AROC Impairment Specific Report

Stroke Report

INPATIENT – PATHWAY 3

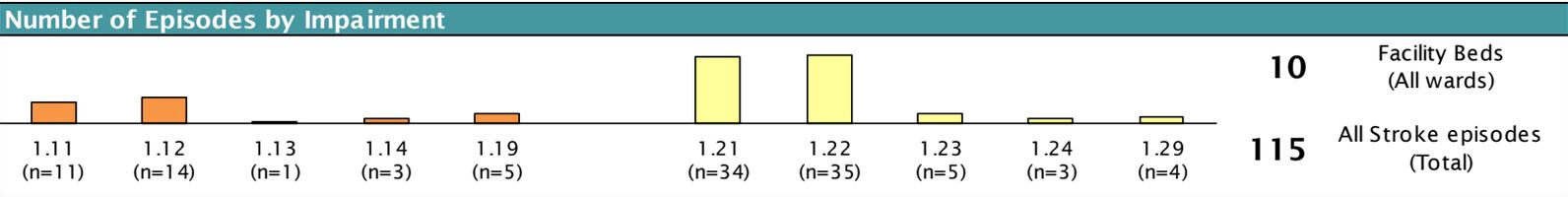January 2019 – December 2019

Anywhere Hospital

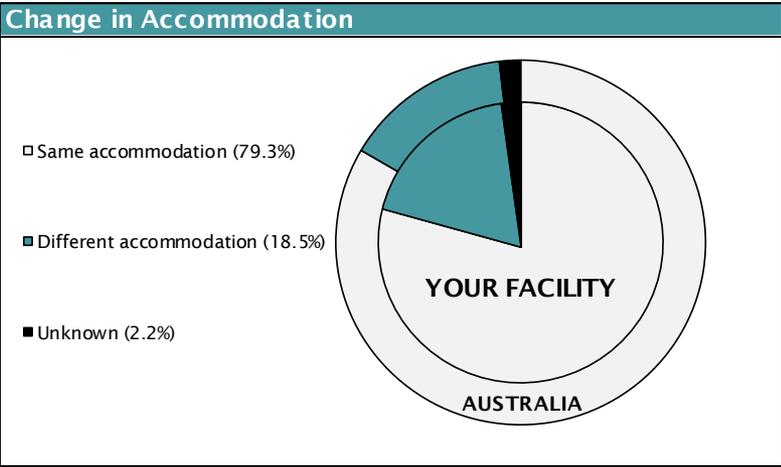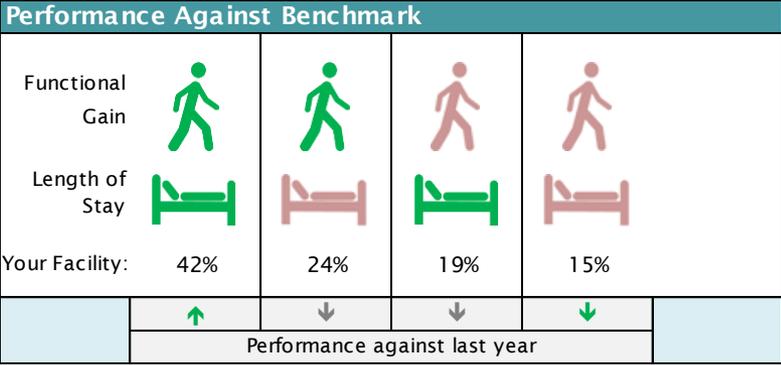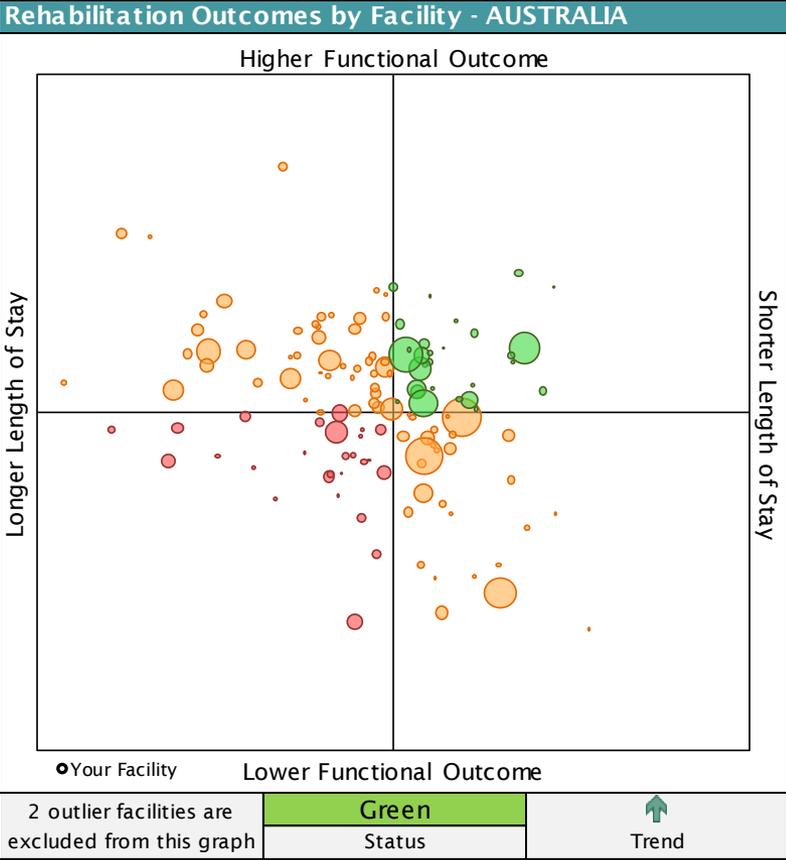Australasian Faculty of Rehabilitation Medicine

australian health services research institute

UNIVERSITY OF WOLLONGONG AUSTRALIA

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Stroke Dashboard

Rehabilitation Outcomes by Facility - AUSTRALIA

Higher Functional Outcome

Longer Length of Stay — Shorter Length of Stay

Lower Functional Outcome

○ Your Facility

2 outlier facilities are excluded from this graph	Green	⬆
	Status	Trend

Performance Against Benchmark

Functional Gain	🚶(green)	🚶(green)	🚶(red)	🚶(red)
Length of Stay	🛏(green)	🛏(red)	🛏(red)	🛏(green)
Your Facility:	42%	24%	19%	15%
	⬆	⬇	⬇	⬇
	Performance against last year			

Change in Accommodation

☐ Same accommodation (79.3%)

☐ Different accommodation (18.5%)

■ Unknown (2.2%)

YOUR FACILITY

AUSTRALIA

Number of Episodes by Impairment

1.11 (n=11)	1.12 (n=14)	1.13 (n=1)	1.14 (n=3)	1.19 (n=5)	1.21 (n=34)	1.22 (n=35)	1.23 (n=5)	1.24 (n=3)	1.29 (n=4)

10 Facility Beds (All wards)

115 All Stroke episodes (Total)

Stroke Dashboard

Key Indicators*

YOUR FACILITY		AUSTRALIA	
Average Age:	71.6	Average Age:	73.3
Mortality Rate:	0.0%	Mortality Rate:	0.5%
% with at least one comorbidity:	56%	% with at least one comorbidity:	53%
% with at least one complication:	27%	% with at least one complication:	31%
% episodes with start delays:	19%	% episodes with start delays:	18%
Days between onset and rehab episode:	10.4	Days between onset and rehab episode:	12.9
Days between clinically rehab ready & start date:	0.5	Days between clinically rehab ready & start date:	0.8

* Mean value provided unless otherwise specified

Facility FIM Training*

FIM Credentialed Staff per 100 Episodes	FIM Credentialed Facility Trainers
7.1 Your Facility	3 Your Facility
6.5 AUSTRALIA (Mean)	2 AROC Suggested Minimum

*This includes all impairments from all wards

Completed Episodes by Facility

Legend:
- ■ Your Facility
- ▬ Average of all AU facilities
- --○-- Completion rate over time at Your Facility

Y-axis: Completed episodes (0% – 100%)
X-axis: AUSTRALIA (CY 2015, CY 2016, CY 2017, CY 2018, CY 2019)

Data used in this report
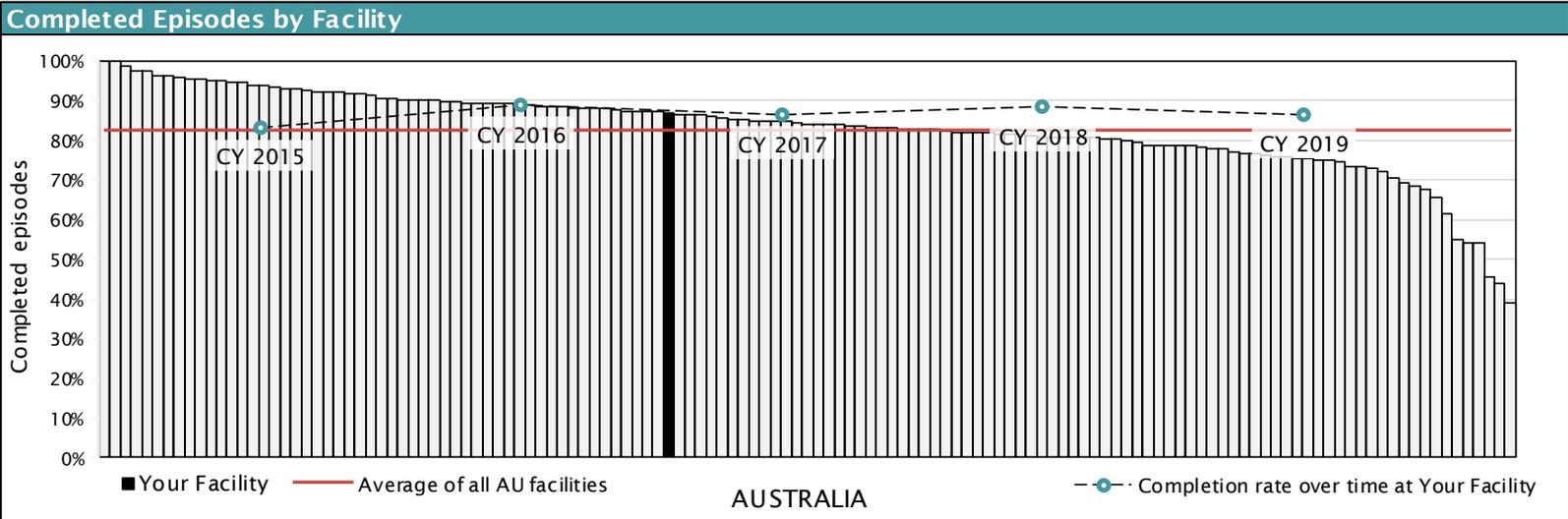
- Stroke episodes discharged during the reporting period (January 2019 – December 2019) and time series data covering five years.

- Benchmark group is AUSTRALIA.

- Casemix analysis uses version 4 AN-SNAP classes (Appendix 3). Casemix adjustment is calculated against AUSTRALIA data.

- Unit of counting is by concatenated* episode, not by patient.

- Where there are less than five episodes within a subgroup, summary data are not provided. Missing data and ungroupable AN-SNAP classes are excluded from figures, but are included in tables.

- Facilities will only receive this report when the facility reports a minimum of 20 completed stroke episodes.

Note: Appendix 1 (Glossary) contains definitions of concepts referred to in this report. An understanding of these will help with interpretation of the data. This report should be considered in conjunction with the Outcome Benchmarks Report for your facility.

*Refer to Appendix 1 for more details about the process of data concatenation.

Stroke impairment codes

Stroke episodes were identified as those with the following AROC impairment codes:

- 1.11 — Haemorrhagic — Left body involvement
- 1.12 — Haemorrhagic — Right body involvement
- 1.13 — Haemorrhagic — Bilateral involvement
- 1.14 — Haemorrhagic — No paresis
- 1.19 — Haemorrhagic — Other stroke

- 1.21 — Ischaemic — Left body involvement (right brain)
- 1.22 — Ischaemic — Right body involvement (left brain)
- 1.23 — Ischaemic — Bilateral involvement
- 1.24 — Ischaemic — No paresis
- 1.29 — Ischaemic — Other stroke

Note: A list of all impairment codes can be found in Appendix 2

Stroke AN-SNAP classes

Levels of functioning for stroke are categorised by the following version 4 AN-SNAP classes:

- 4AA1   Stroke, weighted FIM motor 51-91, FIM cognition 29-35
- 4AA2   Stroke, weighted FIM motor 51-91, FIM cognition 19-28
- 4AA3   Stroke, weighted FIM motor 51-91, FIM cognition 5-18
- 4AA4   Stroke, weighted FIM motor 36-50, Age ≥ 68
- 4AA5   Stroke, weighted FIM motor 36-50, Age ≤ 67
- 4AA6   Stroke, weighted FIM motor 19-35, Age ≥ 68
- 4AA7   Stroke, weighted FIM motor 19-35, Age ≤ 67
- 4AZ3   Weighted FIM motor score 13-18, All other impairments, Age ≥ 65
- 4AZ4   Weighted FIM motor score 13-18, All other impairments, Age ≤ 64

NOTE: A list of all AN SNAP classes can be found in Appendix 3

The BIG picture

Volume of stroke episodes by facility
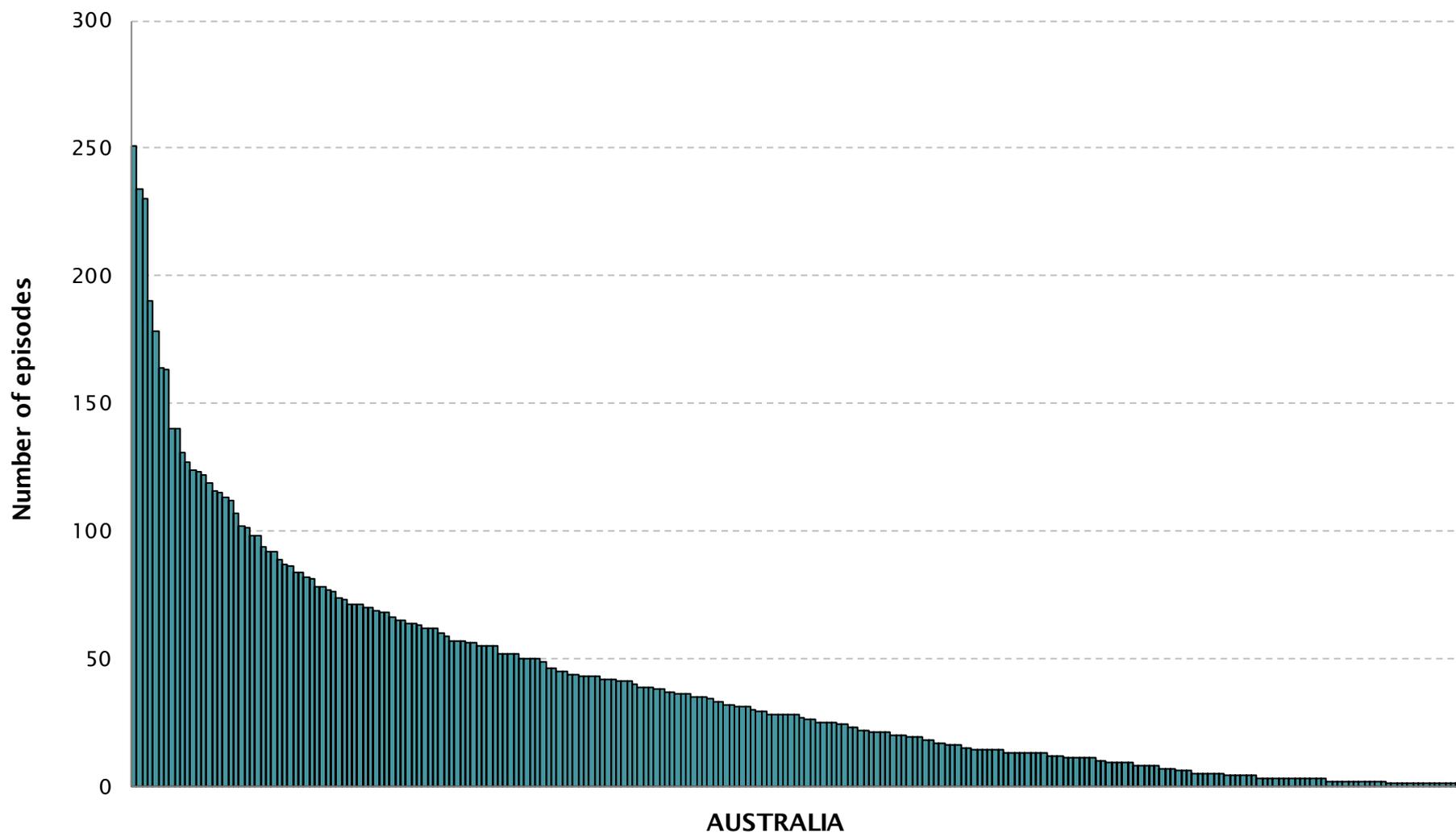
NOTE: 247 facilities reported at least one stroke episode, with 144 facilities reporting between 20 and 251 episodes in this reporting period

Proportion of episodes by impairment and AN-SNAP class
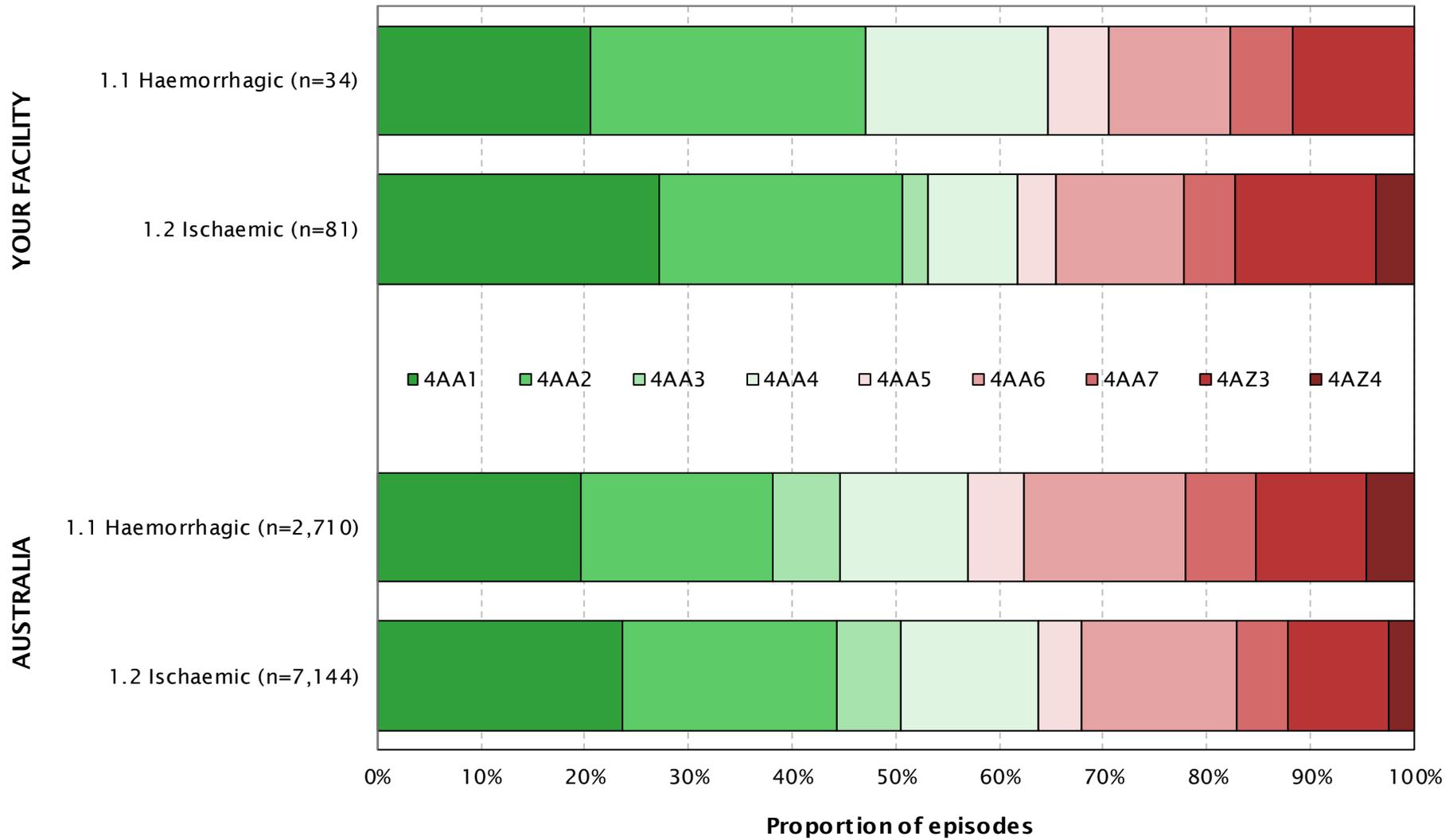
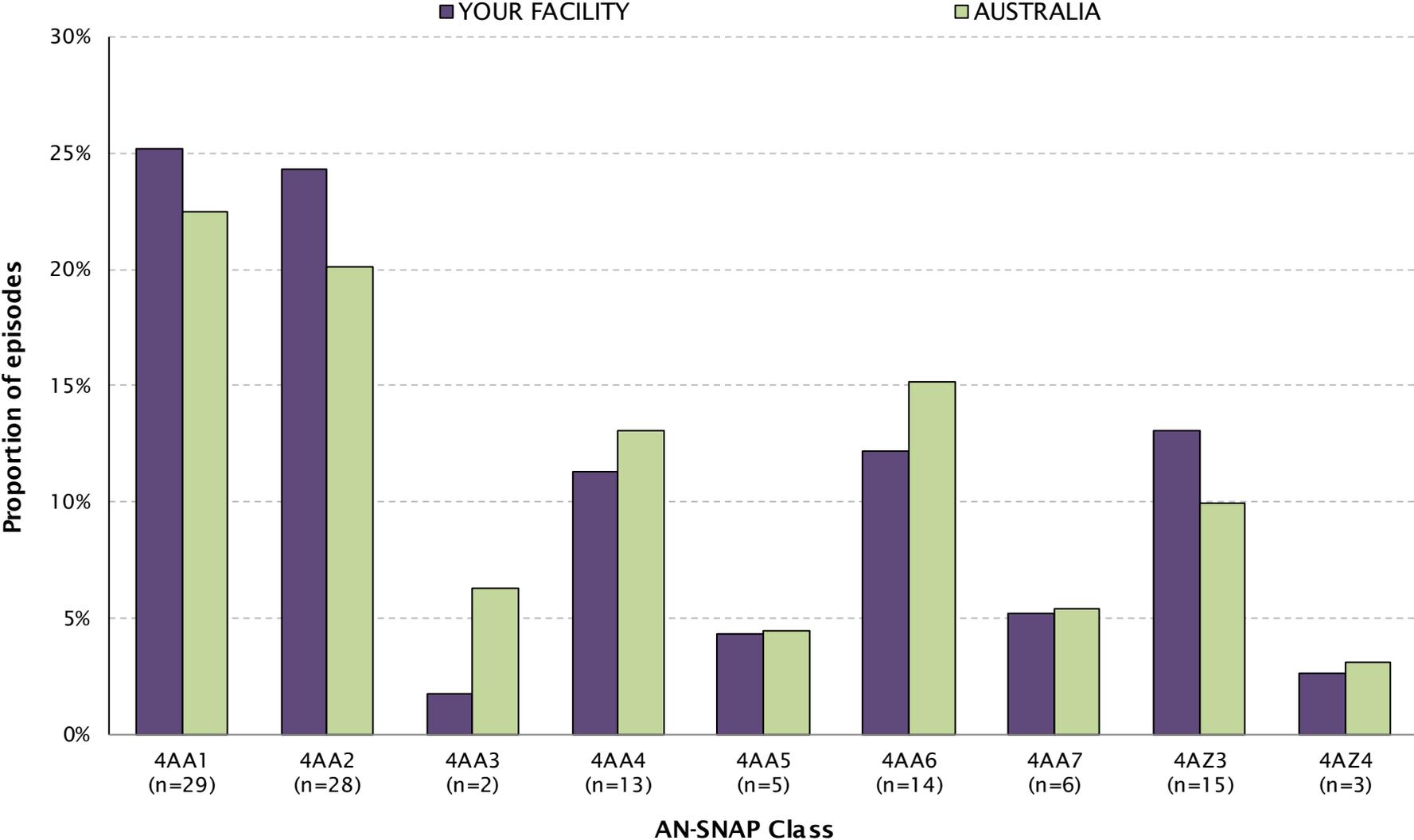# Episodes by impairment and AN-SNAP class

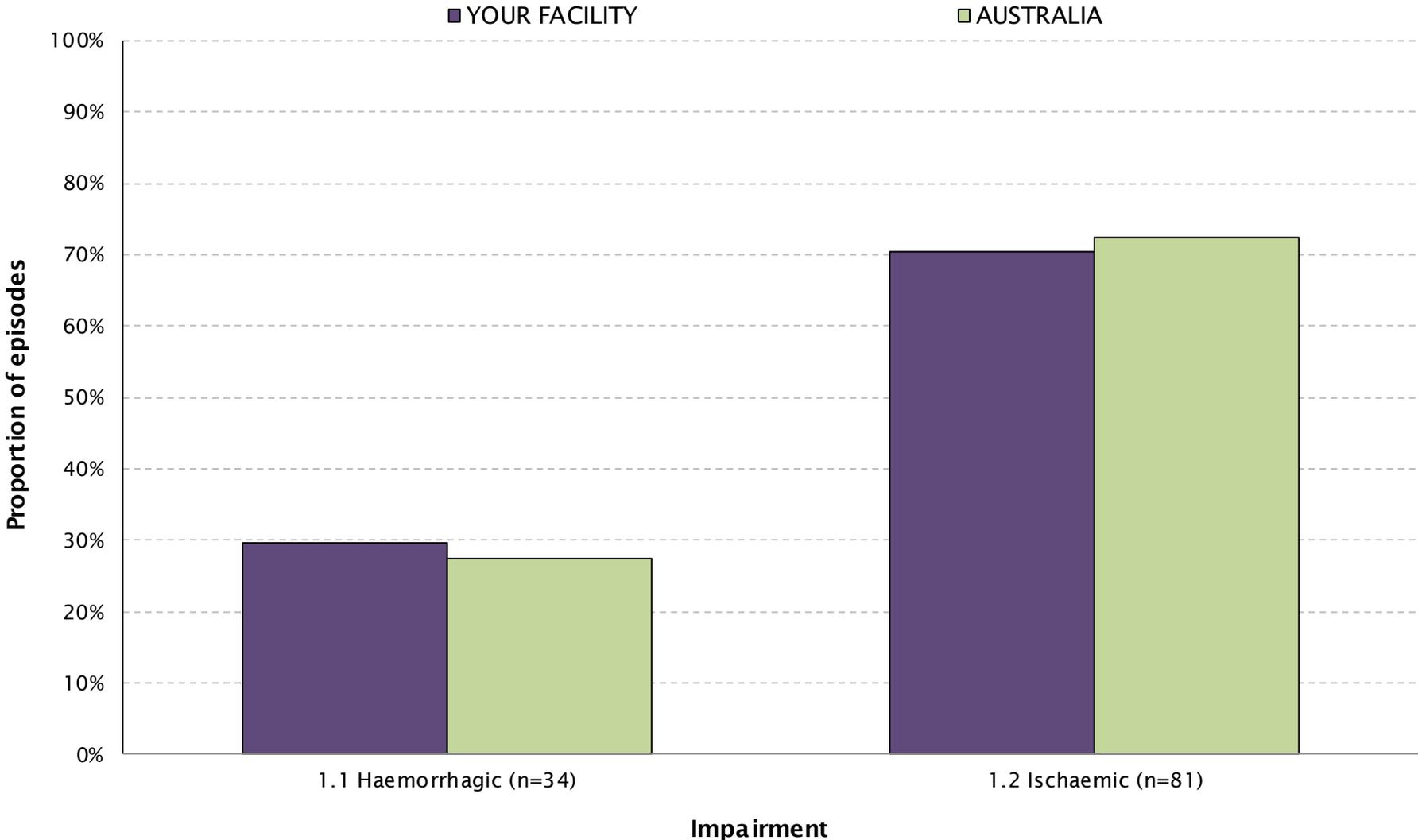| YOUR FACILITY						
	1.1 Haemorrhagic		1.2 Ischaemic		All Stroke	
AN-SNAP class V4	No.	%	No.	%	No.	%
4AA1 (motor 51-91, cognition 29-35)	7	20.6	22	27.2	29	25.2
4AA2 (motor 51-91, cognition 19-28)	9	26.5	19	23.5	28	24.3
4AA3 (motor 51-91, cognition 5-18)	0	0.0	2	2.5	2	1.7
4AA4 (motor 36-50, Age ≥ 68)	6	17.6	7	8.6	13	11.3
4AA5 (motor 36-50, Age ≤ 67)	2	5.9	3	3.7	5	4.3
4AA6 (motor 19-35, Age ≥ 68)	4	11.8	10	12.3	14	12.2
4AA7 (motor 19-35, Age ≤ 67)	2	5.9	4	4.9	6	5.2
4AZ3 (motor 13-18, Age ≥ 65)	4	11.8	11	13.6	15	13.0
4AZ4 (motor 13-18, Age ≤ 64)	0	0.0	3	3.7	3	2.6
All Stroke AN-SNAP Classes**	**34**	**100.0**	**81**	**100.0**	**115**	**100.0**

AUSTRALIA						
	1.1 Haemorrhagic		1.2 Ischaemic		All Stroke	
AN-SNAP class V4	No.	%	No.	%	No.	%
4AA1 (motor 51-91, cognition 29-35)	533	19.6	1,686	23.6	2,219	22.5
4AA2 (motor 51-91, cognition 19-28)	499	18.4	1,486	20.8	1,985	20.1
4AA3 (motor 51-91, cognition 5-18)	176	6.5	441	6.2	617	6.3
4AA4 (motor 36-50, Age ≥ 68)	337	12.4	948	13.2	1,285	13.0
4AA5 (motor 36-50, Age ≤ 67)	144	5.3	292	4.1	436	4.4
4AA6 (motor 19-35, Age ≥ 68)	426	15.7	1,069	14.9	1,495	15.1
4AA7 (motor 19-35, Age ≤ 67)	180	6.6	353	4.9	533	5.4
4AZ3 (motor 13-18, Age ≥ 65)	291	10.7	691	9.7	982	9.9
4AZ4 (motor 13-18, Age ≤ 64)	124	4.6	178	2.5	302	3.1
All Stroke AN-SNAP Classes**	**2,714**	**100.0**	**7,156**	**100.0**	**9,870**	**100.0**

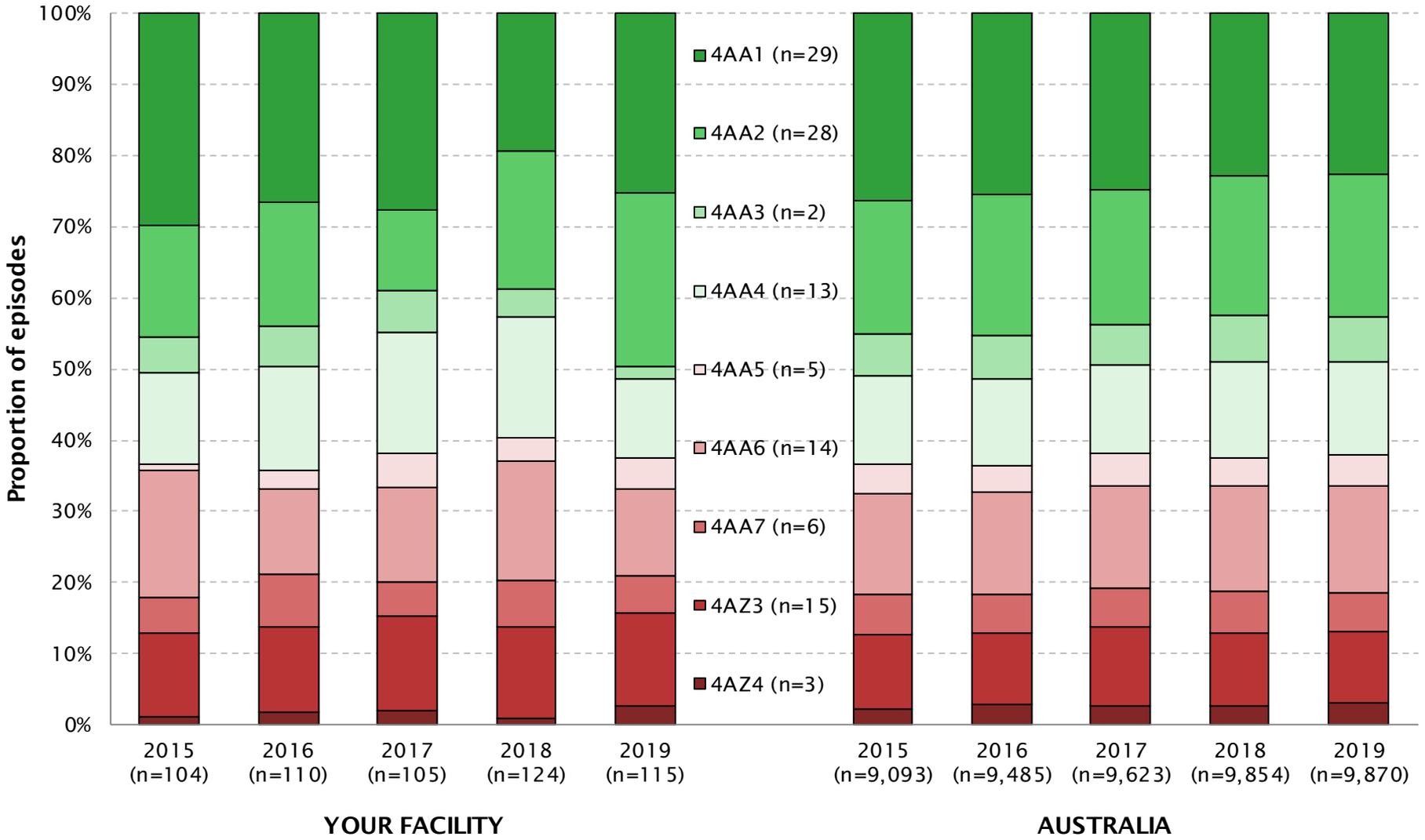**There were 0 episodes in YOUR FACILITY and 16 episodes in AUSTRALIA with AN-SNAP class 499A

Proportion of episodes by AN-SNAP class

Proportion of episodes by impairment

# Proportion of episodes by AN-SNAP class over time

Episodes by AN-SNAP class over time

AN-SNAP class V4	YOUR FACILITY — No.					AUSTRALIA — No.				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
4AA1 (motor 51-91, cognition 29-35)	30	29	29	24	29	2,380	2,412	2,378	2,232	2,219
4AA2 (motor 51-91, cognition 19-28)	16	19	12	24	28	1,703	1,875	1,820	1,943	1,985
4AA3 (motor 51-91, cognition 5-18)	5	6	6	5	2	530	570	558	627	617
4AA4 (motor 36-50, Age ≥ 68)	13	16	18	21	13	1,121	1,165	1,186	1,342	1,285
4AA5 (motor 36-50, Age ≤ 67)	1	3	5	4	5	381	356	449	384	436
4AA6 (motor 19-35, Age ≥ 68)	18	13	14	21	14	1,289	1,363	1,382	1,447	1,495
4AA7 (motor 19-35, Age ≤ 67)	5	8	5	8	6	499	516	517	578	533
4AZ3 (motor 13-18, Age ≥ 65)	12	13	14	16	15	952	940	1,065	1,007	982
4AZ4 (motor 13-18, Age ≤ 64)	1	2	2	1	3	200	266	257	264	302
499A (Data error - ungroupable)	3	1	0	0	0	38	22	11	30	16
All Stroke AN-SNAP Classes	**104**	**110**	**105**	**124**	**115**	**9,093**	**9,485**	**9,623**	**9,854**	**9,870**

