

HIFA Discussion on Systematic Reviews

EDITED version, 7 July 2017

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Introduction

From 15 May to 23 June 2017 the HIFA Evidence-Informed Policy and Practice working group supported a HIFA thematic discussion on Systematic Reviews, around the following 5 questions:

- 1. What are systematic reviews? Why are they important?
- 2. What are the strengths and limitations of SRs (to guide policy and practice in LMICs)?
- 3. What is the role of (global) SRs versus (local) single research studies (to guide policy and practice in LMICs)?
- 4. What can be done to increase the relevance and usefulness of SRs (to guide policy and practice in LMICs)?
- 5. What is the current status regarding (a) production and (b) interpretation and synthesis of SRs in LMICs? How can this be improved?

We are grateful to the Special Programme on Research and Training in Tropical Diseases (TDR), the World Health Organization, and The Lancet for their sponsorship of this discussion. Further details: http://www.hifa.org/news/join-hifa-discussion-systematic-reviews-starting-15-may-2017

Overview

There were 89 messages from 36 contributors in 16 countries (Australia, Bahrain, Bangladesh, Brazil, Canada, Croatia, India, Kenya, Netherlands, New Zealand, Nigeria, Pakistan, South Africa, Switzerland, UK, USA). A summary of the discussion is being prepared and will be available shortly.

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Q1. What are systematic reviews? Why are they important?

Definitions

1. 'Systematic reviews are a type of literature review that collects and critically analyzes multiple research studies or papers, using methods that are selected before one or more research questions are formulated, and then finding and analyzing studies that relate to and answer those questions in a structured methodology. They are designed to provide a complete, exhaustive summary of current literature relevant to a research question. Systematic reviews of randomized controlled trials are key in the practice of evidence-based medicine, and a review of existing studies is often quicker and cheaper than embarking on a new study.'

https://en.wikipedia.org/wiki/Systematic_review

2. 'A systematic review summarises the results of available carefully designed healthcare studies (controlled trials) and provides a high level of evidence on the effectiveness of healthcare interventions. Judgments may be made about the evidence and inform recommendations for healthcare.'

http://consumers.cochrane.org/what-systematic-review

3. 'A systematic review attempts to identify, appraise and synthesize all the empirical evidence that meets pre-specified eligibility criteria to answer a given research question. Researchers conducting systematic reviews use explicit methods aimed at minimizing bias, in

order to produce more reliable findings that can be used to inform decision making.' http://www.cochranelibrary.com/about/about-cochrane-systematic-reviews.html

- 4. Charles Wiysonge, South Africa: My most cherished definition of this type of research comes from a paper published by David Moher and colleagues in 1999.

 "a review in which bias has been reduced by the systematic identification, appraisal, synthesis, and, if relevant, statistical aggregation of all relevant studies on a specific topic according to a predetermined and explicit method" Moher D, Cook DJ, Eastwood S, Olkin I, Rennie D, Stroup DF. Improving the quality of reports of meta-analyses of randomised controlled trials: the QUOROM statement. Quality of Reporting of Meta-analyses. Lancet 1999;354(9193):1896-900.
- 5. Shahed Hossain, Bangladesh: Can anyone reflect on the differences between and among rapid review, realist review, scoping review, review of the reviews and systematic review? Any source that elaborates not only definition but for render better understanding by differentiating their structures from "review questions, approaches, components, information resources and to synthesis"?
- 6. Sylvia de Haan, Netherlands (on behalf of Miranda Crumpton): On behalf of Cochrane, we would agree that there are many kinds of reviews, of which we publish only some. I would say there are three broad categories of difference in reviews, but we don't use any formal typology for this and I'm not sure there is an exhaustive list of all the possible types:
- · reviews to answer different types of questions (e.g. the effects of interventions, diagnostic test accuracy, prognosis, prevalence, research methodology, etc.)
- · reviews looking at different types of evidence (e.g. quantitative evidence about effectiveness, qualitative evidence about experience, economic evidence about cost effectiveness/efficiency all of which could be different ways of looking at the effects of an intervention)
- · reviews using different methods (e.g. meta-analysis, narrative synthesis, network meta-analysis (looking across multiple intervention comparisons), overviews (summarising the results of multiple systematic reviews) again, all of these could be used to synthesise thee effects of an intervention in different ways.
- 7. Neil PW, moderator: The Cochrane Collaboration describes six types of Cochrane Review:
 - 1. Intervention reviews assess the benefits and harms of interventions used in healthcare and health policy.
 - 2. Diagnostic test accuracy reviews assess how well a diagnostic test performs in diagnosing and detecting a particular disease.
 - 3. Methodology reviews address issues relevant to how systematic reviews and clinical trials are conducted and reported.
 - 4. Qualitative reviews synthesize qualitative and quantitative evidence to address questions on aspects other than effectiveness.[9]
 - 5. Prognosis reviews address the probable course or future outcome(s) of people with a health problem.

