

Evidence-based Decision-making: Responsibilities for All



Jonathan Lomas

Canadian Health Services Research Foundation

Montreal, November 8, 2004

Decision Makers

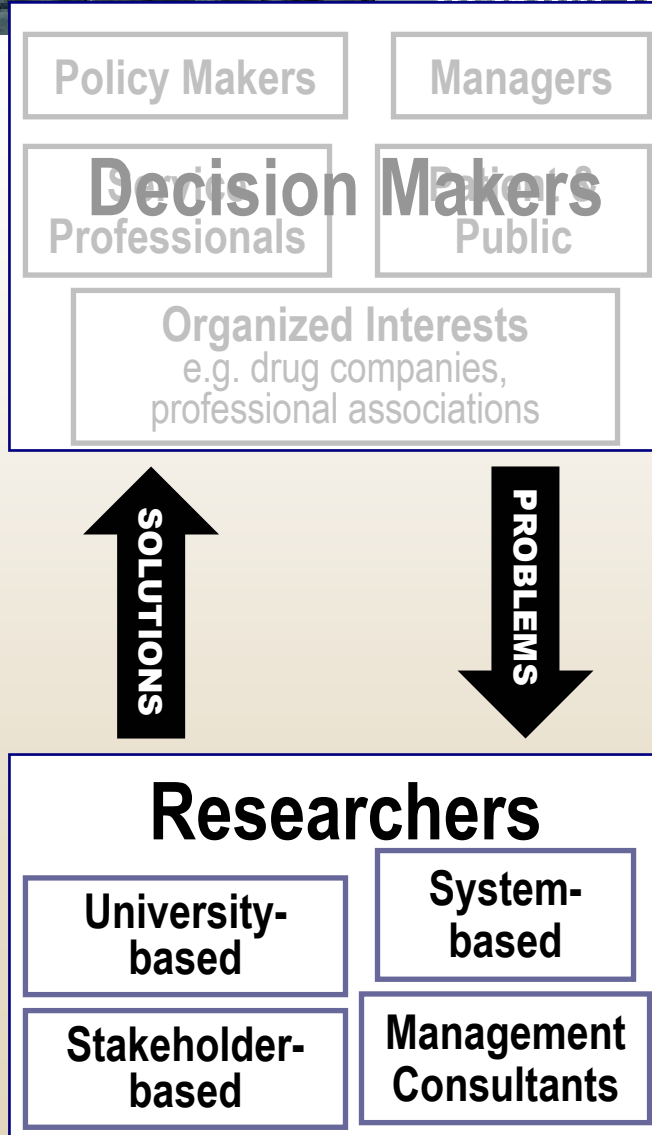
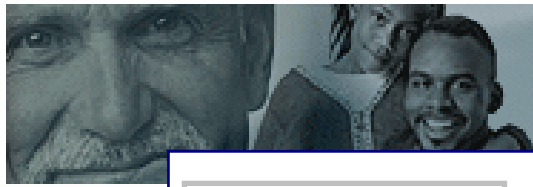
Policy Makers

