Do we need an international collaboration for synthesizing health-system evidence?

Working Group on Health Systems Research Synthesis
Alliance for Health Policy and Systems Research

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This is a consultation document based on presentations given and discussions held in a session at Global Forum for Health Research 2009 in Havana, Cuba. In agreement with the Steering Committee of the First Global Symposium on Health Systems Research, the Alliance will, based on feedback from the consultation, convene a temporary ad hoc working group that will give its recommendations at the symposium in November 2010. This working group will coordinate its efforts with two other working groups that will present their recommendations at the symposium: the working group on implementation and health systems research methods and the task force on health system guidance.
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1. Background

Health system policy-makers and managers routinely face difficult decisions around improving health and promoting equity. They must consider complex questions about effective strategies for organizing the overall health system and about designing and implementing or changing and improving specific policy and programme options. For instance, does contracting out services to the private sector improve access to health care? How could the health system best retain trained health care providers in underserved areas? Do conditional cash transfers improve the uptake of health interventions?

These questions have a high relevance to many low- and middle-income countries (LMICs). But how can scientific evidence – often difficult to find, unclear in its implications, and seemingly shifting from one year to the next – inform the answers to these questions? Similar challenges in clinical medicine have been addressed by the Cochrane Collaboration – an organization dedicated to helping healthcare providers, policy-makers, patients, their advocates and careers, make well-informed decisions about human health care by preparing, updating and promoting the accessibility of Cochrane Reviews which are both produced by, and are relevant to, everyone interested in the effects of health care.

The field of health systems research (HSR) may also benefit from a similar international collaboration for synthesizing health systems evidence. The collaboration could support the synthesizing and translating of health systems knowledge, as well as support the identifying of research gaps and the setting of research agendas for both primary and secondary research. This consultation document explores this issue, based largely (although not exclusively) on presentations and subsequent discussion at a session on this topic held at the Global Forum for Health Research 2009 (1).

The idea for this session came about in a conversation between Professor Julio Frenk, Dean of Harvard School of Public Health, and Professor John-Arne Røttingen, Chief Executive of the Norwegian Knowledge Centre for the Health Services and Chair of the Alliance for Health Policy and Systems Research. It is based on the experiences from synthesizing health systems evidence within one review group of the Cochrane Collaboration (the EPOC review group, which is discussed in further detail below), the recent experiences in funding systematic review centres by the Alliance HPSR, awareness of the newly emerging methodologies for synthesizing research, and the proposal put forward by Professor Frenk for establishing a collaboration to facilitate knowledge translation in part by creating a global repository for the corpus of best practices in health systems development, i.e. both which interventions to choose and how to implement them. This latter idea partly built on the suggestion in a paper by Michael Reich and Keizo Takemi on follow-up to the G8 Toyako summit focusing on strengthening of health systems, where it was proposed to establish a Cochrane-type process for global health monitoring to generate empirical evidence for health policy (2). The aim of the session at the Global Forum for Health Research 2009 was to address how a more systematic international collaboration in synthesizing knowledge for health systems can be fostered.

Towards addressing this over-arching question, we explore the following questions:

- What benefits and challenges might be associated with a collaboration in synthesizing and translating health systems evidence?
- What kinds of knowledge syntheses could usefully inform decisions about strengthening health systems and what methods are appropriate for conducting such syntheses?
- To what extent do established collaborations already support synthesis and translation for health systems research and, what might an additional collaboration offer?
2. What benefits and challenges might be associated with a collaboration in synthesizing and translating health systems evidence?

Already, there exist a number of initiatives for synthesizing or translating health systems evidence to support the design and implementation of health systems strengthening initiatives and interventions. These initiatives cover different types of evidence on health systems as well as different geographic regions:

2.1. Synthesizing

One of the Cochrane Collaboration’s review groups, the Effective Practice and Organization of Care (EPOC) group, is focused on conducting reviews of interventions designed to improve professional practice and the delivery of health care services. This includes financial, organizational and regulatory interventions that can directly enhance effectiveness, efficiency and equity in health systems.¹

