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## **COVID19 - The need for Public Health in a time of emergency**

Andrew Lee & Jo Morling

On 11 March 2020, the World Health Organization (WHO) declared COVID19 a pandemic. Three months on from when China first alerted the world to the emergence of this threat, there were more than half a million confirmed cases and 33,106 deaths reported worldwide.<sup>1</sup> Large epidemics have sprung up in Western Europe and the United States. Worryingly, the infection has also emerged in developing countries where the impact of the pandemic will probably be worst. Infectious disease modellers at Imperial College London estimate that without mitigation, COVID19 could result in seven billion people infected and 40 million deaths globally this year.<sup>2</sup> Consequently, the need for early and sustained suppression measures in these settings will be crucial in order to blunt the severity of the pandemic and save lives.

In Europe, Italy was first to be most severely affected with numbers of cases exceeding China's tally, and a death toll already three times higher. In the worst affected areas, the outbreak was described as out of control and the response has been criticized for its "systematic failure to absorb and act upon existing information rapidly and effectively".<sup>3</sup> Key ingredients for an effective response appear to be the need for extensive testing, proactive contact tracing, an emphasis on home diagnosis and care, and the monitoring and protection of health care and other essential staff. It is clear that the speed of response needed to keep pace with the epidemic spread is exponentially faster than bureaucratic processes in health systems. Crucially, there is a need for learning in order to identify and understand which approaches work.

The Italian epidemic was 2-3 weeks ahead of the rest of Europe and certainly the UK. The UK adopted a graded Contain–Delay–Mitigate–Research response to the threat, moving from an initial containment phase characterized by rigorous contact tracing and testing, to a delay phase in mid-March. This approach was considerably less draconian than the lockdown measures introduced by the Chinese government, possibly based on the concerns of wider socioeconomic and psychological impact of a full lockdown on society. It also did not align with the WHO approach and advice to "test, test, test" all suspected cases. What was not clearly articulated was the government's policy goal at the time, i.e. whether mitigation or suppression of the epidemic was the aim. What then emerged was an unverified narrative that the aim was to allow the infection to burn through the population in order to build up "herd immunity" which would have meant health services being overwhelmed and the deaths of many, predominantly elderly or with complex co-morbidities, in the population. Unsurprisingly, the UK government's approach was heavily criticized by academics who demanded the release of the evidence used to inform the government's approach.<sup>4</sup> The release of the evidence has been slow and it is clear that the lack of transparency has affected trust in the government's response from academics and other allied professionals. Transparency is crucial to retain the cooperation and trust of the scientific community, health workforce and the wider public.

The UK government belatedly introduced lockdown measures and adopted a new strategy to Suppress–Shield–Treat–Palliate. However, this intervention may have come a little late in the course of the outbreak and cases of infection have taken off exponentially.<sup>5</sup>

Compounded by supply issues for personal protective equipment for health staff and conflicting guidance on its use, this has further eroded trust in the government's approach. There was also a clear split in the public health community regarding the approach reflecting the uncertainties in what is known and not known about the virus and how best to tackle the pandemic. This has meant that the public health voice has been muddled and muted at a time when it needed to be crystal clear.

Another potential flaw to the UK's approach has been a strong focus on intensive care unit (ICU) bed capacity as modelling predictions forecast demand for these beds far outstripping available supply.<sup>6</sup> This has led to frenzied planning and efforts to boost ICU capacity.

Unfortunately, this fails to build on learning from Italy: like previous outbreaks of MERS CoV, healthcare settings are possible sites of infection, "as they are rapidly populated by infected patients, facilitating transmission to uninfected patients".<sup>7</sup> The Western health system paradigm is biased towards hospital modes of care delivery. However, in this epidemic scenario, what is becoming clear is that it is not just "an intensive care phenomenon, rather it is a public health and humanitarian crisis".<sup>7</sup> In common with other humanitarian crises, the consequences are pervasive, wide and varied, and therefore require a response beyond a hospital or healthcare response. As a public health emergency, it is concerning that there is not a stronger public health lead and response.

The societal impact needs to be considered. It is predictable that the poor, the marginalized, those on insecure employment, those living with disabilities, and other vulnerable groups, are at greatest risk not just from infection but the indirect consequences. After a decade of austerity in many European countries, where health and social care funding has been curtailed, coupled with disinvestments in public health systems, there is less resilience health systems to cope with this pandemic. Government fiscal ideology of running healthcare like an airline, with for example bed occupancy rates of over 90%, has been flawed as it has taken out vital surge capacity much required in emergency situations. The economic agenda has been prioritized over public health and we are now seeing the fallout from this. Health and social care funding is an investment and a national insurance policy against disasters such as the COVID19 pandemic.

There have been some emerging positives from this crisis. Scientific advice, public health and the evidence-based approach to decision-making is valued once more. There has been rapid and considerable information sharing by clinicians and academics enabled by social media, and in keeping with many other leading journals Public Health has made its COVID19 content freely accessible. Innovation in ways of working by frontline teams is emerging. In the UK, primary care and community health care integration, as well as vertical integration between hospital and out-of-hospital care, is taking place where once it may not have been contemplated. Indeed, integration and coordination will be essential in order to augment existing health and care capacity to absorb the rise in health need.

On a final note, this pandemic is a global health threat and this will require collaborative action to tackle. Whilst the focus of the response may very much be local at the present time, only through concerted public health action worldwide can it be successfully suppressed, and hopefully in time eliminated.

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