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Good policy-making requires good science

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I am going to focus on the issues of policy formation at a national level. From this perspective, fundamentally this meeting could be about what makes for good public policy in general. There is always a risk that by taking a too sharply focused lens we may miss other considerations. This is the challenge for 'Health in all Policies'; health too narrowly defined is just one policy consideration among many. Too broadly defined, it may lose its most salient analytical power for the decision-maker and we may miss out on reaching the goal that we are all interested in – namely achieving better quality of life for all New Zealanders.

This is the underlying challenge – narrow single issue advocacy inevitably comes into conflict with the multidimensional reality of public policy making. What I have learned in my exposure to policy development, is that in creating public policy it is best-practice to consider the broadest possible stakeholder impact and to adopt a multi-sectoral approach to doing so. It is also best practice to implement policy through a whole-of-government lens, where mandates and accountabilities are clear, processes are well-embedded and where all sectors of government feel a sufficient stake and ownership in the endeavour to truly become engaged. The central agencies of government have the responsibility of continuously seeking improvement in policy processes and indeed at the moment there is a very active review and improvement process underway and this is particularly evident in the social sector.

But policy making is not simple and it is certainly not the neat cycle as described in textbooks. That is the cycle of problem identification, analysis, option evaluation and decision making, implementation, evaluation and review before the cycle starts again. It is a much more messy process where the interaction between stakeholders, policy makers and politicians can occur anywhere in the so-called cycle and where inputs from experts and advocates can occur in multiple and often iterative ways.

The core of policy formation should be the evaluation of evidence-informed options but there are always more constraints than simply those of rational choice or logic and indeed there is nearly always an urgency to make decisions in the absence of anything approaching a total understanding of the problem and the effects of any decision. This retreat from policy hubris has led to an increasing awareness of the need for more accountability in terms of evaluation of policies and programmes. An excellent example of how this was acknowledged and enacted was seen in the youth mental health programme announced in 2011. In this programme, Government took the advice of an expert and deliberative scientific evaluation, considered the policy options, developed and funded a large programme of actions and acknowledged, in doing so, the uncertainty of outcome and the need for evaluation. This evaluation is now underway. Indeed in the establishment of SUPERU as a centre of excellence in policy evaluation and in the appointment of departmental science advisors, the government is moving significantly to enhance the use of evidence in both informing policy and in evaluating it.

In all policy formation, multiple domains inevitably need consideration; these include fiscal considerations, electoral considerations, moral considerations, diplomatic considerations and so on - no action of any government is immune from impacting on other domains of interest. Fundamentally policy-making is *always* about trade-offs. It is when the reality of trade-offs is not well understood that tension can arise between legitimate public advocacy and the legitimate constraints of the policy formation process.

The implied question of today's meeting is whether there is a hierarchy of filters in resolving these inherent and often unresolvable conflicts. To a certain extent there is – fiscal affordability, human rights and ethical considerations along with constitutional issues and the government of the day's electoral contract are going to be foremost in the minds of decision-makers. But beyond these, there is a large raft of considerations: interests of particular segments of the population, economic considerations, social and environmental considerations, demographic considerations (which are particularly important in health and education) etc. And health can be seen as either an inherent component all of these or as a filter in its own right dependent on one's definition of health. Arguably one of the strengths of our system of government is that all of these filters can be considered together at the final hurdle; namely at cabinet.

Inherently the different and very personal weighting we all give to these different filters is the basis of our representative political system but even so, the weighting we give these filters varies in different circumstances and varies over time - for example most New Zealanders and all political parties now give far greater weight to the environmental filter than anyone did 50 years ago. In health, expectations change rapidly, particularly as a result of economic progress on one hand and technological progress on the other. Just look at our concepts of life expectancy and how they have changed in the last 50 years. When I left medical school the cut-off for starting renal dialysis was 45 years! Now we face the dilemma of the explosion of dementia and other age-related conditions as so many people live into the 9th and 10th decades of life. The demographic shift, itself a result of economic growth, public health and medical science, is creating enormous pressures on advanced countries' economies and health and welfare systems.

If you think of any decision any government might make, there are trade-offs involved and it would be naïve to ignore them. For example requiring compulsory immunisation trades off individual freedoms for societal benefit and different democracies have reached very different positions over compulsory immunisation because of the relative weightings they give to the two sides of the equation for reasons of national culture and ideology. Restricting extractive industries protects the environment and the health of vital ecosystems, but may cost potential economic growth which could have immediate societal benefits. And while this might seem like a simple equation it is not. Irrespective of more immediate issues, the shared global burden is linked to the rate of population growth, which in turn is largely a reflection of better health, and the understandable desire of all across the globe to have a high standard of living, of which health is an essential part. So while nearly all of us see the logic of ensuring mitigation against climate change, the reality is the global debate has been stalled because of fundamentally different views of these trade-offs. And these trade-offs get more acute, the more resources are limited.

Indeed, who would want to be a politician? We pay them to make almost impossible decisions on our behalf. Inevitably their decisions depend on both evidence, which is always incomplete, and values, which are always in dispute.