AN-SNAP class V4	YOUR FACILITY — %					AUSTRALIA — %				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
4AA1 (motor 51-91, cognition 29-35)	28.8	26.4	27.6	19.4	25.2	26.2	25.4	24.7	22.7	22.5
4AA2 (motor 51-91, cognition 19-28)	15.4	17.3	11.4	19.4	24.3	18.7	19.8	18.9	19.7	20.1
4AA3 (motor 51-91, cognition 5-18)	4.8	5.5	5.7	4.0	1.7	5.8	6.0	5.8	6.4	6.3
4AA4 (motor 36-50, Age ≥ 68)	12.5	14.5	17.1	16.9	11.3	12.3	12.3	12.3	13.6	13.0
4AA5 (motor 36-50, Age ≤ 67)	1.0	2.7	4.8	3.2	4.3	4.2	3.8	4.7	3.9	4.4
4AA6 (motor 19-35, Age ≥ 68)	17.3	11.8	13.3	16.9	12.2	14.2	14.4	14.4	14.7	15.1
4AA7 (motor 19-35, Age ≤ 67)	4.8	7.3	4.8	6.5	5.2	5.5	5.4	5.4	5.9	5.4
4AZ3 (motor 13-18, Age ≥ 65)	11.5	11.8	13.3	12.9	13.0	10.5	9.9	11.1	10.2	9.9
4AZ4 (motor 13-18, Age ≤ 64)	1.0	1.8	1.9	0.8	2.6	2.2	2.8	2.7	2.7	3.1
499A (Data error - ungroupable)	2.9	0.9	0.0	0.0	0.0	0.4	0.2	0.1	0.3	0.2
All Stroke AN-SNAP Classes	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Proportion of episodes by impairment over time
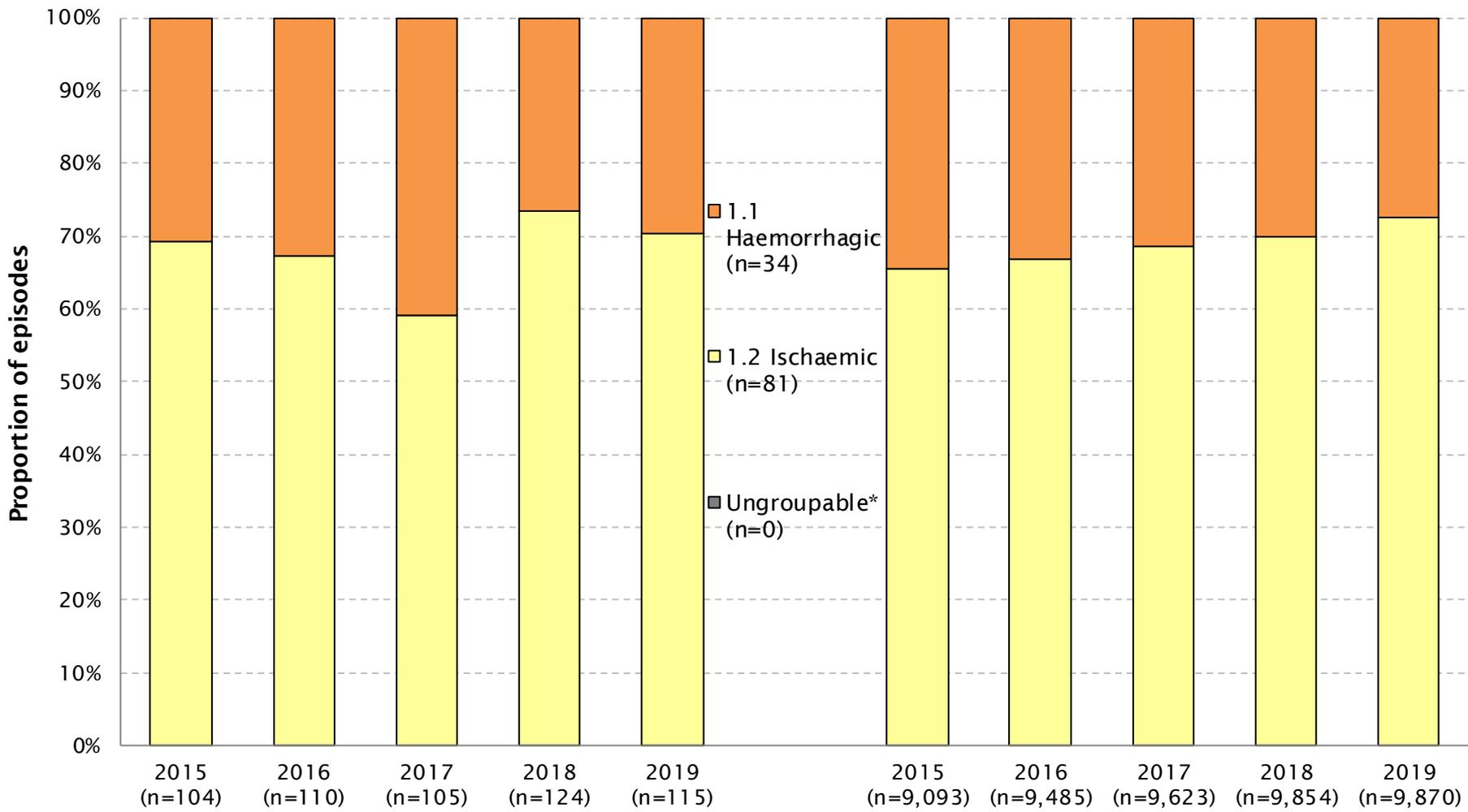
*Ungroupable are the episodes captured using V3 data, which had no distinction for Haemorrhagic/Ischaemic

Episodes by impairment over time

	YOUR FACILITY — No.					AUSTRALIA — No.				
Impairment	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
1.1 Haemorrhagic	32	36	43	33	34	3,139	3,141	3,030	2,970	2,714
1.2 Ischaemic	72	74	62	91	81	5,954	6,344	6,593	6,884	7,156
Ungroupable*	0	0	0	0	0	0	0	0	0	0
All Stroke	104	110	105	124	115	9,093	9,485	9,623	9,854	9,870

	YOUR FACILITY — %					AUSTRALIA — %				
Impairment	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
1.1 Haemorrhagic	30.8	32.7	41.0	26.6	29.6	34.5	33.1	31.5	30.1	27.5
1.2 Ischaemic	69.2	67.3	59.0	73.4	70.4	65.5	66.9	68.5	69.9	72.5
Ungroupable*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All Stroke	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Ungroupable are the episodes captured using V3 data, which had no distinction for Haemorrhagic/Ischaemic

Summary of your incomplete episodes

Complete episode analysis	YOUR FACILITY		AUSTRALIA	
	No.	(%)	No.	(%)
Total reporting episodes	115		9,870	
Incomplete episodes	15	(13.0)	1,714	(17.4)
Reason for incomplete:				
Discharged home with end FIM=18	1	(6.7)	35	(2.0)
Discharged home with no end FIM	2	(13.3)	19	(1.1)
Discharged to another hospital	7	(46.7)	771	(45.0)
Discharged back to acute	4	(26.7)	639	(37.3)
Discharged at own risk	0	(0.0)	73	(4.3)
Change of care type (LOS<1 week)	0	(0.0)	10	(0.6)
Died	0	(0.0)	51	(3.0)
Other/Unknown Discharge	1	(6.7)	116	(6.8)

	YOUR FACILITY			
	Incomplete Episodes		Complete episodes	
Impairment Group:				
1.1 Haemorrhagic	8	(53.3)	26	(26.0)
1.2 Ischaemic	7	(46.7)	74	(74.0)
AN-SNAP Class:				
4AA1 (motor 51-91, cognition 29-35)	4	(26.7)	25	(25.0)
4AA2 (motor 51-91, cognition 19-28)	2	(13.3)	26	(26.0)
4AA3 (motor 51-91, cognition 5-18)	0	(0.0)	2	(2.0)
4AA4 (motor 36-50, Age ≥ 68)	2	(13.3)	11	(11.0)
4AA5 (motor 36-50, Age ≤ 67)	0	(0.0)	5	(5.0)
4AA6 (motor 19-35, Age ≥ 68)	3	(20.0)	11	(11.0)
4AA7 (motor 19-35, Age ≤ 67)	1	(6.7)	5	(5.0)
4AZ3 (motor 13-18, Age ≥ 65)	2	(13.3)	13	(13.0)
4AZ4 (motor 13-18, Age ≤ 64)	1	(6.7)	2	(2.0)

Review of FIM item scoring

by AN-SNAP class

Interpreting the comparative FIM item scoring charts

Admission FIM scores (Figure A) and **Discharge FIM scores** (Figure B), comparing YOUR FACILITY and AUSTRALIA across FIM items: Eating, Grooming, Bathing, Dress upper, Dress lower, Toileting, Bladder, Bowel, Bed transfer, Toilet transfer, Bath transfer, Walking, Stairs, Comprehension, Expression, Social interaction, Problem solving, Memory.
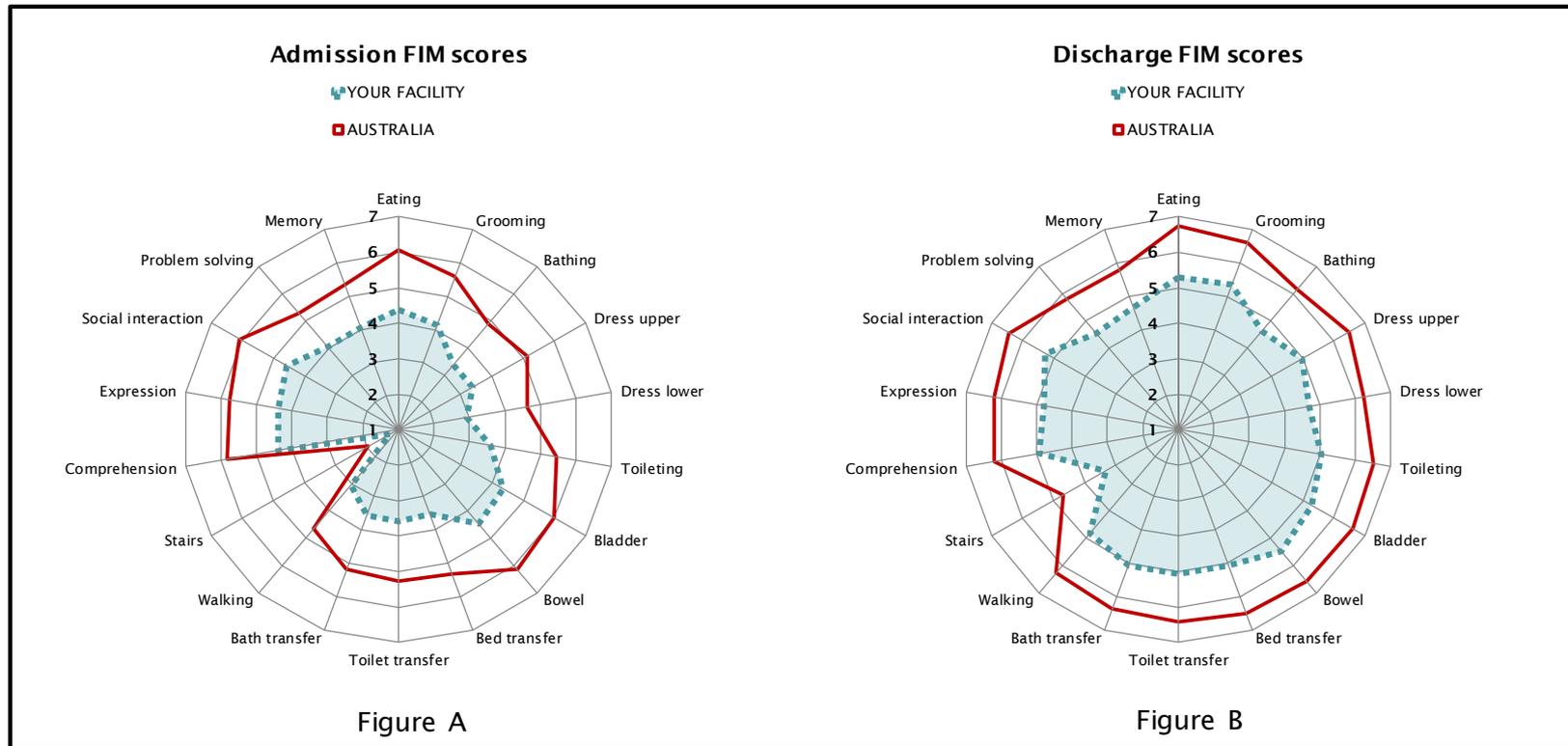
The FIM splat provides a graphic presentation of functional status in a radar chart. The 18 FIM items are arranged in order as 'spokes' of a wheel and the scoring levels from 1 (total dependence) to 7 (total independence) run from the centre outwards. The mean FIM item score for each item is indicated — a perfect score would be demonstrated as a large circle. The two FIM splats compare FIM scoring on admission (Figure A) and discharge (Figure B) between YOUR FACILITY and NATIONAL data — differences in the two shaded areas indicate differences in mean admission/discharge scoring. Graphs include completed episodes with valid FIM scoring.

Comparative FIM item scoring
AN-SNAP class 4AA1

aroc

4AA1 Admission FIM scores

YOUR FACILITY (n=25)

AUSTRALIA (n=2,066)

4AA1 Discharge FIM scores

YOUR FACILITY (n=25)

AUSTRALIA (n=2,066)

NOTE: Includes only completed episodes with valid FIM scores

Comparative FIM item scoring
AN-SNAP class 4AA2

4AA2 Admission FIM scores

- YOUR FACILITY (n=26)
- AUSTRALIA (n=1,791)

4AA2 Discharge FIM scores

- YOUR FACILITY (n=26)
- AUSTRALIA (n=1,791)

NOTE: Includes only completed episodes with valid FIM scores

Comparative FIM item scoring
AN-SNAP class 4AA3

4AA3 Admission FIM scores

⬛ YOUR FACILITY (n<5)

⬛ AUSTRALIA (n=510)

4AA3 Discharge FIM scores

⬛ YOUR FACILITY (n<5)

⬛ AUSTRALIA (n=510)

NOTE: Includes only completed episodes with valid FIM scores

4AA4 Admission FIM scores

- YOUR FACILITY (n=11)
- AUSTRALIA (n=1,070)

4AA4 Discharge FIM scores

- YOUR FACILITY (n=11)
- AUSTRALIA (n=1,070)

NOTE: Includes only completed episodes with valid FIM scores

Comparative FIM item scoring
AN-SNAP class 4AA5

4AA5 Admission FIM scores

- YOUR FACILITY (n=5)
- AUSTRALIA (n=366)

4AA5 Discharge FIM scores

- YOUR FACILITY (n=5)
- AUSTRALIA (n=366)

NOTE: Includes only completed episodes with valid FIM scores
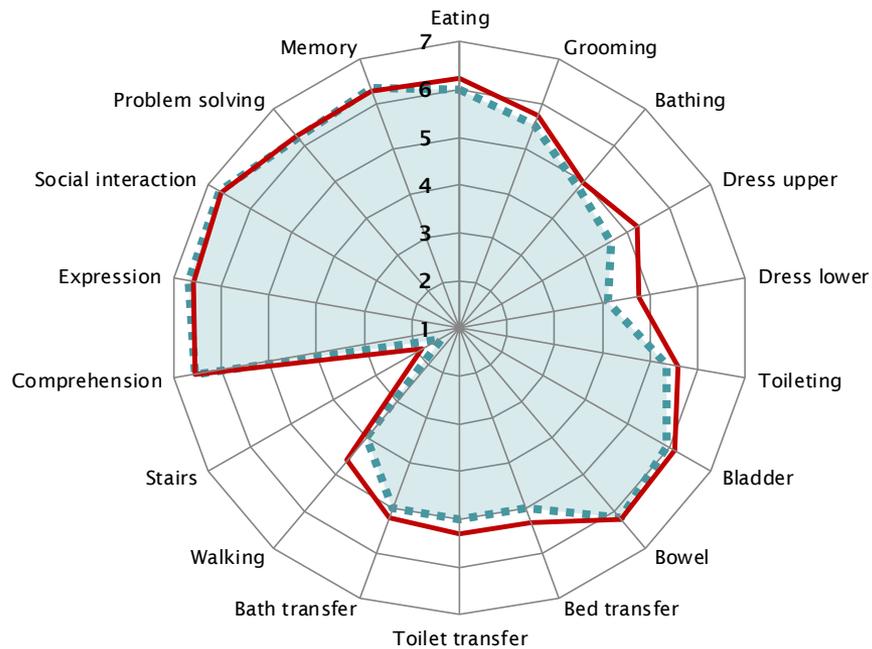
Comparative FIM item scoring
AN-SNAP class 4AA6

4AA6 Admission FIM scores

YOUR FACILITY (n=11)

AUSTRALIA (n=1,130)

4AA6 Discharge FIM scores

YOUR FACILITY (n=11)

AUSTRALIA (n=1,130)

NOTE: Includes only completed episodes with valid FIM scores

Comparative FIM item scoring
AN-SNAP class 4AA7
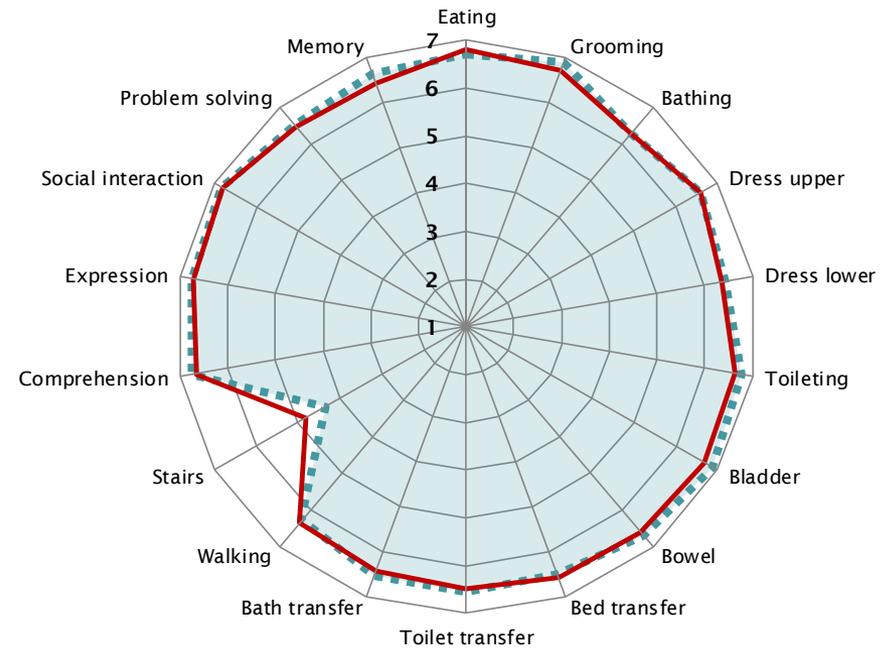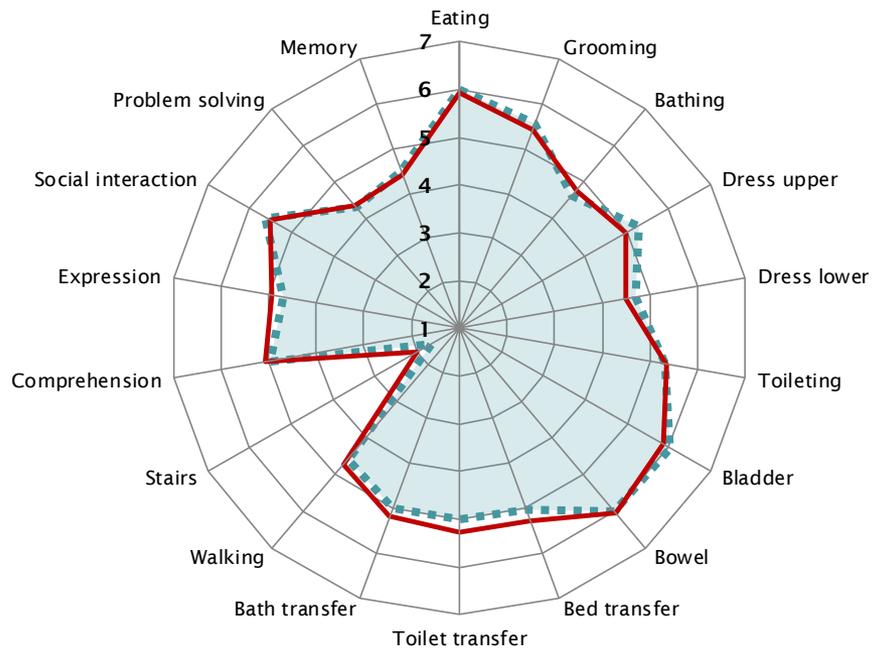

4AA7 Admission FIM scores

- YOUR FACILITY (n=5)
- AUSTRALIA (n=398)
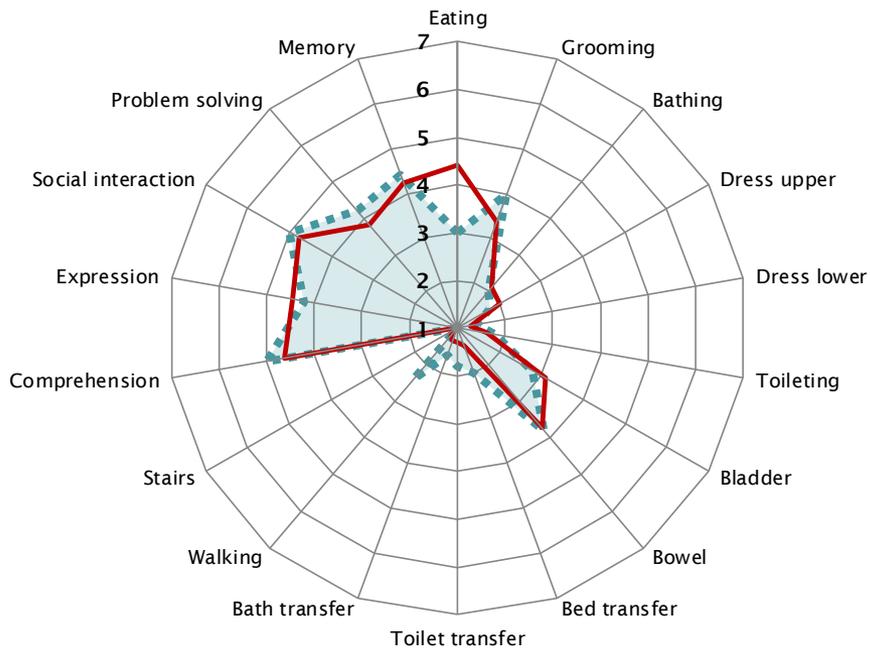
4AA7 Discharge FIM scores
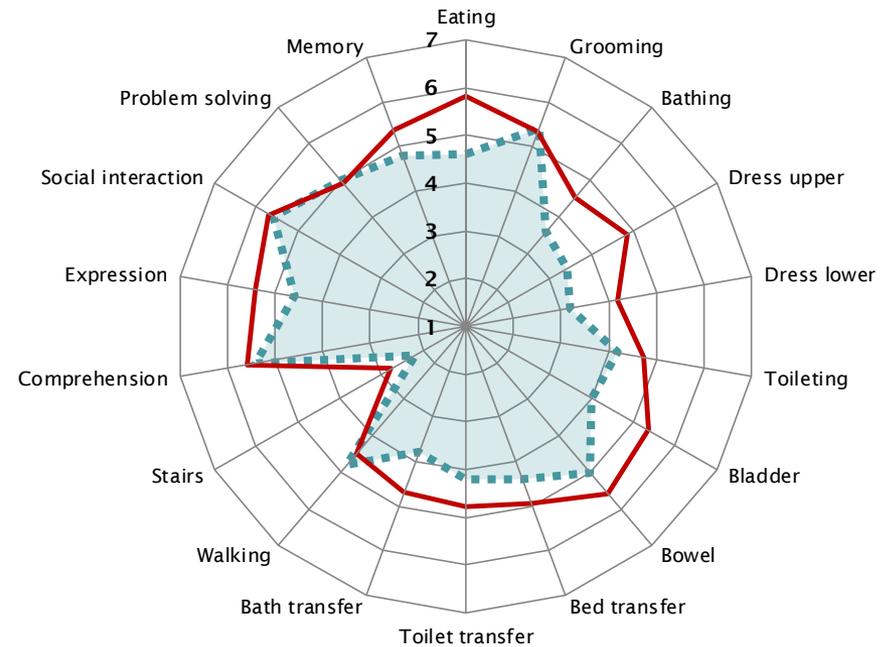
- YOUR FACILITY (n=5)
- AUSTRALIA (n=398)

NOTE: Includes only completed episodes with valid FIM scores

Comparative FIM item scoring
AN-SNAP class 4AZ3

4AZ3 Admission FIM scores

YOUR FACILITY (n=13)
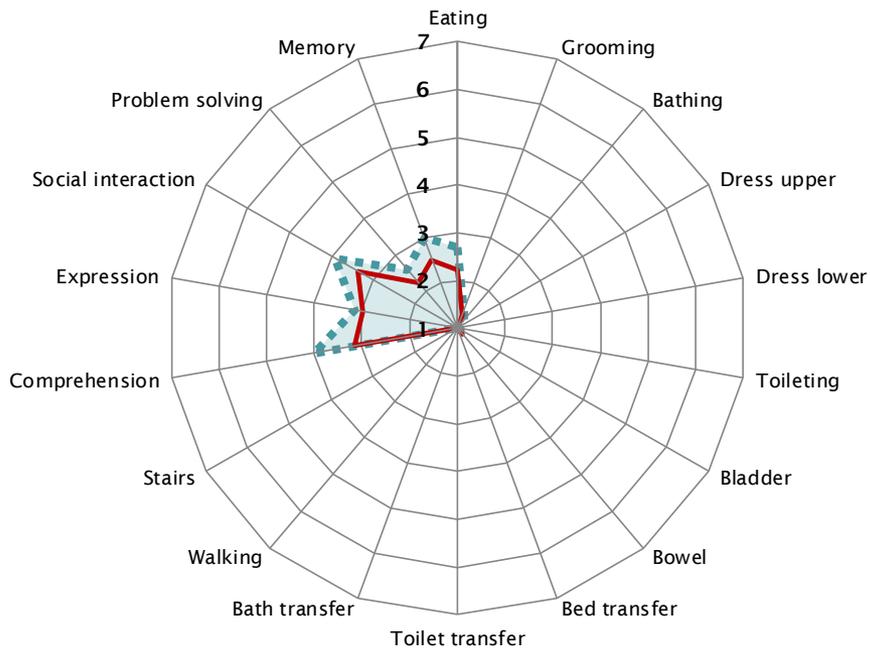
AUSTRALIA (n=623)

4AZ3 Discharge FIM scores
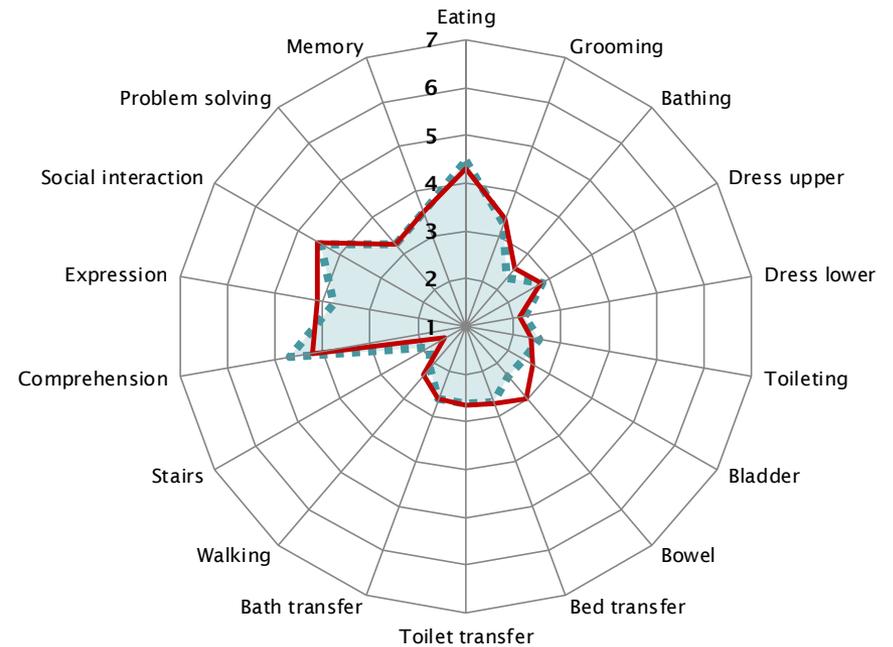
YOUR FACILITY (n=13)

AUSTRALIA (n=623)

NOTE: Includes only completed episodes with valid FIM scores
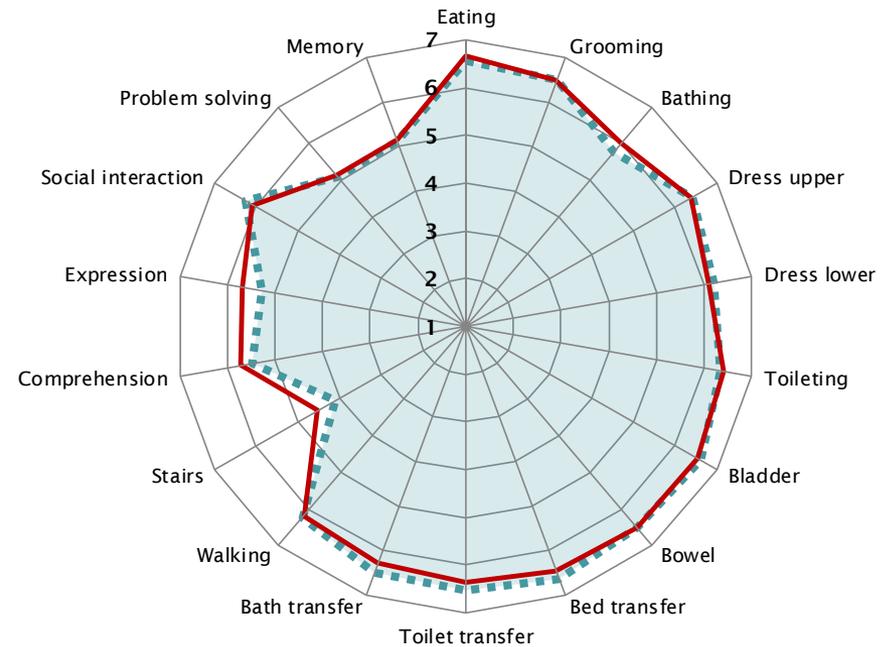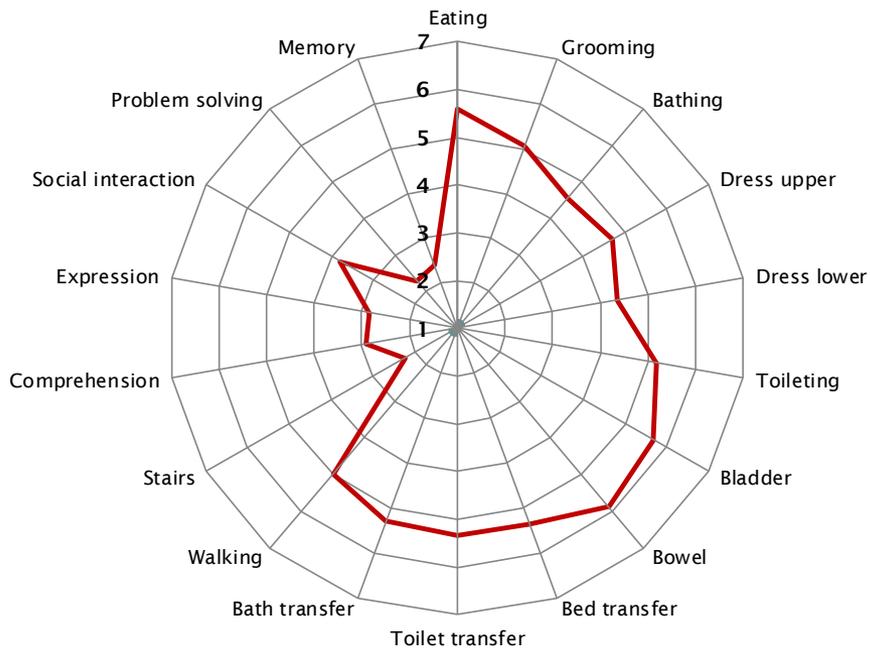
Comparative FIM item scoring
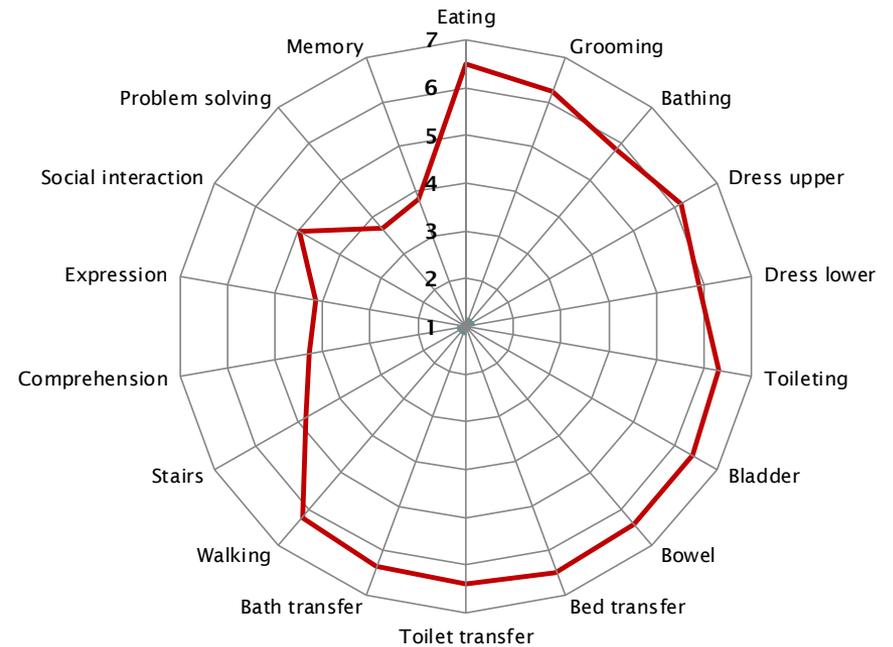# AN-SNAP class 4AZ4

4AZ4 Admission FIM scores

- YOUR FACILITY (n<5)
- AUSTRALIA (n=189)
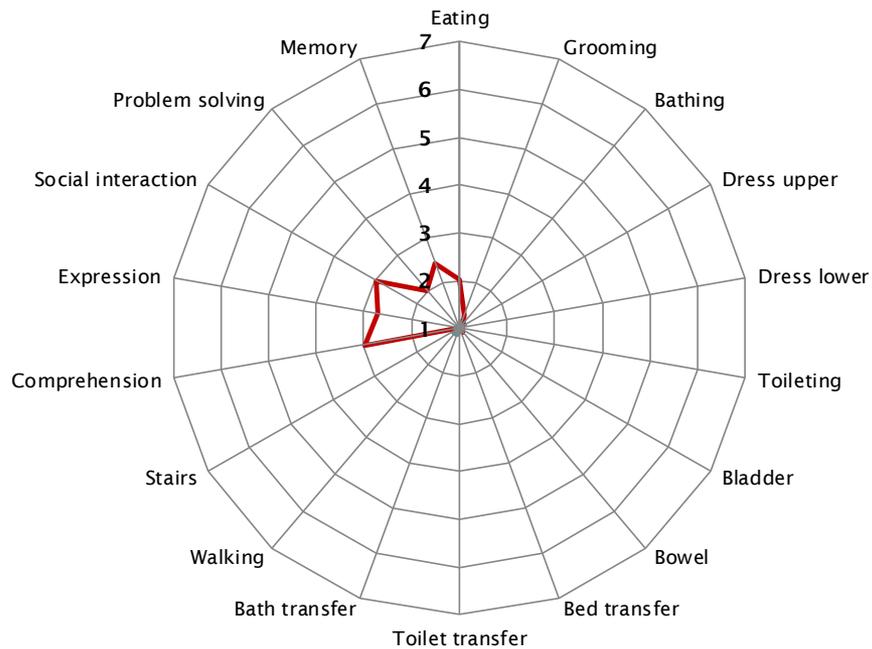
4AZ4 Discharge FIM scores

- YOUR FACILITY (n<5)
- AUSTRALIA (n=189)

