The Use of Evidence in Health Policy-Making

(Knowledge Translation)

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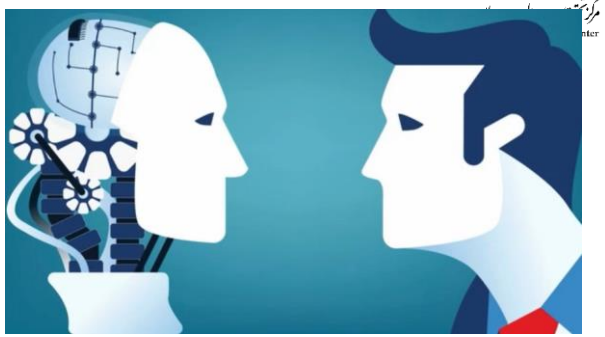
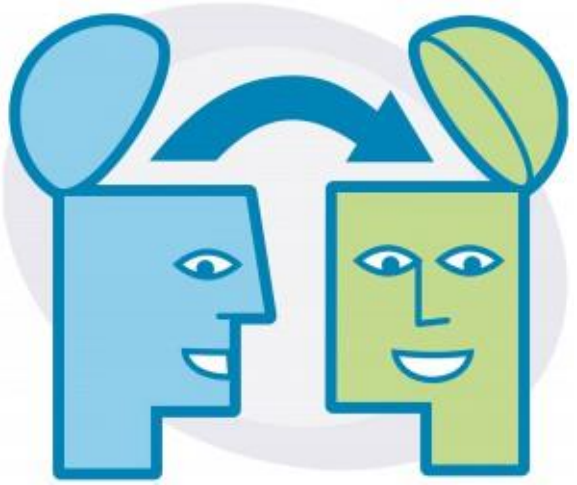
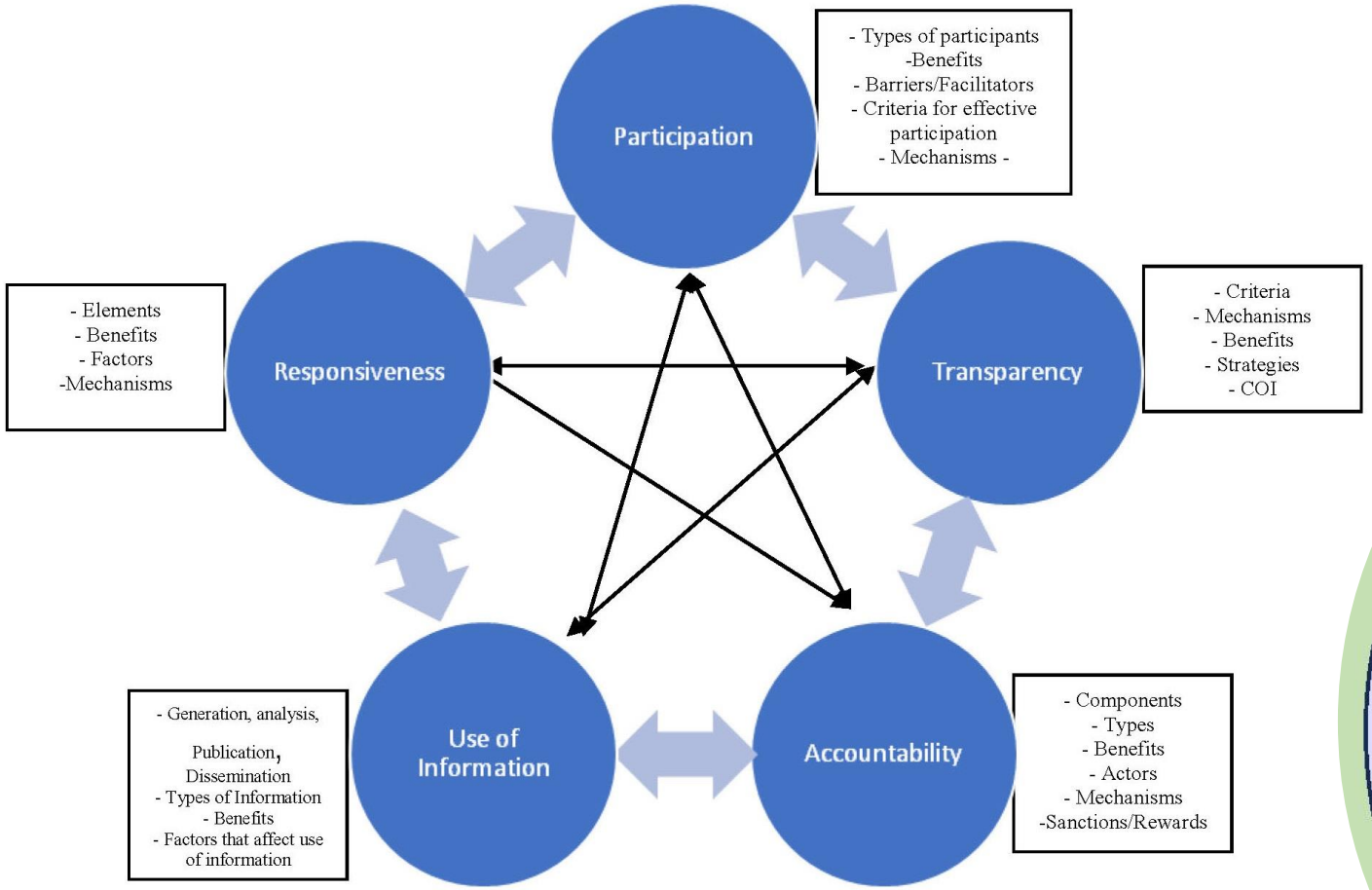




The importance of using evidence in health policy

- Improved Health Outcomes
- Resource Optimization
- Increased Accountability and Transparency
- Enhanced Participatory Decision-Making
- Impact on Health Equity
- Policy Evaluation and Improvement
- Policy Coherence and Integration
- Economic Benefits


Participation
- Types of participants
-Benefits
- Barriers/Facilitators
- Criteria for effective participation
- Mechanisms -
Responsiveness
- Elements
- Benefits
- Factors
-Mechanisms
Transparency
- Criteria
- Mechanisms
- Benefits
- Strategies
- COI
Use of Information
- Generation, analysis, Publication, Dissemination
- Types of Information
- Benefits
- Factors that affect use of information
Accountability
- Components
- Types
- Benefits
- Actors
- Mechanisms
-Sanctions/Rewards


مشارکت
استفاده از اطلاعات
شفافیت
پاسخ‌گویی
پاسخ‌دهی

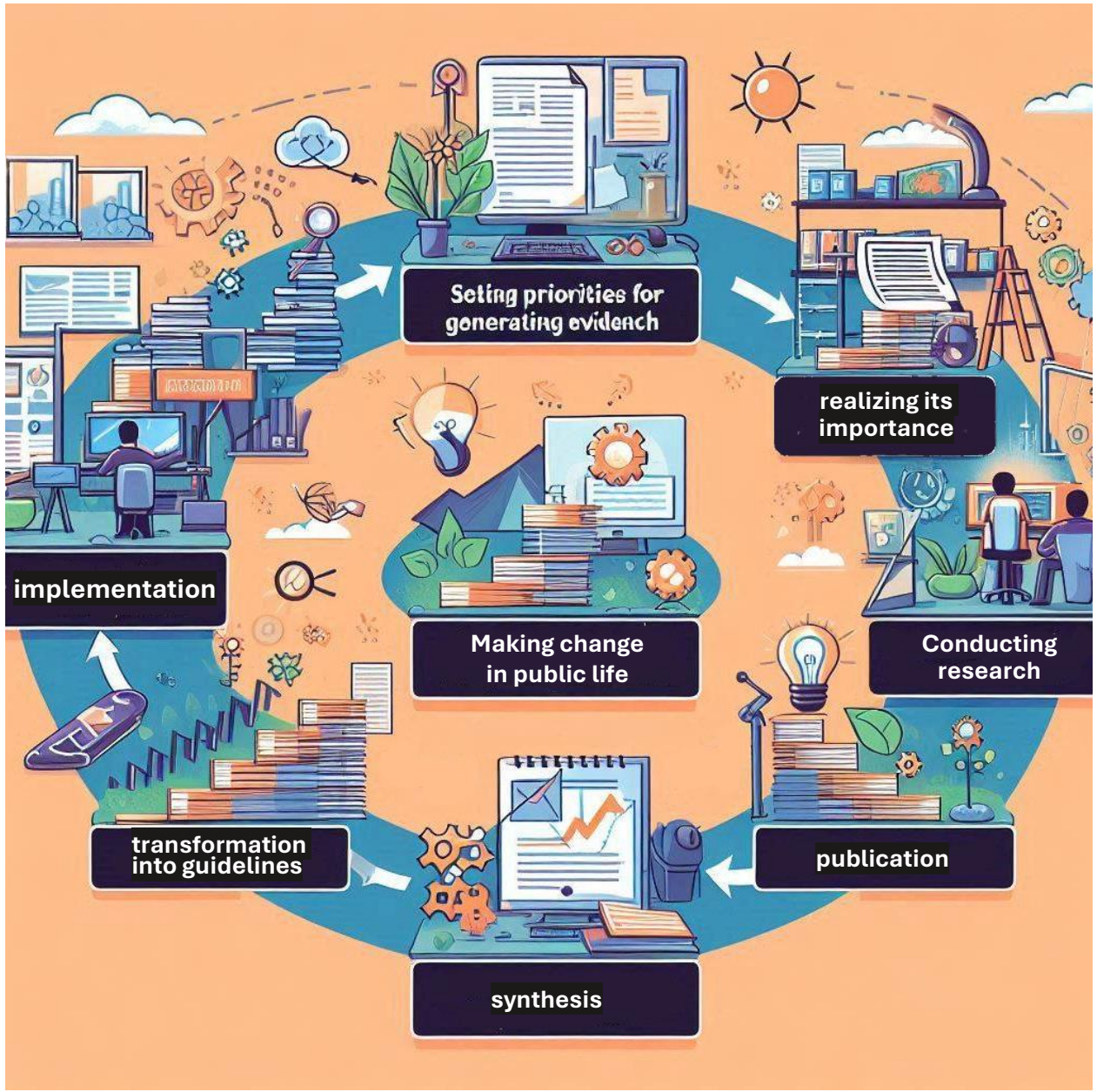
	Evidence-Based Policymaking	Evidence-Informed Policymaking
Definition	It advocates for policy decisions grounded in rigorously established objective evidence	It also emphasizes evidence but allows for flexibility
Application	Decision-making relies on scientific evidence, minimizing reliance on ideology, anecdotes, or personal intuitions	Often involves facility-wide programs rather than individual patient cases
Strengths	Rigorous, data-driven, and objective	Adaptable, considering both evidence and practical realities
Challenges	May overlook contextual factors and governance principles	Balancing evidence with governance principles and emotional appeals

