



Scientific Pandemic Infections Group on Modelling (SPI-M): terms of reference

Published 9 January 2025

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Background

Scientific Pandemic Infections Group on Modelling (SPI-M) is an advisory group to the Department of Health and Social Care (DHSC). Its purpose is to provide expert advice to DHSC and wider government on scientific matters relating to the UK's response to a pandemic or other emerging human infectious disease threats. SPI-M's advice is based on infectious disease analysis, modelling and epidemiology.

The group will seek broadly to adhere to the principles laid out in the [Code of Practice for Scientific Advisory Councils and Committees](#). SPI-M's terms of reference will be reviewed periodically and at least every 2 years.

Throughout the COVID-19 response, SPI-M was an operational subgroup (SPI-M-O) of the Scientific Advisory Group for Emergencies (SAGE), reporting through these structures exclusively. When SAGE stopped meeting in February 2022, SPI-M-O was stood down and SPI-M resumed its advisory function to DHSC under a new term of reference.

While SPI-M's focus in the past has predominantly been on pandemic influenza and COVID-19, the group may provide advice on other areas of infectious disease modelling and epidemiology where appropriate.

SPI-M: terms of reference

Remit

As an advisory group, SPI-M does not make decisions nor set policy. Its advice is limited to scientific and epidemiological matters in the fields of infectious disease analysis, modelling, and epidemiology.

The functions and remit of SPI-M include:

- acting as an independent source of epidemiological advice and a conduit for externally produced infectious disease modelling to DHSC and wider government
- summarising for the government (and public as required) the insights from epidemiological modelling for pandemic policy and preparedness
- advising, as needed, on epidemiological scenarios upon which formal planning might be based
- supporting future strategy and policy development, both within the health and care family of organisations and more widely across government where appropriate

- providing a route for the government to be informed of new policy-relevant insights from academia
- maintaining a network between government and the academic community that can form the basis for SPI-M-O should it need to be stood up
- continuing to capture insights from the COVID-19 pandemic
- supporting the continued development of modelling capability within UKHSA and other UK public health agencies

Questions of operational practicality, proportionality, non-health factors and the value for money of government interventions are outside the group's remit.

Governance

DHSC has sponsorship of, is responsible for, and provides the secretariat function to SPI-M. The senior official sponsor of the group in the department is the Chief Scientific Adviser (CSA).

SPI-M will not only act as an advisory function to DHSC, but it is also able to provide advice to UKHSA, other government departments, and the devolved nations as required. The SPI-M Secretariat will coordinate with any areas of government that wish to utilise the group's expertise.

The group's programme of work is shaped and agreed by the executive and academic chairs. Participants may also suggest items for discussion; however, most of the group's work is expected to be in response to government commissions for advice.

The Secretariat will document and share the group's advice as appropriate with relevant stakeholders in DHSC, UKHSA, and other areas of government. Minutes of SPI-M meetings will be available publicly on the [SPI-M page on GOV.UK](#).

Relationship with the UK Health Security Agency

Where appropriate, SPI-M will act as an advisory function to UKHSA to support its responsibilities for pandemic planning and protecting the public from emerging infectious diseases. This may be, for example, by acting as a second opinion function that offers:

- challenge and comment at an early stage to support policy development
- peer review of epidemiological advice and modelling results produced by UKHSA

- secondary modelling
- or advising what data should be collected and shared during a future epidemic

DHSC will seek input from UKHSA when determining the group's programme of work, and UKHSA can suggest items to Chairs and the Secretariat where advice from the committee is required.

SPI-M and UKHSA's working relationship will evolve as UKHSA's capability and capacity continues to develop. Any material changes will be agreed between SPI-M's chairs and the Data, Analysis, and Surveillance (DAS) group in UKHSA, on behalf of the wider organisation.

There must be clear delineation between UKHSA's responsibilities and SPI-M's contributions. Unless SAGE activates SPI-M-O, SPI-M will not provide modelling for operational purposes, for example the direct monitoring of outbreaks or epidemics. Instead, it will focus on providing advice on more strategic considerations. SPI-M will not provide advice on endemic infectious diseases.

Relationship with the devolved governments

Although SPI-M's high-level purpose is to provide expert advice to DHSC and the wider UK government, the group may also provide advice to support the devolved governments and their respective public health agencies.