A team at McMaster University in Canada has developed and now continually update a searchable repository of syntheses of research evidence about health systems arrangements (governance, financial, and delivery arrangements) and implementation strategies within health systems. The database – called Health Systems Evidence and available online at www.healthsystemsEvidence.org – includes: 1) policy briefs that draw on systematic reviews; 2) overviews of systematic reviews; and 3) systematic reviews. Health Systems Evidence currently contains roughly 1,150 syntheses of health systems evidence.²

The Alliance HPSR is providing ongoing support to four systematic review centres in low- and middle-income countries. This programme of work aims to produce reviews of use to policy-makers across three broad thematic areas – health systems financing, human resources for health and non-state sector service delivery – but also to build the capacity to conduct high quality reviews in LMICs. The four review centres have received technical support from collaborating partners in high-income countries. The Alliance HPSR is also funding work to explore approaches to synthesizing qualitative policy analysis case studies.

The SUPPORT Collaboration has developed structured summaries of systematic reviews that highlight key messages as well as equity, local applicability and scaling-up considerations.³

The International Health Policy Monitor is an international network examining health reform processes. Organized by the Bertelsmann Foundation of Germany, the network includes 15 OECD countries. Each partner provides semi-annual reports on health reforms in their country. Eventually, the Foundation would like to develop a tool for monitoring policy ideas as they evolve and travel within and across health systems.⁴ Other initiatives mostly focusing on high-income countries include the ‘On-call’ Facility for International Healthcare Comparisons at LSHTM (http://www.lshtm.ac.uk/ihc) and the Robert Wood Johnson Foundation’s Synthesis Project (http://www.rwjf.org/pr/synthesisabout.jsp).

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2.2. Translating

The European Observatory on Health Systems and Policies supports and promotes evidence-informed health policy-making through comprehensive and rigorous analysis of the dynamics of health care systems in Europe and through policy dialogues that convene influential doers and thinkers to address key health system challenges at the national level.

Knowledge translation platforms and networks – such as EVIPNet or REACH Policy – produce policy briefs that bring together the best available global and local evidence on a pressing health system challenge, convene policy dialogues to engage policy-makers, stakeholders and researchers in working through the underlying problems, options for addressing it, and key implementation considerations, and undertake a variety of other efforts to support evidence-informed policy-making.

There are, however, a number of needs that existing efforts do not sufficiently address:

Because Cochrane reviews are reviews addressing questions about 'effectiveness', and they are restricted to experimental and some quasi-experimental research designs, they do not address many of the types of questions asked by health policy-makers and managers, including: whether a problem is getting better or worse, how different stakeholders view and experience a problem, the cost-effectiveness of options for addressing a problem; the political and social feasibility of options, and their adaptability to particular contexts; the options' acceptability from the perspectives of key stakeholders; the barriers to implementation and how to address them; and how to manage scaling-up and innovation (3). This will be discussed more below where the types of syntheses that are needed are explored.

The experience of many health systems-focused Cochrane reviewers are that there is lack of primary research that fulfils the criteria for inclusion and thereby the Cochrane reviews often end up ‘empty’ or with very limited evidence, whereas there is still relevant research about the feasibility or acceptability of initiatives that may inform policy-makers’ decisions by suggesting what might be effective.

The presentation of health system reviews rarely includes details that facilitate considerations about equity, local applicability, implementation and scaling-up.

Some of the existing knowledge translation initiatives are probably too small and the impact of existing initiatives has not been evaluated (5).

Sustained funding for country-level knowledge translation activities is limited, given that it tends to fall through the cracks between research and development (5).

Across these collaborations and databases, most reviews are done in high-income countries and are based largely on primary studies conducted in high-income countries (4, 6). It is of crucial importance to strengthen research capacity within LMICs to increase the body of evidence. More primary research and research syntheses for LMICs are needed to make such efforts relevant and useful in the longer run.

There is insufficient coordination between existing initiatives, particularly at regional and global levels (5).

Many of these problems and challenges are also encountered when evaluating the effectiveness of health promotion or public health where they have inspired new approaches to synthesis.

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3. What kinds of knowledge syntheses could usefully inform decisions about strengthening health systems and what methods are appropriate for conducting such syntheses?