6. Overviews of Systematic Reviews (OoRs) are a new type of study in order to compile multiple evidence from systematic reviews into a single document that is accessible and useful to serve as a friendly front end for the Cochrane Collaboration with regard to healthcare decision-making.

https://en.wikipedia.org/wiki/Systematic_review

- 8. Neil PW, moderator: The Cochrane Collaboration provides a handbook for systematic reviewers of interventions which "provides guidance to authors for the preparation of Cochrane Intervention reviews. The Cochrane Handbook outlines eight general steps for preparing a systematic review:
 - 1. Defining the review question(s) and developing criteria for including studies
 - 2. Searching for studies
 - 3. Selecting studies and collecting data
 - 4. Assessing risk of bias in included studies
 - 5. Analysing data and undertaking meta-analyses
 - 6. Addressing reporting biases
 - 7. Presenting results and "summary of findings" tables
 - 8. Interpreting results and drawing conclusions.

https://en.wikipedia.org/wiki/Systematic_review

Why are systematic reviews important?

Role of systematic reviews in qualitative research

- 1. Soumyadeep Bhamik, India: I am particularly excited to see the science of systematic reviews extending beyond statistical aggregation and the relationship between intervention and outcomes. Qualitative systematic reviews are an exciting domain that has come up and it helps understand contexts and mechanisms of how interventions actually work (or not) beyond what numbers can meaningfully explain. Such qualitative systematic reviews indeed provide answers to several questions of relevance to implementation of health interventions in the real world.
- 2. Ruth Martis, New Zealand: I do not believe that the systematic review approach is the golden standard, meaning it is the best research synthesis approach above all. It certainly is a golden standard for synthesising randomised controlled trials. However, it is really important to think about the research question and then use the correct research method and methodology to gain meaningful and insightful data...
- 3. Soumyadeep Bhaumik, India (to Ruth): There are qualitative systematic reviews which can be used for the purpose. More implementation science friendly systematic reviews, where there is integration of qualitative and quantitative evidence, is a rapidly developing methodological domain. Resources about this are available in Cochrane Qualitative and Implementation Methods group at: http://methods.cochrane.org/qi/training-resources
- 4. Soo Downe, UK: There is a long history of debate in the meta-synthesis/qualitative systematic review literature of debate around the extent to which qualitative research can/should be synthesised. However, there is general agreement that the purpose of synthesising qualitative research is to generate hypotheses about what might be working

psychologically or sociologically at the level of mid-range theory, which might be applicable across a range of human social settings. As an example, the qualitative meta-synthesis we undertook for WHO in terms of what matters for women in pregnancy around the world was the basis of changing the focus of the 2016 WHO antenatal guidelines... ... here is the qualitative synthesis that underpinned the framing of the current WHO ANC guidelines. It is open access:

http://onlinelibrary.wiley.com/doi/10.1111/1471-0528.13819/full

- 5. Soo Downe, UK: The reviews being undertaken for the recent and current WHO guidelines on antenatal care for a positive pregnancy experience, intrapartum care for a positive childbirth experience, and reducing unnecessary caesareans, are underpinned and informed by systematic qualitative reviews indeed, a qualitative scoping review of what matters to women in pregnancy has led to a new outcome for such reviews (the 'positive experience' outcome). Cochrane EPOC is also publishing qualitative reviews to inform parallel quantitative ones.
- 6. Soo Downe, UK: The 2016 WHO guideline 'Antenatal care for a positive pregnancy experience' is built on both qualitative and quantitative evidence (http://apps.who.int/iris/bitstream/10665/250800/1/WHO-RHR-16.12-eng.pdf), and this process is continuing for the current intrapartum guidelines work. Indeed, the positive wellbeing focus of the guidelines has emerged from the qualitative data syntheses. This seems to be a very productive way forward for guideline production into the future.
- 7. Soo Downe, UK: The use of CerQual to assess the confidence in qualitative systematic review findings provides a specific accounting for how far the included studies in a qualitative review might apply in a range of settings (or not) and the parallel use of GRADE does the same thing for quantitative studies. The Evidence to Decision frameworks used by WHO in reaching recommendations based on systematic review data include sections on values, acceptability, feasibility and equity, all with findings drawn from qualitative reviews alongside other data, mean that the recommendations that arise can be tailored to context (whether that is resource driven, or culturally relevant, or whether it is other essential factors that require tailoring of recommendations.
- 8: Neil PW, moderator: The Joanna Briggs Institute has a JBI Reviewers Manual to guide JBI Reviews. In the foreword of the 2014 edition Alan Pearson (then executive director) writes: 'Our major role is the global translation of research evidence into practice. We work closely with the Cochrane Collaboration and the Campbell Collaboration and encourage the conduct of reviews of effects (involving the meta-analysis of the results of randomized controlled trials) through Cochrane Review Groups. Our strength is in the conduct of systematic reviews of the results of research that utilize other approaches, particularly qualitative research, economic research and policy research. This broad, inclusive approach to evidence is important when the association between health care and social, cultural and economic factors is considered.'

JBI Reviewers Manual 2015 [https://joannabriggs.org/assets/docs/sumari/Reviewers-Manual_Methodology-for-JBI-Scoping-Reviews_2015_v2.pdf

9. Alexa McArthur: Working at the Joanna Briggs Institute, we collaborate internationally with over 70 entities across the world. (see http://joannabriggs.org) The Institute and its Collaborating Entities promote and support the synthesis, transfer and implementation of

evidence through identifying feasible, appropriate, meaningful and effective healthcare practices to assist in the improvement of healthcare outcomes globally. Systematic reviews are an important part of this work, and vital that this evidence be used to inform policy and practice in low- and middle-income countries.

Role of systematic reviews in international guideline development

1. Neil PW, moderator: In a 2004 Lancet paper (Can we achieve health information for all by 2015?) I and others suggested that developers of international guidelines are the single most important 'customer' for systematic reviews.

http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(04)16681-6/fulltext

2. Neil PW, moderator: I was interested to see this new review which was explicitly conducted to inform international guideline development... Please see below the citation and abstract. The full text is freely available here:

http://www.tandfonline.com/doi/pdf/10.1080/09540121.2017.1317710?needAccess=true

CITATION: C. E. Kennedy, P. T. Yeh, C. Johnson & R. Baggaley (2017): Should trained lay providers perform HIV testing? A systematic review to inform World Health Organization guidelines, AIDS Care, DOI: 10.1080/09540121.2017.1317710

Q2. What are the strengths and limitations of SRs to guide policy and practice in LMICs?

Strengths of SRs

SRs are more reliable than single studies or expert opinion

- 1. Neil PW, moderator: A major strength of systematic reviews is that they synthesise all available evidence, using methods that minimise bias, to enable evidence-informed policy and practice. Without systematic reviews, evidence-informed policy and practice is impossible.
- 2. Neil PW, moderator: It's amazing to think that until just a few decades ago, policy and practice was driven largely by expert opinion, with all its prejudice. It is only recently that WHO guidelines and recommendations have been based primarily on objective syntheses of the literature on systematic reviews.
- 3. Neil PW, moderator: In LMICs where annual expenditures on health are often less than 100 USD per person it is especially important to ensure that resources are allocated to treatments that have been proven to be effective (and indeed cost-effective). Systematic reviews are therefore especially important in LMICs to ensure effective allocation of scarce resources.
- 4. Joseph Ana, Nigeria: The strength of systematic reviews lies in the fact that as a tool it provides the necessary foundations and justification for evidence based practice. Without it, medical and health planning, policy and practice would continue to rely on 'expert' opinion which is not only limited to where the so-called expert is based but also lacks peer review.

Use of systematic reviews to inform programme strategy

1. Neil PW, moderator: This new editorial from Cochrane makes the important point that 'all recent intergovernmental initiatives aiming to reduce the mental health treatment gap have been based on careful and systematic appraisals of the existing evidence'. This is despite the particular challenges of evidence-informed mental health, which are also touched upon. Extracts below.

