR standards in the conduct of systematic reviews with emphasis on associated Common Errors—Part 2

Facilitators: Trivella M1, Beller E2, Lasserson T3, Cates C4
1Cochrane Collaboration, United Kingdom; 2Bond University, Australia; 3Cochrane Editorial Unit, United Kingdom; 4Cochrane Airways Group

Other Contributors: Chandler J
CEU

Abstract: Objectives: To gain insight on common statistical and methodological errors encountered in Cochrane Reviews and associated MECIR standards affected by them. Description: This workshop is part II to a companion MECIR workshop and will focus on the conduct standards and associated common errors through a combination of short presentations and activities. It will aim to concentrate on more advanced methodological and statistical topics, particularly inappropriate analysis, non-standard trial designs, and problems caused by multiplicity of data. Starting with a brief background presentation of a selected number of MECIR standards pertaining to the statistical/methodological section of a review, a number of associated common error topics will be identified. This workshop will be built around an ‘Activities’ booklet distributed to participants, organised by ‘MECIR standard and error’ topic. The basics of each identified error-topic will first be presented briefly, and then participants will be asked to work through the ‘Activities’ booklet, in small groups of 3 people, in order to identify the error and the underlying problem. This will be followed by a brief discussion (facilitated by the presenters), around the ‘problems’ how to spot them, how they affect the quality of a review and how to avoid them in future work.

Target audience: Authors, Editors

Level of knowledge required: Any

Type of workshop: Training

Access: Open

3.14 [DTA Stream]
Systematic reviews of diagnostic accuracy studies: interpreting results and drawing conclusions

Facilitators: Scholten RJPM1, Davenport C2, Hyde C3
1Dutch Cochrane Centre, Netherlands; 2SDTMG, United Kingdom; 3University of Exeter, United Kingdom

Abstract: Objectives: To provide participants with an understanding of how results of Cochrane Diagnostic test accuracy (DTA) reviews can be presented and interpreted. At the end of the workshop,
participants will have been introduced into various ways of presenting DTA results to help end-users to understand better the results of a DTA review. Description: Meta-analysis of diagnostic test accuracy studies is complex and the results of such a meta-analysis are not readily understandable. Interpretation of test results should be done in view of the purpose of the test(s), the position of the test in diagnostic process and the amount of heterogeneity that is present. The workshop will start with a brief introduction about interpretation of diagnostic tests and strategies for their use in quantitative decision making. In small groups the participants will first interpret the quality of the body of evidence of a Cochrane DTA review. Then they will have to translate and interpret the results of various ways of how results of a DTA meta-analysis may be presented. Topics included are SROC-curves, confidence ellipses around summary estimates of sensitivity and specificity, Summary of Results Tables and pretest-posttest graphs.

Target audience: Authors interested in conducting diagnostic systematic reviews and users of reviews interested in learning about the use of evidence in diagnostic decision making

Level of knowledge required: Basic
Type of workshop: Training
Access: Open

3.15 [Core]
Start strong: choosing your review topic and writing your topic proposal

Facilitators: Marin T1, Coubin R2, Ueffing E3, Furlan A1
1Institute of Work and Health, Canada; 2Cochrane Back Group, Canada; 3Canadian Cochrane Centre, Canada

Abstract: Objectives: To give prospective authors tools for registering a title for a Cochrane Review through learning activities to help participants choose a topic and write a successful title proposal. Description: We will spend the first 30 minutes of the workshop discussing how to choose an appropriate topic for title registration. This will include a demonstration of how to search The Cochrane Library for overlapping or related titles/reviews; we will use both pre-identified topics and examples shared by the participants. We will discuss the basic concepts of the intervention review, with a focus on defining the PICO (population, intervention, comparisons, and outcomes). As a group, we will discuss important factors in forming author teams and how to collaborate successfully with co-authors and members of the editorial team. We will work through the Cochrane Back Review Group’s title registration checklist as an example and discuss how to identify and contact the relevant Cochrane Review Group for a given review topic. In the last 40 minutes of the workshop, participants will work in teams on a draft title proposal (using either sample topics we provide or their own ideas).

