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Evidence and health policy discussions to date have largely focused on the relationship between those generating research evidence and policy decision-makers and how improving this relationship will increase research use in policy development. All too often policy makers are perceived as the problem, not understanding or seeing the importance of research evidence. Policy makers do have a responsibility to source and use available evidence, as do researchers to the sharp and meaningful production and syntheses of policy relevant research evidence. This takes more than improved communication mechanisms between individual researcher and policy makers. Evidence-informed policy making is a science in its own right requiring the development and application of methods that conceptualise, synthesise and exchange research evidence. Policy organisations need to develop as receptor sites for research and its application to day-to-day decision-making, this is a significant program of work if it is to be done well and affect the evidence culture of organisations.

Introduction
Developing health policy that is well informed by the available research evidence is a complex business. Getting researchers and policy makers to work together and exchange knowledge is a nice idea but will it really make a difference? Yes, possibly at a research project level but more than likely not to broader policy development and research systems. Efforts to protect, maintain and improve the population’s health are calling on the evidence-base in an unprecedented way in Australia. In policy documents the appearance of the language of translational research, knowledge transfer and evidence-uptake are all too familiar. This task is largely aspirational, as it requires new conceptual theory and application to policy decision-making, new ways of working and new systems to support efforts and sustained change.

Efforts need to take account of, yet extend beyond knowledge translation and exchange between researchers and policy makers. Of importance is the opportunity for innovation in creating a dynamic evidence-informed policy making environment within government departments, which are receptive to research and integral to how research is synthesised, commissioned and utilised. This is an emerging dimension of Public Health worthy of recognition and investigation if we want to see the development and use of a dynamic and policy relevant evidence base.

The development and trial of tools, guidelines and processes are needed. The setting up of systems which enable the majority of policy decision-makers to feel comfortable sourcing and judging the usefulness and quality of the available research evidence and commissioning useful research is also warranted. Strengthened capacity for evidence-informed policy making (EIPM) in the policy environment will also place new types of demand on our research partners, which reinforces the need for a concerted effort to create needed capacity development and change.

This paper aims to describe the building of a policy culture conducive to evidence-informed policy development drawing on the early experience of a policy unit within a State government department focussed on health promotion and prevention policy and program development and delivery.
Research or evidence: clarifying use of terms
The definition of evidence and difference between research, knowledge, information and evidence is elusive in current discussions. The terms 'evidence' and 'research' are often used synonymously with the majority of commentators seeing evidence as the results of research. In this paper 'research evidence' refers to the results of research. The term 'evidence' refers to a range of information that influences the policy process, one of which is research evidence.

Diagnosis of the problem before we create the solution
Why is the evidence and policy relationship so difficult?

Three conceptual approaches or schools of thought describe how we theorise, diagnose the problem and promote solutions to the gritty interface between research evidence and health policy:

• ‘Research centred approach’ – offers a two community explanation in which research is driven by research/researcher

• ‘Meet in the middle approach’ – describes a bridge between the two communities of researcher and policy maker

• ‘Policy opportunity approach’ – whereby policy draws on and considers research; and researchers consider the policy context when developing research.

A research centred approach stems from the two communities theory\(^1\) in describing the gap between research and policy as resting between researcher and policy maker. It is similar to Lavis et al.’s (2006)\(^2\) ‘push’ approach. The solution is perceived to lie in improved dissemination of research results through interaction, collaboration and communication between individual researchers and policy makers. The focus of one-way research transfer from researcher to policy maker operates on the assumption that research drives policy.

The ‘meet in the middle’ approach, also emerging from the two communities theory, considers researchers and policy makers within a surrounding research and policy context – what Lavis describes as a “general climate for research”. This school of thought is similar to the exchange approach of Lavis et al. (2006)\(^2\), recognising that the two communities – researcher and policy maker - need to work better together, but also acknowledges that the organisations in which they work also need to change to better accommodate research for the policy context. This model aspires to the notion that research drives policy. Ideas on linkage and exchange\(^3–5\) begin to move the debate from one-on-one interaction (two communities) to interaction within a research and policy context, particularly at an organisational level. Relationships and dialogue between researchers and policy makers are considered primary to decision-making about research. Debates here highlight improving the bridge between researchers and policy makers.

The ‘policy opportunity approach’ describes evidence-informed policy-making that considers the socio-political and organisational culture and contexts in which research and policy operate (Figure 1). This builds on Lavis et al.’s (2006)\(^2\) ‘user-pull’ and ‘integrated’ approaches, in which the policy process creates opportunities for research, and in which research is but one of many considerations. The policy process draws on research evidence as well as multiple information sources such as expert opinion, and the results of community surveys or polling. Policy makers generate the research questions and approach to research, in collaboration with research partners.\(^6\)

Figure 1. How policy and research relate in an evidence-informed policy environment – the policy opportunity approach

Assumption: “PEIP” Pathways to evidence-informed policy depends on appreciating the socio-political, cultural and organisational contexts, the worlds of both the researchers and policy makers, and the collation and processing of appropriate forms of evidence.

