

Debate

The determinants of policy for population health

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Abstract: Many advocates of policy to implement the findings of research on the multiple determinants of health accord scant attention to the determinants of health policy in democratic countries. The principal determinants of the allocation of scarce resources to improving health include: the priorities of voters; the diffusion of responsibility for improving health; the absence of evidence about matters of consequence to policy makers; the arraying of some evidence in ways that frustrate policy making; resistance to addressing determinants other than clinical services and traditional public health practices among many professionals in these fields, as well as by industries that supply the health sector; and the special political influence of persons who suffer serious chronic disease and of members of their families.

What I have read in the literature of the policy sciences and what I have learned as a participant in the politics of policy making have frequently been in conflict during the four decades of my professional life. This article reports on the difference between what researchers recommend and what policy makers do about improving the health of populations.

Many researchers have argued during the past half century that population health has multiple determinants that policy can address. They have claimed that most of the policy they recommend would cost individuals mainly their excess wealth and opportunities to engage in self-destructive behavior. In many countries, however, most voters in each socio-economic group do not believe they have excess wealth and value their liberty to behave in ways that do not endanger others. Moreover, in response to a century of media coverage of advances in the biomedical sciences, most voters in the industrial countries in which I have worked consider access to health care of high quality the best way to maintain their health (Fox, 1986). Because voters' preferences inform the priorities of policy makers who run for office and the officials they appoint, advocates of improvement in population health status may want to reconsider some of the strategies and tactics they commend to policy makers.

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Applying research on the new population health

I have read persuasive publications about the broad determinants of population health since the early 1970s. This literature documents the effects on health, separately and in summary, of such determinants as nutrition, behavior, education, housing, income, and class, as well as of personal health services and such traditional public health interventions as surveillance, immunization, health education, quarantine, and isolation (Szreter, 2005a). I describe as the new 'population health' the fresh approaches to research and advocacy that this literature has inspired in order to distinguish it from the older but still prevalent use of the phrases 'population health' and 'public health'.

Many persons who do research on the new population health have been forceful advocates for changes in policy. Some of these advocates have accorded priority to more effective economic development, income redistribution, child development and education, empowerment of women, nutrition, education, and use of public space. Others have emphasized the implications for policy of the findings of population-based methods for evaluating the effectiveness, and the cost effectiveness, of personal and public health services (Daly, 2005; Porter, 1999; Szreter, 2005b,c).

This discourse about the determinants of health began to attract attention from a few policy makers during the 1970s, notably among officials of the Canadian government, the World Health Organization (WHO) and the Organization of Economic Cooperation and Development (OECD). By the 1990s, research on the determinants of health was influencing the rhetoric of policy advocates across the ideological spectrum. Both supporters and antagonists of the economic development policies of the World Bank, for example, routinely insisted on the importance of the new population health (Fox, 2003; Szreter, 2005d).

Only a few policy makers, however, set priorities based on either evidence or advocacy about the determinants of health. Beginning in the 1970s and more systematically in the 1980s, moreover, some of the uses that these few policy makers made of research findings about determinants distressed many researchers. For instance, some policy makers (or, more accurately, intellectuals who spun words on their behalf) used the discourse of determinants to reduce expectations about the value of public expenditures. Citizens could improve their health, they insisted, through greater personal responsibility, especially over what they ate, drank, smoked, injected, how much they exercised, and how fast they drove (Fox, 2003).

Other persons who spoke for policy makers used the rhetoric of the new population health to justify dismantling welfare states, or at least slowing growth in spending for entitlement programs. Some of them promoted economic growth because it would improve nutrition, housing, education, and access to personal health services (Johansson, 1994). For David Stockman, a lapsed intellectual serving as Ronald Reagan's Director of the Office of

Management and Budget, for instance, evidence about the determinants of health helped to justify what he is said to have called 'starving the beast' of a growing public sector.

By the mid 1990s, research on the determinants of health seemed to have established causal connections between health and the extent of inequality in countries and their subunits, and to have demonstrated that health status in any country varies along a socioeconomic gradient. Well-known researchers on inequality and the social gradient in health, notably Michael Marmot and Richard Wilkinson, advocated changes in policy that were grounded in morality as well as science, in order, as Marmot wrote, to correct the 'results of unfairness that could be put right' (Marmot, 2004; Wilkinson, 1996).

By the mid 1990s, I had considerable experience in brokering the best-available evidence about interventions to improve health to policy makers in the United States. I had acquired this experience as an official of the federal government and two states, as an administrator and faculty member at a public university, and, since 1990, as president of an endowed philanthropic foundation.

