Cochrane Methods

KEY ACHIEVEMENTS 2018-2019

By Group

Cochrane Methods Adverse Effects	• Dr. Joey Kwong engaged as Policy Consultant for United Nations Population Fund to work on an evidence-informed strategic framework on population ageing. She remains an active Cochrane contributor and works closely with researchers from East Asia Cochrane Alliance (EACA) • Continued group work on updating CONSORT Harms, a project started in 2018; coordinated by Dr. Daniela Junqueira with contributions from Steering Committee that includes Dr. Sunita Vohra, Dr. Yoon Loke, Dr. Su Golder. Final phase of the project (consensus meeting) planned for September 2019 • Group contributed to the development of the new risk of bias tool, RoB 2.0, by providing comprehensive feedback. Dr. Junqueira is actively collaborating with the developers of the tool on behalf of the group
Cochrane Methods Bias	• Julian Higgins (University of Bristol) welcomed as new co-convenor in October 2018 • Continued updating of core chapters of the 'Cochrane Handbook for Systematic Reviews of Interventions' • Development of a tool for addressing conflicts of interest in medical research (TACIT) and a tool for assessing risk of bias due to missing results (ROB-ME) • Hosting of the 'David Moher Cochrane Methods Symposium: Bias and Beyond' at the Cochrane Colloquium in Edinburgh. The symposium celebrated David Moher's significant contributions to methods research and his many years as a co-convenor of the Bias Methods Group. Nine presenters recognised David Moher's very considerable impact on research synthesis methodology and provided an overview of selected hot topics within methods research for more than 300 participants (Sept 2018) • Published letter reflecting on stratification of meta-analyses based on risk of bias in Journal of Clinical Epidemiology (June 2019) • Updating and revision of Bias Methods Group website • Third newsletter informing members and people interested in the work of the Bias Methods Group about new activities and publications (March 2019) • During 2017, the Bias Methods Group has evaluated and redefined its ways of working and communicating with members. This has resulted in a Bias Methods Group Strategy. During 2018 and 2019, the ongoing work on adjusting and implementing the strategy has continued
Cochrane Methods Comparing Multiple Interventions	• Finalized a chapter on network meta-analysis for the 2nd Edition of the "Cochrane Handbook for Systematic Reviews of Interventions". • Developed a 100-minute Cochrane Interactive Learning module on network meta-analysis. The citation is: Higgins J, Li T, Sambunjak D, Watts C. Module 10: Network meta-analysis. In: Cochrane Interactive Learning: Conducting an intervention review. Cochrane, 2019. Available from https://training.cochrane.org/resource/module-10-network-meta-analysis.

KEY ACHIEVEMENTS 2018-2019

By Group

Cochrane Methods Economics	• Two new Convenors elected by the Group after stepping down of Jac Mallender and Kevin Marsh: Pia Johansson, previously Swedish Agency for Health Technology Assessment and Assessment of Social Services (SBU), Sweden and independent Denny John, Evidence Synthesis Specialist with Campbell Collaboration, New Delhi, India. • Ian Shemilt and James Thomas, alongside Cochrane Incontinence, have been awarded a Cochrane Innovation Fund grant for their project 'Use of Microsoft Academic Graph and automation tools to establish and maintain new CRG Specialised Registers of Economic Evaluations alongside existing CRG Specialised Registers of controlled trials' • Several blogs written: how economic analysis is becoming increasingly popular in measuring the impact of resource use; exploring the updated Cochrane learning modules; highlighting the process of adding brief economic commentaries (BECs) into eight reviews by Cochrane Incontinence. • The following work is planned which, though for Campbell, will help to further refine the Cochrane methods: ○ Review of systematic reviews reporting economic methods and outcomes in Campbell library ○ Discussion paper on Economic Evidence in Systematic Reviews ○ Update the Campbell Economic Methods Brief ○ Initiate some work on equity considerations in cost-effectiveness analysis
Cochrane Methods Equity	• Held a 2-day workshop to develop guidance for replication of systematic reviews in February 2019, funded by the Canadian Institutes of Health Research • The Migrant Health Subgroup published public health guidance on screening and vaccination for infectious diseases in newly arrived migrants within the European Union/European Economic Area (https://www.ecdc.europa.eu/en/publications-data/public-health-guidance-screening-and-vaccination-infectious-diseases-newly) • Guidelines on health of people who are homeless or vulnerably housed were developed (Pottie and Tugwell, see https://methods.cochrane.org/equity/projects/homeless-health-guidelines for updates) • Published a rapid review on the potential harms of collecting sociodemographic data in hospitals (Petkovic et al)
Cochrane Methods GRADEing	• Members of the group led or were involved in the update of the Cochrane Handbook: ○ Chapter 14: Completing 'Summary of findings' tables and grading the certainty of the evidence ○ Chapter 15: Interpreting results and drawing conclusions ○ Chapter 16: Equity and specific populations ○ Chapter 18: Patient reported outcomes • GRADE guidance was published for the assessment of evidence in diagnostic test accuracy reviews, for the incorporation of the ROBINs tool in a GRADE assessment, for how to create Summary of Findings Tables for network meta-analyses, and (publication forthcoming) guidance for the communication of results from intervention reviews and network meta-analyses

