Systematic reviews within Evidence-informed Decision-Making (EIDM) in nutrition and health

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PART 1: EVIDENT
A COLLABORATIVE EFFORT TO ENHANCE EVIDENCE-INFORMED DECISION-MAKING AND POLICY-DRIVEN RESEARCH IN HEALTH AND NUTRITION ON A GLOBAL LEVEL
Why EVIDENT – Demand

• Quality evidence maximizes benefits of interventions
• Especially in Low-resourced settings
Why EVIDENT – SUNRAY?

• Gaps in research in Africa
  – Research not adequately linked with local priorities
  – Research and policy community not linked
  – Research waste

www.evident-network.org
Mission

To bridge the gap between researchers and decision-makers by identifying information needs in nutrition and health and translating evidence into concrete recommendations actionable by responsible bodies.
Figure 1 EVIDENT Conceptual framework for evidence-informed decision-making (EIDM)

1. Prioritizing research questions
2. Generating evidence (e.g. systematic reviews)
3. Contextualising evidence
4. Facilitating use of evidence

Capacity & leadership

Stakeholder involvement

Problem-oriented and evidence-informed decision-making

Horizontal collaboration
Expected outputs

• Stakeholders and researchers trained in HTA and evidence-based policy making
• Methodological tools and processes produced
• Evidence products generated and contextualized (e.g. systematic reviews, rapid reviews, HTAs, policy briefs)
• Use of evidence in policy and facilitating its practice
Who is in EVIDENT?

NORTH-WEST UNIVERSITY
UNIVERSITY OF GHANA
INSTITUTE OF TROPICAL MEDICINE ANTWERP
The University Of Sheffield
NICE National Institute for Health and Care Excellence
UNIVERSITEIT GENT
LEUVEN UNIVERSITY
PART 2: EVIDENCE TO INFORM DECISION-MAKING

I HAVE NO IDEA WHAT'S GOING TO HAPPEN.

AND I LOVE IT.
What is evidence?

Evidence:

“findings from research and other knowledge that may serve as a useful basis for decision making in public health and health care.”

(Source: Health evidence network, WHO in Lomas et al, 2005)
“Level of evidence” pyramid

- Systematic Reviews
- Critically-Appraised Topics [Evidence Syntheses]
- Critically-Appraised Individual Articles [Article Synopses]
- Randomized Controlled Trials (RCTs)
- Cohort Studies
- Case-Controlled Studies Case Series / Reports
- Background Information / Expert Opinion

FILTERED INFORMATION

UNFILTERED INFORMATION

- Political judgement
- Resources
- Values
- Lobbyists

Scientific evidence
Mind the gap

Research is:

- Difficult to locate on the WWW
- Inaccessible (paywall)
- Scientific silos
- Descriptive studies $\rightarrow$ no support for policy development
Mind the gap

Decision-makers:
• Evidence is less robust than they think
• Wrong use of evidence; anecdotal evidence (due to lack of time and capacity)
• Evidence is not consulted
Evidence for decision-making

...decision-making which is not informed by:

- Local priorities (donors/civil society/DM)
- Evidence (research/policy level)

→ a waste of time and resources

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Strategies to review evidence

Review Article

A typology of reviews: an analysis of 14 review types and associated methodologies

Maria J. Grant* & Andrew Booth†, *Salford Centre for Nursing, Midwifery and Collaborative Research (SCNMCR), University of Salford, Salford, UK, †School of Health and Related Research (ScHARR), University of Sheffield, Sheffield, UK

Source: http://hlwiki.slais.ubc.ca/index.php/Rapid_reviews
What is a systematic review

A review of a **clearly formulated question** that uses **systematic and explicit methods** to **identify, select and critically appraise** relevant research and to **collect and analyse data** from the studies that are included in the review.
Key properties

TRANSPARANT

REPLICABLE

SYSTEMATIC
Steps in a systematic review

- Question
- Searching evidence
- Selecting studies & collecting data
- Combining evidence
- Quality appraisal
- Recommendations
PART 2: FRAMING THE QUESTION

I DON'T KNOW WHAT TO DO, THE MORE I RUN THE MORE WEIGHT I SEEM TO PUT ON
The way forward

Session 3: PICO
Asking ...a Question

Information

More than you could ever dream of knowing

Why it's always good to ask questions
1. Is the topic important?

2. Are viable options available to address the topic?

3. Is there an opportunity for change?

4. Is there important uncertainty about the topic and potential solutions?

5. Is relevant research evidence available?

6. Is there interest in informed deliberation about the problem and potential solutions?
** Session 3: PICO **

<table>
<thead>
<tr>
<th><strong>Population</strong></th>
<th><strong>The Who?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Defined in terms of age, sex, ethnic origins, defining characteristics of the patients and the population</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Intervention</strong></th>
<th><strong>The What?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This is what is happening to the patient or population,</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Comparison(s) or alternative option(s)</strong></th>
<th><strong>The What Else?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>With what is the intervention (or population) being compared? This could be a control group.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Outcome or the intended effect</strong></th>
<th><strong>To achieve What?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>What outcome do you expect to see?</td>
</tr>
</tbody>
</table>
Framing your question – PICO(T)(C)

<table>
<thead>
<tr>
<th>Type of study</th>
<th>What type of studies will you include</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context</td>
<td>What is the specific context of your population and/or intervention</td>
</tr>
</tbody>
</table>
What is your review Q

To assess the effects of [intervention/control] for [health problem] in [types of people, disease or problem, and setting if specified] + 1/more secondary objective (different participant groups, different outcome measures, etc)
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Framing your question

- Pregnant women are usually provided with supplements of iron+folic acid (IFA)
- UNICEF/WHO/UNU have suggested that multiple micronutrients (UNIMMAP) might be more beneficial
- Your Minister of Health would like to know if it is worthwhile to switch from IFA to UNIMMAP.

Translate this request in a review question
• **What do you consider the issue?**
  – Give a single response accurate summary
  – Real problem in your own words ➔ discuss in group
  – Can you draw the problem up in a diagram?
  – Frame your question
• **What do you consider the issue?**
  - Give a single response accurate summary
  - Real problem in your own words ➔ discuss in group
  - Can you draw the problem up in a diagram?
  - Frame your question
### PICO

<table>
<thead>
<tr>
<th>Population</th>
<th>Pregnant women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>Multiple micronutrient supplements. Duration is not defined. Dosage should be the one proposed by UNICEF/WHO/UNU</td>
</tr>
<tr>
<td>Control</td>
<td>Iron and folic acid supplements. Duration is not defined. Usual dosage recommended.</td>
</tr>
</tbody>
</table>
| Outcomes     | 1. % reduction in neonatal mortality (main outcome)  
               2. % reduction in low birthweight (secondary outcome)  
               3. % reduction in premature delivery (secondary outcome)  
               4. Cost-effectiveness |
| Context      | Low- and middle-income countries |
| Type of studies | RCT’s |