Governments cannot just 'follow the science' on COVID-19.

Politicians may present themselves as merely implementing scientific advice, but Alex Stevens *argues that, when science meets politics, it can be a case of survival of the ideas that fit.*

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'We are following the science' is the claim UK government ministers have repeatedly made in justifying their decisions on how to deal with the COVID-19 pandemic. These decisions include when to begin and end stringent social distancing and whether to tell people to wear face masks. Ministers get this advice through a complex network of scientific advisory committees. But to rely on science as the determining influence on policy is to misunderstand what science is. And the process of organising knowledge for policy through advisory committee is political, as well as scientific.

Science works by researchers coming up with different ideas. They then test them and find many of them to be wrong. There are some ideas - like the fact that human activities are changing our climate - that have been tested so thoroughly that they are beyond reasonable dispute. The best way to deal with a rapidly developing viral pandemic is not one of them.

There is not just one 'scientific' approach to dealing with COVID-19. Different countries are responding in different ways. Singapore, Hong Kong, South Korea, Germany and New Zealand each provide different examples of how to limit the initial spread of the virus, with different policy mixes. Hong Kong, for example, never had a rigid lockdown. New Zealand ordered social distancing early and hard. These different approaches were informed by scientific findings, but they result from political decisions, not science.

Across the world, scientists have created epidemiological models based on the little we know about COVID-19. Small changes in the assumptions made by the modellers can have large effects on their estimates and implications. The UK government has relied heavily on a model produced by researchers at Imperial College, although other models are available. There is also dispute over how these models have been translated into policy. Conflicting accounts have emerged from the Scientific Advisory Group for Emergencies (SAGE), with some claims that the Prime Minister's principal political adviser, Dominic Cummings, has influenced the committee's deliberations, while others report that he was only there to observe.

From my own research and experience of the processes by which scientific evidence gets into policy, I know that things are rarely as simple as ministers directly 'following the science'. There is always a risk that bias enters this process, especially when it is hidden from view. An article in *Nature*[1], co-authored by the UK's Chief Medical Office and Chief Scientific Adviser, stressed the importance of transparency in enabling open debate and testing of scientific advice. But, as of this writing, the

proceedings of key advisory groups and projects, including SAGE and Exercise Cygnus (the 2016 scrutiny of the UK's pandemic preparations) have not been published.

It is also vital, if ministers wish to use the best scientific advice, that they do not influence its creation. I witnessed the risks of such interference first-hand when I was a member of a statutory scientific advisory committee. Between 2014 and 2019, I was on the Advisory Council on the Misuse of Drugs, which advises the UK government on illicit drug policy. In September 2019, I resigned due to concerns over political vetting and exclusion of suitably qualified experts. Niamh Eastwood and Graham Parsons were denied a place on the committee because they had previously criticised ministers[2]. In their work, scientists deal with criticism all the time. The rudeness of peer reviewers is a standing joke for those of us who have to undergo their judgements to get our work published. We use criticism to improve our knowledge. If ministers are not willing to hear dissenting views, then they are not following science.

My previous research on the use of evidence in policy-making showed that ministers can trawl for evidence that suits their purposes, or invest selectively in the types of research that are likely to show them in a favourable light. What results is the 'survival of the ideas that fit'[3]. In working alongside senior civil servants, I learned how skilled they can be in selecting evidence that will tell the story that ministers want to be told. Ministers may well be sincere in their belief that they are following the best scientific advice. That does not mean that this advice reflects an unbiased, unambiguous picture of how different policy options will work out in practice.

In the current crisis, there are worrying signs that British ministers are leading the science, rather than following it. The BBC reported, for example, on the decision to change the recognition of COVID-19 as a 'high consequence infectious disease'[4]. In March 2020, the government suggested to the Advisory Committee on Dangerous Pathogens that this status be changed. This decision was reportedly not taken because scientific knowledge of COVID-19 suggested it was less consequential, but because the UK was running out of personal protective equipment (PPE). The disease had to be downgraded for ministers to escape a legal responsibility to provide high-grade PPE.

As Albert Einstein discussed with Karl Popper shortly before his death, science proceeds through a series of mistakes. So when a government claims to be 'following the science' in response to a global pandemic, we need to treat this claim with caution. A provisional and contested set of statement about how the world is cannot be used directly as a rule for what governments should do. Ministers have to decide for themselves. They must take responsibility for these decisions and their own inevitable mistakes, rather than relying on science as if it were an apolitical and indisputable tablet of stone.

References

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