



Nyasha Weinberg and Claudia Pagliari: Covid-19 reveals the need to review the transparency and independence of scientific advice

This piece was originally co-authored with Prof. Claudia Pagliari, Senior Lecturer in Primary Care and Informatics, the University of Edinburgh, for the [UK Constitutional Law Association Blog](#).

The tragedy of Covid-19 demonstrates the profound, life-saving, importance of good advice. It is essential that the governance system enables the best possible provision of scientific advice, a mechanism for correcting sub-optimal advice, and clarity around the difference between scientific advice and political decision making. Quality scientific advice must be grounded in the fundamentals of good science. These include transparency, allowing for the detection of error and contestability, and the acknowledgement that there is no single correct answer to a problem: it is not "given to science to reach either truth or falsity" ([Popper, pg.6](#)). A procedure for scientific advice to the government that is not transparent, or takes a monolithic view of the 'correct' answer, behind which government officials can hide, is fundamentally not scientific.

Beginning with the premise that the best scientific advice should be underpinned by a process that promotes the best possible science, and good governance requirements for sound [decision making procedures](#) , we come to the question of whether the current institutional arrangements of the Scientific Advisory Group for Emergencies ("SAGE") are adequate. We ask this question in light of the government's Covid-19 response which Jeremy Hunt MP, Chair of the Health Select Committee, described as the "biggest failure of scientific advice in our lifetime".

Questions about the constitutional requirements, under the broad headings of good governance and transparency, for Ministers to 'follow the science' are not new. The [Ministerial Code](#) , described as a "core principle underpinning the UK's unwritten constitution", sets out requirements in [Paragraph 5.2](#) that "Ministers have a duty to give fair consideration and due weight to informed and impartial advice from civil servants, as well as to other considerations and advice in reaching policy decisions, and should have regard to the Principles of Scientific Advice to Government".

This [guidance](#) , in bold typeface, identifies the need for (i) clear roles and responsibilities, (ii) independence, and (iii) transparency and openness as the high-level principles that should govern scientific advice. According to Jill Rutter writing on the need for SAGE transparency in [Prospect](#) , these were drawn up after Labour home secretary Alan Johnson sacked the chair of the Advisory Committee on the Misuse of Drugs for his comments comparing the dangers of ecstasy to the dangers of horse riding. These principles assert that scientific advice should be "[free from political interference](#) ."

[Aparliamentary inquiry was conducted by the House of Commons Science and Technology Committee in 2011](#) , which considered the functioning of SAGE following a number of high profile emergencies. It concluded with concerns about a "lack of balance" of SAGE members (para 154), the need for greater international expertise (para 157), the importance of financial compensation to ensure quality contributions (para. 159), a greater need for transparency to enable greater scientific discussion (para. 165), the immediate publication of minutes (para 167), concerns about SAGE operating under a presumption of secrecy (para. 168), and

concerns about evaluating independence when SAGE includes government officials, and its operation is confidential (para. 175).

These concerns led to the publication of [Enhanced SAGE Guidance](#) , which offered a more specific framework for the use of scientific advice in policy making. These include that SAGE should adopt an open and transparent approach to the process, explain publicly the reasons for decisions and that public disclosures for the declaration of interests of advisors should be made to deliver on requirements for credibility and independence.

All of these issues, raised nearly a decade ago, remain a problem; and there is little evidence of compliance with best practice guidelines. Over the course of Covid-19 many have raised concerns about SAGE, including [about political interference](#), the secrecy of its [membership and proceedings](#) (with the New York Times describing it as operating in a "virtual black box"), and [whether it has the breadth of voices necessary, given two-thirds of SAGE advisers are male](#) and early meetings did not include any [public health advisors](#) . The publication of additional documents has gone some way to assuaging concerns about the activities of the "[secretive group](#)" advising the government, but this did not happen quickly enough, and did not go far enough. The names of [20 members of SAGE remain a secret](#) (and some that are [published claim not to be members](#)), publication of the [minutes of SAGE meetings](#) were significantly delayed, and many have questioned their [heavy redaction](#) . Consequently, at the time of its greatest relevance the advice given by SAGE members for the decisions that are currently being taken, is kept from the public, parliamentarians and other scientists.