Managers

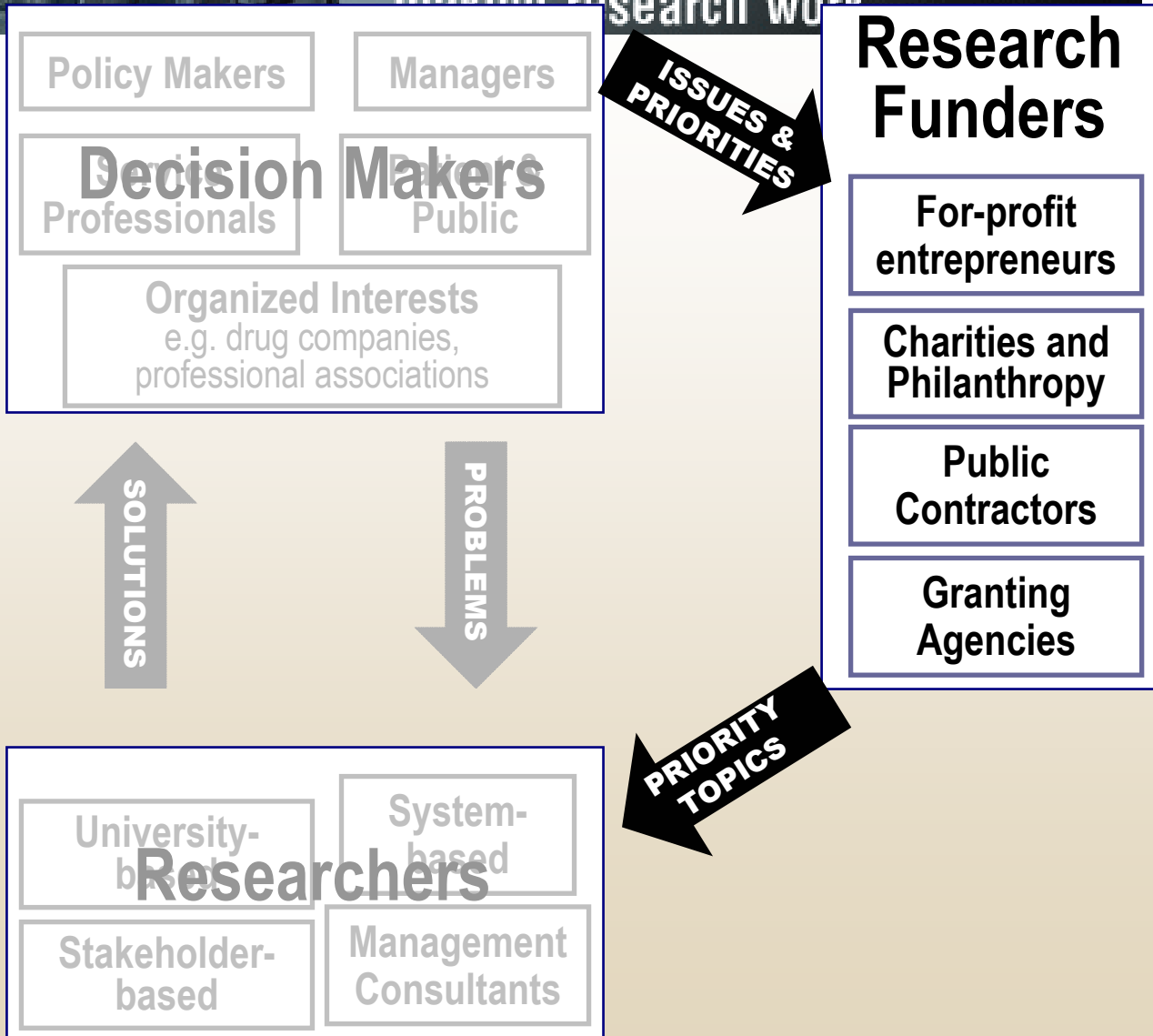
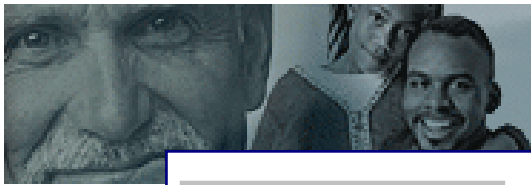
**Service
Professionals**

