Evaluating value-for-money within complex interventions within complex settings – Difficulties and proposed methods

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- on behalf of the Healthy Eating – Healthy Action (HEHA) Evaluation Consortium

Presentation Outline

- The Healthy Eating – Healthy Action Strategy
- Evaluating the Strategy
- Economic evaluation – some difficulties
- Proposed methods for a complexity informed value-for-money evaluation

Background

- Worldwide obesity epidemic
- 2006/07 NZ Health Survey:

  29% children aged 2-14 years overweight/obese

  63% of adults overweight/obese

Healthy Eating - Healthy Action (HEHA)

Healthy Eating – Healthy Action Oranga Kai – Oranga Pumau: A Strategic Framework. ['HEHA'] (Ministry of Health, 2003)

3 goals: improve nutrition, increase physical activity, reduce obesity

HEHA Implementation Plan 2004-2010 (2004)

HEHA Infrastructure

- Pre-existing nutrition & physical activity work
  (e.g. DHBs, PHUs, NGOs, RSTs)
- New funding for DHBs from 2006:
  - Leadership and coordination (Project Managers and District Coordinators)
  - Nutrition Fund
  - Breastfeeding
  - Māori and Pacific Community Action Projects
  - Communications
- Continued nutrition & physical activity work through Public Health Units

Evaluating the HEHA Strategy

- Ministry of Health commissioned a research consortium to evaluate the HEHA strategy (beginning in 2008)
- HEHA is a complex intervention
- Four key evaluation questions cover
  - Implementation
  - Outcomes
  - Improvement
  - Value-for-money

Evaluating VFM Using PBMA

- Programme budget and marginal analysis (PBMA)
  - Based on economic principles of opportunity cost and marginal analysis
  - Identify budgets and assesses changes in cost or benefits through changing resources
- 20 interviews with key informants (govt, DHB, PHU), conducted late 2009
  - HEHA budgets; changes; decision-making

PBMA - difficulties

- Determining value
- Availability of evidence on which to base value judgements
- Close tie between institutional arrangements and marginal value
- Political context of the HEHA Strategy and its funding at the time

Complexity Theory

- Social phenomena ‘emerge’ from systems as a whole
- Complex systems are made up of many elements
- Characterised by non-linear relationships
- The exact structure of a complex system is time and location specific

Complex is different from simple and complicated (Westley, Zimmerman & Patton (2003)):

- Simple – baking a cake
- Complicated – rocket to the moon
- Complex – raising a child

Complexity Theory

How to determine the best direction?

Complexity Theory

Principles for evaluation:

- Theory driven evaluation
  - Complex theory of change
- Intervention design and implementation context taken into account (initial conditions, path dependency)
- Interventions designed through iterative stages – ‘real time’ evaluation (system evolution)

Complexity Principles for VfM Evaluation

Four types of efficiency to consider:

- Traditional PBMA analysis
  - Technical efficiency (are we doing things right?)
  - Allocative efficiency (Are we doing the right things?)

Additional considerations

- Institutional arrangements (new institutional economics)
  - Instrumental value (impact on future activities)
  - Intrinsic value (institutionalisation of values)

Evaluation design

- Comparative case study
- Purposeful sample to investigate anticipated difference between cases
- Number of cases dependent on:
  1. Resources available
  2. Breadth of data required to describe the case

Within each case

- Description of institutional context
- Description of financial and non-financial costs and benefits
- Comparison of cost-consequence tables

Evaluation design between cases:

- Cross-case comparison

Description of institutional context:

Hawe, Shiell and Riley (2009)

I. Describe how the procedures of an intervention have been incorporated within an organisations usual routine
II. Track changes in relationships
III. Identify distribution of resources
IV. Identify what activities have been displaced

Capturing costs and benefits:

Ziller and Phibbs (2003)

	Non-financial benefits	Financial benefits	Non-financial costs	Financial costs
Cost and benefits to individuals	Programme output/outcome	Programme output/outcome	Opportunity cost	Cost of programme
Costs and benefits to groups	Programme output/outcome	Programme output/outcome	Opportunity cost	Cost of programme

Capturing costs and benefits:

Ziller and Phibbs (2003)

	Non-financial benefits	Financial benefits	Non-financial costs	Financial costs
Cost and benefits to individuals	Allocative & technical efficiency	Allocative & technical efficiency	Allocative & technical efficiency	Allocative & technical efficiency
Costs and benefits to groups	Instrumental & instrinsic value	Instrumental & instrinsic value	Instrumental & instrinsic value	Instrumental & instrinsic value

Comparison of cost-consequences

(within case):

Cost-consequence tables

- Pull together institutional and cost-benefit information
- Cost and consequences of various intervention/programme budget options can be shown
- Providing summary of the whole – rather than an average summary score (not losing complexity)

Comparison between cases:

- What has worked well in what situations?
- Inform high level strategy and budget

Questions include:

- Similar outcomes emerging from different institutional context?
- Similar institutional context with different outcomes?
- How is value of interventions influenced by institutional context?
- What appears to work, for whom in what contexts?

Summary of Method

Complexity theory suggests that:

- Keep analysis within the context of implementation
- Case comparison method
- Compare whole systems

Summary of Method

Value-for-money evaluations...:

- Consider four elements
  - Allocative and technical efficiency
  - Intrinsic and instrumental value
- Case-comparison evaluation design
- Describe the institutional arrangements/context
- Identify financial and non-financial costs and benefits
- Develop cost-consequence tables to avoid reducing complexity by averaging

Challenges

- Getting in at the beginning of an intervention
- Findings are difficult to make into sound bites
- Complexity theory acknowledges uncertainty in interventions
- Ongoing and timely engagement of stakeholders (participatory methods)
- Ideas, ideas, ideas ... But where is the proof?

Acknowledgements

- Ministry of Health (evaluation funder)
- Participants
- Research colleagues

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