

# Scientific Advisory Group for Emergencies (SAGE)

SAGE provides scientific and technical advice to support government decision makers during emergencies.

Sir Patrick Vallance FMedSci FRS	Government Chief Scientific Adviser
Professor Chris Whitty CB FMedSci	Chief Medical Officer and Chief Scientific Adviser, Department of Health and Social Care
Professor Rebecca Allen	University of Oxford
Professor John Aston	Chief Scientific Adviser, Home Office
Professor Charles Bangham	Imperial College London
Professor Wendy Barclay FMedSci	Imperial College London
Professor Jonathan Benger	UWE Bristol
Fliss Bennee	Welsh Government
Mr Allan Bennett	Public Health England
Professor Phil Blythe	Chief Scientific Adviser, Department for Transport
Professor Chris Bonnell	London School of Hygiene and Tropical Medicine
Professor Sir Ian Boyd FRSE	University of St Andrews
Professor Peter Bruce	University of Oxford
Caroline Cake	HDR-UK
Professor Andrew Curran	Chief Scientific Adviser, Health and Safety Executive
Professor Paul Cosford	Public Health England
Dr Gavin Dabrera	Public Health England
Professor Sir Ian Diamond FRSE FBA	National Statistician, Office for National Statistics
Professor Yvonne Doyle CB	Medical Director, Public Health England
Professor Deborah Dunn-Walters	University of Surrey
Professor John Edmunds OBE FMedSci	London School of Hygiene and Tropical Medicine
Professor Sir Jeremy Farrar FMedSci FRS	Director, Wellcome Trust

Professor Michael Ferguson	University of Dundee
Professor Neil Ferguson OBE FMedSci	Imperial College London
Professor Kevin Fenton	Public Health England
Dr Aidan Fowler FRCS	National Health Service England
Professor Julia Gog	University of Cambridge
Professor Robin Grimes	Chief Scientific Adviser, Ministry of Defence
Dr Ian Hall	University of Manchester
Dr David Halpern	Behavioural Insights Team, Cabinet Office
Dido Harding	NHS Test and Trace Executive Chair
Dr Jenny Harries OBE	Deputy Chief Medical Officer
Dr Demis Hassabis FRS	Personal capacity as a data scientist
Professor Andrew Hayward	University College London
Professor Gideon Henderson	Chief Scientific Adviser, Defra
Professor Peter Horby	University of Oxford
Professor Anne Johnson	University College London
Dr Indra Joshi	NHSx
Professor Kamlesh Khunti	University of Leicester
Dr Ben Killingley	UCLH
Professor David Lalloo	Liverpool School of Tropical Medicine
Professor Janet Lord	University of Birmingham
Professor Dame Theresa Marteau FMedSci	University of Cambridge
Professor Dame Angela McLean FRS	Chief Scientific Adviser, Ministry of Defence
Dr Jim McMenamin	Health Protection Scotland
Professor Graham Medley	London School of Hygiene & Tropical Medicine
Dr Laura Merson	University of Oxford
Professor Susan Michie FAcSS FMedSci	University College London
Professor Christine Middlemiss	Chief Veterinary Officer

Professor Andrew Morris FMedSci FRSE	University of Edinburgh
Professor Paul Moss	University of Birmingham
Professor Carole Mundell	Chief Scientific Adviser, Foreign and Commonwealth Office
Professor Cath Noakes	University of Leeds
Dr Rob Orford	Welsh Government
Professor Michael Parker	University of Oxford
Professor Sharon Peacock FMedSci	Public Health England
Professor Alan Penn	Chief Scientific Adviser, Ministry of Housing, Communities and Local Government
Dr Pasi Penttinen	European Centre for Disease Prevention and Control
Professor Guy Poppy	Chief Scientific Adviser, Food Standards Agency
Professor Steve Powis FRCP	National Health Service England
Dr Mike Prentice	National Health Service England
Mr Osama Rahman	Chief Scientific Adviser, Department for Education
Professor Venki Ramakrishnan PRS	Ex Officio as Chair of DELVE, convened by the Royal Society
Professor Andrew Rambaut FRSE	University of Edinburgh
Professor Tom Rodden	Chief Scientific Adviser, Department for Digital, Culture, Media and Sport
Professor Brooke Rogers OBE	Kings College London
Dr Cathy Roth	Department for International Development
David Seymour	HDR-UK
Professor Sheila Rowan MBE FRS FRSE	Chief Scientific Adviser, Scotland
Alaster Smith	Department for Education
Professor Iyiola Solanke	University of Leeds
Dr Nicola Steedman	Scottish Government
Dr James Rubin	Kings College London
Professor Harry Rutter	University of Bath
Professor Calum Semple	University of Liverpool

