Building capacity for evidence utilisation in Victorian local governments

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The Jack Brockhoff Child Health and Wellbeing Program,
McCaughey VicHealth Centre for Community Wellbeing
background

- Many barriers, facilitators to EIDM (Innvaer 2002; Orton 2011)
- KTE proposed to facilitate EIDM
- One RCT in public health departments (Dobbins et al 2009)
  - Tailored targeted messages by Knowledge broker more effective in org’s where research use culture low
  - Need for strategies to address org. culture
- Recent international efforts
  - Health Systems Evidence – Lavis et al, KT Canada platforms
  - CIPHER – Sax Institute (NHMRC CRE)
  - TROPIC – Deakin University & C-POND Fijian Nat. University
barriers to EIDM

International and local research with decision-makers & practitioners suggest a lack of:

- Time
- Trust
- Access to evidence
- Accessibility of evidence
- Access to researchers
- Timeliness
- Evidence

KT strategies for EIDM

**Push**
Generally linked to dissemination strategies e.g. Systematic reviews, clearinghouses, websites

**Pull**
Support DMs to seek out evidence e.g. Workforce development, IT access, DM tools

**Exchange**
Meaningful and reciprocal relationship

Lavis, Lomas, Hamid, Sewankambo 2006
**Effectiveness of KT strategies:**
preliminary research

- NHMRC project grant
- Systematic review - KT&E strategies
- Intervention program logic model
- Lit. review, theory, frameworks
- Baseline EviDM survey, Interviews

Armstrong et al 2009 Cochrane Database Syst. Rev (protocol)
Armstrong 2011 PhD thesis
Waters et al 2011 BMC Public Health
Methods

- **Exploratory cluster RCT** in Victorian local government (LG) 2 years 2009 – 2011
- Focus on evidence for obesity prevention – public health planning
- EvIDenT survey* **Baseline**: 45 LGs; n=135 individuals
- 28 LGs block randomized by budget tertile (14 Intervention; 14 Comparison)

**Mixed methods Process & Impact Evaluation**
- EvIDenT survey* **post-intervention** 28 LGs; n=76 individuals
- Interviews with council staff, managers, CEOs
- KB reflective diaries, database of contacts
- Training evaluations

**Approach:** Knowledge Utilisation framework/ Diffusion of Innovations

**Activities/Components**
- Tailored support
- Training
- Targeted communication
- Evidence summaries

**Process Evaluation:** Intervention reach, dose, quality, fidelity, cost/resources, barriers & enablers

**Individual Outcomes**
- Increase confidence
- Increase skills
- Increase access

**Organisational Outcomes**
- Improve EIDM culture within public health (PH) team

**System Outcomes**
- EIDM culture and system-level support

**Assumptions:**
- Increased support & interaction through facilitated program will improve outcomes
- Knowledge, confidence and skills predict research use
- EIDM culture at system-level influences the EIDM culture and research use in organisations but requires individuals with knowledge, skills & confidence
- Innovation will spread through organisations and the system

**Contextual Factors:**
- Type of decision, type of use
- Decision-making structures/systems
- Council size and structure

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Armstrong et al 2013 *Implementation Science*
**Intervention components**

**Tailored support**
- Knowledge broker
- Monthly contact: Scheduled
- Support-response, tailored messages
- Visits, meetings: ad hoc

**Group Training**
- **Group training** for skills development and networking
- Biannual, all councils invited
- Skills: ask, access, assess, apply research evidence

**Targeted communications**
- **Evidence summaries** for Local Govt & Obesity prevention
- Developed through broad consultation
- Published on CO-OPS
**Participants**

<table>
<thead>
<tr>
<th>Control (CON): 14 LGs</th>
<th>Intervention (INT): 14 LGs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed baseline survey: 45 LGs</td>
<td>Consented to participate in phase 2: 28 LGs</td>
</tr>
</tbody>
</table>