Cochrane Methods

KEY ACHIEVEMENTS 2018-2019

By Group

	• Work has begun for methodological guidance for living systematic reviews and GRADE for reviews of patient values and preferences. A grant funded through Canadian Institutes of Health Research was received for Assessing the certainty of evidence about patients' values, preferences and utilities (July 2018 for 2 years).
Cochrane Methods IPD Meta-analysis	• Completion of a revised chapter on IPD meta-analysis for inclusion in the Cochrane Handbook (Jayne Tierney et al) • Lesley Stewart presented at a Cochrane consultation on using aggregate data from clinical study reports (CSRs) in Cochrane reviews, contributing to discussion about access to CSRs and to associated (IPD) datasets (May 2019) • Edinburg Colloquium: Lesley Stewart presented at the special session on content strategy, discussing the use of IPD in Cochrane reviews and took part in a panel session on data sharing; good attendance at the IPD methods group meeting with members discussing work to date and report produced on the use of IPD within Cochrane • Lesley Stewart and Catrin Tudur-Smith are working with Zarco Alfirevik and the Cochrane Pregnancy and Childbirth Group to pilot the development of a Cochrane IPD repository (becoming custodian of a large dataset assembled as part of an IPD meta-analysis performed by the Centre for Reviews and Dissemination (CRD)). Jayne Tierney and Marc Buyse are members of the project advisory group • Richard Riley, Jayne Tierney and Lesley Stewart are continuing to make good progress with writing/editing a book on meta-analysis using IPD (Wiley), which aims to be a highly practical guide to the concepts and methods
Cochrane Methods Information Retrieval	• Cochrane Handbook publication: ○ The first public draft of the Main Text of the Searching for and Selecting Studies chapter of the updated Cochrane Handbook, co-authored by a number of members of the IRMG, was published, on behalf of IRMG, at the Cochrane Colloquium in September 2018. ○ Lefebvre C, Glanville J, Briscoe S, Littlewood A, Marshall C, Metzendorf M-I et al. Chapter 4: Searching for and selecting studies. Draft version (13 September 2018) for inclusion in: Higgins JPT, Thomas J, Chandler J, Cumpston MS, Li T, Page MJ, Welch V (editors). Cochrane Handbook for Systematic Reviews of Interventions. London: Cochrane There has been considerable consultation during the lifetime of this chapter with the IRMG membership and the Cochrane Information Specialist community. • Julie Glanville and her co-authors won the best poster presentation at the HTAi Annual Conference 2019 for 'Search Filter to Identify Reports of RCTs in CINAHL' Cologne, Germany, 18 June 2019. This poster presents work conducted for the Cochrane Centralised Search service. • 2019 Egon Jonsson prize for best paper in the International Journal of Technology Assessment in Health Care was awarded to Arber M, Glanville J, Isojarvi J, Baragula E, Edwards M, Shaw A et al. Which databases should be used to identify studies for systematic reviews of economic evaluations? Int J Technol Assess Health Care. 2018;34(6):547-554. • The Peer Review of Electronic Search Strategies (PRESS) publication continues to be well-cited. Since publication, it has been cited 216 times. It is the most cited publication from the Journal of Clinical Epidemiology contributing to