During the 1990s, policy makers expressed growing interest in the practical uses of rigorous, population-based evidence about the effectiveness of personal health services. Many of them were, moreover, skeptical of the advocacy by public health officials about the effectiveness and under-funding of the services they had provided for the past century.

David Kindig, a colleague in the politics of policy making, decided to broker research findings about the multiple determinants of health to persons who made clinical, reimbursement and social policy in the United States. To begin to do that, he summarized considerable research on the determinants of health in *Purchasing Population Health: Paying for Results* (Kindig, 1997). When this book appeared, in 1997, Kindig and I decided to collaborate in persuading policy makers in the United States to take more account of research on the determinants of health. During the next four years, we convened meetings of policy makers and researchers, commissioned case studies, provided technical assistance to policy makers, and wrote articles and editorials. This work and subsequent experience that I report in this article convinced me that it is feasible to advance policy to improve the health of populations. It also convinced me that policy to improve population health could be advanced most effectively in response to priorities set by policy makers in the context of voters' preferences, rather than by advocating the priorities of most contributors to the literature of the new population health.

Improving health through the politics of policy making

The politics of policy making for health constrains as well as makes possible improvements in population health. These politics are shaped by factors that

include: the priorities of voters; the diffusion of responsibility for improving health; the absence of evidence about matters of consequence to policy makers; the arraying of some evidence in ways that frustrate policy making; resistance to aspects of the new population health among many professionals in medicine and public health as well as in the industries that make and market drugs, devices, and medical equipment; and the special political influence of persons who suffer serious chronic disease and of members of their families.

Priorities

Most voters, as both individuals and members of interest groups, almost always have higher priorities than improving population health. Their priorities can also improve their health, of course: notably voters' interest in economic opportunity and security, public safety, better housing and education, health care that is accessible and affordable, and protection against environmental hazards. But many voters also dislike higher taxes, especially taxes that are either redistributive or that raise the price of drinking, smoking, and driving.

In the United States and Canada, and perhaps other countries of which I have less knowledge, new policy to improve population health becomes feasible when voters approve of it or at least find it plausible. For example, terrorism, epidemics, and floods have recently made many voters more accepting of increased funding for the infrastructure of public health. Similarly, evidence about the incidence of medical errors published since the late 1990s stimulated new policy to increase investment in information technology for hospitals and physicians. More often, individual policy makers rather than disasters or compelling research create opportunities to make new policy in order to improve population health. The president of the senate of a mid-western state described population health in 2003 (to a national meeting of public health officials) as the 'quality of life ... what the people think is important' (Kramer, 2003). She convened meetings in her district at which her constituents discussed the quality of their lives and how to improve it. Then she sponsored legislation to address some of their concerns. Similarly, a cabinet member in a Canadian province said that in order to gain public support for policy to reduce tobacco use he first chose to reorganize the health regions in the province because better access to care was the voters' priority.

Diffusion of responsibility

Policy makers at any level of government or in the private sector usually share authority for maintaining and improving the health status of any population with other policy makers as well as with individuals in their constituencies. Even the most powerful elected officials cannot influence every area of policy that affects the health of a population. In a meeting on family violence, for

example, a researcher admonished the chair of the senate health committee of a large state to pay more attention to the determinants of health. The senator replied that he shares authority for spending about \$50 billion a year on health care and public health, but 'because most of the determinants of health are not within my authority it is not a good investment of time for me to discuss them'.

This senator is a member of a category of officials that I call 'general government', the leaders in any jurisdiction who share accountability for allocating resources to competing objects of public expenditure. I contrast general government with 'specialized government', public employees who spend most of their careers in agencies that are responsible for discrete areas of policy. General government allocates resources; specialized government advocates for more of them.

The diffusion of responsibility in general government constrains policy making to address the multiple determinants of health. Leaders in general government share accountability for a wide range of policy. In each country, however, they divide primary responsibility for policy sectors. In the United States, for example, the legislative branch in the federal government and each of the states devolves considerable authority to committees and their chairs. Governors and presidents appoint department heads and their principal deputies. Leaders of both branches negotiate policy with each other.

As a result, persons whose primary responsibility is health policy need to persuade colleagues who lead in education or housing or taxation that addressing a determinant of health is both feasible politics and in the public interest. Such persuasion is difficult when efforts to improve population health conflict with what a significant number of constituents and influential organizations perceive as their interests. A recent example in the United States has been the reluctance of policy makers for education to reduce children's access to sugared soft drinks in order to control obesity. Policy makers for health who raised this issue learned from colleagues and constituents that income from vending machines is a significant source of income that schools use to subsidize team sports and other extra-curricular activities. Legislation to control the sale of sugared soft drinks has become law in only a few states.

