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Getting evidence into policy: The need for deliberative strategies?

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Abstract

Getting evidence into policy is notoriously difficult. In this empirical case study we used document analysis and key informant interviews to explore the Australian federal government's policy to implement a national bowel cancer screening programme, and the role of evidence in this policy. Our analysis revealed a range of institutional limitations at three levels of national government: within the health department, between government departments, and across the whole of government. These limitations were amplified by the pressures of the 2004 Australian federal election campaign. Traditional knowledge utilisation approaches, which rely principally on voluntarist strategies and focus on the individual, rather than the institutional level, are often insufficient to ensure evidence-based implementation. We propose three alternative models, based on deliberative strategies which have been shown to work in other settings: review of the evidence by a select group of experts whose independence is enshrined in legislation and whose imprimatur is required before policy can proceed; use of an advisory group of experts who consult widely with stakeholders and publish their review findings; or public discussion of the evidence by the media and community groups who act as more direct conduits to the decision-makers than researchers. Such deliberative models could help overcome the limitations on the use of evidence by embedding public review of evidence as the first step in the institutional decision-making processes.

Highlights

- Achieving evidence-based policy implementation is much harder than the rhetoric suggests.
- Our case study showed traditional voluntarist approaches are not enough to overcome institutional filtering of the evidence.
- Deliberative strategies open up the decision-making processes to greater expert and public scrutiny.
- Our framework illustrates the potential for deliberative strategies to increase the relative weight of evidence in policy.

- This article challenges researchers and policy-makers to acknowledge and address the institutional context of decision-making.

Keywords: Australia; Health policy; Decision-making; Evidence; Knowledge utilisation; Bowel cancer; Screening; Deliberative

Introduction

Getting evidence into policy and practice is harder than the rhetoric suggests. For example Pawson (2006) states that in Britain “much of the recent governmental head-nodding to evidence-based policy is mere lip service” (p. 175), while in Australia, Banks (2010) notes “The truth is, that while there has been much talk about evidence-based policy, far less attention has been paid to how we actually go about it and how we might do it better” (p. 3).

The role of evidence in policy-making is complex, and even the definition of evidence is contestable (Dobrow et al., 2004 and Head, 2008). Majone (1989) argues that “evidence is not synonymous with data or information. It is information selected from the available stock and introduced at a specific point in the argument in order to persuade a particular audience of the truth or falsity of a statement” (p. 10). This definition raises questions about who determines what information is considered as evidence, on what basis these decisions are made, and how evidence is actually used in the decision-making process.

Policy emerges from the interaction of different forms of evidence, filtered and shaped by the institutional processes of decision-making. Head (2008) argues that evidence is perceived through three distinct lenses: systematic or scientific research, drawing on knowledge from different disciplines; programme management experience or practice, based on organisational knowledge; and political judgement, involving persuasion, strategising and building coalitions of support. In contrast, for Lin (2003) policy is formed out of the competition between three rival rationalities: the technical, based on the formal scientific assessment of evidence; the cultural, focusing on the values and ethics of participants in the policy process; and the political, concerned with power sharing and the creation of legitimacy. Both views break with any linear notion of knowledge utilisation and emphasise how policy-making is the management of rival value sets and notions of evidence. This conflict is channelled and managed through institutions, such as the legislative, judicial and executive arms of government, the electoral system and the bureaucracy, which “shape preferences, beliefs, norms, and emotions.” (Rueschemeyer, 2009, p. 204)

There are several diverse interpretations of the concept of institutions but most share the basic argument that “institutions do matter ... Most political action of real consequence occurs in institutions, so it is crucial to understand how these bodies act and how they influence the behaviour of individuals working within them” (Peters, 1999, p. 150-151). March and Olsen’s (2006) definition is relevant at the organisational or meso-level of decision-making:

An institution is a relatively enduring collection of rules and organized practices, embedded in structures of meaning and resources that are relatively invariant in the face of turnover of

individuals and relatively resilient to the idiosyncratic preferences and expectations of individuals and changing external circumstances. (p.3)

The “new institutionalism” March and Olsen (2006) describe is a response to the traditional understanding of government and politics in formal-legal institutional terms, and aims to “penetrate the formal surface of governmental institutions and describe how politics ‘really works’” (March & Olsen, 2006, p. 5-6). Hence rather than seeing the process of government policy-making as evidence in one end, a black box of decision-making in the middle, and policy outcomes out the other end, an institutional approach tries to reveal the processes within the black box and help to explain why what comes out does not always resemble what went in. It recognises that norms differ and compete within and between institutions. These normative conflicts may become more intense as an issue progresses through the decision-making hierarchy as “the legitimacy of democratic political institutions is partly based on the expectation that they will provide open-ended processes without deterministic outcomes” (March & Olsen, 2006, p. 8).