The devolved governments may request the group's advice to support their respective responsibilities for pandemic planning. Like commissions from DHSC, UKHSA and other areas of government, these requests will be coordinated by the SPI-M Secretariat and ultimately agreed by the chairs.

To facilitate the sharing of epidemiological information and expertise across the UK, the participants of SPI-M include representatives from public health agencies in England, Scotland, Wales, and Northern Ireland. Furthermore, nominees from each of the devolved governments are also invited to observe meetings. Observers and participants from Scotland, Wales, and Northern Ireland receive equal access to meeting papers and minutes.

Committee chairs

The committee chair is split into two: an executive and an academic role. The chairs are jointly responsible for signing-off the outputs of the group and ensuring the scientific integrity of the group's discussion and outputs. The chairs will work closely with the

Secretariat to report the scientific advice of the group to DHSC, UKHSA, NHS England and wider government, including the devolved governments.

The executive chair is designated by the department's Chief Scientific Adviser. The executive chair is responsible for liaising between the group and DHSC, guiding the agenda and calling extraordinary meetings, reporting to relevant boards, and representing the group within DHSC. The current executive chair is Professor Thomas Waite, Deputy Chief Medical Officer for England, from DHSC.

The academic chair is appointed by the Chief Scientific Adviser, who acts as the vacancy holder for the open recruitment. The Academic Chair is responsible for the academic independence of the group, chairing meetings, and moderating discussion (including any offline correspondence). The current academic chair is Prof. Deirdre Hollingsworth from the University of Oxford.

Between the two chairs, any other appropriate responsibilities as laid out in section 3.3 of the [Code of Practice for Scientific Advisory Councils and Committees](#) should be covered.

SPI-M: participation

Unlike other advisory groups, participants of SPI-M are not formal "members". Specifically, they are not appointed through an open recruitment process or appointed for a specific term length. Instead, they are invited to join at the recommendation of the chairs and the list of participants is reviewed periodically or, for example, at any change of chair(s). Typically, this includes leading experts from within the field of epidemiological modelling and statistics, with relevant experience to contribute to the consensus position of the committee.

Participants are expected to attend SPI-M meetings and make a considered contribution to the work of the group. Where an issue under discussion falls within an individual's particular area of expertise, participants will provide expert guidance. If an issue does not fall within their expertise, participants will contribute to the debate in the capacity of a well-informed professional. The group's work will contribute to the provision of high quality and considered advice to government.

The contents and papers of meetings are confidential unless they have been made public as part of the group's published minutes or advice. Participants should not misuse their position or information acquired in the course of their official duties to further their private interests or the private interests of others. Participants should make clear they are speaking in an individual capacity, not on behalf of SPI-M, in any contact with the media.

In addition to their work on the group, participants may be called upon to provide advice on matters arising where an individual's particular expertise may be of assistance. The Secretariat may occasionally ask participants to provide expert advice on relevant issues outside the group's meetings. It is recognised that in a pandemic situation, or similar emergency, such requests will need to be made at short notice. Additional experts may be invited to attend and advise the group on an ad hoc basis. As such, participants do not have a fixed term of appointment but are required to declare any interests relevant to the SPI-M meetings they attend.

Academic participants are experts in disease modelling or epidemiology and are expected to directly contribute to the consensus view of the committee and its decision-making process (for example, votes).

Public health agency participants¹ may bring either specialist modelling expertise from within public health agencies or non-modelling specialist expertise. Although they may advise the committee or update them on relevant work in various government organisations, they are not directly involved in the committee's decision-making process (for example, votes).

A list of current academic and public health agency participants can be found in the appendices.

Observers will represent various sections of government and public health agencies, who may consider implementing any recommendations of the group or have an interest in its decisions:

- nominees from DHSC, UKHSA, the NHS, and other UK health departments
- nominees from other government departments and other public bodies, groups, or committees
- nominees from the devolved governments

Nominations will be considered on a case-by-case basis by the co-chairs.

Secretariat

The secretariat is provided by DHSC and, as such, many of that team will also attend and may participate in meetings to ensure the group can fulfil its functions. The secretariat's

¹ Public health agency participants include individuals from UKHSA, Public Health Scotland, Public Health Wales, and the Public Health Agency (Northern Ireland).

key role is acting as a conduit between the group and government, translating policy-relevant asks into well-posed scientific questions and, in reverse, translating scientific results into policy-relevant insights.