Target audience: Review authors or those thinking about their first review

Level of knowledge required: Basic
Type of workshop: Training
Access: Open

3.16 Comments on Cochrane Reviews: approaches to managing feedback

Facilitators: Hilton J1, Stewart G2, Lasserson T1
1Cochrane Editorial Unit, United Kingdom; 2Wiley, United Kingdom

Abstract: Objectives: To discuss and learn about the management and role of comments on Cochrane Reviews. Description: This workshop will focus on the management of feedback comments on Cochrane Reviews and Protocols submitted via The Cochrane Library website, but we also will explore broader themes relating to the use and the role of feedback. Submitted comments offer an opportunity to demonstrate transparency and to improve reviews or editorial processes, but they can sometimes be challenging to manage. Participants will be encouraged to share their own experiences. The workshop will include a mix of presentations, exercises, and discussion, and will cover four topics: (1) Processes for submitting, handling, responding to, and publishing comments and responses; the roles of editorial team members and authors; (2) Case studies: how comments were managed and the impact they had on the reviews; (3) Changes to the way that comments are submitted, processed and displayed on The Cochrane Library website; (4) The role of the Cochrane comments system in the context of social media and a rapidly evolving online publishing environment.

Target audience: Feedback Editors, Managing Editors, Co-ordinating Editors, review authors, anyone interested in criticism and post-publication peer review

Level of knowledge required: Basic
Type of workshop: Discussion
Access: Open

3.17 Summarising evidence for harms in systematic reviews

Facilitators: Herxheimer A
UK Cochrane Centre, United Kingdom

Other Contributors: Loke Y
Univ of East Anglia UK

Abstract: Objectives: Most clinical trial reports say too little about adverse events (AEs) or harms that occur during or after the trial. Few adequately describe AEs and their timing, nor how they were ascertained. Beneficial effects get much more space in reports than harms, and this seriously biases assessment of the benefit-harm relationship. The workshop should help authors and editors to correct this imbalance. Description: The introduction will explain that the evidence hierarchy for harms differs from that for beneficial effects, and that essential qualitative and quantitative evidence also comes from sources other than clinical trials (Vandenbroucke 2008). The workshop will break into groups to discuss different reviews and RCTs, and assess the ways in which they deal with AEs and the likely bias in their approach. Finally the whole workshop will consider the work of the small groups, and discuss how they want to use the conclusions in
3.18 Addressing missing participant data in systematic reviews: Continuous outcomes—Part 2

Facilitators: Ebrahim S1, Akl EA2, Johnston B3, Alonso P4, Mustafa RA1, Guyatt GH1
1McMaster University, Canada; 2American University of Beirut, Lebanon; 3Hospital for Sick Children Research Institute, Canada; 4Iberoamerican Cochrane Center, Spain

Other Contributors: Sun X1, Walter SD2, Heels-Ansdell D2
1Center for Clinical Epidemiology and Evidence-based Medicine, Xinqiao Hospital, China; 2Department of Clinical Epidemiology & Biostatistics, McMaster University, Canada

Abstract: Objectives: To describe how to use an innovative approach to addressing missing participant data for continuous outcomes in systematic reviews. Description: The workshop will consist of the following: [1] An interactive presentation of the proposed approach: a complete case analysis and four imputation strategies for making plausible assumptions about the outcomes of participants with missing data. These strategies increasingly challenge the robustness of the pooled estimates of the intervention effect in the systematic review. We will also describe how to calculate the proportion of patients who have an important treatment effect for each strategy, using the minimally important difference (MID) threshold, and provide guidance on how to use the results to judge the impact of missing participant data on risk of bias. [2] A hands-on exercise using an Excel sheet to apply the approach. The participants will use their own laptops and use data provided by facilitators. We will use two example systematic reviews to illustrate the application of the approach: one review restricted to one instrument measuring the outcome, and another using different instruments to measure the same construct. [3] An open discussion of the advantages and limitations of the proposed approach.