The knowledge utilisation literature, which has attempted to address the problem of how to get more evidence into policy, has paid little attention to the institutional context of decision-making. Nutley and colleagues (Nutley, Walter, & Davies, 2007) identified three main evidence-transfer models in the knowledge utilisation literature: the knowledge transfer model, the knowledge transfer and exchange model, and the enduring ‘two communities’ model, first outlined in 1979 (Caplan, 1979), which highlights the different perspectives and objectives of researchers and policy-makers. More recently, the ‘knowledge integration’ model recognises the importance of organisational-level factors and of including the public (Best, Hiatt, & Norman, 2008). Despite this recognition, the rhetoric remains at the level of advocating “the role of communications as a central strategy” (Best et al., 2008, p. 325). Yet as Head (2008) notes, “key actors are anchored in institutional settings that make shared perspectives difficult to attain” (p. 9).

Knowledge utilisation approaches to date have also assumed a voluntarist attitude to policy-making where decision-makers act rationally and want to maximise the use of evidence. Such an approach ignores the primacy of politics in government decision-making, and, as both researchers and policy-makers acknowledge, the many other factors that might impact on the way evidence is filtered, shaped or rejected (Davies, 2004, Gibson, 2003 and Nutley et al., 2007). Acknowledging the lack of evidence for current knowledge utilisation theories, some researchers have called for more “research about research use” (Innvaer et al., 2002, Lavis et al., 2002 and Mitton et al., 2007). More specifically, Nutley et al. (2007) argue for further investigation into the potential roles that evidence may play at the organisational and system levels. This paper addresses that gap in the literature by considering the following research questions: how was evidence used by various committees and government departments? what was the institutional context in which research was reviewed, used or not used? who controlled the selection of evidence and by what means?

A brief review of the case study

Australia has a liberal democratic government arranged on federal lines. Health care is delivered across both the public and private sectors with a complex division of funding and service responsibilities between the federal and six state and two territory governments. The central government uses its massive fiscal predominance to shape overall policy directions. In this case, the

federal government used its control over national public health funding to dominate decision-making processes. The federal government initiated the bowel cancer screening programme, funding the screening pathway up to the point of identifying positive faecal occult blood tests (FOBTs). The state and territory governments, who are responsible for funding of hospital-based services, were left to cover the costs of colonoscopy follow-up of positive FOBTs performed in the public sector.

Four stages in the evolution of the bowel cancer screening policy in Australia have been previously identified (Flitcroft, Salkeld, Gillespie, Trevena, & Irwig, 2010). In Stage 1, following publication of the first randomised controlled trial (RCT) evidence, clinicians made a case for considering FOBT screening. The federal government responded by establishing an expert group, the Colorectal Cancer Screening Working Party of the Australian Health Technology Advisory Committee (AHTAC), to specifically review the benefits, risks and costs of bowel cancer screening in Australia. Stage 2 consisted of the AHTAC review (Commonwealth Department of Health and Family Services, 1997), examining the evidence for the efficacy of bowel cancer screening in an ideal setting, using evidence from recently published RCTs and cost-effectiveness analyses. The AHTAC review concluded that bowel cancer screening satisfied “a number” of the World Health Organisation criteria for a screening programme and “shows sufficient promise to warrant exploration through the establishment of pilot and feasibility studies” (Commonwealth Department of Health and Family Services, 1997, p. xi).

Stage 3 involved the federal government’s implementation of a two-year Pilot programme of FOBT screening, which included qualitative and quantitative components. The task of the Pilot Implementation Committee (PIC) was to consider questions of local effectiveness (i.e. can it work here?) This change in focus brought with it reliance on different types of evidence. Expert opinion, stakeholder consultation, consumer feedback, cost-effectiveness of different age ranges and frequencies, test performance in local populations, workforce capacity and quality of colonoscopy, all became significant metrics to be considered. During Stage 3 institutional barriers to the use of evidence began to appear, as discussed later. The PIC concluded that an FOBT screening programme was feasible, acceptable and cost-effective in the Australian setting and proposed an implementation framework involving biennial screening with immunochemical FOBT for the initial target age group of those between 55 and 74, with a review of the age range once the programme was fully operational (Australian Government, 2005).

However in Stage 4, the prior focus on evidence fell away, and the programme framework proposed by the PIC was not implemented. Instead, one-off FOBT screening was initially offered by the Howard government to those turning 55 and 65 years of age, with re-screening of Pilot invitees only. The Rudd government extended the programme to include one-off screening of 50 year olds in 2008. As a result, the programme in its current form is not evidence-based (Flitcroft et al., 2010). This paper focuses on how evidence was selected and used in Stages 3 and 4 of the policy process.

