



# Critically ill Indigenous Australians and mortality: a complex story

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For most patients, life continues beyond the intensive care unit, and this is where action is needed

**A**boriginal and Torres Strait Islander (Indigenous Australian) cultures thrived for thousands of years before European colonisation.<sup>1</sup> The colonists brought disease, and displaced and marginalised the first peoples, the consequences of which are now seen as inequalities in life expectancy, social determinants of health, and interrupted access to health care.<sup>2</sup> Indigenous people fare worse than non-Indigenous Australians on a range of measures.<sup>3</sup> They are over-represented in acute hospital admissions, particularly to intensive care.<sup>4-8</sup> In the critical care literature a consistent story emerges: critically ill Indigenous Australian patients are typically younger and more likely to be mechanically ventilated than non-Indigenous patients, but their in-hospital mortality, after adjusting for illness severity, is similar.

In this issue of the *MJA*, Mitchell and his colleagues<sup>9</sup> provide an important sequel to this story. They have achieved one of the holy grails of critical care studies by using data linkage techniques to estimate long term mortality (up to 8 years after hospitalisation) for critically ill Indigenous patients; in this case, for patients with South Australian residential postcodes. The main findings are, sadly, unsurprising. The median age of Indigenous patients in intensive care is lower, as is their risk of in-hospital death (probably because they are younger), but long term mortality is substantially higher; the estimated number of years of life lost was nearly double that of non-Indigenous critically ill patients.<sup>9</sup>

This tragedy is compounded by the fact that conditions in the diagnostic groups in which critically ill Indigenous patients are most over-represented — sepsis and trauma — can be alleviated by public health interventions.<sup>7,8</sup> Relative survival in the study by Mitchell and colleagues<sup>9</sup> was related more to that of the background population than the episode of critical illness. The corollary of this insight is that Indigenous people are dying younger because of chronic disease progression.<sup>8,10</sup>

Data linkage studies are challenging and logistically difficult, but necessary when evidence from long term follow-up studies is not available. The potential synergy of analysing data from multiple registries is evident in the article by Mitchell and his co-authors, but it also highlights some problems. The difficulty of accurately identifying the Indigenous status of critically ill patients has been encountered before.<sup>8,11,12</sup> Mitchell and colleagues found that agreement between registries on recorded Indigenous status was poor; the Adult Patient Database of the Australian and New Zealand Intensive Care Society identified only 49% of Indigenous patients. Nevertheless, the population estimate in their report (5.1% of emergency admissions to South Australian




intensive care units were of Indigenous people) concurs remarkably well with an estimate based on more recent national data (5.3%).<sup>8</sup> It is unclear, however, how the authors classified the postcodes of patients residing in the Anangu Pitjantjatjara Yankunytjatjara lands in the far north of South Australia, who have Northern Territory residential postcodes.

Mitchell and his co-authors note the important phenomenon that Indigenous patients were 3.5 times as likely to discharge themselves from hospital, and that long term mortality for these patients was correspondingly higher. This suggests that discharge type is a potentially modifiable risk factor for a subset of Indigenous patients who engage dysfunctionally with the health care system.

Whichever term is preferred — self-discharged, discharged against medical advice, absconded, or took own leave — it is associated with adverse outcomes.<sup>13</sup> Self-discharge can be considered an indicator of the responsiveness of hospitals to the needs of Indigenous people.<sup>14</sup> It would seem that Indigenous patients do not trust the health system, do not feel safe in it, or have other compelling reasons to leave that are not understood by hospitals. How can we redress this problem?

Simple interventions may mitigate poor engagement. Embedding Aboriginal Liaison Officers and Aboriginal Health Practitioners into daily clinical practice could introduce a degree of cultural safety and linguistic familiarity. The introduction of Aboriginal Health Practitioners into other acute care clinical areas has reduced rates of self-discharge.<sup>2</sup> Further, recognising the importance of extended family in Indigenous culture and their role in cultural brokerage and support for patients far from home would be positive. Assisting with transport and accommodation for family members is likely to have long term benefits by reducing morbidity, re-admission rates, and, ultimately, mortality.