Target audience: Review authors
Level of knowledge required: Intermediate
Type of workshop: Training
Access: Open

3.19 Searching and tracking in the Cochrane Register of Studies (restricted) ***In computer lab; no need for personal laptops

Facilitators: Foxlee R1, Dooley G2, Littlewood A3, Noel-Storr A4, Salzwedel D5
1Cochrane Wounds Group/Cochrane Editorial Unit, United Kingdom; 2Metaxis Ltd, United Kingdom; 3Cochrane Oral Health Group, United Kingdom; 4Cochrane Dementia Group, University of Oxford, United Kingdom; 5Cochrane Hypertension Group, Canada

Abstract: Objectives: To give participants practical experience of the searching and tracking features in the Cochrane Register of Studies (CRS). Description: The Cochrane Register of Studies (CRS) is the mandatory mechanism for submitting records to the Cochrane Central Register of Controlled Trials (CENTRAL), but it also offers new functionality to enhance working practices in relation to systematic review searching, and the tracking of search results sent to review authors. Participants in this hands-on workshop will have the opportunity to explore a range of CRS features, including importing records from external databases, searching within the CRS, identifying duplicates, and managing the delivery of search results to authors (including previous search sets sent to the authors outside the CRS). There will be an opportunity for participants to discuss issues and to share their ideas and experience of using the CRS. This workshop is aimed at TSCs and other Cochrane group editorial staff members who are responsible for conducting and tracking literature searches for Cochrane systematic reviews.

Target audience: Trials Search Co-ordinators
Level of knowledge required: Intermediate
Type of workshop: Training
Access: Restricted

3.20 [Consumer Stream] Stakeholder/consumer engagement in systematic reviews

Facilitators: Marin T
Institute for Work and Health, Canada

Other Contributors: Keown K
CIHR, Canada

Abstract: Objectives: This workshop will present, for discussion, a stakeholder engagement model and process used in a variety of reviews. Key points for discussion include a comparison of the engagement model and Cochrane consumer involvement in reviews and how the engagement model may be adapted to the consumer process. Description: We will present a stakeholder engagement model and process as applied in over 25 reviews with over 100 stakeholders. The model depicts a number of engagement opportunities: topic selection, meetings for question and search refinement, inclusion of stakeholder in the review, and dissemination opportunities. The potential benefits to including stakeholders/consumers in the process of systematic reviews include increased quality, accessibility and dissemination/uptake of findings. A challenge is that stakeholder/consumer interactions can
be time and resource intensive. Despite these challenges we consider stakeholder/consumer involvement a valuable part of conducting a systematic review and the dissemination of evidence. We propose to engage in a discussion with workshop participants about potential adaptations to the engagement process based on the collective experience present. By the end of the workshop, participants will have an understanding of a variety of stakeholder/consumer engagement opportunities and an enhanced appreciation of the benefits of this engagement in reviews.

Target audience: review authors, consumers, and researchers
Level of knowledge required: Any
Type of workshop: Discussion
Access: Open

3.21
Developing methods for assessing implementation in effectiveness reviews: Challenges and progress

Facilitators: Hannes K1, Thomas J2
1Cochrane Qualitative Research and Implementation Methods Group, Belgium; 2EPPI-Centre, Institute of Education, London, United Kingdom

Other Contributors: Mayo-Wilson E
University College London, England

Abstract: Objectives: To provide an update on the methods that are being developed to assess implementation within effectiveness reviews. Description: The Cochrane Collaboration has instigated several initiatives to explore the development of methods to better explain intervention effects, which include MICCI and the recent name change of the Qualitative Methods group to the Qualitative and Implementation Research Methods Group (CQIM). The Group will be developing methods for assessing implementation in effectiveness reviews. This workshop will outline the different definitions for implementation. The challenges to the conceptualisation and assessment of implementation in effectiveness reviews will be discussed. It will feature practical examples and tips for extracting implementation data from primary studies and discuss how Cochrane effectiveness reviews can be integrated with other types of reviews to strengthen causal explanation and extrapolation.

Target audience: review authors, consumers, or researchers with an interest in implementation
Level of knowledge required: Any
Type of workshop: Discussion
Access: Open

4.01
How to critically appraise qualitative research papers and prepare for data-extraction

Facilitators: Hannes K
Cochrane Qualitative Research and Implementation Methods Group, Belgium

Abstract: Objectives: By the end of the workshop participants should be able to: 1. Select from a series of existing critical appraisal instruments for qualitative research. 2. Assess the quality of a qualitative primary research paper using a checklist approach. 3. Extract descriptive data from a qualitative primary research paper. 4. Prepare and/or use a template for extracting findings from qualitative research papers. Description: In this workshop we will present and discuss the features and criteria of commonly used critical appraisal instruments. Participants will then engage in a critical appraisal of a qualitative research paper, with a particular focus on the methods section. They will be offered a template against which to extract descriptive data from a research paper. Several options for data-extraction will be discussed and linked to particular approaches to synthesis. Participants will be facilitated to choose between these options or to develop their own template and initiate data-extraction for at least two qualitative research papers.