KEY ACHIEVEMENTS 2018-2019

By Group

	this year's journal impact factor. (97 Citations). McGowan J, Sampson M, Salzwedel D, Cogo E, Foerster V, Lefebvre C. PRESS: Peer Review of Electronic Search Strategies 2015 Guideline Statement. Journal of Clinical Epidemiology. 2016; 75:40-6. PMID: 27005575
Cochrane Methods NRS for Interventions	• Collaboration with the Bias Methods Group on RoB v2 (for RCTs), which has been revised around the framework developed for the bias tool for non-randomized studies of interventions (ROBINS-I). The revised tool is described in the new Handbook (v6.0) and a paper describing the revised tool is in press with the BMJ. • Additions introduced for RoB v2 are also being integrated in a new version of ROBINS-I, notably algorithms to facilitate the mapping of responses to signalling questions on to judgements of risk of bias.
Cochrane Methods Patient Reported Outcomes	• Development and reliability of an instrument to determine the credibility of anchor-based minimal important difference (MID) estimates for patient-reported outcomes: we have developed an instrument to assess credibility – the extent to which the design and conduct of studies measuring MIDs are likely to have protected against misleading estimates – of anchor-based MID estimates that has proved highly reliable. The instrument includes the following core criteria relevant for any anchor: 1) Is the patient or patient proxy responding directly to both the target instrument and the anchor? 2) Is the anchor easily understandable and relevant to the patient or proxy? 3) Is the correlation between the target instrument and the anchor satisfactory? 4) Is the confidence interval around the MID estimate sufficiently narrow? 5) Does the threshold on the anchor reflect a small but important difference? We have developed four additional criteria for assessing the credibility of the most commonly used anchor, global transition ratings: 1) Is there sufficiently short time between the initial and follow-up administration? 2) At baseline, is there a satisfactory correlation between the target instrument and the transition item? 3) At follow-up is there a satisfactory correlation between the target instrument and the transition item? 4) Is the correlation between the target instrument change score and the transition item appreciably greater than the correlation between the target instrument at follow-up and the transition item? o The manuscript documenting the development and reliability is presently under review at the BMJ. • MID Inventory - Update & Web platform development: The identification and selection of MID estimates is challenging for researchers and clinicians: 1) users of MIDs need to conduct comprehensive systematic reviews to identify primary studies reporting MID estimates for the PROM of interest, 2) inconsistencies in terminology will often require meticulous inspection of methodology that many researchers will be ill-equipped to carry out, and 3) in most instances, the literature will include a number of candidate MIDs and choosing the most credible is likely to prove difficult. Our summary of all anchor-based MID estimates for PROMs available in the medical literature, including evaluation of their credibility, will prove enormously useful in addressing these challenges. Our inventory presently includes all articles reporting anchor-based MIDs from 1989 to April 2015. To date, the inventory includes 338 studies reporting on 3389 MID estimates for 358 PROMs. To ensure the inventory retains its value, we have conducted an update including the latest published studies.

Cochrane Methods

KEY ACHIEVEMENTS 2018-2019

By Group

	• The availability of a web platform for users to easily access and identify anchor-based MID estimates for downstream use in clinical research and evidence-based decision-making (see following) will greatly facilitate the uptake of MIDs for improving the presentation and interpretation of PROM data in the context of primary studies, systematic reviews and clinical practice guidelines. By providing easy access to available MIDs, including ratings of their credibility, and thus by reducing the time, effort, and likelihood of error in MID estimate identification and selection, our inventory will close the gap between MID estimation studies and subsequent application of MID estimates in clinical research and practice. To facilitate its use, we will make our inventory available on a web-based platform. We will provide MID estimates and their associated credibility, as well as study details, including participant demographic information, intervention characteristics and study methodology.
Cochrane Methods Priority Setting	• Worked closely with the knowledge translation group to develop the priority setting guidelines for Cochrane • Organised training and meetings as part of the Edinburgh Cochrane Colloquium 2018 and we plan to do more for Chile 2019 but this is pending approval of funding for the members • Developing reporting guidelines for priority setting exercise that involve stakeholders in collaboration with the Cochrane renal and kidney diseases review group and work with them on setting the core outcome measures • Moni Choudhury joined the methods group as co-convenor
Cochrane Methods Prognosis	• Implementation of reviews of prognosis studies within Cochrane is at full speed. New material to support this was developed, e.g. a review template, peer review templates (underway), a workflow for title registration. • First two reviews of prognosis studies were published in 2018 and 3 more reviews are in the final stages of peer review. In total, in addition to the 2 published reviews, there are 11 registered protocols, 7 titles registered and at least 3 titles in preparation. • Survey sent to all editors of Networks and CRGs to gather feedback on the implementation, necessary training, and sustainability of systematic reviews of prognosis studies. Continued updating of our website to make information about current processes better accessible. Discussions have started with RevMan Web team, including talks about building the template for reviews of prognosis studies into RevMan Web. • Face-to-face training material has been updated and 3 successful training sessions held, attended by many Cochrane authors and editors. Supervised online course was held and together with Cochrane Training we are finalizing an online module that will be available to all Cochrane authors and editors for free. • Key guidance paper on systematic reviews and meta-analysis of prognostic factors (see 'publications' for the reference) has been published. This guidance paper will serve as a starting point for every author of a review of prognostic factor studies. • PROBAST, the risk of bias tool for prediction model studies has been published