Methodology

For this project we adopted case study methodology, which emphasises the importance of describing and interpreting an event or series of related events and their context, in order to illuminate more general issues (Stake, 2005). Our case was defined as “the development of bowel

cancer screening policy in Australia from the late 1980s to 2009". Case study methodology has provided the tools to go beyond deductive questions (do policy-makers use evidence?), to explore the process by which bowel cancer screening policy developed, the complex role that evidence played in this process, and discrepancies between evidence-based rhetoric and practice.

Document collection

The process began with the examination of the two major government reviews: the AHTAC Report published in 1997 (Commonwealth Department of Health and Family Services, 1997); and the final evaluation report of the Pilot programme, *The Australian Bowel Cancer Screening Pilot Program and Beyond*, published in October 2005 (Australian Government, 2005). Other sources included randomised controlled trials of faecal occult blood tests, cost effectiveness analyses, commissioned reports, guidelines, press releases, election campaign documents and federal government budget papers. Interview respondents were also helpful in identifying relevant documents and some provided copies of background correspondence. The aim was to build a set of public documents about the process that was as complete as possible.

Interviews

34 key respondents were interviewed between August 2007 and August 2009. Purposive sampling was used to achieve a maximum diversity sample, across clinical, methodological and policy expertise and involvement across the policy development timeline. We initially interviewed members of the two major government review committees (AHTAC's Working Party on Colorectal Cancer Screening and the PIC), and extended our sample based on further document analysis and suggestions from respondents. Respondents included representatives from former and current cancer research organisations such as the National Cancer Control Initiative and the Australian Cancer Council; academics with epidemiology, health economics and public health expertise; clinicians including gastroenterologists, oncologists, surgeons and general practitioners; former health ministers; former and current federal bureaucrats from the Departments of Health and Ageing (DoHA) and Prime Minister and Cabinet (DPM&C); current and former employees of government research agencies including the National Health and Medical Research Council (NHMRC) and the Australian Institute for Health and Welfare; state bureaucrats responsible for the bowel cancer screening programme; the director of a company that manufactures FOBTs; a government lobbyist; and political advisors involved in the 2004 election campaign.

Interviews were semi-structured and lasted between 30 and 90 min. Questions varied according to the participant's role in bowel cancer screening policy. For confidentiality reasons, respondents are referred to only by their identification number [IDXX], given in square brackets after quotations or references attributable to them. Ethics approval for this project was granted by the Human Research Ethics Committee of the University of Sydney.

Interview data management and qualitative analysis

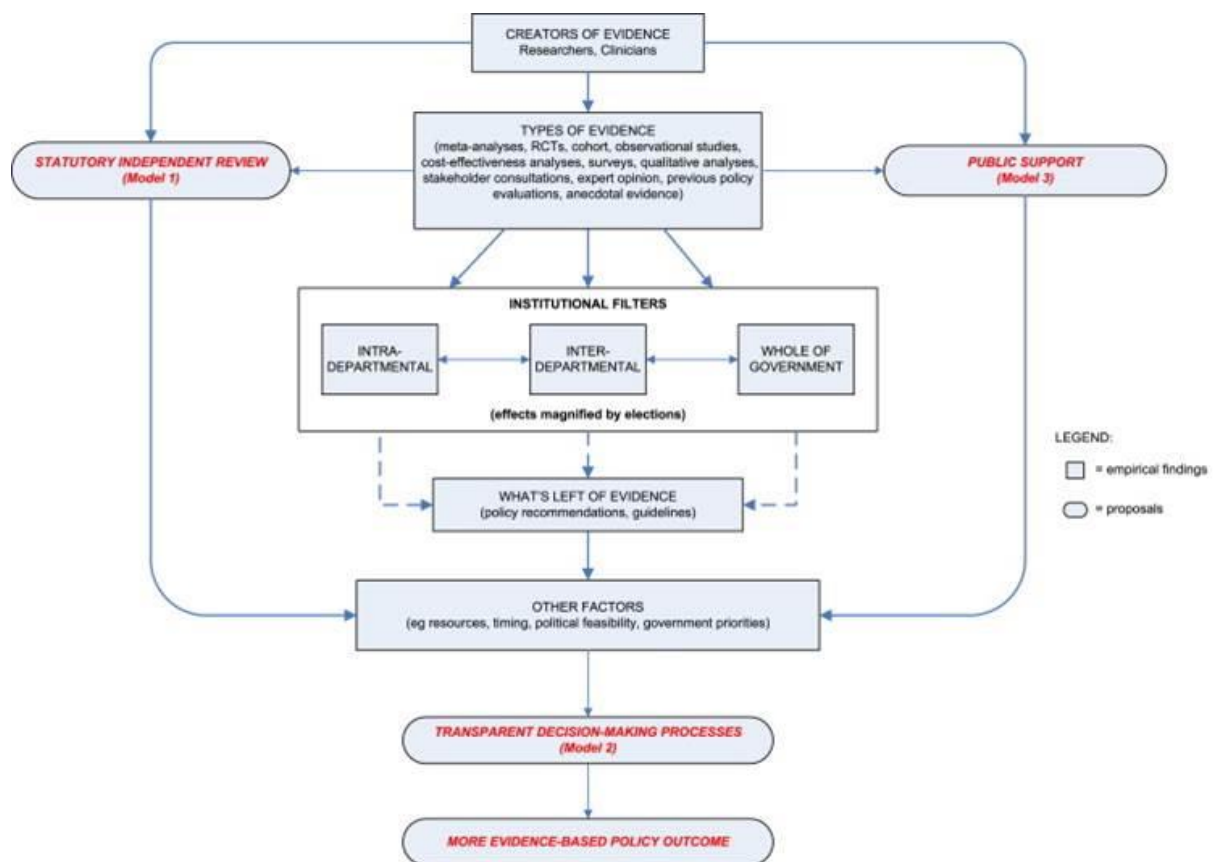
All interviews were digitally recorded and transcribed either by KF or a professional transcription service. KF used NVivo 8 software to code any part of the interview transcripts that referred in any way, directly or indirectly, to the use of evidence. Relevant text was coded with the label 'use of evidence' and the data set was categorised by phases of policy development, types of evidence