CITATION: Evidence-based interventions for global mental health: role and mission of a new Cochrane initiative

Corrado Barbui, Marianna Purgato, Rachel Churchill, Clive E Adams, Laura Amato, Geraldine Macdonald, Jenny McCleery, Silvia Minozzi, Rebecca Syed Sheriff http://www.cochranelibrary.com/editorial/10.1002/14651858.ED000120?elq_mid=18100&elq_cid=4800771

2. Neil PW, moderator: Should WHO undertake to ensure that all its Strategies [as well as its guidelines] are informed by an objective and systematic review of the evidence? We know that over the past 20-25 years WHO has been credited with improving its process for guideline development (which had previously been based largely on expert opinion). Should this approach be mandated for WHO policy and strategy papers also? Is the WHO Traditional Medicine Strategy informed by such an objective and systematic review of the evidence on harms as well as benefits?

Limitations of Systematic Reviews

Quality of systematic reviews

- 1. Bill Cayley, USA: Systematic reviews are clearly not a "homogenous group," any more than "studies" or "research" in general constitute a homogenous body of knowledge. One cannot understand the strengths or weaknesses of a review, w/o reviewing and understanding it's methods. To this end, the work of Cochrane in promulgating a set of norms or expectations is important in that it has raised the quality expectations of readers, but even so the quality of a given review depends on the methods (or how well those methods adhered to standard recommendations).
- 2. Sylvia de Haan, Netherlands (fwd Miranda Crumpton): There are a couple of tools available that can be used to critically appraise systematic reviews, including ROBIS (http://www.bristol.ac.uk/social-community-medicine/projects/robis/) and AMSTAR (https://amstar.ca/). There are also various studies that assess the quality of the systematic review literature and highlight areas of common error or poor practice, of which a great example is here:

http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002028

- 3. Denny John, India: Coarasa et. al. (2017) provides evidence of summary of 2 systematic reviews and compares these based on their contrasting findings. It is an interesting way to look at quality of different systematic reviews done on the same topic. Link to the paper is here: https://globalizationandhealth.biomedcentral.com/articles/10.1186/s12992-017-0246-4
- 4. Dan Mayer, USA: I agree with Denny and these contrasting systematic reviews are not hard to find. In my Evidence Based Health Care course I used two meta analyses of treatment of Helicobacter Pylori for non-ulcer dyspepsia, which came to opposite conclusions. The answer was in the details of the studies and their validity. There was one

study that was an outlier and had serious bias problems that explained the differences between the two reviews.

5. Hora Soltani, UK: Can I ask all's expert opinion about the best/most reliable critical appraisal tools for systematic reviews (qualitative, quantitate and mixed methods reviews).

Publication bias

- 1. Larry Sasich, Canada: Publication bias places in question the validity of medical journal articles based on the published literature including review articles, meta-analyses, pharmacoeconomic evaluations and ultimately clinical practice guidelines. Reviews, meta-analyses, and clinical practice guidelines may be used for promotion.
- 2. Neil PW, moderator: A major limitation of systematic reviews in relation to evidence-informed policy and practice in LMICs is that most research is conducted in high-income countries. We see, time and time again, systematic reviews where almost every study included has been done in a high-income country. This has an impact on the real and perceived value of systematic reviews (as compared with local research) to evidence-informed policy and practice.
- 3. Joseph Ana, Nigeria: The main limitation of systematic review (SR) is that because research result from low and middle income countries rarely get into the major journals or indexes, the context of these countries may not be reflected in the world literature /sources used to produce systematic reviews.
- 4. Margaret Winker, USA: The indexes that researchers use in their searches are much less likely to include journals of the Global South. Is a list of indexes of medical/health Global South journals available anywhere? I have found some lists for all subjects such as https://library.stanford.edu/africa-south-sahara/browse-topic/journal-indexes but none for just medicine and health. If there are none, would such a list be useful?
- 5. Neil PW, moderator: In a letter to The Lancet, Ian Roberts (LSHTM) and Katharine Ker write: 'Iain Chalmers and colleagues argue that waste could be avoided if all research was preceded by a systematic assessment of the existing evidence. We agree in principle, but contend that many systematic reviews, by including small unreliable trials, increase waste by promoting underpowered trials.'

http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(15)00489-4.pdf

They say: 'most reviews provide exaggerated estimates of treatment effects due to inclusion of small, poor-quality trials'. Their contention is not with systematic reviews per se, but the distortion caused by 'inclusion of small, poor-quality trials'.