KEY ACHIEVEMENTS 2018-2019

By Group

	• Publication of numerous important articles, including a systematic review and meta-analysis on cardiovascular prediction models that serves as a good example for future reviews, empirical evidence for the risk of bias domains included in PROBAST, and reviews on the quality of reporting in prediction model studies • Started the setting up (lay out) of a Cochrane Handbook for Reviews of Prognosis studies, which will be developed over time and for which funding is being sought. Without adequate funding the risk of a 10-year project is high yet the current focus on personalized and tailored medicine is spurring the increase and attention of prognosis research and this needs to be capitalised on.
Cochrane Methods Prospective Meta-analysis	• Completed a scoping review to identify and describe the key features, methods and reporting characteristics of PMA in health research. A manuscript is under preparation and will be submitted for publication. • Co-authored a Research Methods and Reporting paper, which is under review by BMJ. The paper articulates the definition of a PMA and describes the steps required to undertake one. • New group member, Saskia Cheyne, who is undertaking a PhD for which she aims to develop methods for the conduct and reporting of 'next generation' systematic reviews and meta-analyses • Co-authored a new handbook chapter: Thomas J, Askie LM, Berlin JA, Elliott J, Ghersi D, Simmonds M, Takwoingi Y, Tierney JF, Higgins JPT. Chapter 22: Prospective approaches to accumulating evidence. In: Higgins JPT, Thomas J, Chandler J, Cumpston MS, Li T, Page MJ, Welch V (editors). Cochrane Handbook for Systematic Reviews of Interventions. 2018, London: Cochrane.
Cochrane Methods Qualitative and Implementation	• Pre-Colloquium Cochrane Workshop (2018), "Methods for qualitative evidence synthesis" delivered by Booth, Flemming and Noyes, fully booked with a waiting list • Pre-Colloquium Cochrane Workshop (2018), "Using the GRADE-CERQual approach and Summary of Qualitative Findings tables in Cochrane systematic reviews", with contributions by Booth and Noyes, fully booked • Facilitated three official qualitative evidence synthesis Cochrane badged methods workshops at the Edinburgh Colloquium • Finalised a new chapter on qualitative evidence synthesis for the Cochrane Handbook • Contributed to a new chapter on synthesis of complex interventions for the Cochrane Handbook • Contributed to the WHO working group on complex interventions and complex health systems and published four papers for the series published in BMJ Global Health. https://gh.bmj.com/content/4/Suppl_1 https://bit.ly/2DC805j • Collectively published two Cochrane reviews and three Cochrane protocols in the past 12 months • James Thomas was the lead for Cochrane project Transform which ended at the end of 2018 • James Thomas is co-Senior Scientific Editor of the new Cochrane handbook and completed the editing process

