

STREAM 13 WORKSHOP

**Systematic
reviews, ‘wicked’
problems & policy
development**

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Our experience

'Rural & Remote' collaboration

- Centre for Remote Health, Alice Springs
- Monash University School of Rural Health Bendigo
- Australian National University, Canberra

Two major APHCRI systematic review studies:

- evidence of apparently successful models of primary health care service delivery in small rural and remote health service communities
- Importance of ongoing education and training in improving primary health care workforce retention in small rural and remote communities

What did we learn?

- Systematic reviews limit the potential for bias and reduce chance in estimates of intervention effectiveness
- Evidence gained from any systematic review of health services can only ever partly contribute to policy
 - timing and political climate
 - receptivity of decision-makers
 - organisational aspects that facilitate transfer
- Traditional protocol-driven systematic reviews by themselves are unlikely to provide a sufficient 'gold standard' in situations where the nature of the problem is complex and not always easily circumscribed.

Issues identified in relation to the knowledge generation process

- a) Many health problems are complex and 'wicked'
- b) Broad multi-methods 'synthesis' approaches are required
- c) Methodological purity of systematic reviews does not address ambiguity associated with complex problems
- d) What is 'known' is significantly more than what is 'documented'
- e) For effective policy translation, interconnectedness and context are as important as objectivity and detachment

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(a) Characteristics of 'wicked' problems¹

- societal problems that form the basis of governmental planning and which are distinguished from those commonly dealt with by scientists
- resolution of 'wicked problems' will always rely on other factors, most notably a degree of elusive political judgement

1. Rittel H & Webber M., 1973: Dilemmas in a General Theory of Planning, *Policy Sciences*, 4: 155-169.

Characteristics of 'wicked problems'

Problem definition

The problem can't be defined until the solution has been found:

- Is poor rural health status a function of geographical access to health services or other broader social determinants?

Wicked problems have no stopping rule:

- This is the best I can do within the limitations of the projects - Hence focus on short-term process and impact studies

Every wicked problem is a symptom of another higher-level problem

- Problems of ensuring health service sustainability ultimately reflect the impacts of global economic restructuring and social change.

Characteristics of 'wicked problems'

Problem resolution

Solutions to wicked problems are not true-or-false:

- Proposed solutions are 'better or worse' or 'good enough'

There are no criteria to show that all solutions have been considered

- It is a matter of judgment which solutions should be implemented

The choice of explanation determines the problem's resolution

- There is no rule ... to determine the 'correct' explanation - Poor rural health status may be due less to service access than health literacy.

(b) Broad synthesis approaches

- guidance from a Policy Reference Group proved invaluable in making underpinning value judgements and carefully considering their policy consequences

(b) Key decisions associated with meeting requirements of a robust systematic review

Characteristic	Ability to fulfill these attributes based on first-hand experience
Objective	<ul style="list-style-type: none"> Dependent on defining the nature of the problem specifically enough to yield unambiguous variables as objects of enquiry.
Comprehensive	<ul style="list-style-type: none"> Dependent on search terms, data base indexing, & 'grey' literature. The research can become over-whelming. Conversely, problem dissection may miss important inter-relationships essential for effective policies.
Valid	<ul style="list-style-type: none"> Dependent on terminology – workforce retention is often equated with recruitment or turnover, when in fact they are different aspects of the issue. However, exclusion of one risks missing out on some useful insights, while inclusion of both can generate an excessively large review.
Consistent	<ul style="list-style-type: none"> Need to minimise possible bias in data included and extracted. Importance of team training, protocols and blind reviewing to ensure selection consistency.
Reproducible	<ul style="list-style-type: none"> Need transparent and detailed decision-tree balancing 'objectivity' in decisions related to data extraction with 'informed judgments'

(c) Balancing methodological purity with policy relevance and practicality

- methodological rigour needs to be matched with understanding the policy challenges inherent in health services research
- the initial scoping of the study is critical in striking the right balance between relevance and practicality
- literature ‘relevance’ versus ‘quality’ requires criteria for selecting and integrating evidence from diverse sources
- an expert policy reference group can bring significant benefits guiding the study questions and overall direction

(d) The role of grey literature

- relying solely on protocol-driven search strategies risks excluding or under-reporting relevant evaluation studies
- ‘grey’ literature and the knowledge and experience of recognised experts should not be ignored simply because it may not be “peer reviewed”
- research can lag behind developments in the field, and the considerable knowledge and experience held by key health service stakeholders
- a reference panel integrally involved in the subject can be an excellent resource in assisting to locate ‘grey’ literature and provide up-to-date information.

(e) Contextualising the evidence

- apparently successful interventions may not work in all settings
- need to balance research evidence from one context to another

Conclusion

- ‘Systematic reviews of complex evidence cannot rely solely on predefined, protocol driven search strategies, no matter how many databases are searched’

Greenhalgh & Peacock, *BMJ*, 331:1065.

- Researchers need to be aware of
 - limitations of systematic reviews, &
 - generalisability of findings and usefulness to policy makers
- Decision-tree must be explicit, so that the validity and reliability of the evidence can be evaluated in its contribution to public policy decisions

Conclusion (cont.)

- Actively engaging policy-makers in the systematic review process ensures
 - relevant research questions
 - shared understanding of the problem and potential policy responses
 - usefulness of findings.
- Recognition of the complexity of 'wicked' health issues will lead to a realistic expectation of the resources and time required for a meaningful response.
- An iterative methodology emphasising relevance rather than methodological purity assists to address the interconnectedness and change inherent in complex problems