These conceptual approaches illustrate how complex the relationship between evidence and policy can be. These complexities emerge from the set of assumptions held by research and policy communities about each other and the relationship between research and policy; the inconsistency in how evidence is understood, conceptualised and applied in efforts to develop policy; the expectations of research in the policy process; and the evolutionary nature of evidence through the policy process.

A critical first step: defining the evidence for policy and programmes
An early starting point in creating an evidence culture in government is in defining what evidence looks like and means in the development of a population health policy or program. It is important to recognise that the evidence-base is perceived to be reviews of research findings, preferably done systematically. However in reality policy decision-makers are often faced with making decisions based on isolated single studies and the experiences of their replication, often well before full evaluation results are available. Policy-making cannot be stifled by a lack of research evidence but must make every effort possible to use research when available.
Whilst we appreciate that evidence-based health policy owes its origins to evidence-based medicine with its focus on health care interventions for patients, evidence-based policy seeks and uses a much broader range of evidence. In the policy environment evidence is sought from clusters of information to build the case for policy or programmatic decisions. These are contextual socio-political; expert opinion; scientific studies; policy audits and reviews; and economic impact analyses. These clusters are the information considered the ‘raw ingredient’ of evidence. Research evidence is sought to answer questions about the problem, the possible interventions, how they might be implemented and their economic impact. Four questions are ideally asked by and for policy makers of the research in their development of a case for policy change (see Box 1):

**Box 1. Policy questions of the evidence**

- **What is the problem?** (Descriptive)
- **What works?** (Intervention)
- **What is needed for it to work?** (Implementation)
- **What will it cost and save?** (Economic)
  (Bowen & Zwi 2005)

**Strategies to develop an evidence-informed policy culture**

There are four main areas of focus needed to build a policy units research capacity: synthesis of existing research, commissioning of needed research, generation of new research and the science of knowledge interaction, translation and exchange. A receptor site for evidence-informed policy making is one that actively engages in research, commissions well defined and high quality policy relevant research, ensures well-spent research funds, and enables evidence-informed policy development.

A number of strategies enable evidence-informed policy development. The strategies span: conceptual and definitional work— a policy discussion paper; tools and methods development (navigating the evidence in policy, Research Impact Guide); synthesis and commissioning a number of research and policy processes and products (policy experiments, applied interventions e.g. community, rapid reviews, policy briefs); research partnerships and centres; workforce capability (policy and research community; learning and knowledge sharing (exchanges); and joint priority-setting (policy driven - targeted) (see Box 2).

**Conceptual and definitional work for our Unit**

A “Conceptual Paper: Development of the Evidence and Policy Function” provided a background to, and definition of evidence and evidence-informed policy; assessment of the current policy context; initial strategic directions that are recommended; risks, challenges and solutions for the unit; capacity required for delivery of an evidence and policy function and a work plan (strategies, key tasks, responsibility/person and timeframe). The paper was disseminated to senior management and Unit staff seeking comment, clarification and endorsement of the approach. This provided the authorisation needed to create change.

**Tools and methods**

An agreed conceptual definition of evidence for policy has been developed and integrated into an evidence and decision-making guide, which is applied to our decision-making processes regarding effective interventions.

The guide walks policy decision-makers through six sequential phases from identifying the problem to policy and program development (Figure 2).
This provides a method for synthesising complex public health information which considers the population groups, settings, risk factors and their social determinants, key settings and systems in which people live, work and play will guide investments in research. This work sees definition of a mechanism for determining the strength and quality of research evidence for policy decision-making.

**A Research Impact Guide**

A Research Impact Guide is in development to apply to all research investments undertaken by the policy unit. A series of indicators will guide the impact of government-funded research on the field of knowledge/research itself, the work of the Unit, the work of partner organisations, across government and society. The impact guide will be applied to the commissioning and reporting process and an annual evaluation of research investments by the Unit.

**Synthesis and commissioning**

The Unit is in the process of defining the different research processes and associated products expected when we commission research or syntheses of research. This ranges from rapid research reviews, evidence summaries, policy briefs, literature and systematic reviews, to policy experiments and longer-term applied interventions. The emphasis is on building a system around rapid reviews and policy briefs that provides timely syntheses of the body of research evidence to answer a policy generated question and produce short syntheses in policy relevant formats. We have trialled a rapid review of workplace interventions to prevent chronic diseases and will now embark on a 12-month work program to commission up to 10 rapid reviews, as we require. This work will be located on a dynamic and interactive evidence portal which provides a shortcut to high quality evidence reviews and/or Units syntheses of systematic reviews on ‘hot topics’ for government.

