

Where England's Pandemic Response to COVID19 Went Wrong

In the autumn of 2020, it was becoming increasingly evident that the UK was heading for a second COVID19 wave. The number of COVID19 cases and COVID19 related hospitalisations continued to rise, and community transmission and outbreaks became more widespread especially in the north of England. (1)

Control of the epidemic was deteriorating again despite the UK government having thrown billions of pounds at the problem. They had hired private contractors to set up a national test and trace system as well as contact tracing app, carried out a national lockdown in the spring, plus local variants of 'lockdown lite' in later months. Yet these measures failed, and the government was left with few options but to institute a second economically damaging national lockdown on 5 November 2020.

After its successes in handling SARS in 2003, the Influenza A/H1N1 pandemic in 2009, as well as threats of Ebola and MERS in recent years, it would seem the UK was well prepared for any pandemic threat. Indeed Public Health England (PHE), the agency whose remit covered communicable disease control in England, was lauded as strong, capable and world leading.(2) However, nine months into the pandemic, the UK had one of the worst rates of infection and case fatality in the developed world. So, what went wrong? The explanation for its underperformance is likely to be multifactorial – a perfect storm of pre-existing flaws in an under-resourced and underprepared system, poor decision-making and politics.

Weakening of public health

The last decade has seen significant disinvestment in public health in England. PHE saw its operational budget cut by 40% between 2013 and 2019.(3) Other public health departments also sustained cuts. The Andrew Lansley reforms leading to the Health and Social Care Act 2012, transferred Public Health departments from the National Health Service to the local authorities. Subsequently, these public health departments nationwide have experienced substantial reductions in funding as local authority budgets were squeezed.(4) The resultant under-resourcing of public health services will have translated into cuts in manpower, leading to losses of capacity, expertise, skills and experience, all of which have weakened the national public health infrastructure.(5)

Failure to invest in systems

One corollary of the disinvestment in public health was that both PHE and the wider health system were inadequately prepared for possible pandemic threats. PHE lacked the information technology infrastructure to deal with large scale epidemics.

Another issue that emerged during the response was problems with communication and information management. As a result, frontline staff lacked easy and reliable access to the correct and most up-to-date information.

Failure to prepare

At the system level, pandemic planning focused on the threat of pandemic flu rather than other equally plausible pandemic pathogens. There was a focus on the traditional healthcare settings with planning and preparations for the wider health and care sector rudimentary at best. In addition, in the run up to 2020 any emergency planning carried out was focused not on pandemic threats but on the potential consequences of Brexit.

Pandemic exercises had previously been carried out, such as Exercise Cygnus in 2016. Whilst health stakeholders may have rehearsed these scenarios, little was done to implement learning or action on issues identified from these exercises (6,7). However, this phenomenon is not new and the UK's failure to learn from past emergencies has been previously reported. (8) Consequently, this heightens the likelihood of the system repeating past failures.

Failure to learn from other countries

There was a hesitance to learn from the experiences of other countries. In the first wave, Italy and Spain were hit some 2 – 3 weeks before the UK. Instead of instituting epidemic control measures early, the UK government acted late and suffered a higher death toll.(9) Likewise, when it was becoming apparent that testing capacity as well as large scale contact tracing systems would be needed, again there was delay in scaling these up.

In part, this could be due to the adoption of the national strategy for pandemic flu, where the focus initially was to contain the first few hundred cases ('containment phase') and then revert to a mitigation strategy where contact tracing efforts would be scaled down and case management left to the health services. But COVID19 is not flu, and the pandemic flu strategy was, therefore, not fit for purpose.

There has also been a slowness in adopting and implementing measures shown to be effective in other countries that have managed to contain the virus, such as South Korea, Vietnam, Taiwan, Japan, Singapore and New Zealand. For example, measures such as more ubiquitous use of face coverings, border controls, and digital apps to facilitate contact tracing and backward tracing approaches to identify clusters of infection.