Policy-makers need to address many types of questions:

- Defining the problem
- Assessing potential policy and program options
- Identifying implementation considerations

An inventory of policy questions and their relationship to the types of questions addressed in systematic reviews provides a starting point for discussions about the types of knowledge syntheses needed by policy-makers (7) (see appendix for more details).

It is important to stress that even if models for synthesizing research evidence within clinical health sciences can be built upon, the health policy and health systems questions are more context and time dependent and therefore may need their own approaches. There is a need to understand how to synthesize the findings of research addressing questions with non-experimental studies including observational studies and qualitative research like single or comparative case studies, ethnographic studies, mixed- or multiple methods studies, action research, operational research and implementation research.

Moreover, key HSR users, i.e. policy-makers and managers, frequently require different types of information and evidence, including modelling data, cost-effectiveness estimates, the political and social acceptability of the intervention, and an analysis of the likely barriers to implementation and how to tackle them. These types of questions do not lend themselves to experimental designs, but are better addressed through modelling studies, economic evaluations, case studies and a variety of qualitative research, and policy analyses. As a result, synthesizing evidence across disciplines, methods and research designs is the subject of much ongoing discussion among HSR researchers and systematic reviewers.

Qualitative and mixed methods approaches to synthesis have emerged from public health, health promotion and social medicine. These include narrative synthesis, meta-ethnography, realist review/synthesis, scoping reviews, meta-synthesis, meta-narrative review, and thematic synthesis. Several groups have developed these approaches and, among others, the Cochrane qualitative methods group and the Campbell process and implementation methods sub-group are striving to integrate these efforts into effectiveness reviews published by the Collaborations, and individuals involved are contributing to advancing these methods in different settings. However, still far fewer resources are going into these kinds of reviews than effectiveness reviews. In addition, these efforts have also to a little extent been focusing on the needs of LMICs.

While understanding and managing this diversity of approaches can be a challenge, many opportunities arise when multiple methodological viewpoints can be understood in relation to each other, researchers working from very different traditions can work together, and the various components of synthesis efforts can be integrated into a comprehensive set of perspectives on a pressing issue. In addition to developing review methods for qualitative studies, there is also a need to explore how to synthesize research that utilize some of the most important “quasi-experimental” methods developed in econometrics and evaluation science.

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such as instrumental variable methods, regression discontinuity, difference-in-difference approaches and fixed-effects panel regressions.

Also, there is a need for the development of rapid review methodologies or rapid methods to do overviews of reviews, given that a typical systematic review takes a long time to perform in the first instance - while policy-makers are often faced with problems that require a rapid political response.

Altogether, this indicates that a multitude of systematic reviews and approaches to research synthesis is needed to provide policy-makers with relevant health systems evidence. In addition, these reviews need to be translated to local contexts by utilizing mechanisms like policy briefs and policy dialogues where the research evidence is synthesized in a systematic way and where transparent deliberative processes including different stakeholders are set up, respectively.

4. To what extent do established collaborations already support synthesis and translation for health systems research and, what might an additional collaboration offer?

There was a clear consensus at the session organized by the Alliance HPSR at the Global Forum for Health Research 2010 that there is a need for increased international collaboration and possibly a new collaboration, but that we should learn from current initiatives rather than "reinventing the wheel" (8). A potential new collaboration could share some of the principles, but not duplicate the work, of existing collaborations, i.e. Cochrane Collaboration with its EPOC group that addresses effectiveness questions about health system interventions. It should also build on the work of and collaborate with the Cochrane and Campbell non-randomized studies, equity, economics, qualitative and agenda setting methods groups that develop methods and approaches that are relevant to HSR. There have been several spin offs from the Cochrane Collaboration, such as the work on uniform reporting guidelines (i.e. standards for how to report research findings) and summaries of reviews. A potential new collaboration with a complementary mission should be considered as building on and being inspired by existing work within clinical medicine, and not be organized or seen as a competing initiative. At the same time, a new collaboration will need to recognize the research traditions and knowledge needs relevant to support health systems strengthening.

More and better coordinated work is needed within and among these efforts. One option is to establish a new formal international collaboration. Its main objectives would be (9):

To contribute to strengthening the use of scientific evidence in decision-making thereby fostering a culture of evidence informed decision-making. Health (systems) policy-makers still rely largely on logical arguments and person experiences, and not on properly evaluated experiences from other jurisdictions.