**Patient &
Public**

Organized Interests
e.g. drug companies,
professional associations



Why Healthcare isn't IBM or General Electric



A Role for Intermediaries

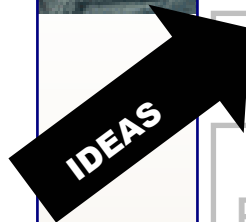
Knowledge Purveyors

Public Relations

Media

Conferences and Events

Journals and Books



IDEAS

Policy Makers

Managers

Decision Makers

Professionals

Public

Organized Interests
e.g. drug companies,
professional associations



ISSUES & PRIORITIES

For-profit
Entrepreneurial
Research

Funders
Philanthropy

Public
Contractors

Granting
Agencies



SOLUTIONS



PROBLEMS



RESEARCH EVIDENCE



PRIORITY TOPICS

Researchers

University-
based

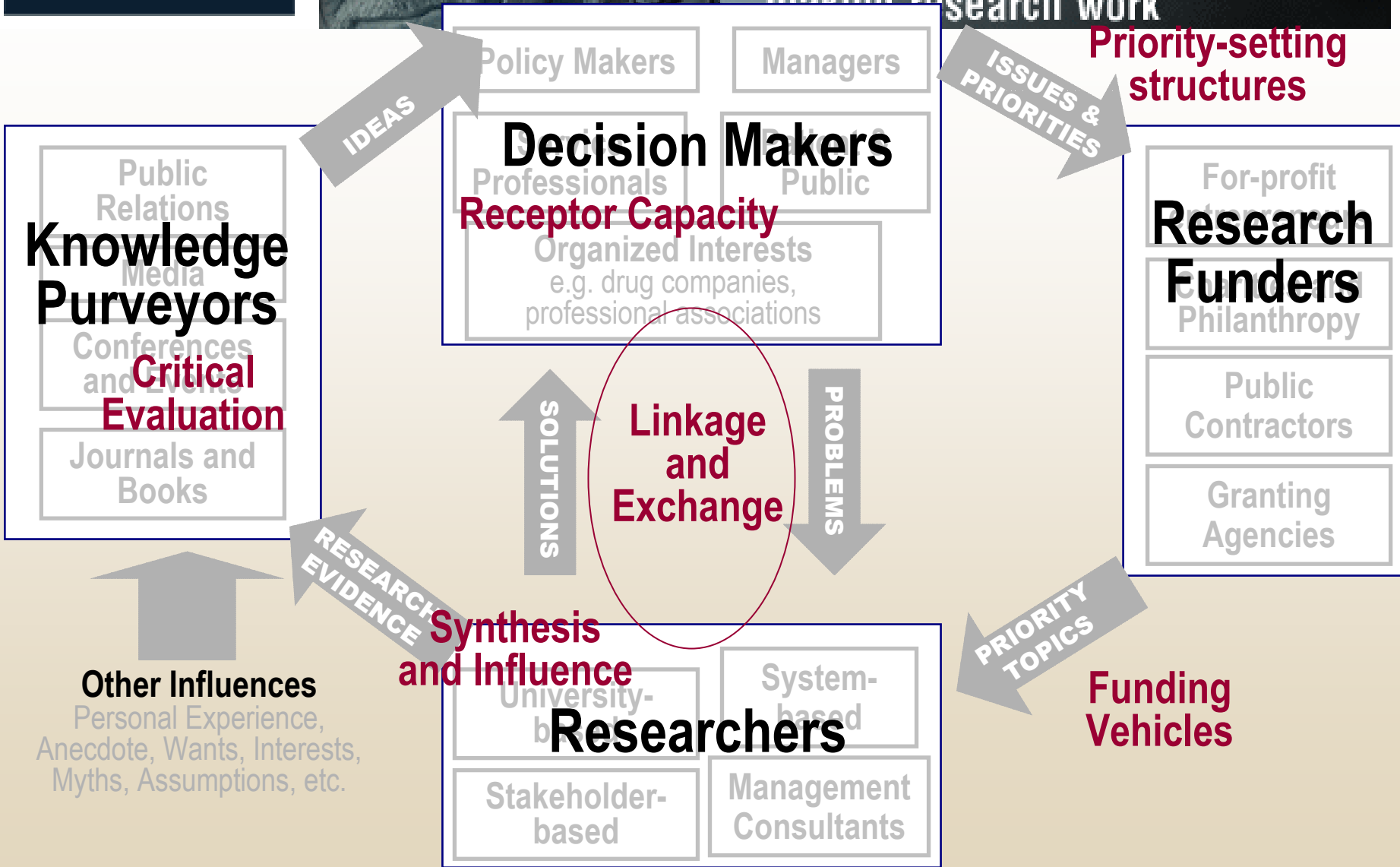
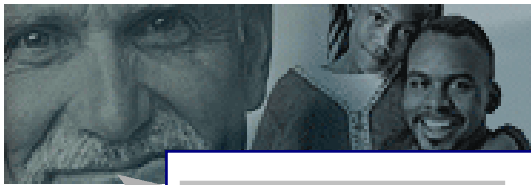
System-
based