Fixation with centralised testing and tracing

Initially, the narrative given was that contact tracing was not worth doing as the outbreak phase had moved from containment to mitigation as of 17 March 2020. The reality was that testing and contact tracing could not be done on a large scale as there was no capacity to do this. Following considerable criticism from the public, academics and public health bodies, there was a shift in government policy. Belatedly, over £12 billion was spent on a centralised testing and tracing system. For context, this staggering sum is more than the combined budget for all of primary care and public health in England. Glaringly, the leadership for this initiative lacked significant public health expertise. (10)

The centralised test and trace system has been beset with issues. It has been criticised for its lack of responsiveness and low rates of contact tracing. Issues with test availability has resulted in people requiring tests being asked to travel hundreds of miles to access one. There have also been issues with the timeliness of reporting of test results. This has led to delays in the initiation of contact tracing efforts, thereby compromising the effectiveness of the whole test and trace initiative. (11,12)

Local systems for testing and tracing are likely to be more efficacious and better adapted to local needs. Moreover, the centralised system is not sustainable in the long term where investment in local laboratory infrastructure and contact tracing capacity is needed. Indeed the latter are key ingredients for local resilience that would enable local laboratories to scale up testing capacity and for contact tracing operations to be enhanced for local outbreak management.(13) However, at the time of writing, most of the resourcing and approach to testing and tracing remains centralised.

Narrow hospital-centric perspectives

Much of the preparedness was healthcare-centric and built around hospital response. This can have serious consequences when it ignores the wider ramifications of decisions made in the interests of the hospital sector. For example, to create hospital surge capacity in the early part of the pandemic there were large scale discharges from hospitals of infected patients back to care homes where infection control measures were suboptimal. This was a recipe for disaster and unwittingly seeded infections into these vulnerable settings. (6)

The hospital-centric bias that afflicts the health system response continues and the role of primary care has been overlooked.(14) When the first wave had momentarily died down, most of the health service focus was on recovery when it really should have been planning for the next wave. Hospital CEOs were warned of financial penalties if they did not get their services back up to 90% of pre-COVID levels, rather than planning for the expected rise in demand because of the second wave and winter pressures. (15)

A healthcare-centric approach to COVID19 also sees the issue from the wrong end of the telescope. COVID19 is a public health emergency that requires a public health approach and solution. It is a preventable disease, and whilst prevention may not appeal as a high technology solution, there are greater returns on investment in prevention. Trying to solve public health problems with healthcare solutions from a healthcare perspective. focuses resources and effort on downstream effects and consequences, such as hospital demand, rather than the upstream causes and drivers. That was a focus early in the pandemic, with concerns about hospital (and ICU) capacity to meet demand from COVID19 infections being a key priority. Whilst this might attenuate deaths, no amount of ICU beds or pop-up Nightingale hospitals will stop a pandemic.

Fallacy in thinking

In the early months of the pandemic, it could be argued that groupthink was occurring. For example, perfect solution ('Nirvana') fallacy was at play around the issue of face coverings. From the outset, there was a 'masks don't work' mindset that led to resistance to advising the public use of face coverings. Similarly, there was the hesitation to acknowledge the potential for airborne spread of the virus. This exemplifies a limitation of a purist approach to evidence-based practice that demands robust evidence from trials, rather than a more nuanced 'evidence-informed' approach to deal with real world conditions. For a new pandemic threat where the evidence base is limited, a pragmatic approach is needed. Applying lots of measures that are likely to 'help a bit' is better than seeking a perfect solution that 'helps a lot'. Unfortunately, the scientific inclination to wait for the evidence before making a big move introduces too much delay into decision-making when fast decisions are needed. (16)