Officials of general and specialized government are always in tension and sometimes in conflict with each other about policy. In 2001, the Reforming States Group (RSG), a voluntary association of leaders of general government in US states and Canadian provinces decided to collect, for the first time, comprehensive data on spending by all 50 states for population health. The RSG and the National Association of State Budget Officers (NASBO) had begun collecting data on state spending for personal health services in 1997. At that time, I had advised against trying to array data on population health because of the difficulty of relating the determinants of health as defined by researchers to the accounting conventions used by state budget offices.

In 2001, having concluded (belatedly, I confess) that the politics of policy is a determinant of population health, I suggested to the policy makers who supervised the state expenditure study that they define the determinants of health. They asked civil servants in the budget office of a state that is a pacesetter in automated budgeting and accounting to array categories of expenditures that might be candidates to be considered determinants. The policy makers then discussed whether they could persuade their peers and constituents that each of these candidate categories was a determinant. Early childhood education was one of the categories that failed this test of political plausibility.

The final list of categories of population health has now been the basis for two studies, each on spending in two fiscal years (National Association of State Budget Officers and the Reforming States Group, 2003 and 2005). The studies summarized the categories in seven groups: prevention of epidemics and the spread of disease; protection against environmental hazards; injury prevention; promotion of chronic disease control and encouragement of healthy behavior; disaster preparation; disaster response; and health infrastructure. The policy makers deemed the distinction between preparing for and responding to disasters to be particularly important when they chose the categories, in October 2001.

At the suggestion of a recently retired senior policy maker for health in the federal government, I described the process of choosing these categories to a research colleague of his who studies determinants of health. Underwhelmed, she told me, 'You cannot categorize population health because the entire budget of any state determines the health of the population.'

Although this argument is consistent with some international discourse about determinants of health, it is inconsistent with the politics of public budgeting in the United States and other countries about which I have inquired. Battles over public budgets are usually fought line by line, behind closed doors as well as in public. In order to defend budget items for population health against other claimants, in health affairs as well as other sectors, policy makers must regard some budget lines as more important than others. If the entire budget is population health, then none of it is.

The absence of evidence

Canadian economist Robert Evans said in a 2002 lecture that 'research [on the determinants of health] is generating increasing confidence as to where we need to go, but is much less helpful as to how to get there' (Evans, 2002). Evans emphasized lack of knowledge about the extent to which non-medical determinants improve health and about the mechanisms by which they do. He and others have also emphasized that very few policy interventions have been evaluated by randomized controlled trials and persuasive systematic reviews of both trials and observational studies.

As a result of these gaps in research, policy makers frequently request evidence that is not available. A senior official of the executive branch in Wisconsin, for example, told Kindig, 'If you can't tell me the relative causal impact of medical care and education spending on the health of the citizens of the state, your studies and opinions are of no help to me in discharging my political responsibilities' (Kindig *et al.*, 2003).

Moreover, policy makers become wary when researchers disagree about evidence or what to infer from it. Despite exhaustive research comparing policy and increased life expectancy in many countries, for instance, James Riley has found no recipe for policy (Riley, 2001). For his latest book, Riley studied twelve countries that began health transitions between the 1890s and the 1930s. He concluded that 'different countries have found their own paths to gains in life expectancy'. No two countries are 'even particularly similar' (Riley, in press). In another example of disagreement among researchers, a systematic review of 98 studies of the association between income and health published in 2004 concluded that there is 'little support for the idea that income inequality is a major, generalizable determinant of population health differences within or between rich countries' (Lynch *et al.*, 2004).

Arraying evidence in ways that frustrate policy making

Policy makers say that approaches to research on determinants, however well intended, are not helpful to them. An example is researchers' effort to construct summary measures of health status. The measures published to date conflict with a principle endorsed by many leaders in government, health services, and business: you should only measure what you can manage. An executive who purchased health coverage for employees of a large US supermarket chain summarized a meeting of public and private sector officials to discuss the relevance of summary measures: 'I want numbers that can be disaggregated.'

The summary measures that researchers at the World Health Organization (WHO) used to rank health care systems in 2000 antagonized many policy makers (Murray *et al.*, 2002). In many countries policy makers complained that the researchers had imposed values in order to weight the data they summarized. In contrast, the state expenditure reports prepared by RSG and NASBO in the United States did not rank states, leaving it to policy makers to decide whether, when, and how to make invidious comparisons among jurisdictions.