Knowledge Translation

World Health Organization (2006):

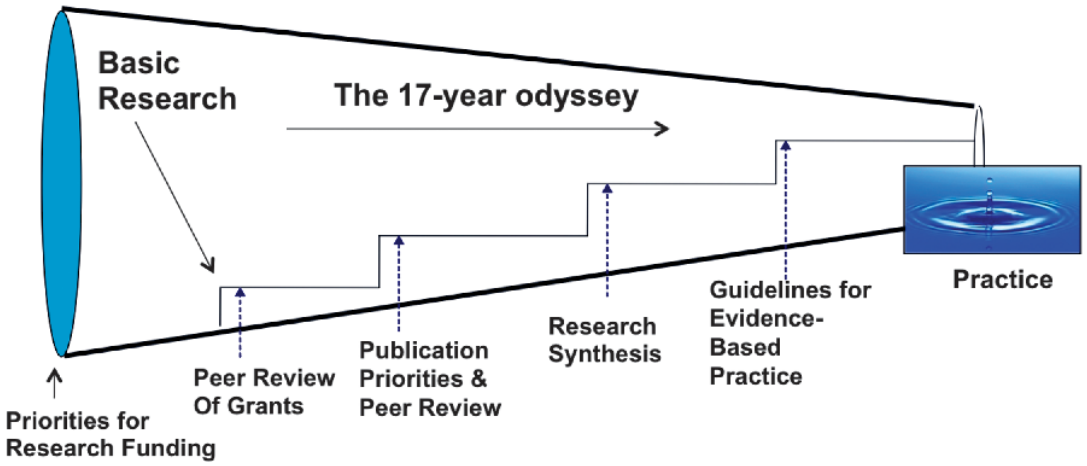
- The synthesis, dissemination, exchange, and ethically application of knowledge by relevant stakeholders
- To accelerate the benefits of global and local innovation
- In strengthening health systems and improving people's health

Bridging the gap between science and policy

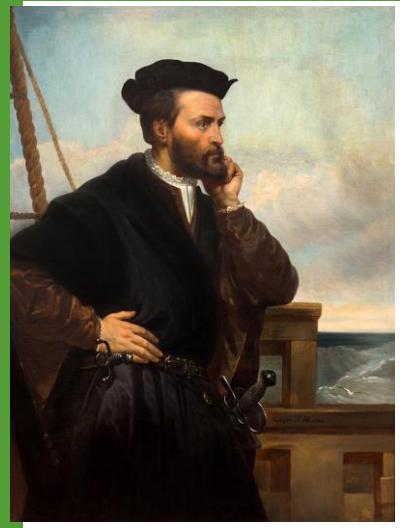


It takes **17 years** to turn **14% of original research into services** that are routinely provided in community service settings

(Balas, 1998; Balas & Boren, 2000; Green et al., 2009; Olswang LB 2015)



Source: Olswang LB and Prelock PA.. Bridging the Gap Between Research and Practice: Implementation Science. J Speech, Language, Hearing Res. 2015



ژاک کارتیه
دریانورد فرانسوی
۱۵۳۶
استفاده از
برگ‌های سوزنی
یک نوع درخت

بیماری اسکوروی

جان وودال
جراح کمپانی هند شرقی بریتانیا
۱۶۱۴
غذای تازه، پرتقال، لیموترش،
لیمو سبز، تمر هندی و اسید
سولفوریک

جیمز لیند، پزشک نیروی
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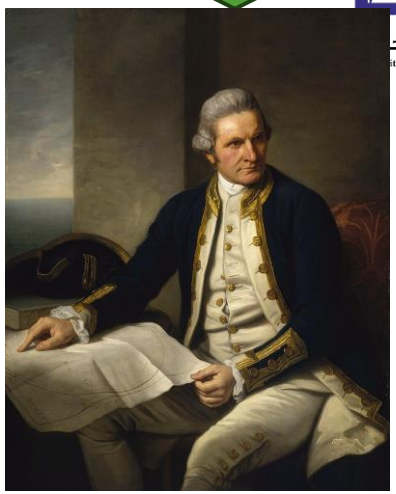
مصرف مرکبات در رژیم
غذایی



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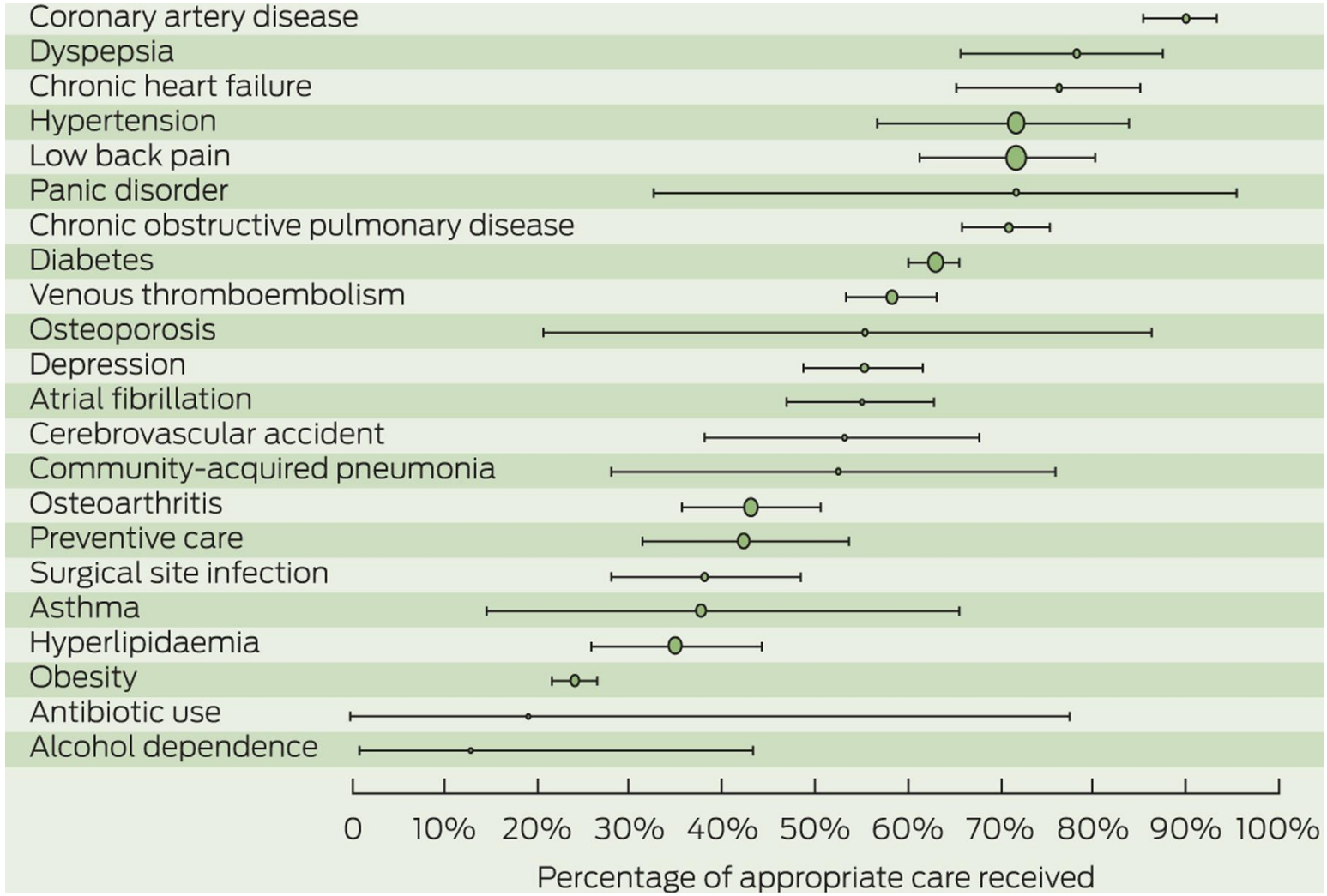
غذاهای تازه و عدم مصرف چربی‌ها
برای تمیز کردن ظروف مسی

نیروی دریایی بریتانیا
دهه ۱۷۹۰
دستورالعمل لزوم استفده همه
کشتی‌ها از مرکبات تازه



Research

CareTrack: assessing the appropriateness of health care delivery in Australia

William B Runciman, Tamara D Hunt, Natalie A Hannaford, Peter D Hibbert, Johanna I Westbrook, Enrico W Coiera, Richard O Day, Diane M Hindmarsh, Elizabeth A McGlynn, Jeffrey Braithwaite

MJA 2012; 197: 100–105
doi: 10.5694/mja12.10510

Editorial p 67
Perspectives p 76, p 78

MJA Podcast

Abstract

Objective: To determine the percentage of health care encounters at which a sample of adult Australians received appropriate care (ie, care in line with evidence-based or consensus-based guidelines).

Design, setting and participants: Computer-assisted telephone interviews and retrospective review of the medical records (for 2009–2010) of a sample of at least 1000 Australian adults to measure compliance with 522 expert consensus indicators representing appropriate care for 22 common conditions. Participants were selected from households in areas of South Australia and New South Wales chosen to be representative of the socioeconomic profile of Australians. Health care encounters occurred in health care practices and hospitals with general practitioners, specialists, physiotherapists, chiropractors, psychologists and counsellors.

Main outcome measure: Percentage of health care encounters at which the sample received appropriate care.

Results: From 15 292 households contacted by telephone, 7649 individuals agreed to participate. 3567 consented, 2638 proved eligible, and 1154 were included after gaining the consent of their health care providers. The adult Australians in this sample received appropriate care at 57% (95% CI, 54%–60%) of 35 573 eligible health care encounters. Compliance with indicators of appropriate care at condition level ranged from 13% (95% CI, 9%–43%) for alcohol dependence to 90% (95% CI, 85%–93%) for coronary artery disease. For health care providers with more than 300 eligible encounters each, overall compliance ranged from 32% to 86%.

Conclusions: Although there were pockets of excellence and some aspects of care were well managed across health care providers, the consistent delivery of appropriate care needs improvement, and gaps in care should be addressed. There is a need for national agreement on clinical standards and better structuring of medical records to facilitate the delivery of more appropriate care.

