ANZICS

Centre for Outcome and Resource Evaluation

2023/24

INTENSIVE CARE RESOURCES AND ACTIVITY REPORT

Australia and New Zealand Intensive Care Resources and Activity Report 2023/24

Acknowledgements

We acknowledge the traditional owners and custodians of the land on which our campuses, patients, carers, intensive care specialists and members are located, the Aboriginal and Torres Strait Islander peoples of Australia and the Māori peoples of New Zealand and pay our respects to their Elders past and present.

The Australian and New Zealand Intensive Care Society (ANZICS) Centre for Outcome and Resource Evaluation (CORE) greatly appreciates patients, their carers, and the efforts of the intensive care community in Australia and New Zealand, without their contributions this data resource would not be possible.

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SNAPSHOT

2023/24 CRITICAL CARE RESOURCES ACROSS AUSTRALIA AND NEW ZEALAND*

Admissions

216,403 Adult
11,712 Paediatric (<16 years)

Beds

3,443 Physical
2,765 Available

Bed Days

264.8 per available bed

Occupancy

72.5%

Access

1.9% Declined
4.3% Readmissions

Discharge

19.8% Delayed
18.8% After hours

Invasive Ventilation

31.7%

Critical Care Qualified RN

52.5%

Staff Vacancies

5.6% SMO
7.8% RN

Cost

$1,497,615
per available bed

MET/RRT

79.1% Led by ICU
79.7 Calls per 1,000
Hospital separations

Indigenous Liaison/ Support Officer Available

81.1% Aboriginal and/or
Torres Strait Islander
94.4% Māori

**Denominator ICUs vary, see full report for details.*

Executive Summary: Critical Care Resources and Activity

The 2023/24 Critical Care Resources (CCR) Survey provides an annual overview of Australian and New Zealand Intensive Care practice and an opportunity to examine changes over time. The findings of the current survey perhaps reveal signs of a shift back towards longer term trends evident prior to the disruptions, including to staffing, induced by the COVID-19 pandemic. Critical care qualified nurse numbers have increased, and staffing vacancies have decreased, albeit both remain below pre-pandemic norms and jurisdictional variability persists.

Notable longer-term trends reflect the evolving role of intensive care staff, and the changing case mix of the patients cared for. ICU staff involvement in care outside of the unit continues to increase, exemplified by the inexorable rise in medical emergency team (MET) call per ICU bed day, whilst the proportion of ICU admissions who are mechanically ventilated continues to slowly decrease.

With clinical practice continually evolving, the CCR survey also evolves to ensure it remains a relevant tool for benchmarking and supporting ongoing improvements in care. The forthcoming survey will include additional Safety and Quality questions related to ICU research resourcing and allied health services, specifically clinical psychology and occupational therapy. The value of the CCR survey derives from the continued participation of all contributing units and staff. The ANZICS team is sincerely grateful for the sustained commitment to enhancing the quality of care delivered in ICUs and improving patient outcomes bi-nationally. The ANZICS Registry is pleased to present the 2023/24 ANZICS Resources and Activity Report for your review.

CCR Survey Contribution

The 2023/24 CCR survey was sent to 226 Intensive Care Units (ICUs) across Australia and New Zealand and had a response rate of 77.4% (175/226).

The data includes 80.5% (157/195) of Australian and 58.1% (18/31) of New Zealand ICUs.

- Tertiary ICUs: 96.2% (51/53)
- Metropolitan ICUs: 84.2% (32/38)
- Rural/Regional ICUs: 75.0% (42/56)
- Private ICUs: 63.3% (50/79)

Analysis of bed numbers includes data from all Australian and New Zealand ICUs (n=226). Total admission data includes data from 191 Australian and 25 New Zealand ICUs (n=216).

Reported changes over 2 or 5 years are based on consistently contributing ICUs.

Graphical data is aggregated by regional group for ACT, NT, and TAS rather than individual regions. This is to avoid exclusion due to insufficient units reporting a particular variable, and to prevent identification of individual sites.

ICU Beds

3,443 physical and 2,765 available beds were reported across 226 Australian and New Zealand ICUs.

Admissions & ICU Bed Days

- 228,115 adult and paediatric admissions reported from 216 ICUs.
- 624,823 ICU bed days were reported from 174 ICUs.

Executive Summary: Critical Care Resources and Activity *continued*

Changes in Critical Care Resources & Activity from 2022/23

- 2.0% growth in physical beds (68 beds, n=225) and 3.8% increase in available beds (102 beds, n=225)
- 3.5% increase in admissions (n=215)
- 0.4% increase in ICU bed days (n=153)
- 3.6% increase in MET calls that resulted in an ICU admission (n=163)
- 2.8% increase in SMO FTE (n=116)
- 4.8% increase in permanent RN FTE (n=151)
- 9.3% increase in Critical Care Qualified RN FTE (n=106)
- 12.3% increase in total ICU expenditure (n=85)
- 8.0% increase in total ICU expenditure per available bed (n=85).

Health Service Changes

Change in ICU Type

- The Bays Hospital reclassified from ICU/HDU to HDU (VIC, Private).

Regional Change in Available Beds from 2022/23

Regions with an increase in available beds:

- ACT 10 beds (22.7%)
- NSW 24 beds (2.7%)
- NZ 28 beds (9.9%)
- QLD 4 beds (0.9)
- SA 9 beds (4.9%)
- VIC 19 beds (3.4%)
- WA 9 beds (4.5%)

Regions with a decrease in available beds:

- TAS 1 bed (2.3%)

NT reported no change in available beds.

Expected Beds to Open in 2024/25 FY

- 133 physical beds (n=13) – overall expected growth of 3.9%.
- 81 available beds (n=22) – overall expected growth of 2.9%.

Expected Growth in Available Beds by Hospital Classification

- Tertiary ICUs: 3.2% (38 beds, n=9)
- Metropolitan ICUs: 7.1% (27 beds, n=6)
- Rural/Regional ICUs: 2.4% (9 beds, n=6)
- Private ICUs: 0.9% (7 beds, n=1)

Readmissions, Declined Admissions, Discharge Delay and After Hours Discharge

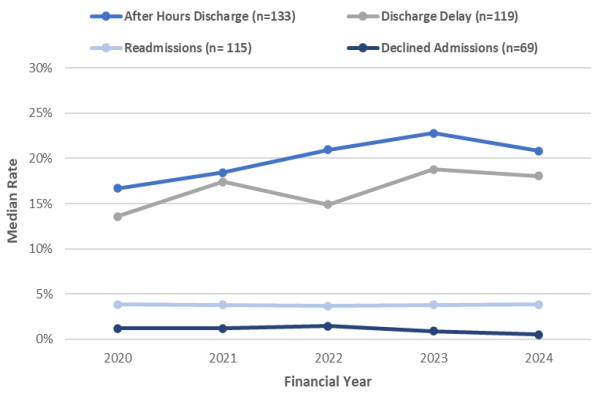
Data from CCR is used for reporting ICU clinical indicators to the Australian Council for Health Standards (ACHS) for hospital accreditation.

Figure 1 shows the median rate for discharge delay (exit block), declined admissions, readmissions and after hours discharge over 5 years.

Discharge delay, after hours discharge and declined admissions showed an absolute decrease of 0.7%, 2.0% and 0.4% respectively, from 2022/23.

Readmission rate remained consistent at 3.8%.

Figure 1 Clinical Indicators over 5 years

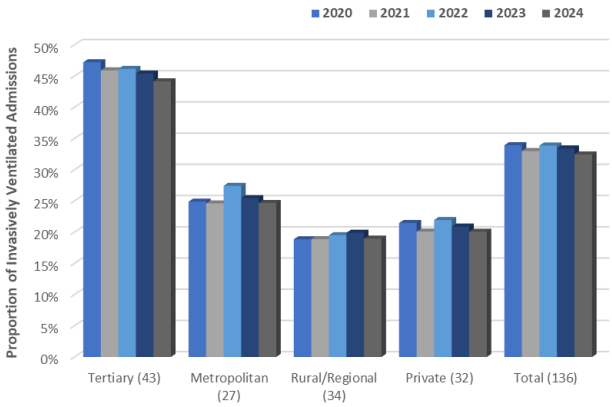


Consistently contributing ICUs for each clinical indicator (n= No. of ICUs).

Ventilation

Figure 2 shows that the overall proportion of invasively ventilated patients continues to slowly decrease. In 2023/24, the proportion of invasively ventilated admissions decreased across all classifications.

Figure 2 Proportion of Invasively Ventilated Patients over 5 years, by Classification



Data from 136 consistently contributing ICUs.

Executive Summary: Critical Care Resources and Activity *continued*

Workforce

Senior Medical Officers (SMO)

- The total SMO Established FTE per 1000 ICU bed days remained consistent at 1.7 FTE (n=130).
- The total SMO vacancy rate for 2023/24 was 5.7%, lower than the 6.4% reported in 2022/23 (n=116).
  - Private units reported an increase in SMO vacancy rate from 0.0% in 2022/23 to 2.0% in 2023/24 (n=25).
  - Public units showed a decrease in SMO vacancy rate from 7.2% in 2022/23 to 6.2% in 2023/24 (n=91).

Senior Medical Officers – Gender balance

- 84.4% (130/160) of ICUs reported having one or more practising female intensivists, totalling 377 female intensivists. Overall, the number of practicing female specialists showed a 9.9% increase from 2022/23 (n=141).
- The proportion of female intensivist FTE reported as a percentage of total SMO FTE increased only slightly from 25.3% in 2022/23 to 25.9% in 2023/24 (n=105).

Registered Nurses (RN)

- The total RN Established FTE per 1000 ICU bed days showed a 1.9% increase from 21.1 FTE in 2022/23 to 21.5 FTE in 2023/24.
- The total RN vacancy rate for 2023/24 was 7.9%, lower than the reported 8.4% in 2022/23 (n=151).
  - Private units showed an increase in RN vacancy rate from 10.2% in 2022/23 to 10.6% in 2023/24 (n=37).
  - Public units showed a decrease in RN vacancy rate from 8.2% in 2022/23 to 7.6% in 2023/24 (n=114).

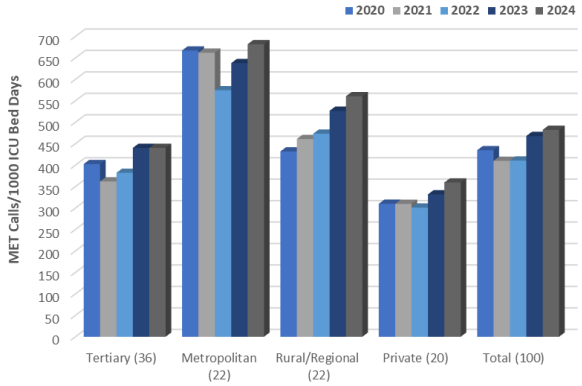
Registered Nurses - Critical Care Qualification

- The median proportion of RN FTE with critical care qualification for each unit (n=127) was 54.5% (IQR 41.6 - 65.4).
- The total FTE for permanent RN with critical care qualification per 1000 ICU bed days showed a 6.4% increase from 2022/23 to 11.2 FTE in 2023/24 (n=103).
  - Private units showed a 12.0% increase in total RN CCQ FTE per 1000 ICU bed days (n=25).
  - Public units showed a 5.6% increase in total RN CCQ FTE per 1000 ICU bed days (n=78).

Medical Emergency Teams - *Activity*

Figure 3 shows an increasing number of MET calls per 1000 ICU bed days across metropolitan, rural/regional and private units, whilst remained consistent in tertiary units. The overall number of MET calls per 1000 ICU bed days reported showed a 16.0% increase from 2019/20.

Figure 3 MET Calls per 1000 ICU Bed Days over 5 years, by Classification



Data from 100 consistently contributing ICUs.

Safety and Quality Activities

Antibiotic Stewardship

Safety and Quality activities monitored include:

- 74.7% (127/170) of ICUs undertake rounds with an infectious disease specialist and/or microbiologist (2.6% absolute increase, n=154).
- 90.1% (155/172) of ICUs have an ongoing antibiotic stewardship program (remained consistent, n=155).
- 39.3% (64/163) of ICUs regularly obtain antibiograms specific to ICU (1.4% absolute decrease, n=146).
- 74.1% (126/170) of ICUs have rounds with a pharmacist (4.5% absolute increase, n=157).

Indigenous Liaison/Support Officer

- 82.6% (133/161) of ICUs have access to an Aboriginal and/or Torres Strait Islander Officer or Kaimahi Hauora Māori i.e. Māori Health Worker (2.8% absolute increase, n=142). Private units reported a 12.9% absolute increase (n=31) whilst Public units reported no change (n=111).

Sepsis Clinical Care

- 92.3% (156/169) of ICUs have a documented protocol, policy or guideline for identification and management of Sepsis (1.3% absolute decease, n=150).
- 26.3% (42/160) of ICUs have a Sepsis care coordinator (7.4% absolute increase, n=136).
- 29.3% (46/157) of ICUs have written information on Sepsis and Sepsis Survivorship for patients and families (7.6% absolute increase, n=132).

Overview of CCR Survey

Introduction

The Critical Care Resources (CCR) Survey is administered by the Australian and New Zealand Intensive Care Society (ANZICS) Centre for Outcome and Resource Evaluation (CORE), a not-for-profit organisation located in Melbourne, Australia. Other registries managed by ANZICS CORE include:

- The **Adult Patient Database (APD)** – collects data on adult admissions to ICUs,
- The **Australian and New Zealand Paediatric Intensive Care Registry (ANZPICR)** – collects data on ICU admissions of patients under the age of 16 years,
- The **Central Line Associated Blood Stream Infection (CLABSI)** Surveillance Program – collects data on ICU CLABSI rates,
- The **Extra Corporeal Membrane Oxygenation (ECMO)** Dataset – collects data on adult and paediatric patients who require ECMO or have had an ECMO cannulation attempt even if ECMO was not subsequently established, and
- The **Patient Reported Outcome and Experience Measures (PROEMs)** – collects patient assessment of their health, function, and wellbeing on discharge from hospital and captures feedback on the care received while in hospital.

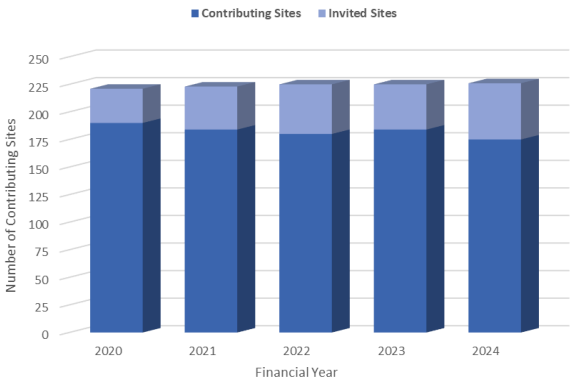
The CCR Survey has collected data on activity, resources, and processes of care from Australian and New Zealand ICUs since 1993. Detail on the CCR Survey can be found at: https://www.anzics.org/critical-care-resources-ccr-registry/

This report describes the changes in activity and bed numbers as reported in the 2023/24 CCR Survey and comparative reporting over 5 years from ICU/HDUs that have consistently submitted data over this period. In 2023/24 there were 226 open ICUs in Australia and New Zealand. Overall, there were 2,765 available beds and 3,443 physical beds. All data included in this report were correct at the time of the survey.

Contribution to the CCR Survey

Figure 4 shows that there has been a 2.3% increase in the number of open ICU/HDUs, and that the response rate has remained relatively constant over the last 5 years. In 2023/24, the response rate was 77.4% (175/226).

Figure 4 Contribution to CCR over 5 years



For the analysis over time, only data from ICU/HDUs that consistently contributed to the survey for the years indicated were included. The number of contributing ICU/HDUs differs for each question. Where relevant, the number of ICU/HDUs included in the analysis has been outlined in each graph and table throughout the report.

Unless otherwise indicated, both Children's Hospital and General Hospital Paediatric Intensive Care Units (PICUs) are included in the presented data.

Intensive Care Bed Stock

Bed Stock

Physical Bed

A single patient care location fully configured to ICU standards. It is an actual bed, not a bed space.

Available Bed

A bed with advanced life support capability that is fully staffed and funded.

The percent increase reported for physical and available ICU beds from 2022/23 to 2023/24 was 2.0% (n=225) and 3.8% (n=225) respectively, consistent with the population growth rate of 2.1%[1,2].

Distribution of Physical and Available ICU Beds

- Australia – 195 ICUs (General ICUs and PICUs), 3,073 physical beds and 2,454 available beds
- New Zealand – 31 ICUs (General ICUs and PICUs), 370 physical beds and 311 available beds

Table 1 Physical Beds in 2023/24, by Classification and Region

Hospital Classification	No. ICUs	ACT	NSW	NT	QLD	SA	TAS	VIC	WA	NZ	AUS	Total
Tertiary	40	38	403		190	106	21	233	94	175	1,085	1,260
Metropolitan	38	10	175	18	65	25	18	144	35	41	490	531
Rural/Regional	56		210	10	79		8	111	14	92	432	524
Private	79	22	297		186	97	11	198	64	32	875	907
PICUs*	13		56		59	12	4	40	20	30	191	221
Total	226	70	1,141	28	579	240	62	726	227	370	3,073	3,443

Data from 2023/24 contributing ICUs and follow-up with non-contributors.

**Data from 9 Children's Hospital and 4 General Hospital (Tertiary) paediatric intensive care units.*

Table 2 Available Beds in 2023/24, by Classification and Region

Hospital Classification	No. ICUs	ACT	NSW	NT	QLD	SA	TAS	VIC	WA	NZ	AUS	Total
Tertiary	40	26	327		138	78	17	191	88	151	865	1,016
Metropolitan	38	7	131	14	42	23	11	89	31	34	348	382
Rural/Regional	56		138	10	53		6	87	10	78	304	382
Private	79	21	274		165	78	5	184	64	22	791	813
PICUs*	13		46		34	8	4	30	16	25	138	163
Total	226	54	916	24	432	187	43	581	209	310	2,756	2,593

Data from 2023/24 contributing ICUs and follow-up with non-contributors.

**Data from 9 Children's Hospital and 4 General Hospital (Tertiary) paediatric intensive care units.*

[1]Australian Bureau of Statistics — Quarterly Population Estimates (ERP), by State/Territory, Sex and Age: https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/jun-2024

[2] Stats NZ Tatauranga Aotearoa: https://infoshare.stats.govt.nz/

Intensive Care Bed Stock *continued*

Table 3 Public and Private Beds in 2023/24, by Region

		Public			Private			Public Beds per 100,000 Population	
Region	Population	No. ICUs	Physical Beds	Available Beds	No. ICUs	Physical Beds	Available Beds	Physical Beds	Available Beds
ACT	474,132	2	48	33	3	22	21	10.1	7.0
NSW	8,484,357	45	844	643	22	297	274	9.9	7.6
NT	255,100	2	28	24				11.0	9.4
QLD	5,586,322	24	393	267	17	186	165	7.0	4.8
SA	1,878,029	5	143	113	7	97	78	7.6	6.0
TAS	575,366	4	51	38	1	11	5	8.9	6.6
VIC	6,981,352	31	528	398	18	198	184	7.6	5.7
WA	2,965,159	9	163	147	5	64	64	5.5	5.0
NZ	5,332,800	25	338	289	6	32	22	6.3	5.4
AUS*	27,204,809	122	2,198	1,663	73	875	791	8.1	6.1
Total	**32,532,617**	**147**	**2,536**	**1,952**	**79**	**907**	**813**	**7.8**	**6.0**

Data from 2023/24 contributing ICUs and follow-up with non-contributors.

** Australia total population includes Other Territories comprising Jervis Bay Territory, Christmas Island, the Cocos (Keeling) Islands and Norfolk Island.*

https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/jun-2024
https://infoshare.stats.govt.nz/

ICU Activity – Admissions and Discharges

Admission Types

There was a 3.5% increase in admissions reported from 2022/23 across 215 ICUs that reported admission data over two financial years.

Planned Admission

A planned admission to ICU/HDU. Post-surgical/procedure admissions are considered planned admissions when the need for admission was anticipated pre-operatively or prior to induction of anaesthesia. For non-surgical admissions, a planned admission should be considered as one that could be postponed for 24 hours with no adverse effect.

Unplanned Admission

An emergency admission to ICU/HDU for urgent care or treatment that could not be postponed without adverse effect. A postponed planned admission can subsequently become an unplanned or urgent admission.

Undivided Admission

An admission that has not been classed as unplanned (emergency) or planned, or ICU or HDU, but has been reported to CCR.

Table 4 Number of Admissions in 2023/24, by Classification

Hospital Classification	Contributing ICUs					All ICUs	
	No. ICUs	Unplanned Admissions	Planned Admissions	Undivided Admissions	Total Admissions	No. ICUs	Total Admissions
Tertiary	51	55,057	36,696	8	91,761	53	94,270
Metropolitan	32	22,557	4,465	1,395	28,417	38	33,165
Rural/Regional	42	22,606	3,390	1,204	27,200	52	33,310
Private	50	11,227	35,331	0	46,558	73	67,370
Total	**175**	**111,447**	**79,882**	**2,607**	**193,936**	**216**	**228,115**

Planned/Unplanned admission data from 2023/24 contributing ICUs. Not all ICUs reported a breakdown of admissions.
All ICUs includes total admissions reported by 2023/24 contributing ICUs and follow-up with non-contributors.

Table 5 Number of Admissions in 2023/24, by Region

Region	Contributing ICUs					All ICUs	
	No. ICUs	Unplanned Admissions	Planned Admissions	Undivided Admissions	Total Admissions	No. ICUs	Total Admissions
ACT	5	2,655	2,696	0	5,351	5	5,351
NSW	53	34,321	25,018	1,948	61,287	65	73,547
NT	2	1,590	241	6	1,837	2	1,837
QLD	35	16,503	14,686	0	31,189	41	36,560
SA	10	8,113	8,923	4	17,040	11	18,485
TAS	3	1,564	162	0	1,726	5	3,992
VIC	39	27,294	15,634	22	42,950	48	48,944
WA	10	7,044	6,418	0	13,462	14	16,346
NZ	18	12,363	6,104	627	19,094	25	23,053
AUS	157	99,084	73,778	1,980	174,842	191	205,062
Total	**175**	**111,447**	**79,882**	**2,607**	**193,936**	**216**	**228,115**

Planned/Unplanned admission data from 2023/24 contributing ICUs. Not all ICUs reported a breakdown of admissions.
All ICUs includes total admissions reported by 2023/24 contributing ICUs and follow-up with non-contributors.

ICU Activity – Admissions and Discharges *continued*

Table 6 Admissions per 100,000 Population in 2023/24, by Region

Region	No. ICUs	Population	Reported Admissions/100,000 Population	% Available Beds Represented	Estimated Total Admissions†/ 100,000 Population
ACT	5	474,132	1,128.6	100.0	1,128.6
NSW	65	8,484,357	866.9	99.3	872.6
NT	2	255,100	720.1	100.0	720.1
QLD	41	5,586,322	654.5	100.0	654.5
SA	11	1,878,029	984.3	99.0	994.7
TAS	5	575,366	693.8	100.0	693.8
VIC	48	6,981,352	701.1	99.0	708.4
WA	14	2,965,159	551.3	100.0	551.3
NZ	25	5,332,800	432.3	93.2	463.6
AUS*	191	27,204,809	753.8	99.4	758.1
Total	**216**	**32,532,617**	**701.2**	**98.7**	**710.2**

Data from 2023/24 contributing ICUs and follow-up with non-contributors.