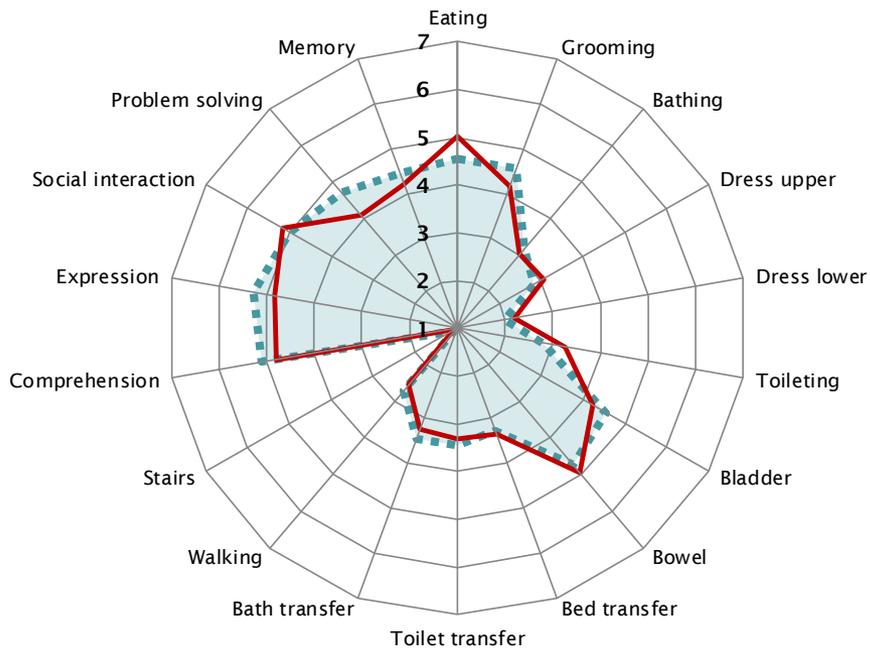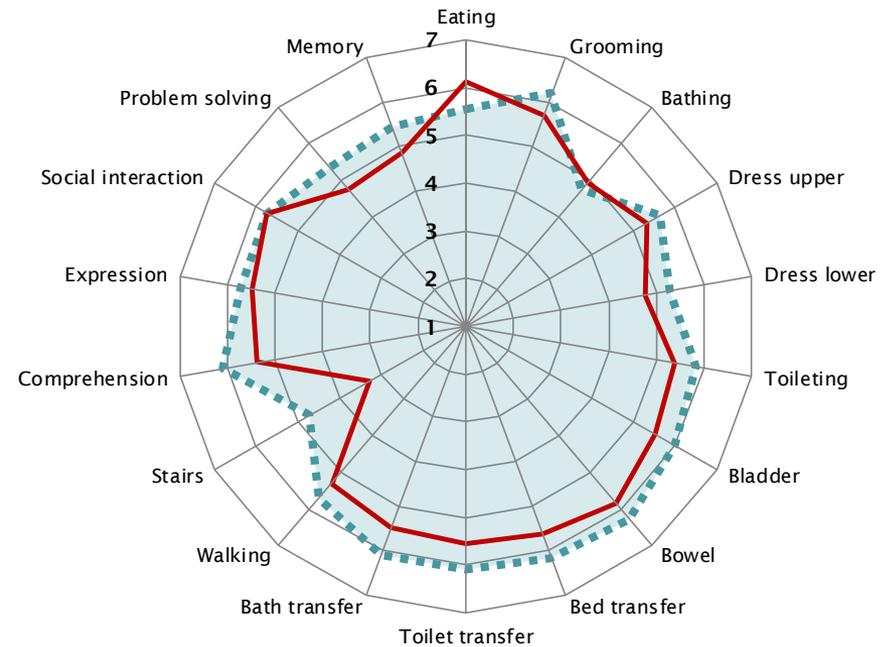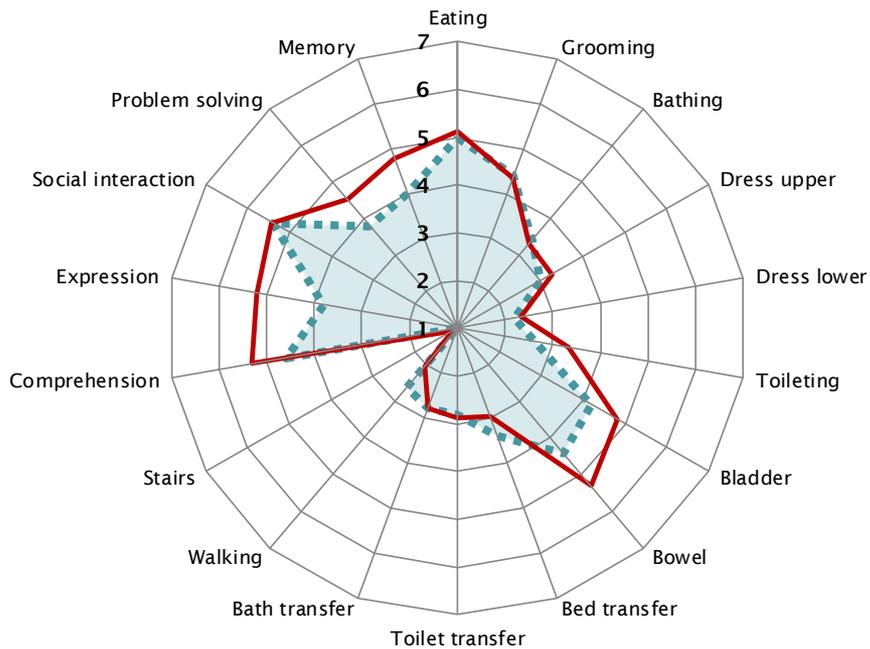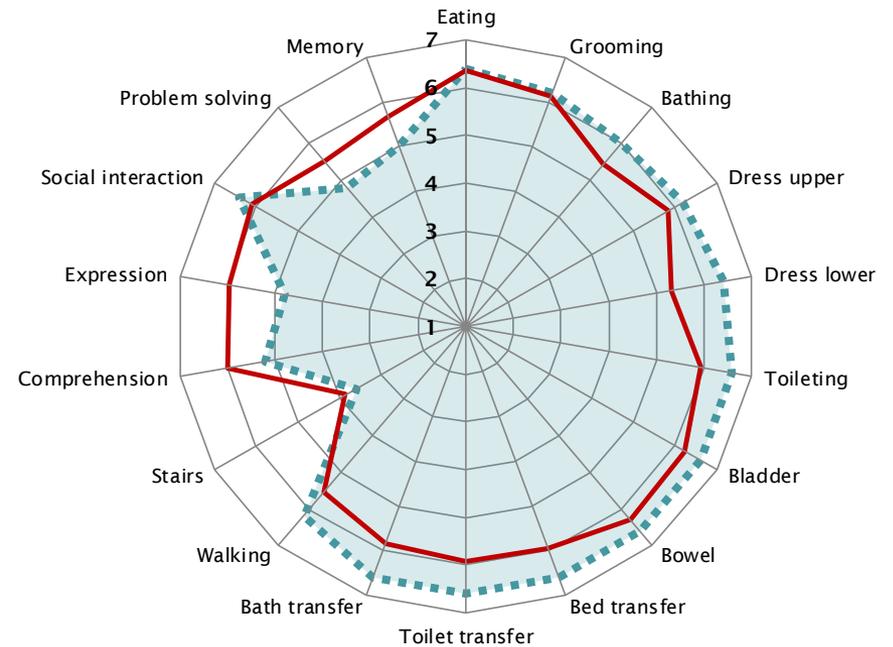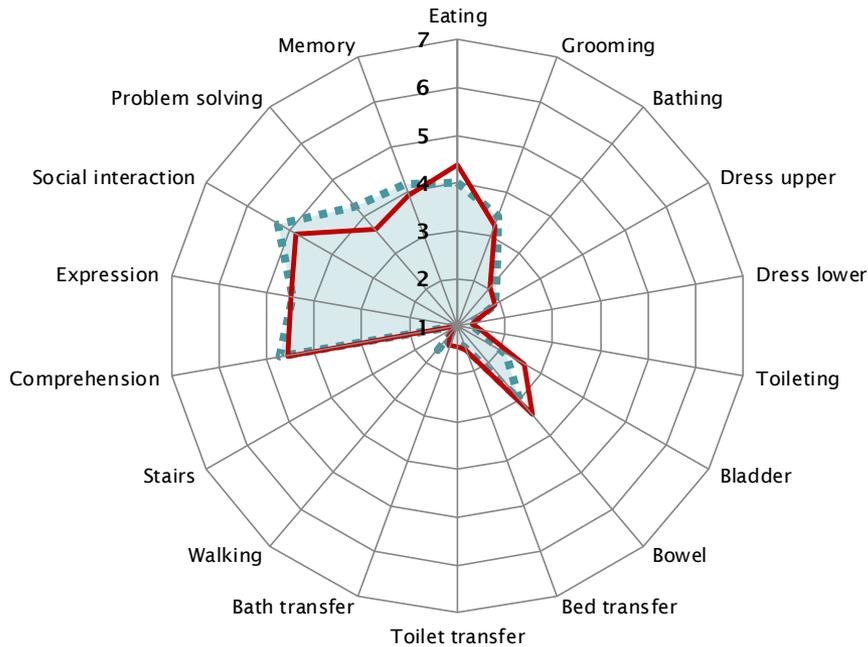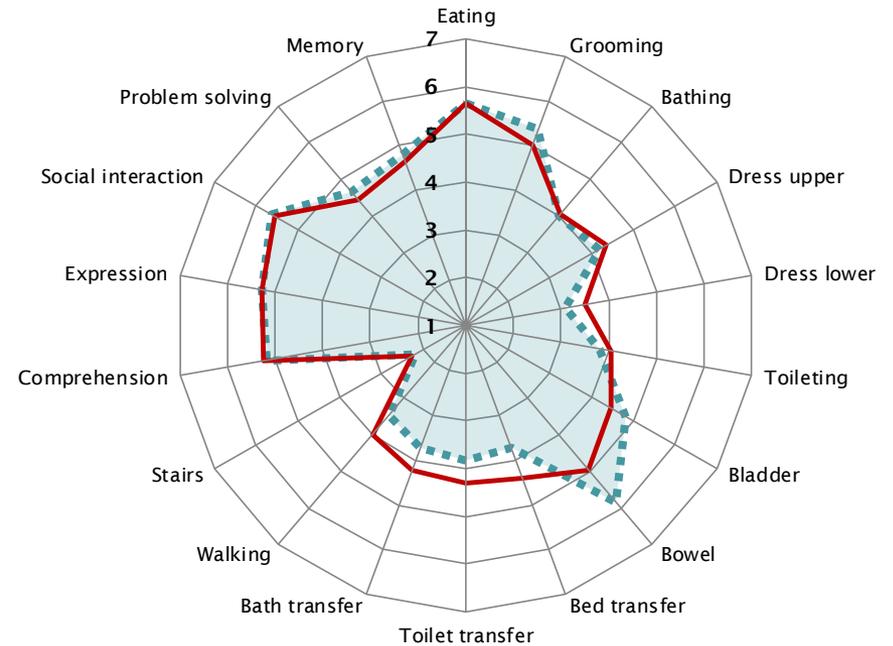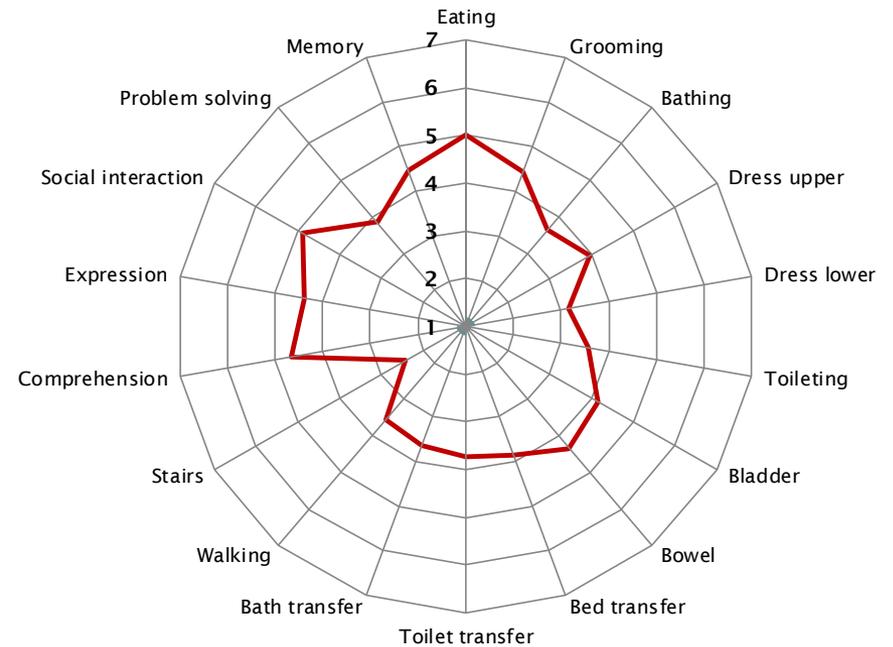NOTE: Includes only completed episodes with valid FIM scores

Outcomes Analysis

Completed episodes by AN-SNAP class and impairment

AN-SNAP class V4	YOUR FACILITY			AUSTRALIA		
	All episodes	Completed episodes	% Complete	All episodes	Completed episodes	% Complete
4AA1 (motor 51-91, cognition 29-35)	29	25	86.2	2,219	2,066	93.1
4AA2 (motor 51-91, cognition 19-28)	28	26	92.9	1,985	1,791	90.2
4AA3 (motor 51-91, cognition 5-18)	2	2	100.0	617	510	82.7
4AA4 (motor 36-50, Age ≥ 68)	13	11	84.6	1,285	1,070	83.3
4AA5 (motor 36-50, Age ≤ 67)	5	5	100.0	436	366	83.9
4AA6 (motor 19-35, Age ≥ 68)	14	11	78.6	1,495	1,131	75.7
4AA7 (motor 19-35, Age ≤ 67)	6	5	83.3	533	398	74.7
4AZ3 (motor 13-18, Age ≥ 65)	15	13	86.7	982	627	63.8
4AZ4 (motor 13-18, Age ≤ 64)	3	2	66.7	302	191	63.2
All Stroke AN-SNAP Classes	**115**	**100**	**87.0**	**9,854**	**8,150**	**82.7**

Impairment	YOUR FACILITY			AUSTRALIA		
	All episodes	Completed episodes	% Complete	All episodes	Completed episodes	% Complete
1.1 Haemorrhagic	34	26	76.5	2,714	2,202	81.1
1.2 Ischaemic	81	74	91.4	7,156	5,954	83.2
All Stroke	**115**	**100**	**87.0**	**9,870**	**8,156**	**82.6**

NOTE: All outcomes analysis are based on completed episodes. A definition of completed episodes can be found in Appendix 1 (Glossary).

Casemix-adjusted* relative means
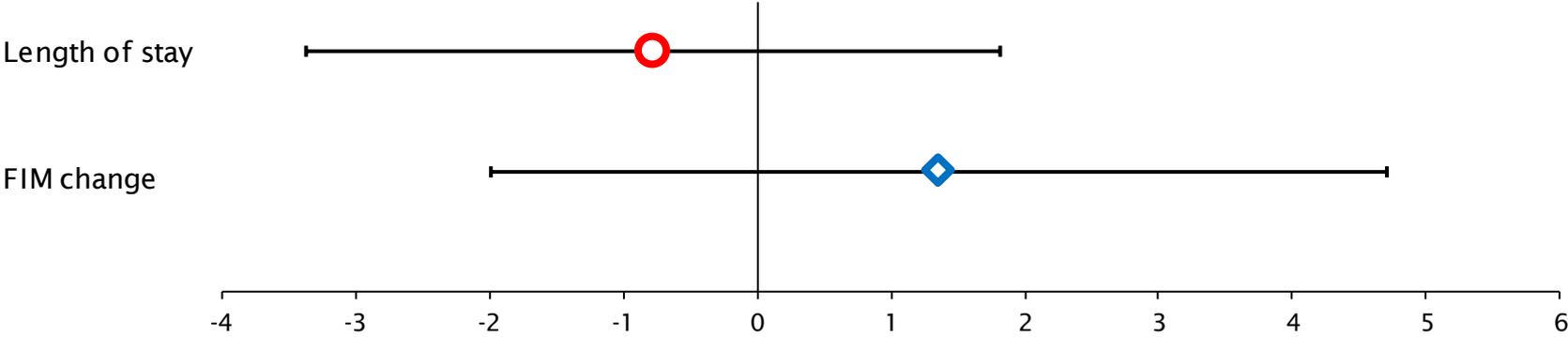
Casemix-adjusted relative means with 95% confidence intervals

	YOUR FACILITY		AUSTRALIA
Outcome measure	Casemix-adjusted* relative mean	95% CI	National IQR
Length of stay	-0.8	-3.4 to 1.8	-8.3 to 7.0
FIM change	1.4	-2.0 to 4.7	-9.9 to 9.6

*Includes only completed episodes with valid FIM scores and LOS

Casemix-adjusted* relative means over time

Legend:
- ─●─ Casemix adjusted relative mean length of stay
- ─◆─ Casemix adjusted relative mean FIM change

Y-axis: **Casemix adjusted relative mean** (from -4 to 4)

X-axis: 2015, 2016, 2017, 2018, 2019
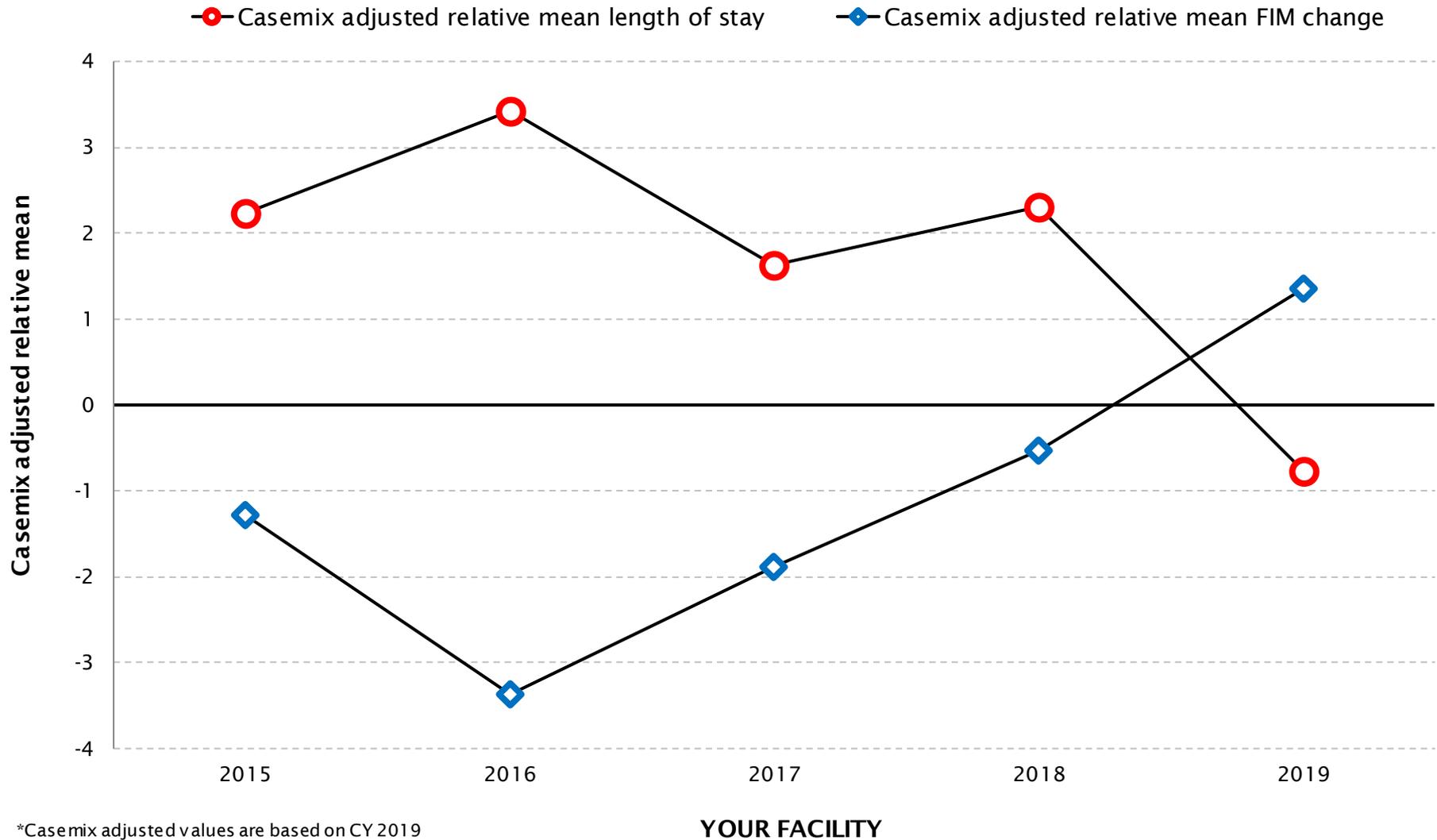
YOUR FACILITY

*Casemix adjusted values are based on CY 2019

NOTE: Includes only completed episodes with valid FIM scores and LOS; where n<5 the casemix-adjusted relative mean will not be shown

Outcome measures – difference from National

How YOUR FACILITY is different to AUSTRALIA

AUSTRALIA

Measure	Value
Age (years)	(73.3)
Length of stay (days)	(27.3)
FIM admission score	(73.7)
FIM discharge score	(98.2)
FIM change (adm to disch)	(24.5)
FIM efficiency (per week)	(6.3)
Disch private residence (%)	(77.5)

Lower than AUSTRALIA   Higher than AUSTRALIA
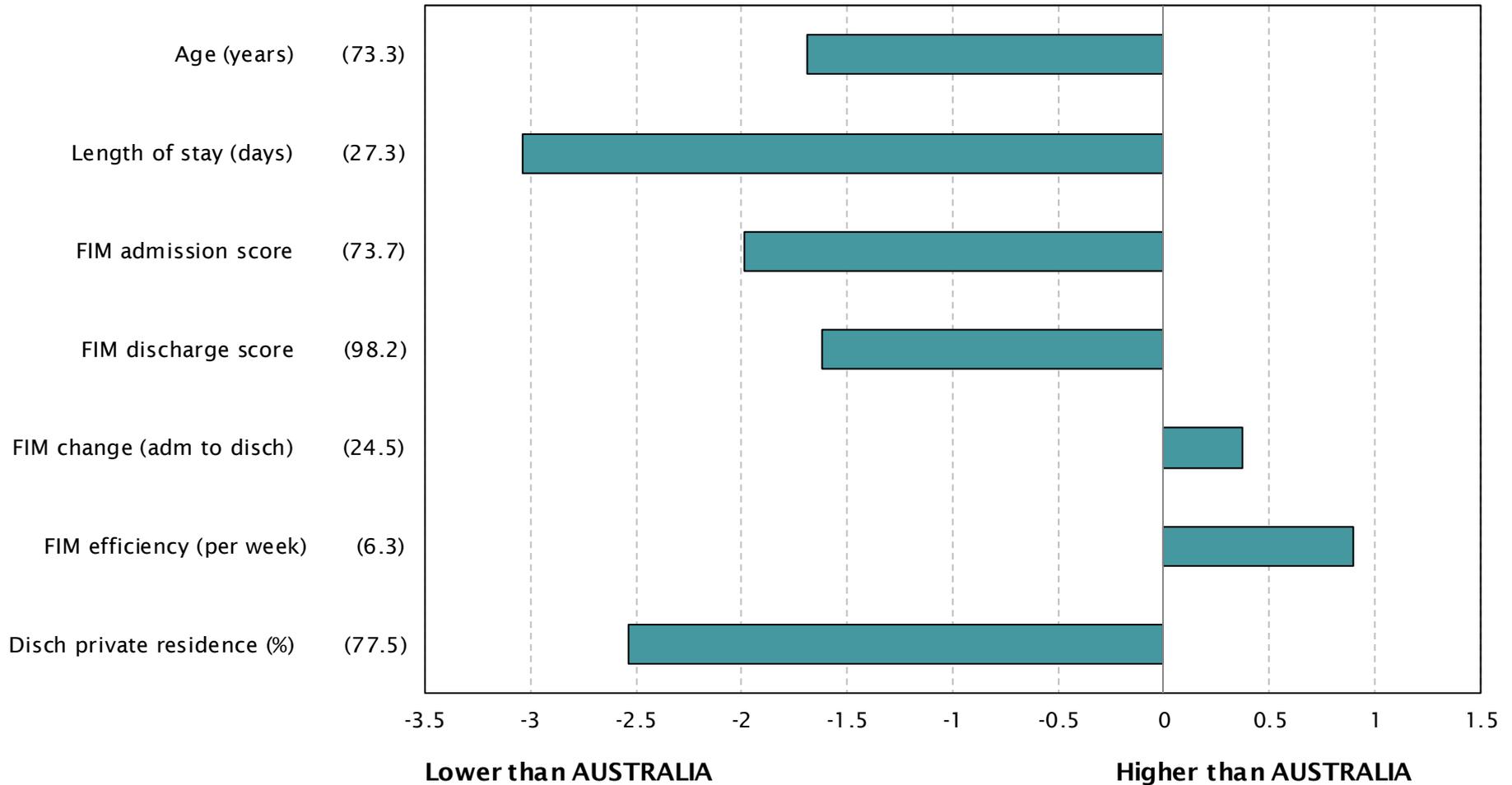
NOTE: Includes only completed episodes with valid FIM scores and LOS

Outcome measures – difference from last year

How YOUR FACILITY has changed since 2018

	2018
Age (years)	(74.3)
Length of stay (days)	(28.6)
FIM admission score	(69.6)
FIM discharge score	(93.4)
FIM change (adm to disch)	(23.9)
FIM efficiency (per week)	(5.8)
Disch private residence (%)	(69.1)

Lower than 2018

Higher than 2018
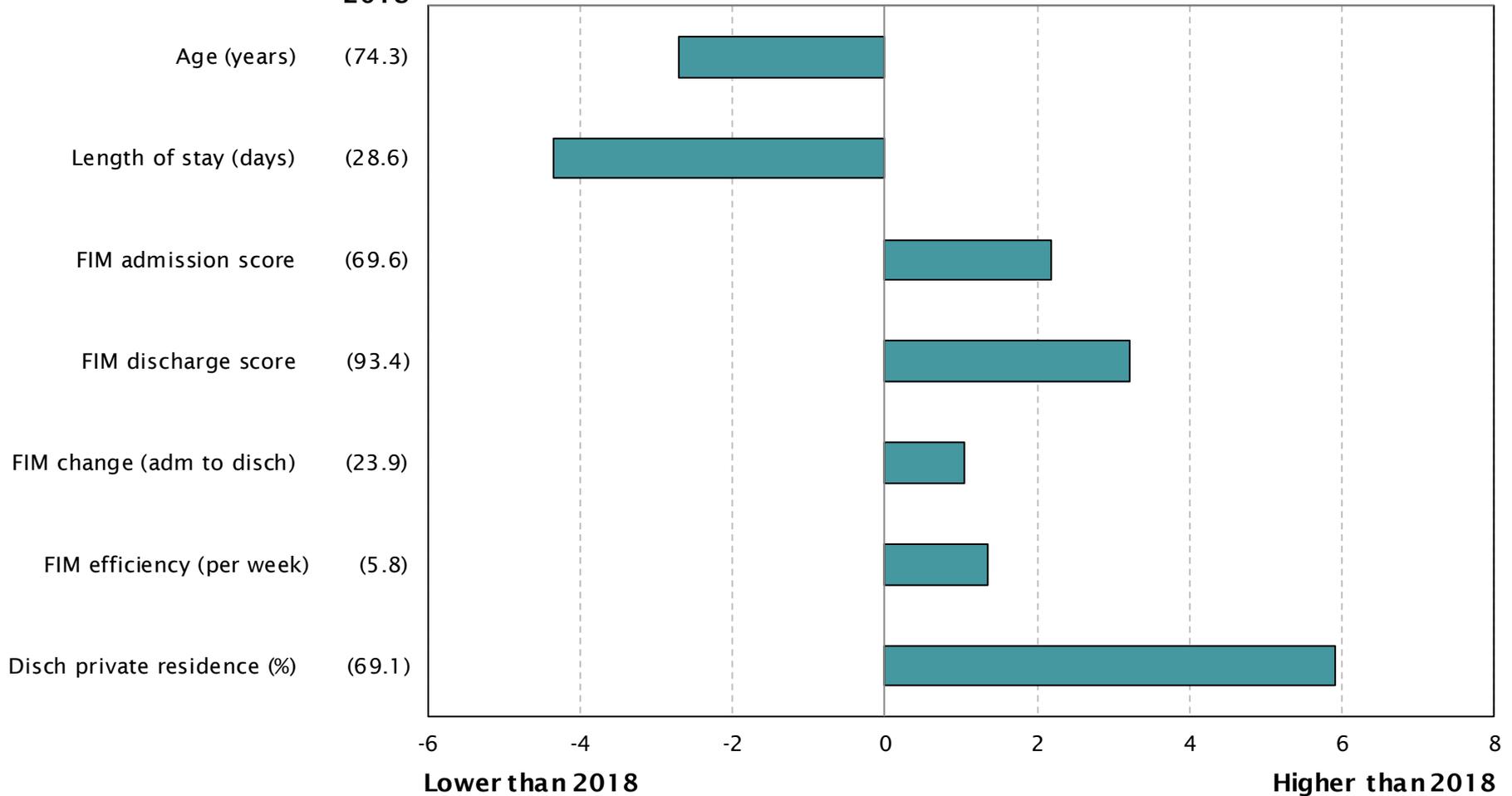
NOTE: Includes only completed episodes with valid FIM scores and LOS

Average length of stay by AN-SNAP class over time

NOTE: Includes only completed episodes with valid LOS; where n<5 ALOS will not be shown
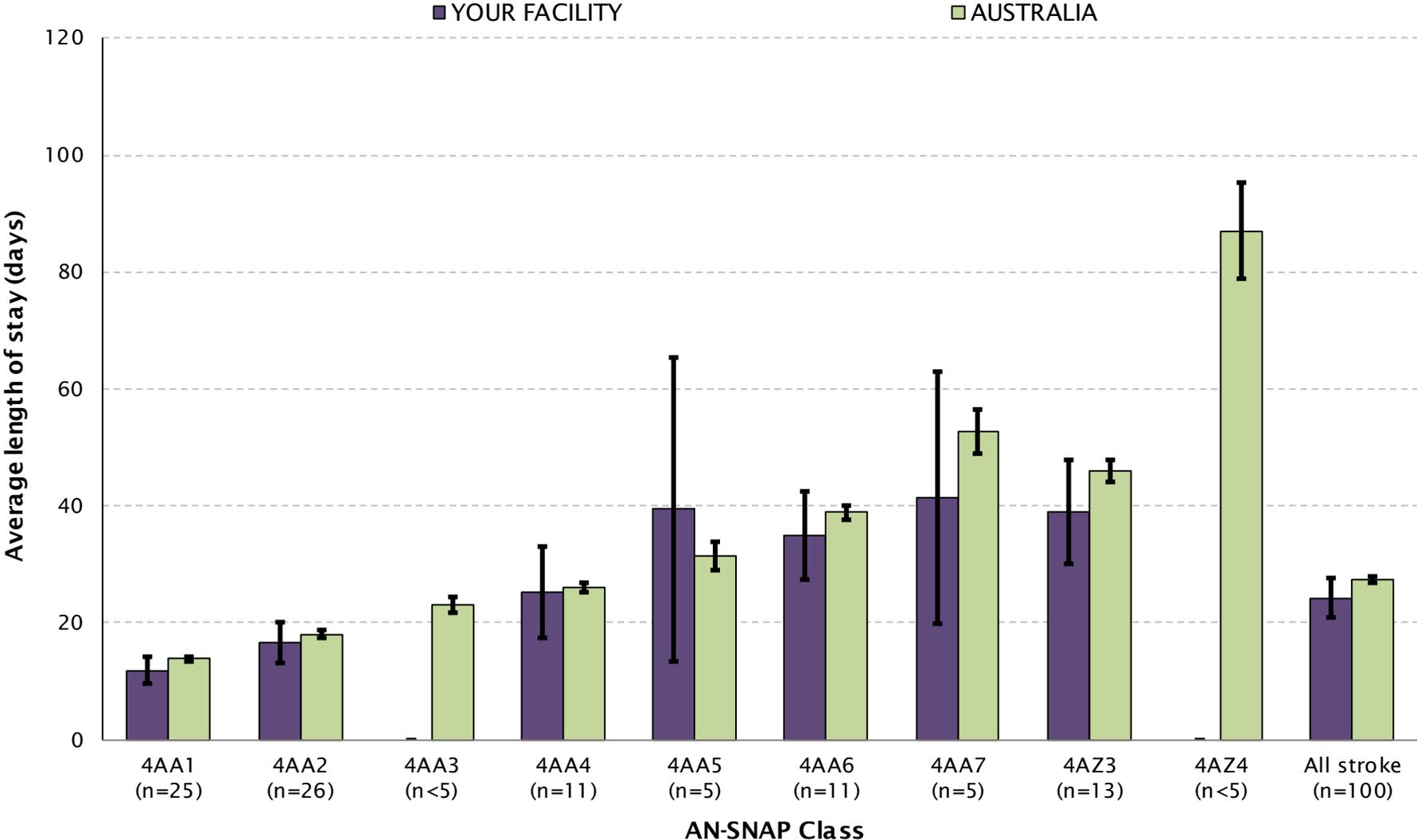
Average length of stay by AN-SNAP class

Casemix-adjusted relative mean length of stay by AN-SNAP class

NOTE: Includes only completed episodes with valid LOS; where n<5 CARMI LOS will not be shown

Average length of stay by impairment

NOTE: Includes only completed episodes with valid LOS; where n<5 ALOS will not be shown

Casemix-adjusted relative mean length of stay by impairment

NOTE: Includes only completed episodes with valid LOS; where n<5 CARMI LOS will not be shown

Average FIM change by AN-SNAP class over time

NOTE: Includes only completed episodes with valid FIM scores; where n<5 average FIM change will not be shown

Average FIM change by AN-SNAP class

YOUR FACILITY   AUSTRALIA

Average FIM change (points)

AN-SNAP Class

NOTE: Includes only completed episodes with valid FIM scores; where n<5 average FIM change will not be shown

Casemix-adjusted relative mean FIM change by AN-SNAP class

NOTE: Includes only completed episodes with valid FIM scores; where n<5 CARMI FIM change will not be shown

Average FIM change by impairment

Casemix-adjusted relative mean FIM change by impairment

NOTE: Includes only completed episodes with valid FIM scores; where n<5 CARMI FIM change will not be shown

Casemix-adjusted relative mean and average length of stay and FIM change by AN-SNAP class and impairment

AN-SNAP class V4	YOUR FACILITY CARMI (95%CI) LOS		FIM change		Average (95%CI) LOS		FIM change		AUSTRALIA Average (95%CI) LOS		FIM change	
4AA1 (motor 51-91, cognition 29-35)	-1.7	(-3.9 – 0.5)	5.0	(1.8 – 8.2)	11.8	(9.6 – 14.1)	21.5	(18.2 – 24.9)	13.8	(13.5 – 14.2)	16.9	(16.5 – 17.3)
4AA2 (motor 51-91, cognition 19-28)	-0.9	(-4.4 – 2.6)	0.5	(-3.6 – 4.7)	16.6	(13.1 – 20.2)	19.2	(15.0 – 23.4)	18.0	(17.4 – 18.7)	19.0	(18.5 – 19.6)
4AA3 (motor 51-91, cognition 5-18)	—		—		—		—		23.0	(21.6 – 24.5)	22.4	(21.2 – 23.5)
4AA4 (motor 36-50, Age ≥ 68)	-0.7	(-8.4 – 6.9)	6.7	(1.6 – 11.8)	25.1	(17.3 – 32.9)	34.9	(29.6 – 40.2)	26.0	(25.2 – 26.8)	28.5	(27.6 – 29.4)
4AA5 (motor 36-50, Age ≤ 67)	8.0	(-18.0 – 33.9)	8.4	(4.3 – 12.6)	39.4	(13.4 – 65.4)	43.4	(39.3 – 47.5)	31.4	(29.1 – 33.8)	35.1	(33.6 – 36.6)
4AA6 (motor 19-35, Age ≥ 68)	-1.5	(-7.7 – 4.7)	-0.8	(-15.4 – 13.9)	34.9	(27.5 – 42.4)	29.9	(15.0 – 44.8)	38.9	(37.6 – 40.2)	31.8	(30.7 – 32.9)
4AA7 (motor 19-35, Age ≤ 67)	-6.4	(-30.7 – 17.9)	-15.7	(-42.0 – 10.6)	41.4	(19.7 – 63.1)	26.0	(-0.1 – 52.1)	52.7	(48.9 – 56.4)	39.3	(37.3 – 41.4)
4AZ3 (motor 13-18, Age ≥ 65)	4.7	(-4.1 – 13.4)	-1.8	(-17.3 – 13.8)	38.9	(30.1 – 47.8)	21.8	(6.0 – 37.7)	46.0	(44.0 – 47.9)	25.4	(23.6 – 27.3)
4AZ4 (motor 13-18, Age ≤ 64)	—		—		—		—		87.1	(78.8 – 95.3)	43.8	(39.8 – 47.9)
All Stroke AN-SNAP Classes	**-0.8**	**(-3.4 – 1.8)**	**1.4**	**(-2.0 – 4.7)**	**24.3**	**(20.9 – 27.6)**	**24.9**	**(21.4 – 28.4)**	**27.3**	**(26.8 – 27.9)**	**24.5**	**(24.2 – 24.9)**

Impairment	YOUR FACILITY CARMI (95%CI) LOS		FIM change		Average (95%CI) LOS		FIM change		AUSTRALIA Average (95%CI) LOS		FIM change	
1.1 Haemorrhagic	-0.8	(-6.0 – 4.3)	0.2	(-7.1 – 7.4)	24.0	(17.6 – 30.3)	24.5	(16.6 – 32.3)	29.5	(28.4 – 30.6)	25.7	(25.0 – 26.5)
1.2 Ischaemic	-0.8	(-3.8 – 2.3)	1.8	(-2.0 – 5.6)	24.4	(20.4 – 28.4)	25.1	(21.2 – 28.9)	26.5	(25.9 – 27.1)	24.1	(23.7 – 24.5)
All Stroke	**-0.8**	**(-3.4 – 1.8)**	**1.4**	**(-2.0 – 4.7)**	**24.3**	**(20.9 – 27.6)**	**24.9**	**(21.4 – 28.4)**	**27.3**	**(26.8 – 27.9)**	**24.5**	**(24.2 – 24.9)**

NOTE: Includes only completed episodes with valid FIM scores and LOS, where n<5 scores will not be shown.