How appropriate is the health care delivered to Australians? A seminal study in the United States showed that American adults received "recommended care" only 55% of the time in the years 1999–2000.[1] Estimates of "appropriate care" — defined here as care in line with evidence-based or consensus-based guidelines[2] — are limited in most countries, including Australia, to small groups of conditions, often in particular settings.[3,4]

Despite some evidence of great variations in care and poor compliance with guidelines (Box 1), no comprehensive study of the appropriateness of the health care received by Australians has been undertaken. Without such information, we will be unable to create sustainable systems that have "the capacity to measure, monitor and act on health care performance data".[5] Financial considerations alone would suggest that maximising the rate at which patients receive appropriate care is a national priority.[6] The aim of the CareTrack Australia study reported here was to determine the percentage of health care encounters at which a sample of Australians received appropriate care.[7]

1 Recent examples of poor compliance with guidelines in Australia

Community-acquired pneumonia: Use of a recommended pneumonia severity index was documented in 5% of 698 presentations at 37 hospitals, and concordance with national guidelines in 18%, leading to inappropriate antibiotic use.[8]

Low back pain: Although guidelines discourage its use, more than a quarter of 3533 patient visits resulted in a referral for imaging. The recommended care focuses on advice and simple analgesics, yet only 29% and 18% of patients, respectively, received these.[9]

Hyperlipidaemia: Of 397 participants at high absolute risk, 24% received primary prevention, and of those who were already treated, 38% reached target levels.[10]

Methods

Details of the CareTrack study methods have been published elsewhere.[7] The methods were based on the US study[1] but differed in three main ways. Rather than convening expert panels, we recruited individual clinical experts to develop our clinical indicators; we recruited participants from rural and remote areas, in addition to metropolitan areas; and we conducted onsite medical record review rather than reviewing copied records at a central location.

Selection of conditions

We selected 22 conditions that include several of the most common in Australia, according to estimates of the burden of disease[10] and studies of primary care activity.[11] Fourteen of the 22 are National Health Priority Areas,[12] and 15 were included in the US study.[1] Three conditions[2] — venous thromboembolism, surgical site infection, and antibiotic use — represent evidence-practice gaps.[13,14] Although cancers account for 20% of disability-adjusted life-years,[10] they were not included because of low projected numbers in the sample. Instead, screening indicators for colorectal, lung, breast and prostate cancer were included within the condition "preventive care". Falls and pressure ulcers were not included because they were already being studied.[15]

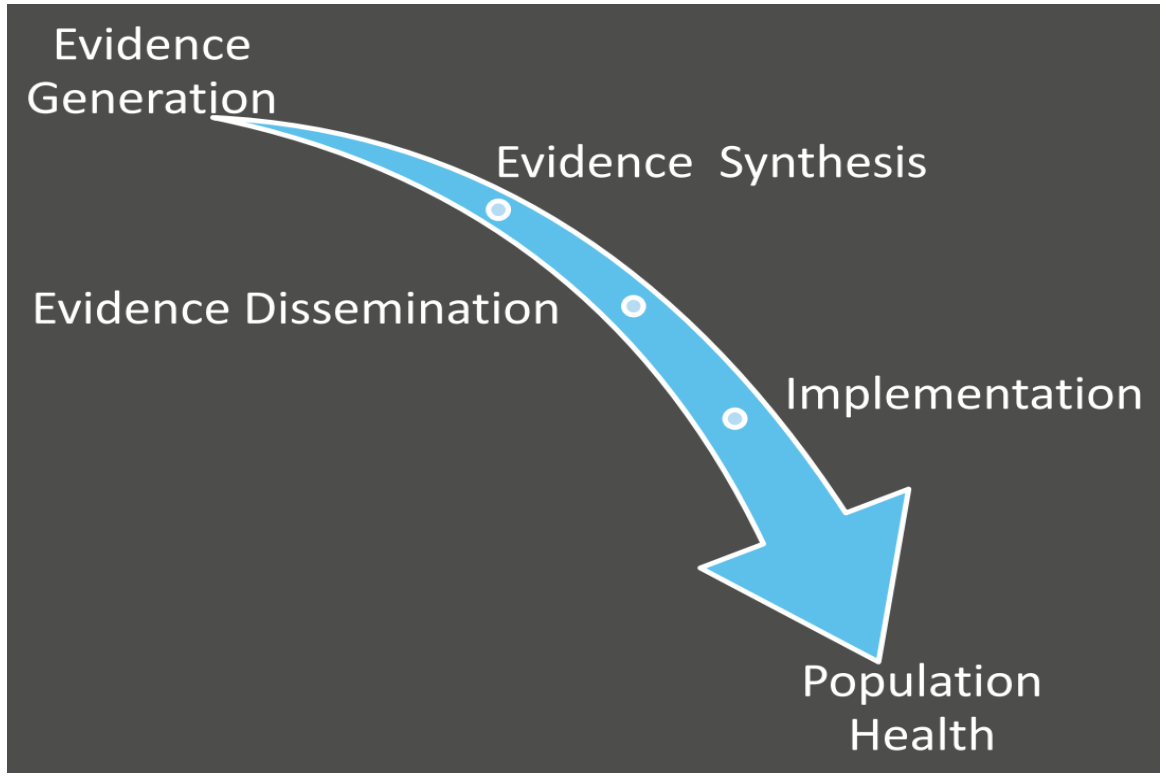
Development and ratification of indicators

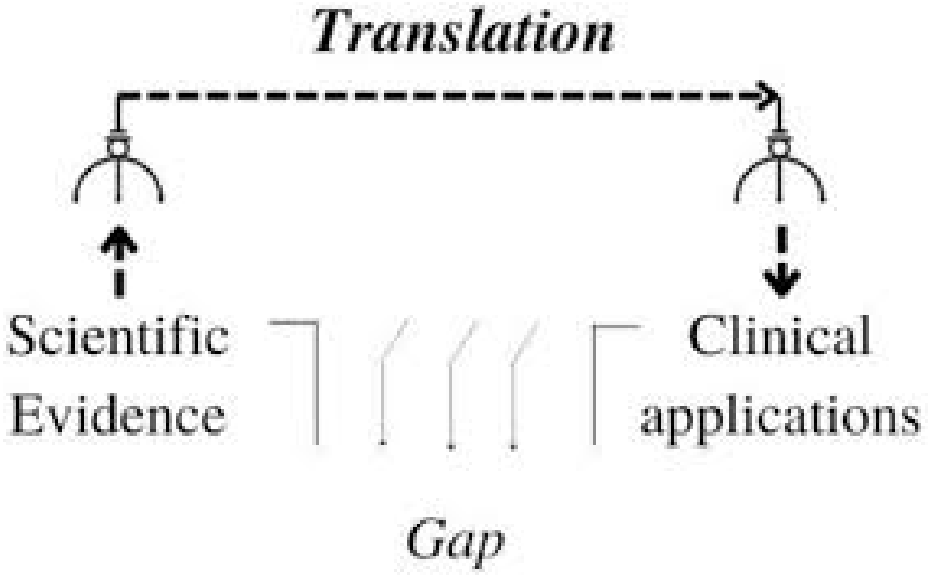
Indicators for the 22 conditions were developed, modified or updated from

100 MJA 197 (2) · 16 July 2012

43% of Australian patients not getting evidence-based care

(Runciman 2012)





سیاستگذاران (که از شواهد استفاده می‌کنند) و محققین (که شواهد را تولید می‌کنند) زبان یکدیگر را نمی‌فهمند.

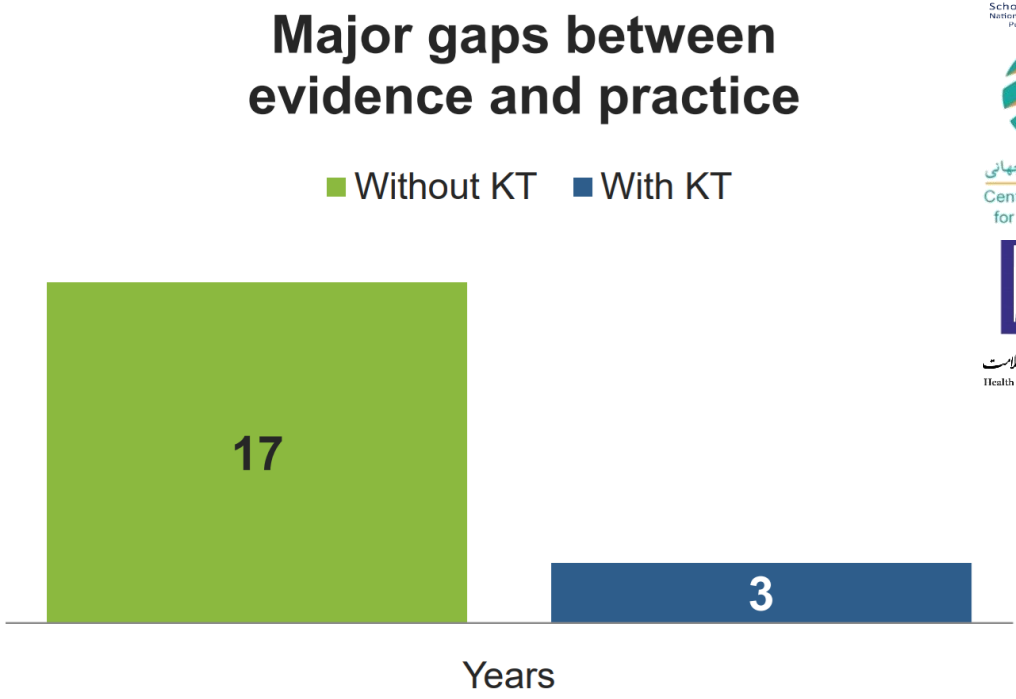
It is estimated that approximately 85% of research resources are wasted:

- Low priority questions addressed
- Important outcomes not assessed

For every 100 projects:

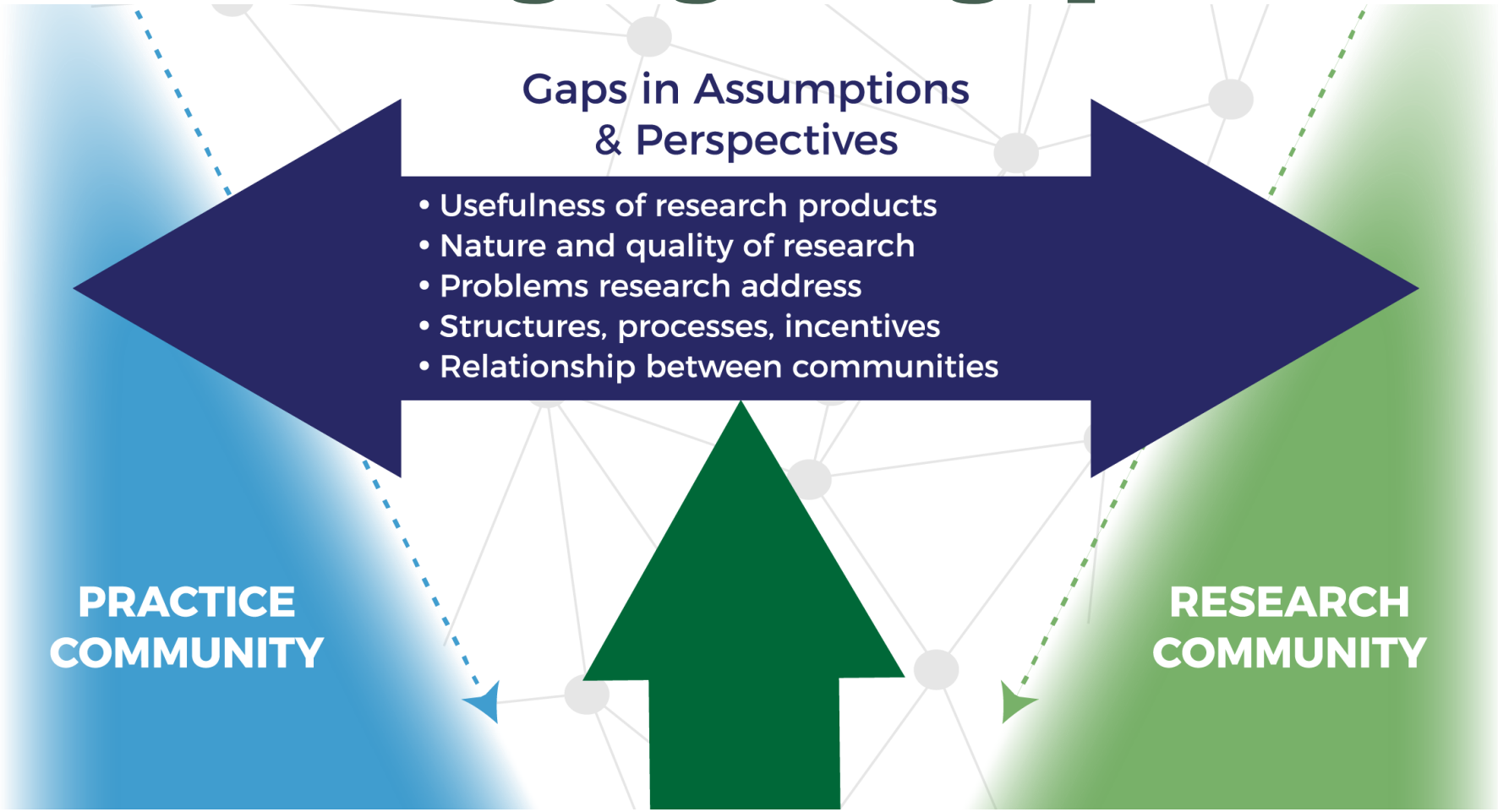
- 50 not published
- 25 not usable or replicable
- 12.5 have serious design flaws
- = 87.5% wasted

Source: Chalmers & Glasziuo (2009) Avoidable waste in the production and reporting of research evidence



Balas E, Boren S. Managing Clinical Knowledge for Health Care Improvement. In: van Bemmel JH, McCray AT, eds. Yearbook of Medical Informatics. Stuttgart: Schattauer Verlagsgesellschaft mbH, 2000:65–70

Practices and conditions to bridging the gap



Science for Policy (S4P)

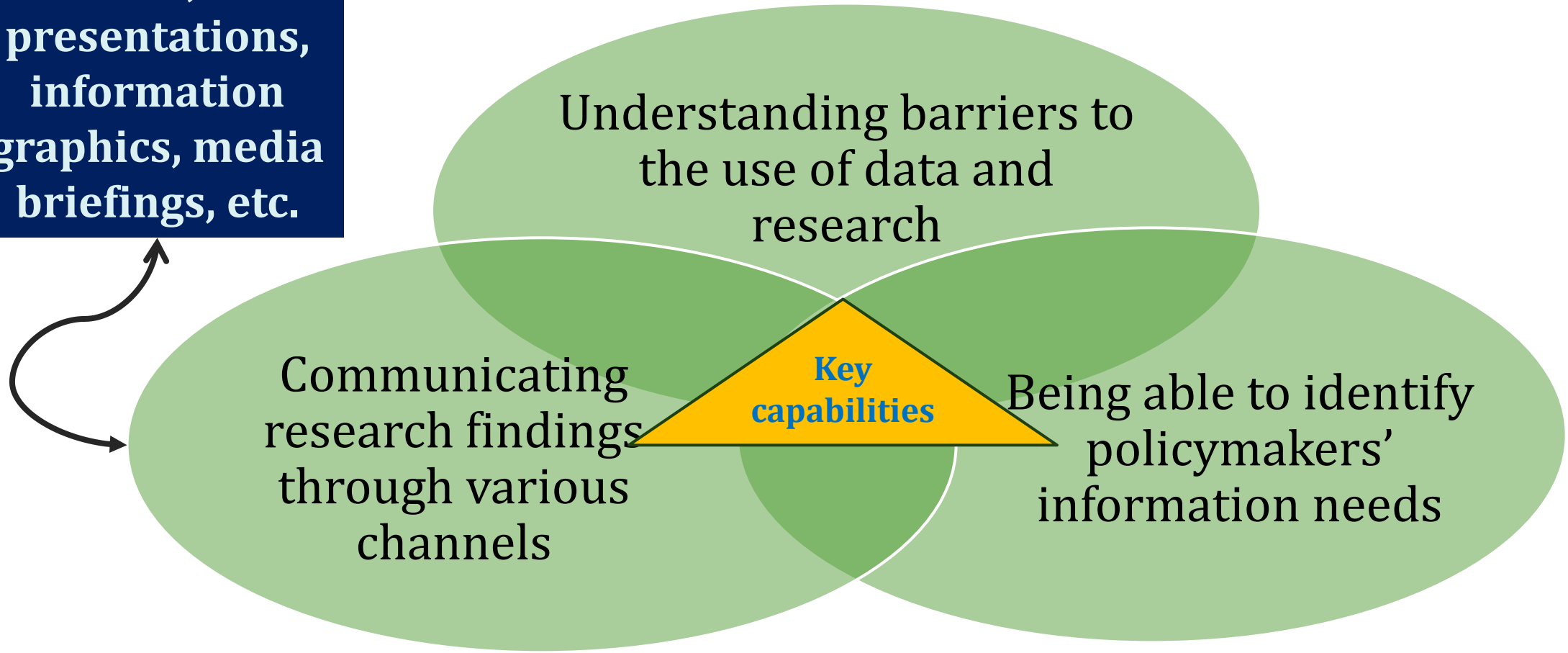
The use of:

- the best available scientific evidence, knowledge and expertise to inform policymaking, aiming to achieve better quality, effectiveness, efficiency and impact of public policies.

Relevance to policy

- Effective resource allocation
- Achievement of public health goals
- There is also a gap between available research and data and policymaking

e.g., written formats, oral presentations, information graphics, media briefings, etc.



The process of knowledge translation is closely related to:

policy communication	advocacy

توانایی بیان توصیه‌های سیاست مبتنی بر شواهد و توسعه و اجرای استراتژی‌های ارتباطی متقاعدکننده

ارتباطات استراتژیک برای مخاطبان خاص، با تمرکز بر تغییرات سیاستی خاص

High capacity for knowledge translation

Identify key data and information needed for decision making

Broker information exchanges between researchers and policymakers and other stakeholders

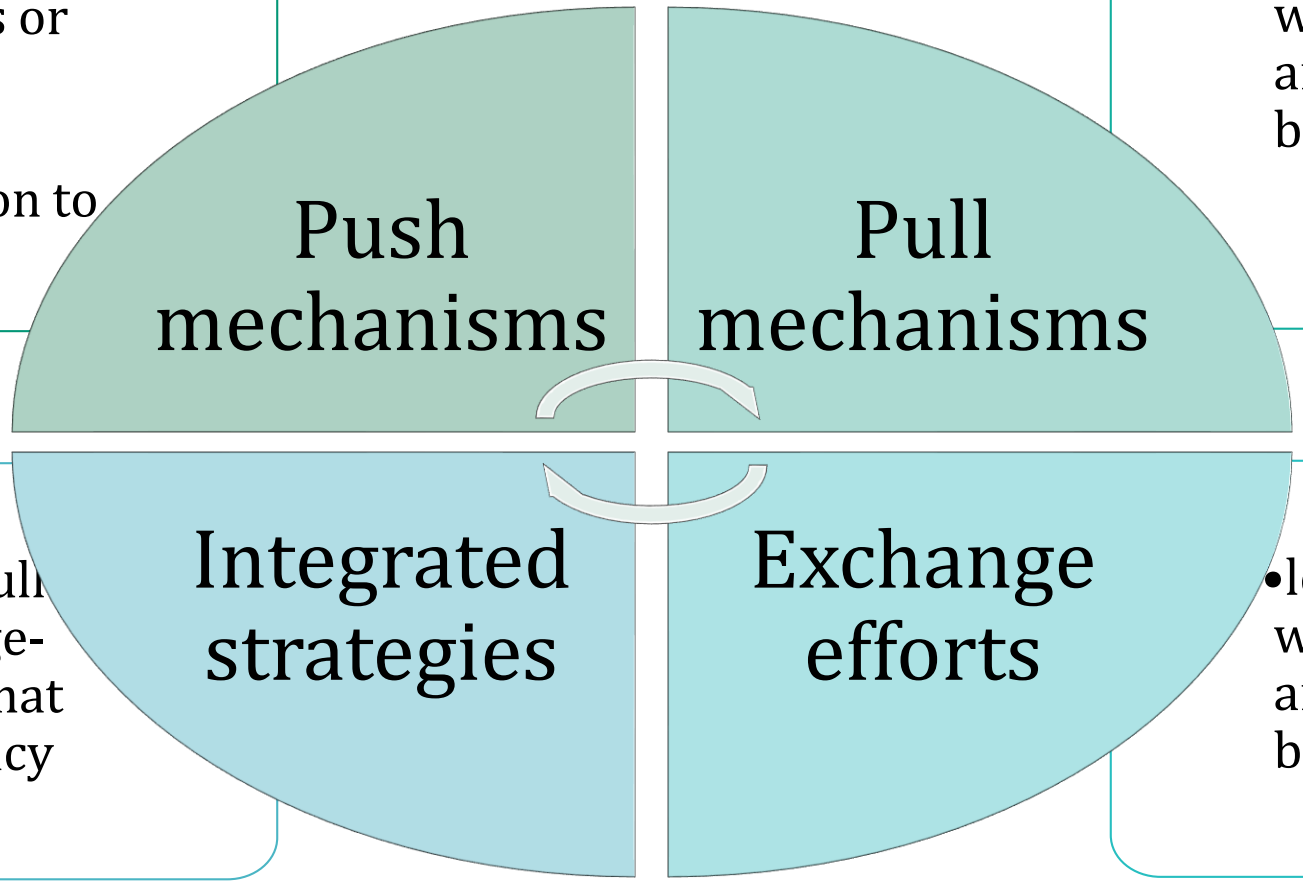
Effectively translate that information into non-technical and easily understood language and messages

Strategically communicate that information through a variety of formats and channels to support policy change

The best available information is regularly communicated to (and demanded by) decisionmakers in support of policy change

Main knowledge translation strategies

- led by researchers, intermediary groups or knowledge brokers
- typically involve providing information to research users



- led by evidence users, who request information and/or research evidence based on their needs

- elements of push, pull and exchange in large-scale KT platforms that work to connect policy needs with research tools.