The SPI-M Secretariat is led by a senior analyst in the Health Protection Analysis team in DHSC. It provides impartial support to the group and works closely with the chairs to ensure that the consensus views of the group are communicated appropriately.

It also ensures SPI-M proceedings are documented in the minutes and that these are published in a timely way after meetings. The Secretariat will make sure participants have signed the SPI-M Code of Conduct and facilitate transparency of the group's other outputs. As far as possible, this will be in line with guidance in section 4 of the [Code of Practice for Scientific Advisory Councils and Committees](#).

SPI-M: in an emergency

During a human infectious disease emergency, SPI-M-O may be stood up as an operational subgroup of SAGE to support the government's response. SPI-M-O is a separate group to SPI-M. The secretariat for both SPI-M and SPI-M-O is provided by DHSC.

This document does not set out the terms of reference or participants of SPI-M-O. SPI-M-O may choose to draw on SPI-M's terms of reference, with appropriate changes to reflect the emergency and advice that is required, if appropriate. It is expected that the participants of SPI-M-O will likely reflect those of SPI-M, but with additional and/or different expertise which reflect the emergency at the time.

From January 2020 to March 2022, SPI-M met as SPI-M-O to support the government's response to COVID-19 and reported through SAGE's structures, rather than those within DHSC. Should SAGE need to convene and require SPI-M-O's input, the secretariats of both groups will work together, with the Cabinet Office, on how best to facilitate this.

In an emergency, a Precautionary SAGE (Pre-SAGE) may meet before central Cabinet Office activation of a response, for example, if COBR were activated. In this case, SPI-M would report to Pre-SAGE as and when required. If the Cabinet Office called for the activation of emergency structures, SPI-M may become SPI-M-O as an operational subgroup of SAGE, where appropriate, and support the cross-government response through these reporting lines. As seen during COVID-19, this may include plotting the course of the pandemic and the range of potential outcomes in response to different policies and working in real-time to analyse and incorporate new data and situations to adapt mathematical models.

Appendices

Current participants

In addition to the chairs, the following people participate in an academic capacity:

- Dr Marc Baguelin, Imperial College London
- Dr Ellen Brooks-Pollock, University of Bristol
- Prof Daniela DeAngelis, University of Cambridge, MRC Biostatistics Unit
- Dr Louise Dyson, University of Warwick
- Prof Sir John Edmunds, London School of Hygiene and Tropical Medicine
- Dr Jessica Enright, University of Glasgow
- Prof. Neil Ferguson, Imperial College London
- Prof Christophe Fraser, University of Oxford
- Prof Julia Gog, University of Cambridge
- Prof Michael Gravenor, University of Swansea
- Prof Ian Hall, University of Manchester
- Prof Thomas House, University of Manchester
- Prof Rowland Kao, University of Edinburgh
- Prof Matt Keeling, University of Warwick
- Prof Adam Kucharski, London School of Hygiene and Tropical Medicine

The following people are public health agency participants:

- Prof Steven Riley, Director General of Data, Analysis, and Surveillance, UKHSA
- Dr Paul Birrell, UKHSA
- Dr Declan Bradley, Public Health Agency (Northern Ireland)
- Dr Andre Charlett, UKHSA

- Dr Thomas Finnie, UKHSA
- Dr Chris Robertson, Public Health Scotland
- Dr Nicholas Watkins, UKHSA
- Dr Christopher Williams, Public Health Wales

Code of conduct

SPI-M adheres to the 7 principles of public life:

- **Selflessness** - Holders of public office should take decisions solely in terms of the public interest. They should not do so in order to gain financial or other material benefits for themselves, their family, or their friends.
- **Integrity** - Holders of public office should not place themselves under any financial or other obligation to outside individuals or organisations that might influence them in the performance of their official duties.
- **Objectivity** - In carrying out public business, including making public appointments, awarding contracts, or recommending individuals for awards and benefits, holders of public office should make choices on merit.
- **Accountability** - Holders of public office are accountable for their decisions and actions to the public and must submit themselves to whatever scrutiny is appropriate to their office.
- **Openness** - Holders of public office should be as open as possible about all the decisions and actions that they take. They should give reasons for their decisions and restrict information only when the wider public interests clearly demands.
- **Honesty** - Holders of public office have a duty to declare any private interests relating to their public duties and to take steps to resolve any conflicts arising in a way that protects the public interests.
- **Leadership** - Holders of public office should promote and support these principles by leadership and example.