

Critical Care Strategy Update Post COVID 19

<i>Reason</i>	<i>Explanation</i>
Commercial Activities	<i>Information contained in this report is related to commercial activities and Auckland DHB would be prejudiced or disadvantaged if that information was made public.</i>
Prejudice to Health or Safety	<i>Information about measures protecting the health and safety of members of the public is enclosed in this report and those measures would be prejudiced by publication at this time.</i>

May not be released in public until: 2022

Recommendation

That the Hospital Advisory Committee:

- 1. Receives the Critical Care Strategy Update Post COVID 19 report for August 2020 report.**
- 2. Notes the update to the Critical Care Strategy approved by the Board in February 2020**

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1. Executive Summary

The Auckland Critical Care Strategy 2020 – 2030 (the strategy) has been reviewed following the COVID-19 pandemic planning and execution to document learning's from this experience relevant to the provision of critical care services.

The COVID-19 pandemic reinforced the need for a resilient critical care sector, able to manage significant surges in demand through:

- A clear focus on:
 - vulnerable populations (e.g., Māori and Pacific Peoples), their equity of access, experience of care, and health outcomes
 - Understanding how triage practices during demand surges can exacerbate inequities, and having appropriate responses in place to minimise this risk
 - Assessing the level of surge demand at which the current resources would be overwhelmed
- Long-term capacity planning and investment pathways to ensure enough supply of critical care beds and workforce across the sector, and at each acute care site (with minimum thresholds of physical and resourced capacity by acute site, contextualised for local provision of services)
- Enough appropriate capacity to manage patients with infectious disease, particularly negative pressure rooms, both within critical care units and in other relevant areas of hospitals
- Strong regional and national relationships that support effective strategic and operational planning, and accountability
- Clear visibility of dedicated and flexible bed and workforce capacity to manage surges in demand
- Scenario-based surge plans and escalation pathways within hospitals, and between hospitals (on regional and national bases as relevant)

- Benchmarking surge and escalation plans against international standards and increasing visibility around acceptable risk management plans (e.g., in Australia critical care was asked to scenario plan at 200% and 300% of current capacity)
- Making appropriate use of tele-ICU approaches, particularly for support of smaller units, and monitoring of higher acuity patients on general wards at tertiary centres
- Ensuring physical design of units supports efficiency of workflows, and ability to manage cohorts of patients appropriately
- Up to date information on key equipment and supplies used in the provision of critical care to enable forward planning and supply chain management.

A key learning from COVID-19 pandemic preparations is when critical care capacity is constrained, admission thresholds increase. Clinical conditions and prognosis of likely outcomes are the key factors used to guide access decisions. Given people from more disadvantaged groups are more likely to have pre-existing comorbidities, the triaging process results in them having less chance of being admitted to critical care – further perpetuating equity of access issues.

While undertaking the review of the report the analytics in the original report were updated with data for 2019. The notable changes are:

- Growth in demand for Department of Critical Care Medicine beds in 2019 of an additional 1-2 bed.
- A slightly weaker demand for Paediatric and Neonatal Intensive Care beds compared to 2018 however the number of days of extreme demand remains largely unchanged.
- Patient average length of stay in Department of Critical Care Medicine increased between 2018 and 2019 with a significant increase in bed-days for patients staying 5 days or longer.
- The historic trend of a relatively low number of critical care beds per capita increased further during 2018, the gap per 100,000 people in NZ and Australia widened a further 0.01 to 3.8 beds from a baseline of 2.7 in 2000.

2. Introduction/Background

The novel coronavirus, COVID-19, has rapidly spread across the world. In a range of jurisdictions, COVID-19 has resulted in extreme strain on health services, and in some instances, service failures. Patients with COVID-19 can progress from asymptomatic or mild illness to hypoxemic respiratory failure or multisystem organ failure, necessitating intubation and intensive care management (Greenland et al, 2020). International experience suggests around 5% of people who test positive for COVID-19 require intensive care management. The experience also suggests that most of these patients have significant underlying health co-morbidities.

In Cardiovascular Intensive Care / Department of Critical Care Medicine and to a lesser extent Neonatal Intensive Care, non-Māori / non-Pacific patients make up most cases. However, in Paediatric Intensive Care, Māori and Pacific children are overrepresented, while in Neonatal Intensive Care, Asian neonates appear to be overrepresented. In some cases, variation in admissions will reflect epidemiological reasons, in others they may indicate access barriers to critical care (or services earlier in a patient's care pathway).

Across all units a higher proportion of patients admitted to critical care are living in, or are born to mothers living in, highly deprived areas. Over the past few years the proportion of admissions from

the most deprived areas has increased. This reflects higher burdens of disease (often occurring at younger ages) and risk of trauma.

3. Conclusion

As a result of the COVID-19 incident key priorities for the first two years of the Critical Care Strategy execution have been amended to include:

- Undertaking an exploration of equity of access, experience and outcomes for Māori and Pacific Peoples to understand whether changes in models of care are required, both within critical care, and more broadly along care pathways
- Assessing unit physical design using a suitably qualified health architect, with a focus on improving workflows in the short-term, and design options for future bed capacity development (as per Building for the Future)
- Building on COVID-19 preparation planning, working with Northern Region DHBs to develop a Regional Critical Care Network, with a key focus on formalising surge and escalation / de-escalation planning and pathways – with the intention that this becomes part of a national programme of work lead by the Ministry of Health aligned with a national critical care network framework (and associated planning and performance framework for critical care).