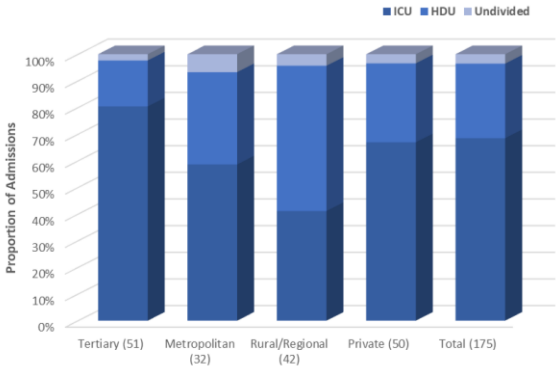
** Australia total population includes Other Territories comprising Jervis Bay Territory, Christmas Island, the Cocos (Keeling) Islands and Norfolk Island.*

Australian Bureau of Statistics — Quarterly Population Estimates (ERP), by State/Territory, Sex and Age: *https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/jun-2024*

Stats NZ Tatauranga Aotearoa: *https://infoshare.stats.govt.nz/*

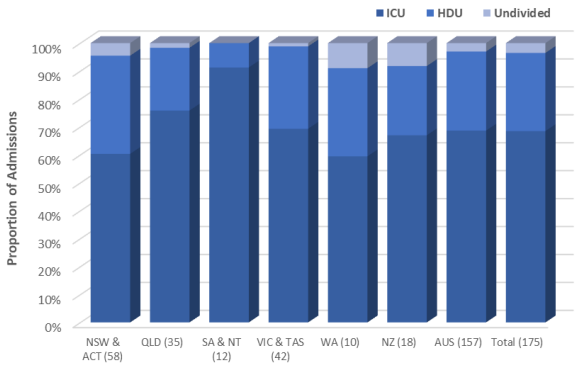
† Estimated Total Admissions calculated as reported Total Admissions divided by percentage of Available Beds represented.

Figure 5 Proportion of ICU and HDU Admissions in 2023/24, by Classification



Data from 175 contributing ICUs.

Figure 6 Proportion of ICU and HDU Admissions in 2023/24, by Region



Data from 175 contributing ICUs.

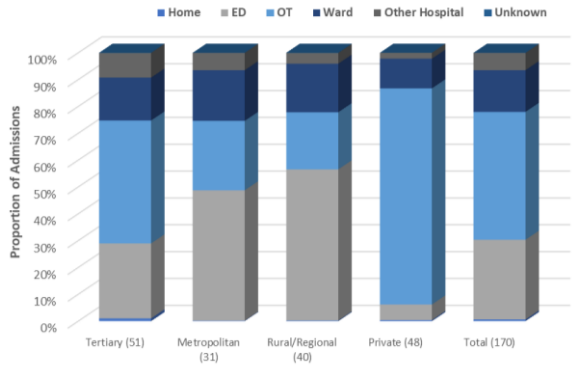
ICU Activity – Admissions and Discharges *continued*

Source of Admission

Source of Admission

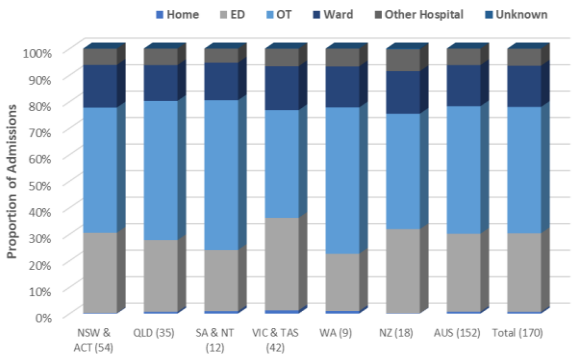
Source of admission of *ward* include patients admitted from Other HDU/CCU same hospital as well as Other ICU same hospital in addition to the general ward. *Other hospital* admissions include admissions from Other hospital ICU and Other hospital ward.

Figure 7 Source of Admission in 2023/24, by Classification



Data from 170 contributing ICUs.

Figure 8 Source of Admission in 2023/24, by Region



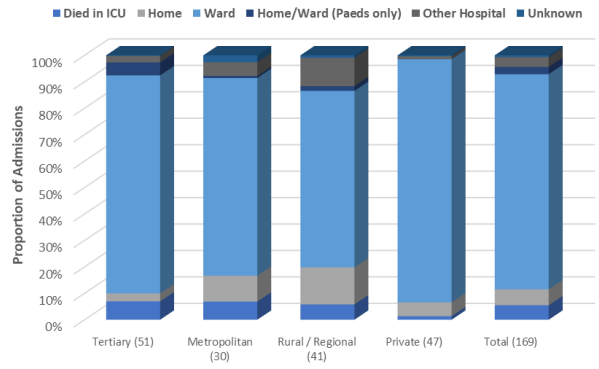
Data from 170 contributing ICUs.

Destination at Discharge

Discharge Destination

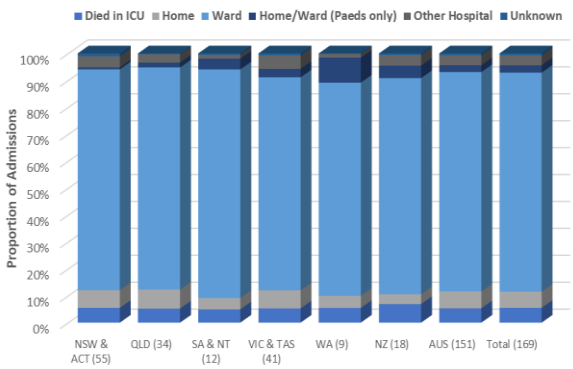
Discharge destination to *Other hospital* include patients transferred to Other hospital ward and Other hospital ICU.

Figure 9 Destination at ICU Discharge in 2023/24, by Classification



Data from 169 contributing ICUs.

Figure 10 Destination at ICU Discharge in 2023/24, by Region



Data from 169 contributing ICUs.

ICU Activity – Admissions and Discharges *continued*

Readmissions

Readmission

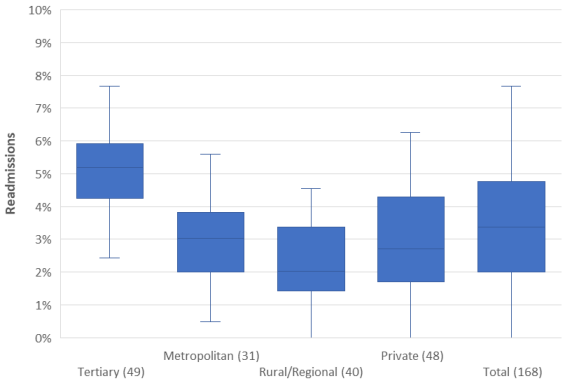
Any second or subsequent admission to ICU/HDU within the same hospital admission, excluding direct transfers to or from ICU/HDU.

Readmission includes all readmissions; it is not equivalent to the ACHS indicator "readmissions within 72 hours".

Readmission rate (%) is calculated as a proportion of total admissions.

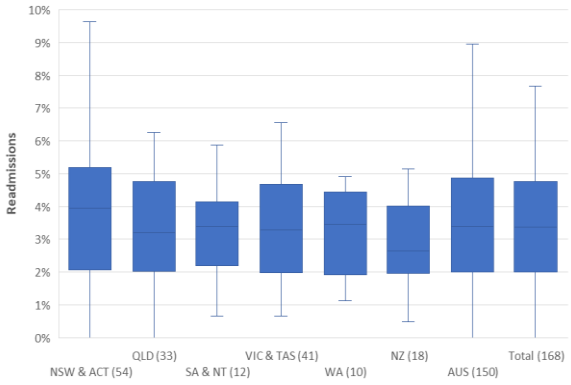
In 2023/24, 168 ICUs reported readmission data showing an overall patient readmission rate of 4.3%.

Figure 11 Readmission Rate (Median and IQR) in 2023/24, by Classification



Data from 168 contributing ICUs.

Figure 12 Readmission Rate (Median and IQR) in 2023/24, by Region



Data from 168 contributing ICUs.

After Hours Discharge

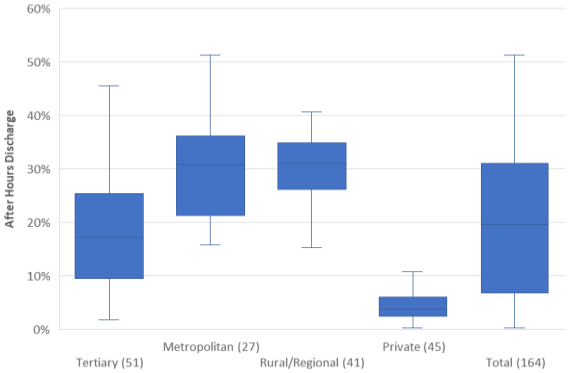
After Hours Discharge

Discharge of a live patient to ward and home between 18:00 hours and 05:59 hours. Excludes patients that died in ICU or transferred to Other ICU or Other hospital.

After hours discharge rate is calculated as a proportion of total discharges to ward and home.

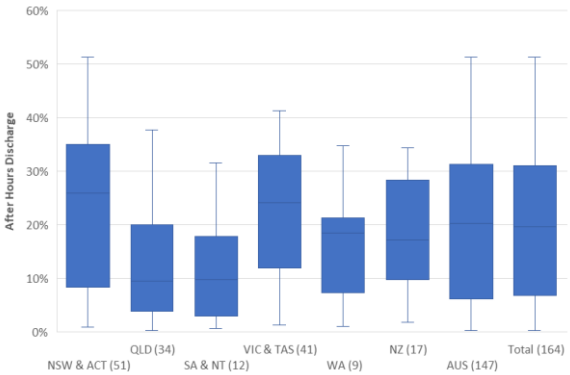
In 2023/24, 164 ICUs reported after hours discharge data showing an overall after hours discharge rate of 18.8%.

Figure 13 After Hours Discharge Rate (Median and IQR) in 2023/24, by Classification



Data from 164 contributing ICUs.

Figure 14 After Hours Discharge Rate (Median and IQR) in 2023/24, by Region



Data from 164 contributing ICUs.

ICU Activity - Admissions & Discharges *continued*

Discharge Delay (Exit Block)

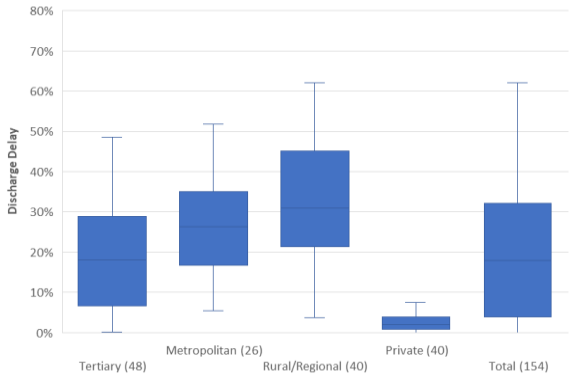
Discharge Delay

The delay in the discharge of a live patient to ward or home by 12 hours or more.

Discharge delay rate (%) is calculated by dividing total discharge delayed 12 hours or more by total ward and home discharges.

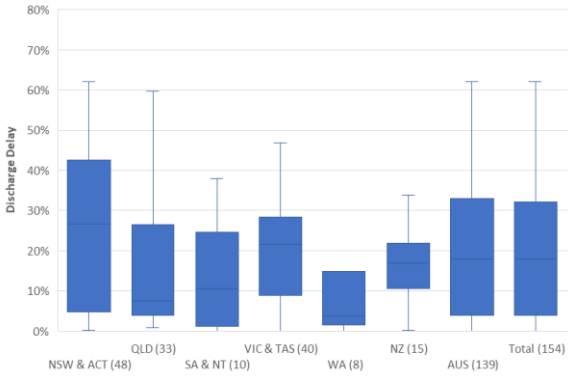
In 2023/24, 154 ICUs reported discharge delay data showing an overall discharge delay rate of 19.8%.

Figure 15 Discharge Delay Rate (Median and IQR) in 2023/24, by Classification



Data from 154contributing ICUs.

Figure 16 Discharge Delay Rate (Median and IQR) in 2023/24, by Region



Data from 154 contributing ICUs.

ICU Activity – Admissions and Discharges *continued*

Declined Admissions

Declined Admissions

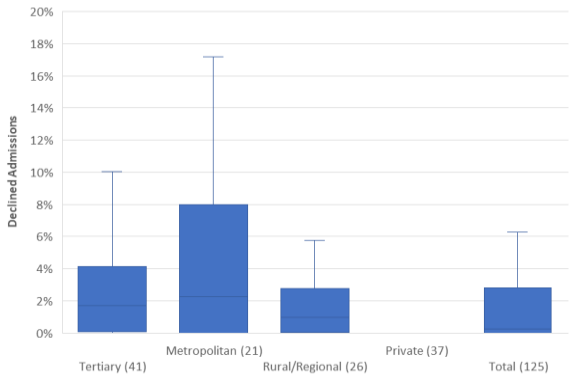
The CCR Survey collects two variables on declined admissions; declined elective surgery admissions (cancelled elective) due to inadequate ICU resources and declined unplanned admissions (refused referrals) due to inadequate resources.

Declined elective surgery admissions due to inadequate resources are calculated as a proportion of planned admissions to ICU and declined unplanned admissions due to inadequate resources as a proportion of unplanned admissions to ICU.

The two data point are combined to calculate an overall declined admission rate (%) as a proportion of total ICU admissions.

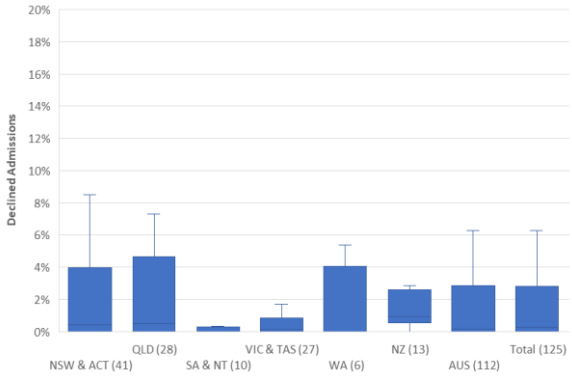
In 2023/24, 125 ICUs reported declined admission data showing an overall declined admission rate of 1.9%.

Figure 17 Overall Declined Admission Rate (Median and IQR) in 2023/24, by Classification



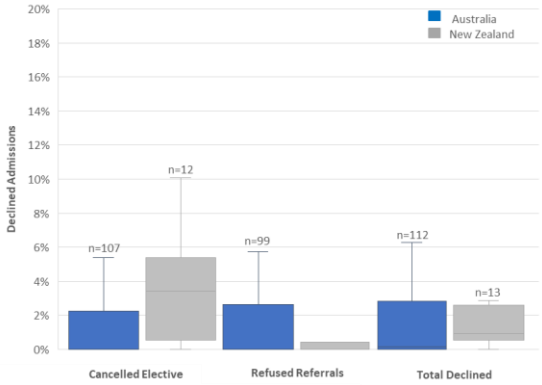
Data from 125 contributing ICUs.

Figure 18 Overall Declined Admission Rate (Median and IQR) in 2023/24, by Region



Data from 125 contributing ICUs.

Figure 19 Cancelled, Refused and Overall Declined (Median and IQR) in Australia and New Zealand, 2023/24



n= Total number of ICUs that responded for each group.

Calculations:
Cancelled elective as a proportion of total elective ICU admissions.
Refused referrals as a proportion of total emergency ICU admissions.
Total declined as a proportion of total ICU admissions.

ICU Activity – ICU Bed Days

ICU Bed Days

ICU Bed Days

The total number of days for patients who were admitted to the ICU/HDU for an episode of care. Calculated as the difference between the ICU/HDU separation date/time and ICU/HDU admission date/time.

The estimated total ICU bed days per 100,000 population is calculated as a proportion of available beds reported.

In 2023/24, the overall total ICU bed days per available bed reported was 264.8 (n=174).

Table 7 Total ICU Bed Days in 2023/24, by Classification

Hospital Classification	Total ICU Bed Days		Unplanned and Planned Bed Days			
	No. ICUs	Total Bed Days	No. ICUs	Unplanned Bed Days	Planned Bed Days	% Unplanned Bed Days
Tertiary	51	349,912	51	231,738	118,174	66.2
Metropolitan	32	95,349	31	79,834	11,926	87.0
Rural/Regional	41	84,333	40	74,218	8,685	89.5
Private	50	95,230	50	32,698	62,532	34.3
Total	**174**	**624,823**	**172**	**418,489**	**201,316**	**67.5**

Total bed days reported by 174 ICUs, of which 172 ICUs provided a breakdown of both Unplanned and Planned Admissions.

Table 8 Total ICU Bed Days in 2023/24, by Region

Region	Total ICU Bed Days		Unplanned and Planned Bed Days			
	No. ICUs	Total Bed Days	No. ICUs	Unplanned Bed Days	Planned Bed Days	% Unplanned Bed Days
ACT	5	14,603	5	9,103	5,500	62.3
NSW	52	212,533	51	138,888	70,056	66.5
NT	2	5,961	2	5,245	716	88.0
QLD	35	94,894	35	62,179	32,714	65.5
SA	10	49,736	10	31,457	18,279	63.2
TAS	3	5,597	3	5,232	366	93.5
VIC	39	136,312	39	93,316	42,997	68.5
WA	10	44,941	10	30,200	14,742	67.2
NZ	18	60,246	17	42,870	15,947	72.9
AUS	156	564,577	155	375,619	185,369	67.0
Total	**174**	**624,823**	**172**	**418,489**	**201,316**	**67.5**

Total bed days reported by 174 ICUs, of which 172 ICUs provided a breakdown of both Unplanned and Planned Admissions.

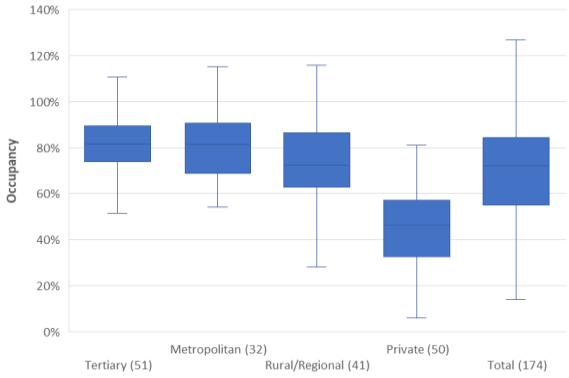
ICU Activity – Occupancy

Occupancy

Calculated by dividing total ICU bed days in a period by the product of the available beds and the days in the period.

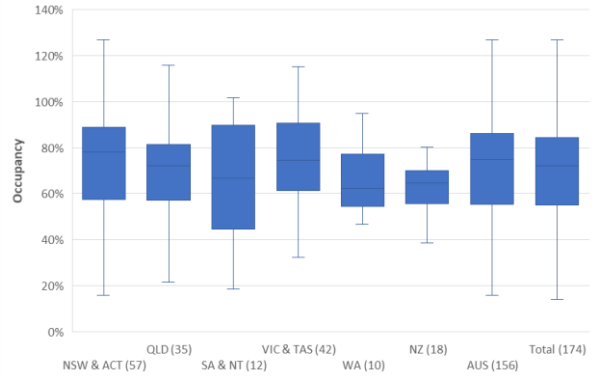
In 2023/24, 174 ICUs reported total bed days showing an overall occupancy rate of 72.5%.

Figure 20 Occupancy Rate (Median and IQR) in 2023/24, by Classification



Data from 174 contributing ICUs.

Figure 21 Occupancy Rate (Median and IQR) in 2023/24, by Region



Data from 174 contributing ICUs.

Table 9 Occupancy in 2022/23 and 2023/24, by Classification

Hospital Classification	No. ICUs	% Occupancy	
		2022/23	2023/24
Tertiary	50	82.8	83.1
Metropolitan	30	82.5	81.5
Rural/Regional	36	75.1	71.9
Private	45	49.7	47.4
Total	**161**	**74.3**	**73.4**

Data from 161 consistently contributing ICUs.

Table 10 Occupancy in 2022/23 and 2023/24, by Region

Region	No. ICUs	% Occupancy	
		2022/23	2023/24
ACT	4	86.5	82.8
NSW	45	76.5	77.3
NT	2	64.4	68.1
QLD	32	71.7	71.5
SA	10	83.6	75.3
TAS	3	71.9	73.0
VIC	37	76.0	74.9
WA	10	70.3	70.4
NZ	18	63.7	62.3
AUS	158	75.6	74.8
Total	**161**	**74.3**	**73.4**

Data from 161 consistently contributing ICUs.

Ventilation

Invasive and Non-Invasive Ventilation

Rates of Ventilation

Rates of ventilation are calculated as the number of ventilated patients as a proportion of all admissions.

Invasive Ventilation

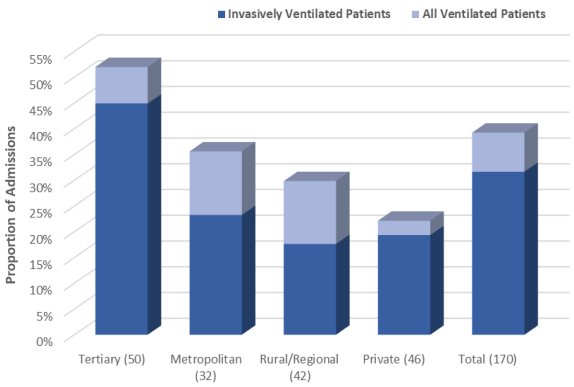
Mechanical ventilator support via oral/nasal intubation or tracheostomy tube.

Non-Invasive Ventilation

Ventilatory support such as CPAP/BiPAP, administered via facial or nasal mask or nasal cannulae.

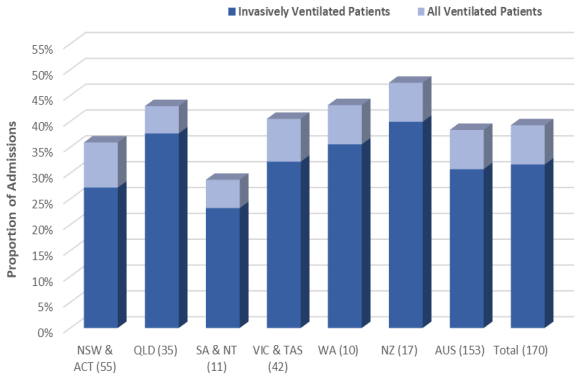
In 2023/24, the proportion of ventilated patients reported was 39.2%, and 31.6% were reported to have received invasive ventilation (n=170).

Figure 22 Ventilation Rate in 2023/24, by Classification



Data from 170 contributing ICUs.

Figure 23 Ventilation Rate in 2023/24, by Region



Data from 170 contributing ICUs.