Casemix-adjusted relative mean length of stay by age group*
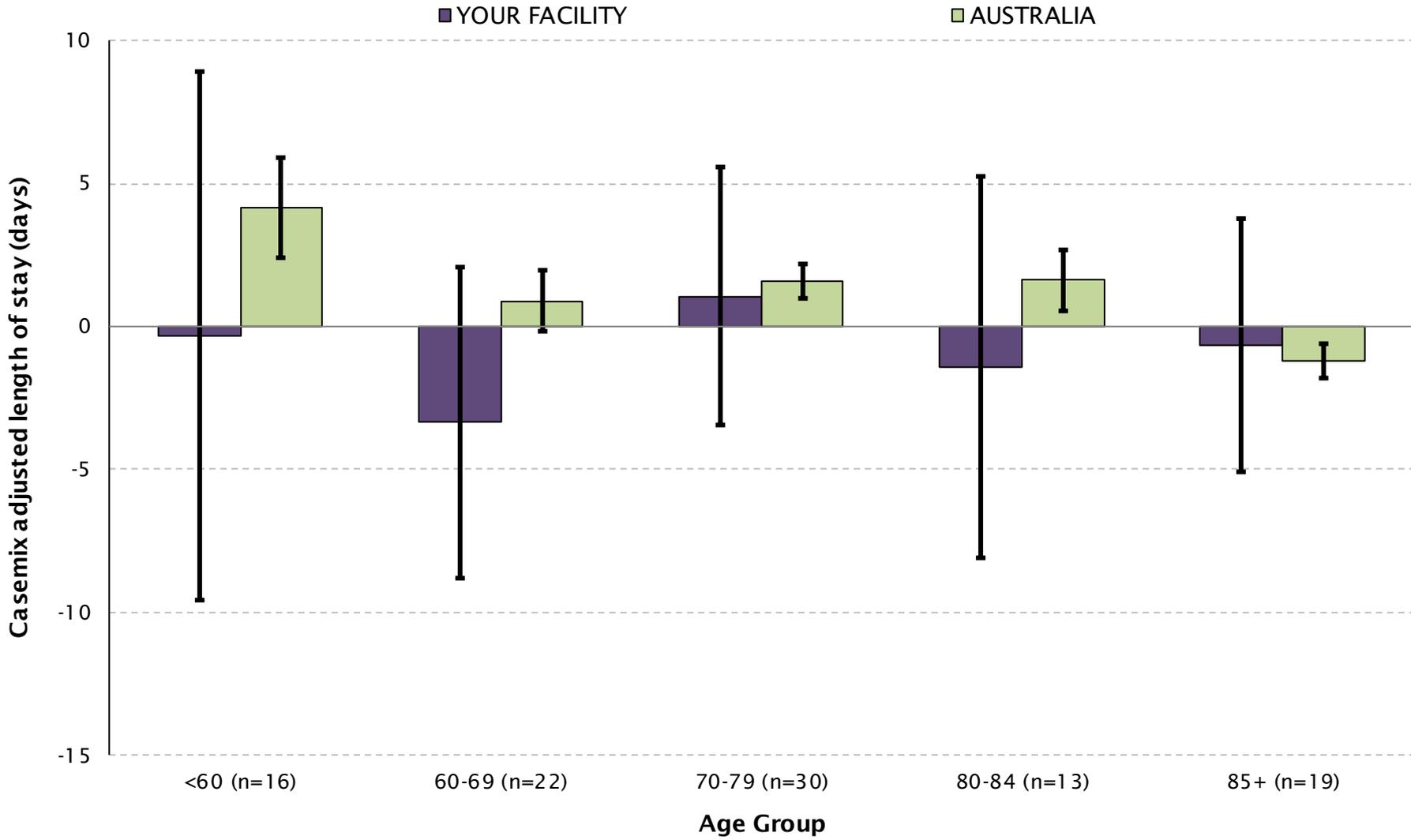
* Approximately 20% national population per age group
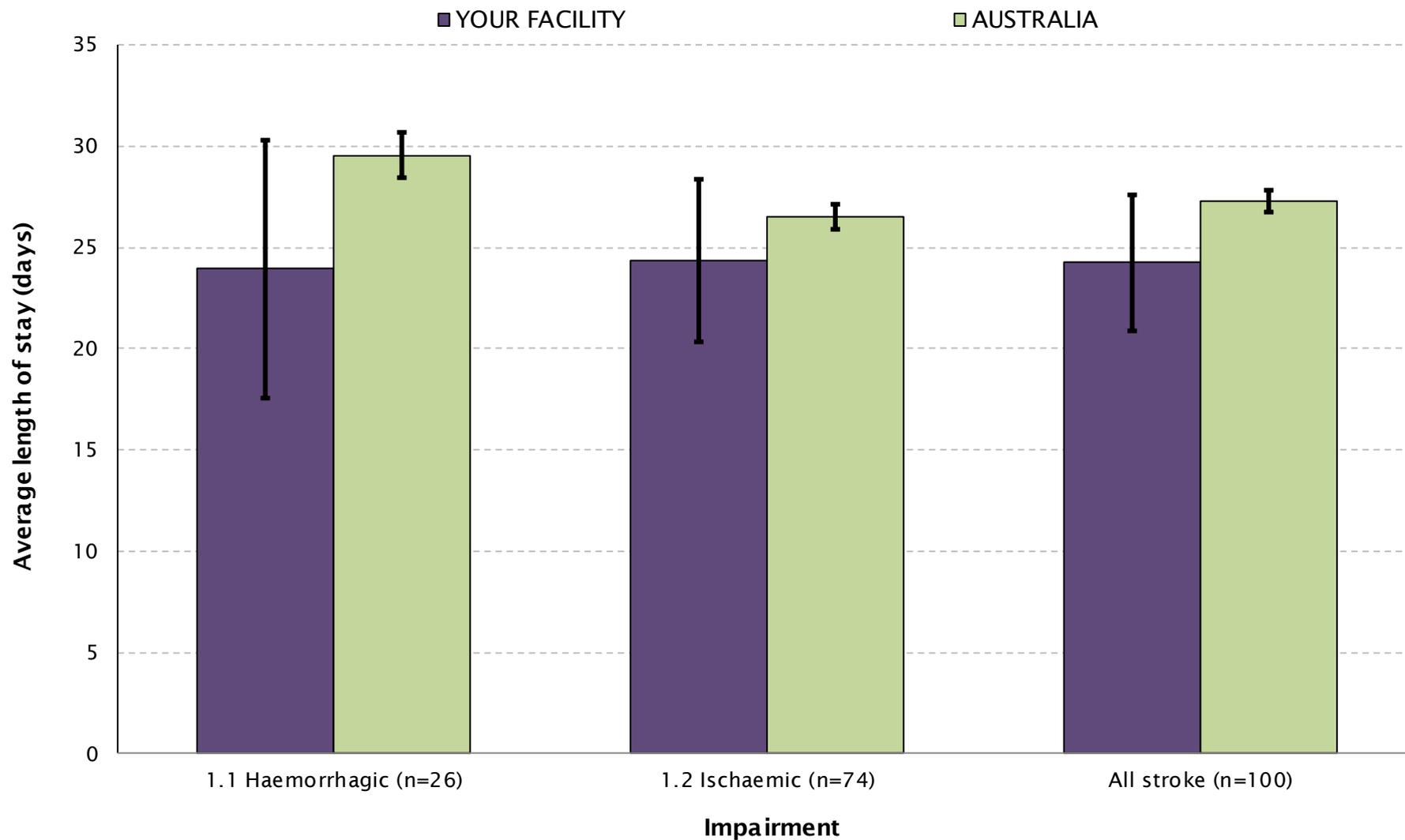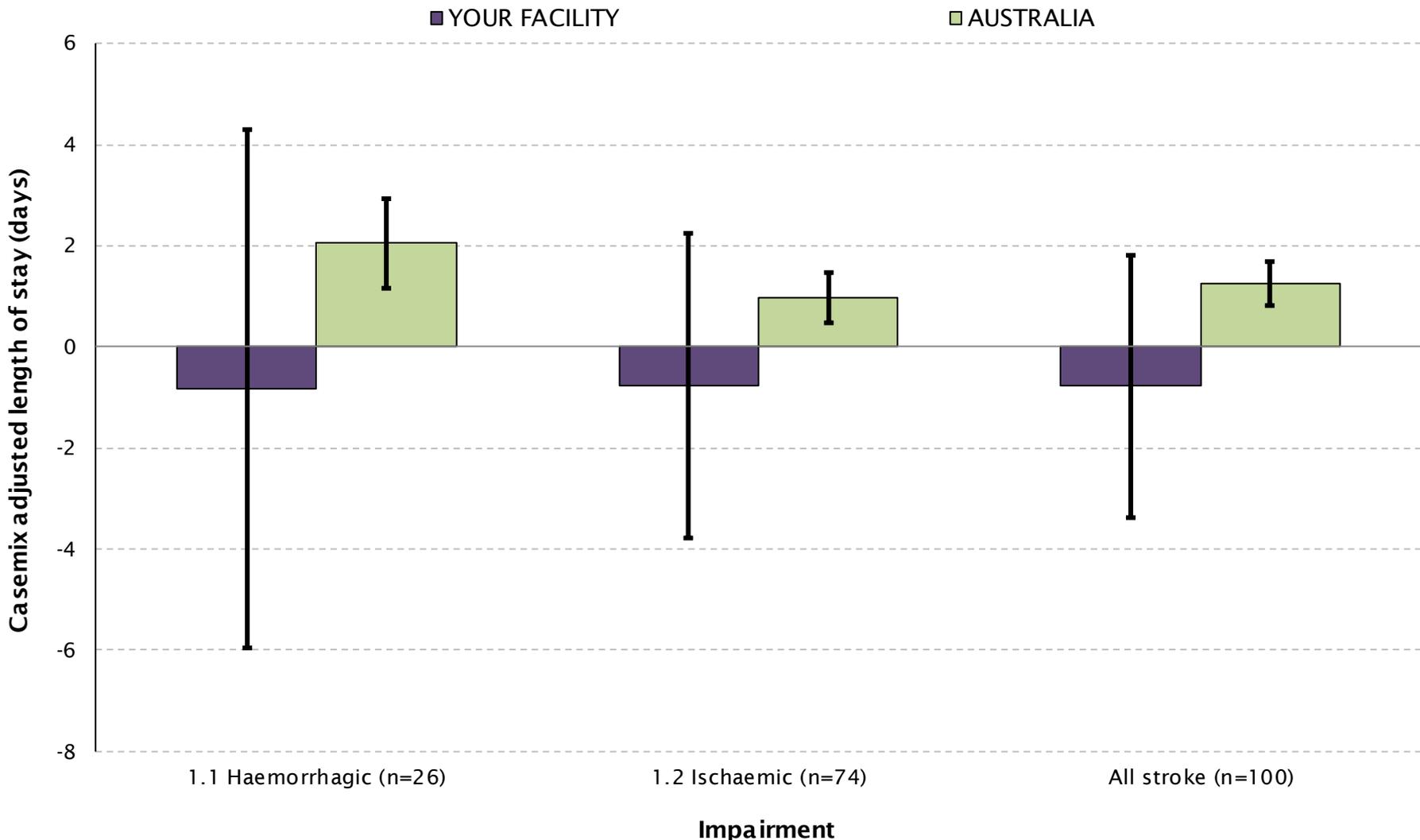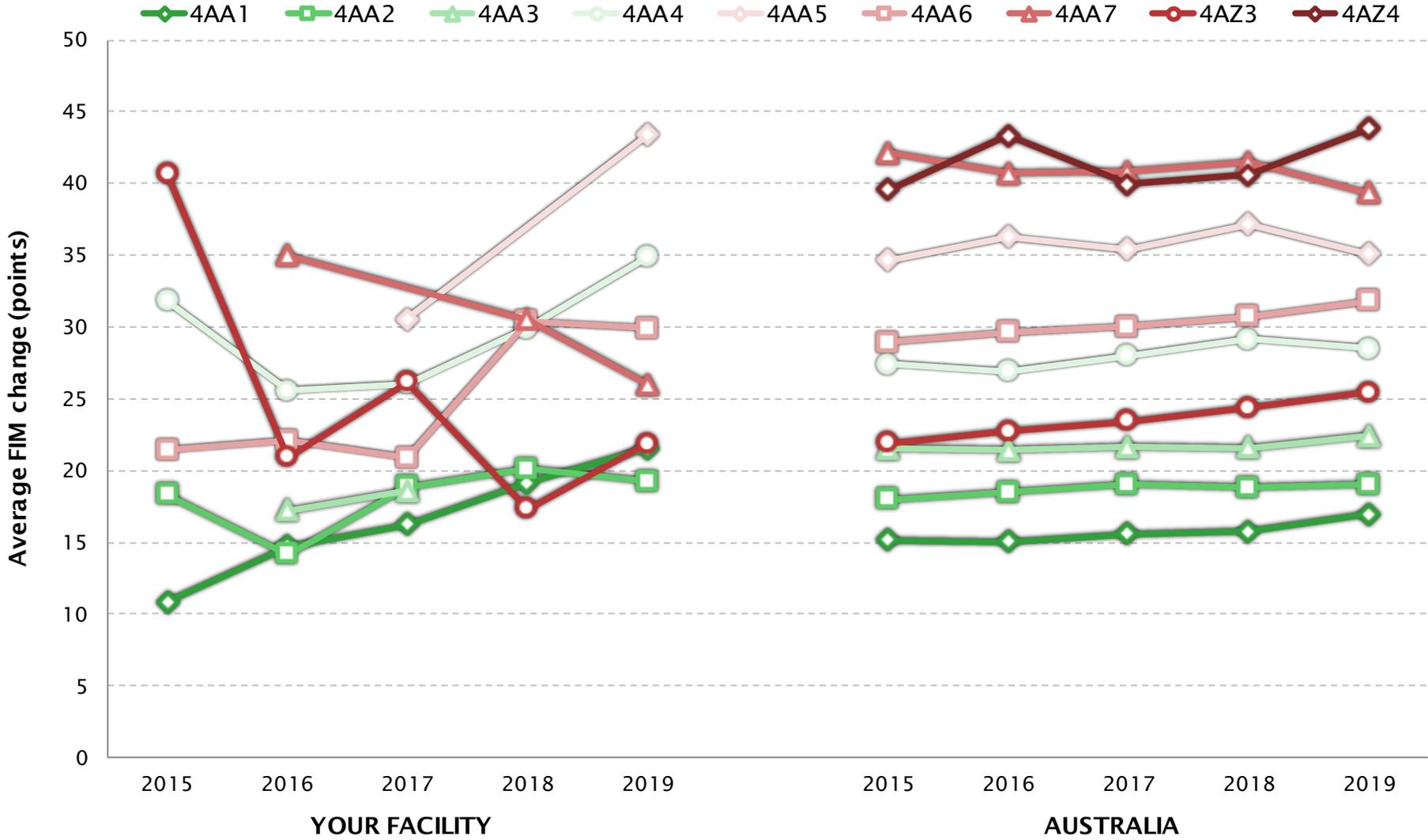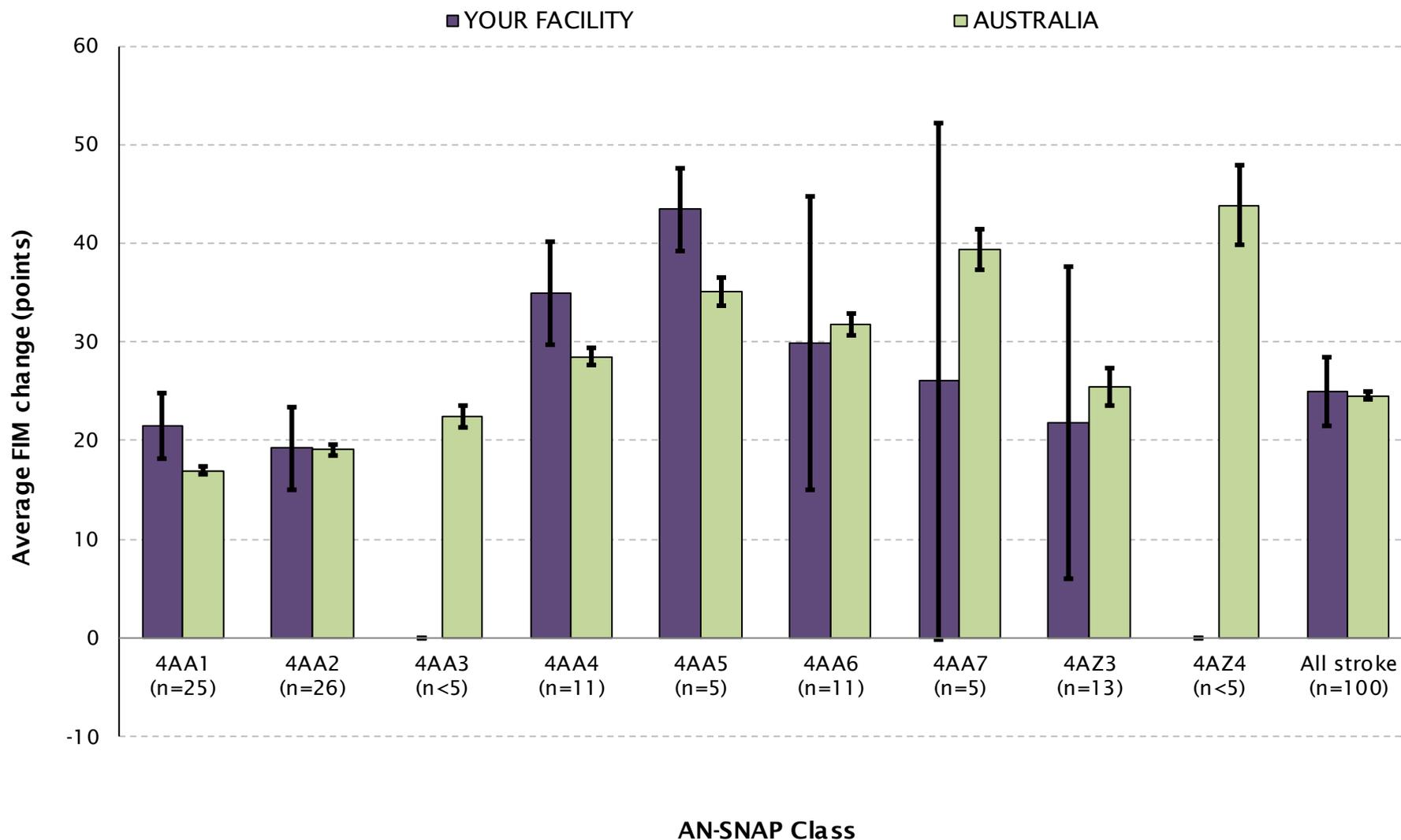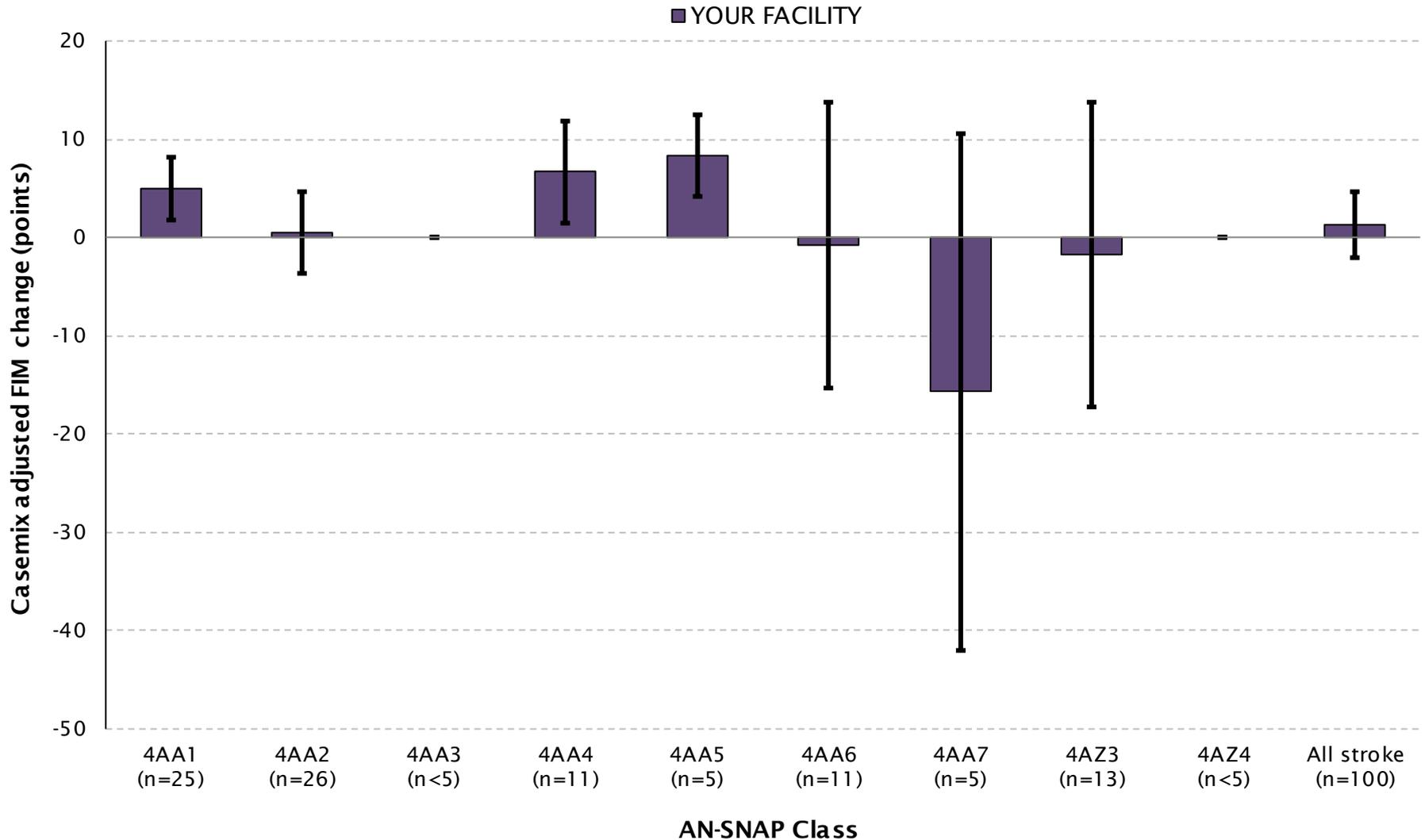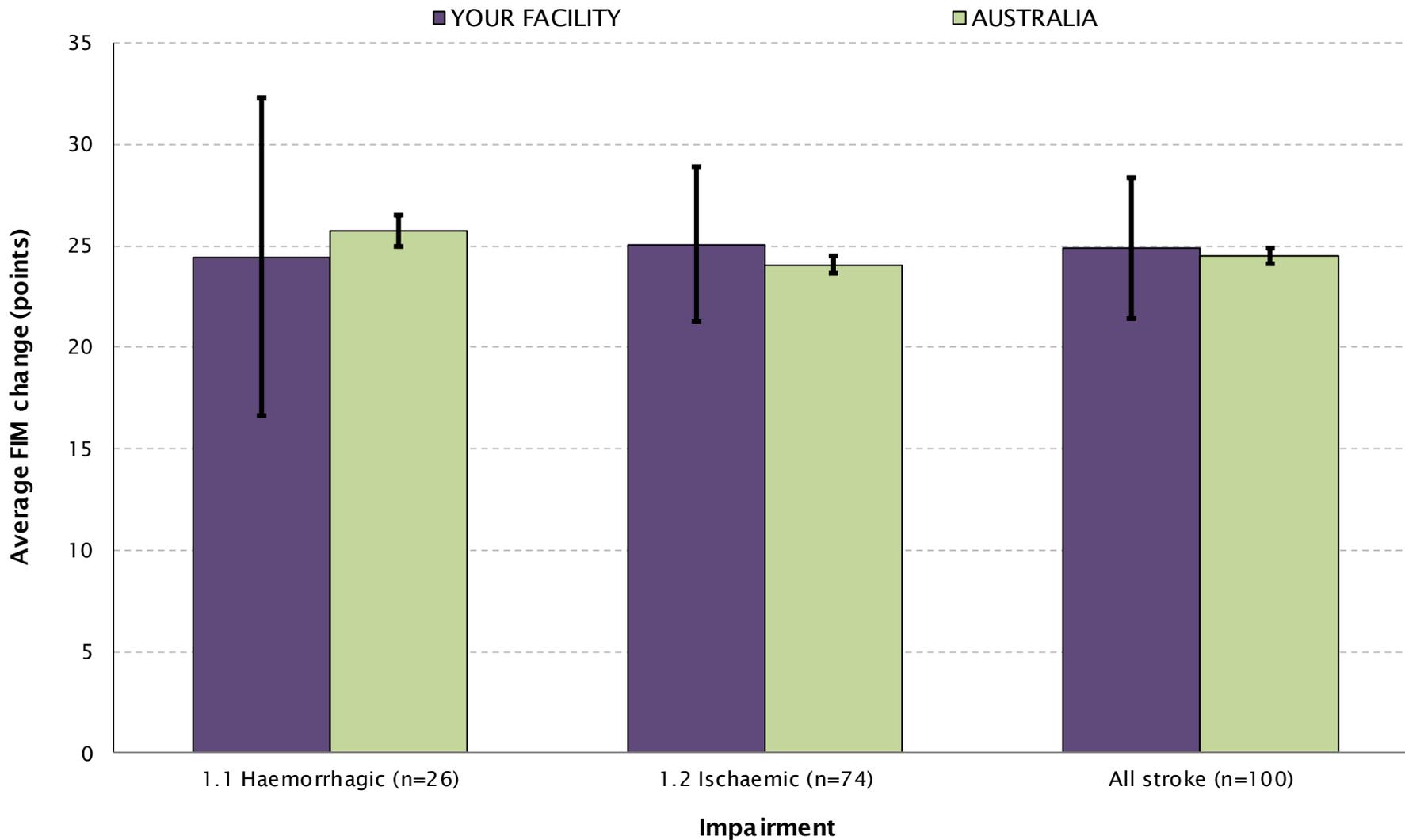NOTE: Includes only completed episodes with valid LOS; where n<5 CARMI LOS will not be shown

Casemix-adjusted relative mean FIM change by age group*

* Approximately 20% national population per age group
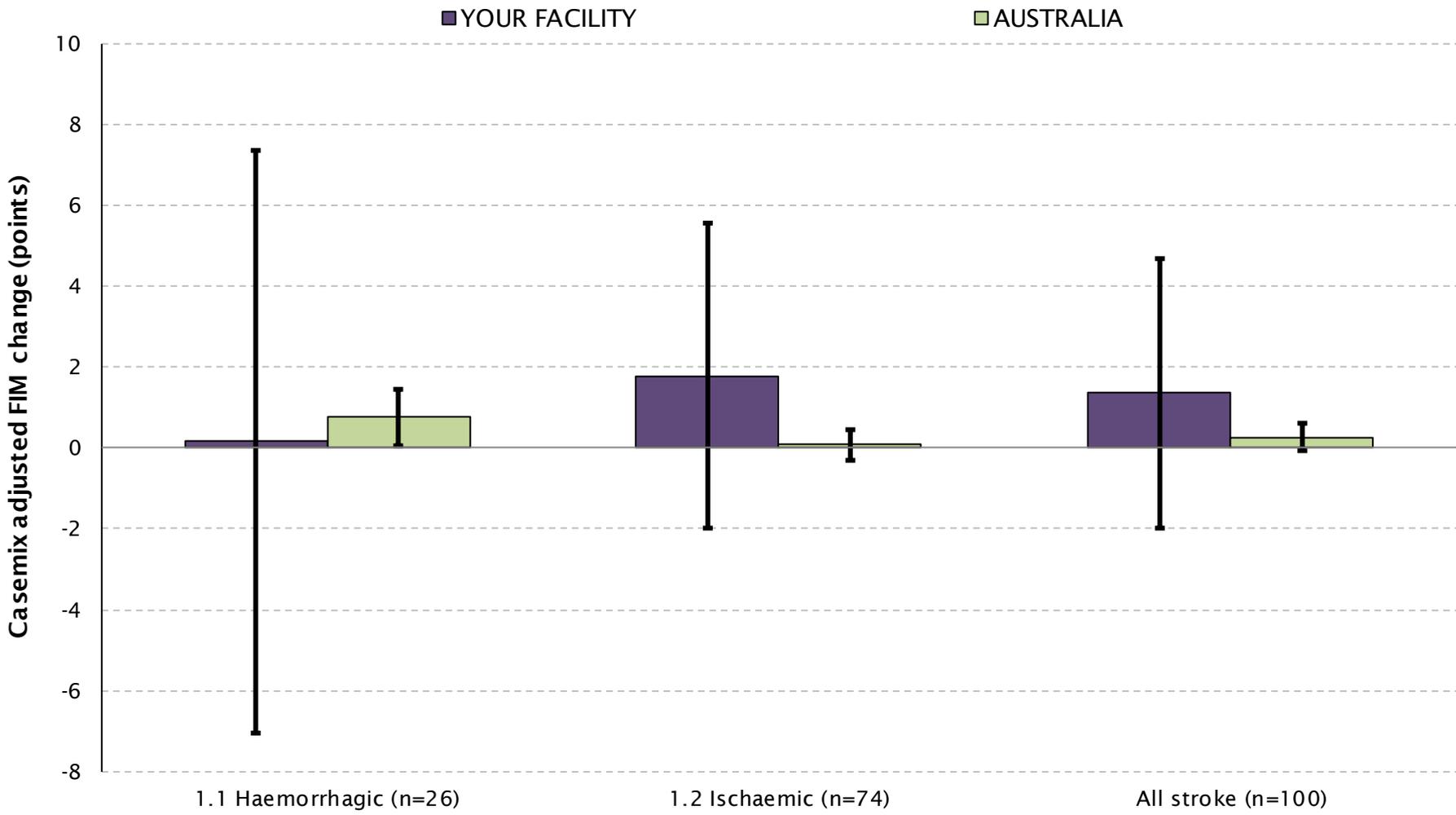NOTE: Includes only completed episodes with valid FIM scores; where n<5 CARMI FIM Change will not be shown

Average and casemix-adjusted relative mean length of stay and FIM change by age group*

	YOUR FACILITY				AUSTRALIA			
Age group	Mean LOS	(95% CI)	FIM change	(95% CI)	Mean LOS	(95% CI)	FIM change	(95% CI)
<60	20.6	(10.1 – 31.1)	27.1	(18.4 – 35.7)	34.0	(31.8 – 36.2)	27.3	(26.2 – 28.4)
60-69	23.6	(15.7 – 31.6)	21.7	(15.7 – 27.7)	29.0	(27.7 – 30.4)	25.8	(24.9 – 26.8)
70-79	25.4	(19.3 – 31.5)	29.2	(22.3 – 36.1)	25.7	(24.9 – 26.5)	25.3	(24.6 – 25.9)
80-84	26.5	(16.9 – 36.0)	26.1	(13.7 – 38.5)	26.4	(25.2 – 27.7)	23.0	(22.1 – 23.8)
85+	24.8	(19.6 – 30.0)	19.2	(13.0 – 25.4)	23.9	(23.2 – 24.6)	21.5	(20.8 – 22.2)

	YOUR FACILITY				AUSTRALIA			
Age group	CARMI LOS	(95% CI)	CARMI FIM change	(95% CI)	CARMI LOS	(95% CI)	CARMI FIM change	(95% CI)
<60	-0.3	(-9.6 – 8.9)	4.5	(-0.9 – 9.9)	4.2	(2.4 – 5.9)	1.2	(0.3 – 2.1)
60-69	-3.4	(-8.8 – 2.1)	-3.1	(-10.5 – 4.3)	0.9	(-0.2 – 2.0)	0.4	(-0.4 – 1.3)
70-79	1.1	(-3.4 – 5.6)	6.5	(0.1 – 12.8)	1.6	(1.0 – 2.2)	2.1	(1.5 – 2.7)
80-84	-1.4	(-8.1 – 5.3)	0.4	(-12.0 – 12.8)	1.6	(0.5 – 2.7)	-0.6	(-1.4 – 0.2)
85+	-0.7	(-5.1 – 3.8)	-3.5	(-9.6 – 2.6)	-1.2	(-1.8 – -0.6)	-2.4	(-3.1 – -1.7)

*Approximately 20% national population per age group

NOTE: Includes only completed episodes with valid FIM scores and LOS and age, where n<5 scores will not be shown.

Explanatory data

Casemix-adjusted relative mean length of stay and FIM change by number of comorbidities
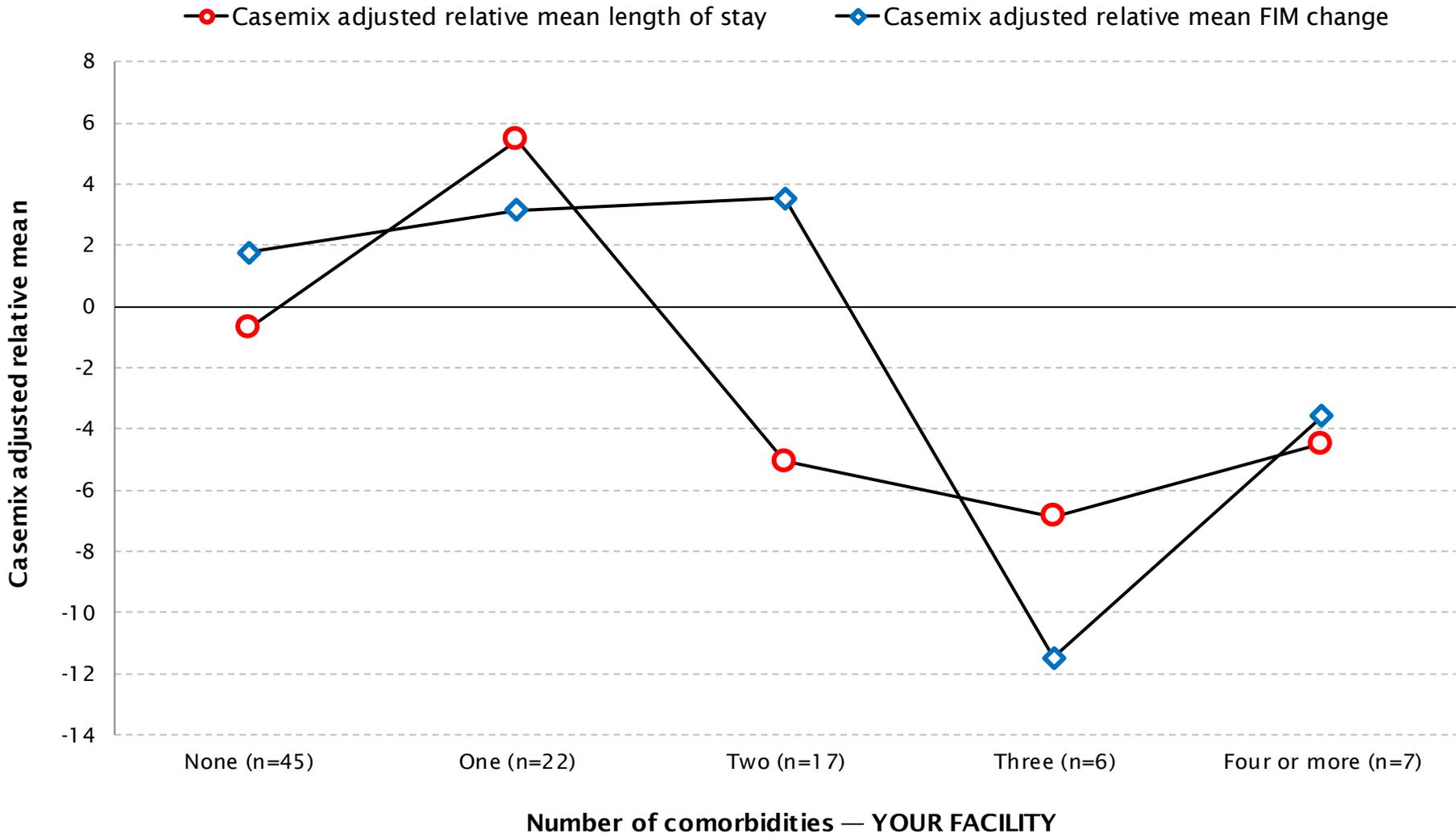
Legend:
- Casemix adjusted relative mean length of stay
- Casemix adjusted relative mean FIM change

Casemix adjusted relative mean (y-axis, from -14 to 8)

Number of comorbidities — YOUR FACILITY (x-axis: None (n=45), One (n=22), Two (n=17), Three (n=6), Four or more (n=7))

NOTE: Includes only completed episodes with valid FIM scores and LOS; where n<5 the casemix-adjusted relative mean will not be shown

Casemix-adjusted relative mean length of stay and FIM change by number of comorbidities
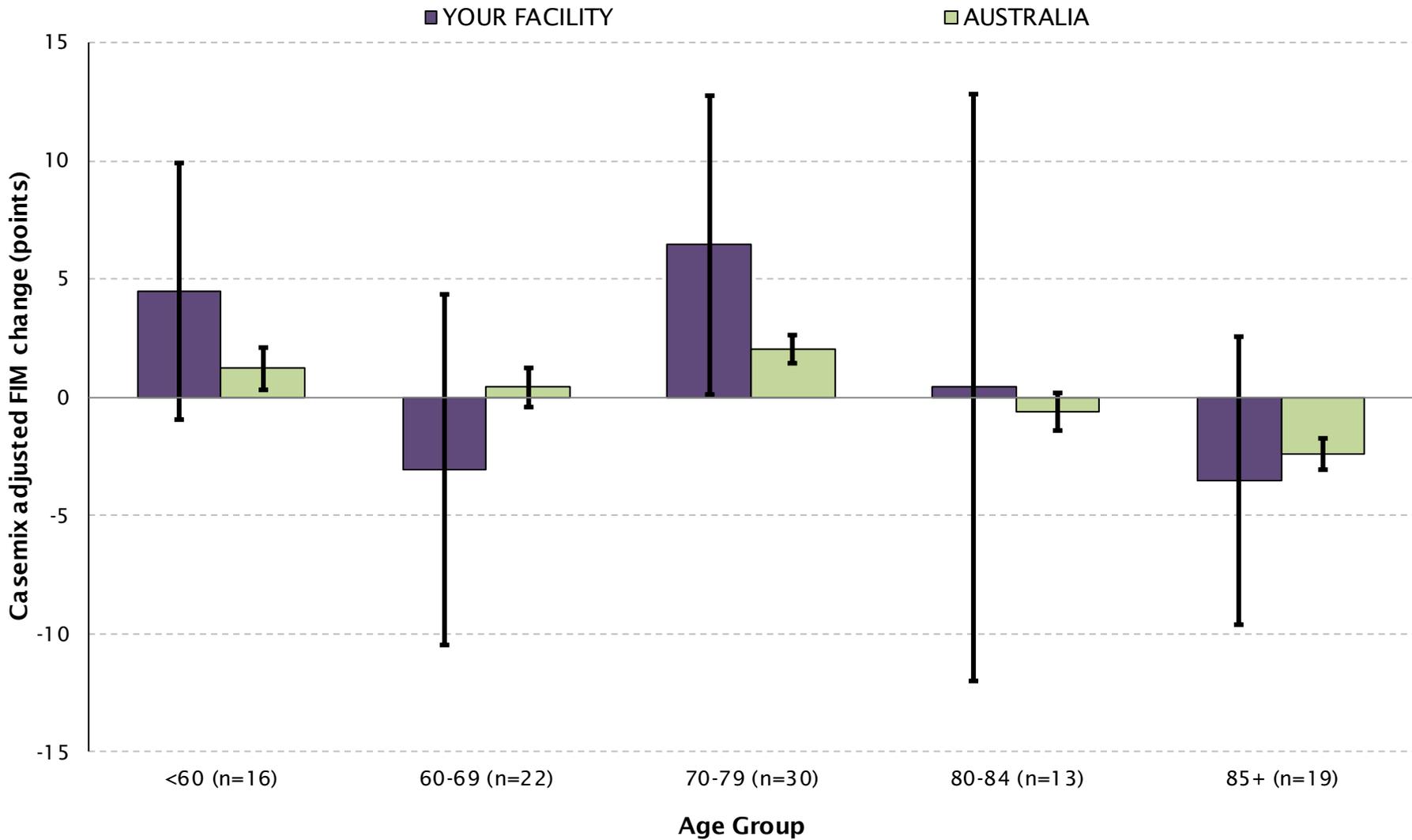

