The foreseeable toll of Covid-19 in the UK: the NHS needs more than money, now

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Health care systems throughout Europe have learnt few lessons from the early days of the Covid-19 epidemic. The building of makeshift hospitals the size of some of the largest in Europe in a matter of days in Wuhan, China spread 'virally' on social media, but it did not make an impact on health care planners and managers until the epidemic reached countries worldwide. During the past few weeks, Lombardy has become the new benchmark right at the centre of Europe. Despite having one of the most advanced and well-resourced health care systems worldwide, Lombardy has been put under unimaginable strain by the Covid-19 epidemic, with hospitalisation rates dwarfing those observed for seasonal influenza¹ and for the previous H1N1 pandemic. Across Europe, excess admissions resulting from Covid-19 matched those caused by H1N1 within days, including in the UK².

Covid-19 has placed unprecedented demands on critical care beds. Less than one month after the diagnosis of the first case of Covid-19, the number of patients treated in intensive care units (ICU) in Lombardy exceeded the number of ICU beds available before the start of the epidemic³. Including coronary care units, Lombardy had 11.7 adult critical care beds per 100,000 inhabitants⁴ at the start of the epidemic. In comparison, England had 7.2 per 100,000 inhabitants⁵, for a similar average usage to Lombardy's, meaning England has significantly less spare capacity to respond to a peak in demand. Even in normal times, between 300 and 400 urgent operations are cancelled each month in England due to capacity constraints.

In Lombardy, Covid-19 case fatality rates have been rising⁶ as intensive care capacity has become gradually saturated. It is still too early to determine whether capacity constraints are causing excess mortality, but anecdotal evidence suggests that triage rules have been progressively tightened in the most affected areas to ensure that patients with the best chances of recovery have priority access to scarce intensive care beds, and scientific societies have issued ethics guidelines to this effect⁷.

The NHS is now scrambling to secure surge capacity. The ambition in the UK is to double critical care capacity⁸, but details of any plans to achieve this are not yet known. On 24th March 2020, one month into the epidemic, the Italian government announced it had managed to increase the number of intensive care beds by 64%⁹, amidst major organisational challenges¹⁰. Increasing capacity while an epidemic is raging is a daunting task requiring significantly more resources than in normal times, yet Italy has achieved this, increasing their capacity beyond the NHS's ambitious doubling plan.

Mario Draghi's 2012 "whatever it takes" line¹¹ has become very popular among politicians addressing the Covid-19 epidemic. Cash has been flowing into health care systems, and large stimulus packages have been approved to sustain economies. The Chancellor of the Exchequer has committed 5 billion pounds for the NHS to fight Covid-19 in the budget announcement, but the imperative is not merely financial. The biggest challenges faced by the NHS are organisational and regulatory. Shortages have become so acute that money is no longer enough to buy essential supplies such as protective gear and equipment, especially mechanical ventilators, most of which were imported before the outbreak. And money alone will not address staff shortages and burnout. The United Kingdom has fewer doctors and nurses than many OECD countries (2.8 and 7.8 per 1,000 population, respectively, vs. OECD averages of 3.5 and 8.8), and significantly fewer than Italy (4 per

1,000 population)¹². In the current outbreak, Italy has been addressing staff shortages by drafting health care professionals from the private sector and from other specialties, recalling those who have retired, facilitating the movement of professionals from other countries, and relaxing the certification requirements for junior and foreign doctors to practice. The governance imperative is an effective and coordinated command chain, not to be taken for granted in a fragmented system with decentralised decision making. Clear and efficient rules are needed for patient triage and allocation to health care facilities (or home confinement) depending on care needs, with a separation of care pathways and facilities for Covid-19 to safeguard other patients and ensure they continue to receive adequate care.

The implications of cancelling routine activities and operations are vast and will not be fully realised until after the epidemic is over, yet maintaining some services in parallel with responding to the Covid-19 crisis is important to minimise further long term damage.

If the NHS is not fully prepared to face a crisis of the magnitude experienced by Lombardy, the outbreak will take a much larger toll on the health of the population, and on the country's economy, with disturbing social and human implications. The former BMJ Editor Richard Smith has emphasised that an even bigger worry than seeing close relatives die of Covid-19 is seeing them die on a trolley in an emergency department¹³. Now we know that people, in most instances, are not even allowed to see their relatives die, which is one of the most inhumane dimensions of this pandemic. The NHS must learn lessons from other countries to ensure no stone is left unturned in the race to strengthen its capacity.

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