- led by evidence users, who request information and/or research evidence based on their needs

Push Mechanisms

- Making evidence available
- Community engagement tools (including participatory action research)
- Dissemination of evidence summaries (such as systematic reviews and policy documents)
- Dissemination strategies (e.g. specific fund allocation, organization of congresses and forums, distribution of targeted newsletters, and specific websites)
- Web-based information and communication strategies, including portals.

Push Mechanisms

The use of targeted messaging to present and disseminate routinely collected health information

Present data and research evidence to potential policy-makers

Knowledge translation platforms increase the use of evidence in policy-making

Pull mechanisms

Dissemination via stakeholders and knowledge brokers (also called knowledge facilitators)

Providing skills training and education for decision-makers through web portals, advice and organizational support

Prioritizing research focused on the needs of policy-makers

Exchange Efforts

Information exchange between government agencies and/or between jurisdictions

Collaborative approaches between researchers and policy-makers (employing knowledge brokers to promote knowledge exchange)

Specific culturally sensitive mechanisms included promoting the involvement of community leaders (an Inuit community) could improve adherence to evidence-informed policies

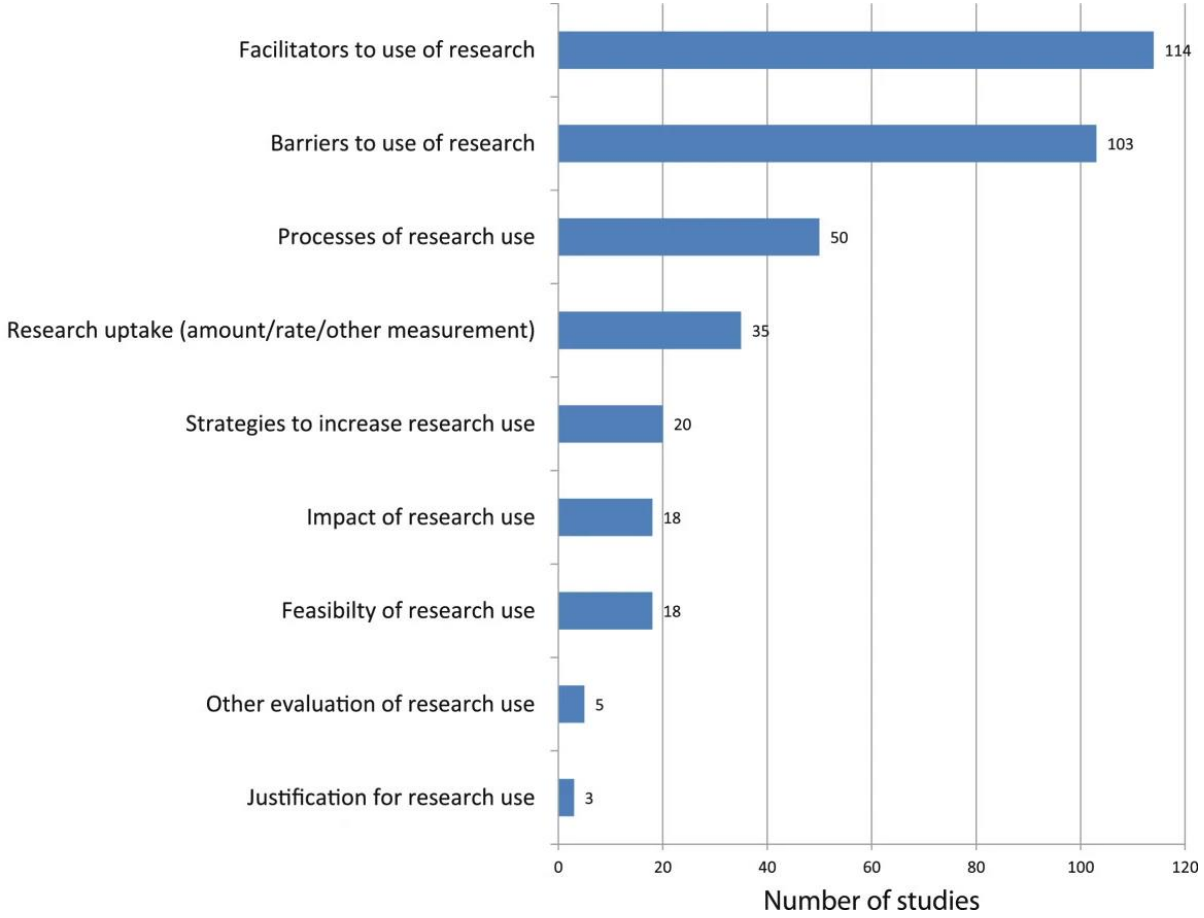
Integrated strategies

Integrating evidence use at different levels of decision-making and services

Coordinating communication activities across response levels between different response agencies

Promoting collaboration between policy-makers and researchers via policy dialogues (stakeholder dialogues).

Main barriers and facilitators of the use of evidence by policymakers



Oliver et al. BMC Health Services Research 2014, 14:2
http://www.biomedcentral.com/1472-6963/14/2

BMC Health Services Research

RESEARCH ARTICLE Open Access

A systematic review of barriers to and facilitators of the use of evidence by policymakers

Kathryn Oliver[1*], Simon Innvar[2], Theo Lorenc[3], Jenny Woodman[4] and James Thomas[5]

Abstract

Background: The gap between research and practice or policy is often described as a problem. To identify new barriers of and facilitators to the use of evidence by policymakers, and assess the state of research in this area, we updated a systematic review.

Methods: Systematic review. We searched online databases including Medline, Embase, SocSci Abstracts, CDS, DARE, Psychlit, Cochrane Library, NHSEED, HTA, PAIS, IBSS (Search dates: July 2000 – September 2012). Studies were included if they were primary research or systematic reviews about factors affecting the use of evidence in policy. Studies were coded to extract data on methods, topic, focus, results and population.

Results: 145 new studies were identified, of which over half were published after 2010. Thirteen systematic reviews were included. Compared with the original review, a much wider range of policy topics was found. Although still primarily in the health field, studies were also drawn from criminal justice, traffic policy, drug policy, and partnership working. The most frequently reported barriers to evidence uptake were poor access to good quality relevant research, and lack of timely research output. The most frequently reported facilitators were collaboration between researchers and policymakers, and improved relationships and skills. There is an increasing amount of research into new models of knowledge transfer, and evaluations of interventions such as knowledge brokerage.

Conclusions: Timely access to good quality and relevant research evidence, collaborations with policymakers and relationship- and skills-building with policymakers are reported to be the most important factors in influencing the use of evidence. Although investigations into the use of evidence have spread beyond the health field and into more countries, the main barriers and facilitators remained the same as in the earlier review. Few studies provide clear definitions of policy, evidence or policymaker. Nor are empirical data about policy processes or implementation of policy widely available. It is therefore difficult to describe the role of evidence and other factors influencing policy. Future research and policy priorities should aim to illuminate these concepts and processes, target the factors identified in this review, and consider new methods of overcoming the barriers described.

Background

Despite an increasing body of research on the uptake and impact of research on policy, and encouragement for policymaking to be evidence-informed [1], research often struggles to identify a policy audience. The research-policy 'gap' is the subject of much commentary and research activity [2-4]. Interventions to bridge this gap are the focus of recent systematic reviews [5-7]. To ensure these interventions are appropriately designed and effective, it is important that they address genuine barriers to research uptake, and utilise facilitators which are likely to affect research uptake.

It is now well recognized that policy is determined as much by the decision-making context (and other influences) as by research evidence [8,9]. Policymakers' perceptions form an important part of this story, but not the whole. Innvaer [10] aimed to review studies about the health sector, but the influence of the evidence-based policy movement is now recognized to be important across many policy areas. In the UK, with the creation of Clinical Commissioning Groups, Health and Well-Being Boards, and private providers moving into areas traditionally occupied by the NHS, a broader range of policymakers are becoming potential 'evidence-users' than ever. Researchers

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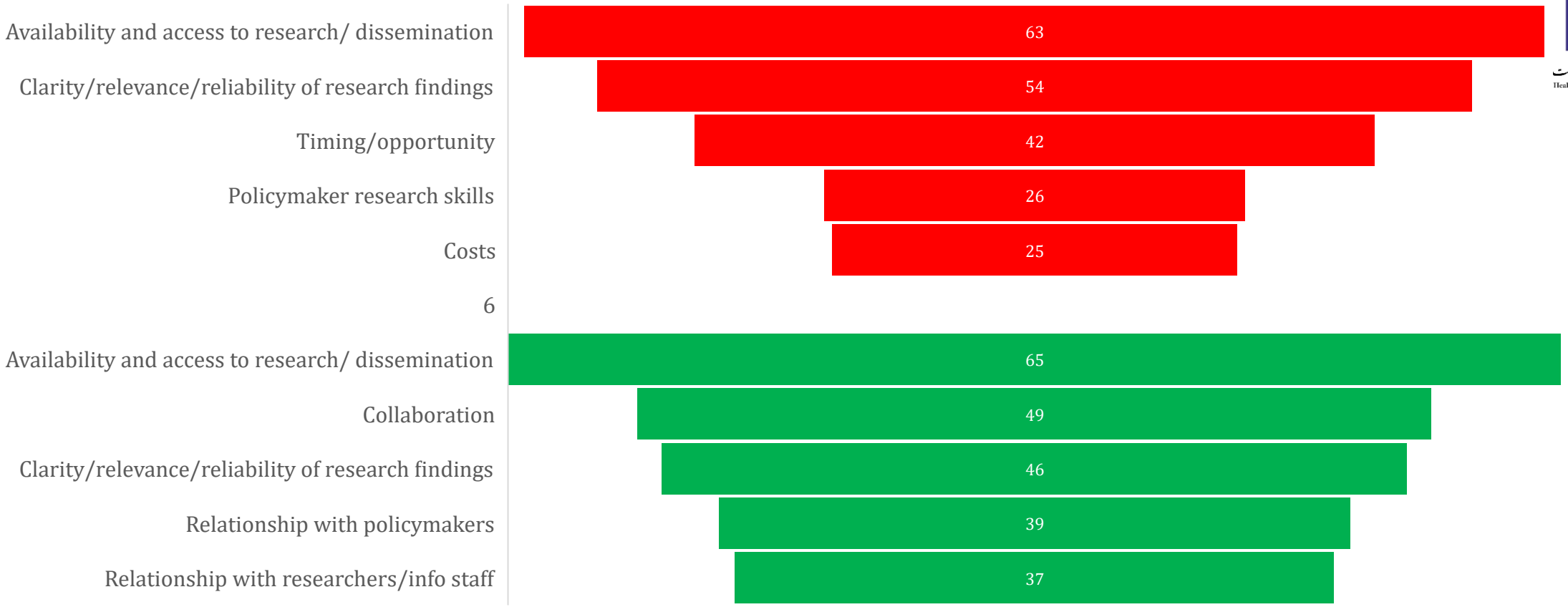
Full list of author information is available at the end of the article

