
October 16, 2020

The Independent Scientific Advisory Group for Emergencies (SAGE)

The Independent SAGE Report 19

**A blueprint to achieve an
excellent Find, Test, Trace, Isolate
and Support system**

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Submitted to The UK Government and the People of Great Britain
& Northern Ireland by Sir David King, former Chief Scientific Adviser,
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A blueprint to achieve an excellent Find, Test, Trace, Isolate and Support system

Executive Summary

The Treasury reports that £10 billion has been budgeted for the existing track and trace system to date. We are concerned that much of this budget is not being used effectively. With this budget, the government could have provided £1 million to every UK general practice and £10 million to every top tier-local health authority.

Covid-19 is a public health problem so the response must be fully integrated within our national health service and public health system. The key element to the response must be at the local level. The virus relies on families, groups and communities within which to spread and the answer to the virus is to be found by working for its control and eventual elimination in and with those communities locally.

National and regional lockdowns and other large scale restrictions are blunt tools; testing and tracing should be a targeted, precise system. Done well, it allows us to identify sources of outbreaks and isolate individuals and those they have been in contact close contact with, rather than entire populations. Without an effective find, test, trace, isolate, and support (FTTIS) system, the government has little choice but to rely on imprecise and damaging local and national lockdowns to prevent surges in infection. These shutter businesses and restrict people – ill or not – from going about their daily lives. In turn, they cause severe economic disruptions. The urgent reform of FTTIS is the most important economic and health priority for the government and the country right now.

This pandemic will never be brought under control in the UK without every community having access to a Find, Test, Trace, Isolate and Support system that actually works. This paper mostly addresses the problem in England. Scotland, Wales and N Ireland have different approaches and challenges. Some issues, such as testing capacity, are however of common importance and are addressed in the UK wide context.

Summary of blueprint

- ◆ Independent SAGE calls for the replacement of the failed, falsely named and private sector run 'NHS' Test and Trace with a system for England which is rooted in the regions of England and in local areas. It must be integrated throughout with the National Health Service and provide for the needs of people and the communities in which they live.
- ◆ NHS England should be the lead national organisation and provide the infrastructure and logistics for the organisation and functioning of the FTTIS system.
- ◆ In each top-tier local authority the local Director of Public Health should have the leadership role and convene the necessary management structure in conjunction with the local NHS and local authority.
- ◆ Laboratory capacity, in particular, is crucial to our ability to control the virus throughout the UK. Independent SAGE calls for the establishment of a national COVID testing consortium , including all current providers, under the auspices, oversight and management of NHS.
- ◆ Isolation will not work unless people are supported to enable them to isolate. Self-isolation should be replaced by 'supported isolation' with assistance, if needed, with accommodation, domestic assistance and financial support up to £800.

Why restructure?

Eight months into the pandemic, it's clear that England's find, test, trace, isolate and support (FTTIS) programme is failing, leading the government to rely on a succession of restrictions on people mixing to control the pandemic. The result is that the UK has some of the greatest excess death rates *and* economic damage anywhere. In the second quarter of 2020, the UK's GDP fell by 20%, or around \$143 billion according to the OECD¹. South Korea, which rapidly suppressed the virus through a smart system of test, trace, isolate and support, experienced only a 3% drop in GDP, with only two short local lockdowns².

"Who is in charge?", asked our Nobel laureate Sir Paul Nurse in several media interviews earlier this year³. The answer for FTTIS is Baroness Dido Harding and her 15 advisers, in what is now the most important boardroom in the UK. Thousands of lives, jobs, businesses, and pensions, as well as the NHS, now depend upon their decisions. Yet the board has no director of public health, no data scientist, GP or nurse, no social or behavioural scientist, community mobilisation expert, virologist, local politician or NHS logistician. We believe the government now needs a radical reform of FTTIS.

The disengagement of the public from the FTTIS programme has been evident throughout the course of the pandemic. The reasons for poor engagement are complex and include confusion, distrust, prevailing beliefs and attitudes, language barriers, stigma, fear, lack of knowledge and awareness, barriers to access, and potentially gender roles. Local networks of lay health workers and navigators, working with community organisations, including faith groups, can raise awareness of the benefits of engagement in the individuals they interact with and the wider community. However the FTTIS programme must itself engage with the community, and with those working in different sectors, to co-create solutions that will be acceptable to all the diverse groups within society.

Independent SAGE has produced the following short report to guide the government on how to reform FTTIS so that it works effectively and prevents the need for repeated lockdowns. We recognise this is difficult but there is no reason why we shouldn't emulate the successes of countries like Norway, Finland, Germany, South Korea, Taiwan, Vietnam, China and Singapore and enjoy the near normality that they have secured.

The introduction of an effective and comprehensive programme of case finding, testing, contact tracing, isolating and support (FTTIS) across a geography as extensive as the UK is challenging. The devolved governments in Scotland, Wales and Northern Ireland have the advantage of local government, health, and social care arrangements which differ markedly from those in England.