Expertise gaps in SAGE and pandemic leadership

For health emergencies, the UK government receives its scientific advice from a committee of scientists, Scientific Advice for Government in Emergencies (SAGE). Whilst SAGE had expert modellers, behavioural psychologists, infectious disease physicians and researchers, there was a crucial weakness – the surprising lack of technical expertise and experience of communicable disease control and outbreak management. (17)

Paradoxically, at the regional emergency planning level, there exist Scientific and Technical Advisory Cells (STACs) that include this technical expertise, but this is not replicated at the higher decision-making level. There were no practicing Directors of Public Health or Consultants in Communicable Disease Control (CCDCs). The former understand how local health and care systems operate, an intimate grasp of how local

politics and populations behave, as well as how to communicate with them. Likewise, CCDCs are experts in the operational art of communicable disease control in the community, in contact tracing, outbreak investigation and management, but also understand operational realities.

Technical expertise is often undervalued; technical experts know how to translate science into action, understand realities on the ground and the detail needed to turn ideas into reality. Without them, science and policy intent are just wishful thinking. That is why input is needed from serving public health professionals, senior health managers and civil servants, the apparatus that makes it happen. Indeed, what seemed to be lacking in the government's COVID19 strategy was a grounding in what was realistically deliverable. This has led, for example, to an obsession with mass testing without any clear appreciation of the scale of the task, the limitations of this approach, its cost-effectiveness and indeed the futility of testing without concomitant population buy-in to support other disease control measures such as self-isolation, social distancing and ubiquitous use of face coverings.

Political dimension

Politics has certainly compromised public health responses. There has been disproportionate political focus on mass testing in the hope that it is the magic bullet solution to the pandemic. Much focus has been placed on England's faltering publicly funded, private sector-delivered test and trace system. Even if it had been operating perfectly, transmissions may already have taken place by the time people are tested and traced. There is no perfect test or test system that will detect all cases. Consequently, many cases will be missed, especially those that are asymptomatic, and it only takes a few cases to sustain an epidemic. 'Managing' infection numbers alone does not solve it. Tests do help confirm cases, but what is vital is for potentially infected individuals to self-isolate early, often before test results are known.

Furthermore, primary prevention of infection is likely to be more efficacious than test and trace schemes. However, this all depends on changing population behaviours.(18) These include greater public compliance with self-isolation advice when symptomatic, adherence to face mask use, frequent handwashing, and social distancing.(19) Like all public health programmes, their success depends on the support of the public if the UK is to beat this pandemic. Unfortunately, political support for Dominic Cummings, a high ranking political advisor who broke COVID19 rules, very likely undermined public support for the government's public health measures.(20) In addition, the political blame game targeting PHE, further compromised the vital public health advice it provides and diminished public trust in this public health agency at the worst possible time during the pandemic.

Lack of strategic aim

Finally, there is the lack of a clear national strategy for managing the pandemic. It is not clear if the government's aim is for 'zero-COVID' elimination, suppression to near zero levels, or accepting the virus will become endemic and opting for mitigation. Sadly, the current government seems to have adopted what some might describe as a 'hope for the best' stratagem – a reactive approach focused only on the short term priorities whilst neglecting to anticipate and prepare for the worst consequences that may arise.

Unsurprisingly, public confidence in the UK government's handling of the COVID19 pandemic has fallen in the past year.(20) In turn, this further erodes public trust in the government's COVID19 measures.

Conclusion

If there is one key lesson from the pandemic thus far it is the need for a well-resourced public health agency focused on biosecurity that is well prepared and able to scale up its response to pandemic threats. It is vital that this public health agency is independent and able to provide credible and trusted scientific and technical expertise and advice to both the government and the public without fear or favour. Public trust and confidence in this public health 'messenger' is crucial to public compliance with the public health messages conveyed. So long as the national public health agency is a branch of a government department, public perception of its independence will be compromised, its advice tarnished, and it risks becoming embroiled in party politics.

This pandemic has not yet run its course. To err once is human. To err twice would be negligent.

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CONFLICTS OF INTEREST

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