Understanding and evaluating complex programs and policies

Ontario CES meetings

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An Example: Primary Prevention Have a Heart Paisley
10. External Factors
- Other funders
- Other research

Innovation Seen as Part of ODA

Grand Challenge Approach Adopted Elsewhere

Branding of Canada in Global Health

11. Other Benefits
- Innovation Seen as Part of ODA
- Grand Challenge Approach Adopted Elsewhere
- Branding of Canada in Global Health
System Dynamic Approaches (Sterman, 2006)

• Constantly changing;
• Governed by feedback;
• Non-linear, History-dependent;
• Adaptive and evolving;
• Characterized by trade-offs;
• Policy resistance: “The result is policy resistance, the tendency for interventions to be defeated by the system’s response to the intervention itself.”
Features of complex interventions (Pawson et al., 2004)

- The intervention is a theory or theories
- The intervention involves the actions of people.
- The intervention consists of a chain of steps
  - These chains of steps or processes are often not linear, and involve negotiation and feedback at each stage.
- Interventions are embedded in social systems and how they work is shaped by this context.
- Interventions are prone to modification as they are implemented.
- Interventions are open systems and change through learning as stakeholders come to understand them.
“Solutions” Can Also Create New Problems

Policy resistance is the tendency for interventions to be delayed, diluted, or defeated by the response of the system to the intervention itself.

-- Meadows, Richardson, Bruckman

System-as-Cause


## A Ten Step approach to Evaluation

### A. Intervention Theory and Developing Expectations of Impacts Over Time
- The key components of the complex intervention
- The program theory of the complex intervention
- Learning from the Evidence Base
- The anticipated timeline of impact

### B. Learning Frameworks and Pathways of Influence
- The pathways of influence of an evaluation
- Learning framework for the evaluation

### C. Impacts and Learning
- Assessing the impact of the intervention: DESIGN
- Learning about the intervention over time

### D. Spread and Sustainability
- Spreading learning from an evaluation
- Reflections on performance and sustainability
Taking Stock
• What are your key evaluation questions? Whom are these questions relevant? When is this information needed? Is the study a demonstration program? A continuous improvement project? What is planned to be spread as a result of the evaluation?
  – Towards a buffet of possibilities

• Is there a framework of learning?
  – Building an evaluation around learning questions
• What is your program/policy etc?
  – Is it stable?
    • What does stability mean in an intervention context?
    – What are your key program outcomes? How is your program likely to impact outcomes? What is your program theory?
    – What is the short term and long term views of success?
• Describe the context in which the intervention exists; What is the context in which the program is most likely to work?
• How does the program design incorporate the context?
  – Context as both a knowledge translation and impact problem
• Who is most likely to be impacted by your program? Our knowledge of such questions is often limited at the start of a program
  – Heterogeneous mechanisms as both a knowledge translation and impact problem
• How long will it take for the program to impact outcomes? Any ideas on a trajectory of impact?
  – Methods to develop anticipated trajectories of impacts

• What can we learn from prior evaluations? Learn about program impacts? Learn about program theory? Learn about impact trajectories....history matters
  – Evidence review as a program theory problem
Core Impact Evaluation Questions
What combinations of evaluation approaches are you adopting to answer the key evaluation questions?
- Movement away from singular designs

What design did you implement to study the impacts? How was the design informed by the program theory? How was the design informed by some implicit understanding of the timeline and trajectory of impact?
- Connecting theory driven evaluation with a range of other approaches

How does the design address threats to external and internal validity?
- Cook and Campbell are still incredibly relevant