Applicability to different contexts

1. Sue McBean, UK: High income is not the only thing that defines SR findings and so there may be a problem in taking findings from say....Japan and applying them to say....Sweden. Surely that is the main problem, not income but cultures and genetics and longevity, education, diet etc etc

Capacity to produce SRs in LMICs

- 1. Joseph Ana, Nigeria: Continuous improvement in methodology and expansion of capacity in SR production to the LMICs are urgent. Expanding capacity and countries will improve the quality, number and pool of studies that are synthesized to produce of SRs.
- 2. Neil PW, moderator: The US Fogarty International Center a major US funder of health research in LMICs is scheduled to be 'eliminated' as a result of President Trump's recent cuts.

Disconnect between systematic reviews and guideline development

- 1. Neil PW, moderator: 'Cochrane reviewers spend months or years systematically reviewing and grading the evidence for treatments across a wide range of clinical conditions. There are 236 Cochrane reviews that include evidence to inform the management of chest disease in children. Yet when 21 UK guidelines on this topic were examined, 96 recommendations that could have cited Cochrane failed to in 40% of cases, and in 26% the guideline recommendation did not fully agree with the Cochrane Review (Thorax doi: 10.1136/thoraxjnl-2016-208790).'
- 2. Zbys Federowicz, Bahrain: One of the things that may explain this is the perception that Cochrane reviews provide recommendations which they do not whereas of course this is the expectation of clinical guidelines. However Cochrane reviews go as far as assessing the quality of the evidence which should be a great stepping stone for guideline developers. The step from evidence to recommendations is not a huge one and GRADE [*1 see note below] has provided plenty of information/guidance on how to do this. The other issue is that some guideline developers may be interested in study designs other than RCTs and of course this can be problematic as Cochrane reviews tend to focus, albeit not exclusively on RCTs and CCTs [*2]

Negative perceptions of systematic reviews

- 1. Soumyadeep Bhaumik, India: I am interested to hear about 'inoculated against SRs' discussion too. Are you referring to an entire generation of mostly clinicians who are being fed the idea of systematic reviews being meaningless statistical jugglery and real evidence is one that comes from experience and studies done locally?
- 2. Zbys Fedorowicz, Bahrain: Its quite 'staggering' to see how much resistance to considering these as reliable sources of evidence still exists. There are reasons for this no doubt and some may

Case study: European Union Horizon 2020

Sian Williams, UK: A good question [Q2. What are the strengths and limitations of SRs to guide policy and practice in LMICs?] and here are some answers based on our current European Union Horizon 2020 funded FRESH AIR implementation science programme working to reduce exposure to smoke (indoor and tobacco) to improve respiratory health in Uganda, Kyrgyz Republic, Vietnam and rural and vulnerable populations in Crete. www.freshair.world

Our programme is working to implement four evidence-based interventions: reducing exposure to smoke through improved ventilation and better stoves (the dream of cleaner energy is not with us yet) using spirometry to improve diagnosis, improving diagnosis of children's respiratory symptoms (including potential misdiagnosis of asthma as respiratory

infection) treating tobacco dependence, and implementing pulmonary rehabilitation. What you'll notice is that none of them are pharmacological (although ideally treating tobacco dependence would include pharmacological options, that is not currently possible in these countries).

What have systematic reviews offered?

- 1. A reasonable amount for treating tobacco dependence, although we are favouring Very Brief Advice (the 3 As, Ask Advise Act), which in our tests of change is proving most amenable to implementation. The three elements are supported by meta-analyses, but the intervention as a whole is not yet. What's clear is that the Act requires a lot of local adaptation depending on what resources are available. NRT is not available in many countries DESPITE being recommended by WHO List of Essential Medicines and despite the enormous burden of tobacco dependence on all health systems.
- 2. A lot for Pulmonary Rehabilitation, but a lot of adaptation is required to low resource settings we're finding "church hall" based PR evidence more useful than hospital-based and there is a lack of useful material about simple ways to deliver the education component, and what the "essence" of the physical activity is, to ensure fidelity.
- 3. Stoves and ventilation a very fast-moving field, but there's a need to combine the evidence from the energy and health fields better than is currently done.
- 4. Spirometry plenty of guidelines on this, but most of the evidence draws on high income, western countries, so there are big debates about lower limits of normal, and so on. Also, it raises a lot of questions about the HOW the workforce issues and digital health. For example, we're about to test use of mobile phone spirometry with an internet-enabled read over service to support interpretation. We've already done it with normal spirometers. Spirometry 360.

What are we doing about it?

