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## COVID: how incorrect assumptions and poor foresight hampered the UK's pandemic preparedness

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Matt Hancock, the former health secretary, has told the recently opened COVID-19 Inquiry that the UK's pandemic planning was “completely wrong”. According to Hancock, the doctrine was “to plan for the consequences of a disaster” rather than stopping or containing the virus in the first place.

While there is truth in this claim, it doesn't give us the whole picture. Hancock was repeatedly asked during his appearance about something called Exercise Cygnus. In 2016, the UK government engaged in a series of exercises including Cygnus to assess their preparedness and response to a pandemic outbreak of influenza.

As the global scale of the COVID pandemic was starting to become apparent in the first half of February 2020, the UK applied the lessons from these exercises to plan for a wide range of scenarios. Based on the scientific evidence available at that time, they anticipated that a “reasonable worst-case scenario” could involve up to 80% of the UK population being infected (with only 50% of those infected showing symptoms). However, it was hoped that the majority of cases would have relatively mild disease.

This information was contained in planning assumptions labelled “officially sensitive” that were shared between a range of healthcare authorities and that I had access to at the time. Some of the figures were also published in the media.

The concept of “herd immunity” played a key role in the existing mathematical models. Herd immunity is the idea that once a sufficiently large proportion of the susceptible population is infected and subsequently acquires immunity, the whole population becomes protected. The thinking was that herd immunity for COVID might be achieved once 80% of the UK population had been infected, or perhaps even earlier.

Underlying all this was the assumption that, in the absence of effective vaccines at that time, the case fatality rate from the new virus (the proportion of infected people who end up dying) would not be so high that herd immunity could only be achieved at the cost of many lives.

Unfortunately, the actual COVID mortality figures – first from China, then other east and southeast Asian countries, and by the second half of February 2020 also from Italy – showed that the initial case fatality rate of COVID was much higher than had been modelled in the UK scenarios.

Without effective vaccines, any attempt at herd immunity had to be abandoned as too many people would have died in the meantime.

## **Flawed assumptions**

The assumption that any new viral pandemic would develop along similar lines as previous influenza pandemics was arguably the key flaw in the UK's planning doctrine.

Countries that had been significantly affected by the severe acute respiratory syndrome (Sars) outbreak in 2002–2004 – principally China but also other Asian countries – didn't make the same mistake. Those countries recognised important biological similarities between COVID (or SARS-CoV-2) and SARS (or SARS-CoV-1) and quickly took action against COVID by means of intensive testing and quarantine policies.

In contrast, the UK lost valuable time between mid-February and mid-March while COVID cases and subsequent deaths were rapidly beginning to rise. The effect on older adults and other vulnerable people in UK care homes was especially severe.



The COVID inquiry is ongoing. Cryptographer/Shutterstock

In the end, the UK's first wave of COVID was only slowed and eventually stopped by the introduction of a lockdown in the fourth week of March 2020.

## **Poor planning**

Hancock's statement raises a key question about the extent to which errors in the UK's pandemic planning could have been foreseen at the time. Notably, the UK's healthcare planning authorities could have taken a wider view of the potential nature of viral pandemics.

The earlier Sars outbreak had been largely confined to China, although it spread to more than 20 other countries through worldwide air travel, and was contained within a few short months. Therefore, the risk of future outbreaks of this type in the UK was regarded as relatively low. Nevertheless, it wouldn't have been unreasonable to include the global re-emergence of a Sars-type virus as one of the possible, albeit more extreme, pandemic scenarios analysed in the UK's planning exercises in 2016.

Even given the wrong assumption regarding the nature of the new virus, some issues could have been anticipated better. For example, it was well known that the supply chain for personal protective equipment (PPE), which is vital for health and care staff, had become increasingly dependent on low-cost suppliers in China. If the UK's pandemic planning exercises had taken a more global perspective, the breakdown in the PPE supply chain in the spring of 2020, which caused huge financial waste (and apparent corruption), could have been better anticipated.

Other questions, such as when effective COVID vaccines would become available, were much harder to predict.

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In sum, no planning exercise can cover all eventualities. But a key requirement for policymakers should be to learn as fast and effectively as possible while events unfold.

The business concept of “dynamic capability” – that is, an organisation’s ability to configure and reconfigure its assets, processes and capabilities so as to respond effectively to rapidly changing external circumstances – is useful here. Building and strengthening this capability should be a prerequisite for policymakers and planners in government.

In regards to Hancock’s comment that the planning was “completely wrong”, one could say that the UK plans were indeed flawed in their key assumption (of an influenza rather than a coronavirus pandemic), but also that policymakers should have learned the true nature of the new virus more quickly than they did.