Scientific advisory councils in the COVID-19 response

Jean-François Delfraissy, Mary Horgan, Kåre Mølbak, Fernando Soria Simón, Tanja Stadler, Jaap van Dissel, Steven van Gucht, Walter Ricciardi, Lothar Wieler, Patrick Vallance, et al.

July 21. 2023

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Timely and impartial scientific advice to governments and citizens based on the best available evidence has been an essential part of the collective response to the COVID-19 pandemic. In Western Europe, this advice was to a large extent provided by independent expert groups or councils (hereafter "councils"). A group of the leaders of these councils met in Paris on June 10 and 11, 2022, under the patronage of the President of the French Republic and this document summarizes the reflections arising from that meeting. The findings are relevant in the context marked of a number of high-level post-crisis Covid-19 reviews taking place in most European countries, and need to remember the lessons for the future (1,2,3).

Science advisory councils varied significantly between countries in their title, size, composition, structure, longevity, mandate and governance. While there is no one-size-fits-all approach - national responses to the crisis have been diverse, and so have different consequences in terms of impact on life expectancy (4,5) - a number of principles have emerged from our collective experience, which helped groups work effectively during the pandemic and are likely to be applicable to other health emergencies.

Councils need to include breadth, depth, and diversity of expertise, and to encourage both constructive challenge and collaborative, interdisciplinary ways of working: Councils confronted an extremely wide range of scientific issues, requiring input from fields as diverse as computational fluid dynamics, evolutionary genetics and behavioural science. Some councils also included perspectives such as economics and ethics, or representation from civil society. In all cases it was important that the participants were selected primarily for their expertise, rather than as representatives of a particular viewpoint or interest group, as well as being selected for their willingness to contribute selflessly to the collective endeavour.

Councils need to be established quickly and to be able to adapt as the situation develops: The speed with which groups began operating was critical. This generally meant making use of existing structures and processes where available: either a pre-existing permanent council, or a pre-defined process for creating one. In either case, councils had to adapt to the circumstances of the pandemic, including its duration. In some cases, the composition of the main council changed depending on the topics being discussed. A rapid response was most readily achieved when individuals had worked together before the pandemic, but it was important to bring in new experts to ensure input and insights from the full range of disciplines. International links were very valuable and again, prior experience and previous contacts were helpful.

Councils should provide decision makers with evidence-based scientific advice (6) for policy rather than determine policy itself: Policy decisions ultimately must be taken by elected politicians based on advice from all relevant domains. This includes scientific

advice but also evidence on economic, social and other impacts, which is usually beyond a science council's remit. Science councils were therefore most effective when they provided scientific advice relevant to those making policy choices but did not recommend or design specific policies.

When providing advice, councils need to be clear about the quantity and quality of evidence available and the degree of confidence they have in their conclusions: Acknowledging and explaining uncertainty – and the likely prospects, timelines and processes for reducing it – is an important aspect of evidence-based advice. This is especially important during an emergency when the situation may be changing rapidly and evidence is still limited and evolving. The reality is that evidence will often be less robust than is ideal to inform decisions. Advisers need to explain to the public and decision makers that the conclusions of the evidence may therefore change and new studies may be required.

Scientific advice must be based solely on the evidence and be politically independent. Councils should maintain a degree of autonomy from decision makers in both their composition and the topics they consider. The need for councils to be independent must not, however, preclude working closely with decision makers to help them understand the scientific questions most pertinent to policy choices they are considering. However, our collective experience was that to provide the best advice in the timeliest way, councils should be free to consider relevant scientific issues or evidence that is not – or not yet – requested.

Councils should have clear routes to deliver advice to decision makers and to receive questions and feedback. Given the wide-ranging impacts of the pandemic, which extended beyond the remit of health ministries, some countries found it valuable for this "docking point" to be a central part of government to allow coordination and direction (e.g. the Prime Minister or President's office). Two-way communication channels needed to be carefully managed to preserve councils' independence but meant that decision makers could put relevant questions to the council, build understanding of the evidence, and provide feedback on how advice was used.

Transparency and effective communication of scientific advice are essential to build trust. Effective transparency requires both publication of advice in a readily accessible location and format, and its communication to both decision makers and the public. It also requires public declaration by advisers of all potential conflict of interests. Publication of science advice should be owned by the council, whilst allowing policy makers sufficient time to consider the advice and their response to it before publication. Our experience was that the output of science councils was best communicated by scientists and should be demarcated from public health decisions and policy communications by public officials. Involving the wider scientific community beyond the council membership to explain the scientific evidence broadened the range of trusted sources. After communicating their work, many scientific advisers found themselves subject to harassment or threats (7). It is important that council members receive

appropriate protection from such incidents, in order to allow them to do their jobs safely and effectively, and so as not to discourage others from contributing. The media has a part to play in ensuring that scientists are not put in a vulnerable position.

For the small group of Western European countries which we represent, some similarities in demographics, health systems, governance and risk factors, and our interconnectedness, often meant we were addressing similar questions and drawing on similar evidence bases at a similar time. This led us to set up regular informal group calls of lead science and health advisers to exchange information and share experiences informally and confidentially. This proved to be a valuable adjunct to existing formal intergovernmental structures.

Even with strong efforts on prevention, which are critically important, there will always be a need to be able to respond to health emergencies. Our view is that the principles outlined above would be valuable for future scientific advisory councils to consider.