Dr Mike Short CBE	Chief Scientific Adviser, Department for International Trade
Dr Gregor Smith	Scottish Government Chief Medical Officer
Professor Sir David Spiegelhalter FRS	University of Cambridge
Professor Jonathan Van Tam MBE	Deputy Chief Medical Officer
Professor Russell Viner PRCPCH	University College London
Professor Charlotte Watts CMG FMedSci	Chief Scientific Adviser, Department for International Development
Dr Rhoswyn Walker	HDR-UK
Professor Sir Mark Walport FRCP FMedSci FRS	UK Research and Innovation
Professor Mark Wilcox	University of Leeds
Professor Lucy Yardley FAcSS	University of Bristol and University of Southampton
Professor Ian Young	Northern Ireland Executive
Professor Maria Zambon FMedSci	Public Health England

# Scientific Pandemic Insights Group on Behaviours (SPI-B)

SPI-B provides advice aimed at anticipating and helping people adhere to interventions that are recommended by medical or epidemiological experts.

Professor Richard Amlôt	Public Health England
Professor Imran Awan	Birmingham City University
Professor Laura Bear	London School of Economics
Professor Chris Bonnell	London School of Hygiene and Tropical Medicine
Dr Ellen Brooks-Pollock	University of Bristol
Professor Val Curtis	London School of Hygiene and Tropical Medicine
Dr Laura de Molière	Her Majesty's Government
Professor John Drury	University of Sussex
Dr Mark Egan	Behavioural Insights Team
Professor Nicola Fear	Kings College London
Dr David Halpern	Behavioural Insights Team
Mr Hugo Harper	Behavioural Insights Team
Professor Gerard Hastings	University of Stirling
Professor Ann John	Swansea University
Dr Atiya Kamal	Birmingham City University
Professor Patricia Kingori	University of Oxford
Dr Daniel Leightley	Kings College London
Professor Dame Theresa Marteau	University of Cambridge
Mr Shaun McNally	Her Majesty's Government
Professor G.J. Melendez-Torres	University of Exeter
Professor Susan Michie	University College London
Professor Melinda Mills	University of Oxford

Dr Gavin Morgan	University College London
DCC Paul Netherton	Devon and Cornwall Police
Professor Melissa Parker	London School of Hygiene and Tropical Medicine
Professor Michael Parker	University of Oxford
Mr Richard Pemberton	British Psychological Society
Dr Henry Potts	University College London
Professor Subhash Pokhrel	Brunel University
Dr Kaveri Qureshi	University of Edinburgh
Professor Stephen Reicher	University of St Andrews
Dr Lorna Riddle	Her Majesty's Government
Professor Brooke Rogers	Kings College London
Dr James Rubin	Kings College London
Ms Kathryn Scott	British Psychological Society
Dr Louise Smith	Kings College London
Professor Iyiola Solanke	University of Leeds
Mr Hugh Stickland	Office for National Statistics
Professor Clifford Stott	Keele University
Dr Tushna Vandrevala	Kingston University
Professor Russell Viner	University College London
Dr Jo Waller	Kings College London
Professor Charlotte Watts	Chief Scientific Adviser, Department for International Development
Professor Robert West	University College London
Professor Lucy Yardley	University of Bristol and University of Southampton

# Scientific Pandemic Influenza Group on Modelling (SPI-M)

SPI-M gives expert advice to the Department of Health and Social Care and wider UK government on scientific matters relating to the UK's response to an influenza pandemic (or other emerging human infectious disease threats). The advice is based on infectious disease modelling and epidemiology.