- 1. Trying to apply high standards of implementation science and colleagues have now published the StaRI standards of reporting recommended in the EQUATOR framework. Will these get picked up in systematic reviews? As they require a good deal of qualitative research I agree with the inclusion of qualitative research. It's essential to understand the context, and also to debate about what the essence of the intervention is, what shouldn't be changed. We are also encouraging photos and videos to be taken to show the variety of contexts and implementation processes what would happen if these could be regarded as high quality evidence by journals!
- 2. Contributing to the evidence as best we can so that they do get picked up in systematic reviews. That's the aim once the project finishes. The choice of journals remains challenging, as does the requirement to write in English.
- 3. Trying to define the essence of these core interventions, when they have far less high quality evidence behind them than some pharmaceutical interventions because non-pharmacological interventions and non-physician interventions have less investment for research, and therefore fewer papers.

It would be great to have a debate particularly about the implementation of non-pharmacological interventions and systematic reviews.

Q3. What is the role of (global) SRs versus (local) single research studies (to guide policy and practice in LMICs)?

- 1. Neil PW, moderator: (a) systematic reviews provide a more reliable tool for evidence-based policy and practice than single research studies; (b) systematic reviews are typically 'top-heavy' with studies from high-income countries, which may affect their relevance to low-and middle-income countries; and (c) previous discussions on HIFA have consistently shown that policymakers and practitioners tend to have a preference for, and are more likely to implement, the findings of local research (single studies conducted in their country or region) as compared with single studies in other countries and regions or even as compared with systematic reviews that may be based on studies from multiple countries.
- 2. Neil PW, moderator: As a policymaker or practitioner, do you tend to attach more importance to systematic reviews (even though they may be based on studies in other countries) or to research conducted in your own country?
- 3. Sunanda Reddy, India: As a Policy maker... I would like to look at the more recent local studies, preferably multi centric studies on health issues already recognized as important for action at National level (but not implemented for several reasons including lack of a strong evidence base or complementary recommendations by a body of Health professionals closer home) and conducted by reputed scientists, practitioners and / or Organizations of standing in the country.
- 4. Edwin van Teijlingen, UK: Policymakers and practitioners tend to have a preference for, and are more likely to implement, the findings of local research (single studies conducted in their country or region) ... this is not a phenomenon unique to low- and middle-income countries. We'll find a similar tendency in high-income countries where health (and social care) managers and policy-makers will want to try something that seems success in the neighbouring region/district or something they heard a friend talk about at a regional or national conference.
- 5. Kelechi Eguzo, Canada: In my work on cancer policy in Abia State of Nigeria, I find that policymakers rely more on local evidence. They are more inclined to reviewing evidence about 'here and now', rather than 'over there'. The case of systematic reviews becomes more important when considering potential policy options.
- 6. Joseph Ana, Nigeria: There are problems with relying mainly on local evidence when the local research culture is weak, mainly observational, and often not peer reviewed. The whole architecture of reading, writing and publishing is faulty because the demands of 'publish or perish' encourages quantity rather than quality. Scholarship is better when it is global / international in scope and scrutiny. Context is important but before localising content it is even more important that the fundamentals meet international best practice.
- 7. Sunanda Reddy, India: Policy makers in LMICs are more interested in how the evidence can effectively feed into the flagship National programmes within the scope of the limited budgetary allocation for Health. This also explains why Public Health practitioners today are

paying as much attention to the Policy briefs as one would to the preparation of papers in Indexed publications.

Q4 What can be done to increase the relevance and usefulness of SRs (to guide policy and practice in LMICs)?

Interpreting and applying the findings of systematic reviews in different contexts

- 1. Claire Allen, UK: I would just like to add that it will be important in the future to develop contextually relevant summaries for all kinds of situations, not just LMIC settings, but also those around humanitarian and crisis situations, where the evidence may exist but the resources may not.
- 2. Claire Allen, UK: Evidence Aid has written a piece on its new website, in the section Evidence Matters (www.evidenceaid.org/evidence-matters) which might be interesting for people to read in this context.
- 3. Zbys Fedorowicz, Bahrain: Indeed it is reassuring to see the steady impact of SRs on policy and practice in general and perhaps disappointing yet not unsurprising to see the that many are not generalisable to LMICs for reasons which have been clearly articulated. However I believe there is in general an increased awareness by review authors of this shortcoming but its hard to know how this can be addressed satisfactorily. Undoubtedly the WHO has made strident attempts over the years to rectify this matter and continues to do so. Addressing the issue of the large wastage of research resources in HIC and possible redirection of some of those resources would be one way of moving forward but would be challenging to say the least.
- 4. Rachel Stancliffe, UK: The WHO Reproductive Health Library was the response from Cochrane in one very important topic area to need for more relevance of SRs to guide policy and practice in LMICS.
- ...There is this page explaining the history http://www.cochranelibrary.com/editorial/10.1002/14651858.ED000070