Factor	Seen as barrier	Seen as facilitator	Factor	Seen as barrier	Seen as facilitator	Factor	Seen as barrier	Seen as facilitator
Contact and collaboration	**85**	**98**	Staff or personnel resources	14	10	Practitioner research skills	12	6
Collaboration	8	49	Managerial will	3	5	Practitioner research awareness	3	2
Timing/opportunity	42	24	Staff turnover/continuity of employment	9	3	Other	6	11
Relationship with policymakers	8	39	Other	9	9	**Policy characteristics**	**28**	**33**
Relationship with researchers/info staff	8	37	**Research and researcher characteristics**	**85**	**95**	Guidelines or policy statement	6	9
Contact with researchers/info staff	8	31	Clarity/relevance/reliability of research findings	54	46	Importance of policy	9	11
Contact with policymakers	9	30	Format of research findings	18	26	Legal or legislative support	5	3
Other	2	1	Importance of research findings	9	10	Other pressures on policy	26	5
Organization and resources	**92**	**99**	Other	25	32	Other	4	4
Availability and access to research/improved dissemination	63	65	**Policymaker characteristics**	**62**	**69**	**Other**	**10**	**1**
Costs	25	11	Policymaker research skills	26	22	Consumer-related barrier	9	0
Managerial support (practical)	3	22	Policymaker research awareness	24	10	Other	1	1
Professional bodies	11	15	Political support (will)	13	21	**All factors (total)**	**105**	**124**
Material resources available	11	12	Political support (practical)	4	12			

Frequently reported barriers and facilitators of the use of evidence



Main Barriers to Knowledge Translation

Economic context

- lack of funding and resources,
- difficulties engaging with stakeholders (including communication problems)
- high staff turnover rates (especially policy-makers)
- lack of local data
- use of inadequate dissemination methods

Organizational context

- Complex bureaucratic structures can hinder information flow and lead to response delays

Local context

- The effectiveness of information dissemination and decision-making
- Availability of local data
- Lack of quality scientific evidence

Time constraints

- Lack of time for researchers to adequately communicate scientific evidence or a need for urgent decisions by policy-makers

Barriers for decision-makers

- Political and personal factors
- A lack of the skills needed to interpret research data (or training to develop these skills) in decision-makers

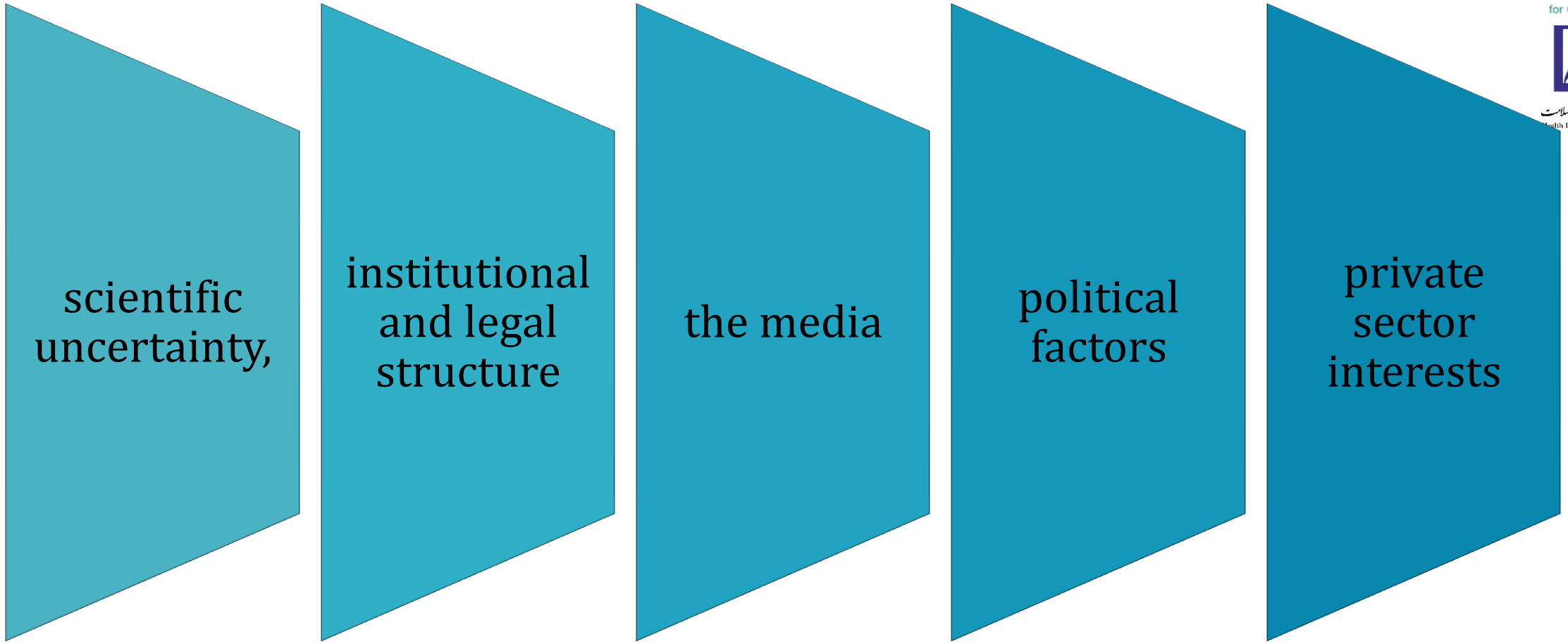
Conflicting perspectives

- Conflicting attitudes, beliefs and models of leadership

Resilience

- resilience (i.e. the ability of individuals and systems to recover after an emergency) as a knowledge gap

Main barriers to knowledge translation



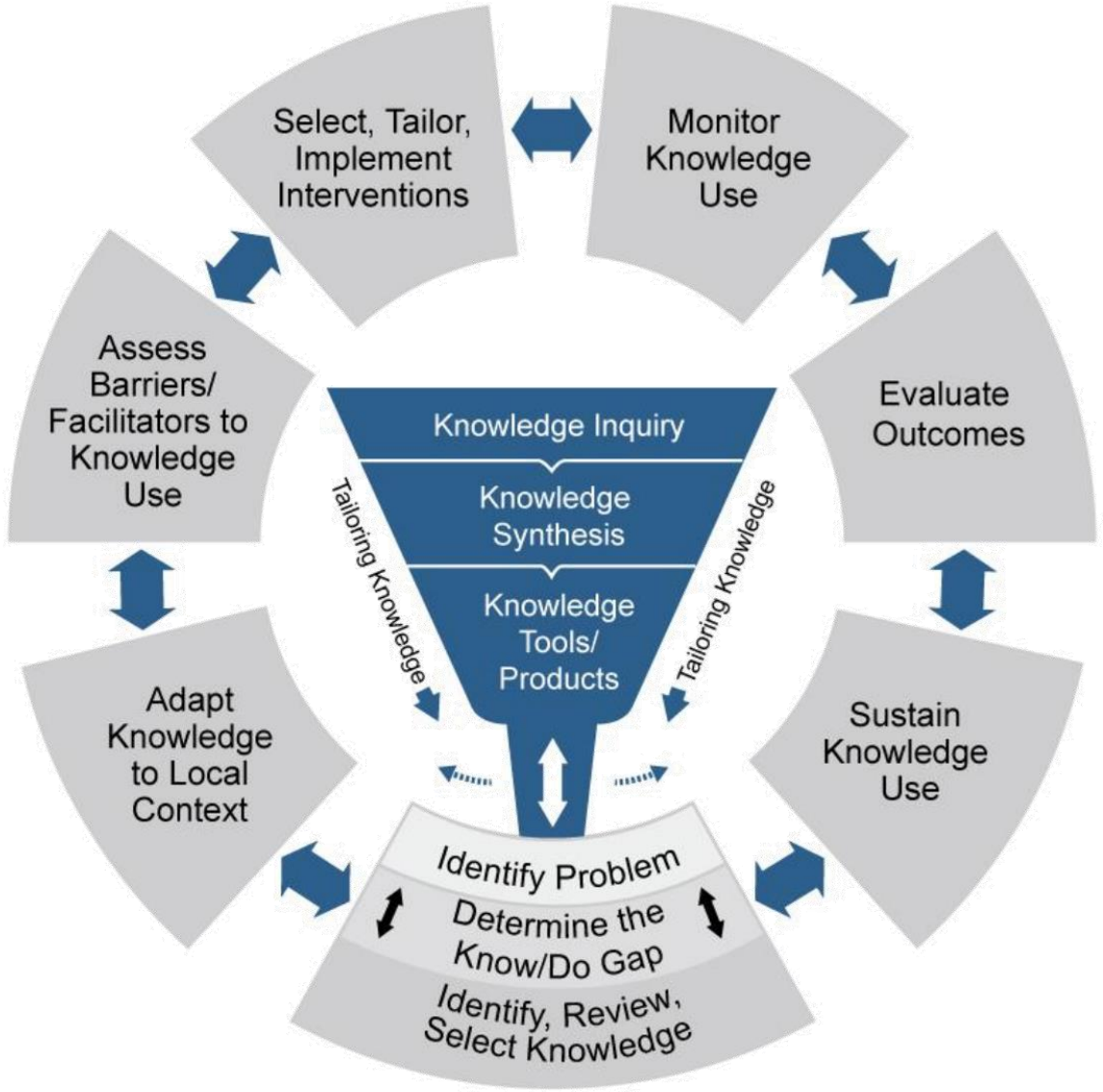
Barriers to knowledge translation

- Political and ideological factors
- Policy and scientific uncertainty
- Different conceptions of risk
- Perceived utility of research
- Timing
- Communication and reputation

The Knowledge to Action Model

Two concepts:

- Knowledge creation (The center)
- Knowledge action (The action)



Source: Graham ID et al. JCHEP 2006;26:13-24.