Panel : Principles for effective Scientific Councils during pandemic crises

- Include breadth, depth, and diversity of expertise, encourage both constructive challenge and collaborative, interdisciplinary ways of working, and place work from the outset in a possible long-term perspective ;
- Be established quickly and adapt as the situation develops, have formal status ;
- Provide decision makers with evidence-based scientific advice for policy rather than determine policy itself ;
- Be clear about the quantity and quality of evidence available and the degree of confidence and uncertainty in the conclusions reached ;
- Be based solely on the evidence and be politically independent. Councils should maintain a degree of autonomy from decision makers in both their composition and the topics they consider, and have the possibility of self-tasking ;
- Have clear routes to deliver advice to decision makers and to receive questions and feedback, making advice public within a short timeframe for the press and the general public, to maintain and preserve trust between scientists and civil society, which is a fundamental element for citizen resilience ;
- Be transparent and have effective communication of scientific advice. Councils should have control over the publication of their outputs.

Authors: Covid-19 National Scientific Advisory Councils: Presidents or Representatives

DELFRAISSY Jean-François (France)
HORGAN Mary (Ireland)
MØLBAK Kåre (Danemark)
SORIA Fernando Simon (Espagne)
STADLER Tanja (Switzerland)
VAN DER HOF Susan (Netherlands)
VAN GUCHT Stevan (Belgium)
WALTER Ricciardi (Italie)
WIELER Lothar (Allemagne)
VALLANCE Patrick (Royaume-Uni)

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Annex

List of the members of the European scientific councils present at the joint meeting (10-11, June 2022, Paris) or involved in the writing of this paper

France: J-F. Delfraissy, Prof of Immunology, President of French Covid-19 scientific council, L. Atlani-Duault, Anthropologist, Research-director IRD, D. Benamouzig, Sociologist, SciencesPo Paris, L. Bouadma, Prof of Intensive care, APHP, Paris, S. Cauchemez, Epidemiological modeller, Pasteur Institute, C. Chirouze, Prof of Infectious disease, Besançon University, A. Consoli, Prof of child psychiatry, APHP, Paris, P-L. Druais, General practicionner, A. Fontanet, Epidemiologist, Pasteur Institute, M-A. Grard, ATD-Quart Monde President, O. Guérin, Prof of geriatric medicine, L. Huiart, Scientific Director at Santé publique France, A. Hoang, Digital expert, T. Lefrançois, Research-director, CIRAD, DirBIOS, Montpellier, B. Lina, Prof of virology , D. Malvy, Prof of Infectious disease, Y. Yazdanpanah, Director of ANRS-MIE

United Kingdom: P. Vallance, UK Government Chief Scientific Adviser, C. Whitty, Chief Medical Officer for England, S. Whitfield, UK Government Office for Science, W. Barclay, Imperial College London, C. Caplan, UK Government Office for Science, J. Lobo, UK Government Office for Science, A. Buckley, UK Government Office for Science

Germany: L. Wieler – Prof, Dr, Centre for International Health Protection, Robert Koch Institute, Berlin, J. Hanefeld – Dr, Centre for International Health Protection, Robert Koch Institute, Berlin, T. Semmler – Head of unit MF2 “Genome sequencing and genomic epidemiology”, Robert Koch Institute, Berlin, T. Eckmanns – Head of the Division for healthcare-associated infections, surveillance of antimicrobial resistance and consumption, Robert Koch Institute

Spain: F-S. Soria – Director, Centro de Coordinación de Alertas y Emergencias Sanitarias, Madrid

Italy: W. Ricciardi – A-T. Palamara – Director Dept. of Infectious Diseases, Istituto Superiore di Sanità, Rome, S. Brusaferro – Istituto Superiore di Sanit, Italian National Institute of Health, Rome

Switzerland: T. Stadler – Professor, ETH Zürich, Department of Biosystems Science Engineering, Basel, M. Ackermann – Professor, ETH Zurich, Department of Environmental Systems Sciences, and Eawag, Department of Environmental Microbiology, Dubendorf, S. Tschudin Sutter – Professor, Division of Infectious Diseases and Hospital Epidemiology, University Hospital Basel, R. Stocker – Professor, ETH Zurich, Institute of Environmental Engineering, Department of Civil, Environmental and Geomatic Engineering

Belgium: S. Van Gucht – DVM, PhD, Virologist, Sciensano, Brussels, M. Dewatripont – Professor of Economics, Université Libre de Bruxelles (I3h, ECARES, Solvay Brussels

School; T. Lernout – MD, Epidemiology of Infectious Diseases, Sciensano, Brussels; P. Vandamme – MD, PhD, Professor of Epidemiology and Vaccinology, Centre for the Evaluation of Vaccination, University of Antwerp; C. Nieuwenhuys – Sociologist, General Secretary of the Social Servces Federation, Brussels; E. Vlieghe – MD, PhD, professor of Infectious diseases, University of Antwerp, University Hospital Antwerp.

Netherlands: J. van Dissel – Director, Center for Infectious Disease Control, National Institute for Public health and Environment (RIVM), Bilthoven; L. Schipper – Head, international office, Bilthoven; S. van den Hof- Head Epidemiology, Bilthoven; C. Swaan – Head Pandemic Preparedness, Center for Infectious Disease Control, National Institute for Public health and Environment (RIVM), Bilthoven.

Ireland: M. Horgan – MD, President of the Royal College of Physicians of Ireland, Infectious Diseases Department Cork, University Hospital and University College Cork, P. Mallon - Director, Centre for Experimental Pathogen Host Research, Professor of Microbial Diseases University College Dublin. Consultant in Infectious Diseases. Member of the COVID19 Advisory Group in Ireland

Denmark: K. Mølbak – retired medical doctor and epidemiologist, Statens Serum Institut, Professor and consultant