

Challenges in conducting systematic reviews in developing countries

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Cochrane GESI Webinar Series



Objectives

- This presentation will explore:
 1. Contextual and methodological challenges to conduct systematic reviews in developing countries.
 2. Approaches to overcoming the challenges using experiences from Jamaica.

Background

- Systematic reviews are widely accepted as a ‘gold standard’ in evidence synthesis which informs decision making in health and development.
- Although systematic reviews help us determine what we know, they are also powerful tools for documenting knowledge gaps in the literature.
- These identified gaps can be used to shape future research agendas

Challenges

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

Poor Access to Published Literature

- While this challenge is not unique to developing countries, access to published literature is often limited.
- Subscription to large search databases such as OVID are prohibitive and may be more than the entire university library budget.
- Information for evidence synthesis in SRs incorporates both peer-reviewed publications and the grey literature.

- SRs conducted in LMICs often inadequately search the grey literature due to resource constraints.
- Check eligibility for WHO's Health InterNetwork Access to Research Initiative (HINARI) which allows over 1500 Journals from 6 major publishers to provide free or partial access to more than 5,000 institutions in LMICs.
- Dialogue with local information scientist to assess capacity to conduct specialize search and retrieve publication.

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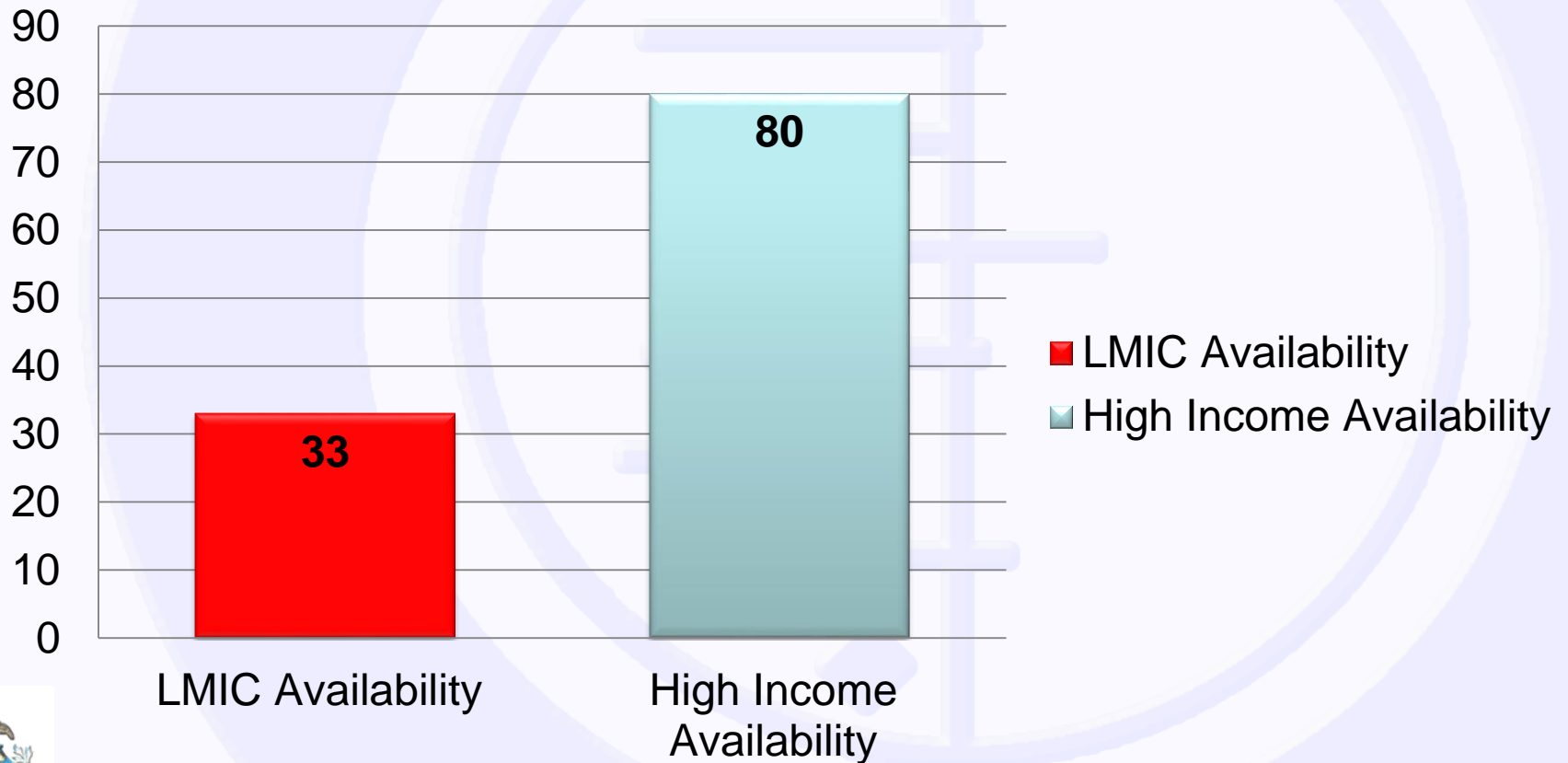
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Collaboration: Food Supplementation Review

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LMIC Availability

High Income Availability

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et al.