Accountability

Governments are accountable for pursuing rational policy-making, adopting a course of action based on planned investigation and rigorous analysis of the evidence. Simply put, how can Parliament hold the government accountable to these standards for the decisions it is making if the legislature has no ability to see how the government is actually making decisions? Obviously, governments have to strike a difficult balance between confidentiality and disclosure, particularly when dealing with an emergency of this magnitude; but this isn't like a terrorist attack and the levels of redaction we have seen in documents seem unjustifiable in a situation where the enemy is a virus. However, the scale and profound consequences of Covid-19 significantly increase the need for Government to be accountable to the public and to Parliament.

Covid-19 has forced the government to make decisions on a scientific evidence base with large gaps. As Freedman sets out politicians should not be "passive recipients of whatever expertise comes their way, but should rather engage with the experts to explore alternative options and their empirical foundations". Whether they, or civil service advisors, have the requisite skills to do this is a question for a different blog, but claims that the government has been using SAGE as a '[human shield](#)', that it has been [selectively](#) using their advice to fit their political narrative, and that there is too much 'groupthink' rendering it [impossible to provide effective scrutiny](#) all suggest cause for concern.

A failure to interrogate the advice given, or indeed excessive reliance on patchy and incomplete advice, amounts to a failure of responsibility. It is crucial for the Rule of Law and accountability that there is transparency around the government's response to Covid-19 and this relies on the government to go further with what it shares about SAGE.

Independence

The scrutiny that is needed includes the independence of advice given, the composition of those giving advice and the foregrounding of particular scientific disciplines in the advice (e.g. behavioural psychology). This includes scrutiny of which science is being followed in a fast-moving area such as the understanding of a novel coronavirus; where the government is not following the science, but rather a particular scientific school of thought, or favoured scientist, it is essential this is known, so that the alternatives can be appraised. As put by Lawrence Freedman in his excellent [Strategy for a Pandemic: The UK and Covid-19](#):

"After the H1N1-09 experience, a number of recommendations had been made to improve the flow of scientific advice. One, from the Health Protection Agency, was to recognise that when decisions have to be made quickly with only limited information, interpretations may legitimately differ, and that it was important to record disagreements in SAGE. In addition, for the benefit of ministers and the Cabinet Office, 'a briefing should be prepared on the limits of science and in particular of epidemiological modelling to manage expectations about what can meaningfully be delivered in what timescales'. It is not known whether such a briefing was delivered on COVID-19 when SAGE reconvened in January 2020."

It may be the case that each SAGE committee is unimpeachable on each of these grounds. However, the current situation where scrutiny of each issue is not possible is creating mistrust and anxiety. This can most obviously be seen in the deluge of reporting on [Dominic Cummings' appearance at the SAGE meetings](#) . According to Freedman there is no evidence that Cummings influenced the committee, or forced the advice to "conform to a predetermined policy", yet his [mere presence](#) will have changed the dynamic. So too will the presence of [Denis Hasabbis, DeepMind co-founder](#) . Moreover, the lack of transparency around the attendance of any member who would raise questions about independence and vested interests, cast into doubt the credibility of the scientific advice given.

Transparency

Transparency is also threatened by the current approach, and its close relationship with the [duty to give reasons](#) ; which is understood as one way of underpinning the [legitimate exercise of public power](#) , and a prerequisite for effective democratic control of government by both Parliament and citizens. Clearly, the reason-giving requirement could be extremely expansive, and place an immense burden on public authorities; but the decisions at SAGE are of life and death importance, and therefore require proper explanation.