Recognition and Response to Clinical Deterioration

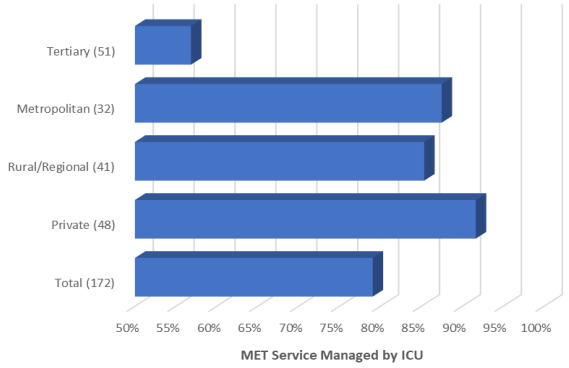
Medical Emergency Team/Rapid Response

Medical Emergency Team/Rapid Response Team

Medical and nursing staff with advanced clinical and resuscitation skills who respond to at-risk patients in settings outside the ICU.

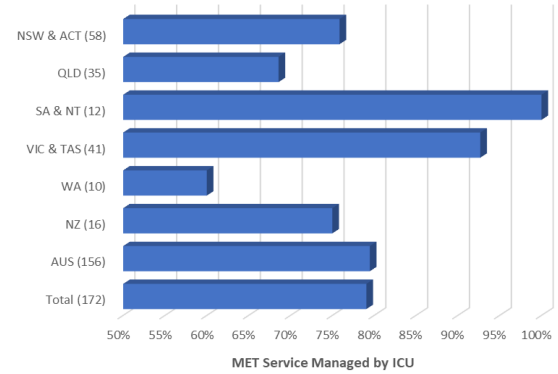
In 2023/24, 98.3% (172/175) ICUs reported to have an active hospital MET service, of which 79.1% (136/172) reported to be led by the ICU team.

Figure 24 Proportion of MET Managed by ICUs in 2023/24, by Classification



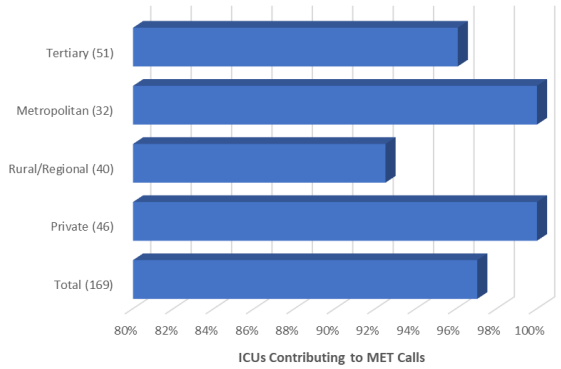
Data from 172 contributing ICUs.

Figure 25 Proportion of MET Managed by ICUs in 2023/24, by Region



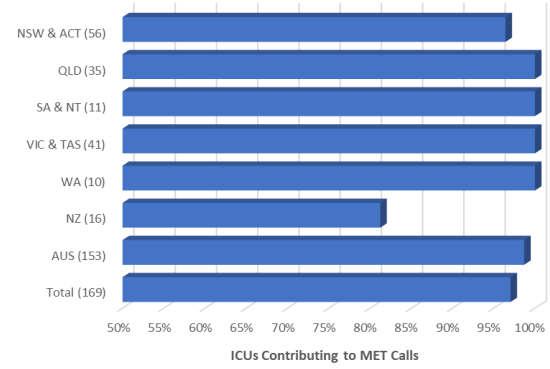
Data from 172 contributing ICUs.

Figure 26 Proportion of ICUs Contributing Staff to MET in 2023/24, by Classification



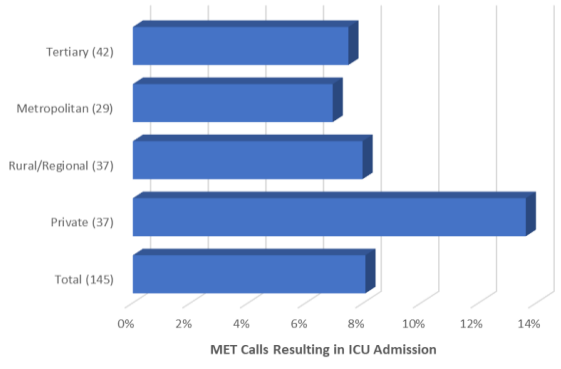
Data from 169 contributing ICUs.

Figure 27 Proportion of ICUs Contributing Staff to MET in 2023/24, by Region



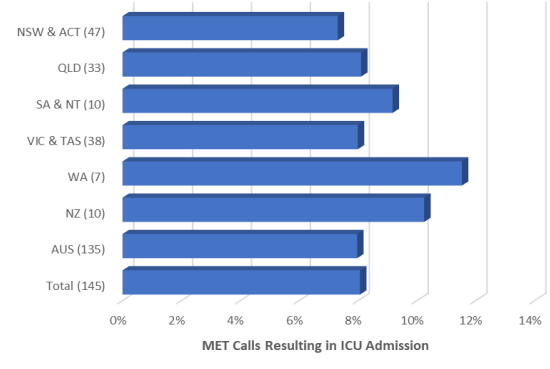
Data from 169 contributing ICUs.

Figure 28 Proportion of MET Calls Resulting in ICU Admission in 2023/24, by Classification



Data from 145 contributing ICUs.

Figure 29 Proportion of MET Calls Resulting in ICU Admission in 2023/24, by Region



Data from 145 contributing ICUs.

Workforce - Medical Staff

Senior Medical Officer

Senior Medical Officer
Intensive care specialists and non-intensive care specialists.

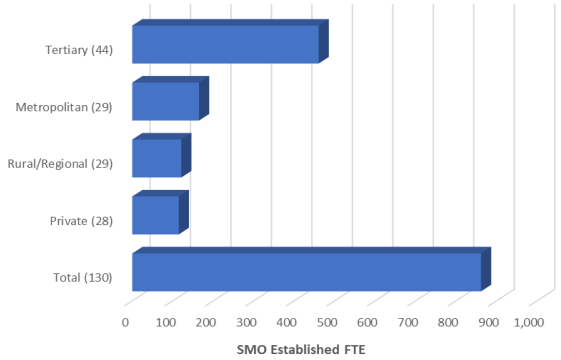
Full Time Equivalent (FTE)
A unit that indicates the workload of an employed person that makes workloads comparable across various contexts.

Total SMO Established FTE
Includes the vacant (funded but not filled) SMO positions (FTE) reported for the financial year.

Proportion of SMO FTE Vacancies
Calculated as a percentage of total SMO Established FTE for ICUs that reported both SMO FTE and SMO FTE Vacancies.

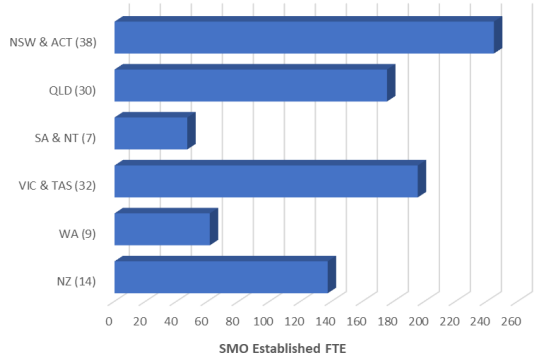
In 2023/24, the overall reported SMO Established FTE per 1000 ICU bed days was 1.7 (n=130).

Figure 30 Total SMO Established FTE in 2023/24, by Classification



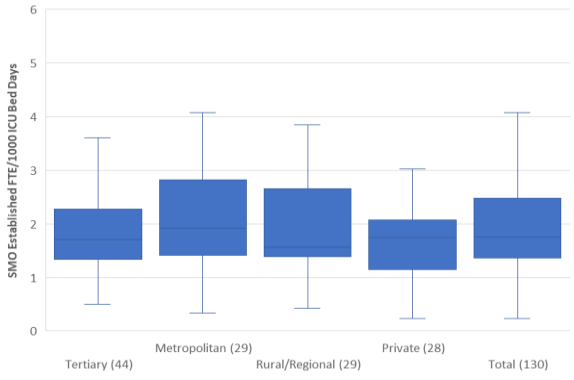
Data from 130 contributing ICUs.

Figure 31 Total SMO Established FTE in 2023/24, by Region



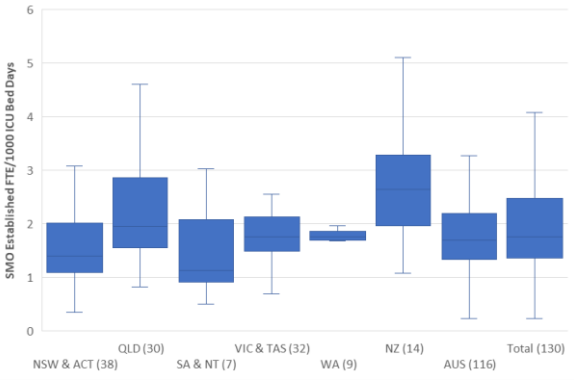
Data from 130 contributing ICUs. AUS (116) reported a total of 724.5 SMO Established FTE.

Figure 32 SMO Established FTE per 1000 ICU Days (Median and IQR) in 2023/24, by Classification



Data from 130 contributing ICUs.

Figure 33 SMO Established FTE per 1000 ICU Days (Median and IQR) in 2023/24, by Region

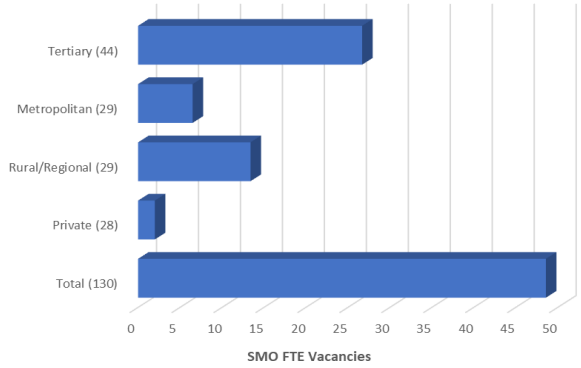


Data from 130 contributing ICUs.

Workforce - Medical Staff *continued*

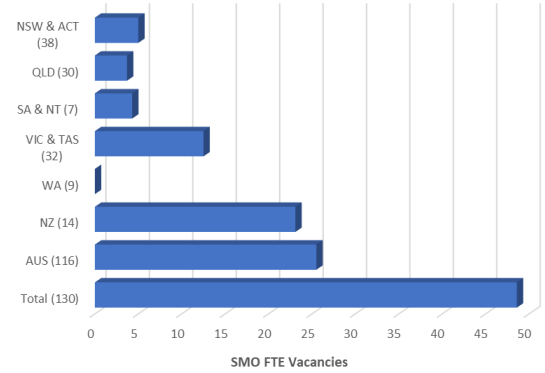
In 2023/24, the overall proportion of SMO FTE Vacancies was 5.6% (n=130), with Private units reporting 1.7% SMO FTE Vacancies (n=28) compared to 6.2% in Public units (n=102).

Figure 34 Total SMO FTE Vacancies in 2023/24, by Classification



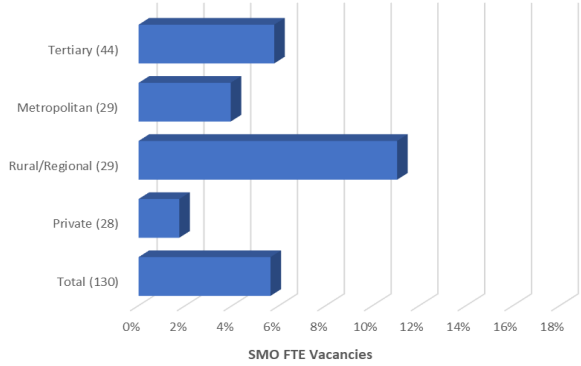
Data from 130 contributing ICUs.

Figure 35 Total SMO FTE Vacancies in 2023/24, by Region



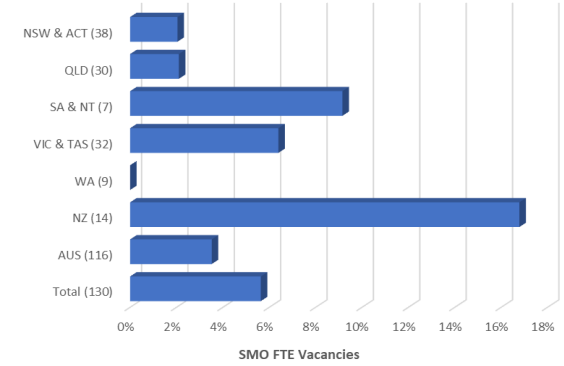
Data from 130 contributing ICUs. WA reported 0 SMO FTE vacancies.

Figure 36 Proportion of SMO FTE Vacancies in 2023/24, by Classification



Data from 130 contributing ICUs.

Figure 37 Proportion of SMO FTE Vacancies in 2023/24, by Region



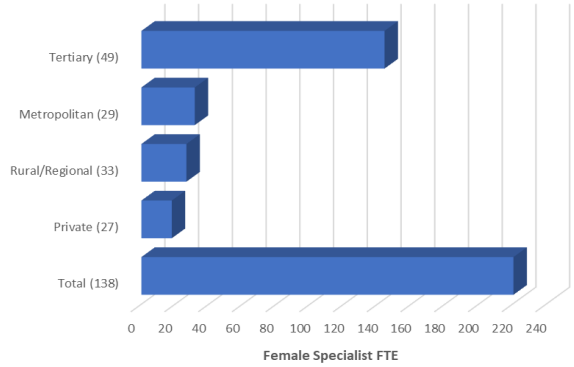
Data from 130 contributing ICUs. WA reported 0 SMO FTE vacancies.

Female Specialists

Proportion of Female Specialist FTE calculated as a percentage of total SMO FTE (excludes vacancies) for ICUs that reported both Female Specialist FTE and SMO FTE.

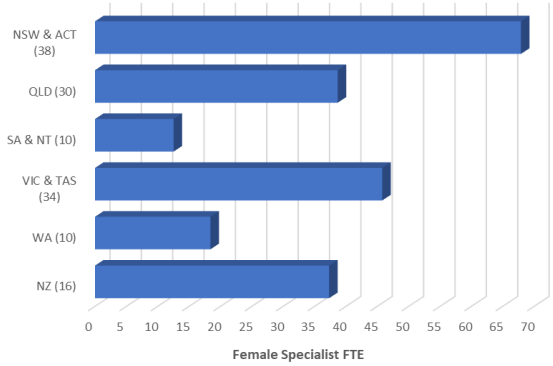
In 2023/24, the overall proportion of practising female intensivist FTE reported was 25.4% (n=121).

Figure 38 Female Specialists FTE in 2023/24, by Classification



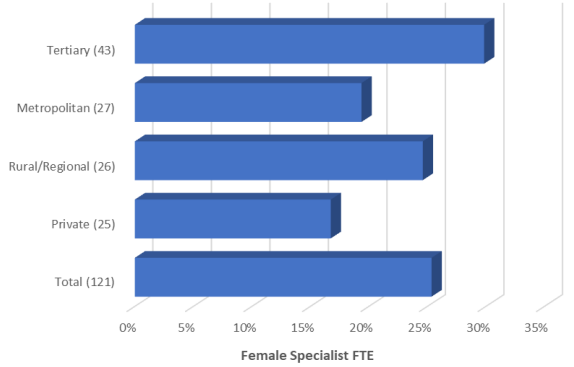
Data from 138 contributing ICUs.

Figure 39 Female Specialists FTE in 2023/24, by Region



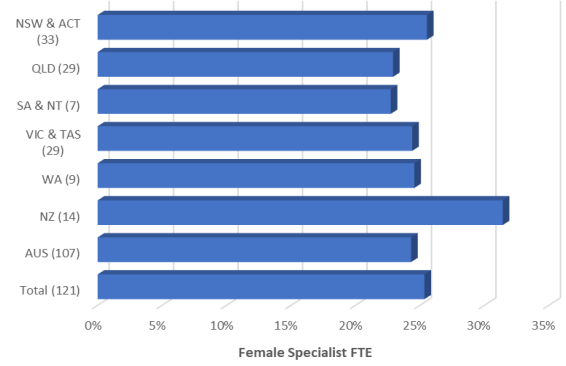
Data from 138 contributing ICUs. AUS (122) reported a total of 183.3 FTE.

Figure 40 Proportion of Female Specialists FTE in 2023/24, by Classification



Data from 121 contributing ICUs.

Figure 41 Proportion of Female Specialists FTE in 2023/24, by Region



Data from 121 contributing ICUs.

Workforce - Medical Staff *continued*

Junior Medical Staff

Fellow
A position where the medical practitioner has completed a specialist trainee program but has not yet obtained a consultant position.

Senior Registrar
A position that involves increased seniority usually close to the completion of specialist training. The position will usually involve responsibility for clinical supervision of registrars.

Registrar
A medical practitioner appointed to a specialist training position.

Table 11 Proportion of Full-time Junior Medical Staff in 2023/24, by Classification

Hospital Classification	Fellow		Senior Registrar		Registrar	
	CICM (n=113)	Non-CICM (n=92)	CICM (n=105)	Non-CICM (n=93)	CICM (n=129)	Non-CICM (n=123)
Tertiary	70.5% (74/105)	91.3% (21/23)	93.4% (213/228)	84.1% (53/63)	71.7% (436/613)	54.2% (300/553)
Metropolitan	14.3% (15/105)	0.0% (0/23)	2.2% (5/228)	0.0% (0/63)	14.7% (90/613)	26.4% (146/553)
Rural/Regional	4.8% (5/105)	8.7% (2/23)	1.3% (3/228)	11.1% (7/63)	7.8% (48/613)	11.2% (62/553)
Private	10.5% (11/105)	0.0% (0/23)	3.1% (7/228)	4.8% (3/63)	6.4% (39/613)	8.1% (45/553)

n= Total number of ICUs that responded for each position. Number of full-time junior medical staff reported divided by total full-time junior medical staff reported in brackets.

Table 12 Proportion of Full-time Junior Medical Staff in 2023/24, by Region

Region	Fellow		Senior Registrar		Registrar	
	CICM (n=113)	Non-CICM (n=92)	CICM (n=105)	Non-CICM (n=93)	CICM (n=129)	Non-CICM (n=123)
ACT	0.0% (0/105)	0.0% (0/23)	4.8% (11/228)	0.0% (0/63)	2.9% (18/613)	1.1% (6/594)
NSW	29.5% (31/105)	4.3% (1/23)	25.9% (59/228)	7.9% (5/63)	33.3% (204/613)	22.8% (126/553)
NT	1.0% (1/105)	0.0% (0/23)	0.9% (2/228)	0.0% (0/63)	1.5% (9/613)	1.3% (7/553)
QLD	21.9% (23/105)	17.4% (4/23)	20.6% (47/228)	34.9% (22/63)	15.0% (92/613)	20.3% (112/553)
SA	5.7% (6/105)	0.0% (0/23)	5.3% (12/228)	6.3% (4/63)	6.9% (42/613)	7.4% (41/553)
TAS	1.0% (1/105)	13.0% (3/23)	0.0% (0/228)	0.0% (0/63)	1.0% (6/613)	1.3% (7/553)
VIC	18.1% (19/105)	30.4% (7/23)	27.2% (62/228)	22.2% (14/63)	24.6% (151/613)	20.4% (113/553)
WA	8.6% (9/105)	0.0% (0/36)	10.1% (23/228)	11.0% (7/63)	4.6% (28/613)	9.9% (55/553)
NZ	14.3% (15/105)	34.8% (8/23)	5.3% (12/228)	17.5% (11/63)	10.3% (63/613)	15.6% (86/553)
AUS	85.7% (90/105)	65.2% (15/23)	94.7% (216/228)	82.5% (52/63)	89.7% (550/613)	84.4% (467/553)

n= Total number of ICUs that responded for each position. Number of full-time junior medical staff reported divided by total full-time junior medical staff reported in brackets.

Workforce - Medical Staff *continued*

Table 13 Proportion of Part-time Junior Medical Staff in 2023/24, by Classification

Hospital Classification	Fellow		Senior Registrar		Registrar	
	CICM (n=85)	Non-CICM (n=83)	CICM (n=90)	Non-CICM (n=85)	CICM (n=99)	Non-CICM (n=90)
Tertiary	69.0% (20/29)	5.0% (1/20)	72.1% (31/43)	50.0% (9/18)	36.2% (34/94)	18.8% (9/48)
Metropolitan	0.0% (0/29)	5.0% (1/20)	2.3% (1/43)	0.0% (0/18)	10.6% (10/94)	29.2% (14/48)
Rural/Regional	6.9% (2/29)	15.0% (3/20)	4.7% (2/43)	38.9% (7/18)	43.6% (41/94)	14.6% (7/48)
Private	24.1% (7/29)	75.0% (15/20)	20.9% (9/43)	11.1% (2/18)	9.6% (9/94)	37.5% (18/48)

n= Total number of ICUs that responded for each position. Number of part-time junior medical staff reported divided by total part-time junior medical staff reported in brackets.

Table 14 Proportion of Part-time Junior Medical Staff in 2023/24, by Region

Region	Fellow		Senior Registrar		Registrar	
	CICM (n=85)	Non-CICM (n=83)	CICM (n=90)	Non-CICM (n=85)	CICM (n=99)	Non-CICM (n=90)
ACT	0.0% (0/29)	0.0% (0/20)	4.7% (2/43)	0.0% (0/18)	2.1% (2/94)	0.0% (0/48)
NSW	3.4% (1/29)	20.0% (4/20)	11.6% (5/43)	11.1% (2/18)	5.3% (5/94)	2.1% (1/48)
NT	0.0% (0/29)	0.0% (0/20)	0.0% (0/43)	0.0% (0/18)	0.0% (0/94)	4.2% (2/48)
QLD	48.3% (14/29)	0.0% (1/20)	18.6% (8/43)	5.6% (1/18)	4.3% (4/94)	16.7% (8/48)
SA	10.3% (3/29)	5.0% (0/20)	16.3% (7/43)	11.1% (2/18)	9.6% (9/94)	16.7% (8/48)
TAS	0.0% (0/29)	0.0% (0/20)	0.0% (0/43)	0.0% (0/18)	0.0% (0/94)	6.3% (3/48)
VIC	3.4% (1/29)	75.0% (14/20)	23.3% (10/43)	38.9% (7/18)	74.5% (70/94)	35.4% (17/48)
WA	34.5% (10/29)	0.0% (3/20)	25.6% (11/43)	5.6% (1/18)	2.1% (2/94)	4.2% (2/48)
NZ	0.0% (0/29)	0.0% (5/20)	0.0% (0/43)	27.8% (5/18)	2.1% (2/94)	14.6% (7/48)
AUS	100.0% (29/29)	100.0% (22/20)	100.0% (43/43)	72.2% (13/18)	97.9% (92/94)	85.4% (41/48)

n= Total number of ICUs that responded for each position. Number of part-time junior medical staff reported divided by total part-time junior medical staff reported in brackets.

Workforce - Registered Nurse

Registered Nurse

Australia – A nurse who is registered with the Nursing and Midwifery Board of Australia in accordance with the Australian Health Practitioner Regulation Authority (AHPRA).

New Zealand – A Registered nurse is defined by the Nurses Act 1977 as a nurse whose name is recorded on one of the registers of nurses.