referred to (e.g. RCT, Pilot-based evaluations, anecdotal) and how it was used (e.g. to promote or justify a particular action) or for what purpose (e.g. to advise government, to inform debate) and by whom. This technique helped to clarify the different ways evidence was filtered within DoHA, between departments and across the whole of government.

Findings

Fig. 1 contains the findings from this case study of Australian bowel cancer screening policy (in square frames) as well as our proposals for the potential role of deliberative models in the policy process (in rounded frames). The latter will be outlined in the Discussion section.

Fig. 1: A framework for getting evidence into policy: the role of institutional filters in a case study of Australian bowel cancer screening policy and the potential role of deliberative strategies.



The evidence pathway is not simply linear, but often iterative – additional or different forms of evidence may be introduced at several stages along the way, and external events, such as an upcoming election, may disrupt progression between stages.

We found a range of institutional processes worked to filter the evidence at three different horizontal levels of federal government: intra-departmental, inter-departmental and whole of government levels. The effect of these institutional filters was amplified by the 2004 election environment (Fig. 1).

The institutional processes within the Department of Health and Ageing

During the Pilot phase (stage 3), DoHA consulted widely with the relevant experts, stakeholders and consumers, and commissioned several technical reports. The Department set the terms of reference and invited “medical and other experts” (such as gastroenterologists, oncologists, epidemiologists, a general practitioner and a health economist) to sit on the PIC. DoHA provided the secretariat, setting the agendas, timetabling the meetings, and stipulating response times. It also commissioned external consultants to conduct qualitative and quantitative research and to produce background reports to inform the committee’s discussions. While the evaluation report was prepared by a consultancy group (Healthcare Management Advisors Pty Ltd) members of the Pilot’s Monitoring and Evaluation Steering Committee, comprising experts as well as state and federal bureaucrats, reviewed the report prior to its final publication [ID10, ID11].

The interviews with respondents revealed the differing perceptions held by some members of the ‘two communities’. For example, one former federal bureaucrat stated that academics “have no idea” how government works [ID34], while an academic bemoaned the paucity of “expertise at the Commonwealth level” [ID02]. There were also tensions around the perceived lack of objectiveness of both parties. On the one hand, some experts were seen to have vested interests in a particular outcome, and as one federal bureaucrat noted, could at times take very entrenched, non-objective views, a situation they described as “quite problematic” [ID11]. On the other hand, some respondents expressed concerns that independent experts were marginalised in the Pilot process. Some of the consultants’ reports commissioned by DoHA were not subjected to routine peer-review by members of the PIC. In one instance, experts had to insist on seeing the full report rather than a consultant-prepared summary of it [ID24]. One clinician respondent stated that DoHA “doesn’t consult enough with the experts who know how to do stuff. And it doesn’t use them enough to help them drive processes” [ID09]. The routine denial of peer review is a serious issue, and Banks (2010) queries whether “data and analysis that are not able to be scrutinised by third parties” (p. 9) can even be called evidence.