Stakeholder-
based

Management
Consultants

Other Influences
Personal Experience,
Anecdote, Wants, Interests,
Myths, Assumptions, etc.





What Might We Do?



- **Researchers must produce relevant research**
“What should we do research on?”
- **Credible knowledge translators must produce summaries of relevant research**
“What are the key messages from research?”
- **Intermediaries (e.g. ‘brokers’, knowledge networks) must communicate summaries effectively**
“How should we communicate the research?”
- **Health system decision-makers must be ready and able to receive and use research**
“How can we create research-based change?”



Does Research Guide Action?

Medline search (1966-02) to identify articles stating:

a. “need more research” or “need less research”

Need more

161/162

Need less

1/162

b. “more questions than answers” or “more answers than questions”

More questions

163/166

More answers

3/166

David, AS. BMJ 2002; 323:1462-3



LISTENING FOR DIRECTION

A National Consultation on Health Services and Policy Issues

**Canadian Health Services Research Foundation
Fondation canadienne de la recherche sur les services de santé**

In partnership with:

**Institute of Health
Services and
Policy Research,
Canadian
Institutes of Health
Research**

**Canadian Institute
for Health
Information**

**Canadian
Coordinating
Office for Health
Technology
Assessment**

**F/P/T Advisory
Committee on
Health Services
to the
Conference of
Deputy
Ministers**



First National Priority Setting Process in Canada

- **Coordinated response to the needs of policy makers and managers for relevant health services research**
- **Reduces the consultation burden**

Objective

Identify health system priority issues every three years to inform the program directions and decisions of five national partner organizations involved with health services research.



A 6-step participatory priority-setting model

1. Environmental scan

2. Identification of stakeholders to consult

3. Consultation on priority issues

4. Validation of priority issues

5. Identification of priority research themes

6. Validation of priority research themes

Lomas et al, 'On Being a Good Listener', Milbank Quarterly 2003



Results from 2004 Listening for Direction

Primary Themes

Repeatedly encountered across settings and perspectives

Examples:

- Health Human Resources
- Timely Access to Quality of Care for All
- Managing for Quality and Safety
- Understanding and Responding to Public Expectations
- Governance and Accountability
- Linking Care Across Place, Time and Settings



But it's Not Just the Topics, it's How the Research is Done

- **Best predictor of use is involving those in the system who can apply the research in the research process**
- **This is CHSRF's funding philosophy: "ongoing linkage and exchange" between the research and the decision-makers in the system**



Philosophy of Ongoing Linkage and Exchange

“Interpersonal links, spread through the life of a given study, are the key to research use. They allow non-researchers to find their niche and their voice while a study is still young . . . There are reciprocal effects, such that we are no longer in a conventional research-to-practice paradigm, but in more of a conversation among professionals, each bringing different expertise to bear on the same topic”

Huberman, M: Research Utilization: The State of the Art. Knowledge and Policy 1994;7:22



What the Policy-Makers Say

- **Review of 24 studies that asked over 2000 policymakers what facilitated or prevented their use of research evidence**
- **#1 facilitator = “personal contact between researchers and policy-makers” (13/24)**
- **#1 barrier = “absence of personal contact between researchers and policy-makers” (11/24)**