Critical Care Qualification

A post-registration award at a minimum certificate level obtained by successful completion of an accredited critical care education program (≥6 months duration).

Full Time Equivalent (FTE)

A unit that indicates the workload of an employed person that makes workloads comparable across various contexts.

Total RN Established FTE

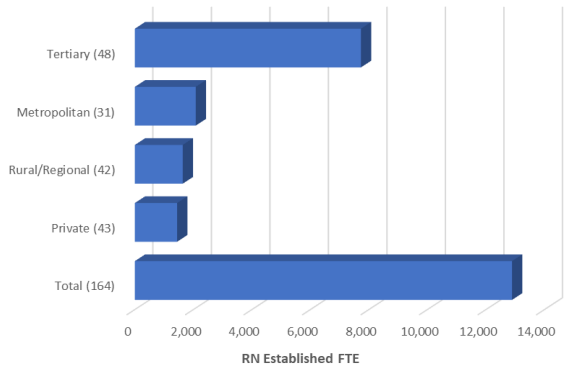
Includes the vacant RN positions reported for the year.

Proportion of RN FTE Vacancies

Calculated as a percentage of total RN Established FTE for ICUs that reported both Permanent RN FTE and RN FTE vacancies.

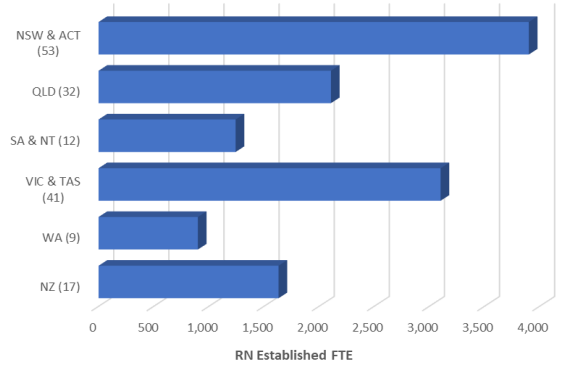
In 2023/24, the overall reported RN Established FTE per 1000 ICU bed days was 20.9 (n=167), and RN Critical Care Qualification FTE per 1000 ICU bed days was 10.6 (n=126).

Figure 42 Total RN Established FTE in 2023/24, by Classification



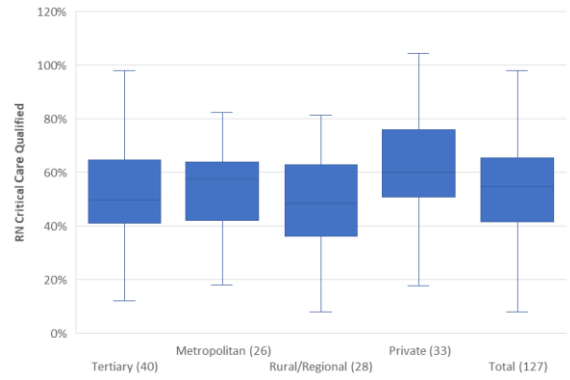
Data from 164 contributing ICUs.

Figure 43 Total RN Established FTE in 2023/24, by Region



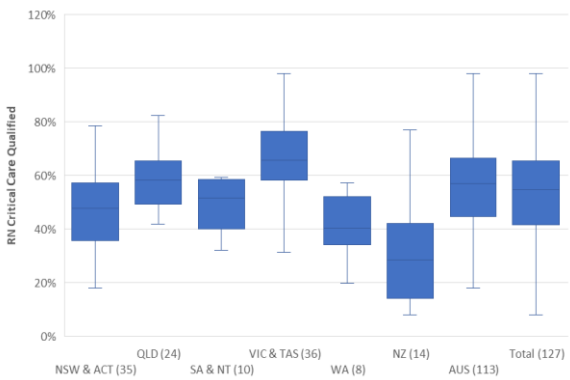
Data from 164 contributing ICUs. AUS (147) reported a total of 11,260.6 FTE.

Figure 44 RN with Critical Care Qualification (Median and IQR) in 2023/24, by Classification



Data from 127 contributing ICUs.

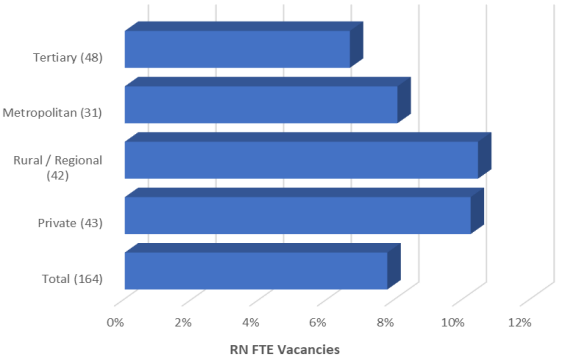
Figure 45 RN with Critical Care Qualification (Median and IQR) in 2023/24, by Region



Data from 127 contributing ICUs.

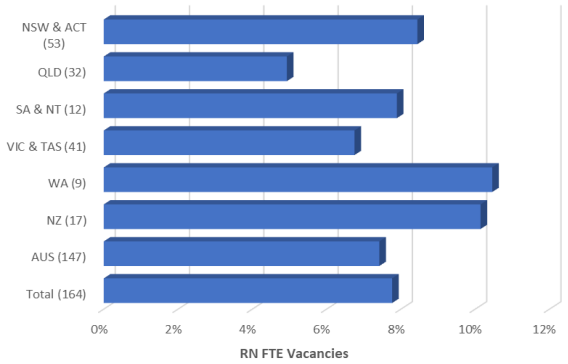
Workforce - Registered Nurse *continued*

Figure 46 Proportion of RN FTE Vacancies in 2023/24, by Classification



Data from 164 contributing ICUs.

Figure 47 Proportion of RN FTE Vacancies in 2023/24, by Region



Data from 164 contributing ICUs.

Clinical Indicators

Table 15 Proportion of Clinical Indicators Collected in 2023/24, by Classification

Clinical Indicator	% ICUs Reporting Yes (No. ICUs)				
	Tertiary	Metropolitan	Rural/Regional	Private	Total
CLABSI (n=162)	88.2 (45/51)	96.7 (29/30)	94.9 (37/39)	88.1 (37/42)	**91.4 (148/162)**
VTE Prophylaxis (n=172)	79.6 (39/49)	100.0 (32/32)	95.2 (40/42)	95.9 (47/49)	**91.7 (158/172)**
Surveillance data for multiresistant organisms e.g. MRSA, VRE, C.diff (n=167)	92.2 (47/51)	84.4 (27/32)	84.2 (32/38)	89.1 (41/46)	**88.0 (147/167)**
Pressure areas risk assessment compliance (n=168)	94.0 (47/50)	93.8 (30/32)	92.3 (36/39)	100.0 (47/47)	**95.2 (160/168)**
Incidence of pressure areas (n=168)	98.0 (49/50)	100.0 (32/32)	94.7 (36/38)	95.8 (46/48)	**97.0 (163/168)**
Medication Safety System* (n=168)	94.0 (47/50)	96.9 (31/32)	82.1 (32/39)	95.7 (45/47)	**92.3 (155/168)**
Adverse Events/Incident Monitoring System e.g. AIMS, IIMS or VHIMS (n=169)	100.0 (49/49)	100.0 (32/32)	87.5 (35/40)	97.9 (47/48)	**96.4 (163/169)**
Documented standards for clinical handover (n=170)	96.1 (49/51)	93.5 (29/31)	87.2 (34/39)	95.9 (47/49)	**93.5 (159/170)**
Follow up with family within 12 weeks of patient's death (n=169)	64.7 (33/51)	40.6 (13/32)	35.0 (14/40)	17.4 (8/46)	**40.2 (68/169)**

n= Total number of ICUs that responded for each clinical indicator. Number of sites reporting YES divided by total number of sites that responded in brackets.

** Medication Safety System refers to whether your ICU/HDU has a system in place to ensure that clinicians safely prescribe, dispense, and administer appropriate medicines, and monitor medicine use.*

https://www.safetyandquality.gov.au/standards/nsqhs-standards/medication-safety-standard

Abbreviations:

MRSA – Methicillin Resistant Staphylococcus Aureus

VRE – Vancomycin Resistant Enterococci

C.diff – Clostridioides difficile

AIMS – Australian Incident Monitoring System

IIMS – International Incident Monitoring System

VHIMS – Victorian Health Incident Management System

Safety and Quality – ICU Activities

Safety and Quality Activity

An activity that contributes to care within the ICU and aims to achieve optimal outcomes and improving processes of care e.g. reviewing outcomes data via ANZICS APD reports, conducting mortality and morbidity meetings, monitoring and reviewing incidents and conducting audits on various processes of care in the ICU.

Table 16 Median and IQR FTE Allocated to ICU Quality Activities in 2023/24, by Classification

ICU Quality Activities	Total FTE				
	Tertiary	Metropolitan	Rural/Regional	Private	Total
Medical FTE allocated to conducting ICU quality activities (n=123)	0.2 (0.1 – 1.0) n=39	0.3 (0.2 – 0.8) n=24	0.1 (0.0 – 0.2) n=30	0.0 (0.0 – 0.2) n=30	**0.2 (0.0 – 0.5) n=123**
Nursing FTE allocated to conducting ICU quality activities (n=130)	1.0 (0.4 – 1.1) n=43	0.2 (0.1 – 0.9) n=23	0.0 (0.0 – 0.4) n=32	0.1 (0.0 – 0.4) n=32	**0.2 (0.0 – 1.0) n=130**
Other S&Q FTE (n=89)	0.0 (0.0 – 0.2) n=26	0.1 (0.0 – 0.2) n=16	0.0 (0.0 – 0.0) n=24	0.0 (0.0 – 0.0) n=23	**0.0 (0.0 – 0.1) n=89**

n= Total number of ICUs that responded for each group.

Table 17 Median and IQR FTE Allocated to Research Activities in 2023/24, by Classification

Research Infrastructure	Total FTE				
	Tertiary	Metropolitan	Rural/Regional	Private	Total
Hospital Funded Research Coordinator FTE (n=138)	0.5 (0.0 – 1.0) n=45	0.2 (0.0 – 0.6) n=29	0.0 (0.0 – 0.2) n=31	0.0 (0.0 – 0.0) n=33	**0.0 (0.0 – 0.6) n=138**
Independently Funded Research Coordinator FTE (n=129)	1.0 (0.2 – 1.4) n=44	0.0 (0.0 – 0.4) n=26	0.0 (0.0 – 0.1) n=28	0.0 (0.0 – 0.0) n=31	**0.0 (0.0 – 0.5) n=129**
Nominated Director/Lead Clinician of Research FTE (n=73)	0.2 (0.0 – 0.3) n=38	0.1 (0.0 – 0.2) n=19	0.0 (0.0 – 0.1) n=9	0.1 (0.0 – 0.2) n=7	**0.1 (0.0 – 0.2) n=73**
Hospital Funded Data Manager FTE (n=134)	0.8 (0.5 – 1.3) n=45	0.5 (0.0 – 0.8) n=26	0.2 (0.0 – 0.5) n=33	0.0 (0.0 – 0.3) n=30	**0.5 (0.0 – 0.8) n=134**

n= Total number of ICUs that responded for each group.

Table 18 Total FTE per Available Bed allocated for each Allied Health Service in 2023/24, by Classification

Allied Health Service	Total FTE/Available Bed (No. ICUs)				
	Tertiary	Metropolitan	Rural/Regional	Private	Total
Pharmacy (n=107)	0.07 (42)	0.07 (25)	0.07 (26)	0.04 (14)	**0.07 (107)**
Physiotherapy (n=110)	0.18 (41)	0.15 (25)	0.09 (29)	0.07 (15)	**0.15 (110)**
Speech Therapy (n=82)	0.03 (31)	0.04 (23)	0.03 (20)	0.01 (8)	**0.03 (82)**
Social Work (n=89)	0.06 (40)	0.08 (23)	0.04 (22)	0.01 (4)	**0.06 (89)**
Dietician (n=92)	0.05 (36)	0.05 (24)	0.04 (22)	0.02 (10)	**0.04 (92)**
Other* (n=52)	0.03 (24)	0.04 (10)	0.05 (14)	0.01 (4)	**0.04 (52)**

n= Total number of ICUs that provided FTE for each Allied Health Service. Number of sites that reported Allied Health FTE for each classification in brackets.

**Other – included Aboriginal Health Practitioner, Art Therapist, Diabetic Educator, Health Psychologist, Indigenous Liaison Officer, Music Therapist, Occupational Therapist, Palliative Care, Pastoral/Spiritual Care, Play Therapist, Podiatrist, Social Work Assistant, and Stomal Therapist.*

Safety and Quality – ICU Activities *continued*

Table 19 Proportion of Units Reporting Safety and Quality Activities in 2023/24, by Classification

Safety and Quality Activity	% ICUs Reporting Yes (No. ICUs)				
	Tertiary	Metropolitan	Rural/Regional	Private	Total
Weekly rounds conducted with infectious disease specialist and/or microbiologist (n=170)	100.0 (50/50)	100.0 (32/32)	70.7 (29/41)	34.0 (16/47)	**74.7 (127/170)**
Daily rounds conducted with a pharmacist (n=170)	94.0 (47/50)	90.6 (29/32)	78.0 (32/41)	38.3 (18/47)	**74.1 (126/170)**
Ongoing antibiotic stewardship program (n=172)	98.0 (49/50)	100.0 (32/32)	85.7 (36/42)	79.2 (38/48)	**90.1 (155/172)**
Regularly obtain ICU-specific antibiograms (n=163)	45.8 (22/48)	40.0 (12/30)	42.5 (17/40)	28.9 (13/45)	**39.3 (64/163)**
Regularly survey ICU patient/relative satisfaction (n=166)	85.6 (38/46)	68.8 (22/32)	68.3 (28/41)	80.9 (38/47)	**75.9 (126/166)**
Documented protocol, policy or guideline for identification and management of Sepsis (n=169)	95.9 (47/49)	90.6 (29/32)	95.2 (40/42)	87.0 (40/46)	**92.3 (156/169)**
Written information on Sepsis and Sepsis Survivorship for patients and families (n=157)	31.0 (13/42)	19.4 (6/31)	35.0 (14/40)	29.5 (13/44)	**29.3 (46/157)**

n= Total number of ICUs that responded for each Safety and Quality Activity. Number of sites reporting YES divided by total number of sites that responded in brackets.

Table 20 Proportion of Units Reporting Safety and Quality Resources in 2023/24, by Classification

Safety and Quality Resource	% ICUs Reporting Yes (No. ICUs)				
	Tertiary	Metropolitan	Rural/Regional	Private	Total
Sustainability initiative clinician or team (n=166)	89.6 (43/48)	59.4 (19/32)	34.1 (14/41)	46.7 (21/45)	**58.4 (97/166)**
Wellbeing clinician or team (n=169)	93.9 (46/49)	68.8 (22/32)	48.8 (20/41)	59.6 (28/47)	**68.6 (116/169)**
Aboriginal and Torres Strait Islander or Māori Healthcare Liaison/Support Officer (n=161)	98.0 (48/49)	93.5 (29/31)	92.7 (38/41)	45.0 (18/40)	**82.6 (133/161)**
Sepsis care coordinator (n=160)	28.6 (12/42)	29.0 (9/31)	21.4 (9/42)	26.7 (12/45)	**26.3 (42/160)**

n= Total number of ICUs that responded for each Safety and Quality Resource. Number of sites reporting YES divided by total number of sites that responded in brackets.

Table 21 Proportion of Units Reporting Sepsis Clinical Care in Australia and New Zealand, 2023/24

Sepsis Clinical Care	% ICUs Reporting Yes (No. ICUs)		
	Australia	New Zealand	Total
Documented protocol, policy or guideline for identification and management of Sepsis (n=169)	92.8 (141/152)	88.2 (15/17)	95.9 (156/169)
Sepsis care coordinator (n=160)	28.0 (40/143)	11.8 (2/17)	26.3 (42/160)
Written information on Sepsis and Sepsis Survivorship for patients and families (n=157)	30.5 (43/141)	18.8 (3/16)	29.3 (46/157)

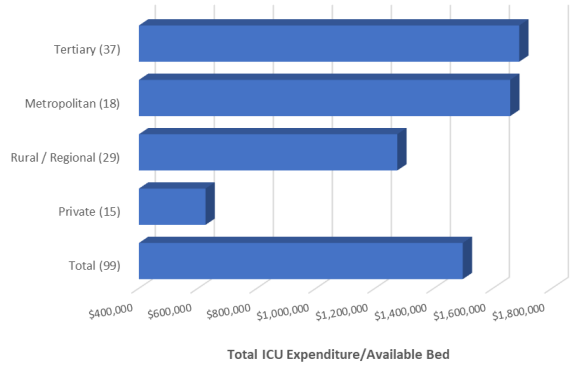
n= Total number of ICUs that responded for each Safety and Quality Resource. Number of sites reporting YES divided by total number of sites that responded in brackets.

ICU Cost

Total Expenditure

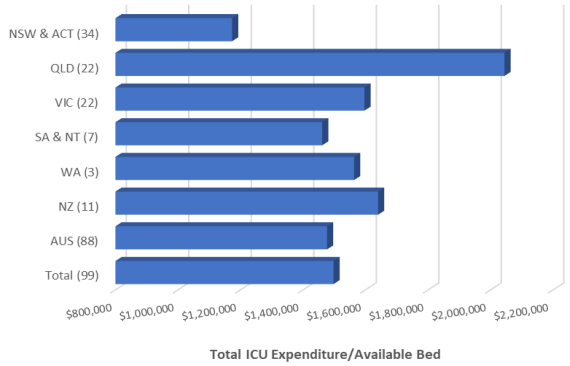
In 2023/24, the average annual cost per available bed was $1,497,615 (n=99).

Figure 48 ICU Expenditure per Available Bed in 2023/24, by Classification



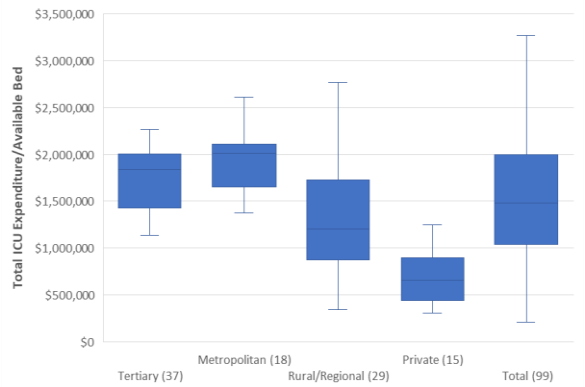
Data from 99 contributing ICUs.

Figure 49 ICU Expenditure per Available Bed in 2023/24, by Region



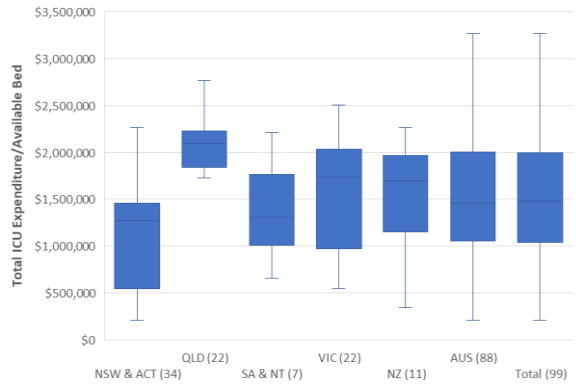
Data from 99 contributing ICUs. TAS did not provide ICU expenditure for 2023/24.

Figure 50 ICU Expenditure per Available Bed (Median and IQR) in 2023/24, by Classification



Data from 99 contributing ICUs.

Figure 51 ICU Expenditure per Available Bed (Median and IQR) in 2023/24, by Region



Data from 99 contributing ICUs. TAS did not provide ICU expenditure for 2023/24. WA (3) excluded for individual reporting to avoid identification of individual ICUs.

Paediatric Intensive Care

Paediatric Patients
A patient < 16 years of age.

Bed Stock

Table 22 Physical and Available PICU Beds per 100,000 Paediatric Population in 2023/24, by Region

Region	Paediatric Population	Physical Beds	Available Beds	Physical Beds/100,000 Paediatric Population	Available Beds/100,000 Paediatric Population
ACT	88,230				
NSW	1,592,639	56	47	3.5	3.0
NT	54,668				
QLD	1,079,856	59	34	5.5	3.1
SA	334,141	12	12	3.6	3.6
TAS	99,800	4	4	4.0	4.0
VIC	1,298,280	40	31	3.1	2.4
WA	579,701	20	18	3.5	3.1
NZ	1,049,060	30	26	2.9	2.5
AUS*	5,128,141	191	146	3.7	2.8
Total	**6,176,375**	**221**	**172**	**3.6**	**2.8**

Data from 9 Children's Hospital and 4 General Hospital (Tertiary) paediatric intensive care units.

AUS Total population includes Other Territories comprising Jervis Bay Territory, Christmas Island, the Cocos (Keeling) Islands and Norfolk Island and is based on under 16 years of age.*

https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/jun-2024
https://infoshare.stats.govt.nz/

Admissions and Beds

Table 23 Paediatric Intensive Care Admissions in 2023/24, by Region

Region	Paediatric Beds		Paediatric Admissions <16yrs			Paediatric Admissions/100,000 Paediatric Population
	Physical	Available	Non-PICU Admissions	PICU Admissions	Total Admissions	
ACT			79		79	89.5
NSW	56	47	167	1,206	1,373	89.8
NT			84		84	153.7
QLD	59	34	288	2,707	2,995	286.1
SA	12	12	23	667	690	220.9
TAS	4	4	41	383	424	424.8
VIC	40	31	434	2,176	2,610	209.4
WA	20	18	35	1,173	1,208	213.9
NZ	30	26	1,063	1,186	2,249	216.5
AUS*	191	146	1,151	8,312	9,463	191.1
Total	**221**	**172**	**2,214**	**9,498**	**11,712**	**195.5**

Paediatric beds data reported from 7 Children's Hospital and 4 General Hospital (Tertiary) paediatric intensive care units. Paediatric admissions data reported from 146 non-PICUs (General ICUs) and 11 PICUs (7 Children's Hospital PICUs and 4 General Hospital PICUs).

AUS Total paediatric population includes Other Territories comprising Jervis Bay Territory, Christmas Island, the Cocos (Keeling) Islands and Norfolk Island and is based on under 16 years of age.*

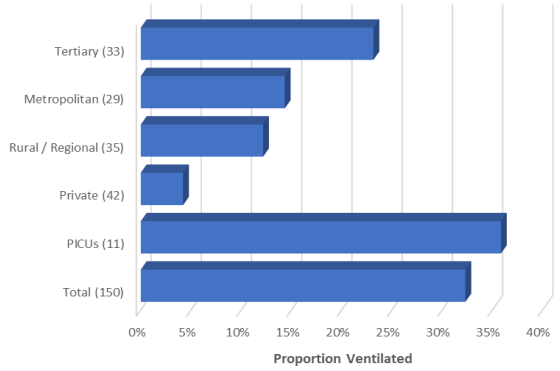
https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/jun-2024
https://infoshare.stats.govt.nz/

Paediatric Intensive Care *continued*

Ventilation

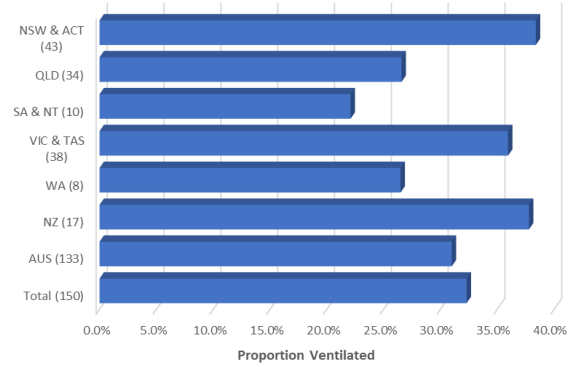
In 2023/24, the overall proportion of invasively ventilated paediatric patients reported was 32.3% (n=150).