Knowledge Creation Funnel

The **knowledge creation funnel** conveys the idea that knowledge needs to be increasingly distilled before it is ready for application

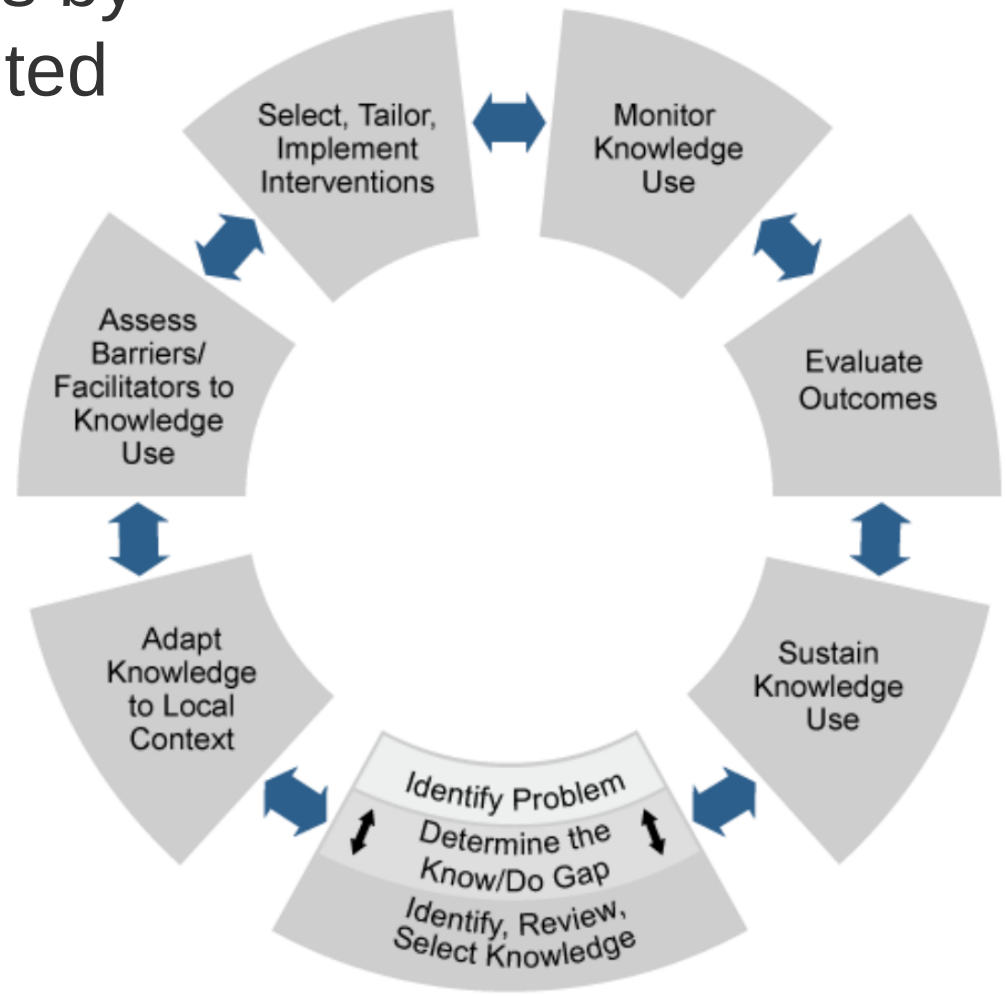
- **Knowledge Inquiry:**
  First generation knowledge (e.g., broad base primary studies or information)
- **Knowledge Synthesis:** Methodologies for determining what is known in a given area or field and what the knowledge gaps are (e.g., systematic reviews)
- **Knowledge Tools/Products:**
  Refined knowledge for decision-making (e.g., guidelines, decision aids, algorithms)

Source: Graham ID et al. *JCHEP* 2006;26:13-24.

The Action Cycle

The action cycle is the process by which knowledge is implemented

The **action cycle** emphasizes the **dynamic action steps** needed to apply the knowledge created (in any sequence).
It is intended to **deliberately** cause change.



Source: Graham ID et al. *JCHEP* 2006;26:13-24.

Operationalizing the KTA: Developing an ETP

LEGEND

A — Identify knowledge to action gaps
1. Describe your program's long-term goal
2. Identify and consult with key stakeholders for your program
3. Define the practice change
4. Define the gap

B — Adapt knowledge to local context
5. Adapt the practice change

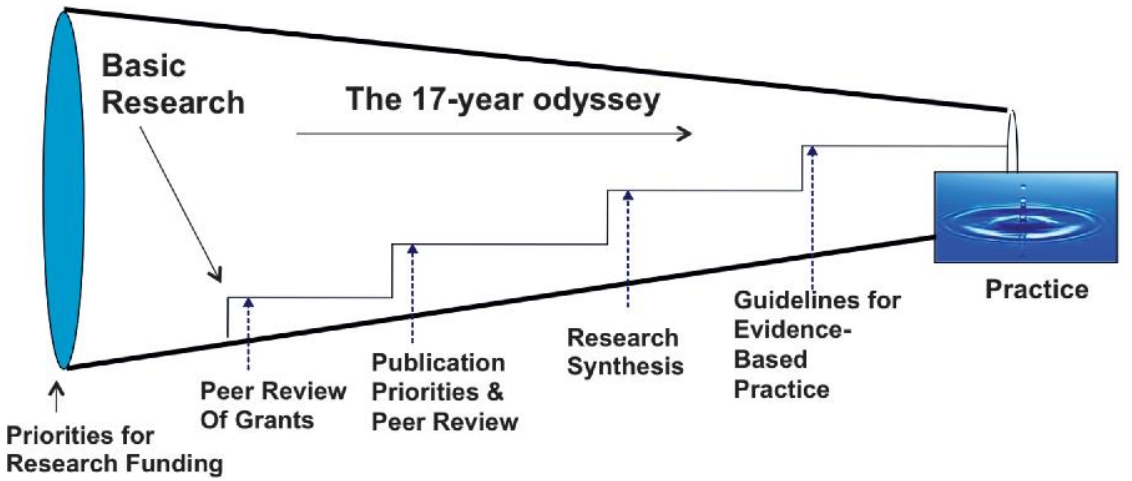
C — Assess barriers and facilitators to knowledge use
6. Identify barriers and facilitators
7. Organize barriers and facilitators to select individual barriers to the practice change
8. Map barriers and facilitators to a behaviour change framework

D — Select, tailor, implement interventions
9. Map barriers and facilitators to a behaviour change theory and implementation strategy
10. Select implementation strategies
11. Identify relevant barriers and facilitators for each implementation strategy
12. Develop key messages/actions for each selected strategy considering the relevant barriers and facilitators
13. Describe implementation strategy elements
14. Operationalize each implementation strategy

E — Bringing it all together
15. Develop a logic model

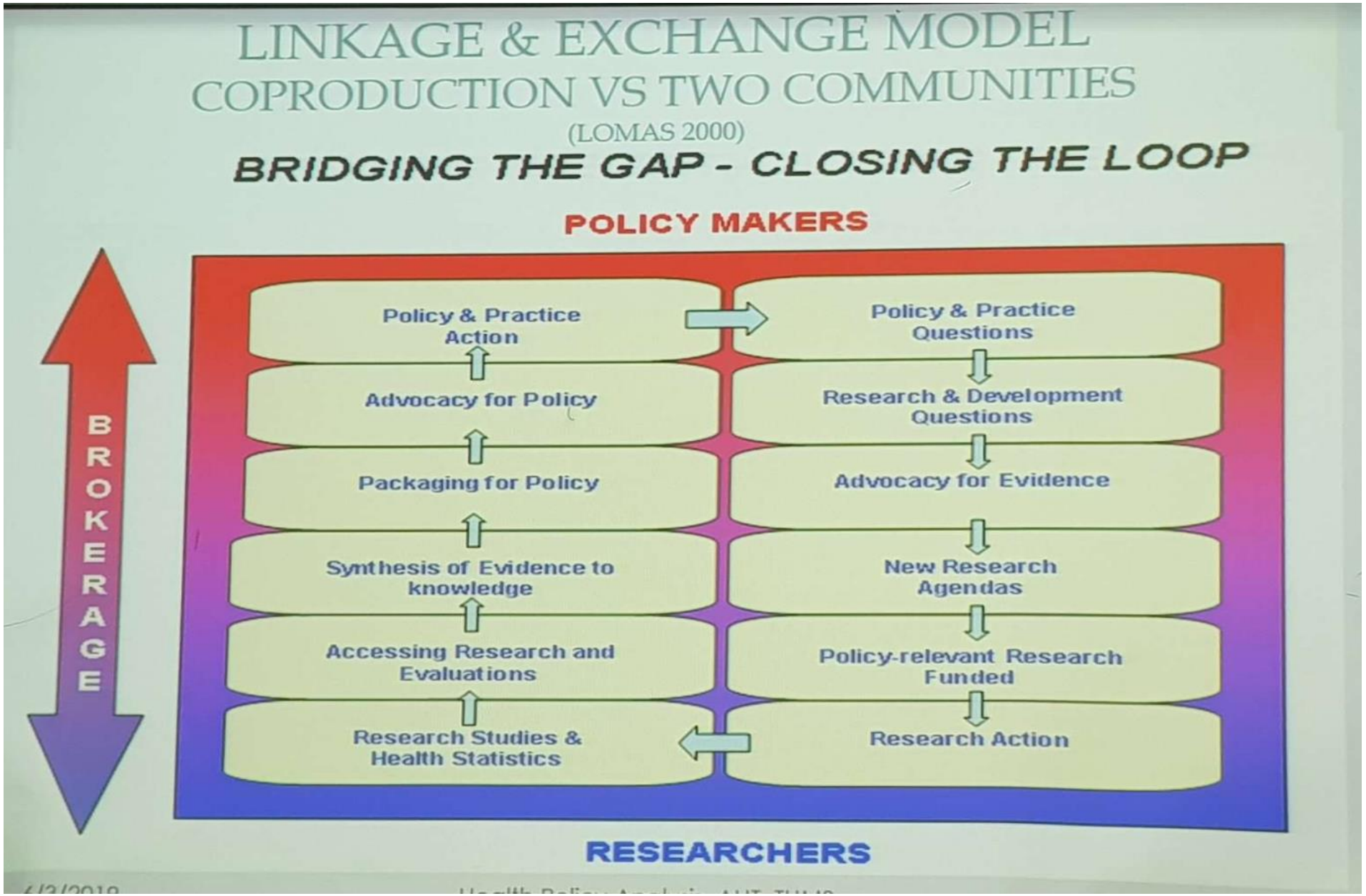
Engineering/Mechanical/Rational Model

- Assumes a direct, rapid relationship between research findings and policy decisions.
- **Problem-solving approach:** Policy makers identify problems, researchers solve them.
- Critiqued for lack of empirical examples linking research results to policy change.