Number of comorbidities — AUSTRALIA

NOTE: Includes only completed episodes with valid FIM scores and LOS; where n<5 the casemix-adjusted relative mean will not be shown

Casemix-adjusted relative mean length of stay by type of comorbidity

	CARMI LOS — YOUR FACILITY		Comorbidity	CARMI LOS — AUSTRALIA
(n=22)			Cardiac disease (n=1,572)	
(n=18)			Other (n=1,242)	
(n=18)			Stroke (n=1,123)	
(n=5)			Diabetes mellitus (n=785)	
(n=5)			Osteoarthritis (n=396)	
(n=11)			Respiratory disease (n=348)	
(n<5)			Mental health problem (n=348)	
(n<5)			Cancer (n=306)	
(n<5)			Dementia (n=251)	
(n<5)			Visual impairment (n=207)	
(n<5)			Chronic pain (n=157)	
(n<5)			Renal failure NO dialysis (n=140)	
(n<5)			Osteoporosis (n=139)	
(n<5)			Drug and alcohol abuse (n=134)	
(n<5)			Hearing impairment (n=131)	
(n<5)			Brain injury (n=88)	
(n<5)			Morbid obesity (n=87)	
(n<5)			Parkinsons disease (n=81)	
(n<5)			Delirium, pre-existing (n=70)	
(n<5)			Inflammatory arthritis (n=56)	
(n<5)			Epilepsy (n=50)	
(n<5)			Renal failure with dialysis (n=46)	
(n<5)			Pressure ulcer, pre-existing (n=23)	
(n<5)			Spinal cord injury/disease (n=22)	
(n<5)			Multiple sclerosis (n=8)	

CARMI LOS — YOUR FACILITY

CARMI LOS — AUSTRALIA

* No data included where number of episodes <5

NOTE: Includes only completed episodes with valid LOS

Casemix-adjusted relative mean FIM change by type of comorbidity

![aroc logo]

Your Facility	Australia
(n=22)	Cardiac disease (n=1,572)
(n=18)	Other (n=1,240)
(n=18)	Stroke (n=1,121)
(n=5)	Diabetes mellitus (n=785)
(n=5)	Osteoarthritis (n=396)
(n<5)	Mental health problem (n=349)
(n=11)	Respiratory disease (n=348)
(n<5)	Cancer (n=305)
(n<5)	Dementia (n=251)
(n<5)	Visual impairment (n=207)
(n<5)	Chronic pain (n=158)
(n<5)	Renal failure NO dialysis (n=140)
(n<5)	Osteoporosis (n=139)
(n<5)	Drug and alcohol abuse (n=135)
(n<5)	Hearing impairment (n=131)
(n<5)	Brain injury (n=87)
(n<5)	Morbid obesity (n=87)
(n<5)	Parkinsons disease (n=80)
(n<5)	Delirium, pre-existing (n=70)
(n<5)	Inflammatory arthritis (n=56)
(n<5)	Epilepsy (n=50)
(n<5)	Renal failure with dialysis (n=46)
(n<5)	Pressure ulcer, pre-existing (n=23)
(n<5)	Spinal cord injury/disease (n=22)
(n<5)	Multiple sclerosis (n=8)

CARMI FIM change — YOUR FACILITY

CARMI FIM change — AUSTRALIA

* No data included where number of episodes <5

NOTE: Includes only completed episodes with valid FIM scores
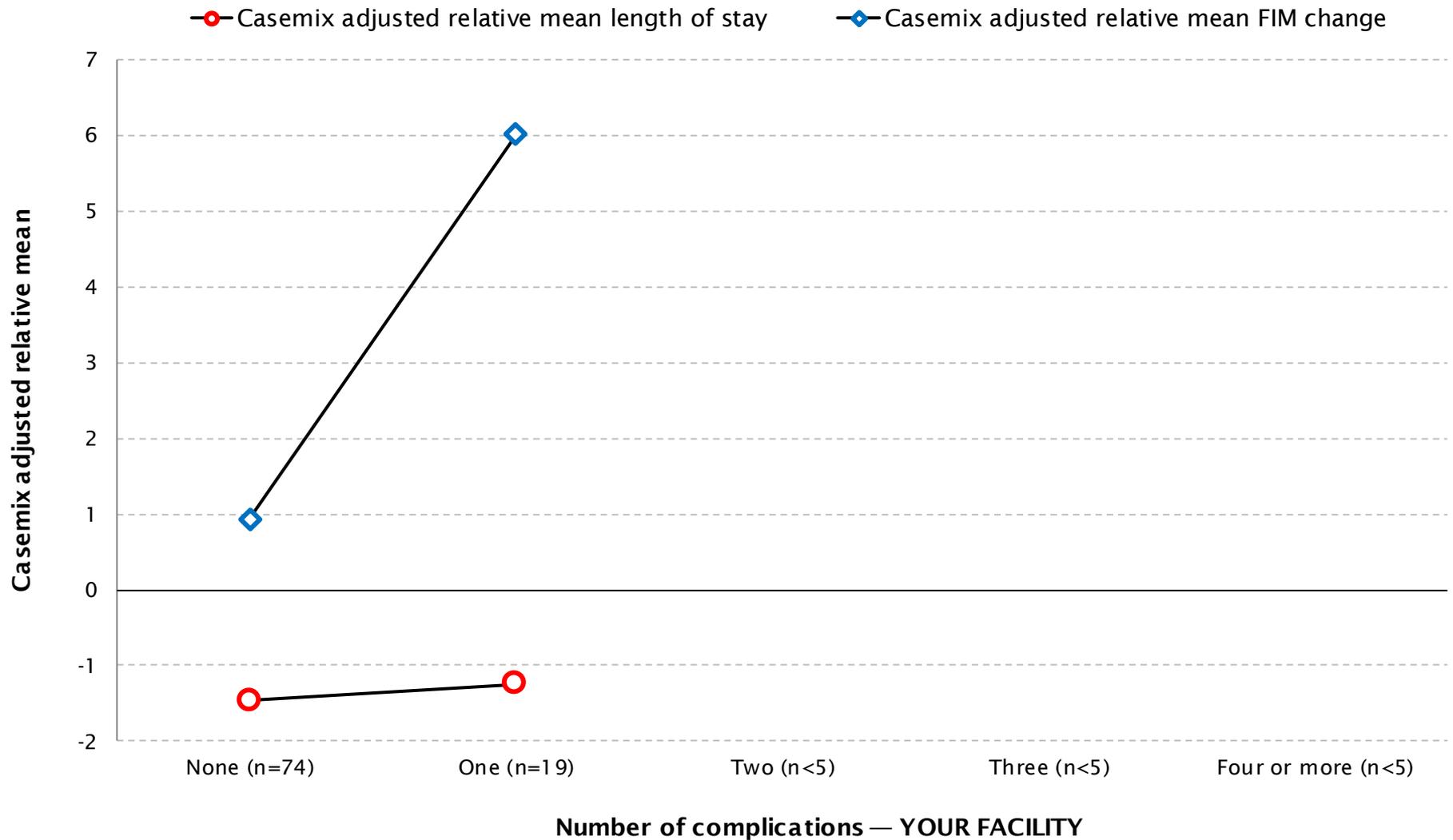
Casemix-adjusted relative mean length of stay and FIM change by number of complications

NOTE: Includes only completed episodes with valid FIM scores and LOS; where n<5 the casemix-adjusted relative mean will not be shown

Casemix-adjusted relative mean length of stay and FIM change by number of complications
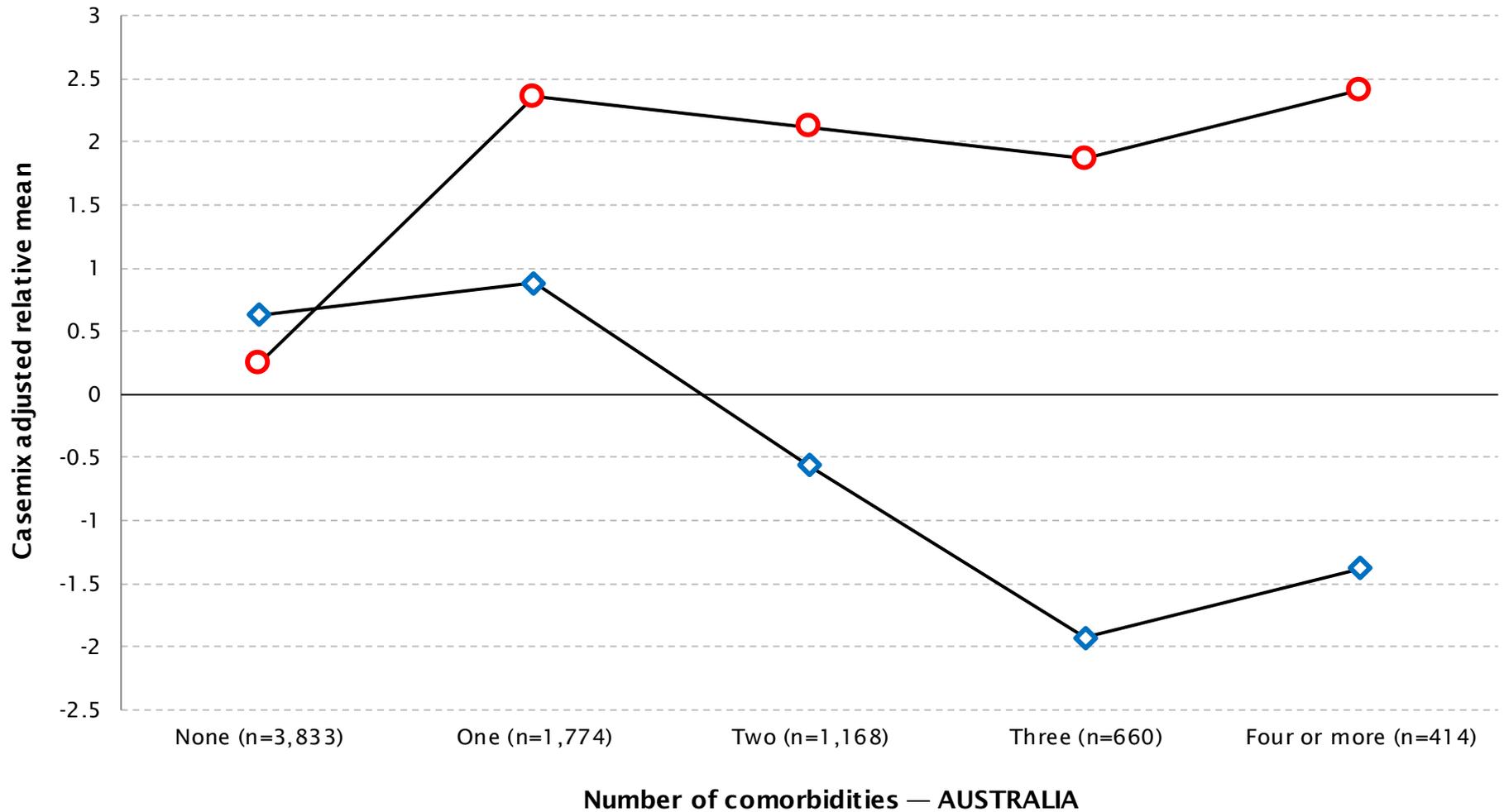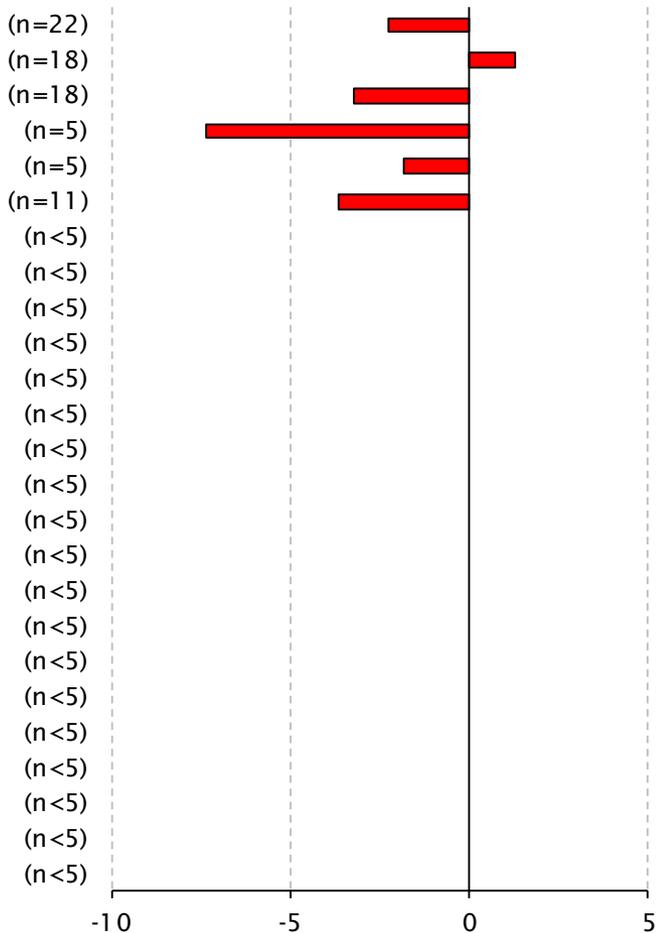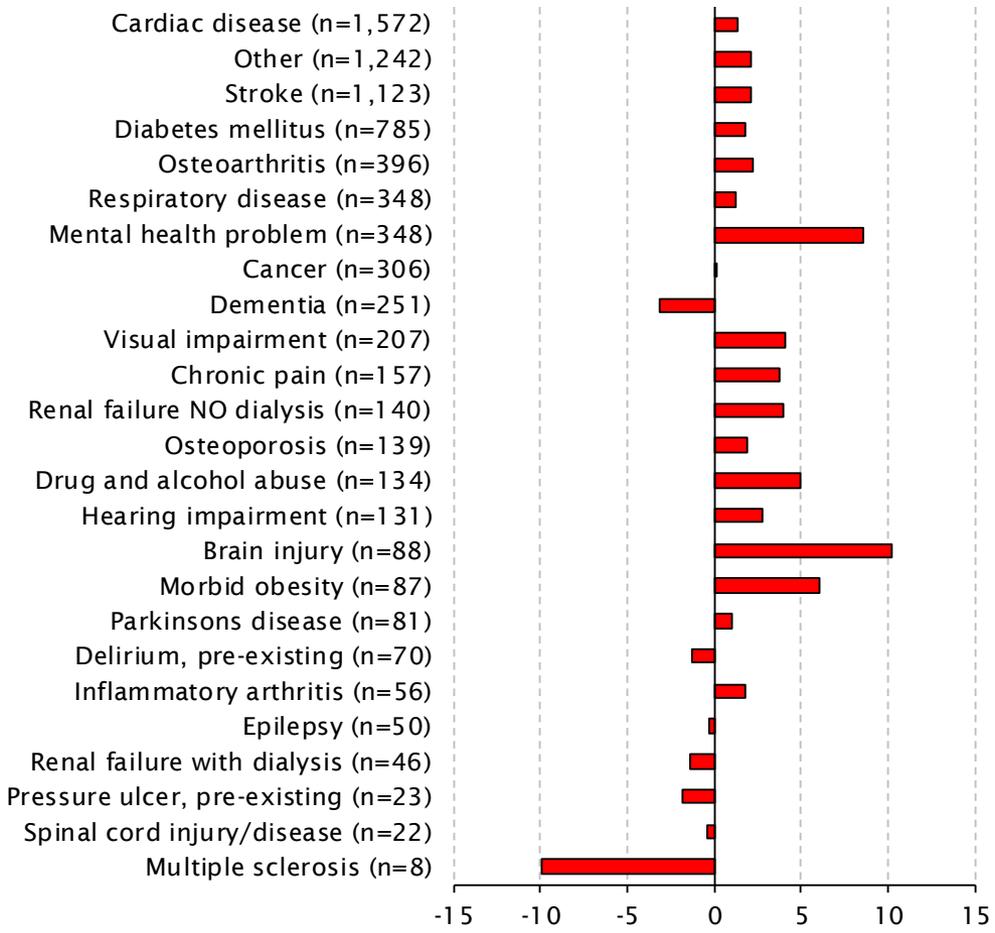

Number of complications — AUSTRALIA
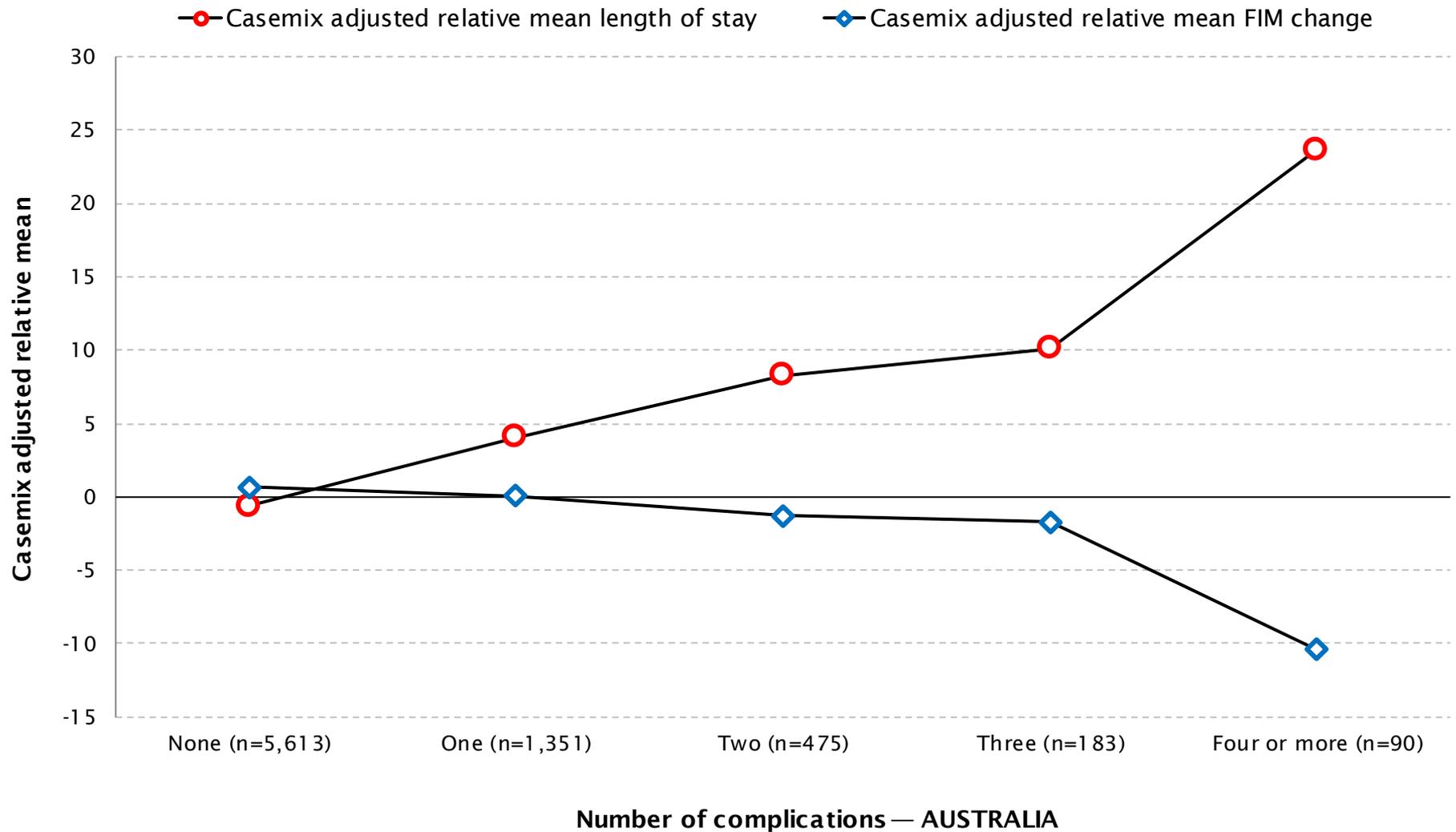
NOTE: Includes only completed episodes with valid FIM scores and LOS; where n<5 the casemix-adjusted relative mean will not be shown

Casemix-adjusted relative mean length of stay by type of complication

CARMI LOS — YOUR FACILITY
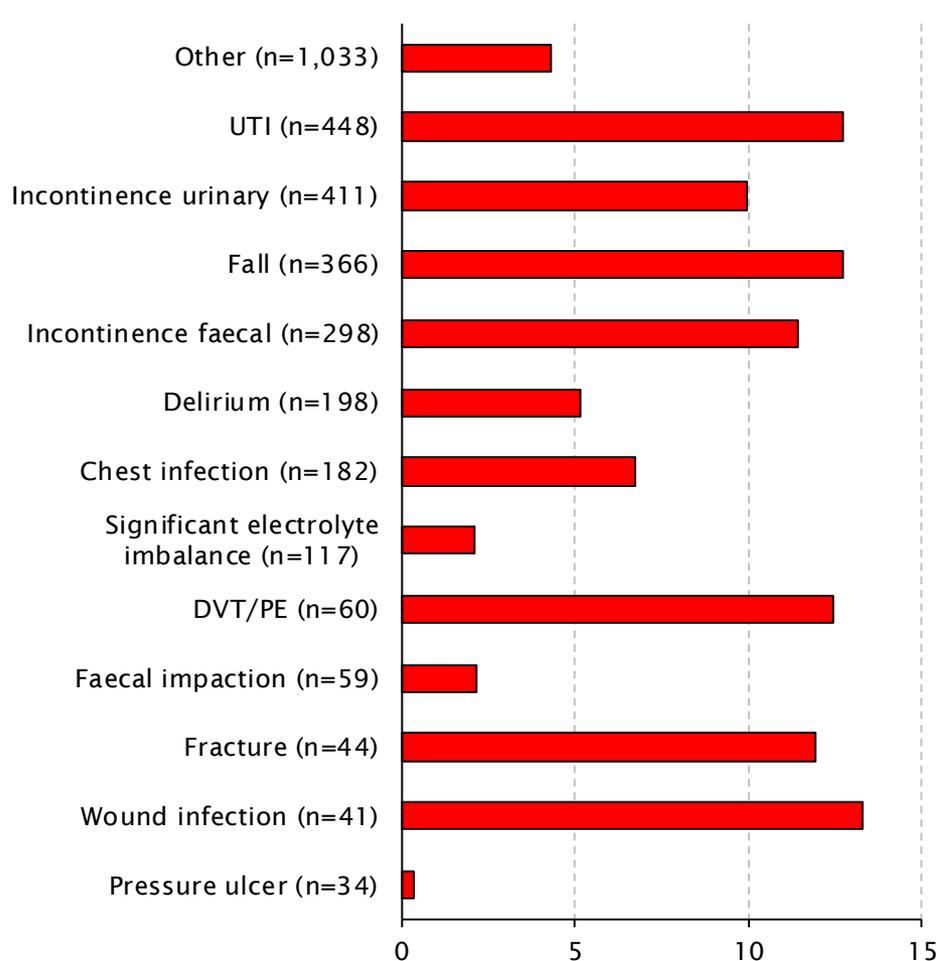
	CARMI LOS
(n=13)	2.3
(n<5)	
(n<5)	
(n<5)	
(n<5)	
(n<5)	
(n<5)	
(n<5)	
(n<5)	
(n<5)	
(n<5)	
(n<5)	
(n<5)	

CARMI LOS — AUSTRALIA

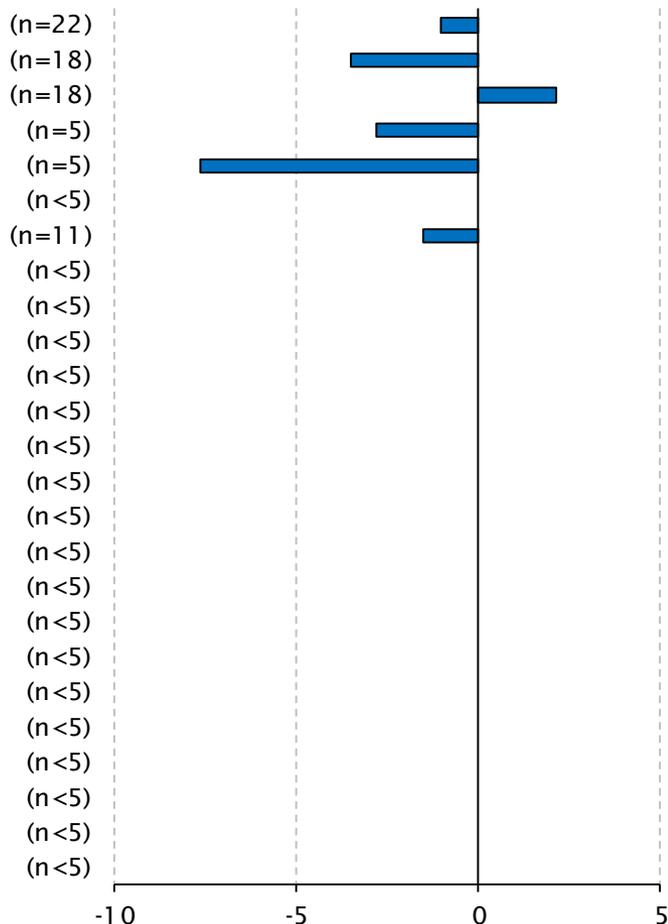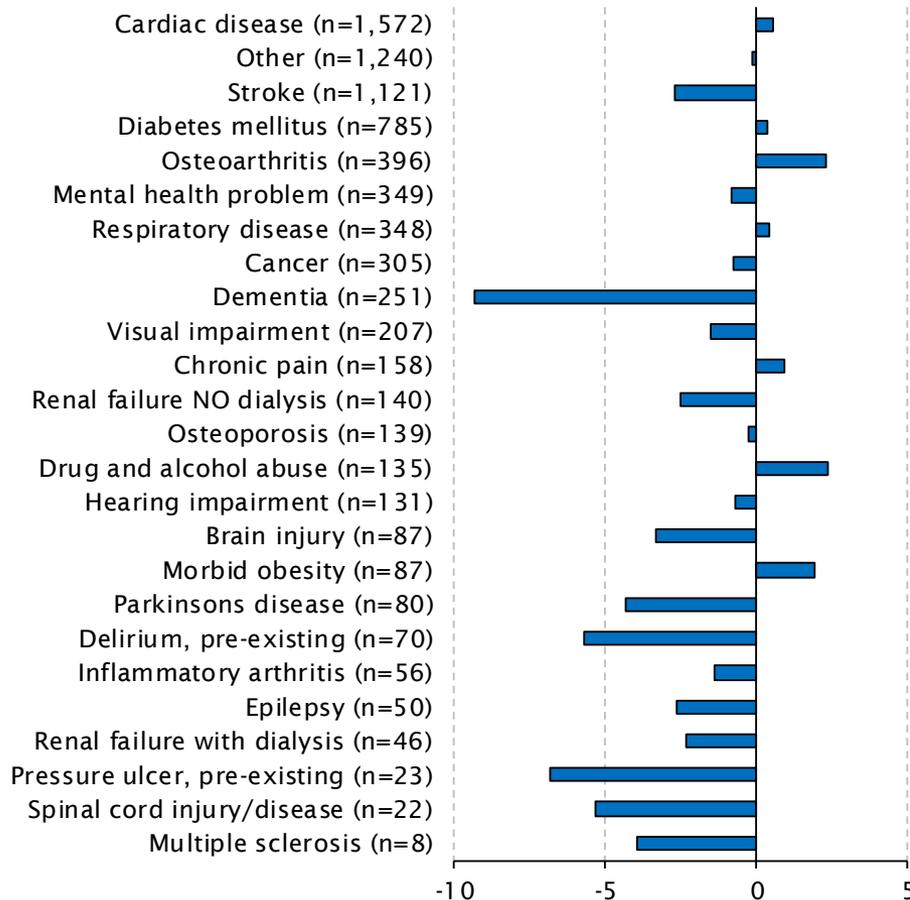|	
Other (n=1,033)	
UTI (n=448)	
Incontinence urinary (n=411)	
Fall (n=366)	
Incontinence faecal (n=298)	
Delirium (n=198)	
Chest infection (n=182)	
Significant electrolyte imbalance (n=117)	
DVT/PE (n=60)	
Faecal impaction (n=59)	
Fracture (n=44)	
Wound infection (n=41)	
Pressure ulcer (n=34)	

* No data included where number of episodes <5

NOTE: Includes only completed episodes with valid LOS

Casemix-adjusted relative mean FIM change by type of complication


CARMI FIM change — YOUR FACILITY
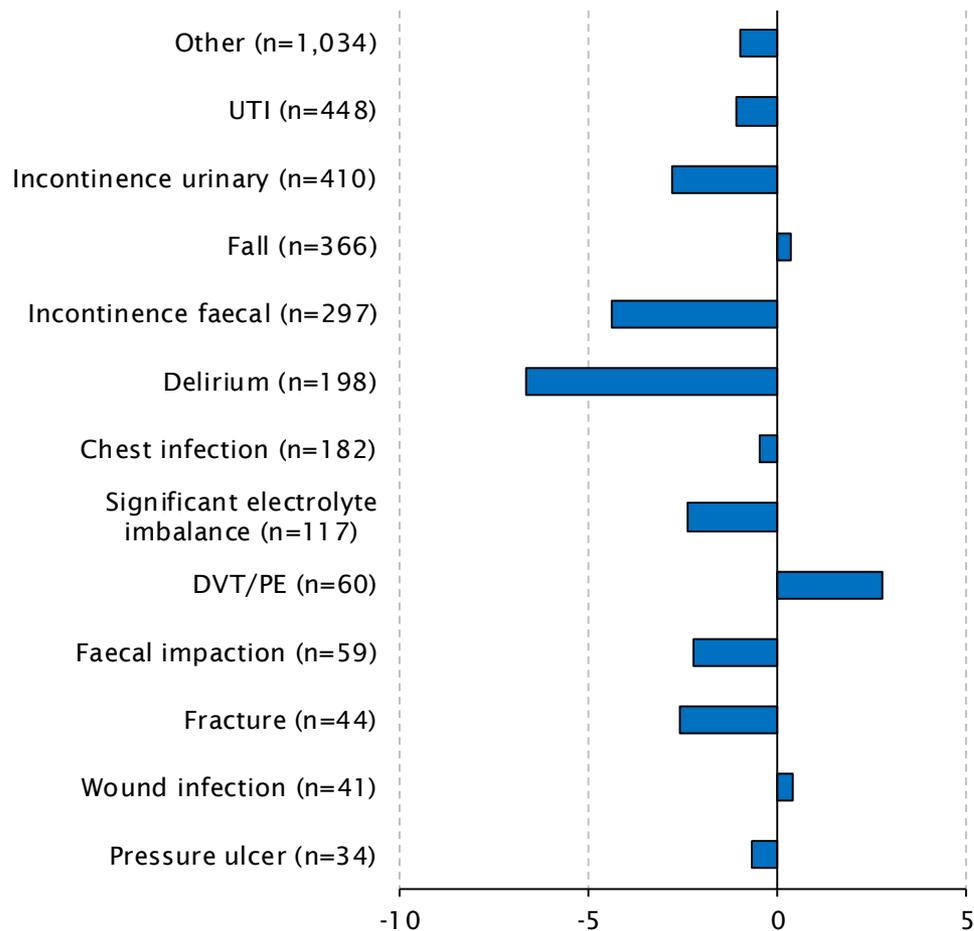
Your facility chart labels (top to bottom):
- (n=13)
- (n<5)
- (n<5)
- (n<5)
- (n<5)
- (n<5)
- (n<5)
- (n<5)
- (n<5)
- (n<5)
- (n<5)
- (n<5)
- (n<5)

CARMI FIM change — AUSTRALIA

Australia chart labels (top to bottom):
- Other (n=1,034)
- UTI (n=448)
- Incontinence urinary (n=410)
- Fall (n=366)
- Incontinence faecal (n=297)
- Delirium (n=198)
- Chest infection (n=182)
- Significant electrolyte imbalance (n=117)
- DVT/PE (n=60)
- Faecal impaction (n=59)
- Fracture (n=44)
- Wound infection (n=41)
- Pressure ulcer (n=34)

* No data included where number of episodes <5

NOTE: Includes only completed episodes with valid FIM scores

Type of accommodation prior to impairment
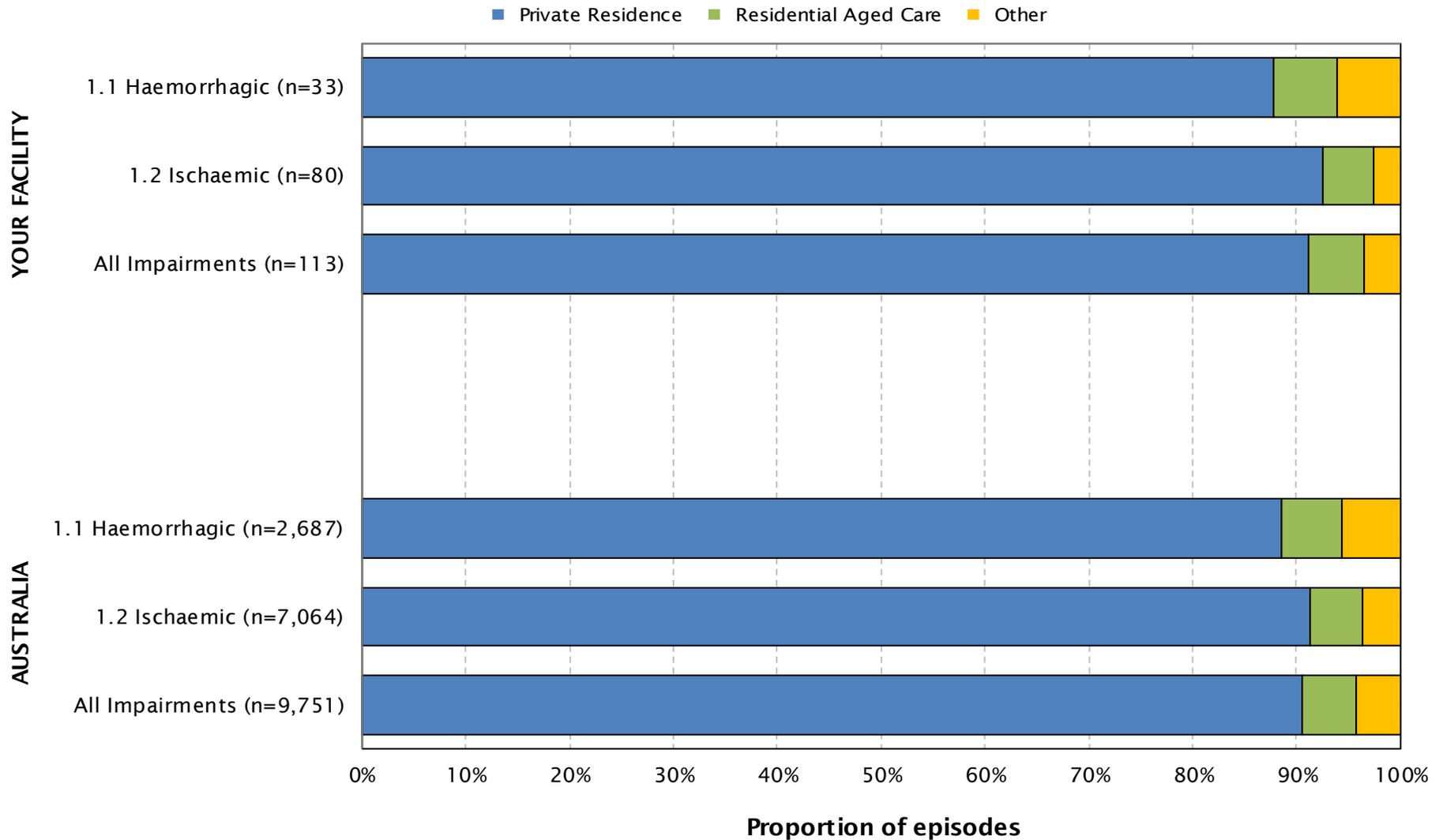
Legend: Private Residence, Residential Aged Care, Other

YOUR FACILITY
- 1.1 Haemorrhagic (n=33)
- 1.2 Ischaemic (n=80)
- All Impairments (n=113)

AUSTRALIA
- 1.1 Haemorrhagic (n=2,687)
- 1.2 Ischaemic (n=7,064)
- All Impairments (n=9,751)

Proportion of episodes

Type of accommodation prior to impairment

YOUR FACILITY — N (%)					
Impairment	**Private residence**	**Residential Aged Care**	**Other**	**Unknown**	**All episodes**
1.1 Haemorrhagic	29 (85.3)	2 (5.9)	2 (5.9)	1	34 (100.0)
1.2 Ischaemic	74 (91.4)	4 (4.9)	2 (2.5)	1	81 (100.0)
All Stroke	**103 (89.6)**	**6 (5.2)**	**4 (3.5)**	**2**	**115 (100.0)**

AUSTRALIA — N (%)					
Impairment	**Private residence**	**Residential Aged Care**	**Other**	**Unknown**	**All episodes**
1.1 Haemorrhagic	2,379 (87.7)	157 (5.8)	151 (5.6)	27	2,714 (100.0)
1.2 Ischaemic	6,447 (90.1)	358 (5.0)	259 (3.6)	92	7,156 (100.0)
All Stroke	**8,826 (89.4)**	**515 (5.2)**	**410 (4.2)**	**119**	**9,870 (100.0)**

