Partnerships between science and society:
Challenges and opportunities in evidence-based public health advice

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The myth of the broken system

With an abundance of public health research showing the need for action, why is the translation of science into practice and policy so slow?

“Public health is both art and science, but it shouldn’t be an act of faith. Too often, the evidence needed to inform decision-making at all levels of practice is hard to come by, of questionable quality and uncertain relevance. This affects the ability of the public health function to operate effectively, and the extent to which it is able to improve health” (King’s Fund, Evidence and Public Health: Towards a common framework, 2000)

The gap between discovery of new research findings and their application in public health and policy settings is extensive in time lapse, completeness, and fidelity (Ross et al Building capacity for evidence-based public health: Reconciling the pulls of practice and the push of research. Annu Rev Public Health. 2018 Apr 1; 39: 27–53)
Timely evidence

Severn Trent Water's Mythe water treatment plant was flooded on July 22, leaving 350,000 people (140,000 households) without water for 17 days.

Matching they pace of research with rapid needs is a challenge in health protection.
The right evidence

How well aligned are our priorities?
Sufficient evidence

When do you have sufficient evidence to make decisions?
Emerging / evolving evidence

There are times when decisions need to be made where the evidence is limited or emerging. Being transparent is key.
Constraining / restrictive evidence

New approaches are needed to identify and implement interventions that take into account a complex set of system-level factors. Data alone does not produce change.

Lankelly Chase builds partnerships across the UK to change the systems that perpetuate severe and multiple disadvantage.

We develop and support action inquiries into the changes that are needed. We don’t think any one person or organisation has all the answers, and so we aim to make these inquiries as collective and collaborative as possible.

Through years of working with people tackling issues such as homelessness, drug misuse, violence, mental ill health and poverty, we’ve observed that the systems which are effective in responding to severe and multiple disadvantage have some common qualities. We call these qualities systems behaviours.

Our action inquiries therefore aim to create the conditions within which these system behaviours can be tested, understood and promoted.
The role of PHE in evidence-based advice

- Identify research priorities
- Undertake research
- Influence research funding
- Review evidence
- Formulate advice
- Influence policy makers
- Evaluate interventions
Some things I have learned

• Framing research questions that can answer the real issues
• Diversity (social, professional, public / private)
• New approaches to collaborations
• Challenges in bringing together political will with finances and science
• Expertise is relative
• Need to prepare for new threats
• Don’t underestimate policy and decision makers
• We need a common language
• Vast opportunities for knowledge mobilisation
• Turn data into policy relevant stories
Public Health advice that is relevant

The art of decision making often involves knowing what information is important to a particular stakeholder at the right time often when a policy “window” is open. (Kingdon JW. Agendas, Alternatives, And Public Policies. New York: Pearson; 2010)
Perhaps the biggest challenge lies in the disconnect between how researchers disseminate their findings and how practitioners learn about the latest evidence.

Table 1

Preferred Methods for Disseminating or Learning about the Latest Research-based Evidence, United States

<table>
<thead>
<tr>
<th>Method</th>
<th>Researchers %a (rank)b</th>
<th>Local practitioners %a (rank)b</th>
<th>Local practitioners %a (rank)b</th>
<th>State practitioners %a (rank)b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic journals</td>
<td>100 (1)</td>
<td>35 (3)</td>
<td>33 (4)</td>
<td>50 (2)</td>
</tr>
<tr>
<td>Academic conferences</td>
<td>92.5 (2)</td>
<td>24 (5)</td>
<td>22 (5)</td>
<td>17.5 (6)</td>
</tr>
<tr>
<td>Reports to funders</td>
<td>68 (3)</td>
<td>--</td>
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<td>--</td>
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<tr>
<td>Press releases</td>
<td>62 (4)</td>
<td>--</td>
<td>12.5 (7)</td>
<td>--</td>
</tr>
<tr>
<td>Seminars or workshops</td>
<td>61 (5)</td>
<td>50 (1)</td>
<td>53 (1)</td>
<td>59 (1)</td>
</tr>
<tr>
<td>Face-to-face meetings with stakeholders</td>
<td>53 (6)</td>
<td>15 (7)</td>
<td>11 (6)</td>
<td>15 (7)</td>
</tr>
<tr>
<td>Media interviews</td>
<td>51 (7)</td>
<td>--</td>
<td>1 (9)</td>
<td>--</td>
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<tr>
<td>Policy briefs</td>
<td>26 (8)</td>
<td>24 (5)</td>
<td>17 (6)</td>
<td>30 (4)</td>
</tr>
<tr>
<td>Email alerts</td>
<td>22 (9)</td>
<td>46 (2)</td>
<td>34 (3)</td>
<td>40 (3)</td>
</tr>
<tr>
<td>Professional associations</td>
<td>--</td>
<td>30 (4)</td>
<td>48 (2)</td>
<td>24.5 (5)</td>
</tr>
</tbody>
</table>

aThe percentage is determined for any method ranked as one of three top choices.
bBased on a study of US public health researchers (n=266) [11, 136].
cBased on a study of US local public health department employees (n=147) [107].
dBased on a study of US local public health department employees (n=849) [64].
eBased on a study of US state public health department employees (n=596) [107].