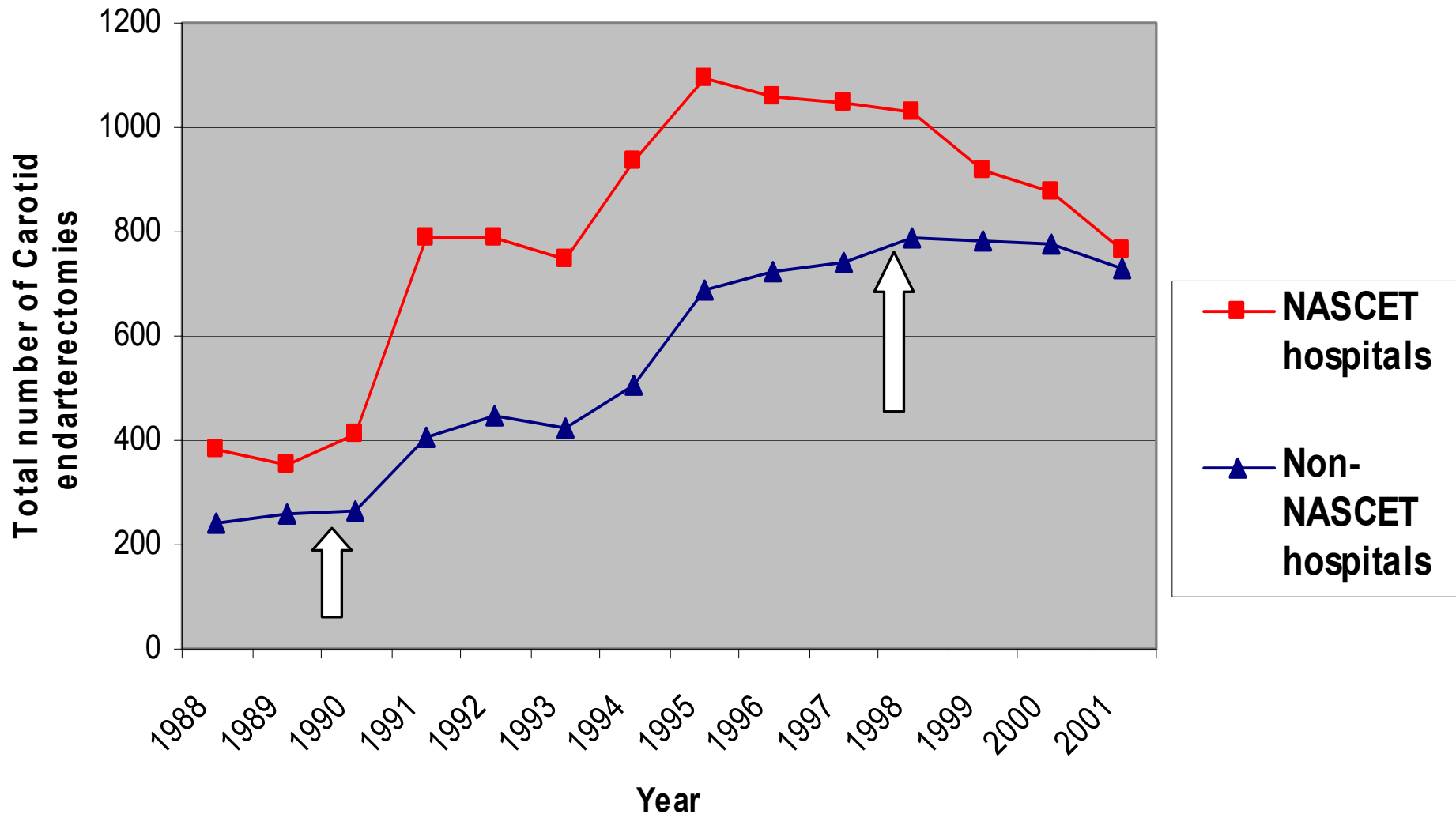


What the Policy-Makers Say

“Personal two-way communication between researchers and decision-makers should be used to facilitate the use of research. This can reduce mutual mistrust and promote a better understanding of policy-making by researchers and research by policy-makers”