And the main publication is now hosted directly by WHO here: https://extranet.who.int/rhl

- 5. Neil PW, moderator: There is huge variation among different countries (and among different healthcare facilities and individual health professionals) with regards to policy on episiotomy. How do different countries come to such differing conclusions? CITATION: Selective versus routine use of episiotomy for vaginal birth (Review) by Jiang H, Qian X, Carroli G, Garner P Cochrane Database of Systematic Reviews 2017, Issue 2 First published: 8 February 2017 http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD000081.pub3/epdf
- 6. Paul Garner, UK: ... routine episiotomies are clearly inappropriate when in a population where many of the babies are small, and tearing is less of a problem; and obviously silly to do in locations where hospitals frequently run out of sutures or antibiotics... I agree with Neil there needs to be a study documenting variations in practice across settings and countries. WHO are not interested. Who might pick this up?

Communicating and discussing research results

1. Jamie Guth: In March, I led policy panels in Benin, Burkina Faso and the Gambia to review research evidence on a specific study. While this was not a systematic review, I believe that the response from those invited would be the same as for a systematic review. What I heard numerous times was real pleasure in being invited to hear about the research, discuss it and consider how to use it.

Case study: Drowning

Neil PW, moderator: 'Last week, WHO released a follow-up implementation guide for policy makers, government officials, and non-governmental organisations, with the aim of providing practical steps towards tailoring preventive measures to local settings. The guide outlines six interventions: installing barriers to control access to water; providing safe spaces for preschool children to play away from water; teaching school-aged children swimming and water safety skills; training bystanders in safe rescue and resuscitation; setting and enforcing safe boating, shipping, and ferry regulations; and building resilience to manage flood risks and other hazards. It also details four overarching strategies: strengthening public awareness; promoting multisectoral collaboration; developing a national water safety plan; and advancing drowning prevention through data collection and well designed studies.'

CITATION:

Drowning: a silent killer

The Lancet, Volume 389, No. 10082, p1859, 13 May 2017

DOI: http://dx.doi.org/10.1016/S0140-6736(17)31269-2

http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)31269-2/fulltext

The WHO Implementation Guide is available here:

http://www.who.int/violence_injury_prevention/drowning/drowning_prevention_guide/en/

It is notable that the references include only two systematic reviews on the subject:

- 1. Thompson DC et al. Pool fencing for preventing drowning in children. Cochrane Database of Systematic Reviews. 2000;(2):CD001047.
- 2. Meaney PA, Topjian AA, Chandler HK, Botha M, Soar J, Berg RA, Nadkarni VM. Resuscitation training in developing countries: a systematic review. Resuscitation. 2010;81(11):146272.

Furthermore the first review is based entirely on data from studies in high-income countries. As The Lancet editorial points out, most drownings in children in low- and middle-income countries happen in natural water (not swimming pools), so fences around pools would have little overall impact.

The second study concluded only that 'Resuscitation training in developing countries was well received and viewed as valuable training by the students and local counterparts.'

A third area for study would be the impact of first aid information on a mobile phone on how to deal with an unresponsive person who has been recovered from an acute drowning incident. If this person is you, or your child, your only hope is that your rescuer knows what

to do. With this in mind, I turned to the Red Cross First Aid app but could not find 'drowning'. There is a category for 'unresponsive and not breathing' and the treatment is based on chest compression only. A google search on management of drowning returns some results based on chest compression only (eg http://www.spa.org.uk/sja/first-aid-advice/breathing/drowning.aspx)

Q5: "What can be done to promote the production, interpretation and synthesis of SRs in low- and middle-income countries?"

Neil PW, moderator: With regards to the production of systematic reviews, it could be argued that it doesn't really matter so much where such reviews are produced. Perhaps what is more important is that every review is done rigorously and presented in a way that is unbiased, clear, and easy to use?

Neil PW, moderator: The ability to interpret systematic reviews [and local research] is arguably more important... We look forward to your comments.