Figure 52 Paediatric Ventilation Rate in 2023/24, by Classification



Data from 150 contributing ICUs. PICUs are separated from Tertiary ICUs and includes data from 7 Children's Hospital PICUs and 4 General Hospital PICUs.

Figure 53 Paediatric Ventilation Rate in 2023/24, by Region



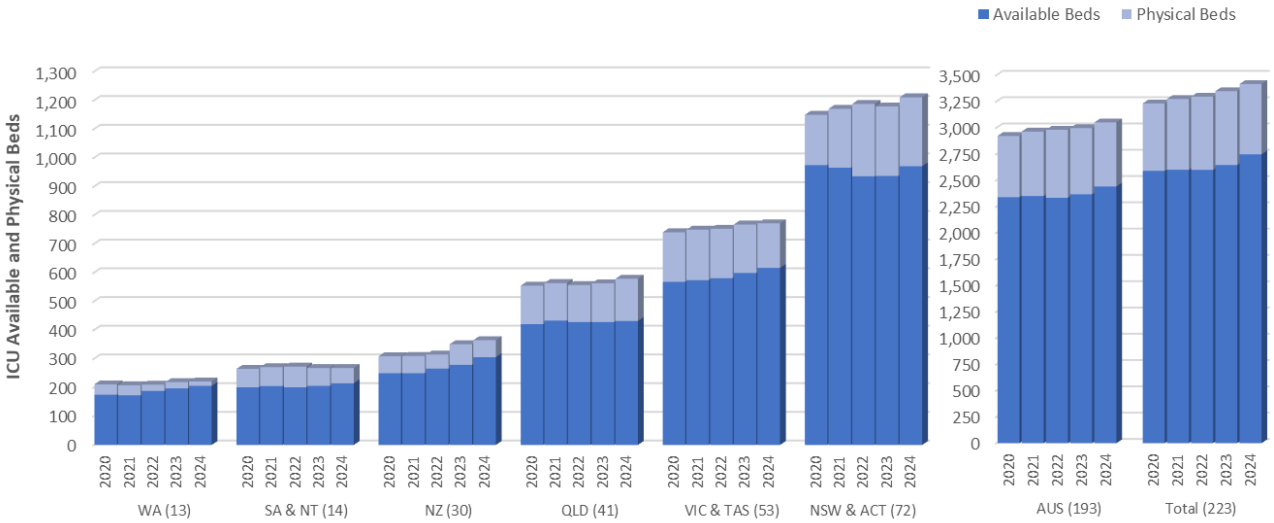
Data from 150 contributing ICUs (7 Children's Hospital PICUs, 4 General Hospital PICUs, and 139 General ICUs).

Adult and Paediatric Intensive Care Trend Data – Bed Stock

Bed Stock

The rate of growth reported in physical and available ICU beds, based on consistently contributing ICUs over the last 5 financial years was 5.7% and 6.1% respectively, compared with a population growth rate of 5.9%.

Figure 54 Number of ICU Available and Physical Beds over 5 years, by Region



Data from 223 consistently contributing ICUs that reported both available and physical beds.

The actual growth rate in physical and available beds over the last 5 financial years was 6.6% and 6.9% respectively.

Table 24 Physical Beds over 5 years, by Region

Region	2019/20 (n=223)	2020/21 (n=223)	2021/22 (n=225)	2022/23 (n=225)	2023/24 (n=226)
ACT	63	63	68	68	70
NSW	1,087	1,108	1,120	1,111	1,141
NT	28	28	28	28	28
QLD	555	564	563	563	579
SA	237	243	245	240	240
TAS	64	64	63	73	62
VIC	677	686	690	695	726
WA	211	208	210	225	227
NZ	309	310	320	356	370
AUS	2,922	2,964	2,987	3,003	3,073
Total	**3,231**	**3,274**	**3,307**	**3,359**	**3,443**

Data from contributing ICUs and follow-up with non-contributors. n= Total number of ICUs that reported physical beds data per financial year.

Adult and Paediatric Intensive Care Trend Data – Bed Stock *continued*

Table 25 Available Beds over 5 years, by Region

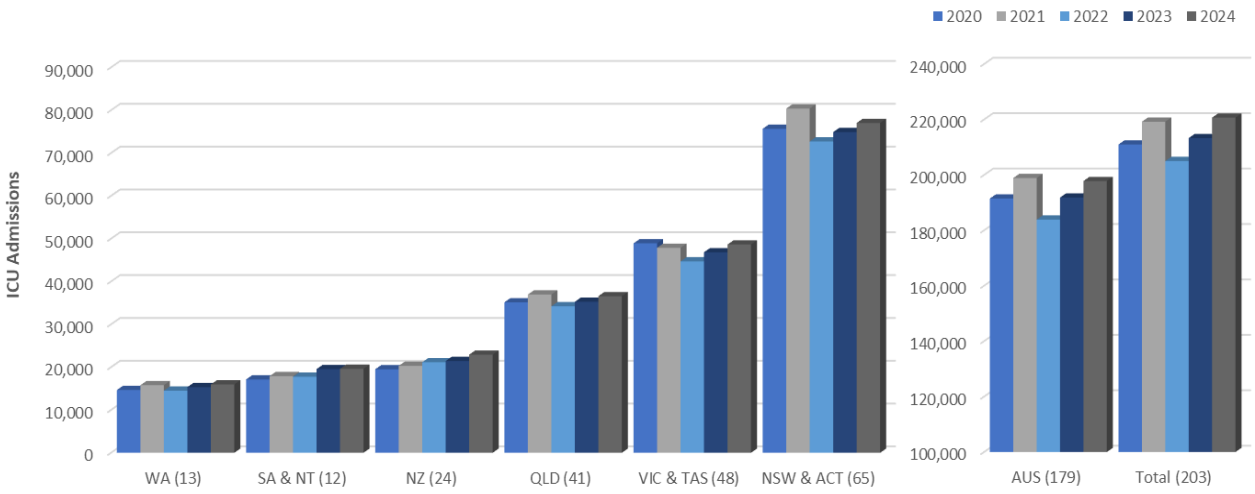
Region	2019/20 (n=223)	2020/21 (n=223)	2021/22 (n=225)	2022/23 (n=225)	2023/24 (n=226)
ACT	48	48	44	44	54
NSW	927	918	892	893	917
NT	24	24	24	24	24
QLD	421	433	430	428	432
SA	177	181	177	182	191
TAS	46	40	42	44	43
VIC	522	534	539	555	582
WA	175	173	188	202	211
NZ	250	250	269	283	311
AUS	2,340	2,351	2,336	2,372	2,454
Total	**2,590**	**2,601**	**2,605**	**2,655**	**2,765**

Data from contributing ICUs and follow-up with non-contributors. n= Total number of ICUs that reported available beds data per financial year in brackets.

Adult and Paediatric Intensive Care Trend Data – Admissions and Discharges

Admissions

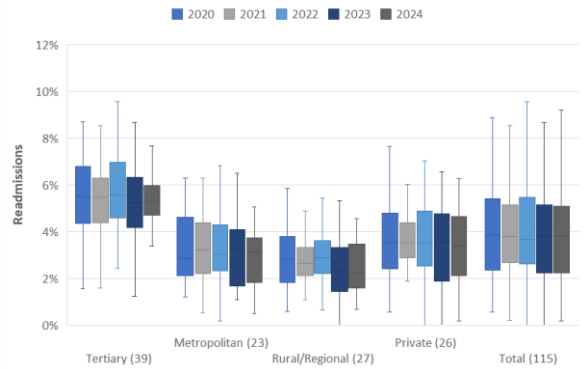
Figure 55 ICU Admissions over 5 years, by Region



Data from 203 consistently contributing ICUs.

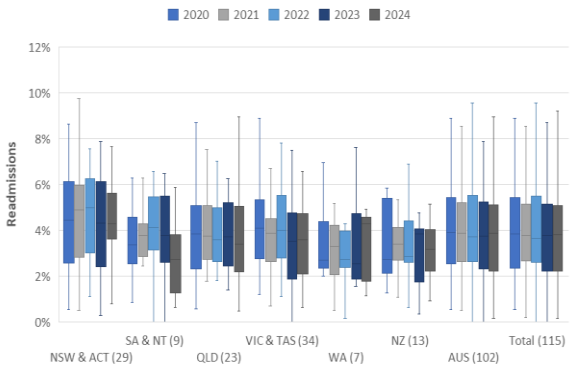
Readmissions

Figure 56 Readmission Rate (Median and IQR) over 5 years, by Classification



Data from 115 consistently contributing ICUs.

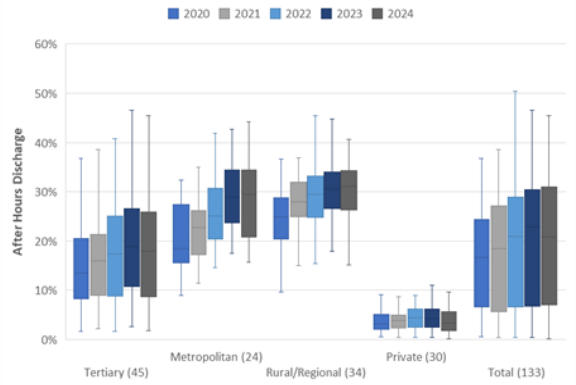
Figure 57 Readmission Rate (Median and IQR) over 5 years, by Region



Data from 115 consistently contributing ICUs.

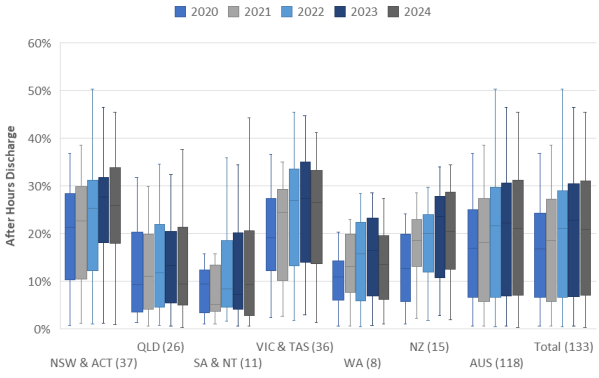
After Hours Discharge

Figure 58 After Hours Discharge Rate (Median and IQR) over 5 years, by Classification



Data from 133 consistently contributing ICUs.

Figure 59 After Hours Discharge Rate (Median and IQR) over 5 years, by Region



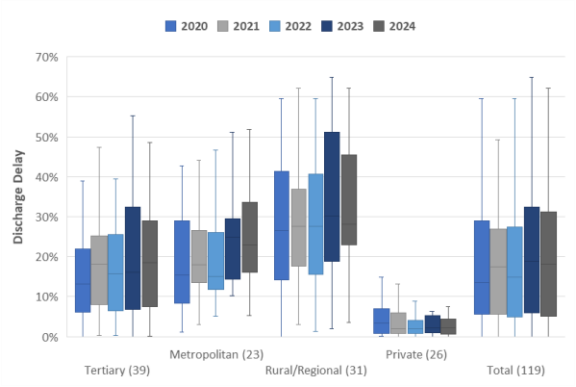
Data from 133 consistently contributing ICUs.

Adult and Paediatric Intensive Care Trend Data – Admissions and Discharges *continued*

Discharge Delay (Exit Block)

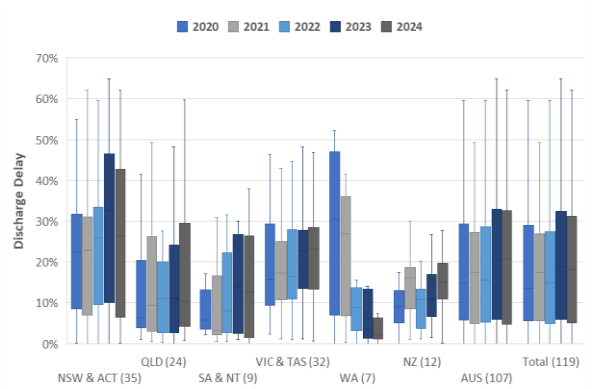
Discharge delay indicator was updated in 2018/19 from 6 to 12 hours to conform with the ACHS Exit Block indicator.

Figure 60 Discharge Delay Rate (Median and IQR) over 3 years, by Classification



Data from 119 consistently contributing ICUs.

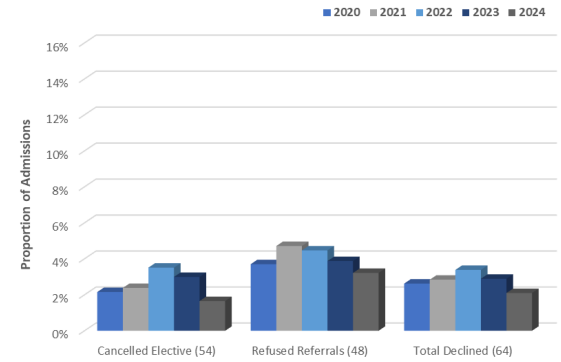
Figure 61 Discharge Delay Rate (Median and IQR) over 3 years, by Region



Data from 119 consistently contributing ICUs.

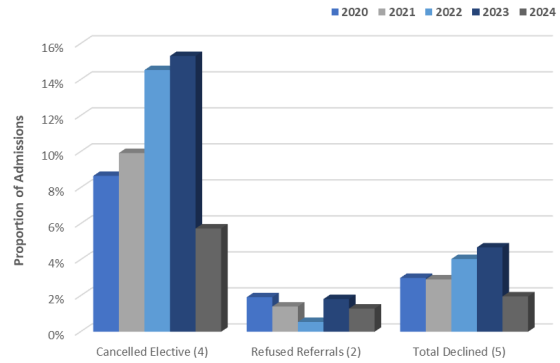
Declined Admissions Due to Inadequate Resources

Figure 62 Declined Admission Rate in Australia over 5 years



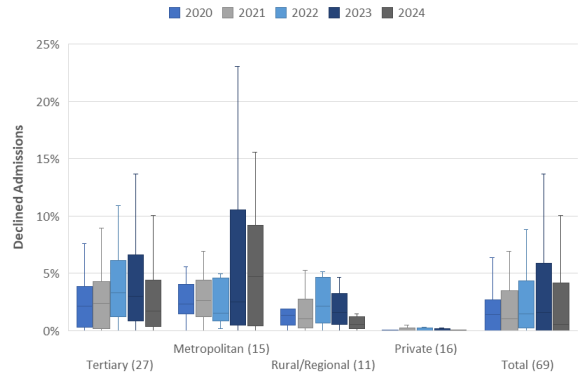
Consistently contributing ICUs. Number of ICUs for each group in brackets.

Figure 63 Declined Admission Rate in New Zealand over 5 years



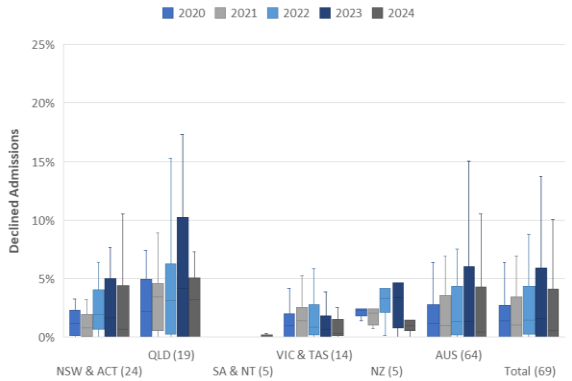
Consistently contributing ICUs. Number of ICUs for each group in brackets.

Figure 64 Overall Declined Admission Rate (Median and IQR) in Australia and New Zealand over 5 years, by Classification



Data from 69 consistently contributing ICUs.

Figure 65 Overall Declined Admission Rate (Median and IQR) in Australia and New Zealand over 5 years, by Region

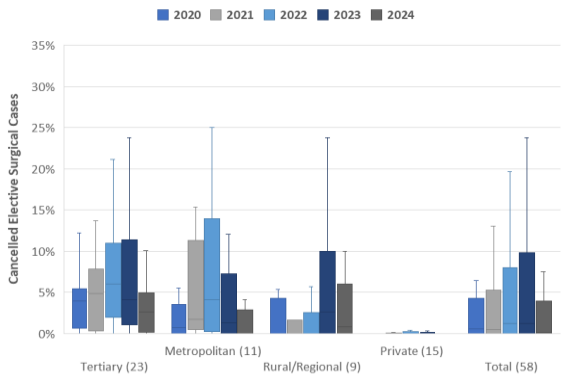


Data from 69 consistently contributing ICUs. WA (2) excluded due to insufficient consistently contributing ICUs.

Adult and Paediatric Intensive Care Trend Data – Admissions and Discharges *continued*

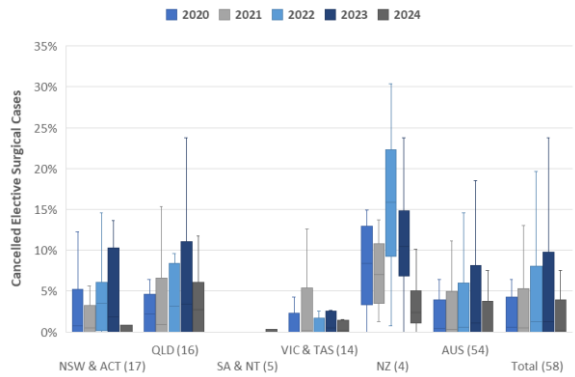
Cancelled Elective Surgery Admissions Due to Inadequate Resources

Figure 66 Cancelled Elective Surgery Rate (Median and IQR) over 5 years, by Classification



Data from 58 consistently contributing ICUs.

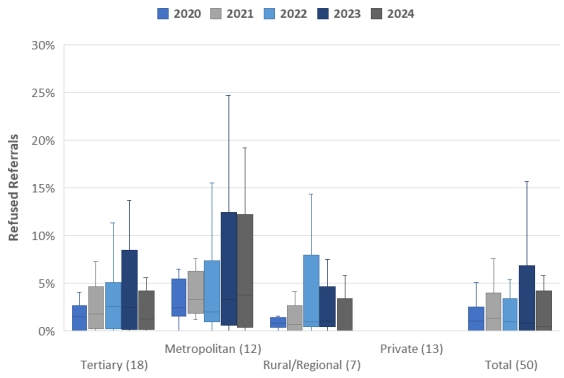
Figure 67 Cancelled Elective Surgery Rate (Median and IQR) over 5 years, by Region



Consistently contributing ICUs. WA (2) excluded due to insufficient consistently contributing ICUs.

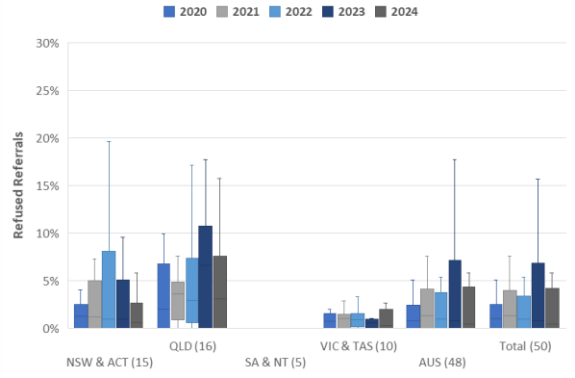
Refused Unplanned Admissions Due to Inadequate Resources

Figure 68 Refused Referral Rate (Median and IQR) over 5 years, by Classification



Data from 50 consistently contributing ICUs.

Figure 69 Refused Referral Rate (Median and IQR) over 5 years, by Region

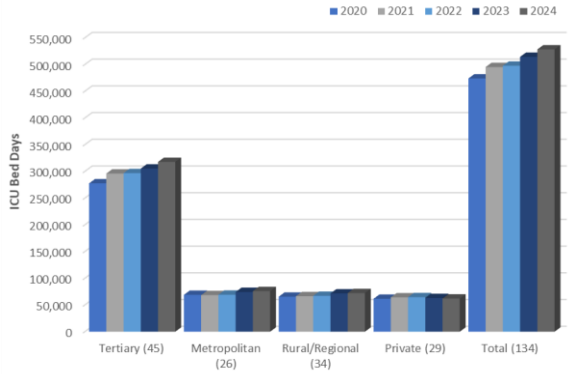


Consistently contributing ICUs. WA (2) and NZ (2) excluded due to insufficient consistently contributing ICUs.

Adult and Paediatric Intensive Care Trend Data – ICU Bed Days and Occupancy

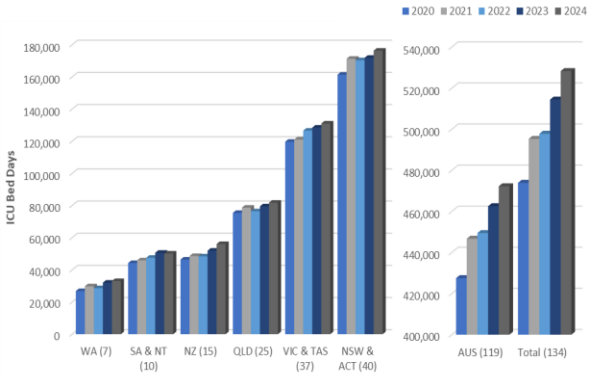
ICU Bed Days

Figure 70 ICU Bed Days over 5 years, by Classification



Data from 134 consistently contributing ICUs.

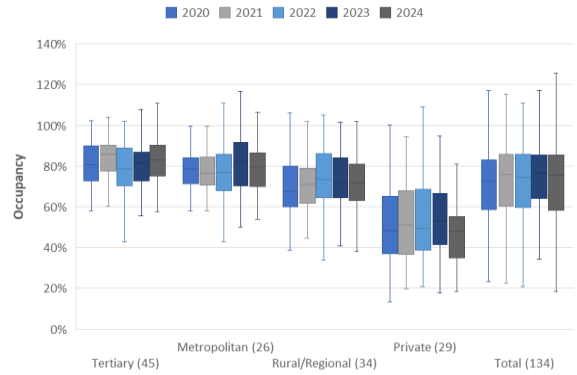
Figure 71 ICU Bed Days over 5 years, by Region



Data from 134 consistently contributing ICUs.