Innvaer et al. J Hlth Serv Res Pol 2002;7:241

Trends in Number of Carotid Endarterectomy Done by Hospitals Participating and Not Participating in NASCET trial, Ontario 1988-2001





- **Researchers must produce relevant research**
“What should we do research on?”
- **Credible knowledge translators must produce synthesis and summaries of relevant research**
“What are the key messages from research?”
- **Intermediaries (e.g. ‘brokers’, knowledge networks) must communicate summaries effectively**
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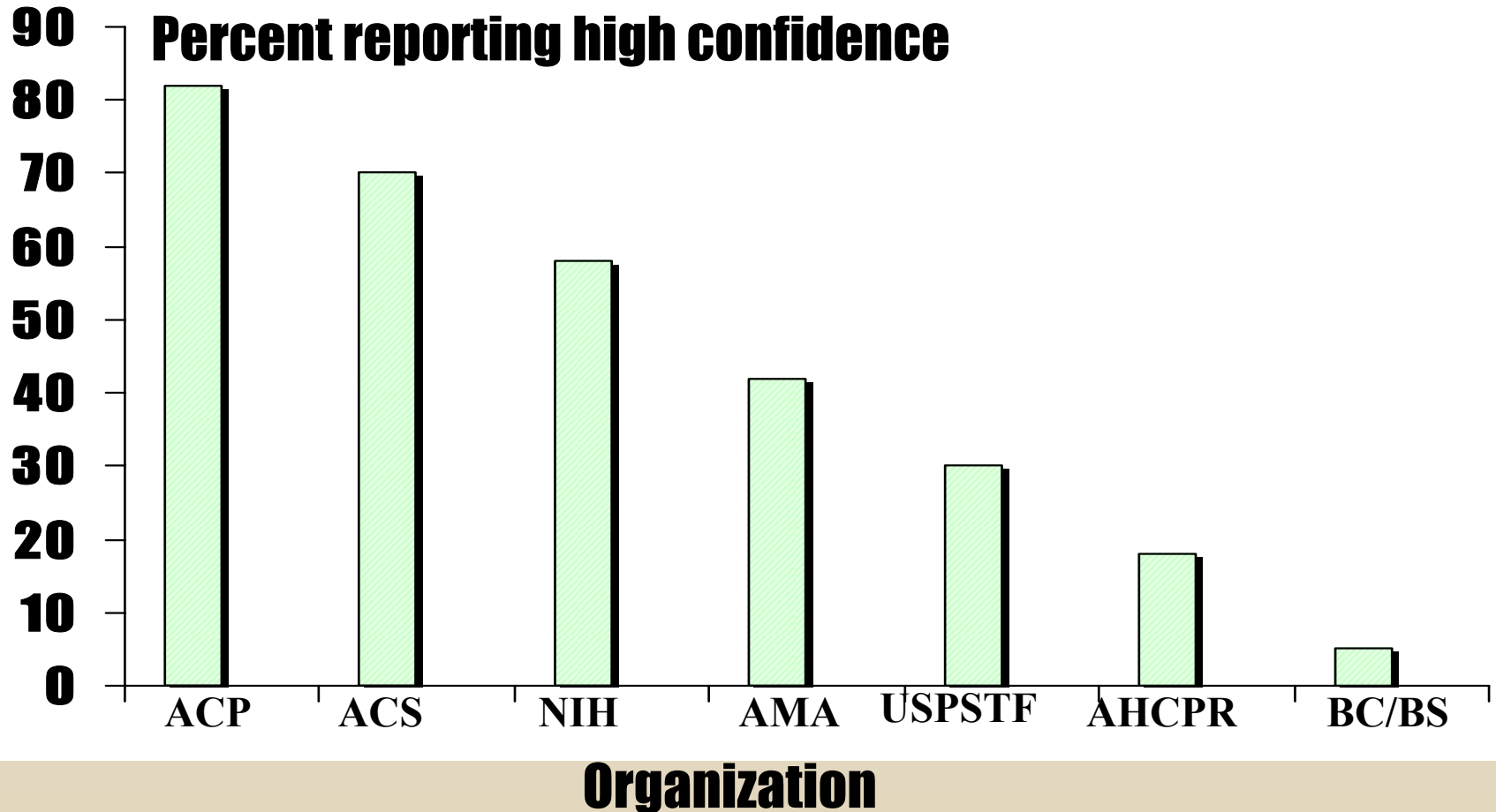