Dr Marc Baguelin	Imperial College London
Fliss Bennee	Welsh Government
Dr Paul Birrell	Public Health England
Dr Joshua Blake	University of Cambridge
Professor Veronica Bowman	Her Majesty's Government
Professor Stephen Brett	Imperial College London
Dr Ellen Brooks-Pollock	University of Bristol
Dr Andre Charlett	Public Health England
Dr Leon Danon	University of Bristol
Dr Nick Davies	London School of Hygiene & Tropical Medicine
Professor Daniela DeAngelis	University of Cambridge
Dr Louise Dyson	University of Warwick
Professor John Edmunds	London School of Hygiene & Tropical Medicine
Dr Rosalind Eggo	London School of Hygiene & Tropical Medicine
Professor Neil Ferguson	Imperial College London
Dr Thomas Finnie	Public Health England
Dr Sebastian Funk	London School of Hygiene & Tropical Medicine
Dr Nick Gent	Public Health England
Professor Julia Gog	University of Cambridge
Professor Nicholas Grassly	Imperial College London
Dr Ian Hall	University of Manchester

Dr Edward Hill	University of Warwick
Dr Thomas House	University of Manchester
Dr Christopher Jewell	Lancaster University
Professor Mark Jit	London School of Hygiene & Tropical Medicine
Dr Thibaut Jombart	London School of Hygiene & Tropical Medicine
Professor Matt Keeling	University of Warwick
Dr Petra Klepac	London School of Hygiene and Tropical Medicine
Dr Adam Kucharski	London School of Hygiene and Tropical Medicine
Dr Jamie Lopez Bernal	Public Health England
Professor Dame Angela McLean	Chief Scientific Adviser, Ministry of Defence
Professor Graham Medley	London School of Hygiene and Tropical Medicine
Dr Lorenzo Pellis	University of Manchester
Dr Jonathan Read	Lancaster University
Professor Steven Riley	Imperial College London
Professor Chris Robertson	University of Strathclyde
Dr Julie Robotham	Public Health England
Dr James Rubin	Kings College London
Dr Michael Tildesley	University of Warwick
Dr Edwin Van Leeuwen	Public Health England
Professor Jonathan Van Tam MBE	Deputy Chief Medical Officer
Dr Marc Warner	Faculty, on behalf of NHSx
Professor Mark Woolhouse	University of Edinburgh
Professor Lucy Yardley	University of Bristol and University of Southampton
Dr Rohini Mathur	London School of Hygiene & Tropical Medicine
Dr Joe Hilton	University of Warwick
Professor Wendy Barclay	Imperial College London
Mr Bill Quilty	London School of Hygiene & Tropical Medicine



Dr Sam Clifford	London School of Hygiene & Tropical Medicine
Professor Axel Gandy	Imperial College London
Dr Samir Bhatt	Imperial College London
Dr Thomas Crellen	University of Oxford
Mr Hugo Lewkowicz	University of Manchester
Dr Carl Whitfield	University of Manchester
Dr Joshua Firth	University of Oxford
Dr Gayatri Amirthalingam	Public Health England
Dr Heather Whitaker	Public Health England
Dr Kimberley Moore	Faculty, on behalf on NHSx
Mr Martyn Fyles	University of Manchester
Dr Elizabeth Fearon	London School of Hygiene & Tropical Medicine
Professor Deirdre Hollingsworth	University of Oxford
Dr Robert Challen	University of Exeter
Dr Gwen Knight	London School of Hygiene & Tropical Medicine
Dr Helena Stage	University of Manchester
Dr Tim Lucas	Imperial College London
Dr Emma Davis	University of Oxford
Dr Lewis Spurgin	University of East Anglia
Dr Daren Austin	GSK, contributing in personal capacity

# PHE Serology Working Group

The Serology Working Group provides oversight of sero-epidemiology work for COVID-19 in England and partners with international colleagues, including the WHO, on these serological studies. The group monitors and reviews work on the establishment and running of population-based seroprevalence surveys in England. Sero-epidemiology is crucial in informing our understanding of the extent of transmission of SARS-CoV-2, and to monitor how this changes over time.