Carer status prior to impairment
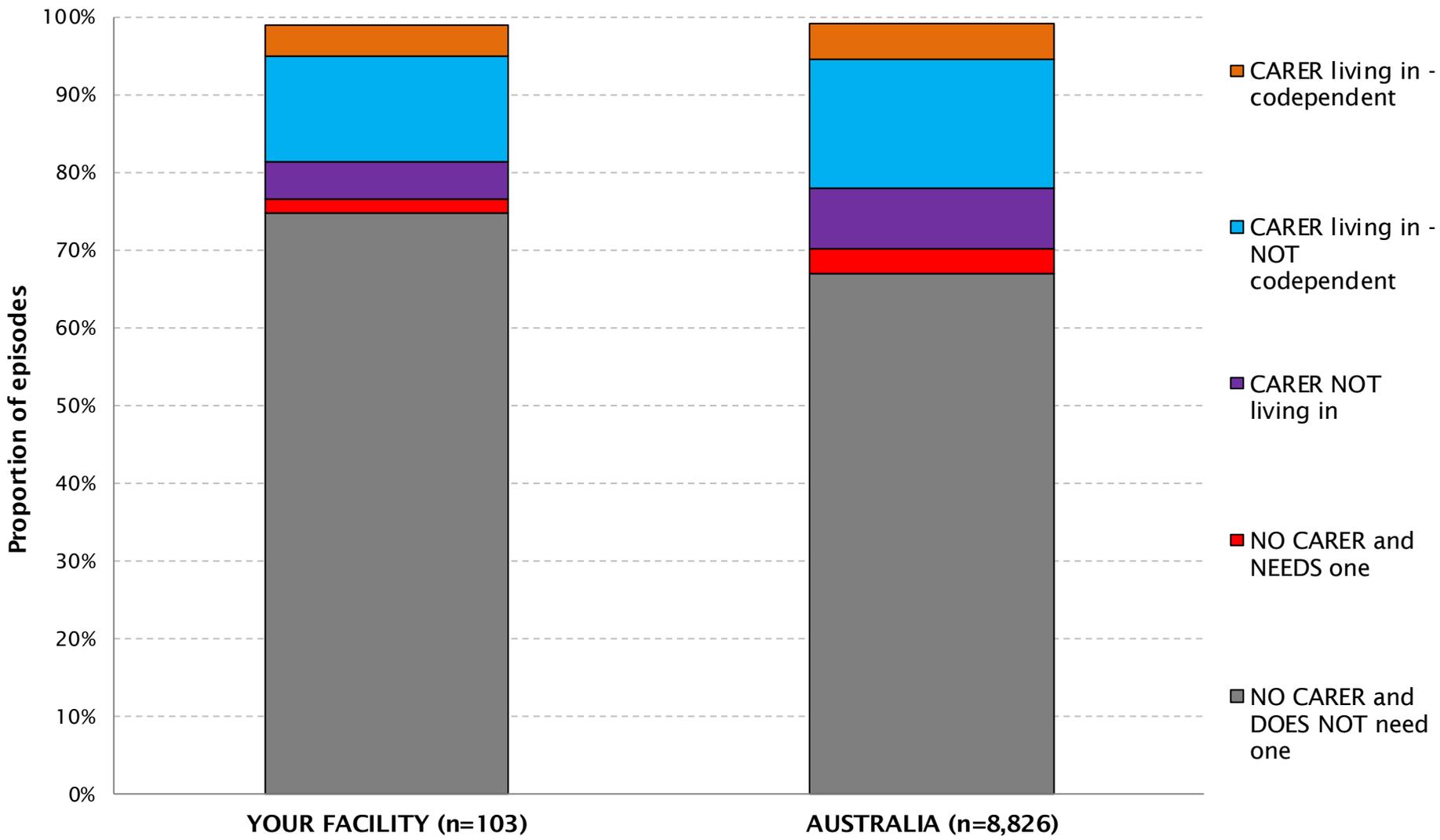
NOTE: Includes only those episodes coming from private residence

Any services received prior to impairment by carer status

Legend: □ Services received   ■ No services received

Proportion of episodes (y-axis: 0% to 100%)

YOUR FACILITY (n=102):
- NO CARER and DOES NOT need one (n=77)
- NO CARER and NEEDS one (n<5)
- CARER NOT living in (n=5)
- CARER living in - NOT codependent (n=14)
- CARER living in - codependent (n<5)
- All episodes in private residence (n=102)

AUSTRALIA (n=8,769):
- NO CARER and DOES NOT need one (n=5,915)
- NO CARER and NEEDS one (n=291)
- CARER NOT living in (n=682)
- CARER living in - NOT codependent (n=1,475)
- CARER living in - codependent (n=406)
- All episodes in private residence (n=8,769)

YOUR FACILITY (n=102)   **AUSTRALIA (n=8,769)**
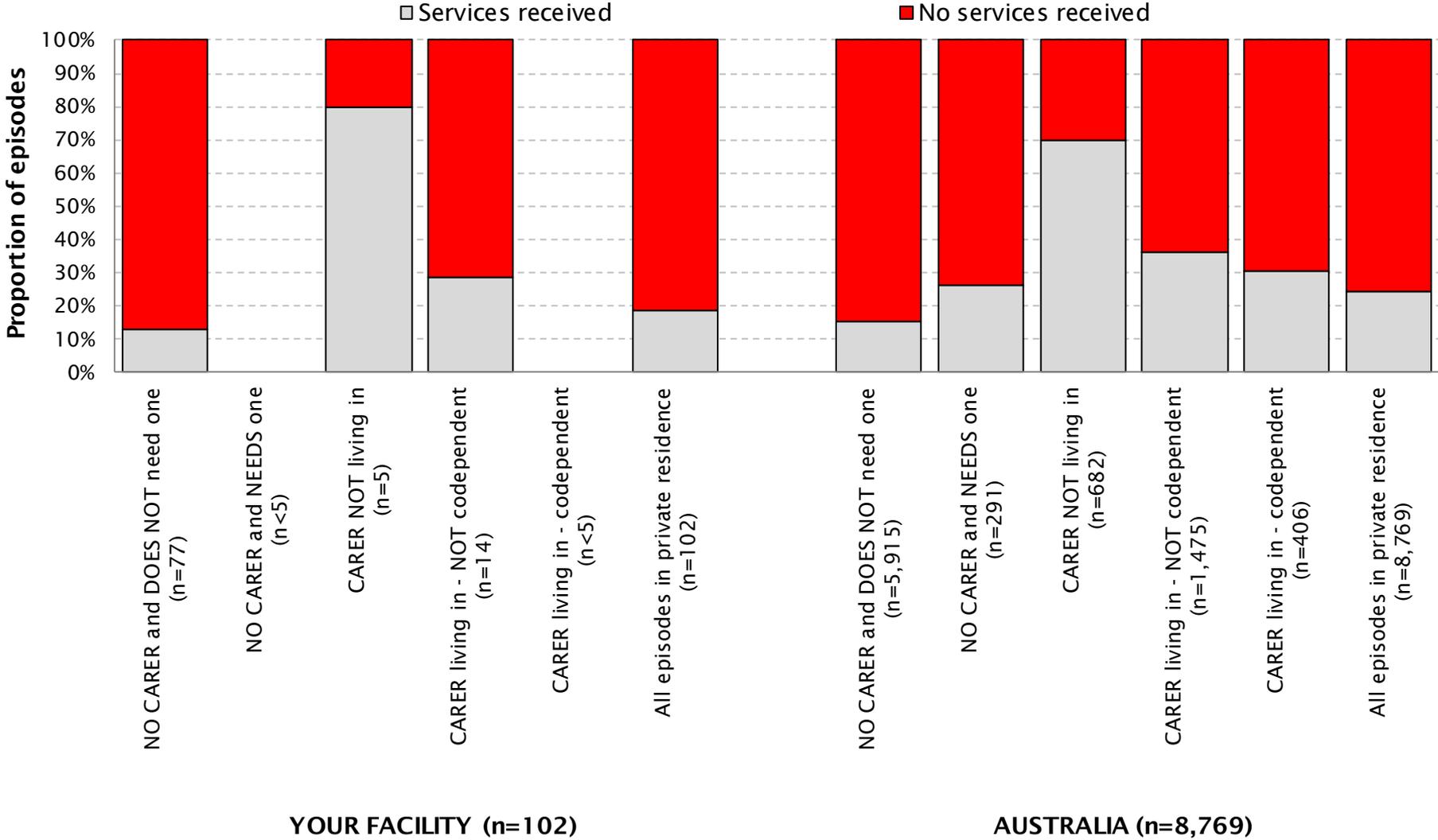
NOTE: Includes only those episodes coming from private residence and with known carer status and known services status

Carer status and any services received prior to impairment
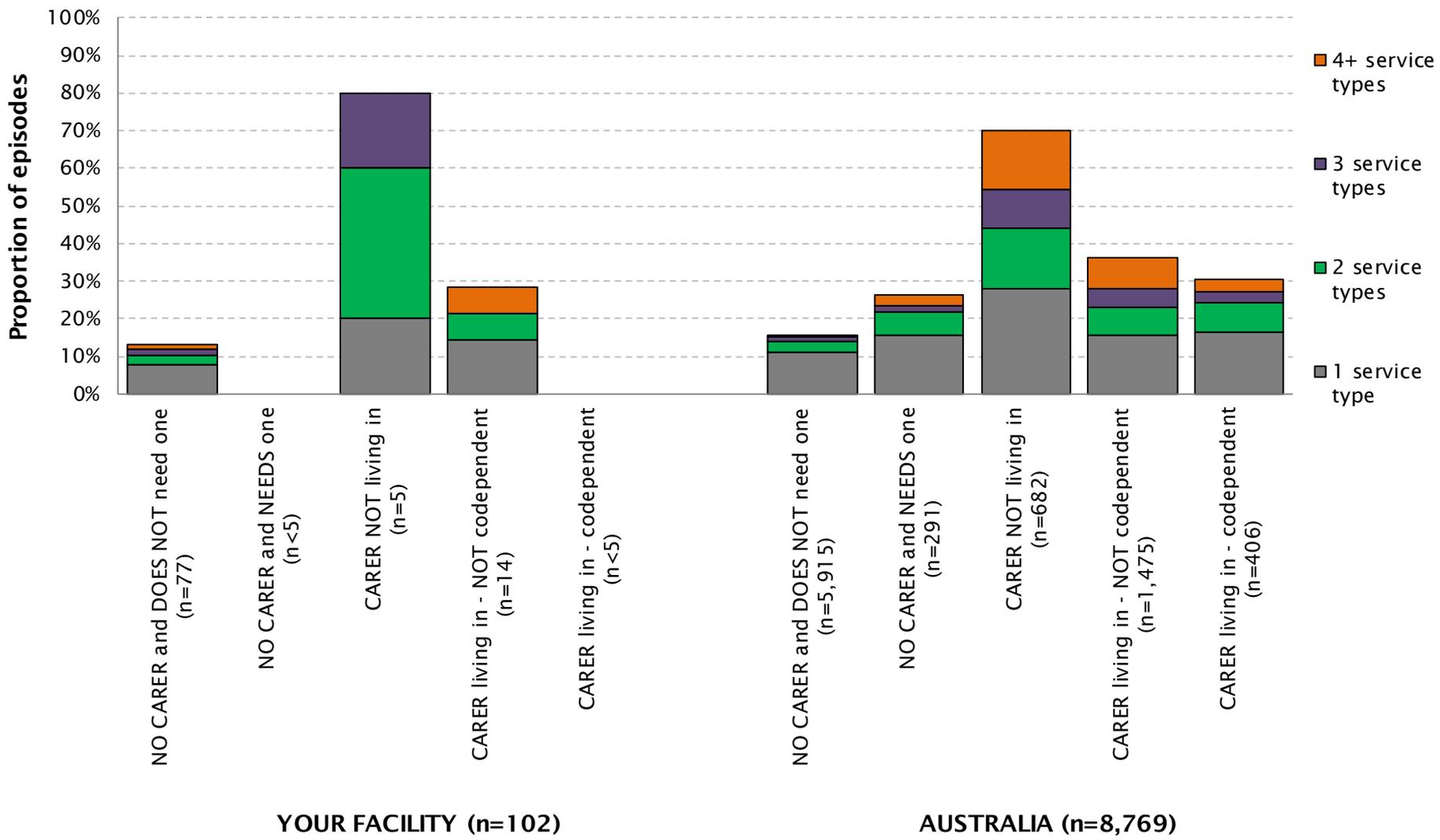
	YOUR FACILITY		AUSTRALIA	
Carer status prior to this impairment	**No.**	**%**	**No.**	**%**
NO CARER and DOES NOT need one	77	75.5	5,915	67.5
NO CARER and NEEDS one	2	2.0	291	3.3
CARER NOT living in	5	4.9	682	7.8
CARER living in - NOT codependent	14	13.7	1,475	16.8
CARER living in - codependent	4	3.9	406	4.6
Missing	1		57	
All episodes in private residence	**103**	**100.0**	**8,826**	**100.0**

	Any services received prior to this impairment?			
	YOUR FACILITY		**AUSTRALIA**	
Carer status prior to this impairment	**Yes (%)**	**No (%)**	**Yes (%)**	**No (%)**
NO CARER and DOES NOT need one	13.0	87.0	15.4	84.6
NO CARER and NEEDS one	—	—	26.5	73.5
CARER NOT living in	80.0	20.0	70.1	29.9
CARER living in - NOT codependent	28.6	71.4	36.2	63.8
CARER living in - codependent	—	—	30.5	69.5
All episodes in private residence	**18.6**	**81.4**	**24.2**	**75.8**

NOTE: Includes only those episodes coming from private residence and with known carer status

Number of services received prior to impairment by carer status

NOTE: Includes only those episodes coming from private residence and with known carer status and known services status

Type of services received prior to impairment

Proportion of episodes vs service type

Legend:
- YOUR FACILITY (n=102)
- AUSTRALIA (n=8,769)

Service type	YOUR FACILITY	AUSTRALIA
Domestic assistance (n=17)	~16.7%	~20.5%
Social support (n=2)	~2%	~4%
Nursing care (n=2)	~2%	~1.5%
Allied health care (n=2)	~2%	~1.7%
Personal care (n=8)	~7.8%	~4.8%
Meals (n=3)	~2.9%	~5.2%
Provision of goods & equipment (n=1)	~1%	~2.9%
Transport services (n=2)	~2%	~4.6%
Case management (n=3)	~2.9%	~1.6%

NOTE: Includes only those episodes coming from private residence and with known carer status and known services status

Type of services received prior to impairment by carer status
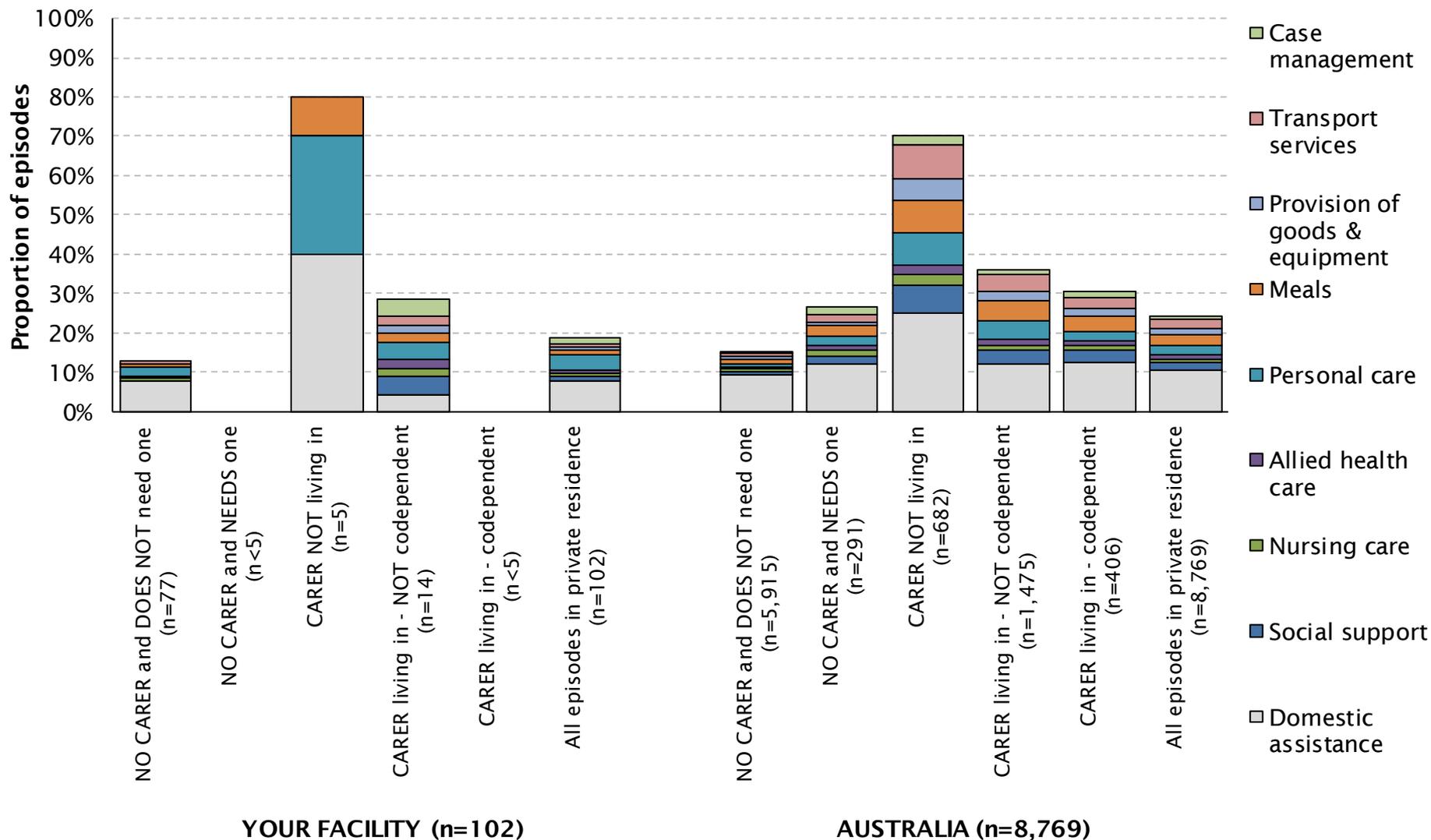
NOTE: Includes only those episodes coming from private residence and with known carer status and known services status

Number and type of services received prior to impairment by carer status

Services received prior to this impairment	Carer status prior to discharge - YOUR FACILITY					
	NO CARER and DOES NOT need one	NO CARER and NEEDS one	CARER NOT living in	CARER living in - NOT codependent	CARER living in - codependent	All episodes in private residence
Number of episodes in private residence	77	2	5	14	4	**102**
Percent of episodes receiving:						
No services	87.0	50.0	20.0	71.4	100.0	**81.4**
1 service type	7.8	0.0	20.0	14.3	0.0	**8.8**
2 service types	2.6	50.0	40.0	7.1	0.0	**5.9**
3 service types	1.3	0.0	20.0	0.0	0.0	**2.0**
4 or more service types	1.3	0.0	0.0	7.1	0.0	**2.0**
Service Type received						
Domestic assistance	13.0	50.0	80.0	14.3	0.0	**16.7**
Social support	0.0	0.0	0.0	14.3	0.0	**2.0**
Nursing care	1.3	0.0	0.0	7.1	0.0	**2.0**
Allied health care	1.3	0.0	0.0	7.1	0.0	**2.0**
Personal care	3.9	0.0	60.0	14.3	0.0	**7.8**
Meals	1.3	0.0	20.0	7.1	0.0	**2.9**
Provision of goods & equipment	0.0	0.0	0.0	7.1	0.0	**1.0**
Transport services	1.3	0.0	0.0	7.1	0.0	**2.0**
Case management	0.0	50.0	0.0	14.3	0.0	**2.9**

NOTE: Includes only those episodes coming from private residence and with known carer status and known services status.

Number and type of services received prior to impairment by carer status

Services received prior to this impairment	Carer status prior to discharge - AUSTRALIA					
	NO CARER and DOES NOT need one	NO CARER and NEEDS one	CARER NOT living in	CARER living in - NOT codependent	CARER living in - codependent	All episodes in private residence
Number of episodes in private residence	5,915	291	682	1,475	406	**8,769**
Percent of episodes receiving:						
No services	84.6	73.5	29.9	63.8	69.5	**75.8**
1 service type	11.1	15.5	28.0	15.4	16.3	**13.5**
2 service types	2.7	6.2	16.1	7.7	7.9	**4.9**
3 service types	1.2	1.7	10.3	4.7	3.0	**2.6**
4 or more service types	0.4	3.1	15.7	8.3	3.4	**3.2**
Service Type received						
Domestic assistance	13.4	22.0	60.7	28.9	23.9	**20.5**
Social support	1.3	3.1	17.3	8.9	5.9	**4.1**
Nursing care	0.7	2.7	6.5	2.4	1.7	**1.6**
Allied health care	0.6	2.1	5.7	4.5	2.2	**1.8**
Personal care	1.4	4.8	21.0	11.3	4.7	**4.8**
Meals	1.8	4.8	19.9	11.7	7.6	**5.2**
Provision of goods & equipment	0.7	1.4	13.2	6.6	3.9	**2.9**
Transport services	1.6	3.1	20.7	10.0	5.2	**4.7**
Case management	0.5	3.4	5.7	3.3	2.7	**1.6**

NOTE: Includes only those episodes coming from private residence and with known carer status and known services status.
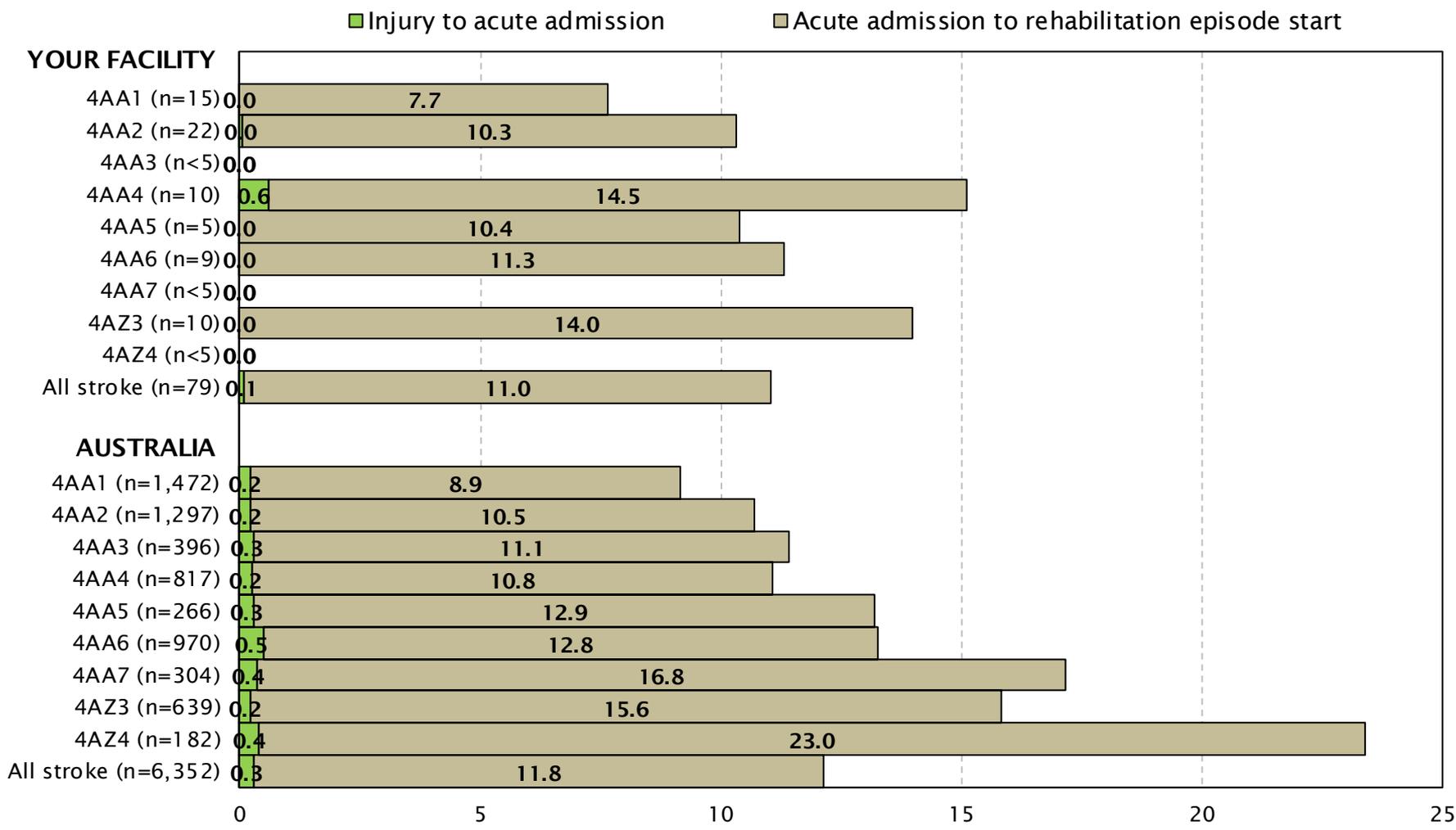
Days from injury to episode start with an acute admission by AN-SNAP class

■ Injury to acute admission ■ Acute admission to rehabilitation episode start

YOUR FACILITY

Class	Injury to acute admission	Acute admission to rehabilitation episode start
4AA1 (n=15)	0.0	7.7
4AA2 (n=22)	0.0	10.3
4AA3 (n<5)	0.0	
4AA4 (n=10)	0.6	14.5
4AA5 (n=5)	0.0	10.4
4AA6 (n=9)	0.0	11.3
4AA7 (n<5)	0.0	
4AZ3 (n=10)	0.0	14.0
4AZ4 (n<5)	0.0	
All stroke (n=79)	0.1	11.0

AUSTRALIA

Class	Injury to acute admission	Acute admission to rehabilitation episode start
4AA1 (n=1,472)	0.2	8.9
4AA2 (n=1,297)	0.2	10.5
4AA3 (n=396)	0.3	11.1
4AA4 (n=817)	0.2	10.8
4AA5 (n=266)	0.3	12.9
4AA6 (n=970)	0.5	12.8
4AA7 (n=304)	0.4	16.8
4AZ3 (n=639)	0.2	15.6
4AZ4 (n=182)	0.4	23.0
All stroke (n=6,352)	0.3	11.8

Average number of days between dates

*No data provided when less than 5 episodes have dates

NOTE: Includes first admissions where all dates have been entered

Days from referral to rehabilitation episode start

■ Injury to Referral   ■ Referral to assessment   ■ Assessment to clinically rehab ready   □ Clinically rehab ready to rehab episode start

YOUR FACILITY (n=91)

Injury to Referral	Referral to assessment	Assessment to clinically rehab ready	Clinically rehab ready to rehab episode start
7.3	0.7	1.8	0.5

%Delayed in episode start
19.3%

AUSTRALIA (n=7,107)

Injury to Referral	Referral to assessment	Assessment to clinically rehab ready	Clinically rehab ready to rehab episode start
9.7	0.7	1.1	0.8

%Delayed in episode start
17.7%
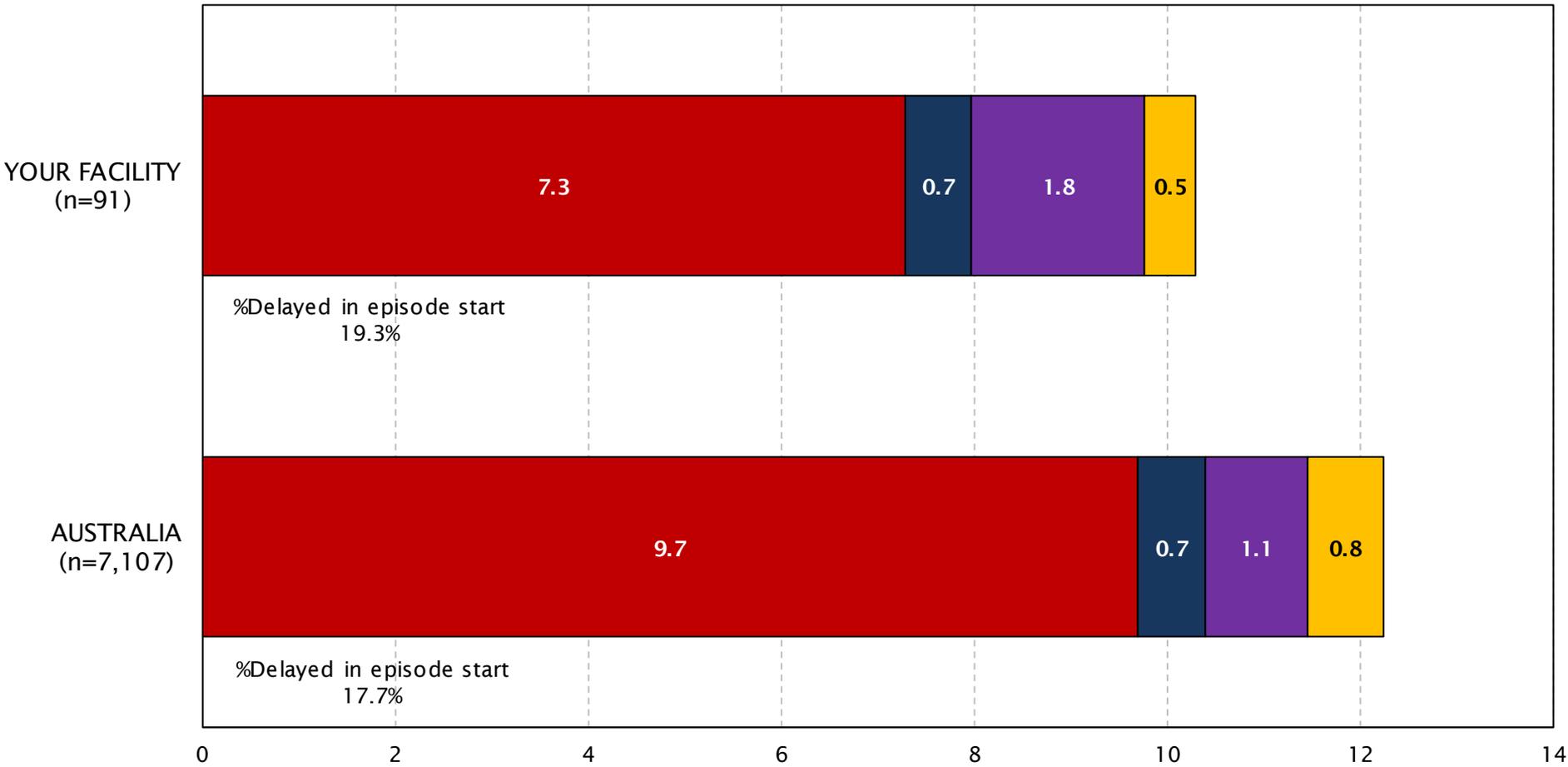
*No data provided when less than 5 episodes have dates

Average number of days between dates

NOTE: Includes first admissions where all dates have been entered

Type of delay in episode start
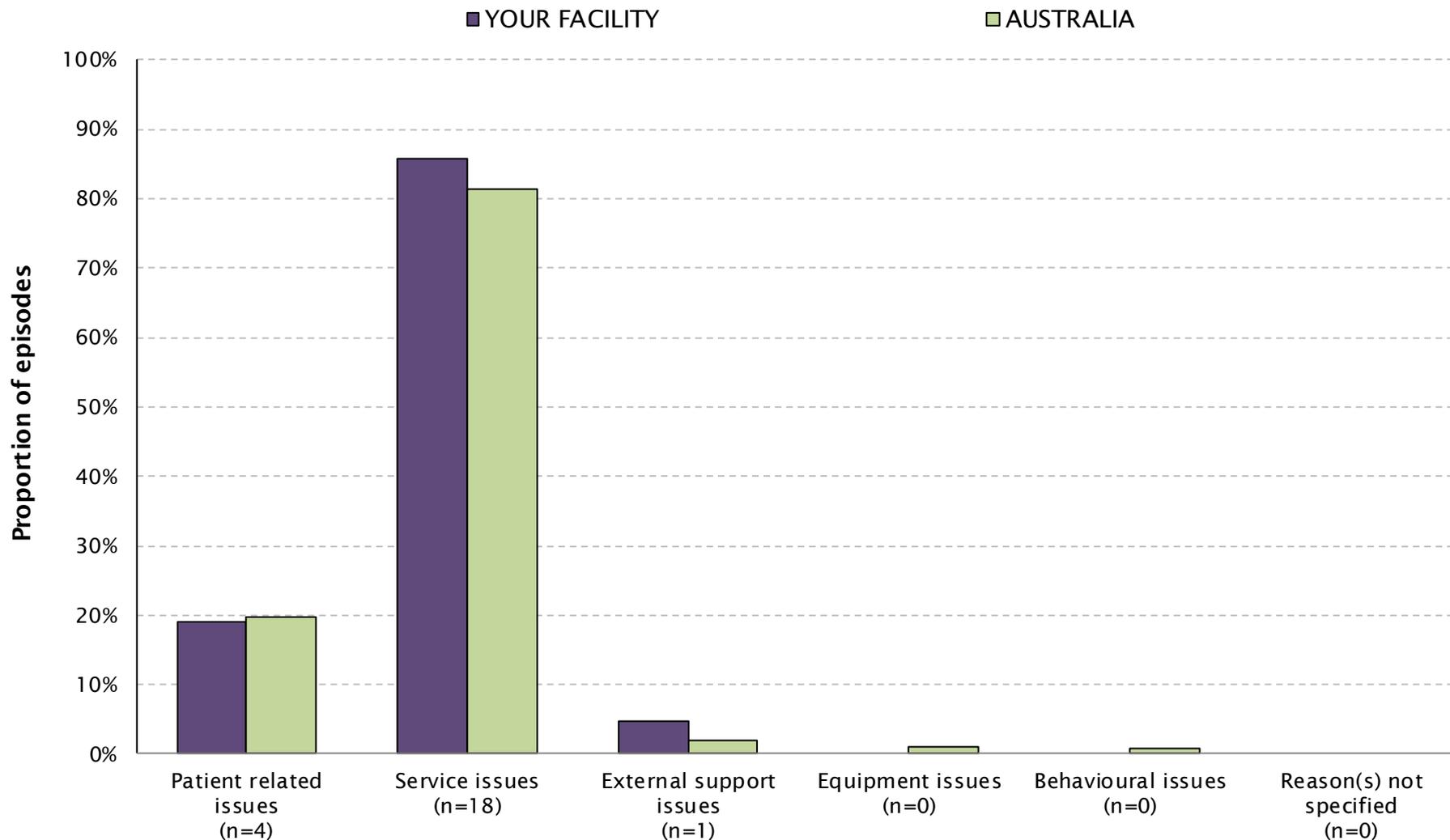
Delays in episode start

Delay in episode start	YOUR FACILITY		AUSTRALIA	
	No.	%	No.	%
No delay	88	80.7	7,697	82.3
Delay in episode start	21	19.3	1,655	17.7
Missing	6		518	
All episodes	**115**	**100.0**	**9,870**	**100.0**

Reasons for delay in episode start	YOUR FACILITY		AUSTRALIA	
	No.	%	No.	%
Patient related issues	4	19.0	327	19.8
Service issues	18	85.7	1,346	81.3
External support issues	1	4.8	32	1.9
Equipment issues	0	0.0	15	0.9
Behavioural issues	0	0.0	12	0.7
Reason(s) not specified	0	0.0	0	0.0

Days from clinically ready to discharge

□ Community to episode end (where a delay was reported)

*No data provided when less than 5 episodes have dates

NOTE: Includes completed episodes with a delay in discharge

Type of delay in episode end
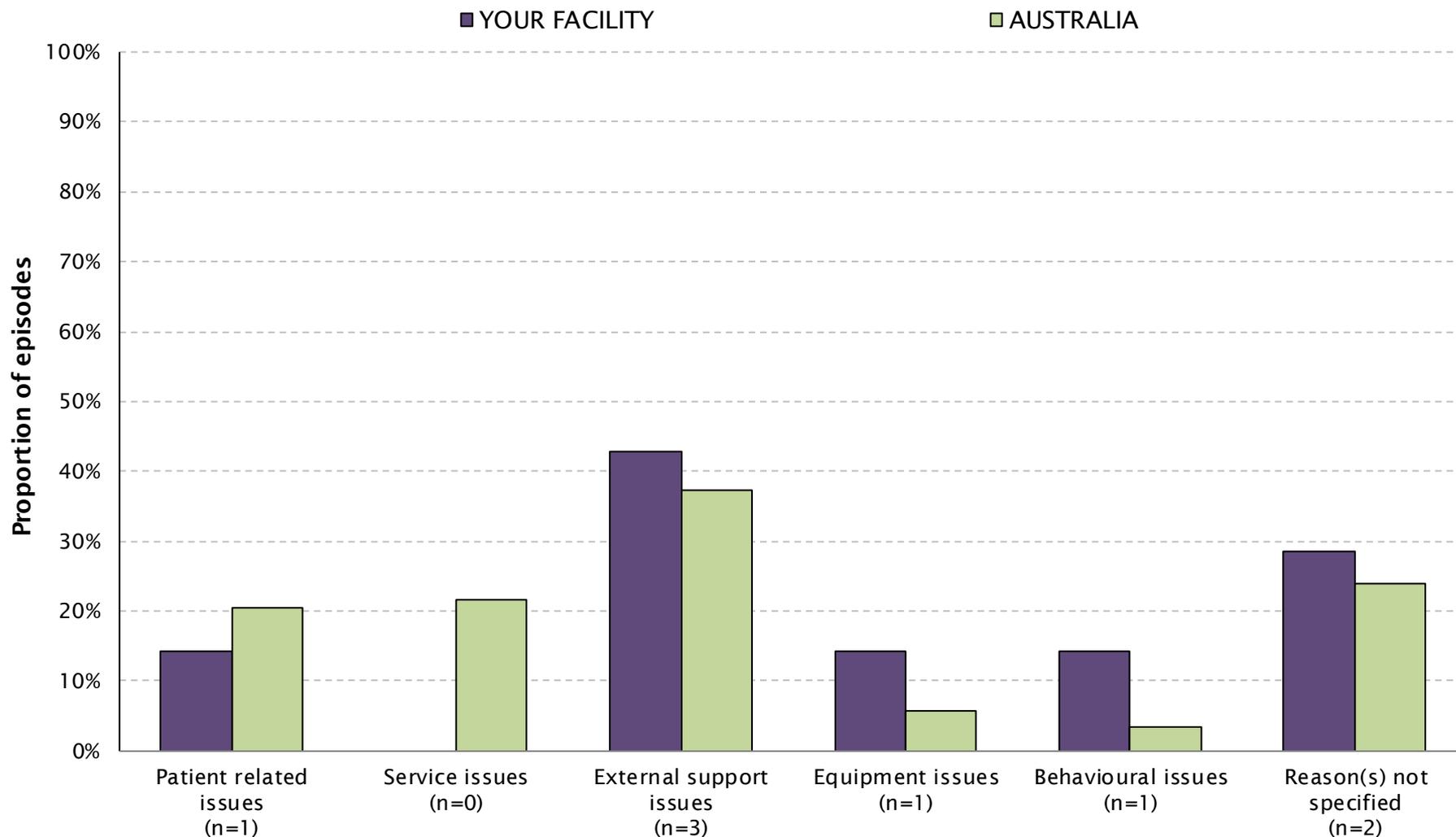
NOTE: Includes completed episodes only

Delays in episode end

Delay in episode end	YOUR FACILITY		AUSTRALIA	
	No.	%	No.	%
No delay	86	92.5	7,032	90.3
Delay in episode end	7	7.5	752	9.7
Missing	6		267	
All episodes	**99**	**100.0**	**8,051**	**100.0**

Reasons for delay in episode end	YOUR FACILITY		AUSTRALIA	
	No.	%	No.	%
Patient related issues	1	14.3	154	20.5
Service issues	0	0.0	162	21.5
External support issues	3	42.9	281	37.4
Equipment issues	1	14.3	42	5.6
Behavioural issues	1	14.3	25	3.3
Reason(s) not specified	2	28.6	179	23.8

NOTE: Includes completed episodes only.

