Intensive care in New Zealand: time for a national network

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The COVID-19 worldwide pandemic seems fortunately to have left New Zealand relatively unscathed in comparison to many countries throughout the world. There have been to date a total of 1,556 cases (1,206 confirmed and 350 probable) with 22 deaths. The national implementation of movement restrictions, border closures and business constraints have been well documented, effective and generally well perceived on the world stage. The resurgence of cases worldwide in recent weeks, including in countries previously felt to be managing well, has illustrated the importance of maintaining ongoing vigilance and management to keep the disease burden down.

In New Zealand, there are approximately 4.6 critical care beds per 100,000 population. These are distributed throughout 29 ICUs/HDUs (adult and mixed), one PICU. This number has declined over the last 10 years and compares poorly to other OECD countries with similar healthcare systems, eg, UK 6.4/100,000, Australia 8.9/100,000. The recently published New Zealand Health and Disability System Review sets out the vision for New Zealand health services over the coming years. There is much emphasis on integration of health services across the country with collaboration both within and across specialities. This encompasses, among other aspects, the more efficient sharing of digital information to allow equity of healthcare to all residents.

Within the medical sphere there has been an immense amount of work carried out in hospitals and intensive care units throughout the country in preparation for a possible influx of patients. This planning has had multiple facets; many units have rearranged rosters, produced whole new teams incorporating both ICU and non-ICU staff, produced new protocols and undertaken hours of meetings and teaching events to train theirs and other specialties’ staff. There has been rapid cataloguing of equipment and identification of deficiencies, planning for expansion into non-critical care areas and conversion and upgrading of existing facilities. During this time period New Zealand has seen the development of an electronic intensive care dashboard through the work of the South Island Alliance. This has been invaluable in allowing clinicians around the South Island to visualise the status of other ICUs within the region on a daily basis, thus allowing for planning of inter-district flow of patients and the likelihood thereof. Similar systems are already in place in Australia (eg, REACH information systems network in Victoria) and the UK (Critical Care Networks) with multiple others worldwide. Indeed, during the 2009 H1N1 avian flu pandemic, a similar system was in situ for a period in New Zealand.

Throughout the world, the importance of collaboration, and the sharing of information and resources by the intensive care community has been shown to be invaluable in trying to stem the tide of admissions and adopt new treatment strategies on the run. In New Zealand, and in many other countries, there has in consequence been an immense amount of knowledge generated in a very short space of time.

Lessons learnt from this global crisis should help inform future strategies in dealing with large-scale disasters. To maximise these benefits I would propose the creation of two entities; the first, in line with recent recommendations, a New Zealand-wide ICU strategic network. This would incorporate aspects of intensive care medicine from standards and protocols of care, through to staffing, training and equipment procurement. Further, it would
contain the pooled knowledge gained from this current crisis and previous as well as that from ‘routine’ ICU work and would be made freely available and easily accessible to all intensive care units in New Zealand. The aim being to provide equitable access for all patients to ICU- and HDU-level care in both tertiary and smaller regional centres.

The second entity would be an electronic ICU dashboard. This would allow ICUs countrywide to share up-to-date information about, among other aspects; bed capacity, patient acuity and available resources in all HDU and ICU facilities throughout the North and South Islands. A real time indication of surge capacity in the event of a localised or national disaster would be readily available to help guide patient movements and resource allocation.

The COVID-19 pandemic undoubtedly represents one of the greatest healthcare crises of modern times, but it also offers the chance for us to gain from it and move our specialty forward—we should embrace the opportunity.

Competing interests:
Nil.

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