**Policy-research partnerships and centres**

Research partnerships are about much more than a financial contribution by government to match funding body investments. We need to consider which research projects we invest human and financial resources into as determined by regular research priority-setting process, in what ways and to what outcomes and impacts. We are developing a charter that specifies a number of criteria for developing effective research partnerships through which policy makers develop research expertise and are better able to develop evidence-informed policy. For example, policy makers are considered policy investigators with time available to participate in research design, conduct and dissemination.

**Workforce capability**

**Unit-wide competencies:** As a policy unit we need to identify the reasonable competencies associated with being able to use descriptive and intervention level evidence and critique the evidence available for our decisions. This needs to be clarified Unit-wide across different positions (public service levels) and functions and as part of a workforce mapping strategy, and subsequently performance managed.

**Unit-wide development:** A Unit-wide training program is providing learning and development, and ongoing support on how to navigate evidence and theory in decision-making (e.g. evidence and decision-making guide).

**Researcher capacity to be policy relevant:** We will also need to work closely with researchers via their University base to promote our approach to evidence and expectations of commissioned work (e.g. ‘how to’ provide rapid research reviews, and standardised reporting formats which identify policy relevance and allow for a policy discussion).
The third community; a new profession: Emerging from increased capacity for EIPM is the new role of policy and research broker, a professional able to work in either research or policy settings. This means research and policy competent Unit staff, university staff and the opportunity for a contractor network able to respond to research questions generated in the policy environment. This approach will have implications for the way Public Health practitioners are trained and their ongoing academic pursuits at Masters and PhD levels. The Unit aims to host a joint PhD program with a university, which will see, as example, up to four ongoing posts with specialism across knowledge exchange, policy experimentation, synthesis and brokerage in the public health context. We need to engage in dialogue with universities to ensure that this agenda forms part of core curricula and learning activities for future Public Health professionals.

Joint posts: As well as a PhD program, we need to establish joint funding initiatives and any research partnerships that the Unit enters into should provide the opportunity for policy makers to also work in research environments and vice versa.

Policy experiments and interventions
It is opportune to invest our human resources and to some extent financial resources into a series of policy experiments. These experiments provide us with the opportunity to investigate our own research questions and to approach research groups to participate in this process and develop research partnerships through joint funding and criteria. The aim of our policy experiments should be to produce and publish high quality research findings relevant to policy knowledge gaps. An early focus is on tracking what happens to research evidence throughout the policy process in making decisions about issues like obesity interventions.

We also need to identify natural policy experiments (often retrospectively) and identify how they emerged, what success factors they exhibit and how they were perceived by policy decision-makers and researchers.

Learning and knowledge sharing
Exchanges about evidence between research and policy communities
All of the above-mentioned directions could be guided and supported by an innovative exchange program in which regular exchange events occur with policy decision makers and researchers focussed on critical issues e.g. overweight and obesity and a number of sub-themes such as health inequalities. A model of policy and research exchanges have been employed by the Sax Institute in Sydney, Australia (see article in this issue on page 15).

Policy driven priority setting for research
Generating ideas for needed health promotion and public health research
We need to systematically consider, based on our own monitoring of the evidence-base, the strategic priorities for disease prevention and health promotion research that will serve policy now and well into the future. This prioritisation should occur annually and engage researchers and policy makers in the prioritisation process. Insights can be drawn from the “Listening for Direction” process undertaken in Canada where researchers and policy makers gather and are steered through a prioritisation process to identify the high level research issues.12

All of these strategies have been compiled by our Unit into a Unit Business and Action Plan, which ensures delivery of each of these strategies over 2009.

Capacity required for delivery of an evidence-informed policy function
An evidence-informed policy agenda requires a mix of skills and competences that range from leadership and communication; training and development; research synthesis and critique; workforce analysis; method, tool and system design; policy development and support for implementation. Mixed teams comprising policy researchers, policy officers, and researchers with a breadth of disciplinary backgrounds, like the qualitative, epidemiologic and social science, ideally carry out this work.

Conclusion
There is no doubt that policy environments need to take account of research in policy development. Developing and following a road map that embeds research into the policy system will facilitate research as a part of policy discussions rather than the first area for savings when budgets get tight. More importantly an evidence-informed policy culture enables the level of innovation needed to respond to complexity in public health, capturing dynamics and processes that contribute to policy and intervention success. We know that contemporary public health challenges call for real world evidence and its application. Evidence-informed policy making is an emerging but neglected science in its own right that will benefit from multidisciplinary and cross disciplinary research and policy teams prepared to tackle complexity and describe it nuances.

References