Randomisation

- **Control (CON):** 14 LGs
- **Intervention (INT):** 14 LGs

<table>
<thead>
<tr>
<th></th>
<th>Baseline 2009</th>
<th>Follow-up 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>n</strong></td>
<td>INT</td>
<td>CON</td>
</tr>
<tr>
<td>42</td>
<td>93</td>
<td>34</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24=F, 18=M</td>
<td>62=F, 31=M</td>
<td>27=F, 7=M, 10=M</td>
</tr>
<tr>
<td><strong>Age (median)</strong></td>
<td>40-49</td>
<td>40-49</td>
</tr>
<tr>
<td><strong>Job title (median of 7 categories)</strong></td>
<td>Prog Mgr</td>
<td>Planner</td>
</tr>
<tr>
<td><strong>Education level (median of 8 categories)</strong></td>
<td>GrDip</td>
<td>Bach</td>
</tr>
<tr>
<td><strong>Years in Local Govt (mean, range)</strong></td>
<td>12.9</td>
<td>9.4</td>
</tr>
<tr>
<td></td>
<td>0.5 - 33 y</td>
<td>0.1 - 33 y</td>
</tr>
<tr>
<td><strong>Years in current position (mean, range)</strong></td>
<td>4.5</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>0.1 - 12 y</td>
<td>0.1 - 30 y</td>
</tr>
</tbody>
</table>

*statistically different between INT and CON at baseline*
Reach

*Database, attendance records*

- 13 councils, 61 participants involved in monthly contact
  - began with 62: of those 30 remained in council; 32 new pts joined (52% turnover)
- 123 attendances at biannual group training
Dose, Fidelity

contacts delivered and individual participants contacted (unique) per month

- **Dose**: monthly contacts, 61 participants
- **Fidelity**: All components delivered as intended
Activities (1)

• **Knowledge broker’s focus**
  - Skills (23%); Access (20%); Instrumental research use (12%), Intervention evidence (9%); Confidence (6%); Organisational research use (6%)

• **Participants’ focus**

<table>
<thead>
<tr>
<th>RESEARCH USE</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Local Govt responsibilities</td>
<td>22%</td>
</tr>
<tr>
<td>Research use (General)</td>
<td>39%</td>
</tr>
<tr>
<td>Data (Type 1)</td>
<td>2%</td>
</tr>
<tr>
<td>Intervention (Type 2)</td>
<td>3%</td>
</tr>
<tr>
<td>Implementation (Type 3)</td>
<td>1%</td>
</tr>
<tr>
<td>Organisational research use</td>
<td>3%</td>
</tr>
<tr>
<td>Organisational culture</td>
<td>3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SKILLS</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skills (for research use)</td>
<td>25%</td>
</tr>
<tr>
<td>Organisational capacity building</td>
<td>4%</td>
</tr>
</tbody>
</table>
Activities (2)

- **Group training**
  - 123 participants, 72% completed evaluation forms
  - Free-text responses to questions, analyzed thematically
  - **Enjoyed most**: Skill development/acquisition (53%); interactive structure (25%)
  - **Plan to apply to practice**: Searching techniques/tools (51%); PICO (35%); applicability/transferability tool (28%); use of research in practice (22%)
  - **Training useful for informing practice?** Yes (75%)

“Very useful. Always good to be reminded/ re-motivated.

“Interactive group work. Helped to see how it can be applied to practical situations.”

“Group tasks were useful and adaptable to workplace.”

“These sessions are useful when they are practical and linked to real issues/challenges facing local government.”
### KB use of time

<table>
<thead>
<tr>
<th>Activity</th>
<th>% Time spent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meetings/site visits</td>
<td>21</td>
</tr>
<tr>
<td>Participant Contact- phone</td>
<td>17</td>
</tr>
<tr>
<td>Participant support*</td>
<td>17</td>
</tr>
<tr>
<td>Data Collection/evaluation</td>
<td>16</td>
</tr>
<tr>
<td>Participant Contact- email</td>
<td>13</td>
</tr>
<tr>
<td>Miscellaneous administration</td>
<td>9</td>
</tr>
<tr>
<td>Training</td>
<td>5</td>
</tr>
<tr>
<td>Dissemination</td>
<td>1</td>
</tr>
</tbody>
</table>