For those reports where expert opinion was sought, several respondents commented on the institutionalised responses to the incorporation of expert opinion such as short turn-around time for revisions to the draft report, resulting in unrealistic deadlines set by DoHA [ID01, ID02, ID24], the cumbersome approach of seeking feedback through electronic tracking of changes [ID24], and the partial incorporation of some comments but not others [ID02, ID24]. In particular, a paucity of face to face meetings was seen as detrimental:

Well, it’s a lousy way to make policy I think because you benefit from sitting opposite colleagues ... that’s how PBAC [Pharmaceutical Benefits Advisory Committee] works, that’s how MSAC [Medical Services Advisory Committee] works and it’s a far more professional and peer-review way of doing it whereas the way that it tends to happen for bowel cancer screening is very haphazard. [ID24]

So although a range of evidentiary sources were considered by DoHA, there were procedural limitations on how thorough the processes of evidence-gathering and review actually were. Researchers may not always appreciate the institutional constraints bureaucrats themselves work under:

As a public servant you ... don't necessarily agree with how things are being done ... you have to work within a certain way and I see my job as getting the best outcome I possibly can within that ... People don't understand that sometimes the choice is this or nothing and you need to make a decision about whether this is better than nothing, even though it may not be, you know, the ideal thing. [ID12]

The situation is further complicated by the purely advisory nature of DoHA committees. The notion of contestability of advice offered by the Australian Public Service was formalised by the Whitlam government in 1972, when separate ministerial advisory positions within Ministers' offices were created (MacDermott, 2008). For example, the Minister for Health and Ageing has their own office, and employs their own independent policy advisors who may offer alternate or even conflicting advice about a particular issue to that offered by bureaucrats working in DoHA. A senior policy advisor to Tony Abbott, the Minister for Health and Ageing at that time, stated that "you feel that your job is to provide alternative ideas and at least alternative commentary on the Department's recommendations on policy issues" [ID28].

The underlying tensions about who controls the selection of evidence that policy is based on (experts, bureaucrats or external advisors) are magnified during an election period. In the course of the 2004 election, the Health Minister's policy advisors developed a suite of cancer-related policy options, including plans for a full roll-out of a national bowel cancer screening programme by 2008. The framing of this commitment ignored much of the evidence gathered in earlier stages of policy-making. For example, the Liberal-National Party campaign document Strengthening Cancer Care (Liberal Party of Australia & The National Party, 2004) set no upper age limit on those to be screened and advocated an earlier starting age for Indigenous Australians. It also promised a full roll-out within an unrealistically short time-frame (4 years), and with an unrealistic budget of only \$25.5 million over four years, much less than the \$29 million per year the Rudd government subsequently allocated to screen just three age groups (Roxon, 2008).

In the search for alternative ideas, especially in the heat of an election campaign, adherence to evidence may play a secondary role.

Look, I think there is always an element of ad hoc in political policy-making. It's always good though if you can make sensible decisions based on the evidence. But when you have to do things in a hurry, you use your instinct and judgment based on what, your understanding of the evidence and our understanding in the campaign unit at the time was imperfect. [ID28]

Bureaucrats within DoHA filtered the evidence reviewed and included in the official reports, while policy advisors, faced with putting policy options together under the pressures of an election campaign, did not create proposals consistent with the best evidence. As one senior former DoHA appointee commented: "I think policy is ... determined by the exigencies of the moment rather more than by evidence and it's, yeah you're lucky it's informed by evidence but it's not totally based on it ever" [Italics added] [ID06].

Institutional processes between departments

Some respondents commented on the tendency for Australian government departments to work in silos, [ID02, ID19] despite one of the roles of the DPM&C being "to ensure that policy proposals put

to the Prime Minister, other ministers in the portfolio, and to Cabinet are developed in a coherent, informed and coordinated fashion” (Australian Government, 2010a). Even within departments, there may be lack of coordination between units or sections. As one respondent noted: “There’s a silo for paying for prostate cancer tests, there’s a silo for cervical screening. There’s no, there’s no pot that says ‘Screening for cancer, how do we allocate the resources?’” [ID19].

The issue of poor communication within government becomes particularly pertinent in an election year. Once an election is called, there is an elaborate set of Caretaker Conventions and associated practices which come into play (Australian Government, 2007b). These are “directed at protecting the apolitical nature of the public service and avoiding the use of Commonwealth resources in a manner to advantage a particular party” (p. 1). In practice, they limit the extent of access political parties may have at election time to the bureaucrats most closely involved, and familiar with, the evidence base used in the development of policy proposals. One policy advisor described the lack of access to DoHA once an election has been called, arguably the most important time for good communication, as “one of the failings if you like, in terms of good policy development” [ID29].

However, under the *Charter of Budget Honesty Act 1998*, both the Prime Minister and the Leader of the Opposition have the right to request costings of publicly-announced election commitments (Australian Government, 1998). As part of the Pilot process, the Medical Technology Advisory Group (M-TAG) had already prepared costings for the proposed national bowel cancer screening programme (Australian Government, 2005) and bureaucrats working in DoHA would have known about those costings. The Department of Finance and Administration (DFA) was entitled to ask DoHA for this information when the Prime Minister requested it to estimate the cost of the *Strengthening Cancer Care* package just prior to the 2004 election. The fact that the DFA allocated only \$34.5 million for “cancer prevention (bowel cancer, smoking and skin cancer)” over three years (Australian Government, 2004) – again, a major underestimate of probable costs – suggests that for whatever reason, there was no sharing of more accurate costings between Departments.