Synthesis and Summary

- **The ‘science of synthesis’ is under-developed**
- **Unlike researcher-to-researcher knowledge transfer, the ‘unit of transfer’ for research-to-practice is not the single study**
- **Synthesis is a contextualizing process, with the key messages for a particular audience**
- **Theme-based synthesis responds to user needs**
- **Credibility of the knowledge translator is very important**



CONFIDENCE IN GUIDELINES x ORGANIZATION



Source: Tunis et al., *Annals of Internal Medicine* 1994; 120:956



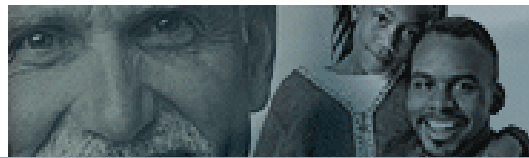
Different Forms of Synthesis and Summary: From The Technical to The Pragmatic

Researcher dominated

- **Meta-analysis**
- **Practice guidelines**
- **Clinical algorithms**
- **Policy synthesis**
- **Consensus statements**
- **Best practices**
- **Expert opinion/experience**



Practitioner dominated



What Canada's Applied Research Centres Communicate

Survey of 175 applied health or economic/social research centres on knowledge transfer (KT)

What is transferred?

	% frequently/always
● Summaries or synthesis	34
● Actionable messages	30

i.e. two-thirds are still doing knowledge transfer with raw results from single studies

Lavis et al., Milbank Quarterly, 2003,



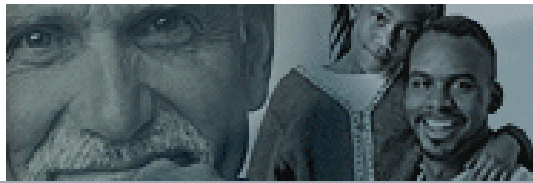
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Champions and Knowledge Brokers

“Time and resources need to be devoted to a period of local negotiation and adaptation of good research evidence based on a careful understanding of the local context, in which opinion leader influence is an important component of a well-managed and preferably well integrated process of change”

Dopson et al J Hlth Serv Res Pol 2001; 6(1):29



Communicating Research

“We use the style of reporting that is most natural to legislative policymakers and their staffs: the anecdote. This may seem somewhat ironic, given that by conducting an evaluation in the first place one has moved deliberately *away* from the anecdote... [but] to disseminate the findings to policymakers, it seems that one of the most effective ways to present them is to rediscover the anecdote – but this time an anecdote that represents the broader evaluative evidence.”

Eleanor Chelimsky, U.S. General Accounting Office. 1994.

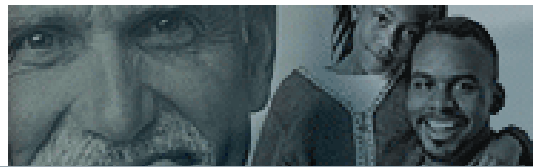


Language, Science and Understanding

LEXICAL DIFFICULTY

(1990)

Cell (Biology journal)	38.0
Nature (Science journal)	31.6
Scientific American	11.0
New Scientist	4.0
ENGLISH LANGUAGE NEWSPAPERS	0.0
Discover (popularized science)	- 4.7
American adult fiction	-19.3
UK children's fiction (10-14 yrs)	-27.4
Farm workers talking to dairy cows	-59.1



With Whom do Canada's Applied Research Centres Communicate

To whom is it transferred?