Discharge destination by AN-SNAP class
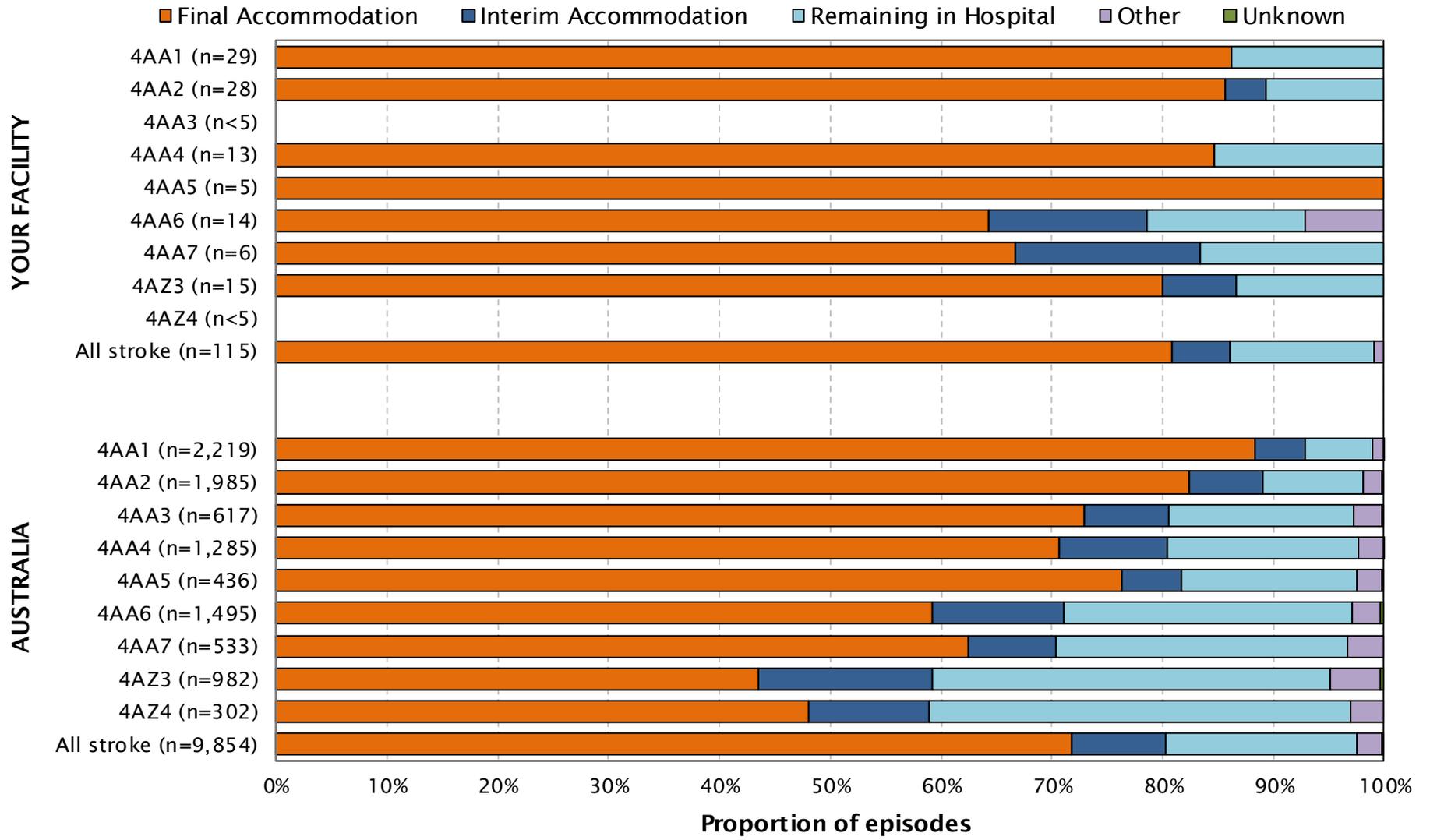
Discharge destination by AN-SNAP class

AN-SNAP class V4	YOUR FACILITY — N					AUSTRALIA — N				
	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown
4AA1 (motor 51-91, cognition 29-35)	25	0	4	0	0	1,961	100	136	20	2
4AA2 (motor 51-91, cognition 19-28)	24	1	3	0	0	1,636	131	181	33	4
4AA3 (motor 51-91, cognition 5-18)	2	0	0	0	0	450	47	103	16	1
4AA4 (motor 36-50, Age ≥ 68)	11	0	2	0	0	909	124	222	29	1
4AA5 (motor 36-50, Age ≤ 67)	5	0	0	0	0	333	23	69	10	1
4AA6 (motor 19-35, Age ≥ 68)	9	2	2	1	0	886	176	389	40	4
4AA7 (motor 19-35, Age ≤ 67)	4	1	1	0	0	333	42	140	18	0
4AZ3 (motor 13-18, Age ≥ 65)	12	1	2	0	0	427	154	353	45	3
4AZ4 (motor 13-18, Age ≤ 64)	1	1	1	0	0	145	33	115	9	0
All Stroke AN-SNAP Classes	**93**	**6**	**15**	**1**	**0**	**7,080**	**830**	**1,708**	**220**	**16**

AN-SNAP class V4	YOUR FACILITY — %					AUSTRALIA — %				
	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown
4AA1 (motor 51-91, cognition 29-35)	86.2	0.0	13.8	0.0	0.0	88.4	4.5	6.1	0.9	0.1
4AA2 (motor 51-91, cognition 19-28)	85.7	3.6	10.7	0.0	0.0	82.4	6.6	9.1	1.7	0.2
4AA3 (motor 51-91, cognition 5-18)	100.0	0.0	0.0	0.0	0.0	72.9	7.6	16.7	2.6	0.2
4AA4 (motor 36-50, Age ≥ 68)	84.6	0.0	15.4	0.0	0.0	70.7	9.6	17.3	2.3	0.1
4AA5 (motor 36-50, Age ≤ 67)	100.0	0.0	0.0	0.0	0.0	76.4	5.3	15.8	2.3	0.2
4AA6 (motor 19-35, Age ≥ 68)	64.3	14.3	14.3	7.1	0.0	59.3	11.8	26.0	2.7	0.3
4AA7 (motor 19-35, Age ≤ 67)	66.7	16.7	16.7	0.0	0.0	62.5	7.9	26.3	3.4	0.0
4AZ3 (motor 13-18, Age ≥ 65)	80.0	6.7	13.3	0.0	0.0	43.5	15.7	35.9	4.6	0.3
4AZ4 (motor 13-18, Age ≤ 64)	33.3	33.3	33.3	0.0	0.0	48.0	10.9	38.1	3.0	0.0
All Stroke AN-SNAP Classes	**80.9**	**5.2**	**13.0**	**0.9**	**0.0**	**71.8**	**8.4**	**17.3**	**2.2**	**0.2**

Discharge destination by impairment code
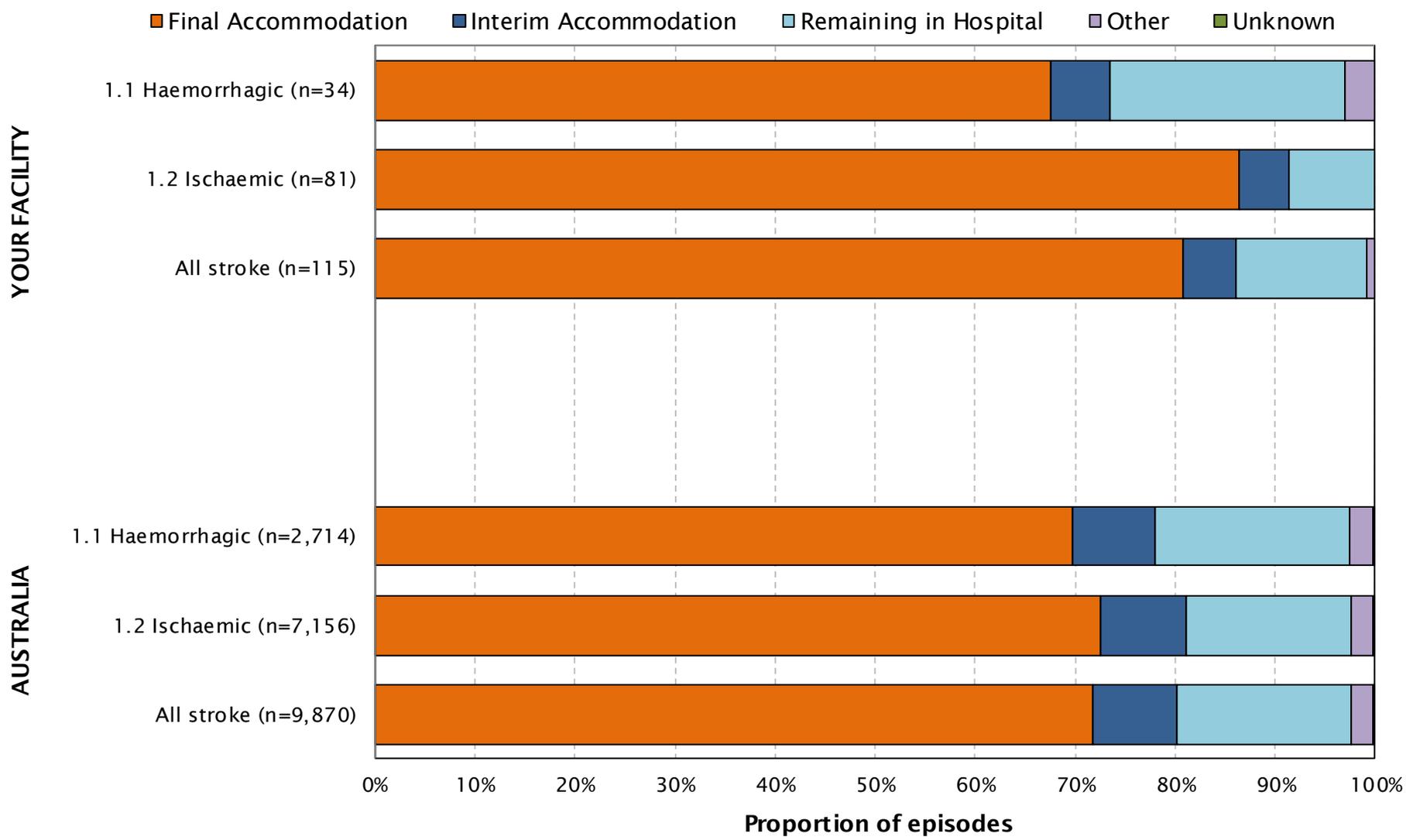
Discharge destination by impairment

YOUR FACILITY — N						AUSTRALIA — N				
Impairment	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown
1.1 Haemorrhagic	23	2	8	1	0	1,892	227	525	66	4
1.2 Ischaemic	70	4	7	0	0	5,197	603	1,186	154	16
All Stroke	**93**	**6**	**15**	**1**	**0**	**7,089**	**830**	**1,711**	**220**	**20**

YOUR FACILITY — %						AUSTRALIA — %				
Impairment	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown
1.1 Haemorrhagic	67.6	5.9	23.5	2.9	0.0	69.7	8.4	19.3	2.4	0.1
1.2 Ischaemic	86.4	4.9	8.6	0.0	0.0	72.6	8.4	16.6	2.2	0.2
All Stroke	**80.9**	**5.2**	**13.0**	**0.9**	**0.0**	**71.8**	**8.4**	**17.3**	**2.2**	**0.2**

Discharge destination

AROC Impairment Specific Report on Stroke (Inpatient - pathway 3) | Anywhere Hospital | January 2019 – December 2019

80

Interim accommodation post discharge by AN-SNAP class

Legend: ■ Private Residence ■ Residential Aged Care ■ Hospital ■ Other

YOUR FACILITY
- 4AA1 (n<5)
- 4AA2 (n<5)
- 4AA3 (n<5)
- 4AA4 (n<5)
- 4AA5 (n<5)
- 4AA6 (n<5)
- 4AA7 (n<5)
- 4AZ3 (n<5)
- 4AZ4 (n<5)
- All stroke (n=6)

AUSTRALIA
- 4AA1 (n=100)
- 4AA2 (n=131)
- 4AA3 (n=47)
- 4AA4 (n=124)
- 4AA5 (n=23)
- 4AA6 (n=176)
- 4AA7 (n=42)
- 4AZ3 (n=154)
- 4AZ4 (n=33)
- All stroke (n=830)

Proportion of episodes

NOTE: Includes only those episodes with mode of episode end equal to interim accommodation

Interim accommodation post discharge by AN-SNAP class

AN-SNAP class V4	YOUR FACILITY — N (%)				
	Private residence	Residential Aged Care	Hospital	Other	All episodes**
4AA1 (motor 51-91, cognition 29-35)	0 —	0 —	0 —	0 —	0 —
4AA2 (motor 51-91, cognition 19-28)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)
4AA3 (motor 51-91, cognition 5-18)	0 —	0 —	0 —	0 —	0 —
4AA4 (motor 36-50, Age ≥ 68)	0 —	0 —	0 —	0 —	0 —
4AA5 (motor 36-50, Age ≤ 67)	0 —	0 —	0 —	0 —	0 —
4AA6 (motor 19-35, Age ≥ 68)	0 (0.0)	1 (50.0)	0 (0.0)	1 (50.0)	2 (100.0)
4AA7 (motor 19-35, Age ≤ 67)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
4AZ3 (motor 13-18, Age ≥ 65)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
4AZ4 (motor 13-18, Age ≤ 64)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
All Stroke AN-SNAP Classes	**0 (0.0)**	**2 (33.3)**	**1 (16.7)**	**2 (33.3)**	**6 (100.0)**

AN-SNAP class V4	AUSTRALIA — N (%)				
	Private residence	Residential Aged Care	Hospital	Other	All episodes**
4AA1 (motor 51-91, cognition 29-35)	49 (49.0)	15 (15.0)	15 (15.0)	19 (19.0)	100 (100.0)
4AA2 (motor 51-91, cognition 19-28)	45 (34.4)	21 (16.0)	30 (22.9)	27 (20.6)	131 (100.0)
4AA3 (motor 51-91, cognition 5-18)	7 (14.9)	4 (8.5)	12 (25.5)	22 (46.8)	47 (100.0)
4AA4 (motor 36-50, Age ≥ 68)	14 (11.3)	32 (25.8)	21 (16.9)	40 (32.3)	124 (100.0)
4AA5 (motor 36-50, Age ≤ 67)	3 (13.0)	5 (21.7)	8 (34.8)	3 (13.0)	23 (100.0)
4AA6 (motor 19-35, Age ≥ 68)	14 (8.0)	49 (27.8)	20 (11.4)	82 (46.6)	176 (100.0)
4AA7 (motor 19-35, Age ≤ 67)	8 (19.0)	11 (26.2)	9 (21.4)	12 (28.6)	42 (100.0)
4AZ3 (motor 13-18, Age ≥ 65)	4 (2.6)	37 (24.0)	36 (23.4)	52 (33.8)	154 (100.0)
4AZ4 (motor 13-18, Age ≤ 64)	1 (3.0)	7 (21.2)	11 (33.3)	10 (30.3)	33 (100.0)
All Stroke AN-SNAP Classes	**145 (17.5)**	**181 (21.8)**	**162 (19.5)**	**267 (32.2)**	**830 (100.0)**

** There was 1 episode(s) in YOUR FACILITY and 75 episodes in AUSTRALIA with unknown interim accommodation

NOTE: Includes only those episodes with mode of episode end equal to interim accommodation

Interim accommodation post discharge by impairment

NOTE: Includes only those episodes with mode of episode end equal to interim accommodation

Interim accommodation post discharge by impairment

YOUR FACILITY — N (%)					
Impairment	Private residence	Residential Aged Care	Hospital	Other	All episodes**
1.1 Haemorrhagic	0 (0.0)	1 (50.0)	0 (0.0)	1 (50.0)	2 (100.0)
1.2 Ischaemic	0 (0.0)	1 (25.0)	1 (25.0)	1 (25.0)	4 (100.0)
All Stroke	**0 (0.0)**	**2 (33.3)**	**1 (16.7)**	**2 (33.3)**	**6 (100.0)**

AUSTRALIA — N (%)					
Impairment	Private residence	Residential Aged Care	Hospital	Other	All episodes**
1.1 Haemorrhagic	42 (18.5)	56 (24.7)	46 (20.3)	59 (26.0)	227 (100.0)
1.2 Ischaemic	103 (17.1)	125 (20.7)	116 (19.2)	208 (34.5)	603 (100.0)
All Stroke	**145 (17.5)**	**181 (21.8)**	**162 (19.5)**	**267 (32.2)**	**830 (100.0)**

** There was 1 episode(s) in YOUR FACILITY and 75 episodes in AUSTRALIA with unknown interim accommodation

NOTE: Includes only those episodes with mode of episode end equal to interim accommodation

Final accommodation post discharge by AN-SNAP class

Legend: ■ Private Residence ■ Residential Aged Care ■ Other

YOUR FACILITY
- 4AA1 (n=25)
- 4AA2 (n=25)
- 4AA3 (n<5)
- 4AA4 (n=11)
- 4AA5 (n=5)
- 4AA6 (n=11)
- 4AA7 (n=5)
- 4AZ3 (n=13)
- 4AZ4 (n<5)
- All stroke (n=99)

AUSTRALIA
- 4AA1 (n=2,061)
- 4AA2 (n=1,767)
- 4AA3 (n=497)
- 4AA4 (n=1,033)
- 4AA5 (n=356)
- 4AA6 (n=1,062)
- 4AA7 (n=375)
- 4AZ3 (n=581)
- 4AZ4 (n=178)
- All stroke (n=7,910)

X-axis: Proportion of episodes (0% to 100%)
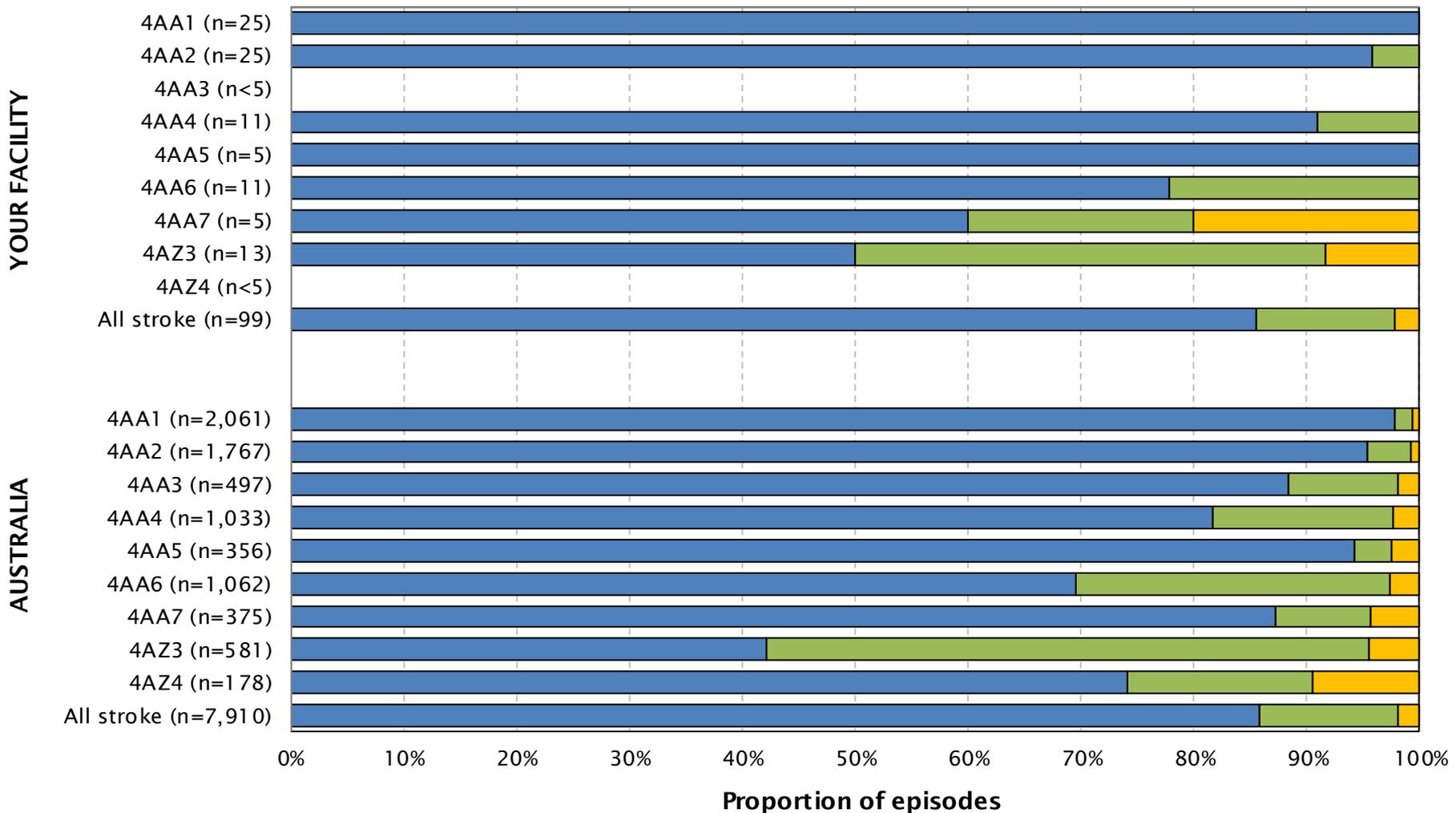
NOTE: Includes only those episodes with mode of episode end equal to either final or interim accommodation

Final accommodation post discharge by AN-SNAP class

AN-SNAP class V4	YOUR FACILITY — N (%)								
	Private residence		Residential Aged Care		Other		Missing	All episodes	
4AA1 (motor 51-91, cognition 29-35)	21	(100.0)	0	(0.0)	0	(0.0)	4	21	(100.0)
4AA2 (motor 51-91, cognition 19-28)	23	(95.8)	1	(4.2)	0	(0.0)	1	24	(100.0)
4AA3 (motor 51-91, cognition 5-18)	2	(100.0)	0	(0.0)	0	(0.0)	0	2	(100.0)
4AA4 (motor 36-50, Age ≥ 68)	10	(90.9)	1	(9.1)	0	(0.0)	0	11	(100.0)
4AA5 (motor 36-50, Age ≤ 67)	5	(100.0)	0	(0.0)	0	(0.0)	0	5	(100.0)
4AA6 (motor 19-35, Age ≥ 68)	7	(70.0)	2	(20.0)	1	(10.0)	1	10	(100.0)
4AA7 (motor 19-35, Age ≤ 67)	3	(60.0)	1	(20.0)	1	(20.0)	0	5	(100.0)
4AZ3 (motor 13-18, Age ≥ 65)	6	(46.2)	5	(38.5)	2	(15.4)	0	13	(100.0)
4AZ4 (motor 13-18, Age ≤ 64)	0	(0.0)	1	(100.0)	0	(0.0)	1	1	(100.0)
All Stroke AN-SNAP Classes	**77**	**(83.7)**	**11**	**(12.0)**	**4**	**(4.3)**	**7**	**92**	**(100.0)**

AN-SNAP class V4	AUSTRALIA — N (%)								
	Private residence		Residential Aged Care		Other		Missing	All episodes	
4AA1 (motor 51-91, cognition 29-35)	1,917	(93.0)	30	(1.5)	28	(1.4)	86	2,061	(100.0)
4AA2 (motor 51-91, cognition 19-28)	1,596	(90.3)	65	(3.7)	34	(1.9)	72	1,767	(100.0)
4AA3 (motor 51-91, cognition 5-18)	421	(84.7)	46	(9.3)	15	(3.0)	15	497	(100.0)
4AA4 (motor 36-50, Age ≥ 68)	781	(75.6)	153	(14.8)	43	(4.2)	56	1,033	(100.0)
4AA5 (motor 36-50, Age ≤ 67)	310	(87.1)	11	(3.1)	11	(3.1)	24	356	(100.0)
4AA6 (motor 19-35, Age ≥ 68)	673	(63.4)	268	(25.2)	59	(5.6)	62	1,062	(100.0)
4AA7 (motor 19-35, Age ≤ 67)	300	(80.0)	29	(7.7)	27	(7.2)	19	375	(100.0)
4AZ3 (motor 13-18, Age ≥ 65)	216	(37.2)	274	(47.2)	43	(7.4)	48	581	(100.0)
4AZ4 (motor 13-18, Age ≤ 64)	117	(65.7)	26	(14.6)	23	(12.9)	12	178	(100.0)
All Stroke AN-SNAP Classes	**6,331**	**(80.0)**	**902**	**(11.4)**	**283**	**(3.6)**	**394**	**7,910**	**(100.0)**

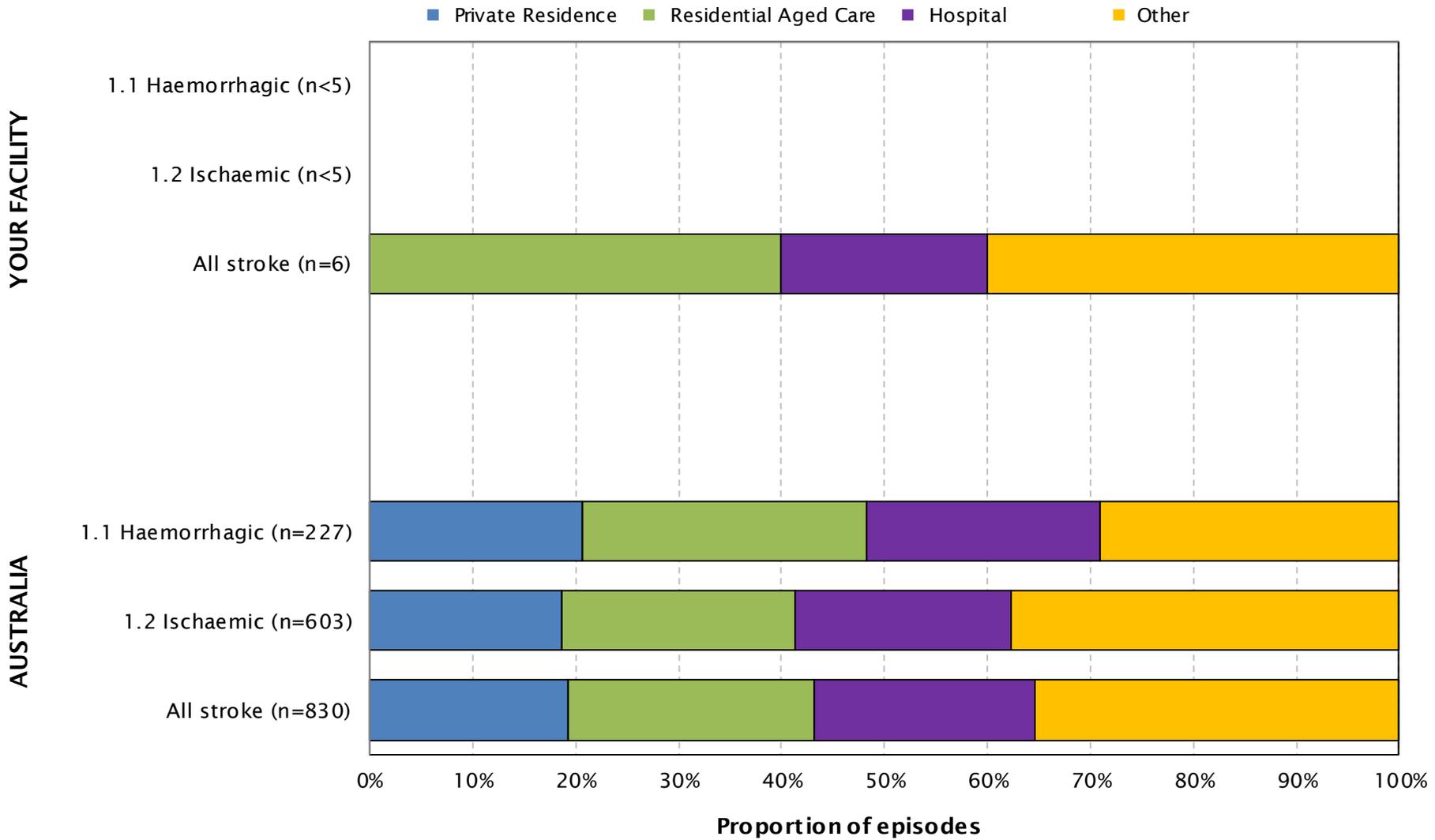NOTE: Includes only those episodes with mode of episode end equal to either final or interim accommodation

Final accommodation post discharge by impairment

Legend: ■ Private Residence ■ Residential Aged Care ■ Other

YOUR FACILITY
- 1.1 Haemorrhagic (n=25)
- 1.2 Ischaemic (n=74)
- All stroke (n=99)

AUSTRALIA
- 1.1 Haemorrhagic (n=2,119)
- 1.2 Ischaemic (n=5,800)
- All stroke (n=7,919)

X-axis: Proportion of episodes (0% to 100%)

NOTE: Includes only those episodes with mode of episode end equal to either final or interim accommodation

Final accommodation post discharge by impairment

Impairment	YOUR FACILITY — N (%)								
	Private residence		Residential Aged Care		Other		Missing	All episodes	
1.1 Haemorrhagic	18	(81.8)	3	(13.6)	1	(4.5)	3	22	(100.0)
1.2 Ischaemic	59	(84.3)	8	(11.4)	3	(4.3)	4	70	(100.0)
All Stroke	**77**	**(83.7)**	**11**	**(12.0)**	**4**	**(4.3)**	**7**	**92**	**(100.0)**

Impairment	AUSTRALIA — N (%)								
	Private residence		Residential Aged Care		Other		Missing	All episodes	
1.1 Haemorrhagic	1,691	(79.8)	239	(11.3)	72	(3.4)	117	2,119	(100.0)
1.2 Ischaemic	4,648	(80.1)	664	(11.4)	211	(3.6)	277	5,800	(100.0)
All Stroke	**6,339**	**(80.0)**	**903**	**(11.4)**	**283**	**(3.6)**	**394**	**7,919**	**(100.0)**

NOTE: Includes only those episodes with mode of episode end equal to either final or interim accommodation

Interim and final accommodation post discharge

Other (I=2, F=2)

Hospital (I=1, F=—)

Transitional living unit (I=0, F=0)

Boarding house (I=0, F=0)

Community group home (I=0, F=0)

Residential Aged Care (I=2, F=11)

Private residence (I=0, F=77)

YOUR FACILITY (n=115)

AUSTRALIA (n=9,870)
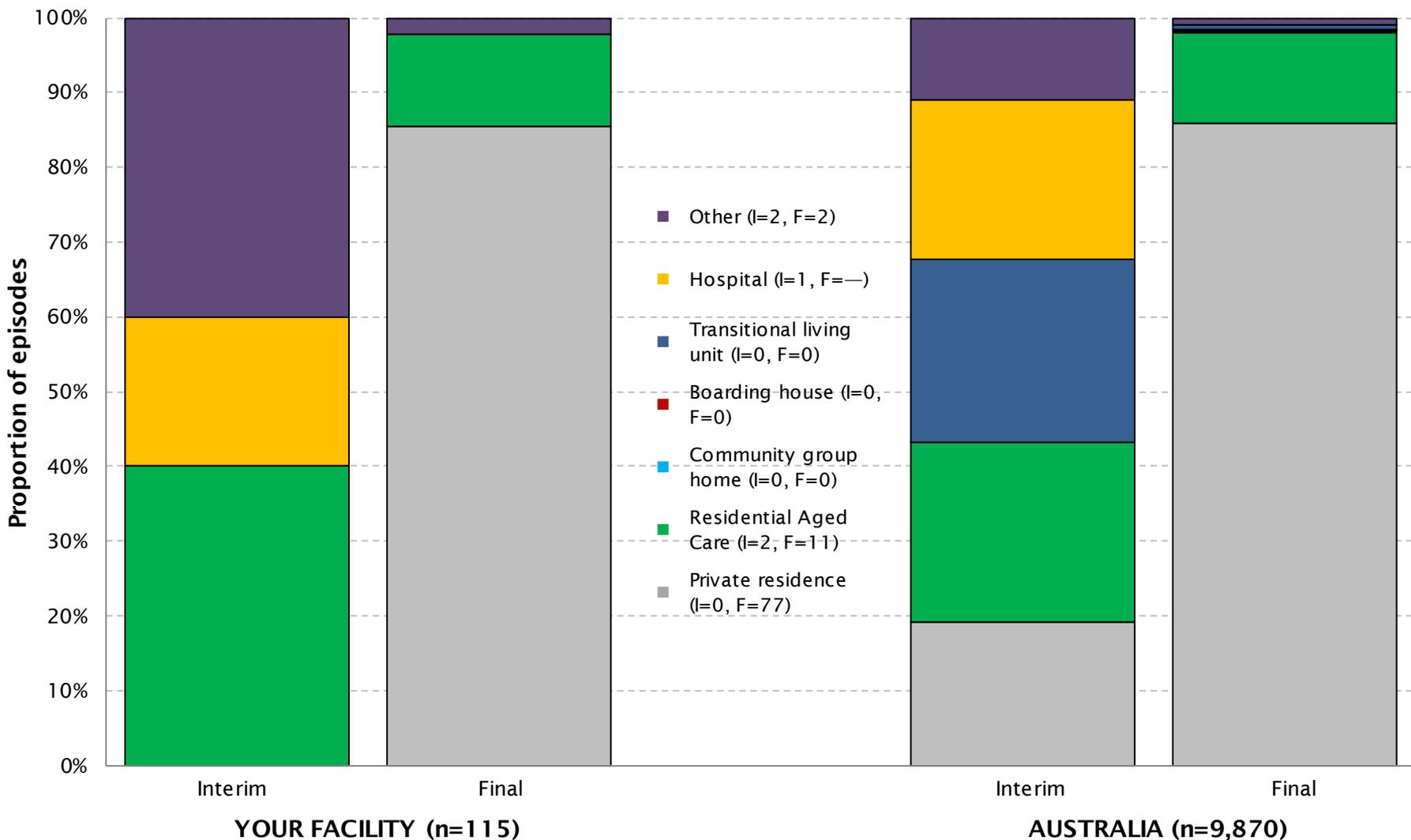
NOTE: Includes only those episodes with mode of episode end equal to either final or interim accommodation