Government-wide institutional processes

Policy implementation depends on adequate funding being made available. In Australia at the time of this case study, all proposals for funding were vetted by the Expenditure Review Committee (ERC), a sub-committee of Cabinet. Here the Health Minister needed to convince officials from Finance, Treasury and the DPM&C of the worthiness of a particular proposal. New spending measures had to be offset against reductions in other areas of portfolio spending [ID31, ID34]. For expensive programmes such as population screening this was a difficult task. Despite 2004 being a time of economic surplus, once the inaccurate costings generated by DFA had been approved by the ERC, and the rest of the budget allocated to other programmes, the inflexibility of the ERC budgetary approval process made subsequent financial allocations of the magnitude required to fund a full programme of bowel cancer screening impossible. As one ministerial advisor stated, “post-election, we actually bid for more budget to cover the shortfall in our costings, but Treasury and Finance said no way” [ID28].

Another government-wide barrier to the use of evidence stemmed from the lack of transparency inherent in Australian government processes. For example, members of federal advisory committees were (and still are) subject to confidentiality agreements that prevent them from disclosing details

of discussions. Thus minutes of the bowel cancer screening Implementation Advisory Group and its successor, the Program Advisory Group, were confidential. Even members of those committees who did see the minutes had difficulty relating to the abridged format: “sometimes it’s very hard to reconcile what you think was discussed in the meeting to what you see in the minutes, ‘cause it’s sort of you know, action this, that and the other, and very little ... reflection of the discussion at all” [ID10].

Australia does not have a culture of publishing results of commissioned government research in peer-reviewed journals (Yazahmeidi & Holman, 2007). While a series of reports on the Pilot programme were published (Australian Government, 2005), many reports commissioned by DoHA were not published at all, and these included several that would have been of interest to those outside the PIC. For example, the M-TAG review (cited in Australian Government, 2005) which became the basis for concluding that bowel cancer screening in the Australian context was cost-effective, was never published. Of those reports that were published, some have been criticised for not reflecting the “robust discussions” that took place within the committees and task groups [ID10].

Finally, the comparatively short three-year electoral cycle in Australia again amplifies the effect of institutional barriers on the timely consideration of evidence in policy development. The final report of the bowel cancer screening PIC (Australian Government, 2005) was not published until October 2005 (16 months after the Pilot was completed) and so was not publicly available in time to inform policy proposals on this issue for the 2004 election, held on 9 October. Hence election proposals were being made without reference to the evidence that had been carefully gathered by DoHA over the preceding period of several years. As Banks (2010) has remarked, “Even the best evidence is of little value if it’s ignored or not available when it is needed” (p. 8).

Discussion

This case study has highlighted the major institutional constraints on the use of evidence at work in the area of bowel cancer screening policy. Getting evidence into practice is not the logical outcome of researchers and policy-makers working together, as much of the knowledge utilisation literature suggests. In the Australian setting, experts and evidence were important in informing discussions with policy advisors and the voluntarist approach works well up to the point of formulating evidence-based policy proposals to be considered by the Minister. However, “for evidence and evaluation to contribute materially to the selection of policies, it must be supported by institutional frameworks that embed the use of evidence” [italics added] (Banks, 2010, p.7). So, if institutional filtering of evidence is the problem, what is the solution?

One approach has advocated changes in formal procedures of policy development to facilitate “more participative, deliberative and bottom-up approaches to policy analysis” (Nutley et al., 2007, p. 260). Deliberative processes would bring to the surface the range of possible views on a policy issue, distribute the decision-making authority and encourage increased communication and transparency about how policy decisions are made (Hayer, Laws & Versteeg, 2009), factors noticeably absent from our case study. Brown (2009) describes deliberative theory as focusing on:

broadening the deliberative input from all participants, on creating a sense of public reason, and on creating procedures that can be seen as acceptable by all stakeholders involved. By

doing so, deliberative democrats seek to transform the current systems of governance, which are often associated with social exclusion, power asymmetries, and mutual distrust. (p. 139)

However, Nutley et al. (2007) have cautioned that there is limited evidence that formal deliberative processes will improve policy outcomes, and that “While ‘democratising’ the policy process may be appealing, potentially ‘anarchising’ it may be less so” (p. 262).

Culyer and Lomas (2006) propose a more narrowly defined view of a deliberative process as “one that provides guidance informed by relevant scientific evidence, interpreted in a relevant context wherever possible with context-sensitive scientific evidence and, where not, by the best available colloquial evidence.” However, this implies that different sources of evidence are necessarily complementary, although this is not always true. More evidence will not inevitably lead to “policy making that is more rational and less political” (Tenbenschel, 2004, p. 204).

