Appendix

This appendix was part of the submitted manuscript and has been peer reviewed. It is posted as supplied by the authors.

Supplementary Table 1
STROBE Statement—Checklist of items that should be included in reports of ***cohort studies***

	Item No	Recommendation	
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	p. 1
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	p. 2
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	p. 3
Objectives	3	State specific objectives, including any prespecified hypotheses	p. 3
Methods			
Study design	4	Present key elements of study design early in the paper	p. 4
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	p. 4
Participants	6	(*a*) Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up	p. 4
		(*b*) For matched studies, give matching criteria and number of exposed and unexposed	p. 4
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	p. 4
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	p. 4
Bias	9	Describe any efforts to address potential sources of bias	p. 11
Study size	10	Explain how the study size was arrived at	p. 4
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	p. 4 – 5
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	p. 5
		(*b*) Describe any methods used to examine subgroups and interactions	N/A
		(*c*) Explain how missing data were addressed	p. 4 – 5
		(*d*) If applicable, explain how loss to follow-up was addressed	N/A

		(*e*) Describe any sensitivity analyses	p. 5
Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	Fig 1
		(b) Give reasons for non-participation at each stage	Fig 1
		(c) Consider use of a flow diagram	Fig 1
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	Table 1
		(b) Indicate number of participants with missing data for each variable of interest	Table 1
		(c) Summarise follow-up time (eg, average and total amount)	N/A
Outcome data	15*	Report numbers of outcome events or summary measures over time	Table 2
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	Table 2
		(*b*) Report category boundaries when continuous variables were categorized	N/A
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	N/A
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	Supplementary tables
Discussion			
Key results	18	Summarise key results with reference to study objectives	p. 7
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	p. 11
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	pp. 9 & 12
Generalisability	21	Discuss the generalisability (external validity) of the study results	pp. 11 - 12
Other information			

Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	N/A

*Give information separately for exposed and unexposed groups.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at http://www.strobe-statement.org.

Supplementary Table 2: Hierarchical Logistic Regression Model (sensitivity analysis)†☐				
	n	**Deaths, n (%)**	**OR [95% CI]**	**p-value**
Severity of Illness				
ANZROD (log)	860 988	89 368 (10.4)	3.82 [3.79 - 3.85]	< 0.001
Socioeconomic				
IRSAD	847 546	88 047 (10.4)	1.00 [1.0 - 1.0]	0.26
Hospital Classification				
Tertiary	508 041	55 240 (10.9)	Reference	
Metropolitan	193 960	20 940 (10.8)	0.89 [0.81 - 0.97]	0.007
Rural/Regional	164 062	13 822 (8.4)	0.84 [0.77 - 0.91]	< 0.001
Year of Admission				
Admission year	866 063	90 002 (10.4)	0.97 [0.97 - 0.97]	< 0.001
Jurisdiction				
ACT	25 5 23	2 701 (10.6)	Reference	
NSW	307 858	32 747 (10.6)	0.89 [0.70 - 1.14]	0.37
NT	13 9 48	1 120 (8.0)	0.68 [0.48 - 0.96]	0.03
QLD	163 274	13 696 (8.4)	0.82 [0.63 - 1.05]	0.12
SA	66 5 09	8 624 (13.0)	0.81 [0.61 - 1.08]	0.12
TAS	18 7 95	1 881 (10.0)	1.00 [0.73 - 1.37]	1.0
VIC	230 652	23 299 (10.1)	0.83 0.65 - 1.07]	0.14
WA	61 0 58	6 409 (10.5)	0.83 [0.63 - 1.09]	0.19

† Excludes IHT's defined by the receiving unit (sensitivity analysis)

ANZROD - Australian and New Zealand Risk of Death
IRSAD - Index of relative socio-economic advantage and disadvantage

Supplementary Table 3: Hierarchical Logistic Regression Model (sensitivity analysis) †☐				
	n	**Deaths, n (%)**	**OR (95% CI)**	**p-value**
Severity of Illness				
ANZROD (log)	880 035	89 626 (10.2)	3.77 [3.74 - 3.80]	< 0.001
Socioeconomic				
IRSAD	866 304	88 304 (10.2)	1.00 [1.0 - 1.0]	0.30
Hospital Classification				
Tertiary	513 158	55 417 (10.8)	Reference	
Metropolitan	199 060	20 962 (10.5)	0.84 [0.76 - 0.92]	< 0.001
Rural/Regional	173 081	13 885 (8.0)	0.73 [0.67 - 0.80]	< 0.001
Year of Admission				
Admission year	885 299	90 264 (10.2)	0.97 [0.97 - 0.97]	< 0.001
Jurisdiction				
ACT	25 6 65	2 725 (10.6)	Reference	
NSW	311 385	33 405 (10.7)	0.90 [0.69 - 1.19]	0.47
NT	13 9 63	1 125 (8.1)	0.71 [0.48 - 1.04]	0.08
QLD	165 812	14 102 (8.5)	0.80 [0.60 - 1.04]	0.11
SA	66 7 60	8 668 (13.0)	0.75 [0.55 - 1.03]	0.07
TAS	18 9 18	1 907 (10.1)	0.98 [0.69 - 1.39]	0.91
VIC	232 498	23 692 (10.2)	0.84 [0.64 - 1.11]	0.23
WA	61 3 77	6 462 (10.5)	0.83 [0.62 - 1.12]	0.23

† No IHT's excluded (all patients)

ANZROD - Australian and New Zealand Risk of Death
IRSAD - Index of relative socio-economic advantage and disadvantage

Supplementary Table 4: Admission status by need for mechanical ventilation		
	Not mechanically ventilated	**Mechanically Ventilated**
Emergency Admission	377 106 (60.5)	246 101 (39.5)
Elective Admission	139 502 (56.7)	106 762 (43.4)