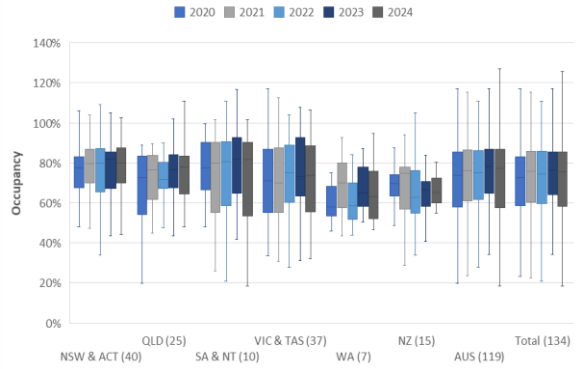
Occupancy

Figure 72 Occupancy Rate (Median and IQR) over 5 years, by Classification



Data from 134 consistently contributing ICUs.

Figure 73 Occupancy Rate (Median and IQR) over 5 years, by Region



Data from 134 consistently contributing ICUs.

After Hours Discharge and Occupancy

Figure 74 Scatter Plot of Occupancy versus After Hours Discharge over 5 years

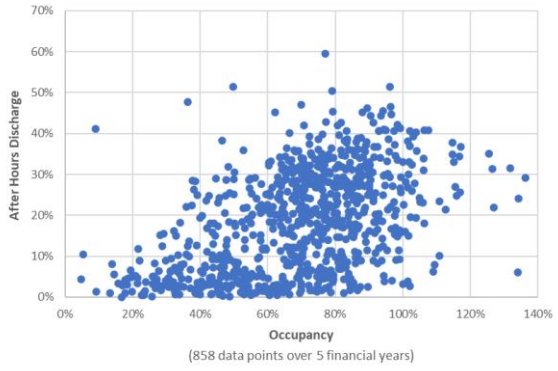


Figure 74 shows that a higher occupancy rate within a unit correlates with a higher rate of after hours discharge.

Declined Admission and Occupancy

Figure 75 Scatter Plot of Occupancy versus Declined Admissions over 5 years

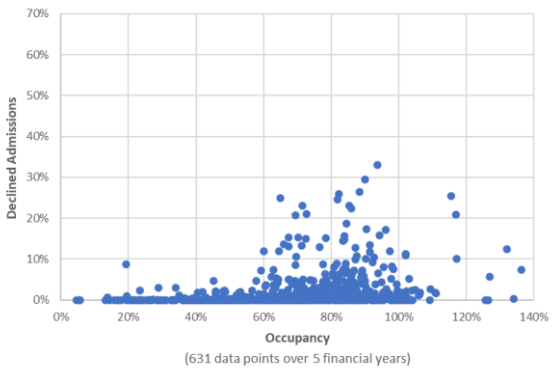
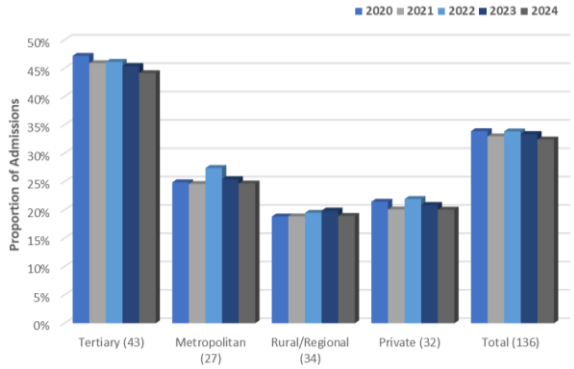


Figure 75 shows that a higher occupancy rate within a unit correlates with a higher rate of declined admissions.

Adult and Paediatric Intensive Care Trend Data - Ventilation

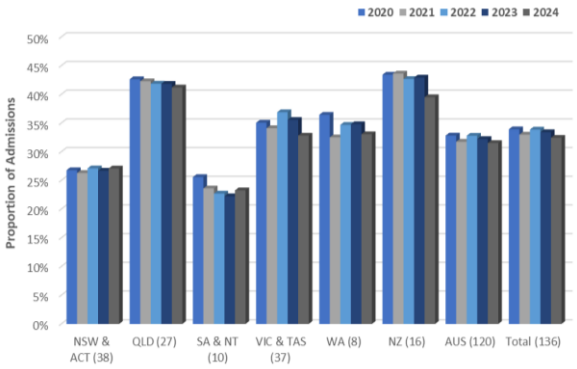
Ventilation

Figure 76 Total Rate of Invasive Ventilation over 5 years, by Classification



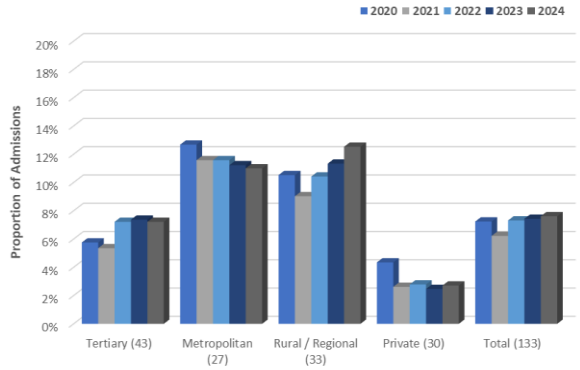
Data from 136 consistently contributing ICUs.

Figure 77 Total Rate of Invasive Ventilation over 5 years, by Region



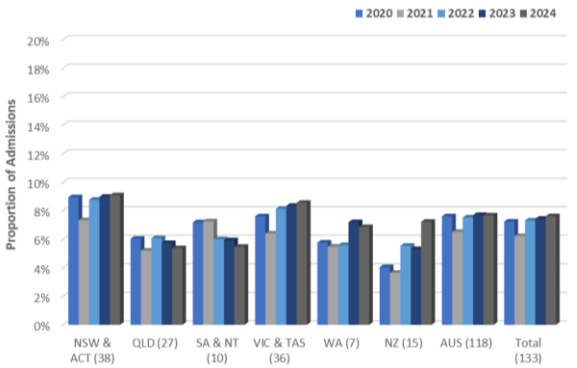
Data from 136 consistently contributing ICUs.

Figure 78 Total Rate of Non-Invasive Ventilation over 5 years, by Classification



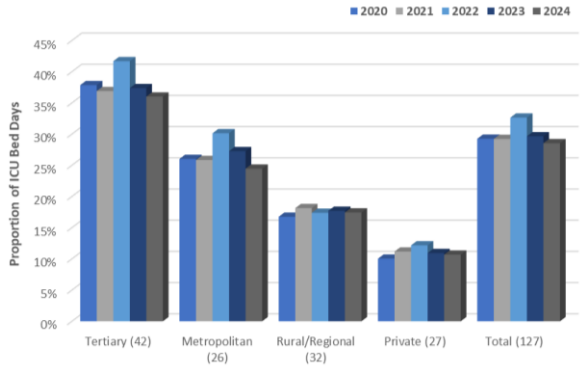
Data from 133 consistently contributing ICUs.

Figure 79 Total Rate of Non-Invasive Ventilation over 5 years, by Region



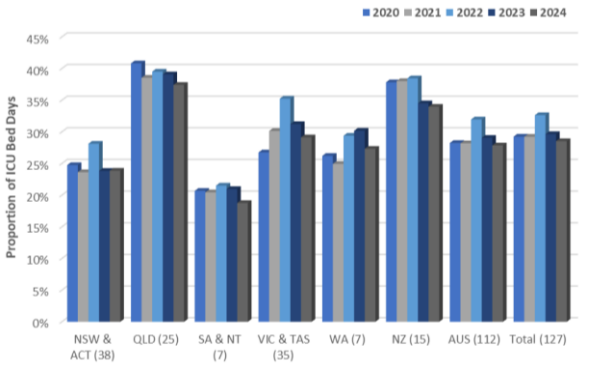
Data from 133 consistently contributing ICUs.

Figure 80 Duration of Invasive Ventilation over 5 years, by Classification



Data from 127 consistently contributing ICUs.

Figure 81 Duration of Invasive Ventilation over 5 years, by Region

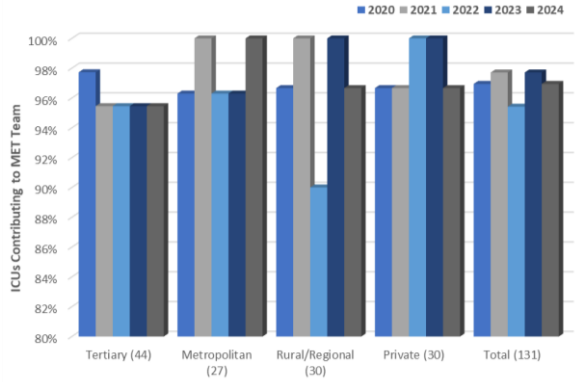


Data from 127 consistently contributing ICUs.

Adult and Paediatric Intensive Care Trend Data – Recognition and Response to Clinical Deterioration

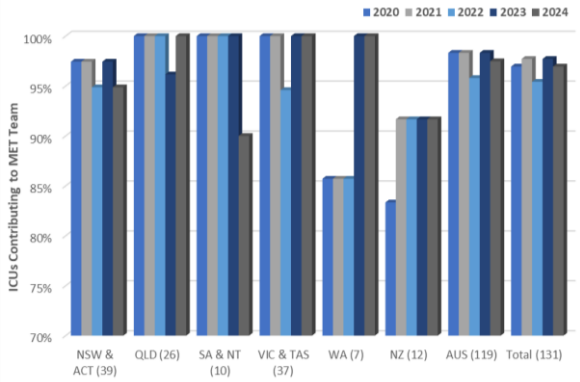
Medical Emergency Team Service

Figure 82 Proportion of ICUs Contributing Staff to MET Service over 5 years, by Classification



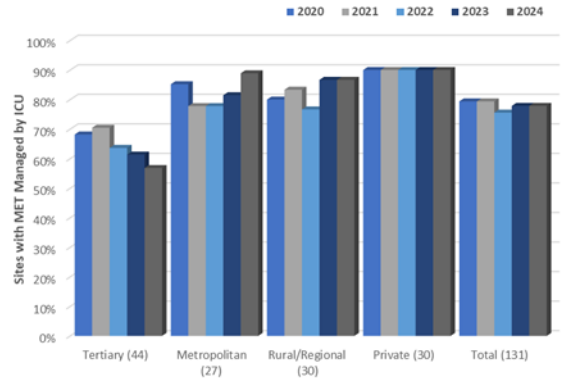
Data from 131 consistently contributing ICUs.

Figure 83 Proportion of ICUs Contributing Staff to MET Service over 5 years, by Region



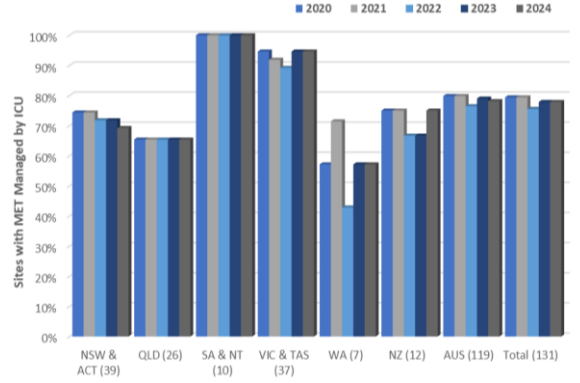
Data from 131 consistently contributing ICUs

Figure 84 Proportion of MET Service Managed by ICUs over 5 years, by Classification



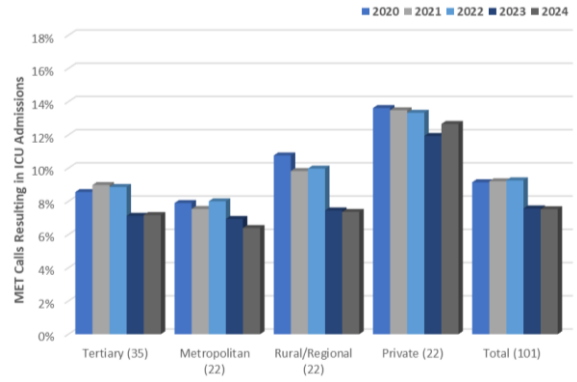
Data from 131 consistently contributing ICUs.

Figure 85 Proportion of MET Service Managed by ICUs over 5 years, by Region



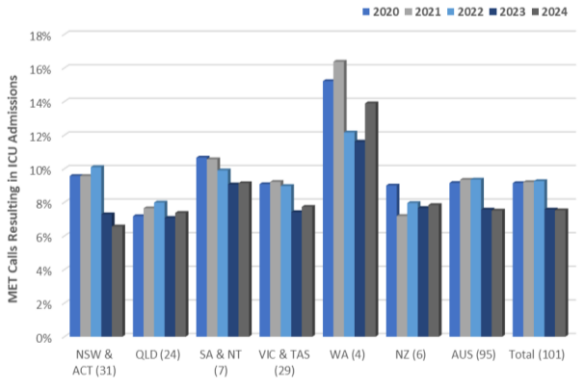
Data from 131 consistently contributing ICUs.

Figure 86 Proportion of MET Calls Resulting in ICU Admissions over 5 years, by Classification



Data from 101 consistently contributing ICUs.

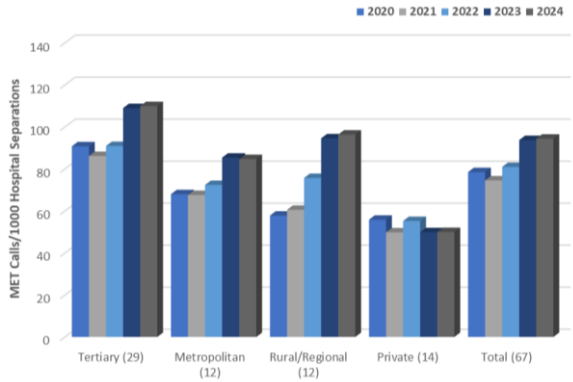
Figure 87 Proportion of MET Calls Resulting in ICU Admissions over 5 years, by Region



Data from 101 consistently contributing ICUs.

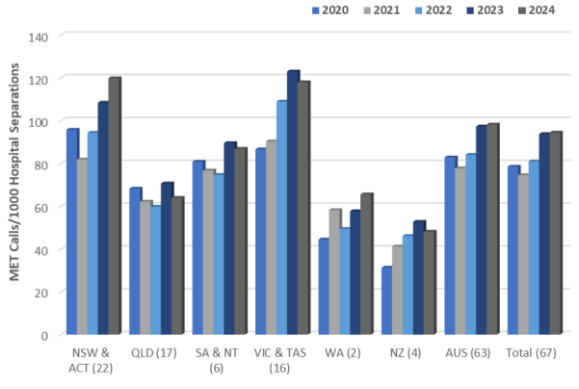
Adult and Paediatric Intensive Care Trend Data – Recognition and Response to Clinical Deterioration *continued*

Figure 88 MET Calls per 1000 Hospital Separations over 5 years, by Classification



Data from 67 consistently contributing ICUs.

Figure 89 MET Calls per 1000 Hospital Separations over 5 years, by Region

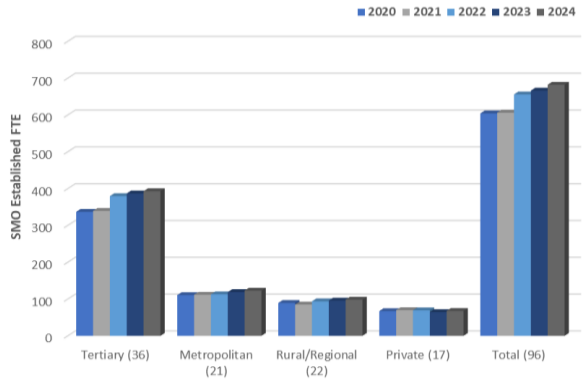


Data from 67 consistently contributing ICUs.

Adult and Paediatric Intensive Care Trend Data - Workforce

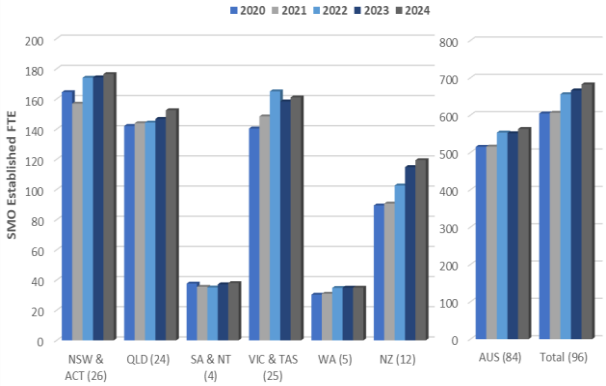
Workforce - Senior Medical Officer

Figure 90 Total SMO Established FTE over 5 years, by Classification



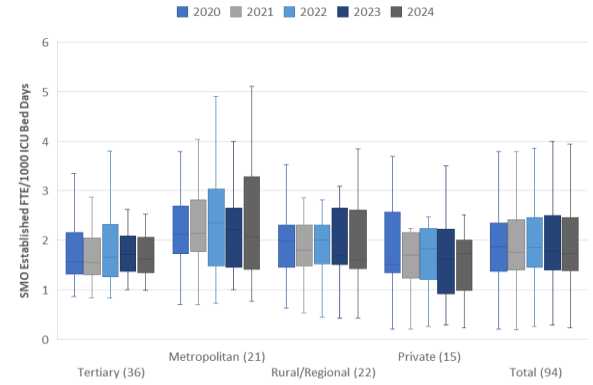
Data from 96 consistently contributing ICUs.

Figure 91 Total SMO Established FTE over 5 years, by Region



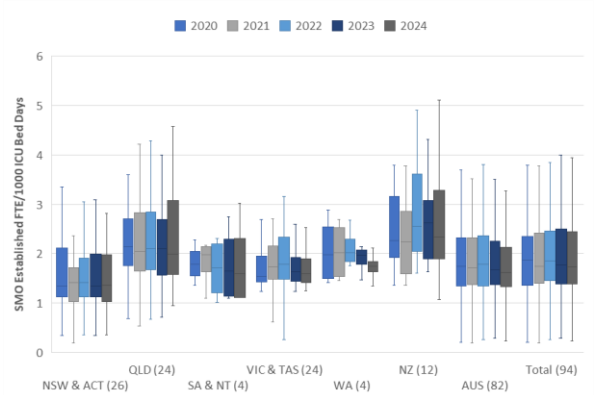
Data from 96 consistently contributing ICUs.

Figure 92 SMO Established FTE (Median and IQR) per 1000 ICU Bed Days over 5 years, by Classification



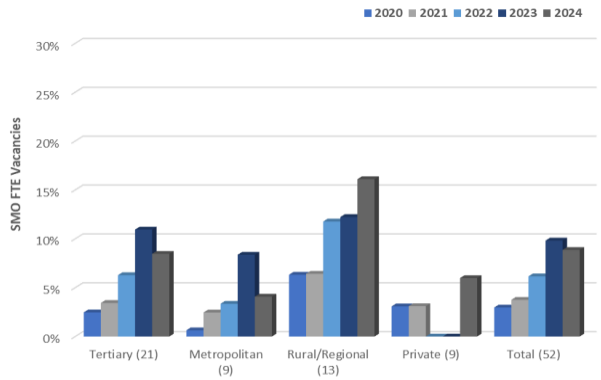
Data from 94 consistently contributing ICUs.

Figure 93 SMO Established FTE (Median and IQR) per 1000 ICU Bed Days over 5 years, by Region



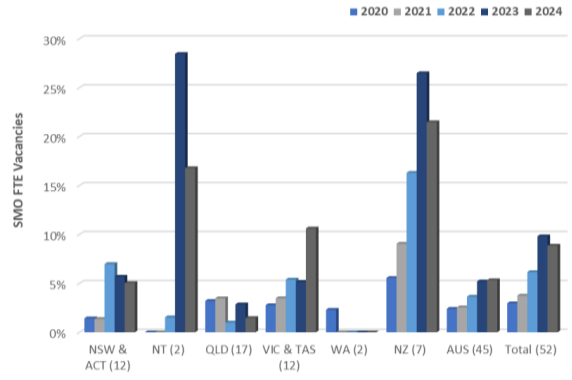
Data from 94 consistently contributing ICUs.

Figure 94 Proportion of SMO FTE Vacancies over 5 years, by Classification



Data from 52 consistently contributing ICUs.

Figure 95 Proportion of SMO FTE Vacancies over 5 years, by Region

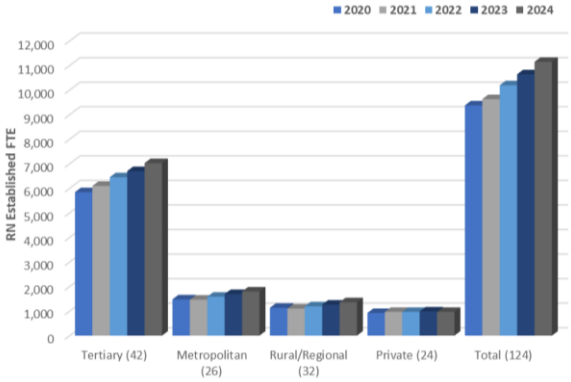


Data from 52 consistently contributing ICUs. SA did not have any consistently contributing ICUs.

Adult and Paediatric Intensive Care Trend Data – Workforce *continued*

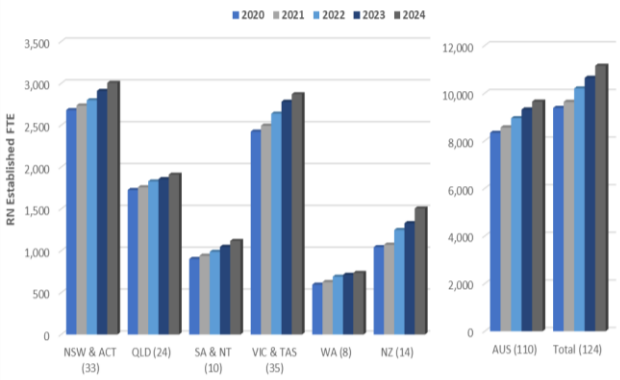
Workforce – Registered Nurse

Figure 96 Total RN Established FTE over 5 years, by Classification



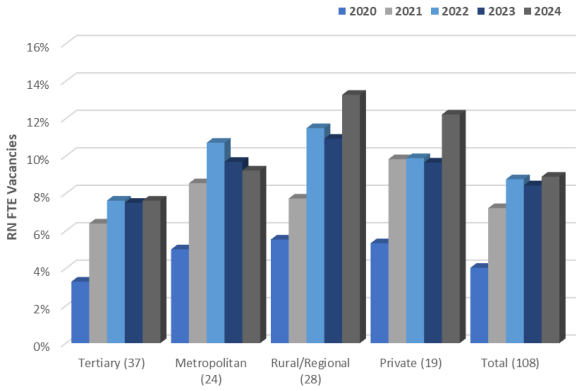
Data from 124 consistently contributing ICUs.

Figure 97 Total RN Established FTE over 5 years, by Region



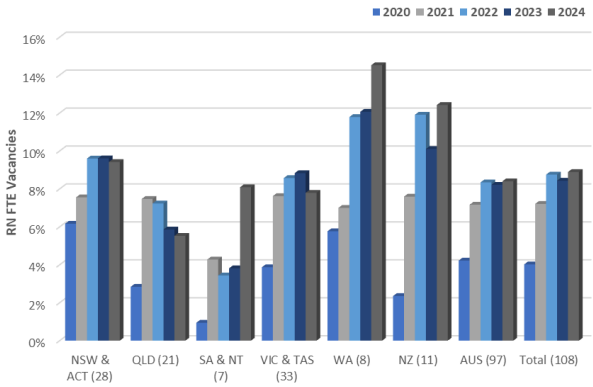
Data from 124 consistently contributing ICUs.