New organisational principles

1. Operate at as local a level as possible. Build community solidarity which encourages individuals with symptoms to come forward for testing. Use local civil society organisations, especially those from deprived and minority ethnic populations.
2. Public Health England as a centralised civil service executive agency of the Department of health means it is not well suited to run the FTTIS programme. Now that the abolition of PHE has been announced and the central role of the Joint Biosecurity Centre confirmed, the case for centralisation has been further eroded. Contracting out to the private sector does

¹ <https://www.oecd.org/economy/g20-gdp-growth-second-quarter-2020-oecd.htm>

² https://en.wikipedia.org/wiki/COVID-19_pandemic_in_South_Korea and <https://coronaboard.kr/en/>

³ <https://www.independent.co.uk/news/uk/politics/coronavirus-government-science-response-criticism-nurse-nobel-a9527746.html>

nothing to engender local engagement and sustainable engagement. In England, a regional governance tier offers many advantages.

3. The key local figure with a responsibility for population health is the local Director of Public Health (DPH). Within each upper tier local authority in England the appointed DPH should be placed in charge of organising and managing the FTTIS programme. In Scotland and Wales they cover manageable populations and work closely with multidisciplinary outbreak management teams. Northern Ireland is handicapped by having, since 2009, only a single DPH for the whole province and they should consider how public health expertise and the FTTIS resources can be deployed to ensure adequate connection with local communities and councils. The active involvement of key health professionals at a local level, including general practitioners, community pharmacists, health visitors, environmental health officers and school nurses, will be extremely important and should be part of ongoing communication networks that ensure that everyone understands the vital role that they can play.

Organisational form in England

4. In each of the standard government regions of England a COVID-19 office should be created urgently, led by an experienced senior public health professional or by an experienced NHS Chief Executive, with support from public health professionals. Where there is an elected Mayor in a city region they would be closely involved. Staff from local authorities or NHS bodies within the region should be seconded to oversee and performance manage the FTTI programme in each of the 141 upper tier local authority areas.
5. Within each upper tier local authority the DPH should be in charge of organising and managing the FTTI programme. Staff and finance should be provided via the NHS and local authority, subject to approval from a regional tier. The active involvement of key health professionals at a local level, including general practitioners, community pharmacists, health visitors, environmental health officers and school nurses, is crucial.
6. There should be close links between social services and housing departments so that those requiring isolation can be supported to remain isolated with their families.

Strategy and data (England)

7. The strategy for FTTIS should be developed in conjunction with Public Health England (or its successor NIHP) in conjunction with regional directors. Public Health England or NIHP should also, in conjunction with the regional directors, develop a performance management tool which would establish reporting criteria for each local FTTIS team.
8. The director of NIHP/PHE with responsibility for the FTTIS programme should be an experienced and dynamic leader with proven track record in public health.
9. The collection, analysis, and dissemination of data from FTTIS programme will form an essential part of the decision-making process at local and national levels. Accurate, timely and comprehensible information must be produced for a range of audiences both professional, political and lay.
10. Detailed data on the success (or otherwise) of each component of FTTIS should be published weekly. Particular attention should be paid to both qualitative and quantitative analysis of isolation of cases and contacts

Reorganising and optimising testing capacity (UK)

There are currently four broad categories of laboratories undertaking COVID-19 testing- NHS diagnostic laboratories, PHE laboratories (in Scotland and NI these are other centrally coordinated structures), academic laboratories, and private laboratories. Within these categories there are further divisions- for instance, many NHS laboratories are now embedded within public-private partnerships as an outcome of the Carter report; PHE laboratories outside of the central reference structure at Colindale are co-terminus with NHS labs; and private laboratories include Lighthouse as well as other providers. The COVID activities of these laboratories have been defined as Pillars (1-4), each managed separately.

In order to optimise existing capacity, and provide a solid basis for expansion of testing based on quality, we recommend:

11. Establishing a national COVID testing consortium, including all current providers, under the auspices, oversight and management of NHS.
12. Providing delegated authority to enable local oversight - for instance to a lead NHS Trust - to ensure optimal management and clinical responsibility for multiple laboratory sites, including flexibility for expansion to deal with local surge demand, and ensuring high quality of the expanded laboratory capacity, and adequate staff safety and training.
13. Maintaining central coordination for purposes of procurement, data governance and similar activities, and to allow overall capacity to be maintained.
14. Extending local NHS responsibilities to the organisation and implementation of community-based sampling (swabbing) and establishment of community-based laboratories, where appropriate.
15. Ensuring that local NHS responsibilities include integration with primary care, local authorities, Directors of Public Health, and Health Protection teams and appropriate data flows, as defined elsewhere in this document - as is the case for other infectious disease outbreaks at present.
16. Freeing resources by terminating current contracts for Lighthouse laboratories and associated activities
17. Removing the "Pillar" structure of testing.
18. Due regard to ensure that structures in the devolved nations follow the trajectory laid out above. In general, laboratory activities in Wales, Scotland and Northern Ireland are already more coordinated, although Lighthouse laboratories exist and should be dealt with as above.

