

***Reply to “What Constitutes ‘Good’ Evidence for Public Health and Social Policy Making? From Hierarchies to Appropriateness”***

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The academic community has long considered how knowledge can and should influence decision-making. The evidence-based medicine movement rose to prominence in the 1990s, with its influence extending from clinical decisions to areas of social policy. Parkhurst and Abeysinghe provide a useful addition to the literature which ambitiously draws on three different disciplinary perspectives—political science, philosophy of science and the sociology of knowledge—to reflect on the limitations of evidence hierarchies for informing policy decisions (2014). Public health is perhaps a natural focus of enquiry, drawing as it does on clinical disciplines as well as the social and political sciences.

The authors start by noting the increasing debate about the use of evidence hierarchies within the academic literature that has been coupled with a rise in a discourse of being ‘evidence based’. They argue that a political science perspective highlights the existence of multiple competing goals for policymakers to consider—therefore technical evaluations of evidence may serve merely to obscure political considerations and challenges in the production of evidence may favour individualistic interventions that are more amenable to randomised controlled trials.

Philosophy of science highlights the tension between causality and generalisability, which has arguably been ignored within evidence-based medicine (EBM), drawing as it does on an epidemiological focus on internal validity at the expense of applicability of evidence. Sociologists question the process by which knowledge is constructed, so that what counts as evidence is influenced by existing power structures. Parkhurst and Abeysinghe conclude that these three complementary critiques of EBM point to a new direction for evidence informing policy—a shift to an appropriate use of evidence whereby good evidentiary practice: “Reflects a process of making values explicit, considering causal mechanisms, and questioning evidentiary forms with respect to policy maker goals and needs” (Parkhurst and Abeysinghe 2014, 47).

Their paper adds an alternative view of thinking about the influence of evidence on policy. However, it perhaps should be considered a work in progress—one which may benefit from even deeper engagement with the three disciplines they draw upon.

**Normative and Descriptive Views of the Policy Process**

Political science frequently makes a distinction between *descriptive* and *normative* views of the policy process i.e. how policy *is* made and how policy *should* be made (Hogwood and Gunn 1984). In relation to the former, there is certainly support for the authors’ claim that the discourse of EBM has become prominent in policymaking. For example, the last English public health white paper, ‘Healthy Lives, Healthy People’ (Department of Health 2010), repeatedly adopted a position of being ‘evidence based’, but empirical assessments suggested otherwise (Katikireddi et al. 2011). Assessments of the evidence

base underpinning policy in this way could potentially serve to illuminate, rather than obscure, political considerations.

The reasons for ‘Healthy Lives, Healthy People’ not meeting the standards it set itself are no doubt complicated but the issue of multiple competing goals of policy which Parkhurst and Abeysinghe point to are no doubt important. Their contribution implicitly suggests that decision-making should be informed by the evidence but that the manner in which evidence should be used needs refinement. This normative perspective is not necessarily self-evident but the incorporation of ‘evidence based’ rhetoric within policy statements presents an important argument for decisions being informed by evidence too. However, the normative nature of both EBM and the authors’ suggested approach is contestable and requires justification.

A move towards ‘appropriate’ evidence which is informed by an explicit elucidation of the different goals underpinning decision-making should be understood as a normative endeavour. Such an approach of clear articulation of goals does not reflect the reality of policymaking as it currently operates (Smith and Katikireddi 2013), therefore echoing the transformative endeavour of EBM. Both evidence hierarchies and appropriate evidence do not consider the potential for evidence to shape the goals of decision-makers, rather than just the means of achieving them (Weiss 1977). For example, evidence has arguably been more important in setting the terms of the debate around minimum unit pricing of alcohol rather than just defining the best means of reducing alcohol-related harms (Katikireddi, Bond, and Hilton 2014, Katikireddi et al. 2014). Similarly, the role of ill-defined ideas in shaping decision-makers’ understanding of health inequalities has been shown to be crucial (Smith 2007, Smith 2013).

### **Philosophy of Science**

The need for locally applicable evidence for decision-making is often asserted within public health, on the basis that effects are more likely to differ between settings than might be the case for biomedical interventions. Is this really the case? It may not be the case that external validity is really a more important challenge for public health and social interventions, than for clinical interventions. The growing interest in stratified medicine suggests that actually human individuals do actually differ considerably, resulting in many individuals taking medications without benefiting (Trusheim, Berndt, and Douglas 2007). This poses a challenge for EBM within its own sphere of enquiry.

Even if the greater challenge to public health rather than biomedical interventions is true, it may not necessarily be as damning an issue as suggested. Indeed, the example provided by Parkhurst and Abeysinghe of a meta-analysis which might suggest an intervention is ineffective, rather than being more accurately identified as effective in some contexts and harmful or ineffective in others, should theoretically be disentangled by an adequate exploration of statistical heterogeneity if enough evidence has been collected. Furthermore, stating concerns about applicability of evidence often conceals other more political reasons for not pursuing an intervention.

The tension between causality and generalisability is perhaps better thought of as a challenge to EBM itself, rather than its extension to public health and social policy. It might be fruitful to think back to the epidemiological thinking that underpinned the development of EBM in the first place to consider how different forms of evidence could contribute to decision-making. Austin Bradford Hill suggested several factors which might help assess whether a causal relationship exists (Hill 1965). Incorporating in broader forms of local evidence in this way might allow assessments of applicability to be informed by the best available evidence from elsewhere.

### **Sociology**

Public health and social policy often occur in cross-sectoral spaces, necessitating decision-makers to draw upon diverse bodies of evidence. Lorenc and colleagues have found that policymakers' views of what constitutes evidence differ in subtle ways from those operating solely in the health sector, with experiential and economic evidence often especially valued (Lorenc et al. 2014). Differing cultures of evidence therefore operate but how they should be deemed appropriate and who should determine this remain questions for investigation.

The process by which the evidence base is constructed may or may not serve the interests of public health, as illustrated by Parkhurst and Abeysinghe. Drawing attention to the importance of the construction of variables is welcome but why moving to 'appropriate' evidence represents an improvement is unclear. An alternative approach is to explicitly consider the interplay between ethical and epistemic aspects of evidence creation (Katikireddi and Valles 2014). This presents a framework which allows public health researchers and practitioners to critically reflect on how their use and development of the evidence base contributes to public health goals.

### **The Future of Evidence and Policy**

Parkhurst and Abeysinghe call for a move from hierarchies of evidence to appropriate evidence. Such a call is not new (Petticrew and Roberts 2003). Their articulation of what 'appropriate' might mean is helpful but will benefit from greater detail that will hopefully emerge through iterative discussions and debates. While they focus on hierarchies of evidence as their departure point, this is increasingly becoming a 'straw man'—for example even the Cochrane Library, which is often viewed as amongst EBM's strongest advocates, incorporate diverse forms of evidence (including qualitative studies). The UK's revised Research Excellence Framework (REF) means greater engagement by researchers with policymakers is likely. However, whether striving to meet the stated goals of policymakers will be the most effective means of improving public health is unclear, with there being a risk of critical intellectual spaces being squeezed (Smith 2010). Their article has outlined a vision for how evidence could inform policy but whether such an approach could be realisable remains uncertain.

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