### KB reflective diary

- Not enough time – more investment in establishing relationships, understanding context
- Breadth of focus put strain on time

### Time spent – contacts & visits

<table>
<thead>
<tr>
<th>Activity</th>
<th>% Time spent (mean ± SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All calls continued, planned and unplanned</td>
<td>25 ± 12 min</td>
</tr>
<tr>
<td>Meetings and visits</td>
<td>76 ± 26 min</td>
</tr>
<tr>
<td>All calls not continued (missed, rescheduled)</td>
<td>6 ± 22 min</td>
</tr>
</tbody>
</table>

*Accessing or summarising evidence, reviewing documents
Evidence summaries

Have had **access** to the evidence summaries developed for the project

- **INT, 66.7%**
- **CON, 28.6%**

Have **used** the evidence summaries developed for the project to inform local program decisions

- **INT, 3.6**
- **CON, 1.9**

Mean agreement rating:

- Scale 1 (disagree) - 7 (agree)
So, what (do we think) happened

Access: Decreased mean differential change
Culture: Increased mean differential change
Confidence: Decreased mean differential change

Did KT4LG influence participants perceptions of these domains?

descriptive  effectiveness
### Influence and Usefulness of evidence

#### INFLUENCE overall change – baseline to follow up (%)

<table>
<thead>
<tr>
<th>Type of Evidence</th>
<th>INT</th>
<th>CON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost all internal</td>
<td>3.8</td>
<td>8.8</td>
</tr>
<tr>
<td>A mixture, but more internal than external</td>
<td>-19.1</td>
<td>-10.9</td>
</tr>
<tr>
<td>A mixture but more external than internal</td>
<td>27.7</td>
<td>4.4</td>
</tr>
<tr>
<td>Almost all external evidence</td>
<td>-7.3</td>
<td>-7.3</td>
</tr>
</tbody>
</table>

#### USEFULNESS overall change – baseline to follow up (%)

<table>
<thead>
<tr>
<th>Type of Evidence</th>
<th>INT</th>
<th>CON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost all internal</td>
<td>0.0</td>
<td>2.9</td>
</tr>
<tr>
<td>A mixture, but more internal than external</td>
<td>-6.7</td>
<td>-6.7</td>
</tr>
<tr>
<td>A mixture but more external than internal</td>
<td>13.6</td>
<td>4.4</td>
</tr>
<tr>
<td>Almost all external evidence</td>
<td>-7.0</td>
<td>-7.0</td>
</tr>
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</table>
EIDM barriers

Change in mean rating score (1 disagree – 7 agree)

Relevant evidence is available
Evidence is accessible
Evidence is understandable
Not enough time to look
Too much information
Not enough time to understand/apply
Prioritise time to find/use
Like to develop skills to find/use
Feel confident to use

INT
CON
Barriers

• Organisational **culture**
  e.g. **Time** to participate in an exchange, **Time** to apply research to context) – thus having to push, not build capacity for access
  e.g. **Senior staff /management** – lack of internal champions
• Need to respond to **policy/priority change**
• Workforce **turnover** (52% left council)
• Not having a “**way in**”, not knowing what would help

Enablers

• Tools, processes development (systems) may assist with building organisation **culture**
• Training: confidence and skills
• Opportunity – new purpose when **priorities change**
• KB’s ability to find a “**way in**”, learning their priorities e.g. evaluation methods
• Workforce – engaging the right people early and when **turnover** occurs
Reflections – methods

• Cluster RCT feasible…but
  • Participants baseline ≠ follow-up
  • Large sample size required
  • Different types of individuals
• Recommendations for new research
  • Embed ability to follow individuals longitudinally
  • Investment in outcome measurement
    • Individual, organisational, involve DMs
Implementing KT strategies to enhance EIDM in public health decision-making

- Feasible, acceptable, willingness to pay
- Resources to implement, KB role
- Barriers and enablers, contextual challenges
- Organisational culture – development

KT4LG is the first study of its kind in Australia

- KB role promising for ↑ access & ?use
- Effectiveness still uncertain, underpowered
- Shifts in access, confidence
- But needs organisational and system support/ incentive
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