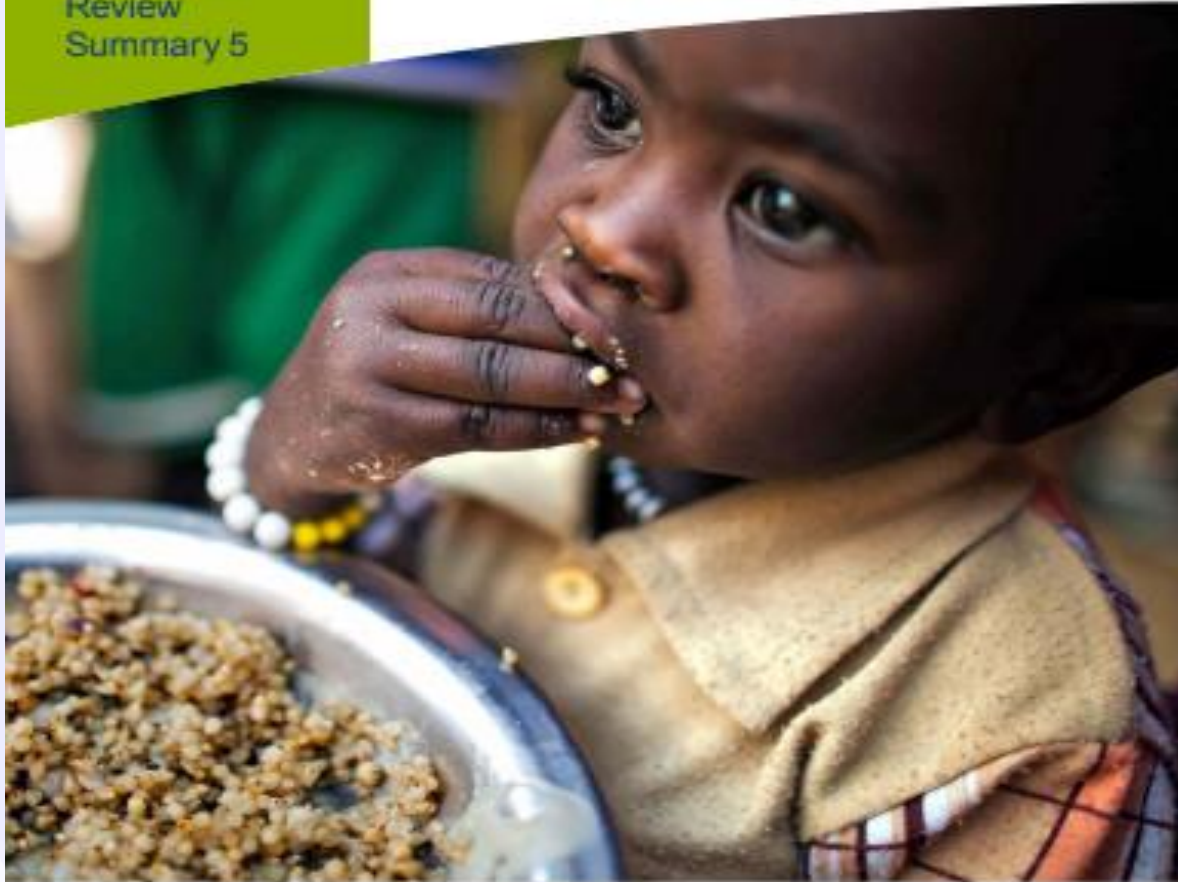
Supplementary feeding for improving the health of disadvantaged infants and children

What works and why?

March 2016

Systematic
Review
Summary 5

Health Services



Inadequate Human Resource in Research

- Gaps in specialized skills required for knowledge synthesis and translation.
- Commonly, shortages are in the areas of :
 - 1) information searching and retrieval and
 - 2) statistical analysis.
- Very few contributors to the Cochrane products were from the English speaking Caribbean.

Building capacity to conduct SRs

- In order to overcome skill deficits in conduct of SRs: strategic partnerships were developed.
- Partners included:
 - the Cochrane and Campbell Equity Methods Group (Peter Tugwell & Vivian Welch)
 - Cochrane review groups (particularly the wounds group)
 - Cochrane US Centre (Kay Dickersin & Roberta Scherer)
- Partners have provided support and necessary guidance for methodological challenges when they arise.

