



EDITORIALS

The UK's public health response to covid-19

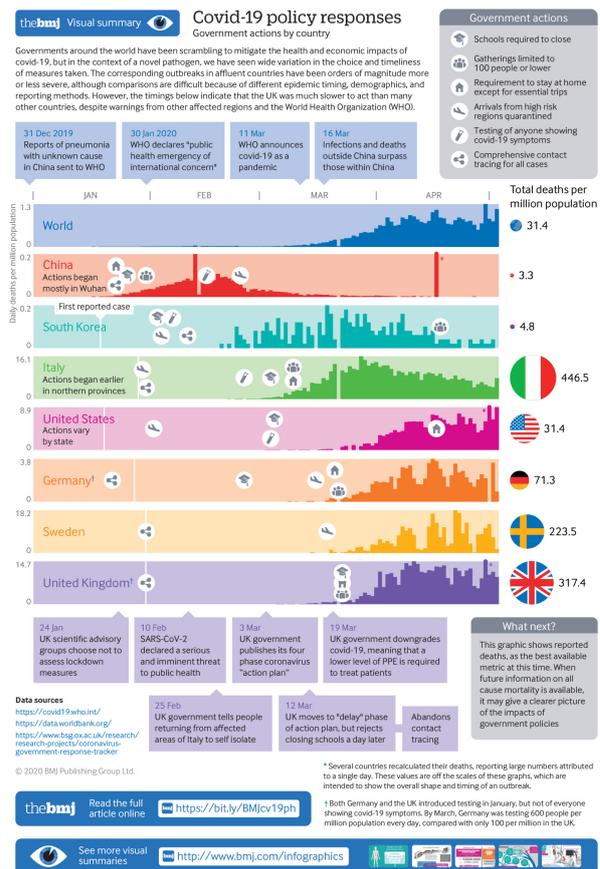
Too little, too late, too flawed

Gabriel Scally *visiting professor of public health*¹, Bobbie Jacobson *senior associate*², Kamran Abbasi *executive editor*³

¹University of Bristol, Bristol, UK; ²Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MA, USA; ³The BMJ, London, UK

The UK government and its advisers were confident that they were “well prepared” when covid-19 swept East Asia. The four-pronged plan of 3 March to contain, delay, research, and mitigate was supported by all UK countries and backed, they claimed, by science.¹ With over 30 000 hospital and community deaths by 12 May, where did the plan go wrong?² What was the role of public health in the biggest public health crisis since the Spanish flu of 1918? And what now needs to be done?

What is clear is that the UK's response so far has neither been well prepared nor remotely adequate (see infographic). The weakness of the preparations was exposed in 2016 by Exercise Cygnus, a pandemic simulation, and the necessary remedial steps were not taken.³ On 30 January, the World Health Organization declared a public health emergency of international concern and governments were urged to prepare for global spread of covid-19 from East Asia.⁴ Detailed case studies followed showing the need for high levels of mechanical ventilation and high death rates.^{5,6} But the UK ignored these warnings.



Delay and dilution

By 11 March, Italy had taken firm public health action and was in full lockdown, followed closely by Spain and France. The UK's Scientific Advisory Group for Emergencies (SAGE) rejected lockdown, believing that the population would not accept it. SAGE, chaired by Patrick Vallance, the government's

chief scientific adviser, reports into the Civil Contingencies Committee (popularly known as Cobra), which coordinates the governmental response to national or regional emergencies.⁷

One day later, the government inexplicably announced a move from the containment phase in its strategy to the delay phase.⁸ Chris Whitty, England's chief medical officer, explained it was no longer necessary to identify every new case and that all testing capacity across the UK, despite major regional variation in cases, would be "pivoted" to hospital patients. NHS 111 and Public Health England teams working on contact tracing were confused and overwhelmed. WHO's standard containment approach of find, test, treat, and isolate, which has worked well in countries that have successfully suppressed viral spread, was abandoned; entry via ports and airports remained unrestricted.⁹ There was no future plan for community based case finding, testing, and contact tracing. Procurement and delivery of testing resources was ineffective, despite a readymade viral test and offers of help from university and private sector laboratories.¹⁰

