Raising the standard of evidence

Tools and techniques to improve implementation and measure impact

Mair Bell
Ian Jones
Leanne Teichner
Raising the standard of evidence

Task

On each table:

• Introduce yourselves and your project

• Select one project to use as an example
Reviewing your evidence base

“There is nothing a politician likes so little as to be well-informed.”

“It makes decision making so complex and difficult.”

John Maynard Keynes
Reviewing your evidence base

“What works?”

Watch out for:

• Cherry picking

• Cut and paste
Reviewing your evidence base
**Reviewing your evidence base**

<table>
<thead>
<tr>
<th>Systematic Review</th>
<th>Rapid Evidence Assessment</th>
<th>Ad hoc searching</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most rigorous</td>
<td></td>
<td>Least rigorous</td>
</tr>
</tbody>
</table>

**REAs compared with SR:**
- Less exhaustive search
- Narrower inclusion criteria
- Limited critical appraisal

**But:**
- Can be done in a matter of weeks
- More rigorous than ad hoc searching
Reviewing your evidence base

Task

Thinking about your project:

• How strong or weak is the evidence base?

• Where would you look for evidence about what has worked elsewhere?

• If you need to commission a review of the evidence, who would you ask?
Impact and process evaluation

Evaluation Questions

**Impact**
- Did our smoking cessation service work?
- How many people stopped smoking as a result?

**Process**
- Was the service implemented as planned?
- What are the barriers and enablers?
- How can we improve implementation?

Use in combination
Theory of Change

For project planning and evaluation of both process and impact
Assessing implementation

Implementation
The **process** by which an intervention is put into practice

Why evaluate implementation?
- Context is important
- Formative, ongoing and iterative
- Identify enablers and barriers to achieving impact
- Powerful combination of Y/N with how & why
- Distinguish a poor idea from poor implementation
Process evaluation

Implementation
• What activities are delivered? [Quantity of activity]
• How are they delivered? [Quality of activity]
• Who received the intervention? [Reach of activity]

Mechanisms of impact
• How did participants interact with the intervention?
• Did the intervention lead to anticipated outputs?

Understanding the context
• Are there any contextual factors that we had not considered or anticipated?
• How did these affect implementation or mechanism of impact?
Process evaluation: exploring multiple perspectives

Participants
• Service users, beneficiaries
• Perceived strengths and weaknesses or intervention
• How intervention brought about change (or not)

Implementers
• Practitioners
• Extent to which training is implemented as intended
• Barriers and enablers

Gatekeepers and stakeholders
• Senior management & broader stakeholders
• Identify broader / institutional barriers and enablers
## Implementation assessment methods

<table>
<thead>
<tr>
<th></th>
<th>Quantitative</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Active</strong></td>
<td>Self-report questionnaires</td>
<td>Focus groups / In-depth interviews</td>
</tr>
<tr>
<td><strong>Passive</strong></td>
<td>Analysis of routine data</td>
<td>Observation</td>
</tr>
</tbody>
</table>

There is no one best way.
Assessing implementation

Task

• How will you assess the implementation of your intervention (i.e. the link between activities and outputs)?

  – Who will you collect data from?

  – At what stages will you collect it?

  – How will the data be analysed and used?
Measuring outcomes

• Are we making a difference?

• How big is the difference?

• Should we scale this up?

• **Combine with a process evaluation** → Not seeing the anticipated changes in outcomes? May be due to implementation issues
Measuring outcomes

Before and after comparisons

How would we know that any changes observed were due to our intervention, and not other factors?

Establish a counterfactual
Randomised Control Trials

- Participants randomly assigned to control or intervention group

Why randomise?
- Should create statistically identical groups
- Only difference is one gets intervention and the other doesn't
Randomised Control Trials

1. Randomise population into groups A and B
2. Pre-test: collect baseline data for groups A and B
3. Intervention given to group A
4. Post-test: collect data for groups A and B (any differences observed between the two groups due to intervention)
5. Follow-up tests at 6 and 12 months: Were differences in outcomes sustained over time?
Finding a control group

- Those who don’t quite meet the threshold to receive intervention
- Individuals with similar characteristics in other geographic areas

Chart 7.1 Number of days on which GP events occurred per record in the months before and after being referred to Supporting People
Measuring outcomes

When to collect data
- Pre, post and follow up measures
- Pre and post measures
- Post-intervention measure

Estimating the counter-factual
Randomise participants into intervention and control groups
- Participants and find a ‘quasi’ control group
- Participants only
Measuring outcomes

Task

Thinking about your project:

• How could you estimate the counterfactual?
  – Control group?

• At what points in time could you collect outcome data?
  – Pre, post and follow up?
The start of a journey...

Will you need further support?
Can Data Cymru (and other national partners) help?

**Our current thinking**
- Develop some simple guidance on evaluation – we’ll publish this shortly
- Provide advice and guidance on collecting, sourcing and using data effectively
- Helping you with your qualitative data needs
- Helping you make sense of your data
- Providing bespoke local support for planning and delivering your evaluation

What else?
Resources

Data Cymru evaluation guidance
http://data.cymru

What works network
http://www.gov.uk/guidance/what-works-network

Designing experiments for public services
http://ylab.wales/

Research practice guide

DECIPHER (evaluating health interventions)
http://decipher.uk.net/