Economic evaluation of interventions to improve health can also be problematic to policy makers. As British economist Joanna Coast wrote in 2004, most policy makers prefer to 'impute their own values' to the 'costs and consequences' of decisions (Coast, 2004). Similarly, the authors of a recent report by a committee of the Institute of Medicine of the National Academies of Science

emphasize the limits of Quality Adjusted Life Years (QALYS), the dominant measure of the cost effectiveness of health services, in addressing an ‘important and difficult set of distributive issues and choices’ (Miller *et al.*, 2006).

Policy makers who have commissioned and made public economic evaluations have considerable experience of the backlash against them. Some of this backlash is from advocacy groups claiming that the values assigned in these studies discriminate (by age or disability, for instance). Clinicians and vendors of drugs and equipment (and the disease-specific advocacy groups they subsidize) also attack economic evaluation studies. They frequently insist that any opportunity to alleviate suffering trumps any analysis of cost effectiveness, even if the economic evaluation could lead to increased expenditure.

In order to manage this antagonism, many policy makers prefer to commission studies that only evaluate the effectiveness of interventions to improve health. They use the results of these studies, and often of internal studies of cost or cost effectiveness by their own staff as well, in discussing policy with their peers and with lobbyists and advocates.

Evaluations of the effectiveness of interventions often lead to policies that differ among jurisdictions, whether or not they are accompanied by economic evaluation (Fox, 2005). To the discomfort of many economists, resources are usually allocated to and among health services on criteria of political rather than economic rationality.

Political rationality is considerably more complicated than economic rationality. Health policy frequently has goals other than maximizing population health or satisfying efficiency criteria. For example, the purpose of policy has often been to create and protect jobs (in the economy in general, not just the health sector), to change the geographic distribution of public spending (especially from richer to poorer jurisdictions and from urban to rural areas), and to attract votes in close elections.

Nevertheless, despite its limitations and the frequent complaints from advocates and physicians, economic evaluation can be useful to policy makers and members of the public. A notable example is the work of the National Institute of Health and Clinical Excellence (NICE) in England and Wales (Pearson and Rawlins, 2005). The success of NICE relative to many other sponsors of economic evaluation may be a result of its status as a government-funded but independent agency, its concern for methodological rigor, and the openness of its leaders in discussing economic and social valuation with representative consumers as well as with providers and practitioners.

Other Interest group resistance

Aspects of the new population health threaten other groups than clinicians and suppliers of drugs, devices, and medical equipment. I described above resistance among school administrators in the United States to policy to reduce incentives

to obesity. In the United States, the new population health has also threatened more than a few public health professionals. I received approximately 80 critical (and similarly worded) email messages from directors of state and county public health agencies the day after the presiding officer of the Association of State and Territorial Health Officials (ASTHO) announced that he would help to choose categories for the RSG/NASBO study of spending for health. My correspondents insisted that public health officials are the only persons who are qualified to establish criteria for defining population health.

Unlike public health officials, many others who oppose policy that addresses the determinants of health are antagonistic to population-based studies more generally. Many educationists in the United States resented and resisted the findings of randomized controlled trials of methods of teaching children to read that were sponsored by the National Institute of Child Health and Development at a cost of almost a billion dollars. Similarly, many physicians, and leaders of some organizations that speak for them, have caricatured evidence-based health care research as promoting 'cookbook medicine'. Hospitals and physicians in many jurisdictions have opposed, or tried to limit, public reporting of population-based data on the quality and safety of health services.

This opposition is longstanding. Almost two decades ago, I tried to implement in a populous region of a US state the methodology used in Europe to calculate 'achievable death rates'. The regional hospital association and county medical societies prevented the study from being launched because they feared blame for not meeting achievable targets (even though determinants other than health care may have been the major causes of that failure). Similarly, senior physicians at an academic health center in the same region rebuked me for commissioning a study by economists that compared inpatient mortality in each of our services with mortality at other hospitals in our region, making appropriate adjustments for differences in the acuity of patients treated in each unit.

Patients as an interest group

A fundamental fact that both impedes and assists policy making to improve health is that patients with serious chronic diseases and members of their families accord higher priority to health than almost anyone else. This political fact impedes policy when it causes public or private payers to reverse denials of coverage for a drug or procedure that is risky, unlikely to be effective, or unproven. It assists policy makers in general government to risk opposition, and reduced campaign contributions, from medical, hospital, and pharmaceutical interests, when they can persuade their peers and the media that a new policy is in the best interests of patients.