On 19 March, the status of covid-19 was downgraded from level 4, the highest threat level, to level 3 by the four nations group on high consequence infectious diseases and the Advisory Committee on Dangerous Pathogens.¹¹ This enabled the required standard of personal protective equipment to be lowered for staff in hospitals and to nurse patients in non-infectious disease settings. Meanwhile, a reckless policy of discharging older patients from hospitals to care homes without testing allowed the virus to spread and kick start a second epidemic of community infection.¹²

Matters worsened when Vallance initially rejected "eye catching measures" such as stopping mass gatherings or closing schools. To widespread criticism, he floated an approach to "build up some degree of herd immunity" founded on an erroneous view that the vast majority of cases would be mild, like influenza.¹³ When subsequent modelling estimated that 250 000 people might die in this scenario, but that physical distancing measures could limit deaths to about 20 000, a sharp reversal of policy followed.¹⁴ By the time the UK formally announced a lockdown with a huge package of economic support measures, almost two months of potential preparation and prevention time had been squandered.¹⁵ The delay in the face of emerging evidence that the Italian lockdown reduced viral transmission by about half¹⁶ looks likely to have cost many lives.

If the government failed in its duty to protect the public, it also failed to protect staff in the NHS and social care by not delivering sufficient amounts of personal protective equipment (PPE) of the right specification, again deviating from WHO advice.¹⁷ By late April, only 12% of hospital doctors felt fully protected from the virus at work, as staff deaths in health and social care began to rise.¹⁸ The broken promises on testing were matched by those on PPE.

Narrow scientific view

How did a country with an international reputation for public health get it so wrong? The UK's response to covid-19 is centrally coordinated through a series of scientific advisory groups led by Whitty and Vallance. Critical to this is the Scientific Pandemic Influenza Group on Modelling (SPI-M), which models the future epidemic and feeds into SAGE. SPI-M and SAGE are dominated by modellers and epidemiologists. None of the members were experts in developing and implementing a public health response, and other relevant groups such as communicable disease experts, women, and ethnic minorities are under-represented.¹⁹

The *Guardian* revealed that several SAGE meetings had been attended by Dominic Cummings, the prime minister's chief political adviser, and Ben Warner, his adviser on data science.²⁰ The involvement of two influential political advisers makes a mockery of SAGE's claim to provide independent scientific advice to the government. To date, we do not even know the details of that advice. Such is the furore about SAGE's composition and operations, that David King, the UK's former chief scientific adviser, established an alternative "Independent SAGE" with a diverse membership including from public health,^{18 19} which advises publicly on the UK's response to covid-19.²¹

Membership of SAGE and its national committees reflects England's marginalised public health infrastructure. Reorganisation of public health in England, largely resulting from the Health and Social Care Act 2012, led to a critical loss of senior posts and staff.²² The Health Protection Agency, regional public health teams, and regional public health observatories were abolished, and the remnants incorporated into a slimmed down Department of Health agency, Public Health England. This new agency lacks an independent voice and clear public health leadership. England's chief medical officer is no longer seen as the leader of public health. With these reforms, England's new public health system was born critically flawed.

By the start of the coronavirus pandemic only one of the UK's four territories had a trained public health physician as its chief medical officer. At a local level in England, many public health responsibilities were sensibly transferred back to local authorities with the 2012 act. But since then, close to £1bn (€1.1bn; \$1.2bn) has been cut from public health budgets and the position made worse by cuts to other local authority services such as environmental health.^{23 24}

Public health approach

The UK government's decimation of public health during years of austerity, and its impact on vulnerable groups, is for a public inquiry to investigate, although any inquiry report will be hollow without legislative change. The system failings are being exposed brutally by covid-19. For now, the focus must be on a strategy to minimise harm from ill advised relaxation of physical distancing in ways that will trigger further epidemic spikes with prospects of a vaccine or treatment still distant.

Firstly, SAGE must exclude political advisers and recruit more public health experts. Secondly, a clear population strategy based on case finding, testing, contact tracing, and isolation is required for each of the four nations to inform and justify future decisions about how the lockdown can be safely relaxed. The plans for case finding, testing, and community contact tracing must be adequately resourced, decentralised, and led by local public health teams who know their communities and the nature of the outbreaks in their localities. Public Health England and the NHS must fully support these plans. And implementation of testing, data monitoring, and reporting must be optimised from all sources: hospital, primary, and social care.