To coordinate and support research synthesis work for health systems (the core function of the collaboration) which includes:

- To further develop methodologies for health systems research synthesis including developing synthesis methodologies and approaches for reviewing observational and qualitative research in collaboration with existing methods groups within Cochrane and Campbell Collaborations and elsewhere.

- To promote and support the further development of databases of health system systematic reviews and review-derived products such as policy briefs.
To consider establishing a database for other kinds of research-derived products that can inform health systems policy design and implementation.

To consider establishing an umbrella knowledge repository that can inform health systems strengthening and that maps the array of existing information sources thereby providing a one-stop shop access and a guiding function to all initiatives/sources which will avoid duplication of efforts.

To set up a global international coordination mechanism and an editorial process for these reviews and review-derived products.

To inform and facilitate the production of relevant high quality primary HSR that can contribute to research syntheses. This can be done through the following mechanisms:

- Identify questions for research and syntheses that are of particular interest to policy-makers and funders, and establish a database for unresolved relevant HSR questions inspired by i.e. the UK NHS DUET database that can be utilized when doing research priority setting.

- Establish a taxonomy of HSR study designs and develop reporting guidelines for those designs not covered in existing guidelines in order to improve the methodology of primary research and harmonize reporting, which would in turn improve and facilitate the synthesis process.

- To consider establishing a register for prospective HSR studies or build on existing ones (i.e. the EPOC specialized register of RCTs, CCTs, CBAs and ITS of interventions and the policy trials register of complex interventions related to healthcare management and policy (NOKC with EPOC, James Lind Library and WHO) to prevent publication bias (and provide useful methodological information to researchers considering similar work in other settings; perhaps to prevent unnecessary duplication of studies in relatively similar settings).

- To encourage the publication of all relevant findings, i.e. both "negative" and "positive" findings and results on intended and unintended consequences, to facilitate reviews that:
  
  (i) identify all relevant primary studies; and
  
  (ii) based on these, are able to identify unambiguous findings.

- To advocate for openly sharing HSR data and health system performance data to allow and foster secondary data analysis.

To facilitate information sharing of knowledge translation mechanisms for health systems and to evaluate different approaches to knowledge translation by developing indicators for synthesis and translation initiatives, and use these to evaluate existing (and any new) activities.

To generate an awareness of the need for (and possibly funding for):

- Collaboration among existing efforts and initiatives at regional and global levels;

- Country-level knowledge translation activities;

- Increasing capacity for primary HSR and synthesis work in LMICs.
The aim would be to work together in ways that avoid duplication of synthesis work and increase value for policy-makers, and that build on the following principles:

A culture of sharing of data, studies and learning from each other. Transparency and willingness to collaborate.

Systematic, collective and coordinated approaches to research synthesis, not just unspecific forms of general collaboration.

Avoiding duplication of work in doing systematic reviews and other syntheses

Common frameworks, taxonomies and methods for both primary research and research synthesis to be able to build on each other’s work.

System for quality control, publication and commitment for updating systematic reviews and other syntheses.

A collaboration with clear commitments and obligations and necessary governance arrangements.

A collaboration based on multi- and cross-disciplinary approaches including political scientists, economists, management specialists, etc.

Effective inclusion of research users, policy-makers, civil society groups to make the work relevant for them.

Encourage evidence-informed policy processes rather than evidence-based policy-making thereby underlining the need for other knowledge domains and deliberative processes when making policy, and thereby understanding the politics and the political economy of health policy-making where ideas, interests and institutions compete, but where research evidence may inform the dialogue.

5. Questions for consideration

The general consensus seems to be that there is need for more systematic collaboration in research synthesis and knowledge translation which focus on HSR and that complement the work of Cochrane Collaboration and systematic reviews of effectiveness studies.

The Alliance HPSR will convene a working group to discuss the need for and the potential role of a new international Collaboration for synthesizing health systems knowledge. To inform the deliberations of this working group, the Alliance HPSR would like to have feedback on the following specific questions:

1. What might be the benefits or challenges of an international collaboration for synthesizing and translating health systems research? How could legitimacy of such a collaboration be built?