How does the design study the “networks” of interventions? How does it study context and changes in context over time?
- Operationalizing the complexity of the intervention; Operationalizing context; operationalizing dynamic context
• What analysis methods did you use to study if there was an impact? What methods did you use to study why did the change happen (or not happen)?
  • Connect theories of change with impact evaluations
• What monitoring data were used? Were additional data collected as part of an evaluation? How was monitoring integrated with the evaluation?
  – Integrate monitoring with evaluation
• What were the impacts on the overall sample? What were the impacts on targeted groups?
  – Methods of heterogeneous impacts; learning through principled discovery
• How did the design link process to impacts?
  – Methods to link process to outcomes
• How sure are you that the program caused the change? Are there alternative explanations for the observed patterns?
  – How useful are concepts of threats to internal validity when dealing with highly innovative, dynamic systems?
• How does the design generate information that can be generalizable?
  – What are we generalizing?
• What were the unintended consequences of the program?
  – What methods did you implement to be open to the possibility of unintended consequences?
• If possible also address this question: Is it cost effective? Are the positive changes worth the costs of the project / programme / policy? (cost effectiveness)
  – Methods of economic evaluation
The ‘So What’ of the Evaluation
• Is the program generalizable? Can the program be scaled up?
  – Linkage between evaluation and scaling-up
• How do the results link to a framework of spread?
  – Linkage between evaluation, learning and spread
• Did the program impact the groups that needed the program the most? How should the program be adapted to ensure that future version of the program engage with those in need?
  – Differential impacts, heterogeneous mechanisms and knowledge translation
• How will the information help with decisions to sustain the program?
  – Evaluation, performance and sustainability

• Based on what is learned from the evaluation, how should the program theory be adapted?
  – Dynamic, emergent program theory

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1. Elements of the intervention

- Intervention System
- Components of the Intervention
- Stability of the components
- Impacts on evaluation design
2. Program theory

What are the "active ingredients" of each of the intervention dimensions?

Resources
- Centralised data repository
- Existing community partners
- HHBC
- Primary Care

Identify & Reach Target Population
- Focus on deprived areas
- Invitation letters
- Marketing / Community Engagement

Risk Screening
- Communication of risks

Health Coaching

Signposting to Services

Micro-Interventions

Outcomes

What is the relationship between deprivation and risk score?

How was the health coaching framework modified to target deprived areas/population?

What factors are associated with adherence to health coaching over time?

Increased Participant Knowledge and Understanding to Enable Behavioural Change

Adherence to agreed-upon Goals

Improvement in Lifestyle

Reduction in CHD Risks

Long term reduction in mortality / morbidity in targeted population

Reduced CHD related Health Inequalities
2. Program theory

- Context and contingencies
- Mechanisms
- Heterogeneity
- Leverage

- ...what is a good enough program theory? What is a good enough program theory to aid implementation?
3. Evidence Synthesis
4. Expected Performance Trajectory

- Anticipated performance in the presence of programme
- Absence of programme

Performance Measure

Years

0 1 2 3 4 5
4. Anticipated Timeline of Impact

Program

Outcome 1

Outcome 2

Outcome 3

Years
B. Structure of Evaluation Influence

5. Framework of Learning
6. Pathways of evaluation influence
Five types of learning

1. Policy Learning
2. Organisational Learning
3. Process Learning
4. Risk Landscape of Clients
5. Individual-Level Impacts
7. Design principles

• Continues to be surprisingly inadequate
• Respond to threats to internal, external validity
• Connect with program theory;
• Connect to a framework of learning;
• Connect to an anticipatory trajectory of impact;
• Leverage innovative methods;
• Pay attention to the policy landscape
(8) Learning from Methods

Scenario 1

Program → Evaluation Design/Method → Program Impacts

Scenario 2

Initial Program Theory → Initial Impacts → Emergent Program Theory

Areas of Uncertainty → Learning from Innovative Method
9. Spread and Sustainability
Ideas/Questions

Anticipatory Care

Policy Learning
(1) Organisational Learning
(2) Process Learning
(3) Risk Landscape of Clients
(4) Individual Impact

Learning

Collaborative Structures of Dynamic Translation of Learning
Examples
- Scottish Executive,
- Health Scotland,
- Local Health Board, Etc.

Programmes

Have a Heart Paisley

Keep Well Phase 1

Keep Well Phase 2
(9) Framework of Spread

Program

- Larger System

- Components of System

- Innovative Practice

- Contextual Learning

- Spread Innovations
A Framework for Sustainability

- Framework of Learning
- Match between Anticipated Findings of Impact/Performance Trajectory and Actual Performance
- Evaluation Results
- Other Factors
- Decision to Sustain