It is gratifying that in-hospital outcomes are similar for Indigenous and non-Indigenous intensive care patients. However, the gains

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achieved at this, the front end of critical illness, are lost at the back end if Indigenous patients are discharged to poor living conditions and community inequities. The study by Mitchell and colleagues provides a timely and salient reminder that, for most patients, life continues beyond the intensive care unit. As a craft group we could and should do more to correct the modifiable risk factors that contribute to the mortality gap between Indigenous and non-Indigenous Australians. This should encompass ensuring a culturally safe intensive care service, including during the transition to ward care.

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- 1 Pascoe B. Dark emu. Black seeds: agriculture or accident? Broome: Magabala Books, 2014.
- 2 Mackean T, Withall E, Dwyer J, Wilson A. Role of Aboriginal Health Workers and Liaison Officers in quality care in the Australian acute care setting: a systematic review. *Aust Health Rev* 2020; 44: 427–433.
- 3 Australian Department of the Prime Minister and Cabinet. Closing the gap: Prime Minister's report 2018. <https://www.pmc.gov.au/sites/default/files/reports/closing-the-gap-2018/sites/default/files/ctg-report-20183872.pdf?a=1> (viewed Apr 2018).
- 4 Ho KM, Finn J, Dobb GJ, Webb SA. The outcome of critically ill Indigenous patients. *Med J Aust* 2006; 184: 496–499. <https://www.mja.com.au/journal/2006/184/10/outcome-critically-ill-indigenous-patients>.
- 5 Trout MI, Henson G, Senthuran S. Characteristics and outcomes of critically ill Aboriginal and/or Torres Strait Islander patients in North Queensland. *Anaesth Intensive Care* 2015; 43: 216–223.
- 6 Australian Institute of Health and Welfare. Admitted patient care 2016–17: Australian hospital statistics (Cat. No. HSA 201; Health services series no. 84). Canberra: AIHW, 2018.
- 7 Magee F, Wilson A, Bailey MJ, et al. Trauma-related admissions to intensive care units in Australia: the influence of Indigenous status on outcomes. *Med J Aust* 2019; 210: 493–498. <https://www.mja.com.au/journal/2019/210/11/trauma-related-admissions-intensive-care-units-australia-influence-indigenous>.
- 8 Secombe P, Brown A, McAnulty G, Pilcher D. Aboriginal and Torres Strait Islander patients requiring critical care: characteristics, resource use, and outcomes. *Crit Care Resusc* 2019; 21: 200–211.
- 9 Mitchell WG, Deane A, Brown A, et al. Long term outcomes for Aboriginal and Torres Strait Islander Australians after hospital intensive care. *Med J Aust* 2020; 213: 16–21.
- 10 Secombe P, Moynihan G, McAnulty G; Alice Springs Hospital Renal-ICU research group. Long term outcomes of dialysis dependent chronic kidney disease patients requiring critical care: an observational matched cohort study. *Intern Med J* 2020; <https://doi.org/10.1111/imj.14764> [Epub ahead of print].
- 11 Australian Institute of Health and Welfare. Indigenous identification in hospital separations data: quality report (Cat. no. IHW 90). Canberra: AIHW, 2013.
- 12 Secombe PJ, Brown A, Bailey MJ, Pilcher D. Equity for Indigenous Australians in intensive care. *Med J Aust* 2019; 211: 297–299.e1. <https://www.mja.com.au/journal/2019/211/7/equity-indigenous-australians-intensive-care>.
- 13 Katzenellenbogen JM, Sanfilippo FM, Hobbs MST, et al. Voting with their feet – predictors of discharge against medical advice in Aboriginal and non-Aboriginal ischaemic heart disease inpatients in Western Australia: an analytic study using data linkage. *BMC Health Serv Res* 2013; 13: 330.
- 14 Ni Cheallaigh C, Cullivan S, Sears J, et al. Usage of unscheduled hospital care by homeless individuals in Dublin, Ireland: a cross-sectional study. *BMJ Open* 2017; 7: e016420. ■