2. The EPOC group of the Cochrane Collaboration (http://epoc.cochrane.org/) conducts systematic reviews of the effectiveness health system interventions (usually restricted to randomized controlled trials, controlled before-and-after studies, and interrupted time-series). What other types of systematic reviews of health systems research could usefully inform health policy-making and strengthening health systems (using the table in the appendix as a starting point for discussion)?
3. Are you aware of current work that could contribute to mapping the landscape of knowledge synthesis and knowledge translation efforts for health systems?

4. What organizations and institutions might usefully contribute to a more systematic collaboration in conducting reviews that address questions other than effectiveness?

5. What might you or your organization contribute to such a collaboration? What might you or your organization hope to gain from such a collaboration?

6. What are the relative merits of a new, independent initiative compared with a collaboration under the umbrella of an established organization, such as the Cochrane Collaboration or the EPOC group within the Cochrane Collaboration?

7. What functions should such a new initiative fulfil, and what resources would such a new initiative require?

8. How can knowledge synthesis work support the development of a wider and stronger body of empirical HSR in LMICs of direct use to policy-makers and for use in future synthesis efforts?

The Alliance HPSR does not see itself as an organization that has the role or capacity to establish a new international collaboration responding to the identified needs. However, as the only global actor that exclusively focuses on health policy and systems research and the utilization of this research in improving health systems in low- and middle-income countries, the Alliance HPSR sees its role as an organization that can facilitate and foster these discussions, and possibly take on some of the work.

6. Next steps and contact details

The Alliance HPSR plans to convene a meeting of the proposed working group in September 2010 that could reach some recommendations to be presented at the First Global Symposium on Health Systems Research in Montreux in November 2010.

We would therefore ask for feedback on this consultation document and receive the questions by: 30 July 2010.

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References


4. Kwon S. What are the needs of policy-makers for synthesized evidence? Global Forum for Health Research; 2009; Havana, Cuba (16-20 December); 2009.


6. Koehlmoos TP. What are the merits and limitations of Cochrane reviews for health policy and systems research? Global Forum for Health Research; 2009; Havana, Cuba (16-20 December); 2009.


9. Røttingen JA. What can we learn from clinical research, and what kind of collaboration is needed?. Global Forum for Health Research; 2009; Havana, Cuba (16-20 December 2009); 2009.
### Table 1. Examples of the types of systematic reviews needed in different steps in the policy-making process

<table>
<thead>
<tr>
<th>Steps in a Policy-making Process</th>
<th>Sub-Steps that Involve Acquiring Data and/or Research Evidence</th>
<th>Examples of the Types of Systematic Reviews That Can Be Acquired</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Defining the problem</strong></td>
<td>Identifying indicators to establish the magnitude of the problem (or the factors that contribute to it) / Making comparisons (over time, across settings or against plans) to establish the magnitude of the problem (or the factors that contribute to it) / Highlighting alternative framings of the problem to assist with mobilizing support among different groups to address the problem</td>
<td>Reviews of observational studies (i.e., administrative database studies, community surveys) / Reviews of observational studies (i.e., administrative database studies, community surveys) / Reviews of qualitative studies that examine stakeholders’ views about and experiences with the problem (i.e., studies in which narrative data are collected from individual or groups of “informants” through interviews, focus groups, participant observation, or from documents)</td>
</tr>
<tr>
<td><strong>Assessing potential policy and program options</strong></td>
<td>Identifying policy and program options that could affect the problem (or the factors that contribute to it) / Characterizing the positive effects (benefits) of each policy option / Characterizing the negative effects (harms) of each policy option / Characterizing the cost-effectiveness of policy options</td>
<td>Reviews of effectiveness studies (i.e., randomized controlled trials, interrupted time series) / Reviews of effectiveness and/or observational studies / Reviews of economic evaluations</td>
</tr>
<tr>
<td><strong>Identifying implementation considerations</strong></td>
<td>Identifying potential barriers to implementation at the level of patients/consumers, health workers, organizations, and systems / Characterizing the effects of appropriately targeted implementation strategies</td>
<td>Reviews of observational studies and/or reviews of qualitative studies / Reviews of effectiveness studies</td>
</tr>
</tbody>
</table>