In time, findings from the first population surveillance study will help effective targeting.²⁵ Meaningless political soundbites promising to recruit 18 000 contact tracers, test 200 000 people a day, or invest in unjustified contact tracing apps, divert focus and could lead to more deaths.²⁶ These headline grabbing schemes should be replaced by locality led strategies rooted in communicable disease control.

An effective pandemic response requires not only speed and clarity but also a willingness to accept mistakes and a

commitment to international cooperation. Sharing the science and the uncertainties that inform political decisions will help rebuild lost public trust. Politicians and their advisers cannot hide behind science to avoid responsibility for making difficult decisions in a global crisis or merely repeat that they are following the science.

Above all, the response to covid-19 is not about flattening epidemic curves, modelling, or epidemiology. It is about protecting lives and communities most obviously at risk in our unequal society. The most serious public health crisis of our times requires a strong and credible public health community at the heart of its response. A UK government that prioritises the health and wellbeing of the public will see the importance of rebuilding the disempowered and fragmented infrastructures of its public health system. Anything less is an insult to the tens of thousands of people who have lost their lives in a pandemic for which the UK was forewarned but not forearmed.

Competing interests: We have read and understood BMJ policy on declaration of interests. GS is a member of Independent SAGE. KA is an honorary visiting professor in the department of primary care and public health at Imperial College, London. We have no other relevant interests to declare.

Provenance and peer review: Commissioned; not externally peer reviewed.

- 1 Coronavirus: action plan. A guide to what you can expect across the UK. <https://www.gov.uk/government/publications/coronavirus-action-plan>
- 2 Public Health England. Total covid-19 associated deaths in the UK. 12 May 2020. https://coronavirus.data.gov.uk/?_ga=2.222337883.1957776867.1589315087-1108945997.1589315087
- 3 Nuki P, Gardner B. Exercise Cygnus uncovered: the pandemic warnings buried by the government. *Telegraph* 2020 Mar 28. <https://www.telegraph.co.uk/news/2020/03/28/exercise-cygnus-uncovered-pandemic-warnings-buried-government/>
- 4 WHO Director-General. Statement on IHR emergency committee on novel coronavirus (2019-nCoV), 30 Jan 2020. [https://www.who.int/dg/speeches/detail/who-director-general-s-statement-on-ihc-emergency-committee-on-novel-coronavirus-\(2019-ncov\)](https://www.who.int/dg/speeches/detail/who-director-general-s-statement-on-ihc-emergency-committee-on-novel-coronavirus-(2019-ncov)).
- 5 Xu XW, Wu XX, Jiang XG, et al. Clinical findings in a group of patients infected with the 2019 novel coronavirus (SARS-CoV-2) outside of Wuhan, China: retrospective case series. *BMJ* 2020;368:m606. 10.1136/bmj.m606.32075786
- 6 Yang X, Yu Y, Xu J, et al. Clinical course and outcomes of critically ill patients with SARS-CoV-2 pneumonia in Wuhan, China: a single-centered, retrospective, observational study. *Lancet Respir Med* 2020;8:475-81. 10.1016/S2213-2600(20)30079-5.32105632
- 7 Grey S, MacAskill A. Special report. Johnson listened to his scientists about coronavirus but they were slow to sound the alarm. <https://uk.reuters.com/article/health-coronavirus-britain-path/rpt-special-report-johnson-listened-to-his-scientists-about-coronavirus-but-they-were-slow-to-sound-the-alarm-idUKL4N2BV54X>.