Dr Gayatri Amirthalingam	Public Health England
Dr Marc Baguelin	London School of Hygiene and Tropical Medicine
Professor Wendy Barclay	Imperial College London
Dr Rupert Beale	Francis Crick Institute
Dr Tim Brooks	Public Health England
Dr Mary De Silva	Wellcome Trust
Professor Sir Jeremy Farrar	Wellcome Trust
Professor Paul Kellam	Imperial College London and Kymab Ltd
Professor Sharon Peacock	Public Health England
Dr Mary Ramsay	Public Health England
Professor Gavin Screaton	University of Oxford
Dr Edwin Van Leeuwen	Public Health England

# COVID-19 Clinical Information Network (CO-CIN)

CO-CIN collates clinical information from the usual health care records of people of all ages admitted to hospital in the UK to characterise the clinical features of patients with severe COVID-19 in the UK.

Dr Kenneth Baillie	University of Edinburgh
Dr Annemarie Docherty	University of Edinburgh
Dr Chris Green	University of Birmingham
Professor Ewen Harrison	University of Edinburgh
Professor Peter Horby	University of Oxford
Professor Peter Openshaw	Imperial College London
Professor Calum Semple	University of Liverpool
Professor Wei Shen Lim	University of Nottingham
Professor Jonathan Van Tam	Deputy Chief Medical Officer

# Environmental Modelling Group (EMG)

The purpose of this group is to identify and steer the role that environmental modelling, data analysis and environmental sampling can play in understanding COVID-19 transmission, with a view to understanding transmission routes, factors that influence this and the impact of environmental and behavioural interventions and mitigations at a mechanistic level.

Dr Alexander Allen	National Health Service
Professor Phil Blythe	Chief Scientific Adviser, Department for Transport
Dr Andrew Curran	Chief Scientific Adviser, Health and Safety Executive
Mr Adrian Eggleton	National Health Service
Dr Shaun Fitzgerald	University of Cambridge
Dr Ian Hall	University of Manchester
Dr Ben Killingley	UCLH
Professor Dame Theresa Marteau	University of Cambridge
Professor Cath Noakes	University of Leeds
Professor Alan Penn	Chief Scientific Adviser, Ministry of Housing Communities and Local Government
Professor Harry Rutter	University of Bath
Professor Tim Sharpe	University of Strathclyde
Dr Danielle Solomon	National Health Service
Professor Mark Wilcox	University of Leeds

Also attended by representatives of the Royal Academy of Engineering.

# Children's Task and Finish Working Group (TFC)

The group provides consolidated scientific health advice to government. Subject advice focuses on the transmission of COVID-19 in children and within schools, ensuring research questions are fed into relevant studies and UKRI/ funders for new funding.

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Professor Laura Bear	London School of Economics
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Professor Chris Bonnell	London School of Hygiene and Tropical Medicine
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Dr Ellen Brooks-Pollock	University of Bristol
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Professor John Edmunds	London School of Hygiene and Tropical Medicine
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Dr Rosalind Eggo	London School of Hygiene and Tropical Medicine
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Dr Thomas Finnie	Public Health England
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Ms Clementine Fu	Her Majesty's Government
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Professor Julia Gog	University of Cambridge
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Professor Peter Horby	University of Oxford
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Dr Thomas House	University of Manchester
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Dr Lorna Howarth	Her Majesty's Government
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Dr Michael J Tildesley	University of Warwick
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Professor G. J. Melendez	University of Exeter
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Professor Matt Keeling	University of Warwick
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Dr Petra Klepac	London School of Hygiene and Tropical Medicine
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Professor Graham Medley	London School of Hygiene and Tropical Medicine
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Dr Gavin Morgan	University College London
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Professor Cath Noakes	University of Leeds
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Professor Michael Parker	University of Oxford
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Dr Lorenzo Pellis	University of Manchester
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Mr Osama Rahman	Chief Scientific Adviser, Department for Education
Dr Jonathan Read	Lancaster University
Professor Steven Riley	Imperial College London
Professor Brooke Rogers	Kings College London
Dr Edwin Van Leeuwen	Public Health England
Professor Russell Viner	University College London
Professor John Watkins	Public Health Wales and Cardiff University
Professor Charlotte Watts	Chief Scientific Adviser, Department for International Development
Professor Lucy Yardley	University of Bristol and University of Southampton

# Hospital Onset COVID-19 Working Group (HOCl)

This working group focuses on hospital-onset COVID-19 infection (HOCl) and its purpose is to provide thought leadership, direction to analysis and precipitate policy change and interventions that lead to a rapid and sustained reduction in the rate of HOCl.