Figure 98 Proportion of RN FTE Vacancies over 5 years, by Classification



Data from 108 consistently contributing ICUs.

Figure 99 Proportion of RN FTE Vacancies over 5 years, by Region

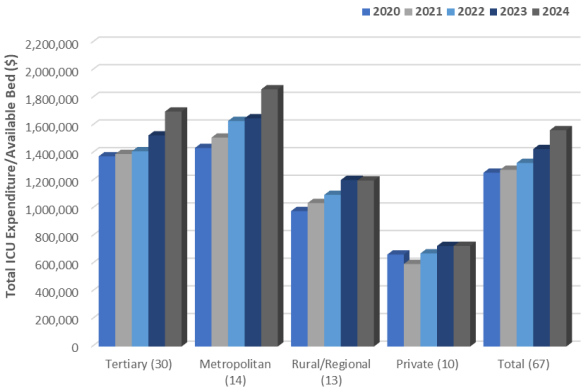


Data from 108 consistently contributing ICUs.

Adult and Paediatric Intensive Care Trend Data – ICU Cost

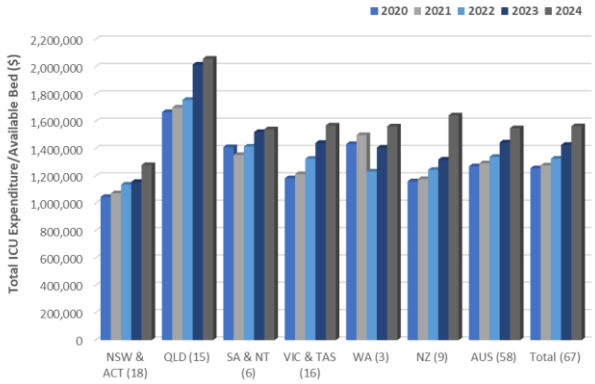
Total Expenditure

Figure 100 ICU Expenditure per Available Bed over 5 years, by Classification



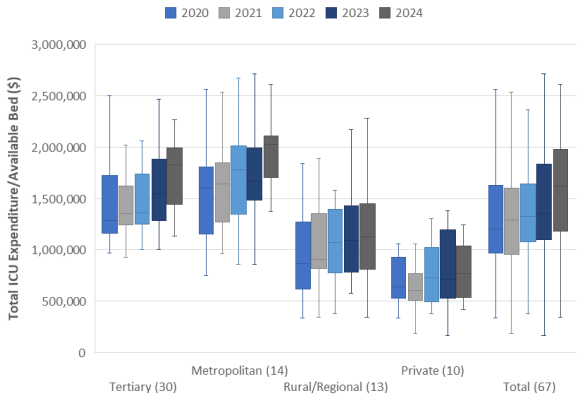
Data from 67 consistently contributing ICUs.

Figure 101 ICU Expenditure per Available Bed over 5 years, by Region



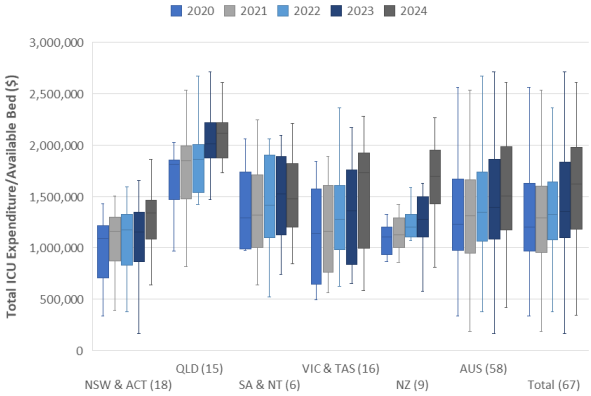
Data from 67 consistently contributing ICUs.

Figure 102 ICU Expenditure per Available Bed (Median and IQR) over 5 years, by Classification



Data from 67 consistently contributing ICUs.

Figure 103 ICU Expenditure per Available Bed (Median and IQR) over 5 years, by Region



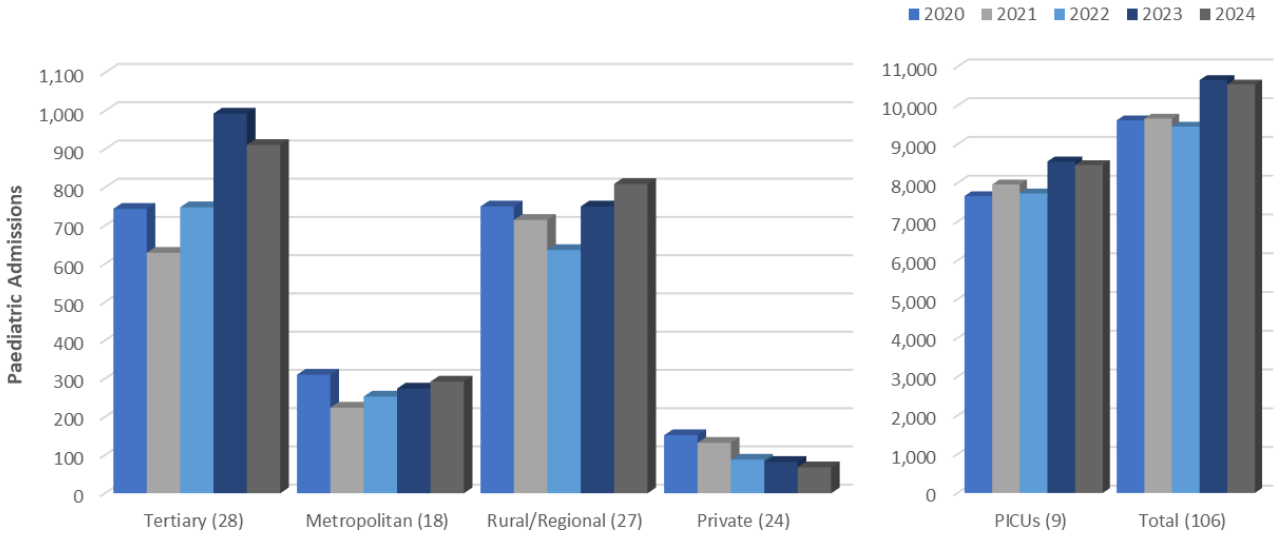
Data from 67 consistently contributing ICUs. WA (3) excluded for individual reporting to avoid identification of individual ICUs.

Paediatric Intensive Care Trend Data

Paediatric Patients
A patient < 16 years of age.

Admissions

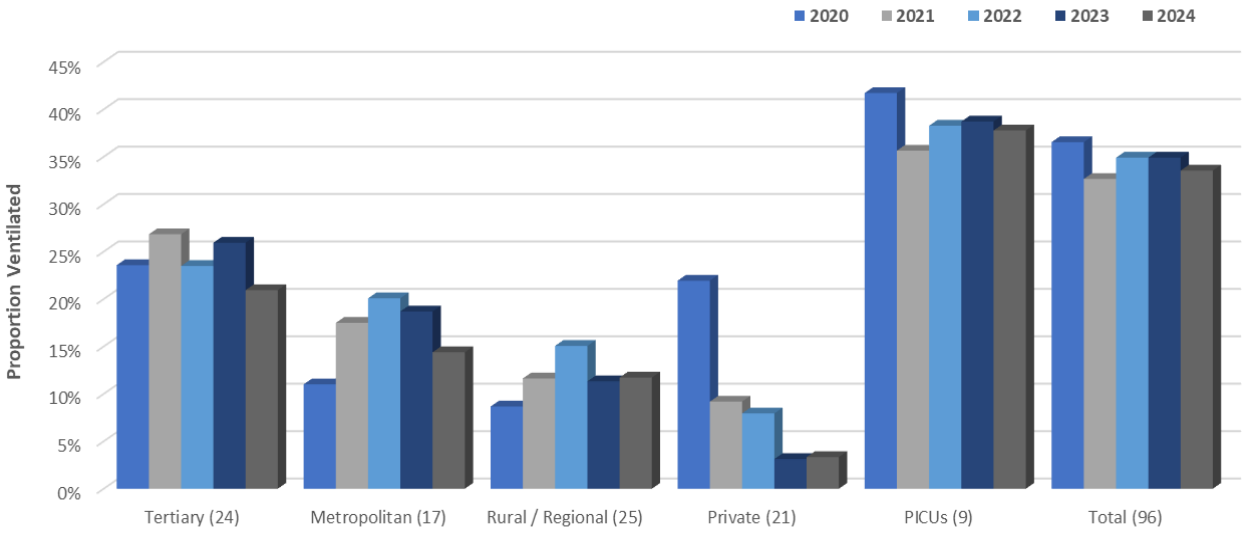
Figure 104 Paediatric Admissions over 5 years, by Classification



Data from 106 consistently contributing ICUs. PICUs are separated from Tertiary ICUs and includes data from 6 Children's Hospital PICUs and 3 General Hospital PICUs.

Ventilation

Figure 105 Paediatric Ventilation over 5 years, by Classification



Data from 96 consistently contributing ICUs. PICUs are separated from Tertiary ICUs and includes data from 6 Children's Hospital PICUs and 3 General Hospital PICUs.

Appendix 1 – CCR Survey Methodology

Survey Instrument

The online survey was sent to 226 ICUs in Australia and New Zealand in September 2024 with the return of surveys accepted until mid-March 2025. Follow up of non-submitted surveys was by email and telephone.

Data Quality

The survey is reliant on self-reporting by staff members at the contributing ICUs. To assist with this process, supporting documents were provided to assist contributors in understanding key terms and to provide the framework for determining ICU levels. Where applicable, CCR endeavours to follow definitions listed in the National Health Data Dictionary.

Submitted data was checked and any identified issues or discrepancies, both within each survey and relating to answers provided in previous surveys, confirmed with the survey contact nominated by the ICUs. Not all questions were answered by all ICUs, and despite follow-up of missing data, questions remain unanswered for various reasons. To account for this, the number of contributing ICUs is indicated in each section below.

Data Analysis

The online survey tool enters data into a Microsoft SQL server database. Data extraction and analysis was undertaken with Microsoft SQL server and Microsoft Excel.

Presentation of Data

Data is presented in tables and various types of graphs. Data presented is for the 2023/24 financial year (1 July 2023 to 30 June 2024), unless otherwise stated. Box and whisker plots represent the range, interquartile range and median, unless specifically indicated otherwise. Effort has been taken to avoid identifying individual ICUs, see notes below each graph for details.

Data Items

Extensive data relating to the resources and activity of ICUs in Australia and New Zealand is collected by the CCR survey, however, to ensure only the most relevant information is presented, not all data items are presented in this report. The data not presented here includes staffing models but is available upon request from ANZICS CORE. Please complete an information request form available here: https://www.anzics.com.au/data-access-and-publication-policy/

Comparison Groups

This report separates ICUs into two types of comparison groups: classification and region. ICUs are classified as one of four hospital classifications: Tertiary, Metropolitan, Rural/Regional and Private. In the paediatric section – Children's Hospital PICUs and General Hospital PICUs are separated from other Tertiary ICUs. Classification is determined by various factors, including geographical location and patient case mix. Effort is taken to align classifications across all ANZICS CORE registries. The location of ICUs in Australia and New Zealand is separated into nine regions: eight states and territories in Australia, and New Zealand as one region.

Information on the level and type of ICU was also collected in the survey but not used as a comparison for the purpose of this report.

ICU Beds

For the purposes of the CCR Survey, beds are categorised as general ICU, other ICU and High Dependency Unit (HDU).

Physical and Available Beds can be described in any category of bed. For this report, beds are reported as physical and available and not broken down by category.

Appendix 1 – CCR Survey Methodology *continued*

ICU Activity

The CCR Survey collects data relating to Adult and Paediatric patient admissions to an ICU, including admissions, bed days, readmissions, admission source, discharge destination, patient ventilation and activity indicators. Definitions of these activities are detailed in the respective sections of this report.

Intensive Care Workforce

Data is collected on medical, nursing, and allied health staff within ICUs and reported in the workforce section. Extensive data is collected profiling both medical and nursing staff, however for the purposes of this report, details of staffing models have not been included but are available upon request from ANZICS CORE. Please complete an information request form available here: https://www.anzics.com.au/data-access-and-publication-policy/

Changes over Time

In addition to reporting on the 2023/24 financial year, this report makes comparisons against previous survey years. As different ICUs submitted surveys each year, the time series analysis includes only data from ICUs that consistently submitted a survey in all the years in question. This was done to prevent differences in the combination of ICUs masking any trends in changed resources of activity over time. The number of ICUs included in each time series analysis is indicated in each section.

Population

For analysis of data in relation to population, estimated population data at the end of June 2024 financial year was used. Data was obtained from the Australian Bureau of Statistics and Statistics New Zealand. Population was 27,202,809 for Australia and 5,332,800 for New Zealand.

Sources:

https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/jun-2024
https://infoshare.stats.govt.nz/

Appendix 2 – ICU Bed Stock

Table 26 Physical and Available Beds per 100,000 Population in 2023/24, by Region

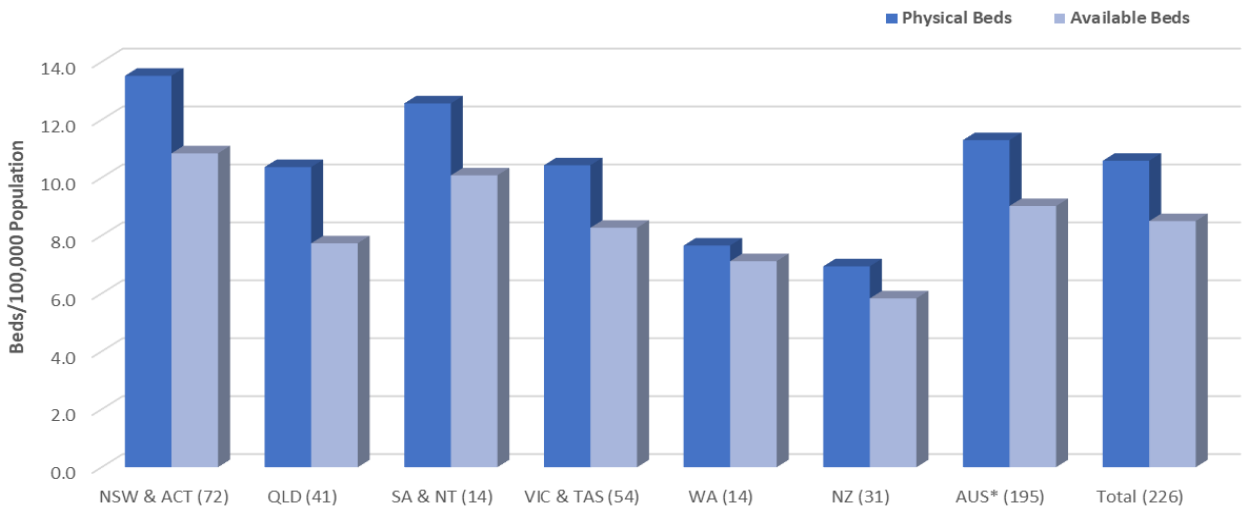
Region	Population	No. ICUs	Physical Beds	Available Beds	Available Beds as % of Physical Beds	Physical Beds/100,000 Population	Available Beds/100,000 Population
ACT	474,132	5	70	54	77.1	14.8	11.4
NSW	8,484,357	67	1,141	917	80.4	13.4	10.8
NT	255,100	2	28	24	85.7	11.0	9.4
QLD	5,586,322	41	579	432	74.6	10.4	7.7
SA	1,878,029	12	240	191	79.6	12.8	10.2
TAS	575,366	5	62	43	69.4	10.8	7.5
VIC	6,981,352	49	726	582	80.2	10.4	8.3
WA	2,965,159	14	227	211	93.0	7.7	7.1
NZ	5,332,800	31	370	311	84.1	6.9	5.8
AUS*	27,204,809	195	3,073	2,454	79.9	11.3	9.0
Total	**32,532,617**	**226**	**3,443**	**2, 765**	**80.3**	**10.6**	**8.5**

Data from 2023/24 contributing ICUs and follow-up with non-contributors.

AUS Total population includes Other Territories comprising Jervis Bay Territory, Christmas Island, the Cocos (Keeling) Islands and Norfolk Island.*

https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/jun-2024
https://infoshare.stats.govt.nz/

Figure 106 Physical and Available Beds per 100,000 Population in 2023/24, by Region



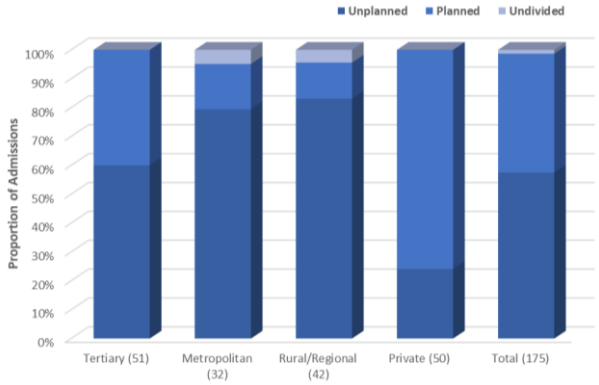
Data from 2023/24 contributing ICUs and follow-up with non-contributors.

Total population for Australia includes Other Territories comprising Jervis Bay Territory, Christmas Island, the Cocos (Keeling) Islands and Norfolk Island.

https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/jun-2024
https://infoshare.stats.govt.nz/

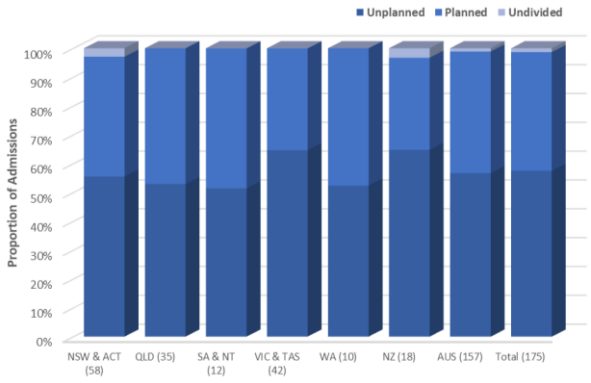
Appendix 3 – Admissions and Discharges

Figure 107 Proportion of Planned and Unplanned Admissions in 2023/24, by Classification



Data from 175 contributing ICUs. Not all ICUs reported a breakdown of admissions (undivided).

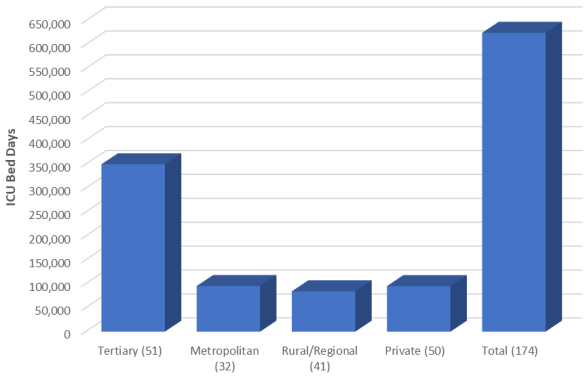
Figure 108 Proportion of Planned and Unplanned Admissions in 2023/24, by Region



Data from 175 contributing ICUs. Not all ICUs reported a breakdown of admissions (undivided).

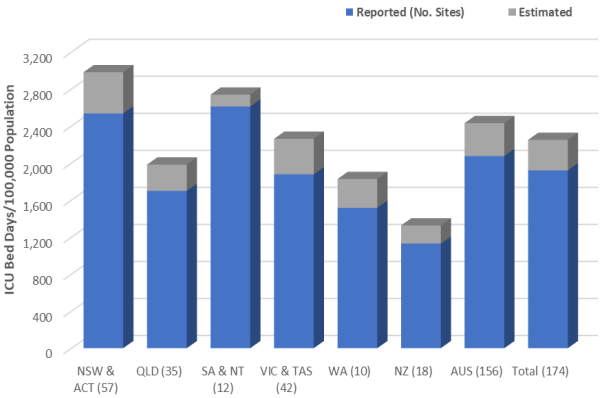
Appendix 4 – ICU Bed Days

Figure 109 ICU Bed Days in 2023/24, by Classification



Data from 174 contributing ICUs.

Figure 110 ICU Bed Days per 100,000 population in 2023/24, by Region



Data from 174 contributing ICUs.