	% frequently/always
● Tailor to target audience	60
● Dedicate resources to knowing target audience	39
● Build research use skills in target audience	20



Evidence-based Decision-making as a Social not Technical Process

“Knowledge depends for its circulation on interpersonal networks, and will only diffuse if these social features are taken into account and barriers overcome”

Greenhalgh, T ‘Diffusion of innovations in service organizations: systematic literature review’, 2004

The apocryphal tale of the Xerox machine technicians



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The Role of Organizations

“Evidence and opinion leaders seemed particularly important for immediate implementation of clinical change, whilst organisational commitment was more strongly associated with wider learning from the experience”

Dopson et al J Hlth Serv Res Pol 2001; 6(1):28



The Boundaries Between Research and Implementation

“Despite our limited knowledge of implementation methods, it seems reasonable to assume that the skills required for implementation may not be the same as those needed to carry out good research... Implementation is largely concerned with bringing about change in health care. But this, surely, is the essence of operational management, the basic task of most health service managers.”



Types of Research Users in Organizations (from the diffusion of innovations literature)

- **Boundary spanner** – networks with individuals outside to bring new knowledge into the organization
- **Organizational maverick** – creates insulated space where risks can be taken
- **Network facilitator** – builds coalitions across functional departments of the organization

Greenhalgh, T 'Diffusion of innovations in service organizations: systematic literature review', 2004



Successful Research Use Organizations (from the diffusion of innovations literature)

- **Characteristics (accounting for 15% of the variation in innovation adoption):**
 - **Large, mature, functionally differentiated, with decentralized decision-making**
 - **Focused on specialised professional knowledge**
 - **Slack resources**
 - **Absorptive capacity for new knowledge (receptor capacity)**

Greenhalgh, T 'Diffusion of innovations in service organizations: systematic literature review', 2004



RECEPTOR CAPACITY: The forgotten factor

- **Pre-requisites for ethical application of research by the users:**
 - **individual skills of professionals in acquiring and appraising research**
 - **structures for acquiring, appraising and adapting research for use by the organization**
 - **processes for applying research to the organization's operation**



Receptor Capacity: New Organizational Structures And Processes

- **explicit place in decision-process for results from research**
- **R&D departments to serve needs of the organization (and understand the research process)**
- **designated accountability for identification of research-based evidence**
- **job descriptions and performance appraisals that incorporate evidence-based decision-making**
- **self-assessment of capacity to use research**



EXTRA/FORCES

Executive Training for Research Application

Formation en recherche pour
cadres
qui exercent dans la santé

EXTRA is a 2-year fellowship program designed to train 24 health services leaders and their organizations every year for ten years to become even better decision makers by learning how to find, assess and interpret research-based evidence

VISION

- A health system in which nurses, physicians and health service executives collaborate as teams of evidence-based decision-makers, optimizing the health of the Canadian population.

MISSION

- To develop capacity and leadership to optimize the use of research-based evidence in Canadian health service organizations.

LEARNING OBJECTIVES

- Demystify research-based evidence
- Enhance research literacy
- Learn to use research based evidence to facilitate change management
- Refine leadership skills to develop a culture of evidence-based decision-making in health system organizations

PROGRAM FORMAT

- **Five core program components:**
 - Six weeks of 'away-from-home' residency sessions
 - Intervention projects undertaken in fellows' home organizations
 - Educational activities and ongoing mentoring between residency sessions
 - Network building
 - Post-program support and activities



John Eisenberg

“Evidence is an important part, but not the only part of effective decision-making. The use of evidence is most successful when local differences are factored into the decision-making process, whether at the clinical, system, or policy level”

Eisenberg JM “Globalize the evidence, localize the decision. Evidence-based medicine and international diversity” Health Affairs, 2002; 21(3):167.

THANK YOU!



www.chsrf.ca

or

www.fcrss.ca