Target audience: review authors, editors, centre staff interested in guiding or conducting qualitative and mixed method syntheses
Level of knowledge required: Basic
Type of workshop: Training
Access: Open

4.02
Workshop for Managing Editors and Assistant Managing Editors (restricted)

Facilitators: Shah A1, Dearness K2, Ruotsalainen J3
1Cochrane Eyes and Vision Group, United Kingdom; 2Cochrane Upper GI and Pancreatic Diseases Review Group, Canada; 3Occupational Safety and Health Group, Finland

Abstract: Objectives: The purpose of this workshop is to provide a forum for CRG MEs and AMEs to informally discuss editorial processes and operational issues. Description: The first part of the workshop will follow the format of a “Trivial pursuit” game and will have participants competing to answer questions on the systems and processes to produce Cochrane reviews in a light-hearted and fun atmosphere. Contestants will earn pieces of “pie” for each category of question answered, on such as topics on RevMan and workflows. Controversial questions will be included where more than one answer may be correct, but where there is only one officially correct answer. These will be discussed in more detail for better understanding of the reasons for the discrepancies. A feature of the Workshop will be the awarding of “Archies”, to recognize the unique achievements of MEs/AMEs and CRGs. The second part will have no pre-set agenda and will be set by the MEs themselves on the day. This will enable discussion and participation across the group and also allow for any issues relating...
4.03 [DTA Stream]
Grading the quality of evidence and preparing summary of findings tables for diagnostic tests

Facilitators: Schünemann HJ
McMaster University, Canada

Abstract: Objective: To learn how to assess the quality of evidence and preparing a summary of findings table for diagnostic tests and to collect feedback from participants. Summary: Cochrane review authors and many other organizations use the GRADE approach to grade the quality of evidence for interventions studies in Cochrane summary of findings (SoF) tables—a presentation of the most important information and findings of reviews in a table format. The GRADE working group has also suggested an approach to grading the quality of evidence and developing SoF tables for questions of diagnostic accuracy. Suggested formats for SoF tables for diagnostic test accuracy studies have been developed with support from the Cochrane Methods Innovation Fund. This workshop will introduce the approach and collect feedback through hands-on work on examples.

Target audience: Reviewers and others interested in diagnostic questions
Level of knowledge required: Basic
Type of workshop: Training
Access: Open

4.04 [Core]
Investigating and Dealing with Bias in Cochrane Systematic Reviews

Facilitators: Boutron I
BMIG, French Cochrane Centre, France

Other Contributors: Sterne J1, Moher D2, Turner L2, Hrobjartsson A3, Altman DG4, Higgins J1
1University of Bristol, England; 2Ottawa Hospital Research Institute, Canada; 3Nordic Cochrane Centre, Denmark; 4University of Oxford, England

Abstract: Objectives: To introduce the different forms of bias that can affect systematic review results, and the methods that can be used to detect and address these biases. Description: The results of a systematic review can be distorted if bias has been introduced into the review process at any stage (e.g. biased location and selection of included studies, high risk of bias in the results of included studies). Accordingly, investigation of the presence, degree, and nature of bias is mandatory and is as a routine part of the systematic review process. The Bias Methods Group draws together researchers interested in this field, and the Cochrane Handbook contains chapters on ‘Assessing risk of bias in included studies’ and ‘Addressing reporting biases’. The workshop will largely draw upon the work of members of this Group, of which the facilitators are the co-Convenors. We will discuss potential biases that might be introduced into reviews, with an emphasis on the effects of flaws in the methodology of component studies. We will discuss how review authors should incorporate risk of bias assessments in meta-analyses. The workshop will consist of presentation, discussion and worked examples with and among participants and in small groups.

