Local Public Health

“Bridging the science-to-policy gap in agri-food public health”

University of Guelph
March 6, 2013

David L. Mowat, MBChB, MPH, FRCPC
Medical Officer of Health
Region of Peel
Generating and Sharing Knowledge

- Fesikh (Coptic dish for Sham al-Nessim)
  Salted & fermented fish
  Clostridium botulinum type E
Challenging and Contextualizing Knowledge
Relevance of Evidence

- Can it work?
- Does it work?
- In what circumstances does it work?
- Is it acceptable and feasible?
- At what cost does it work?
- How are benefits and risks distributed?
- Is the capacity available?
- Is it worth doing?
Synthesizing Evidence
Formula feeding impairs cognitive performance

$125,000 mass media campaign
Problems in 2007

- Unsystematic searching for the evidence
- Uneven appraisal of research
- Finding evidence to support a solution
Rapid review process

- Problem definition
- Search
- Critical appraisal
- Data extraction
- Synthesis
- Applicability and transferability
- Recommendations
- Manager checklist
- Change management
- Knowledge transfer and exchange
Participants

- Manager-specialist pair
- Program team
- Mentors
- Director and Medical Officer of Health
Team Defines the Issue

Coverage Target for Influenza Immunization

Augustine Nagbebi-Asseze, Analyst, Research and Policy
Susan Hertz, Supervisor
Loretta Rowan, Manager

July 22, 2012

The Health Impacts of Exposure to Outdoor Tobacco Smoke: A Rapid Review of the Evidence

Frances Urselli, Research and Policy Analyst, Health Hazard Investigation & Vector borne Disease Program
Andrea Chieffo, Manager, Environmental Health
Region of Peel Public Health

July 2011
Databases

- Virtual library: 18
- Typically use 3 to 4

Filtered sites

- NICE
- CDC community guide
- Healthevidence.ca
Critical appraisal process

- 2 independent reviewers
- Supports
  - Knowledge broker
  - Critical appraisal course
  - Critical appraisal club
Critical appraisal

Textbooks: Adapted template from Cornell University
Guidelines: Agree 2
Systematic reviews: health evidence or CASP
Qualitative: Various
Other study designs: CASP

Source: http://www.peelregion.ca/health/library/critical-appraisal.asp
# Data Extraction

*Source: Public Health Practice Effectiveness Project*

## STEP 4 – DATA EXTRACTION FOR SYSTEMATIC REVIEWS

<table>
<thead>
<tr>
<th>General Information and Quality Rating for Each Review</th>
<th>Details of Each Review</th>
<th>Details of Interventions Included in Review</th>
<th>Outcome Measurements in Review</th>
<th>Results of Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author(s) and data</td>
<td>Number of primary studies included</td>
<td>Description of interventions</td>
<td>Primary outcomes</td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>Types of studies included</td>
<td>Intervention providers</td>
<td>Secondary outcomes</td>
<td></td>
</tr>
<tr>
<td>Quality rating</td>
<td>Search period</td>
<td>Intervention settings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generalisability to local population</td>
<td>Number of databases searched</td>
<td>Theoretical frameworks</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inclusion and exclusion criteria</td>
<td>Target groups</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Applicability and Transferability
Rapid Reviews

- obesity in children from birth to six years
- does food handler training improve food safety?
- infant feeding and cognitive development
- infant feeding and development of type 2 diabetes
- healthy weights and supportive environments: nutrition focus
- ethno-cultural factors that influence infant feeding practices among ethnically diverse women in Western countries.
## Appendix C
### Table 1 – Summary of Included Articles of Food Handler Training Programs

<table>
<thead>
<tr>
<th>Study, (country)</th>
<th>DESIGN (Quality Assessment)</th>
<th>Participants (number)</th>
<th>Intervention</th>
<th>Outcome (knowledge, attitude, behaviour and / or work practices)</th>
<th>Findings</th>
<th>Relevance Decision</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mann, 2001 (Canada)</td>
<td>Systematic Review (strong)</td>
<td>Various 55 relevant studies captured. Of these, five food handler training studies (Kinsher, 1990; Cotterchio et al., 1998; Rinke et al., 1975; Waddell &amp; Rinke, 1985; Ehir, 1997) were rated as being of good enough quality (moderate) to be critically appraised.</td>
<td>Various including: Formal courses for Managers / Staff, Lecture, Home study, CD ROM Audio tape, Manuals, Workshops.</td>
<td>Changes to inspection scores (Kinsher, 1990; Cotterchio et al., 1998). Changes in knowledge (Rinke et al., 1975; Waddell &amp; Rinke, 1985; Ehir, 1997).</td>
<td>Of 55 relevant articles captured through the search, 48 were rated as being weak. Three of five studies (of moderate quality) (Cotterchio et al., 1998; Rinke et al., 1975; Waddell &amp; Rinke, 1985) found food handler training to be effective in enhancing food safety knowledge and behaviour among food handlers. There was a lack of evidence in two studies (Kinsher, 1990; Ehir et al., 1997) to support food handler training / certification.</td>
<td>INCLUDED</td>
<td>Sound methodology and transparency. Multiple interventions examined beyond food handler training. Problems with quality assessment methodology. Lack of rigour in the design of included single studies resulting in conclusions that could be overstated. NOTE: Mann rated many of the moderate and strong studies (10/14) from the Campbell review as weak.</td>
</tr>
<tr>
<td>2. Cates, S. et al., 2009 (USA)</td>
<td>Cohort Retrospective (moderate)</td>
<td>4,461 establishments</td>
<td>Certified kitchen manager (CKM)</td>
<td>Inspection scores based on 8,338 routine inspection results. Premises broken down into three categories (with liquor, without liquor, and taverns with food)</td>
<td>Restaurants with a CKM present during inspection were less likely to have a critical violation (CV) for certain issues (food source or handling (OR=0.80, P&lt;0.01), facility or equipment requirements (OR=0.85, P&lt;0.05) but equally likely to have a CV for other issues (hot holding, temperature abuse)</td>
<td>INCLUDED</td>
<td>There is a lack of adequate information on the training of CKMs. There was no explanation about why the types of premises were selected for the study. The fact that a manager is certified does not necessarily mean that the certification alone causes a reduction in certain violations. Having a manager present may have an effect on improving certain conditions. This was not stated in the limitations.</td>
</tr>
</tbody>
</table>
Questions?