KEY ACHIEVEMENTS 2018-2019

By Group

	• Tomas Pantoja is chairing the Scientific Committee of the 2019 Cochrane Colloquium, Chile. Embracing diversity will be the Colloquium's central theme and QES will be highlighted in a number of sessions including a plenary about methodological diversity. • Jane Noyes stood down as Co-Chair of the Methods Executive and remains a member. Current member of the Scientific Committee advising on methodological issues for Cochrane
Cochrane Methods Rapid Reviews	• Candyce Hamel (PhD student) from Ottawa Hospital Research Institute (OHRI) became actively involved with the RRMG joining Lisa Affengruber (Cochrane Austria, PhD candidate) in supporting Cochrane Rapid Review content strategy workplan projects • Continued active use of social media (e.g. Facebook, website) to raise profile and reach a broader audience of interested stakeholders. The RRMG newsletter now has over 300 subscribers and serves to highlight activities, upcoming events including training opportunities, new publications in the field, and other relevant items. • Various methods projects were completed that evaluated the report structures of rapid review reports (both journal and non-journal published), and how a sample of rapid reviews performed when evaluated as an information product for policymakers (Bridges study). Manuscripts from both of these projects under submission to journals. • Four projects undertaken as part of the Cochrane Rapid Review content strategy work plan: assessing the exclusion of non-English studies; impact of single reviewer abstract screening; a scoping review of rapid review methods evaluations and a scoping review of rapid review definitions. Work continues on developing reporting guidelines for rapid reviews (to coincide with revisions to PRISMA-SR). • Over eleven training and/or speaking events related to rapid reviews in Europe, Asia, and Canada with six events planned till the end of 2019. • Rapid reviews are a key focus area within Cochrane's content strategy. Over July/August 2018, the RRMG created a work plan outlining considerations for the development of Cochrane Rapid Review as an official product. This plan details advance activities and requirements to support a decision by Cochrane on whether to formally implement Cochrane RRs. These activities were intended to fill methodological knowledge gaps and to provide an assessment of RRs in order for Cochrane constituents to better understand the potential relevance. The workplan also highlighted various discussions, tasks and considerations that need to be addressed over a subsequent 12-month period to fully integrate RRs into the Cochrane environment should an initial 'go decision' be made in early 2020. Therefore, over the past 12 months, the RRMG has been carrying out the planned workplan activities. • Next steps: ○ In late August 2019, various Cochrane constituents from across pre-identified Cochrane entities will be surveyed as to their preferences on various abbreviated methods short-cuts (menu options) and key constructs that will help define what is meant by a Cochrane Rapid Review. Survey questions will be based on the evidence derived from the abovementioned scoping reviews and methods projects.

KEY ACHIEVEMENTS 2018-2019

By Group

	○ Following this survey, the Cochrane RRs Content Strategy Advisory Committee members will meet to discuss the results of the survey in early October 2019 along with Cochrane's EiC and the Methods Implementation Coordinator. ○ An open consultation meeting will be held at the upcoming Cochrane Colloquium in Santiago, Chile – an opportunity to solicit further feedback from the Cochrane community. ○ It is anticipated that the Editorial Board will make a final 'go/no-go decision' on implementation of RRs in early 2020.
Cochrane Methods Screening and Diagnostic Tests	• Almost 1000 submissions reviewed by the Diagnostic Test Accuracy (DTA) Editorial Team since 2009 • 122 published Cochrane DTA Reviews (including 8 updates; 1 review has now been updated twice) and 89 Protocols • Cochrane DTA reviews are informing policy and practice; just under half of the reviews (48%; 59 of 122) have already been used to inform 100 clinical guidelines (34 in UK and Ireland; 32 in other European countries; 19 in USA; 4 in Canada; 2 in Australia; 5 in WHO; 4 in other (South Africa, Korea, Mexico, "World"). • In 2018 the WHO used guidelines citing Cochrane DTA reviews to create the Essential Diagnostics List (WHO EDL). • Of the 59 reviews that have informed clinical guidelines, 31 reviews have been used in more than one guideline. The top three most frequently used reviews are: 1. Red flags to screen for vertebral fracture in patients presenting with low-back pain (CD008643) – Cochrane Back and Neck Group in 10 guidelines. 2. Red flags to screen for malignancy in patients with low-back pain (CD008686) – Cochrane Back and Neck Group in 9 guidelines. 3. Xpert MTB/RIF and Xpert MTB/RIF Ultra for pulmonary tuberculosis and rifampicin resistance in adults (CD009593) – Cochrane Infectious Diseases in 9 guidelines. • In the period 1st September 2018 to 8th August 2019, 38 DTA publications were published in The Cochrane Library: 13 protocols and 25 full reviews • Suite of 11 DTA reviews on diagnosing skin cancer highlighted as a Special Collection (https://www.cochranelibrary.com/collections/doi/10.1002/14651858.SC000033/full) • New guidance on plain language summaries (PLS) for DTA reviews.
Cochrane Methods Statistics	• The convenors of the group have contributed to several chapters of version 6 of the Cochrane Handbook: ○ as leading authors: 1. Chapter 3: Defining the criteria for including studies and how they will be grouped for the synthesis 2. Chapter 9: Summarizing study characteristics and preparing for synthesis 3. Chapter 11: Undertaking network meta-analyses 4. Chapter 12: Synthesizing and presenting findings using other methods ○ as contributing authors: 1. Chapter 2: Determining the scope of the review and the questions