Cochrane Caribbean CAIHR Systematic Review Workshop



Scarce Local Funding

- Accessing research funding is very competitive and often require developing countries to partner with universities in high income countries.
- Very few developing countries may have such partnerships.
- Within the current funding framework there are limited opportunities for grant funding to conduct SRs.

- In tackling this challenge, our team has made efforts to increase the awareness of:
 - governments and academic institutions through training and sensitization workshops.
- Funding challenges are addressed through shared personnel time and collaborating partners.
e.g. “Deworming and Adjuvant Interventions for Improving the Developmental Health and Well-being of Children in Low- and Middle-income Countries”

Funding- Canadian Institutes of Health Research and WHO.



Mass deworming to improve developmental health and wellbeing of children in low-income and middle-income countries: a systematic review and network meta-analysis

Vivian A Welch, Elizabeth Ghogomu, Alomgir Hossain, Shally Awasthi, Zulfiqar A Bhutta, **Chisa Cumberbatch**, Robert Fletcher, Jessie McGowan, Shari Krishnaratne, Elizabeth Kristjansson, Salim Sohani, Shalini Suresh, Peter Tugwell, Howard White*, George A Wells*



Summary

Background Soil-transmitted helminthiasis and schistosomiasis, considered among the neglected tropical diseases by WHO, affect more than a third of the world's population, with varying intensity of infection. We aimed to evaluate the effects of mass deworming for soil-transmitted helminths (with or without deworming for schistosomiasis or co-interventions) on growth, educational achievement, cognition, school attendance, quality of life, and adverse effects in children in endemic helminth areas.

Methods We searched 11 databases up to Jan 14, 2016, websites and trial registers, contacted authors, and reviewed reference lists. We included studies published in any language of children aged 6 months to 16 years, with mass deworming for soil-transmitted helminths or schistosomiasis (alone or in combination with other interventions) for 4 months or longer, that reported the primary outcomes of interest. We included randomised and quasi-randomised trials, controlled before–after studies, interrupted time series, and quasi-experimental studies. We screened in duplicate, then extracted data and appraised risk of bias in duplicate with a pre-tested form. We conducted random-effects meta-analysis and Bayesian network meta-analysis.

Lancet Glob Health 2017;
5: e40–50

See [Comment](#) pages e2 and e4

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Minimal Capacity for KT

- The usefulness of any evidence synthesis to improve health systems, and impact policy and practice is largely dependent on effective knowledge translation (KT).
- KT require additional skills that are not incorporated in the training of most researchers.
- It involves developing a network of end-users who will facilitate the flow of information once the SR is completed.

- Health systems in many LMICs struggles to effectively implement evidence-informed interventions.
- Much of this challenge can be ameliorated by having sustainable capacity to retrieve, synthesize, interpret, and translate evidence for use by policy makers, public health practitioners, and consumers.

- To this end our team established a Cochrane Associate Centre in the Caribbean and partnered with the Caribbean Public Health Agency to provide support for integration of evidence into guidelines and policy.





TMRI **FOCUS**

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The Tropical Medicine Research Insti-

Cochrane Caribbean Launched!



From left- Ernest Pate (PAHO), Mark Wilson (Cochrane CEO), Roberta Scherer (US Cochrane Centre), Damian Francis (CBUSCC/ TMRI), Jeremy Grimshaw (Canadian Cochrane Centre), Nadia Bennett (CBUSCC/TMRI), Peter Tugwell (University of Ottawa), Luis Gabriel (PAHO) & Marshall Tulloch-Reid (CBUSCC/TMRI) at the launch of CBUSCC.

The Tropical Medicine Research Institute continues to build on its tradition of excellence in research and development with the launch of the Caribbean Branch of the United States Cochrane Center (CBUSCC).



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Summary

Challenges

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

Summary

Lessons Learned

- In many LMICs the value of SRs are 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 knowledge translation.
- A significant difference exists in the needs and interest of researchers and policy makers... a gap that can be bridged by sustainable centres of excellence in knowledge synthesis and translation.

Take Home Message

LMICs Universities would benefit from:

- Partnering with UN agencies such as the WHO HINARI.
- Engaging agencies such as INCLEN, Cochrane Collaboration and the Campbell Collaboration to establish training fellowships and drawing on skills of experienced researchers.
- Increase dialogue with governments and academic institutions to sensitize on the importance of systematic reviews in policy while utilizing the share resources approach.
- Establish relationships with end-users and establish centres of excellence in knowledge synthesis and translation.





**THANK
YOU!**