Contact tracing (England)

19. The effectiveness of the contact tracing programme has been poor and has recently deteriorated further as cases rise. The effectiveness of contact tracing defined as the chance that someone infected but without symptoms isolates after being contacted of contacts without symptoms who comply with isolation is estimated to be less than 5%.

20. Funds should be re-directed from central systems to regional management offices, DPHs should recruit appropriate numbers of contact tracers able to identify contacts of new cases and daily follow-up of cases and contacts to ensure compliance with isolation and support provided where needed.
21. Contact tracers should work closely with the GPs of cases and contacts so that symptoms can be monitored and clinical deterioration spotted quickly.
22. Studies suggest that super-spreading events are a major cause of transmission, and that 80% of all infections arise from just 20% of those infected. Backward contact tracing combined with standard contact tracing has the potential to double the effectiveness of the NHS Test and Trace system (NHSTT), according to preliminary research.⁴ Backward tracing is an outbreak investigation process where new cases and their contacts are routinely linked via the events or place where they originally got infected. Other infections linked to these events also have their contacts traced. This is opposed to standard 'forward' contact tracing which looks forward, and quarantines contacts of new cases to prevent future transmission. Backward tracing enables us to identify clusters from super spreaders. Research suggests at least one in four backward tracing practices could identify groups of five or more COVID infected people. This would strengthen the impact of supported isolation policies.

Isolation (UK)

23. One key problem is that so little support has been offered to those self-isolating. A recent survey suggested 82% of positive cases did not comply fully with self-isolation, although over 70% intended to. We believe the term 'self-isolation' should be replaced by 'supported-isolation'.
24. Symptomatic people ringing 119 or booking a test online should be advised to isolate immediately, until their test results are back, and they should also be asked which general practice they are registered with.
25. Ensure 24 hour turnaround for test results: this will improve the effectiveness of isolation.
26. The test result should be copied to the individual's general practice. If the test is positive, the GP should arrange an immediate telephone consultation, provide clear information, and ask about their competing priorities, such as other pre-existing conditions they may have, caring or work responsibilities, and whether they're living in overcrowded accommodation.
27. Health workers should follow-up with the person involved to provide clear information, understand their competing priorities (other pre-existing conditions, care and/or work responsibilities, crowded housing etc.) that may hinder isolation, and provide tailored advice accordingly.
28. Primary care staff should explain COVID risks and the importance of isolation to all cases and contacts and follow them up with daily phone calls. This model can also be used to monitor and respond to longer term COVID health problems. They should be given clear details about who to phone about deteriorating symptoms.

⁴ <https://cmmid.github.io/topics/covid19/backwardtracing.html>

29. The NHS App should be developed to support people to adhere to isolation and enable them to report symptoms daily for future research. Such features would need to be co-developed with local communities.
30. Some households cannot effectively isolate so the government must fund local authorities to requisition appropriate alternative accommodation which might include Nightingale hospitals or hotels as Covid-secure places of safety, where asymptomatic or pre-symptomatic contacts can isolate for 14 days. (Taiwan requisitioned 7,000 hotel rooms. In the UK a similar number of rooms per head of population would mean 20,000 hotel rooms requisitioned. This could provide an excellent stimulus to the hospitality industry)
31. Government should make isolation financially feasible for all cases and contacts. This was not provided until September 28, since when £500 has been provided to properly isolate for 14 days, or £7.14 per hour, substantially below minimum wage and hard to access (and many remain ineligible). For five million workers in the gig economy, this provides little incentive. We recommend £800 as a minimum.
32. For people needing practical support at home, *social support* should be arranged with shopping for food, pharmaceuticals and other necessities.

Communication in England

33. Help the public to understand the purpose of FTTIS. In conjunction with communications professionals, the FTTIS teams must communicate through accessible routes about case symptoms, where and how to get tested, and how tracing workers will help you. Details should be made widely available about how to communicate with your GP, and the procedure for isolation including details of how to obtain financial and social support, or move to another location if isolation at home is inappropriate.
34. Focus on encouraging people with one or more symptoms of COVID-19 to come forward for testing and to participate in assisting with contact tracing if they prove positive
35. Communications should operate not just centrally, but also within regional media and, particularly, at a local level. Awareness of the importance of communicating with BME groups will be essential as will the local knowledge of how this can be achieved

Immunisation

36. An important opportunity to bring the COVID-19 crisis to a close will arise from the development of an effective vaccine. Whilst it cannot be predicted if or when this will happen it would be wise to put into place arrangements that could facilitate mass vaccination if that becomes an option. The FTTIS programme would be well placed to spearhead local vaccination efforts in conjunction, particularly, with general practices and other community care settings.

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Following the science