Both the Brown (2009) and Culyer and Lomas (2006) notions of deliberation do not solve the problem of institutional filters. Unlike Brown (2009), our concern is not with ‘democratising’ the policy process to transform the existing systems of governance by enhancing the public role through, for example, the creation of mini-publics (Goodin & Dryzek, 2008). This would not necessarily improve the uptake of evidence into policy – and could even have the obverse effect, by introducing political questions much earlier in the policy process. Nor do we want to limit our proposals, like Culyer and others (Culyer, 2006, Culyer and Lomas, 2006 and Lomas et al., 2005) to the early stages of policy guidance – in our case we found the utilisation of evidence was generally successful in the initial stages of policy formulation.

We are more interested in testing the proposal that the institutional filters on the use of evidence identified in this case study could be mediated by deliberative strategies that work within the existing system of governance and extend beyond initial policy formulation to actual evidence-based policy implementation. These strategies represent a distinct break with the voluntarist, discursive emphases of the existing knowledge utilisation literature. Our aim is to promote strategies that balance the ideal of evidence-based decision-making against the realities of bureaucratic and political filtering of the evidence, to produce the best-informed outcomes possible. Based on our empirical findings that identified the problem of institutional filtering of the evidence, we have proposed three models, represented in Fig. 1 by the rounded frames, as potential solutions.

Statutory, independent, expert review of the evidence

The first and most potent model is one that involves statutory, independent, expert review of the evidence, as embodied in the Australian Pharmaceutical Benefits Advisory Committee (PBAC), widely considered to be the gold standard of independent advice to government internationally.

Established in 1954, the PBAC determines whether drugs are added to the list of pharmaceuticals subsidised by the Australian government and its functions, roles and responsibilities have been prescribed in legislation, which underpins its independence. PBAC considers evidence of community need, comparative clinical performance and cost-effectiveness (Salkeld, Mitchell, & Hill, 1999) and since 2004, has produced Public Summary Documents presenting the rationale for its recommendations (Australian Government, 2007a). This very successful model has been adopted internationally (Taylor, Drummond, Salkeld, & Sullivan, 2004).

We propose that extending this model to other areas of technical decision-making, like population screening, would protect the role of advisory bodies in the inherently political process of decision-making. A report on the Australian Public Service (KPMG, 2009) found it to “be less adept than other nations at incorporating non-government expertise and the views of citizens into its policy development and service design process” (Rudd, 2010, p. 3-4). Head (2010) noted if research rigor is valued, it “needs to be protected by strong institutions and robust professional practices” (p. 19). The PBAC model seems most likely to preserve research evidence in the face of the institutional filters identified in this case study.

Independent and public review of the evidence

The second model involves independent and public review of the evidence, and there are several examples of this model in practice. The UK National Screening Committee (NSC) is a standing advisory committee which invites public consultation and publishes all stages of its review process and the committee minutes on its website (UK National Screening Committee, 2010). Similarly, the National Institute for Health and Clinical Excellence (NICE) employs widespread stakeholder consultation and transparency of the decision-making processes (Kelly et al., 2010). Although lacking the legislative backing for their recommendations, these bodies use deliberative processes to maximise the impact of evidence and their consultative and transparent approach makes it much more difficult for a government to reject those recommendations without justification.

Transparent review of the evidence for screening programmes could reduce the potential for evidence to be filtered by government departments prior to policy proposals being made and enable the proper costing of election proposals. The 2009 Review of Health Technology Assessment in Australia (Australian Government, 2009) noted repeated stakeholder concerns about the lack of a strategic, systematic and integrated framework for health technology assessment, and the need to “take a holistic not silo approach” to assessment procedures (p. 6). Former Prime Minister Rudd acknowledged greater transparency was “essential for accountability and improved outcomes” (Rudd, 2010, p.6), and recent changes to the Freedom of Information Act aim at “promoting a pro-disclosure culture across the government” (Australian Government, 2010b).

Public debate about the evidence

The final and least developed model is public debate of the evidence through existing organisational fora (print, electronic or social media outlets such as the internet, or through discussion groups, workshops or other community-based activities). This deliberative strategy focuses on building grass roots and media support for a particular policy in order to make it more personally relevant to the careers and aspirations of the decision-makers, in most cases politicians. The difference in federal government commitments to the breast and bowel cancer screening programmes in Australia is a salient example of the power of public support and the importance of getting the media onside. Breast cancer screening was portrayed by former Prime Minister Hawke as a ‘women’s issue’ (Women’s Health Queensland Wide Inc., 2007). A full roll-out of the BreastScreen programme commenced in 1991, with recurrent funding incorporated within the health budget. Breast cancer screening had the support of educated and articulate middle class women who lobbied consistently and cohesively for early detection of a disease which had elicited genuine community concern, and was often portrayed sympathetically in the media [ID32].