I experienced the power of policy makers' empathy for patients and other voters to influence policy at a meeting of public officials from about ten states

in 1992. Two policy makers from Minnesota described how they and their colleagues had overcome opposition to taxing the proceeds of medical practices and hospitals in order to create a subsidized insurance program for people with low incomes. A member of the lower house from another state asked the Minnesotans why they had risked challenging powerful interest groups. His counterpart replied that ‘we did it for our constituents, who deserve it’. The room fell silent for several long seconds.

I have subsequently witnessed other examples of the power that policy makers can mobilize among their constituents, especially those whose illness makes them heavy users of health care, against professional and health industry interests. For instance, policy makers in many US states and Canadian provinces have instituted preferred drug lists (PDL) for programs of public coverage. They knew that considerable population-based evidence demonstrated that PDLs reduce cost without adversely effecting (and frequently improving) quality. In many of these jurisdictions, PDLs have survived well-financed challenges from pharmaceutical lobbyists and their allies among advocates and policy makers (Fox, 2005). Moreover, purchasers in the public and private sectors have persuaded consumers (represented, frequently, by union officials) that evidence-based ‘value purchasing’ contains cost increases and maintains or even improves the quality of care (Kindig, 2001).

Similarly, the movement to improve the safety and quality of health care that began at the end of the 1990s relies on policy makers’ ability to mobilize public opinion. Policy makers in Canada and the United States report considerable support from their constituents for requiring public reporting of both adverse events in hospitals and how physicians perform on standardized measures of quality.

Policy makers can address other determinants of health than health care when they sense they have support to do so. For example, civilian and uniformed leaders of the United States Air Force mobilized their colleagues to change the culture of that service in order to encourage recognition and treatment of symptoms of mental distress. From 1990 to 1994 suicide rates in the US Air Force increased significantly, particularly among African-Americans and white men aged 24–35 years. Senior Air Force officials instituted a program of prevention to ‘deal with the entire range of afflictions experienced by individuals, families, and their communities.’ Senior officers endorsed, and the chain of command enforced, a ‘radical change in social norms to decrease stigma around help-seeking behaviors’, especially the stigma that resulted from anyone seeking help for mental distress being automatically designated as unfit to fly. An evaluation of the program after six years found a ‘sustained decline in the rate of suicide and other adverse outcomes’ (Knox *et al.*, 2003).

The enactment of legislation in several states to prohibit smoking in bars and restaurants is another example of the mobilization of voters on behalf of their

own health. Legislators who introduced these bills emphasized that workers in these establishments are at greater risk of tobacco-related disease than non-smoking patrons. Workers' antipathy to the effects of second-hand smoke proved to be more influential than opposition to the proposed regulations from smokers, business owners, and libertarians.

Using the determinants of policy for population health

Different policies are politically feasible in different jurisdictions at different times, as a few researchers have begun to describe. Scott Greer recently analyzed the divergence of policy for the health of populations in England, Scotland, Northern Ireland, and Wales as a result of devolution (Greer, 2005). Patricia Day has studied variations in how policy makers address population health in several jurisdictions in the United Kingdom and North America (Day, 2000–2004).

Prudent political calculation does not preclude creativity in devising incentives to improve population health. As I was completing this article, a former state budget director who is now a senior federal health official, wondered if the agencies that rate the quality of the bonds that state and local government issue could devise a metric that would cause population health status, and hence policies that affect it, to affect interest rates. A senior executive of a leading rating agency has agreed to explore this question.

Policy makers at times transfer the political support they acquire by responding to voters' concerns about personal health services to address other determinants of health. Evidence is accumulating, for example, that many policy makers have been deliberately expanding the scope of policy for population health in recent years (Fox, 2004). Such evidence can come from unexpected sources. For instance, the regulator of managed care in a large state recently described how policy to improve the quality of health services has stimulated a statewide effort to address the causes and consequences of obesity.

There is considerable variation within and among countries in how policy makers rank determinants other than personal health services. Every policy maker I know wants to address the quality of air and water, nutrition, and education. But they will usually address any of these determinants only when a disaster occurs or seems likely to. Moreover, few senior policy makers in the United States, or other industrial countries I have inquired about, have accorded high priority, except rhetorically, to remedying income inequality. Many more believe that addressing disparities in access and outcomes will gain more support from other policy makers and voters.

Persons who are eager to improve population health could usefully seek to understand why policy makers make particular choices in particular circumstances. Often policy makers will only describe the reasons for acting or failing to act on a not-for-attribution basis (thus the many quotations and paraphrases in this article that lack citations). Because most policy makers value reciprocity

as well as circumspection, moreover, proponents of the new population health could ask themselves what they could do in return for attention from policy makers and ought to keep in mind that practitioners of the profession of politics are essential partners in applying knowledge to improve the health of populations.

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