Mr Alexander Allen	Public Health Registrar
Dr Meera Chand	Public Health England
Dr Aidan Fowler	National Health Service England
Professor Alison Holmes	Imperial College London
Dr Russell Hope	Public Health England
Dr Susan Hopkins	Public Health England
Professor Nick Lemoine	National Institute for Health Research
Dr Kiran Loi	National Health Service England
Ms Ruth May	National Health Service England
Professor Graham Medley	London School of Hygiene and Tropical Medicine
Professor Cath Noakes	University of Leeds
Professor Sharon Peacock	Public Health England
Dr James Price	Imperial College London
Dr Lisa Ritchie	National Health Service England
Dr Julie Robotham	Public Health England
Professor Calum Semple	University of Liverpool
Ms Sue Tranka	National Health Service England
Ms Karen Turner	National Health Service England
Dr Ben Warne	Cambridge University Hospitals
Professor Mark Wilcox	University of Leeds

# Ethnicity Subgroup

This subgroup advises on COVID-19 risks and impacts for minority ethnic groups.

Professor Benjamin Barr	University of Liverpool
Professor Laura Bear	London School of Economics
Mr Iain Bell	Office for National Statistics
Professor Ewan Birney	Deputy Director General EMBL
Professor Enitan Carrol	University of Liverpool
Dr Rosalind Eggo	London School of Hygiene & Tropical Medicine
Professor Kevin Fenton	Public Health England
Dr Ben Goldacre	University of Oxford
Dr Jenny Harries	Deputy Chief Medical Officer
Dr Ewan Harrison	Wellcome Sanger Institute & University of Cambridge
Professor Julia Hippisley-Cox	University of Oxford.
Dr Atiya Kamal	Birmingham City University
Professor S Vittal Katikireddi	University of Glasgow
Professor Kamlesh Khunti	University of Leicester
Dr Rohini Mathur	London School of Hygiene and Tropical Medicine
Professor Melinda Mills	University of Oxford
Dr Tolullah Oni	University of Cambridge
Professor Michael Parker	Ethox Centre, University of Oxford
Dr Julia Pearce	King's College London.
Professor Alan Penn	Chief Scientific Adviser, Ministry for Housing and Local Government
Professor Lucinda Platt	London School of Economics and Political Science
Professor Henry Potts	University College London
Mr Osama Rahman Chief Scientific Adviser	Department for Education



Dr Allison Streetly

Public Health England

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Ms Ruth Studley

Office for National Statistics

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Mr Nizam Uddin

The Prince's Trust

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Professor Ewen Harrison

University of Edinburgh

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# Social Care Working Group (SCWG)

The Social Care Working group provides expert modelling and evidence review functions to support scientifically based policy decisions to limit the impact of COVID-19 in social care service provision.

Dr Jenny Harries	Deputy Chief Medical Officer
Dr Ian Hall	University of Manchester
Dr Andrew Page	The Quadram Institute
Dr Leon Danon	University of Bristol
Liz Jones	National Care Forum
Professor Martyn Regan	University of Manchester
Professor John Watkins	Public Health Wales and Cardiff University
Dr Rachel Kwiatkowska	University of Bristol
Dr Thomas Finnie	Public Health England
Dr Richard Fry	Swansea University
Dr Marcello Morciano	University of Manchester
Dr Adrian Hayter	National Clinical Director for Older People and Integrated Person Centred Care. NHS England and NHS Improvement
Professor Jackie Cassell	Brighton and Sussex Medical School
Dr Laura Shallcross	University College London
Professor Arpana Verma	University of Manchester
Professor Bruce Guthrie	University of Edinburgh
Professor Chris Todd	University of Manchester
Dr Lucy Thomas	Public Health England

Craiger Solomons	Welsh Government
Professor Graham Ellis	Scottish Government
Professor Julia Verne	Public Health England
Professor Adam Gordon	Professor of Care of Older People, University of Nottingham; President Elect, British Geriatrics Society
Dr Hannah Williams	Public Health England