The potential for grass-roots support to influence policy decisions is not limited to population screening policy, as shown by the fast-tracking of antiretroviral drugs for the treatment of HIV/AIDS by the United States Food and Drug Administration (FDA). The effectiveness of these drugs had been demonstrated in clinical trials, but the FDA was slow to approve them until demonstrations by members of the civil disobedience group ACT UP led to regulatory changes to speed up approval processes (AVERT, 2010).

We propose that more public interest in, and support for, bowel cancer screening may lead to a more evidence-based programme. There is solid evidence for bowel cancer screening including three RCTs and a meta-analysis which all demonstrate significant potential mortality reduction (Australian Government, 2005). The PIC, after an extensive review of the evidence, suggested a framework for the implementation of a bowel cancer screening programme involving initial biennial FOBT screening of all those aged between 55 and 74 (Australian Government, 2005). The Australian government's own research body, the NHMRC, had also independently reviewed the evidence and recommended biennial FOBT screening for those aged over 50 (National Health and Medical Research Council, 1999). However, neither the Howard nor Rudd governments had allocated sufficient funding for a full bowel cancer screening programme to be implemented. In the absence of any strong public and political demand for a more effective programme, successive governments have made do with a limited programme, which screens 50, 55 and 65 year olds once only, in contravention of the evidence base (Flitcroft et al., 2010).

Evidence may be most influential when it fits with current political priorities (Nutbeam & Boxall, 2008). Politicians respond to party political and electoral pressures, which remain more immediate to them than the science of epidemiology and population health. Thus "more effective engagement by researchers with ordinary citizens could have a powerful impact on decision-making by influencing public knowledge and attitudes and, in turn, the politician's perception of the 'saleability' of particular initiatives (Grayson, 2007, p. 15). If the general public does act as a more direct conduit to decision-makers than researchers, the focus on increasing communication between researchers and policy-makers in the knowledge utilisation literature may be misplaced, at least at a national level.

Although public pressure can work as an effective means of getting neglected, evidence-based policies onto the political agenda, there are no inherent properties associated with this model that restrict it to consideration of policies with strong evidence bases, and herein lies this model's weakness. Nonetheless, it remains a valid, if less reliable, alternative.

Limitations

There are a number of limitations to the study. Although we employed a sampling strategy aimed at maximising variation in responses, we cannot be sure that the views we heard represented all possible perspectives. Two serving senior public servants declined to be interviewed, and of those people we did interview, some spoke on the condition of anonymity, requesting some comments remain 'off the record.' Recall bias is also a possible limitation, as respondents were asked about events that for some of them, occurred up to 13 years previously.

Finally, there is the question of generalisability from our findings. Only through further, more comparative research will we know if the institutional filters identified in the Australian setting also

exist elsewhere. However, problems stemming from centralised control over the review of evidence, poor communication and lack of transparency are unlikely to be confined to this case study.

In our discussion, we proposed the solution to this filtering of evidence may lie in the use of deliberative strategies that balance the ideal of evidence-based decision-making against the realities of bureaucratic and political tailoring of the evidence, to produce the best-informed outcomes possible. Although the literature notes the paucity of evidence for the effectiveness of deliberative processes (Culyer and Lomas, 2006 and Nutley et al., 2007), we have provided practical examples for each of our three models where deliberative processes have worked to promote the primacy of evidence over other considerations: the internationally-adopted PBAC legislative approach (model 1); the consultative and transparent methods of the NSC and NICE (model 2); and the power of public pressure in breast cancer screening and HIV drug policy (model 3).

Conclusion

Based on our case study analysis, we have proposed a framework (Fig. 1) that illustrates the role of institutional filters in the pathway between evidence and policy outcomes. Institutional processes at three horizontal levels of government blocked the direct transfer of evidence into policy, and the effect of these institutional processes was magnified at election time. In response to our empirical findings, we have proposed that the impact of evidence may be boosted through the use of deliberative strategies. Genuinely independent review of the evidence can bypass the selective use of evidence by government prior to the development of policy proposals (model 1); transparent decision-making processes enable the other factors that have influenced policy decisions to be openly declared, making expert recommendations harder for the government to ignore (model 2); and the relative power of evidence can be mediated through public support (model 3).

Getting evidence into policy is difficult. We have suggested that embedding public review of the evidence as the first step in the institutional decision-making processes (all three models) may be more successful in delivering evidence-based policy outcomes than the voluntarist methods advocated to date. Additional national and comparative studies of how governments use evidence would help establish the strengths and boundaries of our proposals.

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