The matter is further complicated by the reality that the relationship between evidence and values is complex. It is also complicated by the inevitable nature of bipolar partisan politics in a healthy parliamentary democracy, by the modern style of media reporting and by the

role of advocates. Each of these can magnify nuances or exploit complexities, which in turn can impact on policy making. Indeed one of the tensions in the modern policy process is the difficulty of sustaining long-term planning against these tensions which often push towards short-termism.

The DPMC-led 'Policy Project' currently underway aims to enable a future focussed policy system with the capability to respond to the big policy challenges as they emerge. An important element is the use of evidence and the creation of conditions that enable more evidence to be generated and applied to policy making (such as robust intervention research and evaluation). The departmental science advisors and SUPERU have important roles in this regard.

To the policy uninitiated, the process of using new and relevant research-derived knowledge as the basis on which to develop public policy may seem straightforward. But it is anything but easy. I have already outlined the multitude of considerations in policy-formation; now consider that only one of these considerations is the evidential basis for one course of action over another. And many decisions that governments must make are in domains where the science is – of its very nature – incomplete, yet decisions are urgent. For this reason, despite the privileged place of science in much contemporary policy making, there has been a conscious shift away from the aspirational but generally unachievable 'evidence-based' policy making to the actionable and possibly more desirable 'evidence-informed' policy making. Indeed, we would not wish our policy making to become so technocratic in our approach that we would overlook the real and significant human dimensions that enrich our society and thus must be part of all policy making.

In areas such as the environment, health and the social sectors, the science will never be complete, and yet all too often what appears to be a sound normative argument for action may, when evaluated, turn out NOT to be effective or not to have the impact that justifies the cost or the choice over another option. Thus when policy choices are made largely on normative arguments, it is important no matter how obvious it may seem, to evaluate the effect of an intervention. My experience as co-chair of the WHO Commission on Childhood Obesity has highlighted this issue. A related issue is the fact that things that may work at small scale may not scale to national level.

From my vantage point I have seen considerable progress in the use of evidence in informing the policy process. Examples include the appointment of a Chief Science Advisor and a growing cadre of departmental science advisors; the formation of SUPERU; the better use of better deliberative processes as in the youth mental health example; the use of departmental science advisors' committee to independently evaluate the evidence base for new budget initiatives. Each of these may seem small steps, but their impact on the entire policy process is broader and compounding.

One key challenge is to clearly distinguish the role of science and the role of human values. This is not as obvious as it may seem when one considers that the most sensitive and values-driven areas of public policy today are also the areas where the science is the most complex and probabilistic rather than certain and mechanistic. Climate change impacts, NCDs, social inequalities come to mind.

It is precisely the complexity of the type of science needed today that makes distinguishing between values and evidence so challenging. The science can be – indeed famously has been – exploited in the name of ideological agendas.

By now we are familiar with the tactics of big tobacco companies who sowed doubt about the science of lung cancer to advance their cause, or the climate change deniers who refuse to accept the robust and refined global models of climate change? These 'merchants of

doubt' exploit inevitable scientific uncertainty to advance their cause which in these two cases was short-term economic gain. But there are other examples from across the whole of the political spectrum.

What is happening in these cases is that a concocted 'scientific debate' becomes a proxy for what is in reality a values-based debate. Yet values-based debates are legitimate. Responsible and responsive public policy requires them. But let us not harbour any illusions that they are about science. We must not overlook legitimate scientific consensus in an effort to promote a supposed balanced debate. Parsing both legitimate science and legitimate values-driven concerns is a critical policy skill.

And this is where public health is an interesting and difficult terrain – It is a discipline where legitimate values-based arguments intersect with science-based ones at nearly every turn. Much of public health is based on sound science but there is also much normative argument applied in public health because of the lack of interventional evidence at scale. Yet at other times that normative argument is conflated with advocacy and the emergent science can be challenging to that view. We can see this in the ongoing dialogue over the relative place of biological and behavioural determinants of obesity. All scientists, whether social, public health or biological need to be open to adapting their perspectives as more evidence emerges from across disciplines and so must the policy process in response.

Whether it is approaches to fluoride, vaccination, fiscal measures on sugary beverages or more broadly on resource management or city planning decisions, there can be tensions between the views of different stakeholders – not on the desirable outcome, but rather on how to do it. What is the balance between individual and state, between private sector and state, between private sector and individual? When should the State intervene in the public interest?

The examples could go on and on – these complex choices that combine science and values, and that weigh the benefits to society against individual's rights and responsibilities, how to balance economic, societal, environmental and individual wellbeing, have always been at the heart of public health policy and political agonies. And public health practitioners must be especially skilled at parsing the normative from the scientific. This is not always easy to do when our strong convictions and desire to advocate for better health and living standards are what draws us to the profession in the first instance. But it is essential.

So what does this mean for a 'Health in All Policies' agenda? It means that maintaining population health requires good science AND a respectful alignment of the consensus of societal values in order to prioritise the necessary governing actions and embed these across sectors. It means recognising where one discussion stops and the other starts, and where they can inform each other without becoming conflated. But it also means being pragmatic and realistic for a healthy life requires a healthy society and this requires a broad perspective – societal health depends on many things – economic health, social health, environmental health, social cohesion, a sense of personal empowerment, healthy democracy and a robust but constructive and informed debate. Relative to most countries we score well on all of those things – but it also a mark of who we are as a society that we collectively always strive to do better.

Thank you.