

## COMMENTARIES

# There are challenges in conducting systematic reviews in developing countries: the Jamaican experience

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## Abstract

**Objectives:** To describe some contextual and methodological challenges to conduct systematic reviews (SR) in developing countries using experiences from Jamaica.

**Study Design and Setting:** We identified four overarching challenges to conducting SRs in our setting, and present approaches used to overcome them. Challenges were evaluated using experiences in primary research and examples from SRs being conducted by the team. The applicability of global networking to increase capacity for SRs in Jamaica was described.

**Results:** Challenges were: 1) accessibility to the literature, 2) human resources in research, 3) local funding and 4) knowledge translation (KT). We found access to published literature was incomplete. There were limited human resources to conduct SRs, especially information scientists, knowledge brokers and expert SR methodologists as well as limited research funding. The approaches to overcome these challenges were; establishing membership within research networks, implementing training fellowship for SR authors, conducting sensitization and training workshops with specialized groups, and collaborating with developed country researchers for wider access to both funding and human resources.

**Conclusion:** Challenges in conducting SR in developing countries can be overcome. Approaches to strengthen KT should be prioritized in order to generate and promote a robust, generalizable evidence base for healthcare and policy. © 2015 Elsevier Inc. All rights reserved.

**Keywords:** Systematic reviews; Training; Knowledge translation; Policy; Evidence

## 1. Introduction

Jamaica like other low- and middle-income countries (LMIC) faces greater challenges in applying the evidence to solve health care problems and strengthen health systems because of fewer financial, human, and technical resources when compared with upper income countries. Evidence from systematic reviews (SR) is now key to the development of guidelines used in patient care, health policy, and health system management as well as in setting research agendas and developing scientific consensus statements [1–3].

Caribbean researchers are involved in conducting SRs, typically propelled by personal interests or exposure while being trained at overseas institutions. These researchers also contribute as content experts or co-authors in

specialized areas relevant to the Caribbean. Despite this history, there is still no organized system for conducting SRs in the English-speaking Caribbean.

The University of the West Indies Clinical Epidemiology Unit collaboratively with the CanUSACLEN has established a fellowship program for Caribbean researchers aimed at training persons in SR methodology as well as clinical epidemiology, with three persons benefitting from this program to date.

In this article, we highlight some of the challenges of conducting SRs in LMICs, as well as the approaches taken to overcome these challenges using the Jamaican experience as an exemplar. The challenges experienced by the authors have been divided into the following areas:

1. Poor access to the published literature.
2. Inadequate human resources in research.
3. Scarce local/regional funding.
4. Minimal capacity for knowledge translation (KT) and dissemination.

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### What is new?

- The capacity to conduct systematic reviews in developing countries is significantly hindered by lack of trained persons and poor access to the published literature.
- This paper adds to the literature highlighting a gap in the use of systematic reviews in policy decision making in developing countries.
- There is a need for additional training in the conduct of systematic reviews and partnerships with established agencies such as WHO to improve the understanding and use of these reviews in developing countries.

### Challenges

- Limited access to published literature.
- Inadequate human resources in health research.
- Scarce local funding.
- KT deficit.

### Lessons learned

- In many LMICs, the value of SRs is poorly understood and requires sensitization of key stakeholders such as policy makers.
- The usefulness of any evidence synthesis to improve health systems and impact policy and practice is largely dependent on effective KT.
- A significant difference exists in the needs and interest of researchers and policy makers... a gap that can be bridged by sustainable centers of excellence in knowledge synthesis and translation.

### Recommendations

LMICs Universities would benefit from:

- Partnering with UN agencies such as the WHO's Health InterNetwork Access to Research Initiative (HINARI).
- Engaging agencies such as INCLEN, Cochrane Collaboration, and the Campbell Collaboration to establish training fellowships and drawing on skills of experienced researchers.
- Increase dialog with governments and academic institutions to sensitize on the importance of systematic reviews in policy while using the share resources approach.
- Establish relationships with end users and establish centers of excellence in knowledge synthesis and translation.

### 1.1. Poor access to the published literature

LMICs often have limited access to the published literature; however, this is not an entirely unique challenge. The extent of access is greatly influenced by the resources of the institution to which the review authors are affiliated [4]. In Jamaica (like other LMICs), access to the major journals in biomedical and related social sciences is usually limited.

Small university subscriptions do not provide access to all the required journals and databases needed to conduct an SR. Subscriptions to search databases such as OVID MEDLINE are expensive and, in many instances, amount to more than a yearly library budget. This affects the quality of the SRs by restricting them to what literature is available.

Information for evidence synthesis in SRs incorporates both peer-reviewed publications and gray literature including technical reports, position articles, conference proceedings, and other formats of documented research findings that are often unpublished. In the local setting, the use of gray literature is infrequent because it is difficult to search for and retrieve due to the absence of updated or online central gray literature repositories for unpublished data and reports.

#### 1.1.1. What has been our experience in overcoming these challenges?

Several approaches have been used in overcoming these challenges. There are information sharing agreements between our university and several international agencies. One such example is the WHO's HINARI, which allows over 250 publishers to provide free or partial access to more than 5,000 institutions in LMICs.

In addition to using sharing agreements, critical players are included from the initial planning stages. This includes dialog with local librarians to ascertain potential capacity to allocate time to search and retrieval of articles. Additionally, the involvement of collaborators from developed countries has been helpful, both because of specialized skill sets available and increased access through more highly resourced university libraries.

#### 1.1.2. Example

The search strategy for the SR "Food Supplementation for improving the physical and psychosocial health of disadvantaged children aged three months to 5 years" identified 29,000 citations that after screening resulted in 300 full-text articles for evaluation. Locally, 33% of these full-text articles could be retrieved through our university library subscription, whereas 80% could be obtained by our Canadian partners through their library subscriptions and interlibrary loan arrangements. The remaining 20% had to be purchased online. To overcome hurdles of retrieval in this review, full-text retrieval and screening was mostly done in Canada.

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