Appendix 5 – Contributing ICUs

Australian Capital Territory		
Tertiary	Canberra Hospital	
Metropolitan	North Canberra Hospital	
Private	Calvary Bruce Private Hospital Calvary John James Hospital	National Capital Private Hospital
New South Wales		
Tertiary	Concord Hospital (Sydney) John Hunter Children's Hospital John Hunter Hospital PICU Liverpool Hospital Nepean Hospital Prince of Wales Hospital (Sydney) Royal North Shore Hospital	Royal Prince Alfred Hospital St George Hospital (Sydney) St Vincent's Hospital (Sydney) The Children's Hospital at Westmead PICU Westmead Hospital Wollongong Hospital
Metropolitan	Bankstown-Lidcombe Hospital Blacktown Hospital Calvary Mater Newcastle Campbelltown Hospital Canterbury Hospital	Gosford Hospital Hornsby Ku-ring-gai Hospital Ryde Hospital and Community Health Services Sutherland Hospital & Community Health Services
Rural/Regional	Coffs Harbour Health Campus Dubbo Base Hospital Goulburn Base Hospital Grafton Base Hospital Griffith Base Hospital Hawkesbury District Health Service Lismore Base Hospital Maitland Hospital Manning Rural Referral Hospital	Orange Base Hospital Port Macquarie Base Hospital Shoalhaven Hospital South East Regional Hospital Tamworth Base Hospital Tweed Heads District Hospital Wagga Wagga Base Hospital & District Health Wyong Hospital
Private	Hurstville Private Hospital Lake Macquarie Private Hospital Lingard Private Hospital Macquarie University Private Hospital Maitland Private Hospital Mater Private Hospital (Sydney) Nepean Private Hospital	North Shore Private Hospital Prince of Wales Private Hospital (Sydney) Strathfield Private Hospital Sydney Adventist Hospital Sydney Southwest Private Hospital The Chris O'Brien Lifehouse Wollongong Private Hospital
Northern Territory		
Metropolitan	Royal Darwin Hospital	
Rural/Regional	Alice Springs Hospital	
Queensland		
Tertiary	Gold Coast University Hospital Gold Coast University Hospital Paediatric Mater Adults Hospital (Brisbane) Princess Alexandra Hospital Queensland Children's Hospital PICU Royal Brisbane and Women's Hospital	Sunshine Coast University Hospital Sunshine Coast University Hospital Paediatric The Prince Charles Hospital Townsville University Hospital Townsville University Hospital Paediatric
Metropolitan	Caboolture Hospital Ipswich Hospital Logan Hospital	Queen Elizabeth II Jubilee Hospital Redcliffe Hospital Robina Hospital
Rural/Regional	Bundaberg Base Hospital Cairns Hospital Mackay Base Hospital	Mount Isa Hospital Rockhampton Hospital Toowoomba Hospital
Private	Brisbane Private Hospital Gold Coast Private Hospital John Flynn Private Hospital Mater Private Hospital (Brisbane) Noosa Hospital Pindara Private Hospital	St Andrew's Hospital Toowoomba St Andrew's War Memorial Hospital St Vincent's Private Hospital Northside St Vincent's Hospital Toowoomba Sunnybank Hospital Sunshine Coast University Private Hospital

South Australia		
Tertiary	Flinders Medical Centre ICU Royal Adelaide Hospital ICU	The Queen Elizabeth Hospital (Adelaide) Women's and Children's Hospital PICU
Metropolitan	Lyell McEwin Hospital	
Private	Ashford Community Hospital Calvary Adelaide Hospital Flinders Private Hospital	St Andrew's Hospital (Adelaide) The Memorial Hospital (Adelaide)
Tasmania		
Tertiary	Royal Hobart Hospital NICU/PICU	
Metropolitan	Launceston General Hospital	
Rural/Regional	North West Regional Hospital (Burnie)	
Victoria		
Tertiary	Alfred Hospital Austin Hospital Monash Children's Hospital PICU Monash Medical Centre-Clayton Campus Royal Children's Hospital (Melbourne) PICU	Royal Melbourne Hospital St Vincent's Hospital (Melbourne) University Hospital Geelong Victorian Heart Hospital
Metropolitan	Angliss Hospital Box Hill Hospital Casey Hospital Dandenong Hospital	Frankston Hospital Maroondah Hospital The Northern Hospital Werribee Mercy Hospital
Rural/Regional	Albury Wodonga Health Bendigo Health Care Group Central Gippsland Health Service (Sale) Echuca Regional Hospital Goulburn Valley Health Grampians Health Ballarat	Grampians Health Horsham Latrobe Regional Hospital Mildura Base Public Hospital Northeast Health Wangaratta South West Healthcare (Warrnambool) Western District Health Service (Hamilton)
Private	Cabrini Hospital Epworth Eastern Private Hospital Epworth Freemasons Hospital Epworth Hospital (Richmond) John Fawkner Hospital	Knox Private Hospital Melbourne Private Hospital Peninsula Private Hospital St John of God Hospital (Bendigo) St John of God Hospital (Geelong)
Western Australia		
Tertiary	Fiona Stanley Hospital Perth Children's Hospital PICU	Royal Perth Hospital Sir Charles Gairdner Hospital
Metropolitan	Joondalup Health Campus	Rockingham General Hospital
Rural/Regional	Bunbury Regional Hospital	
Private	Mount Hospital St John of God Health Care (Subiaco)	St John of God Hospital (Murdoch) St John of God Midland Public & Private
New Zealand		
Tertiary	Auckland City Hospital CV Auckland City Hospital DCCM Christchurch Hospital Dunedin Hospital	Middlemore Hospital Starship Children's Hospital PICU Waikato Hospital Wellington Hospital
Metropolitan	North Shore Hospital Tauranga Hospital	Whangarei Area Hospital, Northland Health Ltd
Rural/Regional	Hawkes Bay Hospital Nelson Hospital Rotorua Hospital	Southland Hospital Taranaki Health
Private	Braemar Hospital	Wakefield Hospital (NZ)

Appendix 6 – Abbreviations

ACHS	Australian Council on Healthcare Standards
ACT	Australian Capital Territory
ANZICS	Australian and New Zealand Intensive Care Society
ANZPICR	Australian and New Zealand Paediatric Intensive Care Registry
APD	Adult Patient Database
AUS	Australia
CCQ	Critical Care Qualified
CCR	Critical Care Resources
CCU	Coronary Care Unit
CICM	College of Intensive Care Medicine
CLABSI	Central Line Associated Blood Stream Infection
CORE	Centre for Outcome and Resource Evaluation
ED	Emergency Department
FTE	Full Time Equivalent
HDU	High Dependency Unit
ICU	Intensive Care Unit
MET	Medical Emergency Team
NICU	Neonatal Intensive Care Unit
NSW	New South Wales
NT	Northern Territory
NZ	New Zealand
OT	Operating Theatre
PICU	Paediatric Intensive Care Unit
QLD	Queensland
RN	Registered Nurse
SA	South Australia
SMO	Senior Medical Officer
SQL	Structured Query Language
TAS	Tasmania
VIC	Victoria
WA	Western Australia

Appendix 7 – Glossary

Admissions	All ICU and HDU admissions including readmissions but not including transfers between ICU and HDU. Coronary care, procedure only and ward type admissions should be excluded.
Admission Source	The mechanism by which a person was admitted to the ICU/HDU for the current episode of care and provides information for analysis of admission patterns and referrals. Paediatric retrieval/transfer should be considered a Home (Direct Admission) to ICU/HDU.
After Hours Discharge	Discharge of a patient to ward or home between 18:00 hours and 05:59 hours. Excludes patients that died in ICU/HDU or transferred to Other ICU/HDU or Other Hospital. For adult cases, this data relates to ACHS CI 1.5 ICU - adult discharge between 6pm and 6am. For paediatric cases, this data relates to ACHS CI 1.6 ICU - paediatric discharge between 6pm and 6am.
Antibiogram	Laboratory testing for the sensitivity of an isolated bacteria strain to different antibiotics.
Antibiotic Stewardship Program	A program or policy, including input from microbiologists and/or infectious disease specialists that aims to optimise antibiotic prescribing for patients within the ICU/HDU. Minimum twice per week ICU/HDU rounds with microbiologists and/or infectious disease specialists or compliance with a hospital policy with respect to the use of restricted antimicrobials. Please refer to the **Australian Commission on Safety and Quality in Health Care Antimicrobial Stewardship Clinical Care Standard** at https://www.safetyandquality.gov.au/sites/default/files/2020-11/saq10001_ccs_antimicrobial_v4_film_web.pdf
Available Bed	A bed with advanced life support capability that is fully staffed and funded.
Cancelled Elective Surgery	An elective surgical case with a planned admission to ICU/HDU that was cancelled due to inadequate resources in ICU/HDU such as beds or staff. For adult cases, this relates to ACHS CI 1.2 ICU - elective adult surgical cases deferred or cancelled due to unavailability of bed. For paediatric cases, this relates to ACHS CI 1.7 ICU - elective paediatric surgical cases deferred or cancelled.
CICM Level	Functional ICU/HDU level as per guidelines from the College of Intensive Care Medicine (CICM). Please refer to the **CICM Minimum Standards for Intensive Care Units** at https://www.cicm.org.au/common/Uploaded%20files/Assets/Accredited%20Sites/Unit%20Seeking%20Accreditation/IC-1-Minimum-Standards-for-Intensive-Care-Units.pdf
CLABSI	Refers to a central line associated blood stream infection where a central line has been in situ within 48 hours of the event.
CLABSI rate per 1000 line days	Calculated by dividing the number of ICU/HDU associated blood stream infections by the number of central line days in ICU/HDU patients multiplied by 1000. For adult cases, this relates to ACHS CI 4.1 Adult ICU-associated CI-CLABSI. For paediatric cases, this relates to ACHS CI 4.2 Paediatric ICU-associated PI-CLABSI.
Clinical Handover	The communication and transfer of responsibility and accountability for some or all aspects of care from one health care professional to another at the end of a shift. Please refer to **Australian Commission on Safety and Quality in Health Care Communicating for Safety Standard** at https://www.safetyandquality.gov.au/standards/nsqhs-standards/communicating-safety-standard

Coronary Care Unit (CCU)	Hospital ward specialised in the care of patients with cardiac conditions that require continuous monitoring and treatment.
Contribution to ANZPIC	This relates to ACHS CI 5.2 Participation in the ANZICS CORE Paediatric Intensive Care. Patient whose age is < 16 years.
Contribution to APD	This relates to ACHS CI 5.1 Participation in the ANZICS CORE Adult Patient Database (APD). Patient whose age is ≥ 16 years.
Critical Care Qualification	A post-registration award at a minimum certificate level obtained by successful completion of an accredited critical care education program (≥6 months duration).
Director of Research (DOR)	A clinician whose role is to lead research in the ICU/HDU. Also known as Lead Clinician of Research.
Discharge Delay (Exit Block)	Delay in the discharge of a patient to ward or home by 12 hours or more. Excludes patients that died in ICU/HDU or transferred to Other ICU/HDU or Other Hospital. *In 2019, this question was updated from 6 hours to 12 hours to conform with ACHS CI 1.4 ICU - adult discharge delay more than 12 hours.*
Discharge Destination	This data is required to calculate Discharge Delay (Discharges to Ward and Home) and After Hours Discharge (Excludes Died in ICU/HDU, transferred to Other ICU/HDU or Other Hospital). If unable to state the destination of ALL patients, at a minimum please identify how many ICU/HDU patients died and how many were discharged to the ward, home, ward/home (paeds only), and list other admissions in Unknown/Other.
DOR Protected FTE	The fraction of FTE that is allocated to the Director of Research or Lead Clinician of Research, that is free from any clinical commitment and available solely or predominantly for research activities.
ECMO	Extracorporeal membrane oxygenation is an extracorporeal technique of providing cardiac and/or respiratory support.
Enrolled Nurse	A nurse who has completed training in the vocational sector. Referred to as a division 2 registered nurse in Victoria.
Fellow	A medical practitioner who has completed a specialist trainee program but has not yet obtained a consultant position.
Follow up	Refers to contact made by an ICU/HDU team member involved in the care of the deceased patient to the relevant family member/s within 12 weeks of the patient's death. The follow-up contact must evaluate the care provided within the ICU/HDU. Contact can be via face to face, telephone, letter, survey, or conducted in a mode in accordance with organisational policy that may exist. *In 2020, this question was updated from 4 weeks to 12 weeks to relate to ACHS CI 6.1 Empathetic practice toward families of ICU patients.*
Full Time Equivalent (FTE)	A unit that indicates the workload of an employed person (or student) in a way that makes workloads comparable across various contexts.
General ICU	Non-dedicated intensive care unit that provides a broad range of services including neurosurgical, cardiac surgery and post-operative care, excluding coronary care.
HDU	High dependency unit with infrastructure or patients managed by the ICU, excluding coronary care.
Hospital Beds	The number of hospital beds available to provide overnight accommodation for patients, averaged over the counting period. Include hospital beds at the main hospital campus only. - Include acute inpatient mental health beds - Include short stay unit beds - Include ED observation ward beds

	- Exclude all other mental health beds - Exclude rehabilitation beds - Exclude HITH beds - Exclude maternity and neonatal cots - Exclude ED beds This data can usually be sourced from Hospital Exec suite.
Hospital Separations	The total number of episodes of care for overnight admitted patients, which can be total hospital stays (from admission to discharge, transfer or death), or portions of hospital stays beginning or ending in a change of type of care (for example, from acute to rehabilitation) that cease during a reference period. Include separations at main hospital campus only. - Include patients admitted overnight to a short stay unit - Include ED patients admitted overnight to an ED observation ward - Include acute inpatient mental health - Exclude all other mental health - Exclude rehabilitation - Exclude HITH - Exclude maternity and neonatal - Exclude ED presentations not admitted to hospital This data can usually be sourced from Hospital Exec suite.
ICU Days	The total number of days for patients who were admitted to the ICU/HDU for an episode of care. Calculated as the difference between the ICU/HDU discharge date and ICU/HDU admission date. Often referred to as Patient Bed Days.
ICU Hours	The total number of hours for patients who were admitted to the ICU/HDU for an episode of care. Calculated as the difference between the ICU/HDU discharge date and time and ICU/HDU admission date and time. Often referred to as Patient Bed Hours.
Infectious Disease Specialist	Infectious disease specialists trained in Australia are fellows of the Royal Australasian College of Physicians (FRACP) and the Royal College of Pathologists of Australasia (FRCPA) following training supervised jointly by the two colleges.
Intensive Care Specialist	A medical practitioner who has been specifically trained in intensive care medicine. Intensive care specialists are formally certified in intensive care by completing the training requirements of the CICM.
Invasive Ventilation	Mechanical ventilator support via oral/nasal intubation or tracheostomy tube.
Invasive Ventilator Time	The number of hours or days a patient (including those diagnosed as brain dead) is intubated (oral/nasal/tracheostomy) and ventilated but not weaned from mechanical ventilator support.
Lead Clinician of Research (DOR)	A clinician whose role is to lead research in the ICU/HDU. Also known as Director of Research (DOR).
Liaison/Outreach Nurse	An advanced practice nurse who assists patients and families in their transition to the ward and home and who promotes continuity of care.
Mechanical Ventilation	Continuous ventilator support by means of a mechanical device that moves gases into/from a patient's lungs to augment/replace respiratory effort.
Medication Safety Standard	Medication Safety Standard refers to whether your ICU/HDU has a system in place to ensure that clinicians safely prescribe, dispense and administer appropriate medicines, and monitor medicine use. Please refer to the **Australian Commission on Safety and Quality in Health Care Medication Safety Standard** at https://www.safetyandquality.gov.au/standards/nsqhs-standards/medication-safety-standard

MET/RRT/Code Blue	Medical Emergency Team/Rapid Response Team/Code Blue Medical and nursing staff with advanced clinical and resuscitation skills who respond to at-risk patients in settings outside the ICU/HDU. Such patients present with specific clinical criteria. Adult MET Calls – This relates to ACHS CI 2.1 Rapid response system calls to adult ICU patients within 48 hours of ICU discharge. Patient whose age is ≥ 16 years. Paediatric MET Calls – This relates to ACHS CI 2.2 Rapid response system calls to paediatric ICU patients within 48 hours of ICU discharge to the ward. Patient whose age is < 16 years. This data can be sourced from the Hospital Emergency Response database.
Nurse Consultation	Service provided by a senior ICU/HDU nurse to ward staff regarding treatment or management of patients who are not post-ICU/HDU.
Nurse Educator Registered Nurse	A registered nurse who combines their clinical experience and academic expertise to train students in nursing skills and who is exclusively rostered to perform this role.
Nurse to Patient Ratio	The number of nurses tasked with caring for a particular patient cohort. Ratios represented in whole numbers e.g. 0.5 nurses per 1 patient is recorded as 1:2 to make it a whole number ratio.
Non-Intensive Care Specialist	A medical practitioner with a qualification awarded by, or which equates to that awarded by, the relevant specialist training college.
Non-Invasive Ventilation	Ventilatory support such as CPAP/BiPAP, administered via facial or nasal mask or nasal cannulae. Excludes HFNC.
Non-Invasive Ventilator Time	The number of hours or days a patient is provided with ventilator support such as CPAP and BiPAP.
Occupancy	Calculated by dividing total bed days in a period by the product of the available beds and the days in the period.
Other Medical Staff	All non-specialists e.g. Registrars, Residents, Senior House Officers, etc.
Other ICU	Dedicated cardiac surgery/neurosurgical ICU/separate critical care unit, **excluding** coronary care.
Paediatric Patient	A patient < 16 years of age.
Pathology Stewardship Program	A structured program or policy to review and reduce unnecessary pathology use.
Physical Bed	A single patient care location fully configured to ICU standards. It is an actual bed, not a bed space.
Planned Admission	A planned admission to ICU/HDU. Post-surgical/procedure admissions are considered planned admissions when the need for admission was anticipated pre-operatively or prior to induction of anaesthesia. For non-surgical admissions, a planned admission should be considered as one that could be postponed for 24 hours with no adverse effect.
Readmission	Any second or subsequent admission to ICU/HDU within the same hospital admission, excluding direct transfers to or from ICU/HDU. Readmission includes all readmissions; it is not equivalent to the ACHS indicator “readmissions ≤ 72 hours”.
Refused Unplanned Admission	An unplanned (emergency) patient referred to ICU/HDU but refused admission due to inadequate resources e.g. beds or staff. This relates to ACHS CI 1.1 ICU - adult non-admission due to inadequate resources.

Registered Nurse (RN)	**Australia** – A nurse who is registered with the Nursing and Midwifery Board of Australia in accordance with the Australian Health Practitioner Regulation Authority (AHPRA). **New Zealand** – A Registered nurse is defined by the Nurses Act 1977 as a nurse whose name is recorded on one of the registers of nurses.
Registrar	A medical practitioner appointed to a specialist training position.
Research Coordinator	Research coordinators are healthcare professionals, often nurses, who manage the clinical research in the ICU/HDU environment. **Hospital funded Research Coordinators** are **paid by a hospital department** such as the ICU/HDU nursing budget. **Independently Funded Research Coordinators** are **paid by private means** such as a private research special purpose fund, consultant contributions, industry, grant or university funding. **Permanent ongoing role** refers to positions that are not subject to periodic renewal. **Temporary contract role** refers to positions that are subject to periodic renewal e.g. 3 to 12-month contracts – which may be reviewed at the conclusion of the specified duration. These positions may have substantive roles within the ICU/HDU to return to at the end of the contract if not renewed.
Resident/House Officer	Junior medical practitioner not appointed to a specialist training position.
Retrieval Service	The provision of medical and nursing/ambulance staff, appropriately equipped to undertake out of hospital patient transportation of critically ill patients in accordance with the joint **CICM/ANZCA/ACEM IC-10 (2024) guidelines**. Please refer to https://www.cicm.orgl.au/common/Uploaded%20files/Assets/Professional%20Documents/IC-10-Guidelines-for-Transport-of-Critically-Ill-Patients.pdf
RRT	Rapid Response Team. See MET/RRT/Code Blue.
Safety and Quality Activity	A safety and quality activity is one that contributes to care within the ICU/HDU and aims to achieve optimal outcomes and improve processes of care e.g. reviewing outcomes data via ANZICS APD reports, conducting mortality and morbidity meetings, monitoring and reviewing incidents, and conducting audits on various process of care in the ICU/HDU.
Senior House Officer	A medical practitioner in the second or subsequent years of practical experience after eligibility for full registration as a medical practitioner and who has not been appointed as a Registrar or Principal House Officer.
Senior Medical Officer (SMO)	Intensive care specialists and non-intensive care specialists. Specialist medical staff include intensive care, anaesthesia, medicine, paediatrics.
Senior Registrar	A position that involves increased seniority usually close to the completion of specialist training. The position will usually involve responsibility for clinical supervision of registrars.
Sepsis Care Co-ordinator	A lead doctor or nurse with expertise in managing sepsis who coordinates multidisciplinary care throughout the patient's hospital stay, including transitions between settings (ED, ICU/HDU, wards) and medical teams. This relates to the Australian Quality statement 4: Multidisciplinary coordination of care in hospital. Please refer to https://www.safetyandquality.gov.au/standards/clinical-care-standards/sepsis-clinical-care-standard/quality-statements
Sepsis Clinical Care	**Australia** – The Sepsis Clinical Care Standard includes seven quality statements describing the key components of care that a patient presenting with signs and symptoms of sepsis should receive so that the risk of death or ongoing morbidity is reduced.

	Please refer to https://www.safetyandquality.gov.au/standards/clinical-care-standards/sepsis-clinical-care-standard/quality-statements
Services Outside of ICU	Out of ICU/HDU services may include MET/RRT, ward, ED consults, post-discharge follow-up, total parenteral nutrition, vascular access, pain management, airway management, other but **excludes** interhospital transport.
Specialist	A medical practitioner with a qualification awarded by, or which equates to that awarded by, the relevant specialist training college.
Sustainability Initiatives	A clinician or team (e.g. Green Team) with responsibility for considering and implementing environmentally sustainable ICU/HDU policies and practices.
Transfers	Transfer of a patient from your ICU/HDU to another facility/ICU/HDU to allow another patient to be admitted due to unavailability of a bed in your unit. Patients transferred from Emergency Department, Ward, and Operating Theatre to another hospital ICU/HDU due to bed unavailability are not captured for CCR reporting. This relates to ACHS CI 1.3 ICU - adult transfer to another facility/ICU due to unavailability of bed.
Trauma Level One	A trauma service capable of providing the full spectrum of care for the most critically injured patient, from initial reception and resuscitation through to discharge and rehabilitation. As well as this, the level one service provides research, education & fellowship training, trauma services overview, quality and improvement program, data collection, prevention and outreach programs, trauma audit, leadership responsibilities. For further details, please refer to the **Royal Australian College of Surgeons** website at https://www.surgeons.org/research-audit/trauma-verification/the-trauma-verification-process#Model%20resource%20criteria
Trauma Level Two	A level two service can be either metropolitan or rural based. Level two hospitals should provide comprehensive clinical care for the severely injured patient to supplement clinical activities of level one services in population dense areas. The clinical aspects of care for the injured patient should be identical to that of a level one service without the additional leadership, research and education components. For further details, please refer to the **Royal Australian College of Surgeons** website at https://www.surgeons.org/research-audit/trauma-verification/the-trauma-verification-process#Model%20resource%20criteria
Undivided Admission	Where admissions cannot be separated into Unplanned (emergency) or Planned they should be entered as Undivided.
Unplanned Admission	An emergency admission to ICU/HDU for urgent care or treatment that could not be postponed without adverse effect. A postponed planned admission can subsequently become an unplanned or urgent admission.
VTE Prophylaxis	Venous thromboembolism prophylaxis refers to the administration of appropriate pharmacological or non-pharmacological measures to adult patients to diminish the risk of deep vein thrombosis and pulmonary embolism within the first 24 hours of ICU/HDU admission. VTE prophylaxis may be contraindicated in some patients.
VTE Prophylaxis Rate	Calculated by dividing the number of adult patients that received VTE prophylaxis within 24 hours of ICU/HDU admission by the number of adult admissions into the ICU/HDU, excluding patients where VTE prophylaxis was contraindicated, not indicated and < 16 years of age. This relates to ACHS CI 3.1 VTE Prophylaxis in adult patients within 24 hours of ICU admission.
Wellbeing	A clinician or team with responsibility for considering and responding to the wellbeing needs of staff within the unit.

Appendix 8 – Data Requests 2023/24

Requests for information using CCR data were received from fourteen researchers. The data was used in a variety of research projects such as retrospective clinical research, clinical trials, and investigation for administrative reporting.

1. To determine the temporal trends and volume-outcome relationships for tracheostomies in Australian and New Zealand Intensive Care Units.
2. To develop an ICU Business Case.
3. Comparative analysis of case-mix adjusted senior medical officer and junior medical officer FTE for workforce planning.
4. To analyse admissions by time of day and occupancy by day of the week (2023 financial year).
5. To establish a correlation between SMR outlier status and after hours discharges, registered nurse (RN) FTE, and critical care qualified RN FTE.
6. Availability of critical care trauma beds.
7. To analyse contributing factors impacting an increased SMR status.
8. To benchmark hospital funded data manager FTE reported by comparative units with greater than 2000 admissions per year across Australia and New Zealand (2021-2023 financial years).
9. To benchmark junior medical staffing FTE with comparable units across Australia and New Zealand.
10. To analyse unit-based data reported to the CCR Survey over last 10 years.
11. A bi-national survey on the functioning of Intensive Care follow-up clinics.
12. To determine sustainability resources in intensive care units across Australia and New Zealand.
13. To analyse the demand and capacity of New Zealand intensive care units for future planning.
14. To understand the data capability and capacity in Intensive Care to plan binational research projects with the aim to enhance critical care across Australia.

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