Additional content: Where to access global south health research?

1. Judy Wright, UK: Regarding Margaret Winkler's request ("Is a list of indexes of medical/health Global South journals available anywhere?"), over the last 10+ years we've built a list of databases and websites from around the world where randomised controlled trials have been found. Many resources are in the Global South and are freely available. They are (in my experience) more time consuming to search and download records for a systematic review than major western databases (i.e. Medline) but can provide relevant studies. Please see

http://medhealth.leeds.ac.uk/info/639/information_specialists/1790/finding_randomised_cont rolled_trials

2. African Journals Online/AJOL (https://www.ajol.info/)

AfricaPortal is an online resource of policy research on African issues.

AMEDEO is a free information resource for healthcare professionals. Also see http://www.freemedicaljournals.com/

Bioline is a non-profit journal aggregator of Open Access (free full text) biomedical journals containing research from developing countries.

BioMed Central is a publishing initiative committed to providing immediate open access to peer-reviewed biomedical research.

Directory of Open Access Journals (DOAJ)

Epistemonikos https://www.epistemonikos.org/ (Systematic Reviews) and another one called support summaries https://www.supportsummaries.org/

Lilacs (Spanish and Portuguese)

Open Doar: Directory of Open Access Repositories is an authoritative directory of academic open access repositories.

PLoS (Public Library of Science)

Popline

ResearchGATE is a free of charge, online research platform with meta-data of around 35 million articles and publications and tens of thousands of full-texts available, focused on the sciences but open to all disciplines. ResearchGATE also acts as a social networking platform where information on jobs, conferences and new publications can be shared between individuals and groups.

SciELO - Scientific Electronic Library Online is a model for cooperative electronic publishing of scientific journals on the Internet. Especially conceived to meet the scientific communication needs of developing countries, particularly Latin America and the Caribbean countries.

Science in Africa - Africa's first online science magazine.

WHO Global Index Medicus: http://www.globalhealthlibrary.net/php/index.php

CITATIONS

1. Enuameh, Yeetey Akpe Kwesi. Riding a wave in developing countries: challenges and priorities for evidence based practice. JBI Database of Systematic Reviews and Implementation Reports: September 2016 - Volume 14 - Issue 9 - p 12. doi: 10.11124/JBISRIR-2016-003086 http://journals.lww.com/jbisrir/Fulltext/2016/09000/Riding_a_wave_in_developing_countries_challenges.1.aspx

- 2. Introduction to Systematic Review and Meta-Analysis A free online course on systematic reviews started this week on Coursera. Anyone can still join it. https://www.coursera.org/learn/systematic-review
- 3. (from Zbys Fedorowicz):
 Bahrain Medical Bulletin, Volume 30, No 2, June2008
 More or Less Healthcare Research or, Healthcare Research 'More or Less'?
 https://www.academia.edu/692355/More or Less Healthcare Research or Healthcare Research More_or_Less
- 3: (from Neil PW): CITATION: Health Res Policy Syst. 2016 May 17;14(1):36. doi: 10.1186/s12961-016-0107-
- 4. Which health research gets used and why? An empirical analysis of 30 cases. Kok MO, Gyapong JO, Wolffers I, Ofori-Adjei D, Ruitenberg J.

https://health-policy-systems.biomedcentral.com/articles/10.1186/s12961-016-0107-2

'Our study underlines the importance of supporting research that meets locally-expressed needs and that is led by people embedded in the contexts in which results can be used.' This is the conclusion of a paper that sought to answer 'Which health research gets used and why?'.

Comment (Neil PW): Interestingly the paper does not acknowledge the tension between actual and perceived needs, and does not even mention the role of systematic reviews.

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Unanswered questions

Is there unreasonable resistance to systematic reviews in principle? If so, it would be good to understand why, and how such resistance might be addressed. Any thoughts?

International guidelines, such as those produced by WHO, and the systematic reviews on which they are based, are fundamental to evidence-informed policy and practice.... I look forward to any observations and reflections you may have on the role of SRs in international guideline development. In particular, if you have been involved in the development of an international guideline for WHO or any other international health agency, how have you used systematic reviews in the process? In what ways could systematic reviews be improved to facilitate the production, quality and relevance of international guidelines and recommendations?

How is the term 'systematic review' understood (or misunderstood) by the general public, by health workers, by policymakers?

What evidence do we have that systematic reviews have a positive impact on policy and practice?