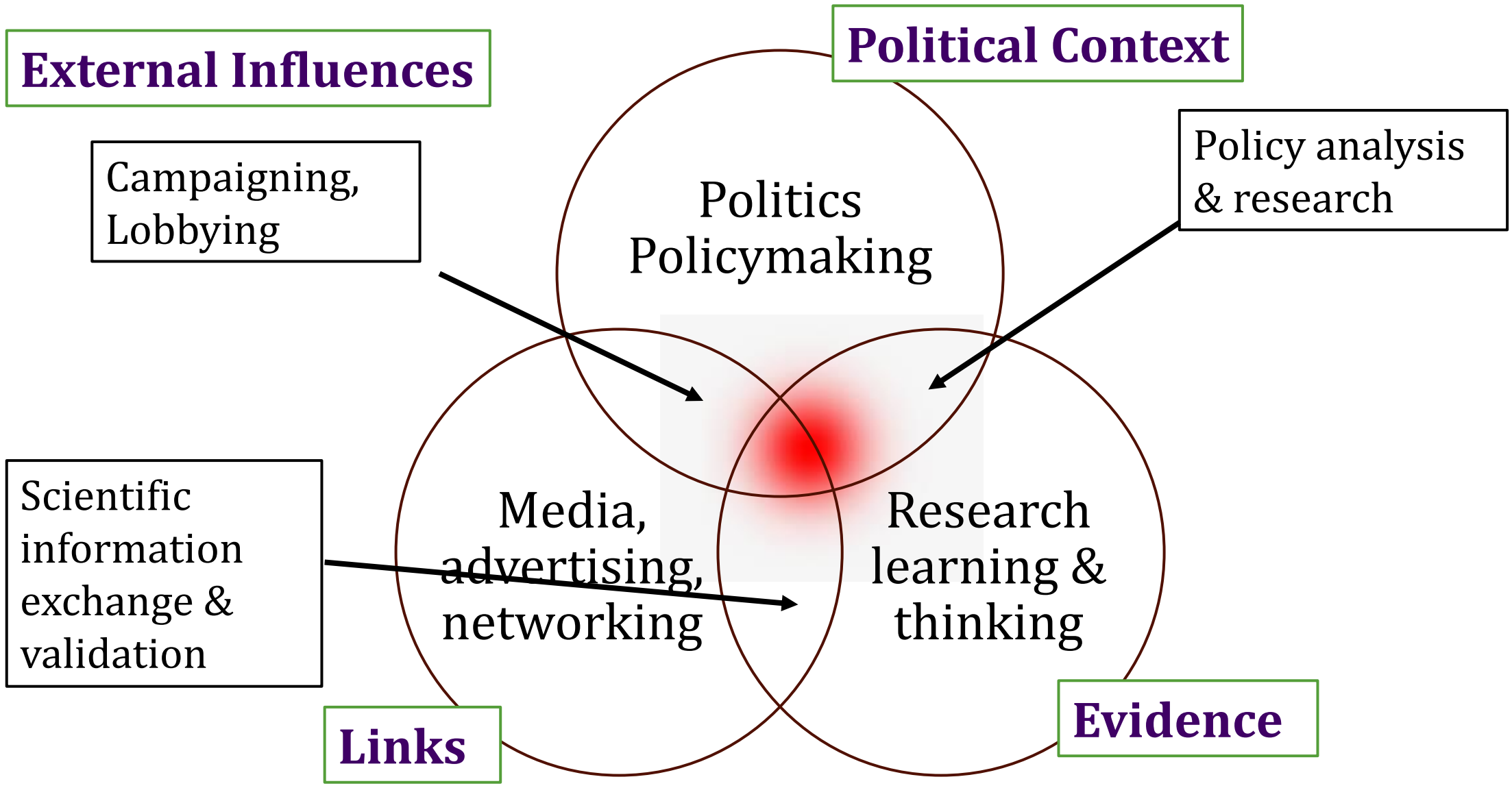
Challenges and Critiques of Engineering Model

- Policy Solutions without Clear Problem Definition:
  - Privatization and contracting out in low-income countries lacked clear problem-context fit.
- Rational, Linear Model Persists:
  - Researchers and policy makers often assume direct research-policy link.
  - Lomas (2000): A retail store filling shelves with studies.


LINKAGE & EXCHANGE MODEL
COPRODUCTION VS TWO COMMUNITIES
(LOMAS 2000)
BRIDGING THE GAP - CLOSING THE LOOP
POLICY MAKERS
BROKERAGE
Policy & Practice Action
Advocacy for Policy
Packaging for Policy
Synthesis of Evidence to knowledge
Accessing Research and Evaluations
Research Studies & Health Statistics
Policy & Practice Questions
Research & Development Questions
Advocacy for Evidence
New Research Agendas
Policy-relevant Research Funded
Research Action
RESEARCHERS

Enlightenment Model (Weiss, 1979)

- indirect conceptualization of the relationship between research and policy
- Research conclusions penetrate through political environment like water on limestone.
- Cumulative, indirect effect on policy over time.


External Influences
Political Context
Campaigning, Lobbying
Policy analysis & research
Politics Policymaking
Scientific information exchange & validation
Media, advertising, networking
Research learning & thinking
Links
Evidence

Why this issue is important in crises?

- Knowledge translation processes provide diverse tools for researchers and decision-makers to promote evidence-informed policies.
- Humanitarian emergencies and infectious disease pandemics challenge governments and, above all, test the capabilities of health systems.
- Time constraints are an inevitable barrier to the use of evidence in decision-making during a crisis or emergency.
- Existing evidence often has to compete with an abundance of poor-quality information.
- New evidence must be rapidly produced to fill knowledge gaps for effective policy-making.

- Scientific evidence is critical to managing infectious disease outbreaks but must compete with a wide range of other factors that influence decision-making.

In the ideal, the following would exist

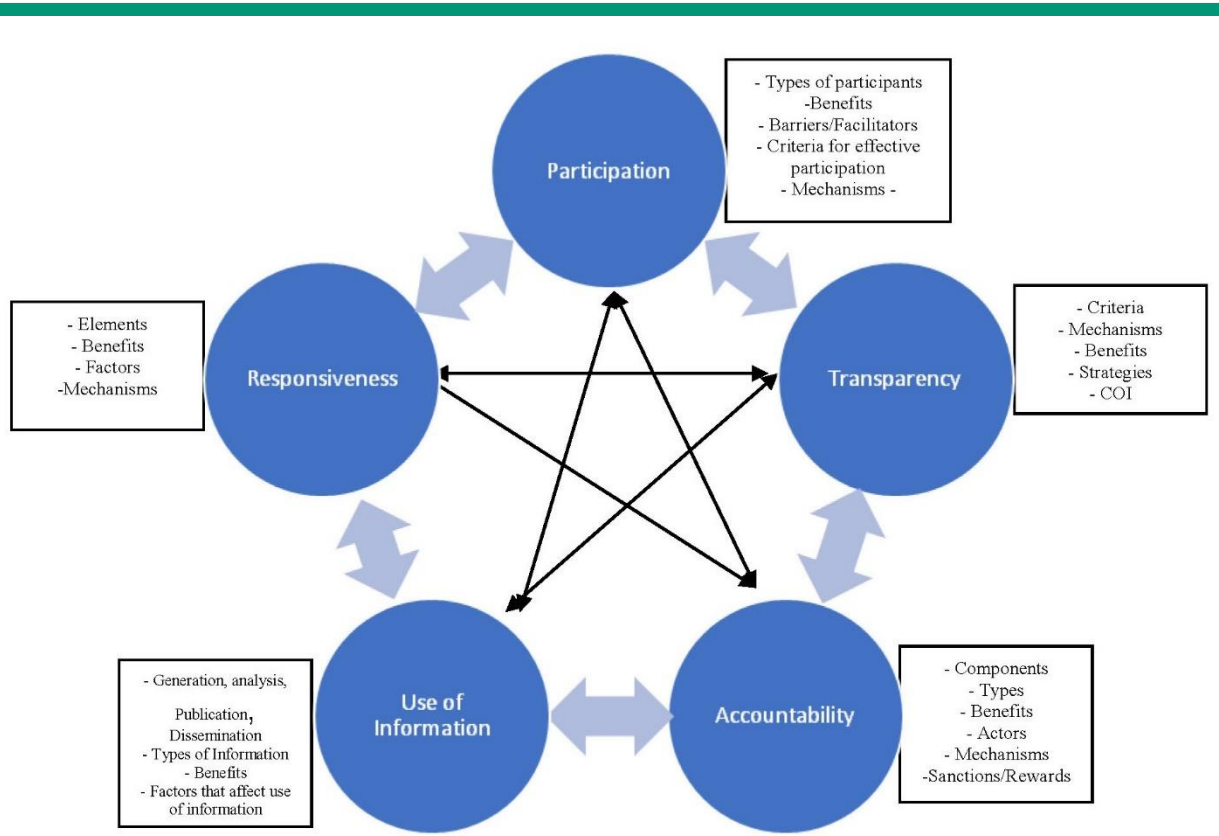
Basic data col … g of the data

A pub … cess

A culture where N … h government to

Opportun … nfluence

System … policy



Opportunities and mechanisms for policymakers to influence research and data collection to meet policy information needs

Policy considerations to improve knowledge translation in LMICs

- strengthen the capacity for local research;
- provide training to improve the skills of decision-makers to interpret and understand scientific evidence;
- engage stakeholders (including the community) in decision-making to promote the exchange of information between policy-makers and the chain of command;
- disseminate evidence in the form of short synthesis documents with a simple format and easy-to-understand language; and
- consider using different strategies to support translating research evidence to policy decisions: push mechanisms, pull mechanisms, exchange efforts and integrated strategies.