Target audience: Managing Editors and Assistant Managing Editors
Level of knowledge required: Any
Type of workshop: Discussion
Access: Restricted

4.05
Sharing participant-level clinical trial data in public repositories: what are implications for Cochrane reviews?

Facilitators: Kriela-Jeric K1, Vision T2, Groves T3
1Ottawa Group, Canada; 2University of North Carolina at Chapel Hill, USA; 3Deputy editor, BMJ, United Kingdom

Abstract: Objectives: To discuss how the Cochrane Collaboration can best build on its call for: “All data from all randomised clinical trials, including raw anonymised individual participant data that do not allow identification of individual participants, and the corresponding trial protocols, to become publicly available free of charge and in easily accessible electronic formats”. In particular, we will consider how to make IPD analysis easier to do. This workshop will provide participants with current evidence and examples on: a) which data need to be accessed; from where; by whom (roles of trialists, meta-analysts, journals) b) public disclosure of clinical trial data through repositories: new platforms with new opportunities; technical and practical exemplars; issues with sharing “on request” vs publicly c) risks, fears and benefits of data sharing: the risk of re-identification of trial participants from anonymised datasets vs. the under-utilization of data; risks of data sharing or using by researchers; understanding legal frameworks and international policies; Description: The 90 minutes workshop will consist of d) four 15-minute presentations on the above topics e) followed by 4 concurrent breakout groups for 20 minutes each f) a final 10 minute discussion focusing on potential ways of operationalization of the Cochrane policy at: http://www.cochrane.org/about-us/our-policies/support-free-access-to-all-data-from-all-clinical-trials

Target audience: Review authors, Cochrane editors, clinical trialists, consumers, members of institutional review boards and research funders
Level of knowledge required: Any
Type of workshop: Discussion
Access: Open
4.06
How to develop brief economic commentaries for Cochrane intervention reviews

Facilitators: Shemilt I
Cambridge University, United Kingdom

Abstract: Objectives: To provide training in the process of developing brief economic commentaries for inclusion in Cochrane intervention reviews. Description: Incorporating brief, evidence-informed economic commentaries into the Background and/or Discussion sections of Cochrane intervention reviews places an ‘economic lens’ on the health condition and interventions being studied. This can serve to increase the relevance and usefulness of the review for end users, but without major additional resource or workload implications for author teams and editorial base staff. The process of developing an economic commentary involves: conducting supplementary searches of selected electronic health economics literature databases; selecting relevant health economic studies; and drawing on information contained in database records and/or corresponding full-text reports to summarise, in narrative form, the economic burden of the condition, the potential impact of the intervention on resource use and costs, and (possibly) the prima facie case that an intervention may (or may not) be judged ‘promising’ from an economic point of view. This workshop will comprise presentations followed by interactive exercises for hands-on application of the process and skills being taught. Workshop materials are consistent with methodology described in Chapter 15 of the Cochrane Handbook for Systematic Reviews of Interventions.

Target audience: Review authors, Managing Editors, Co-ordinating Editors, Editors, Trials Search Co-ordinators

Level of knowledge required: Any

Type of workshop: Training

Access: Open

4.07
Live the trial! an interactive method for learning and teaching trial design and risk of bias assessment

Facilitators: Baker P1, Francis D2, Dobbins M3
1Queensland University of Technology, Australia; 2Cochrane Public Health Group, Australia; 3National Collaborating Centre for Methods and Tools, Canada

Other Contributors: Cathcart A
Queensland University of Technology, Australia

Abstract: Objectives: a) Learn a fun and innovative way to illustrate trial design and risk of bias assessment. b) Experience the use of interactive wireless voting technology for active learning and data collection. c) Provide participants with ideas for teaching the concepts in their own settings. Description: In this workshop, attendees will have the opportunity to participate in ‘Live the Trial’, a mock randomised controlled trial. The participants will see a demonstration of the steps of a mock RCT using candy to increase happiness. Interactive wireless voting technology will be employed to demonstrate the capture of data and facilitate direct participation. Throughout the workshop the risks of bias which can creep into a study will be explored, and to some extent experienced. Participants in previous ‘Live the Trial’ sessions have reported increased confidence in the identifying the risks of bias and steps of a randomised controlled study. Previous participants have also reported the use of interactive voting to be helpful in their learning. Capacity: 30 mock RCT volunteers, plus an additional 20 interactive participants.

Target audience: Reviewers with an interest in systematic reviews of Cochrane intervention reviews.