- 8 Mahase E. Covid-19: UK holds off closing schools and restricts testing to people in hospital. *BMJ* 2020;368:m1060. 10.1136/bmj.m1060.32169967
- 9 Department of Health and Social Care. Covid-19: government announces moving out of contain phase and into delay. Press release, 12 Mar 2020. <https://www.gov.uk/government/news/covid-19-government-announces-moving-out-of-contain-phase-and-into-delay>
- 10 Clark P, Cookson C, Hughes L. How the UK got coronavirus testing wrong. *Financial Times* 2020 Mar 27. <https://www.ft.com/content/fa747fbd-c19e-4bac-9c37-d46afc9393fb>
- 11 Public Health England. High consequence infectious diseases. 2018. <https://www.gov.uk/guidance/high-consequence-infectious-diseases-hcid>
- 12 Gardner B. Discharging coronavirus patients into care homes is 'madness', Government told. *Telegraph* 2020 Apr 15. <https://www.telegraph.co.uk/news/2020/04/15/discharging-coronavirus-patients-care-homes-madness-government/>.
- 13 Smith B. Government chief scientist explains lack of 'eye-catching' measures in coronavirus fight. *Civil Service World* 2020 Mar 13. <https://www.civilserviceworld.com/articles/news/government-chief-scientist-explains-lack-eye-catching-measures-coronavirus-fight>
- 14 Imperial College COVID-19 Response Team. Report 9: impact of non-pharmaceutical interventions (NPIs) to reduce covid-19 mortality and healthcare demand. <https://www.imperial.ac.uk/media/imperial-college/medicine/sph/ide/gida-fellowships/Imperial-College-COVID19-NPI-modelling-16-03-2020.pdf>
- 15 Johnson B. Coronavirus: strict new curbs on life in the UK announced by PM. BBC News 2020 Mar 23. <https://www.bbc.co.uk/news/uk-52012432>
- 16 Gatto M, Bertuzzo E, Mari L, et al. Spread and dynamics of the COVID-19 epidemic in Italy: Effects of emergency containment measures. *Proc Natl Acad Sci U S A* 2020;117:10484-91. 10.1073/pnas.2004978117.32327608
- 17 Calvert J, Arbutnot G, Leake J. Coronavirus: 38 days when Britain sleepwalked into disaster. *Times* 2020 Apr 18. <https://www.thetimes.co.uk/article/coronavirus-38-days-when-britain-sleepwalked-into-disaster-hq3b9tgh>
- 18 British Medical Association. BMA survey finds doctors' lives still at risk despite government pledges on PPE. Press release, 7 Apr 2020.
- 19 Sample I. Who's who on secret scientific group advising UK government? *Guardian* 2020 Apr 24. <https://www.theguardian.com/world/2020/apr/24/coronavirus-whos-who-on-secret-scientific-group-advising-uk-government-sage>.
- 20 Carrell S, Pegg D, Lawrence F, et al. Revealed: Cummings is on secret scientific group for covid-19. <https://www.theguardian.com/world/2020/apr/24/revealed-dominic-cummings-on-secret-scientific-advisory-group-for-covid-19>.
- 21 Mahase E. Covid-19: UK advisory panel members are revealed after experts set up new group. *BMJ* 2020;369:m1831. 10.1136/bmj.m1831.32371467
- 22 Devakumar D, Mandeville KL, Hall J, Sutaria S, Wolfe I. Government changes are jeopardising public health. *BMJ* 2016;352:i1662. 10.1136/bmj.i1662.27026052
- 23 Buck D. The English local government reforms. An independent assessment. King's Fund, 2020. <https://www.kingsfund.org.uk/sites/default/files/2020-01/LGA%20PH%20reforms%20-%20final.pdf>
- 24 Thomas C. Hitting the poorest worst? How public health cuts have been experienced in England's most deprived communities. IPPR, 5 Nov 2020. <https://www.ippr.org/blog/public-health-cuts>
- 25 Office for National Statistics. ONS jointly leading government's large-scale virus infection and antibody test study. 22 Apr 2020. <https://www.ons.gov.uk/news/news/onsjointlyleadinggovernmentlargescalevirusinfectionandantibodyteststudy>.
- 26 Our plan to rebuild: The UK government's covid-19 recovery strategy. 12 May 2020. <https://www.gov.uk/government/publications/our-plan-to-rebuild-the-uk-governments-covid-19-recovery-strategy/our-plan-to-rebuild-the-uk-governments-covid-19-recovery-strategy>

Published by the BMJ Publishing Group Limited. For permission to use (where not already granted under a licence) please go to <http://group.bmj.com/group/rights-licensing/permissions>