# Taking public health policy models upstream

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The reduction of societal inequalities has risen to prominence as a policy goal internationally through the Sustainable Development Goals. Thus, the scopes of modelling studies aimed at prospectively appraising the effects of relevant policy options have broadened to assess their distributional effects on individual and population health. A huge range of increasingly complex public health models now exist that can estimate the extent to which different policy options might attenuate or exacerbate existing inequalities in health. However, the overwhelming majority of studies that use such expanded models have concentrated on public health policies that seek to influence individual behaviours, such as smoking, alcohol consumption, diet, and exercise. This focus contrasts with the abundant theoretical literature on the determinants of health and health inequalities, which extends the concept of determinants of health far beyond individual behaviours to address the cultural and socioeconomic factors that shape those behaviours. These broad structural determinants, which are widely considered to be the true drivers of inequality, are sometimes referred to as upstream determinants. The Marmot Review[1] identified that any effective measure to reduce inequalities requires action across all levels of these determinants, both individual and structural. However, each policy generally acts at a single level—eg, increasing tobacco taxation to reduce smoking, increasing funding for schools in deprived areas, or increasing means-tested benefits. A key question for decision makers who seek to reduce inequalities in health is how to compare the potential inequality effects of disparate policies, or how to determine the overall effect of a broad suite of policies on inequality.

While ever more complex and sophisticated public health models that elucidate the links between behavioural policies and health inequalities continue to be developed, few researchers venture further to investigate the health inequality effects of wider public policies (eg, economical, cultural, or environmental policies). Although there are well developed approaches to estimate policies' redistributive financial effects, similar approaches are seldom used in practice to assess redistributive effects on health. It is against this background that Elizabeth Richardson and colleagues, in *The Lancet Public Health*,[2] have undertaken an important study, starting from the premise that they want to estimate the effects on overall health and health inequality resulting from income-based policies in Scotland. They found that more expensive policies tended to be more effective at improving overall health, but that the design of a policy was more important in determining its effects on health inequalities. Notably, the investigators have used an existing economic model to estimate the redistributive economic effects of various policies. They have subsequently linked these effects into an existing model of health to estimate their redistributive effects on health. The beauty of this approach is precisely its simplicity. There is ample scope for further research to refine many aspects of the methods used by Richardson and colleagues, particularly in linking income and health and in evaluating how other socioeconomic factors might interact with and influence this link. However, Richardson and colleagues have taken a very pragmatic view—decisions on income-based policies are being made right now in Scotland, and it is important to get imperfect evidence on their potential effects on inequality, rather than have no evidence at all. If policy makers truly want to reduce inequalities in health, they need to understand how all policies can contribute to this goal, not just the ones that can be modelled most easily. This study shows that appraising the effect of economic policies on health inequalities can be done, and in doing so, it highlights the value to public health policy modellers of extending their scope and venturing upstream.

I declare no competing interests.



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1 Marmot M, Allen J, Goldblatt P, et al.. Fair society, healthy lives: the Marmot review. 2010. http://www.instituteofhealthequity.org/resources-reports/fair-society-healthy-lives-the-marmot-review/fair-society-healthy-lives-full-report-pdf.pdf (accessed Jan 28, 2020).

2 Richardson E, Fenton L, Parkinson J, et al. The effect of income-based policies on mortality inequalities in Scotland: a modelling study. *Lancet Public Health* 2020; **5:** e150–56.