Level of knowledge required: Basic

Type of workshop: Training

Access: Open
4.09 [Consumer Stream]
Consumer-led knowledge translation: leveraging patient networks to disseminate Cochrane Reviews

Facilitators: Brachaniec M1, Gunderson J2, Rader T1, Busch A3
1Cochrane Musculoskeletal Group, Canada; 2Consumer MSK Group, Peripheral Vascular Group, Canada; 3University of Saskatchewan, Canada

Other Contributors: Bidonde J, Ward N
Cochrane Musculoskeletal Group, Canada

Abstract: Objectives: (1) To use a structured approach to discuss and prioritize evidence-based knowledge translation strategies to disseminate the results of a series of Cochrane Reviews on exercise for fibromyalgia to consumers; (2) To use workshop proceedings to guide plans to disseminate review results to consumers in order to facilitate shared decision making and self-management. Description: While exercise is a key element in fibromyalgia management, patient access to high-quality treatment information is limited. To improve this access, the fibromyalgia and exercise review team is developing a knowledge translation plan to share review results with consumers as widely as possible through established national and international patient organizations and communication networks. This workshop will assist this review team to gather stakeholder input on this dissemination strategy. The consumer-facilitator will summarize evidence-based dissemination strategies for consumers; and use a structured, nominal group technique (Van de Ven & Delbecq, 1971) to generate, discuss and prioritize ideas in terms of potential impact and feasibility. Full participant engagement and feedback will be encouraged using this dynamic and collaborative group technique. Workshop results will inform plans for the fibromyalgia and exercise review team to share results with patients to facilitate shared decision making and self-management.

Target audience: Consumers, the public, review authors, clinicians

Type of workshop: Discussion

Access: Open

4.10
Searching trials registers to identify studies for Cochrane Reviews (restricted) ***in computer lab; no need for personal laptops

Facilitators: Glanville J1, Lefebvre C2
1Cochrane Information Retrieval Methods Group, United Kingdom; 2Information Retrieval Methods Group, United Kingdom

Abstract: Objectives: Searching trials registers to identify studies for Cochrane Reviews is advocated in the Cochrane Handbook (Chapter 6—Searching for Studies). With the introduction of the ‘Methodological standards for the conduct of new Cochrane Intervention Reviews’ (MECIR) under the Methodological Expectations of Cochrane Reviews programme, searching trials registers is mandatory for new Cochrane Reviews (MECIR Standard C27). The above Standard requires the searching of trials registers and repositories of results, where relevant to the topic through ClinicalTrials.gov, the WHO International Clinical Trials Registry Platform (ICTRP) portal and other sources as appropriate'. Trials registers provide information on current and recently completed research. They are important for systematic reviews because they provide opportunities to reduce publication bias. Trials registers are developing quickly and provide challenges to efficient searching. Description: The target audience for this workshop is Trials Search Co-ordinators, other information specialists and review authors with searching experience. The workshop is open and participants need to have an intermediate level of knowledge of searching. The workshop will give a brief overview of the development of trials registers followed by an online demonstrations of key registers. There will be hands-on exercises if facilities permit or a discussion of search approaches.

Target audience: Trials Search Co-ordinators, other information specialists and review authors. Participants should be experienced in developing searches and searching databases such as MEDLINE/PubMed

Level of knowledge required: Basic

Type of workshop: Training

Access: Restricted

4.11 [Core]
Introduction to meta-analysis 3: dealing with heterogeneity

Facilitators: Salanti G1, Veroniki AA2, Mavridis D1, Chaimani A3
1University of Ioannina, Greece; 2Department of Hygiene and Epidemiology, University of Ioannina School of Medicine, Ioannina, Greece; 3Department of Hygiene and Epidemiology, University of Ioannina School of Medicine, Greece

Abstract: Objective: The Cochrane Statistical Methods Group has developed a series of workshops addressing statistical guidelines as formulated in the Cochrane Handbook for Systematic Reviews of Interventions. This workshop will provide review authors with the knowledge to understand and investigate variability across studies in a meta-analysis, and to recognise the limitations of the methods available. Description: This training workshop will address approaches to dealing with between-study variability, or heterogeneity, in the results of a series of clinical trials. We will first discuss some potential sources of between-study variability, and overview some methods for identifying whether heterogeneity poses a problem in a particular set of studies. We then will focus on issues related to dealing with study variability once it has been identified. In particular, we will discuss the decision whether or not to combine results; the choice between fixed-effect and random-effects analyses; and the use of subgroup analyses (with a brief mention of meta-regression). Discussion will be supplemented with practical examples from the Cochrane Database of Systematic Reviews.

Target audience: Review authors

Level of knowledge required: Intermediate

Type of workshop: Training

Access: Open
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