It is also important to have transparency around the role of the technological advice given by a chosen group of advisors, and the democratic input that filters that advice. The Principles of Scientific Advice to Government set out the following transparency requirements:

- scientific advice to government should be made publicly available unless there are over-riding reasons, such as national security or the facilitation of a crime, for not doing so
- any requirement for independent advisers to sign non-disclosure agreements, for example for reasons of national security, should be publicly acknowledged and regularly reviewed
- the timing of the publication of independent scientific advice is a matter for the advisory body but should be discussed with the government beforehand
- government should not prejudge the advice of independent advisers, nor should it criticise advice or reject it before its publication
- the timing of the government's response to scientific advice should demonstrably allow for proper consideration of that advice
- government should publicly explain the reasons for policy decisions, particularly when the decision is not consistent with scientific advice and in doing so, should accurately represent the evidence
- if government is minded not to accept the advice of a Scientific Advisory Committee or Council the relevant minister should normally meet with the chair to discuss the issue before a final decision is made, particularly on matters of significant public interest

The delayed publication of advice and top-down [advice on policy](#), among other decisions, all suggest that many of these requirements may not have been met.

Challenge

Scientific Advice is a process, from consideration of evidence to political decision. To appraise the quality of that process we need to know what scientific advice was given, what range of advice was considered, how uncertainty was factored into the advice, how the advisors were selected, whether the advice was followed, and if not, why not. If scientific advice was followed partially, how was that decision taken. We do not know about any of the steps. Covid-19 has forced the government to make decisions on the basis of a scientific evidence base with large gaps. A failure to interrogate the advice given, or indeed excessive reliance on patchy and incomplete advice, amounts to a failure of responsibility. When we consider the decision making earlier this year, it may be that the wrong evidence was considered/weighted, or it may be that the process of political decision making on the back of good science was flawed; but transparency is essential to understand where / if fault lies.

The [research of Cao Cong into SARS](#) suggests that China failed to make a head start in its identification of SARS as a coronavirus because of a fear of challenging the "chlamydia theory" put forward by scientific authorities. There is a risk that scientific advice shrouded in mystery will go unchallenged. Again, the 2011 Committee identified the "[crucial challenge function](#)" played by other scientists, a situation which is particularly important in situations of scientific uncertainty.

These principles are mutually supportive

These principles are not mutually exclusive or independent. For example, we need transparency over the extent of reliance on particular scientific disciplines (for example on modelling) in order to provide adequate challenge. Modelling disease outbreaks has not served us well on previous occasions - for example during the CJD and Foot and Mouth epidemics - and see here for a discussion by Dr. Pagliari here on the [fetishisation of data science in crisis response](#). It is not clear that the lessons from these events had been incorporated into the SAGE process. Finally, the essence of Science, and the reason it is such a successful explanatory framework, is that it is open and transparent. Methods, results and conclusions are published so that other scientists can scrutinise, learn and critique. The SAGE Process goes against the very essence of a Scientific one!

One element of transparency is procedural transparency. The openness of decision-making processes by the executive is essential to democratic government. Here, identifying the [extent of political vs. scientific decision-making](#) is necessary. Invariably the government will be taking into account a whole range of non-scientific considerations; including the implications for the economy, geopolitics, and personal freedoms.

Scientists should clearly play a key role in advising on what the science is, and what technologies can do, but politicians must play a role in making a final judgement that also incorporates political issues and values. For elected representatives and the public to be able to appraise the political decision making they need transparency concerning what elements of that decision are political judgement, and which elements are unanimous scientific consensus.

Wider context

The issues of independence, transparency and accountability also raise wider questions about the institutional arrangements for public health advice. SAGE is the primary mechanism for channelling advice to governments in the case of emergency. Each SAGE is emergency specific; and during an emergency the government decides whether a SAGE is required, and which expertise is needed. Given what we are currently learning about the comprehensive impact of public health emergencies on all facets of life, should Parliament not play a role in independently scrutinising healthcare responses? And given we deem education important enough for an independent chief inspector of schools, who is appointed by the government but reports directly to Parliament, why is there no equivalent position with oversight for public health? The [Independent SAGE](#) chaired by Sir David King recognises the issue as it "aims to bring together an independent group of scientists providing transparent advice with the purpose of helping the

UK navigate COVID-19 whilst minimising fatalities".

These are just some of the important questions which we will need to consider in the wake of the crisis.

URL: <https://binghamcentre.biicl.org/comments/96/nyasha-weinberg-and-claudia-pagliari-covid-19-reveals-the-need-to-review-the-transparency-and-independence-of-scientific-advice>