Interim and final accommodation post discharge

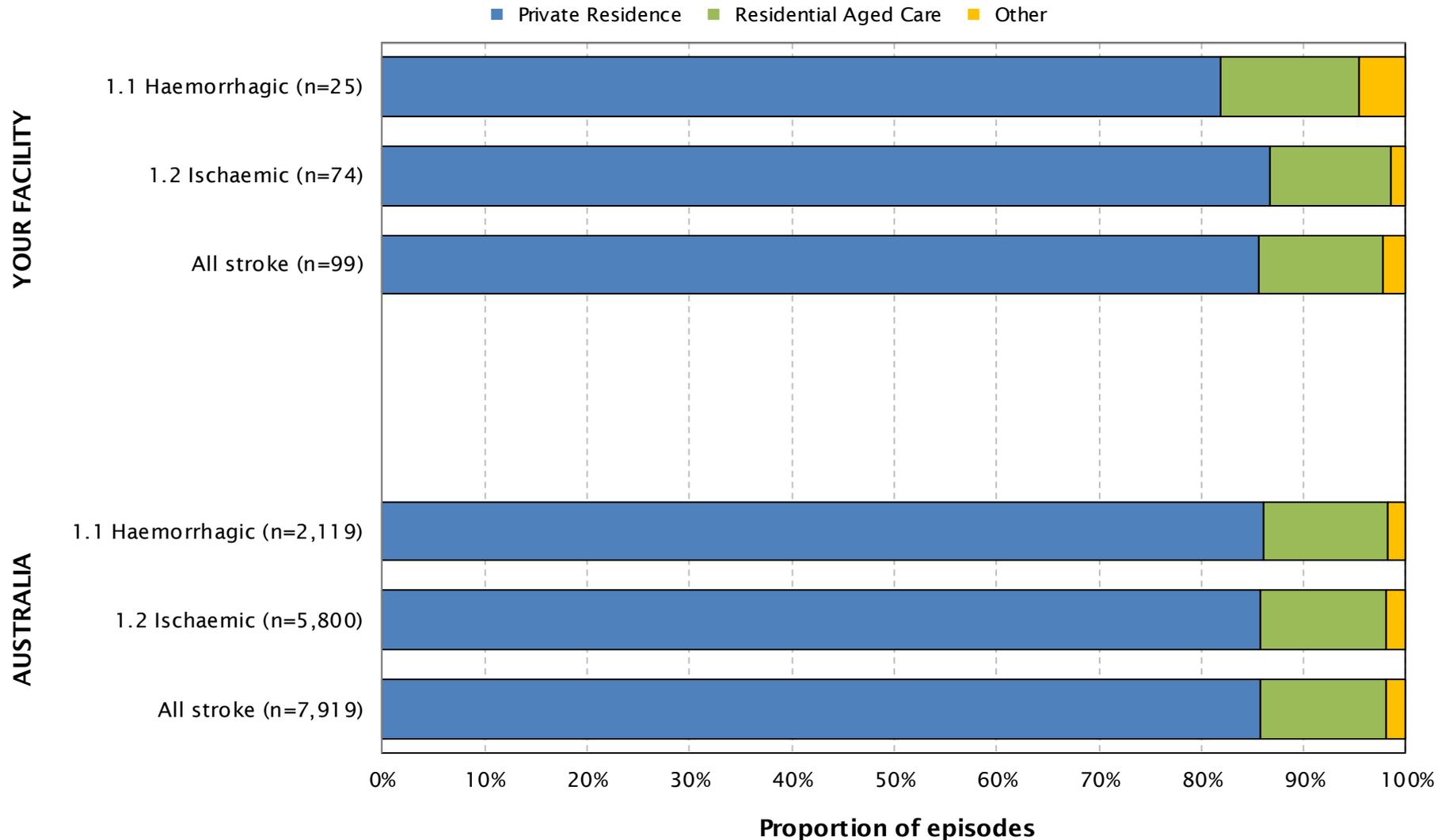| Accommodation	YOUR FACILITY				AUSTRALIA			
	Interim	(%)	Final	(%)	Interim	(%)	Final	(%)
Private residence	0	(0.0%)	77	(85.6%)	145	(19.2%)	6,331	(85.8%)
Residential Aged Care	2	(40.0%)	11	(12.2%)	181	(24.0%)	902	(12.2%)
Community group home	0	(0.0%)	0	(0.0%)	1	(0.1%)	21	(0.3%)
Boarding house	0	(0.0%)	0	(0.0%)	0	(0.0%)	12	(0.2%)
Transitional living unit	0	(0.0%)	0	(0.0%)	184	(24.4%)	39	(0.5%)
Hospital	1	(20.0%)	—		162	(21.5%)	—	
Other	2	(40.0%)	2	(2.2%)	82	(10.9%)	72	(1.0%)
Missing/Unknown	1		9		75		533	
All episodes	**6**	**(100.0)**	**99**	**(100.0)**	**830**	**(100.0)**	**7,910**	**(100.0)**

NOTE: Includes only those episodes with mode of episode end equal to either final or interim accommodation

Carer status post discharge
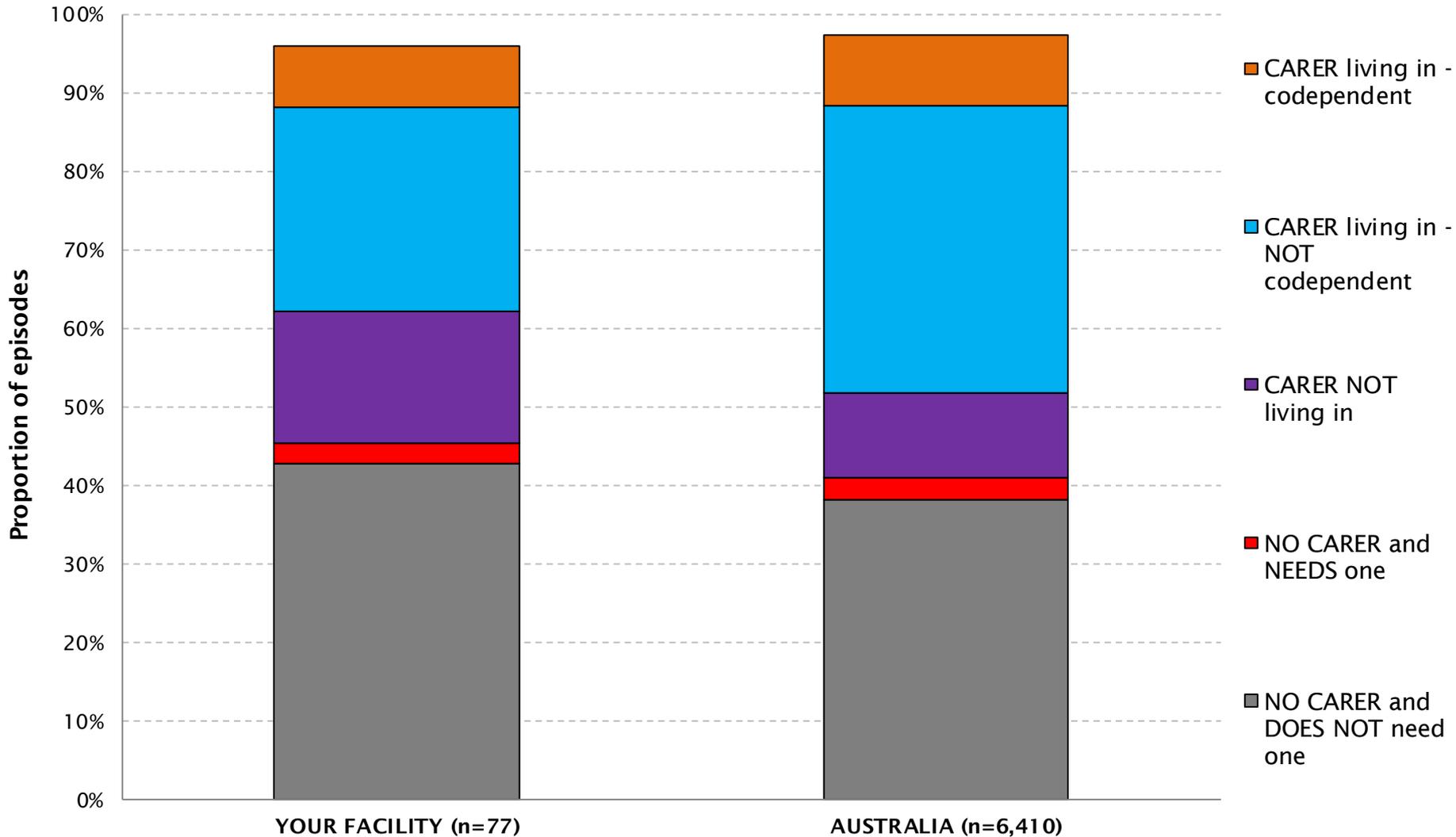
Legend:
- CARER living in - codependent (orange)
- CARER living in - NOT codependent (light blue)
- CARER NOT living in (purple)
- NO CARER and NEEDS one (red)
- NO CARER and DOES NOT need one (grey)

Y-axis: Proportion of episodes (0% – 100%)

X-axis categories: YOUR FACILITY (n=77), AUSTRALIA (n=6,410)

NOTE: Includes only those episodes whose final accommodation is private residence

Any services received post discharge by carer status

Carer status and any services received post discharge

Carer status post discharge	YOUR FACILITY		AUSTRALIA	
	No.	%	No.	%
NO CARER and DOES NOT need one	33	44.6	2,453	39.3
NO CARER and NEEDS one	2	2.7	172	2.8
CARER NOT living in	13	17.6	696	11.1
CARER living in - NOT codependent	20	27.0	2,346	37.6
CARER living in - codependent	6	8.1	579	9.3
Missing	3		164	
All episodes in private residence	**77**	**100.0**	**6,410**	**100.0**

	Any services received post discharge?			
	YOUR FACILITY		AUSTRALIA	
Carer status post discharge	Yes (%)	No (%)	Yes (%)	No (%)
NO CARER and DOES NOT need one	72.7	27.3	61.7	38.3
NO CARER and NEEDS one	—	—	73.3	26.7
CARER NOT living in	84.6	15.4	86.9	13.1
CARER living in - NOT codependent	75.0	25.0	77.5	22.5
CARER living in - codependent	50.0	50.0	73.9	26.1
All episodes in private residence	**73.0**	**27.0**	**71.9**	**28.1**

NOTE: Includes only those episodes whose final accommodation is private residence and with known carer status and known services status

Change in prior accommodation post discharge

NOTE: Includes only those episodes whose final accommodation is private residence and with known carer status and known services status

NOTE: Includes only those episodes whose final accommodation is private residence and with known carer status and known services status

Type of services received post discharge

■ YOUR FACILITY (n=74)   □ AUSTRALIA (n=6,240)

NOTE: Includes only those episodes whose final accommodation is private residence and with known carer status and known services status

Type of services received pre and post rehabilitation

Proportion of episodes

Legend: ▢ PRIOR   ▢ POST

X-axis categories: Domestic assistance, Social support, Nursing care, Allied health care, Personal care, Meals, Provision of goods & equipment, Transport services, Case management

YOUR FACILITY (n=13)

NOTE: Includes only those episodes whose final accommodation is private residence and with known carer status and received services both prior and post the episode

Type of services received post discharge by carer status

Proportion of episodes (y-axis: 0% to 100%)

Legend:
- Case management
- Transport services
- Provision of goods & equipment
- Meals
- Personal care
- Allied health care
- Nursing care
- Social support
- Domestic assistance

YOUR FACILITY (n=74)

- NO CARER and DOES NOT need one (n=33)
- NO CARER and NEEDS one (n<5)
- CARER NOT living in (n=13)
- CARER living in - NOT codependent (n=20)
- CARER living in - codependent (n=6)
- All episodes in private residence (n=74)

AUSTRALIA (n=6,240)

- NO CARER and DOES NOT need one (n=2,448)
- NO CARER and NEEDS one (n=172)
- CARER NOT living in (n=696)
- CARER living in - NOT codependent (n=2,345)
- CARER living in - codependent (n=579)
- All episodes in private residence (n=6,240)

NOTE: Includes only those episodes whose final accommodation is private residence and with known carer status and known services status

Number and type of services received post discharge – Your facility

Services received post discharge	Carer status post discharge - YOUR FACILITY					
	NO CARER and DOES NOT need one	NO CARER and NEEDS one	CARER NOT living in	CARER living in - NOT codependent	CARER living in - codependent	All episodes in private residence
Number of episodes in private residence	33	2	13	20	6	74
Percent of episodes receiving:						
No services	27.3	50.0	15.4	25.0	50.0	**27.0**
1 service type	48.5	50.0	23.1	25.0	16.7	**35.1**
2 service types	9.1	0.0	7.7	10.0	0.0	**8.1**
3 service types	6.1	0.0	30.8	15.0	16.7	**13.5**
4 or more service types	9.1	0.0	23.1	25.0	16.7	**16.2**
Service Type received						
Domestic assistance	12.1	0.0	38.5	30.0	33.3	**23.0**
Social support	3.0	0.0	30.8	15.0	16.7	**12.2**
Nursing care	6.1	0.0	15.4	10.0	16.7	**9.5**
Allied health care	63.6	50.0	69.2	65.0	50.0	**63.5**
Personal care	12.1	0.0	38.5	30.0	16.7	**21.6**
Meals	0.0	0.0	7.7	20.0	0.0	**6.8**
Provision of goods & equipment	6.1	0.0	30.8	20.0	16.7	**14.9**
Transport services	18.2	0.0	23.1	20.0	16.7	**18.9**
Case management	3.0	0.0	15.4	25.0	33.3	**13.5**

NOTE: Includes only those episodes whose final accommodation is private residence and with known carer status and known services status
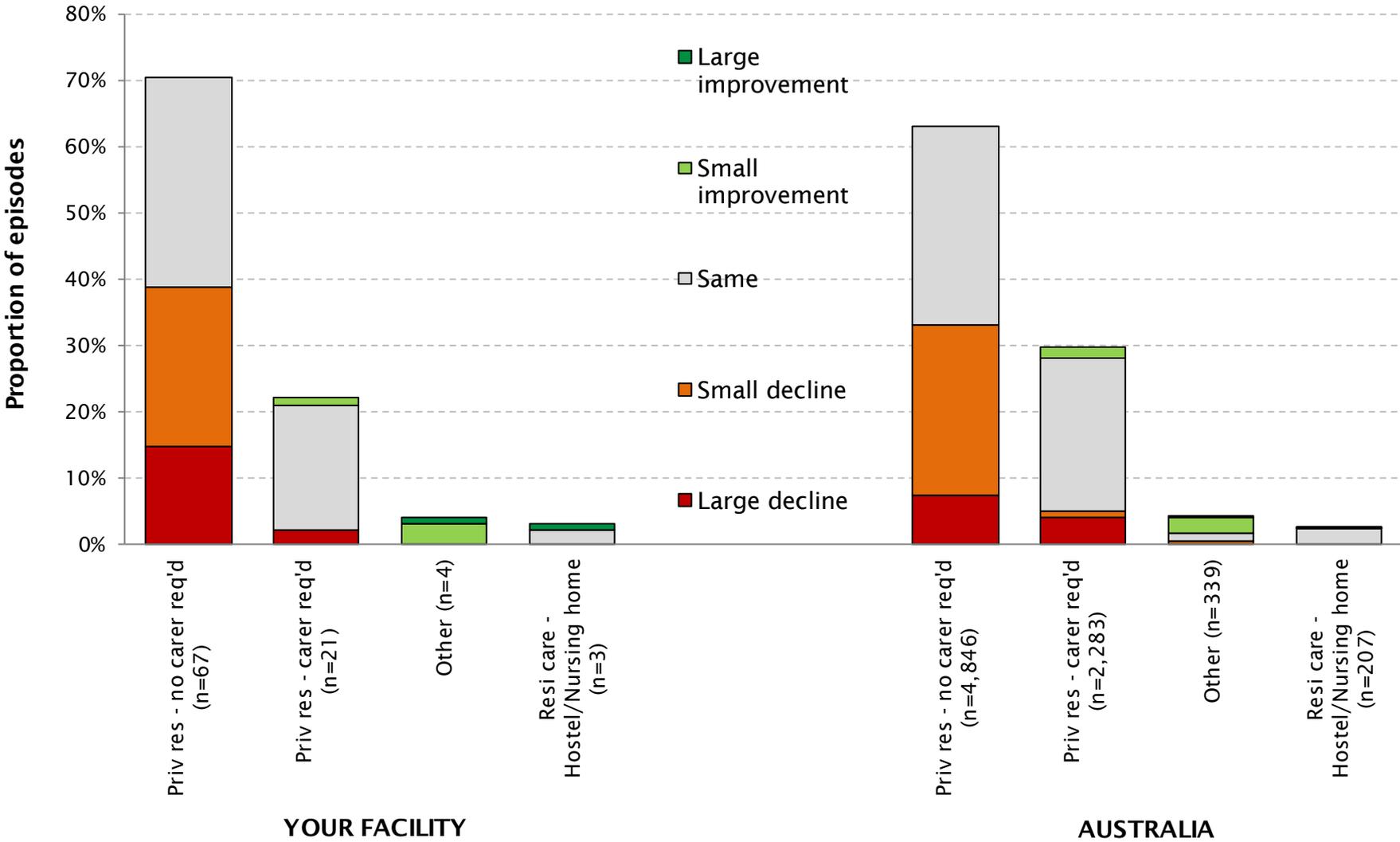
Number and type of services received post discharge – National

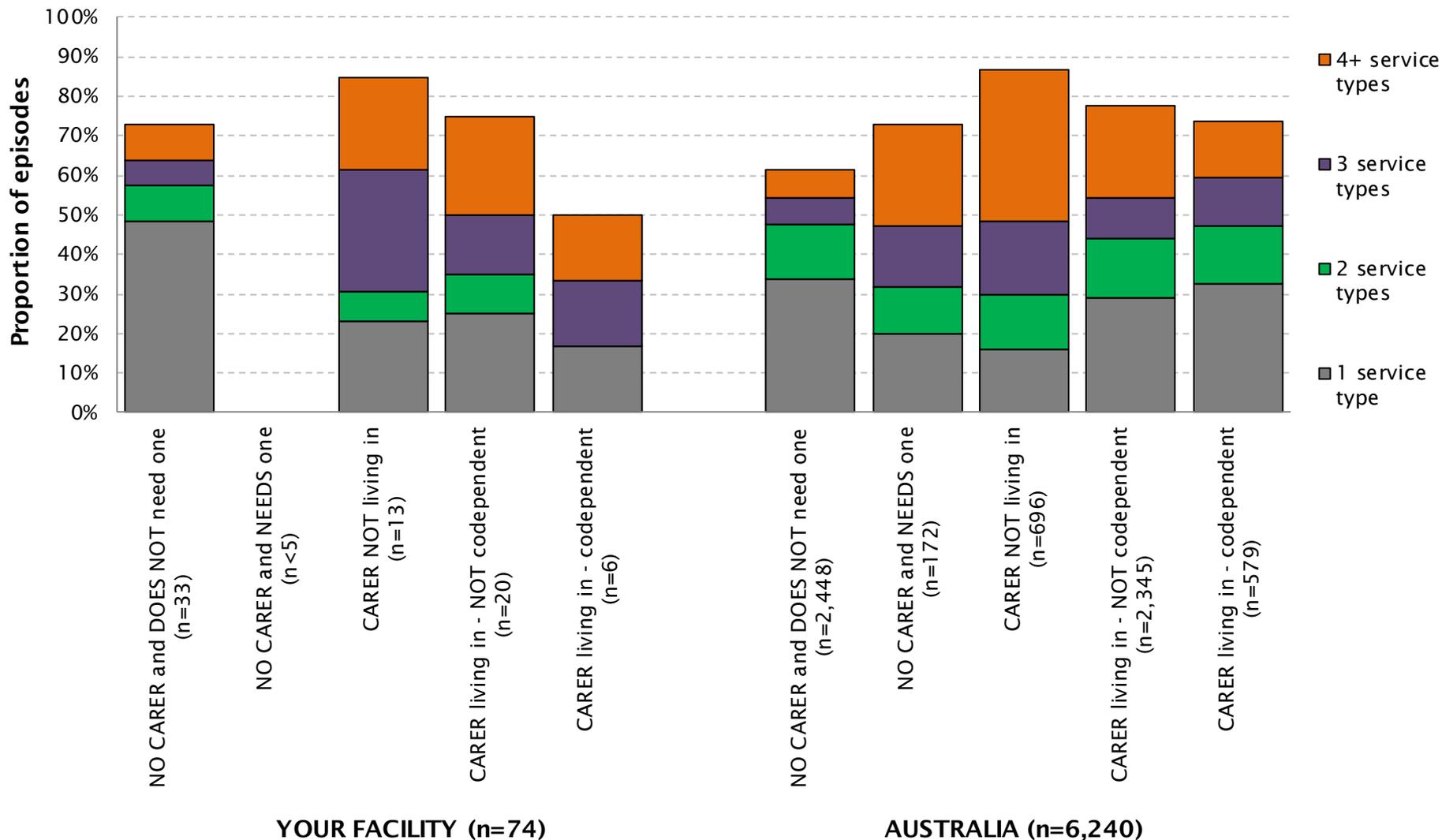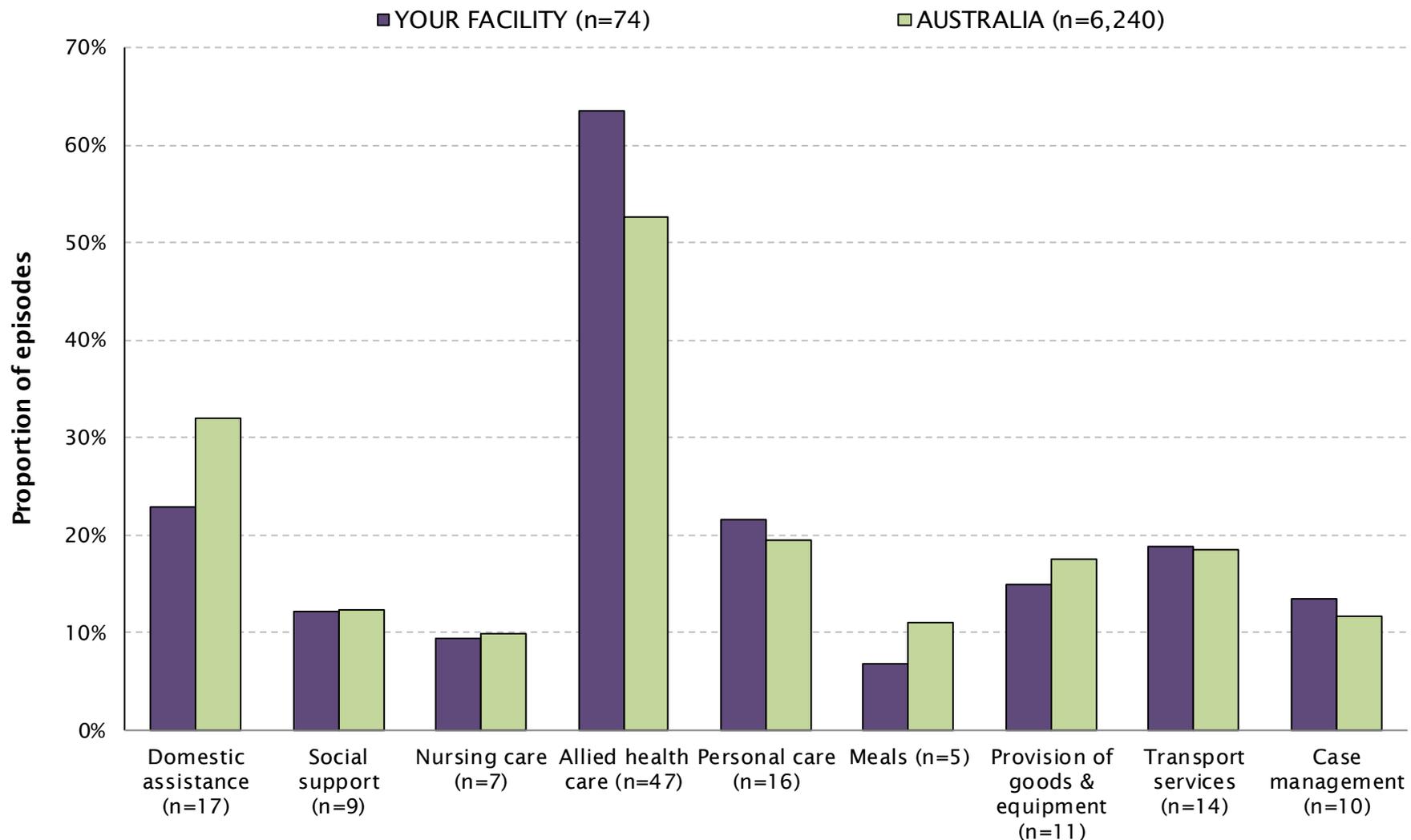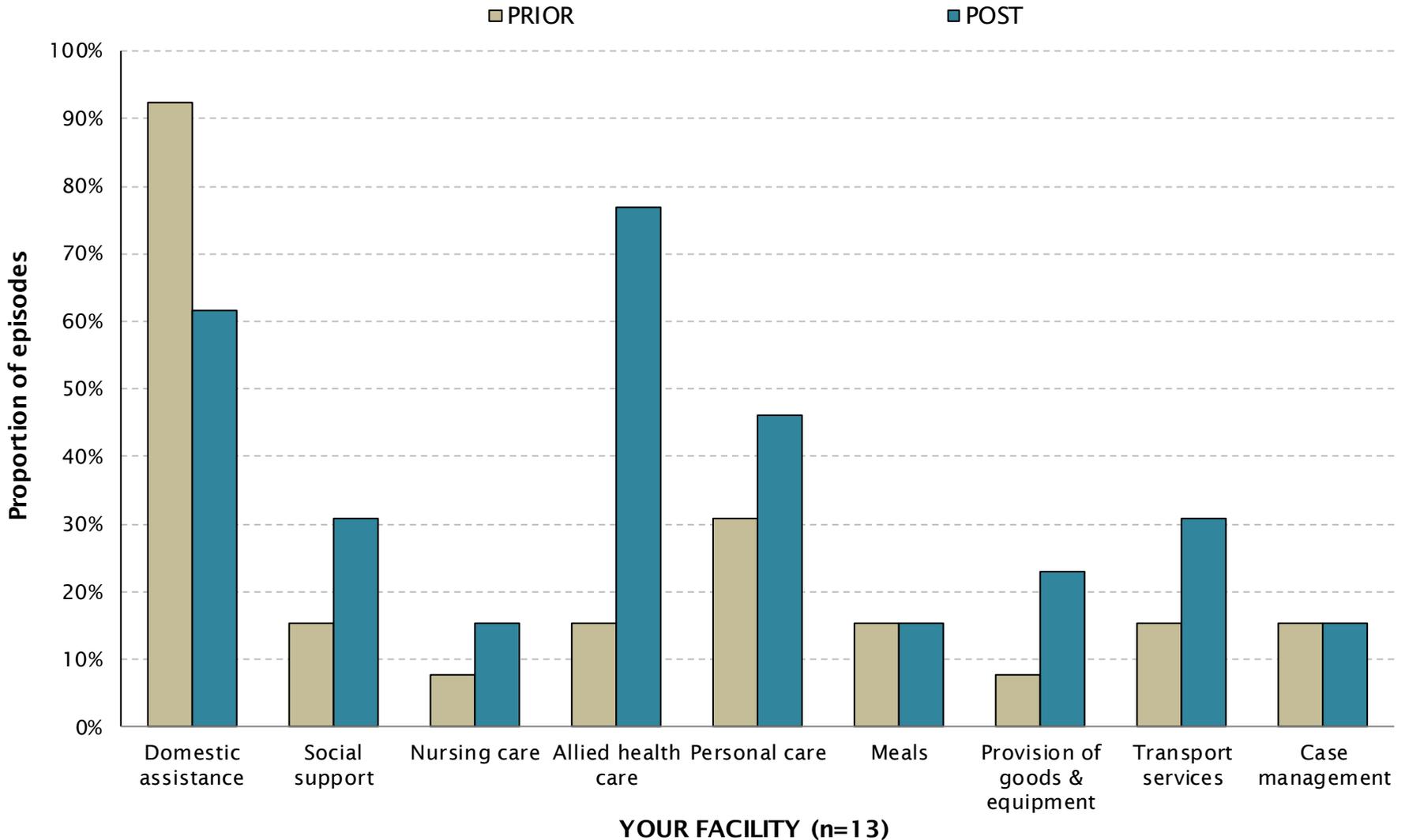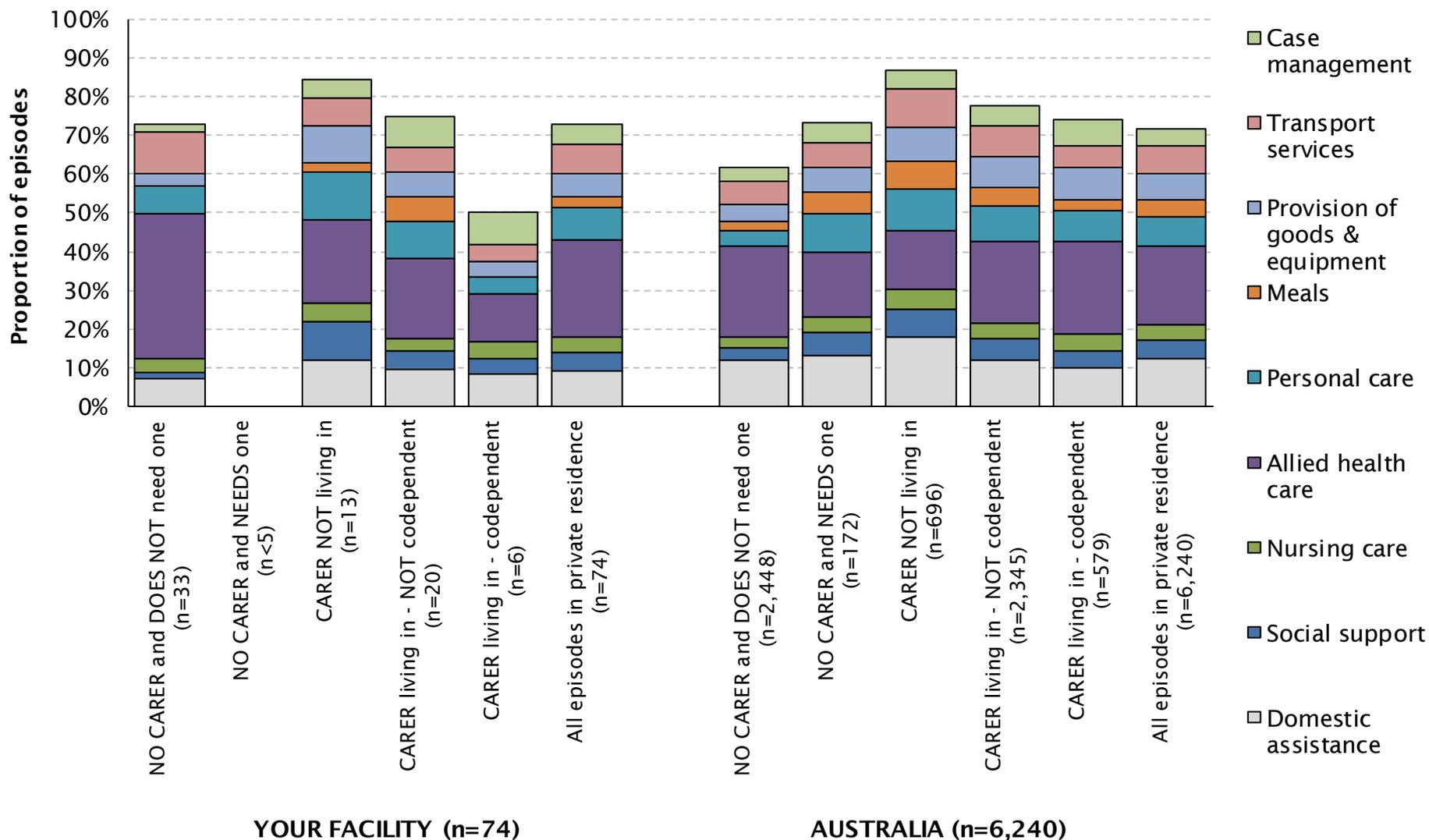| Services received post discharge	Carer status post discharge - AUSTRALIA					
	NO CARER and DOES NOT need one	NO CARER and NEEDS one	CARER NOT living in	CARER living in - NOT codependent	CARER living in - codependent	All episodes in private residence
Number of episodes in private residence	2,448	172	696	2,345	579	**6,240**
Percent of episodes receiving:						
No services	38.3	26.7	13.1	22.5	26.1	**28.1**
1 service type	33.6	19.8	16.1	28.9	32.6	**29.4**
2 service types	14.0	12.2	13.8	15.1	14.7	**14.4**
3 service types	6.9	15.1	18.5	10.3	12.1	**10.2**
4 or more service types	7.1	25.6	38.1	23.2	14.3	**17.8**
Service Type received						
Domestic assistance	22.5	40.1	62.8	33.8	24.4	**31.9**
Social support	5.8	19.2	25.7	15.1	9.8	**12.2**
Nursing care	5.9	11.6	17.5	11.6	10.9	**9.9**
Allied health care	44.1	51.7	54.3	59.4	58.0	**52.5**
Personal care	8.1	30.2	36.9	25.3	18.8	**19.4**
Meals	4.7	17.4	25.4	14.1	7.1	**11.1**
Provision of goods & equipment	8.3	19.2	30.7	22.4	19.9	**17.5**
Transport services	11.0	20.3	35.8	22.1	13.6	**18.4**
Case management	6.8	15.7	17.1	13.9	15.7	**11.7**

NOTE: Includes only those episodes whose final accommodation is private residence and with known carer status and known services status

Appendix 1: Glossary

AN-SNAP class

The Australian National Sub-Acute and Non-Acute Patient Classification (AN-SNAP) is a casemix classification for sub-acute and non-acute care provided in a variety of treatment settings. Version 4, introduced in July 2016 and used in these reports, uses the episode's impairment, age, weighted FIM motor admission score and FIM cognition score to determine which of 50 inpatient (admitted overnight adult) rehabilitation classes the episode should be assigned to.

Between AN-SNAP V3 and V4 there have been some minor refinements to the positioning of age and FIM score splits, however the greatest change has been the introduction of impairment-specific weights to FIM item scores in the calculation of a motor score, the introduction of reconditioning only classes and the removal of orthopaedic replacement classes (now grouped with all other orthopaedic conditions). Refer Appendix 3 for the full list of classes and the section Impairment-specific weighted FIM scores below for more detail about how the items are weighted. For more information about AN-SNAP class V4 please refer to the AROC website.

AROC

The Australasian Rehabilitation Outcomes Centre (AROC) was established in 2002 and current membership encompasses close to 100% of all Australian and New Zealand rehabilitation facilities. Facilities routinely submit deidentified data to AROC for each rehabilitation episode, including information about demographics, process indicators and functional status.

Benchmark group

In Calendar Year 2015 new benchmark groups were introduced. With the exception of brain injury and spinal cord dysfunction an episode's benchmark group is determined by the country of the submitting facility and can be either Australia or New Zealand. For episodes recorded as brain injury or spinal cord dysfunction (or major multi trauma involving brain injury and/or spinal cord dysfunction) the benchmark group is determined by first admission episodes reported by all specialist (brain/spinal) units in both Australia and New Zealand, calculated separately for traumatic and non-traumatic episodes. The benchmark data set is all episodes during the reporting period in the AROC database.

Casemix-adjusted relative mean

A comparison of some statistics such as length of stay and FIM change is only possible if the groups being compared comprise similar episodes. The specific impairment, level of functional independence, age and other factors relating to the episode have an impact on these statistics. If, for example, your average length of stay were different from the benchmark group, we could not tell if your episodes really were different or if the difference was merely due to the unique casemix.

To overcome this difficulty, it is possible to statistically control for casemix. This is achieved by adjusting measures such as length of stay and FIM change so that the comparison is only made between similar types of episodes.

In this report we have calculated casemix-adjusted relative mean length of stay and casemix-adjusted relative mean FIM change for completed episodes. To do this, we needed to know the LOS (or FIM change) and AN-SNAP class for each episode as well as the mean LOS (or FIM change) for the benchmark group for each AN-SNAP class. We then calculated the difference between each episode LOS (or FIM change) and the mean LOS (or FIM change) of the appropriate AN-SNAP class. These differences were then averaged to produce the casemix-adjusted relative mean. This may be easier to understand as a set of two equations illustrated below.

> **For each episode calculate:**
> **LOSdiff = episode's LOS – mean LOS appropriate AN-SNAP class.**
> **Casemix-adjusted relative mean** = Sum of **LOSdiff** for all episodes divided by **Number of episodes**

A casemix-adjusted relative mean length of stay of, say, -2 days would indicate that, on average, your facility has a LOS of 2 days less than similar episodes in the benchmark group. A casemix-adjusted relative mean FIM change of, say, 4 would indicate that, on average, your facility improved 4 FIM points more than similar episodes in the benchmark group. It is important to consider both of these statistics together. For example, your episodes may have stayed longer than similar episodes in the benchmark group, but they may also have achieved a greater functional improvement.

Complete/incomplete episode

An episode is considered "complete" for the purpose of calculating outcome statistics in this report if (A) the mode of episode end was either 1 (discharged to usual accommodation) or 2 (discharged to interim accommodation) AND total FIM score at episode end was greater than 18, or (B) the mode of episode end was 7 (change of care type within sub-acute/non-acute care) AND length of stay greater than 6 days.

Appendix 1: Glossary

Confidence interval for a mean

To decide if a difference between your facility's mean score and the benchmark group's mean is statistically significant, look at the two confidence intervals. If they overlap, the difference is not likely to be statistically significant. For example your facility's mean onset to first admission may be 16 days while the benchmark group's mean is 12 days. These values are certainly different, but the difference may not be statistically significant. If the 95% confidence interval of your data were (13 – 19) (i.e. 13 days to 19 days) and that of the benchmark group data set were (10.5 – 13.5) (i.e. 10.5 days to 13.5 days), the difference is not likely to be statistically significant as the two confidence intervals overlap. Note that this is a conservative comparison and is not as accurate as a formal statistical test.

Data Concatenation

Increasingly some jurisdictions have introduced business rules around data collection that have resulted in episodes of rehabilitation being ended and then re-commenced a few days later. AROC definitions would record these as one episode with the period in between defined as a suspension of rehabilitation. Such business rules result in two (or more) episodes of rehabilitation being reported to AROC when only one full episode should be reported.

Whilst this happens much more frequently in some impairment groups (e.g. spinal cord injury & brain injury) it does impact all impairments to some degree. Reporting of multiple episodes impacts outcomes analysis, resulting in shorter than real length of stays and reduced FIM change being reported.

Concatenated episodes will have a revised Length of stay and FIM change (start details will be taken from the identified primary episode; end details from the identified final episode), and will also have a revised number of suspensions (being the sum across all concatenated 'submitted episodes' plus the number of breaks between 'submitted episodes') and a revised number of suspension days (being the sum across all concatenated 'submitted episodes' plus the sum of all days between 'submitted episodes').

Submitted episodes to AROC are identified for concatenation based on the following rules:

- Subsequent episodes MUST have same impairment code and be from same reporting facility with same MRN and DOB.
- Leading episode must be discharged into the hospital system with following episode being admitted from hospital system.
- Number of days between episodes being 0-14 days for spinal and 0-7 days for all other impairments.

To make it easier for AROC to identify episodes that should be concatenated in January 2014 the data item Mode of Episode Start had an additional code set value added: **9 = recommended rehabilitation episode following suspension**.

Data quality score

The data quality score is the average percent reported for all AROC data items (including impairment specific items where relevant) with the exception of those items that are optional. Path, facility code, facility name, MRN and episode end date are not included as these fields are used to extract the data for reporting.

Functional Independence Measure (FIM)

The Functional Independence Measure (FIM) is used as a tool to assess the functional independence of patients at episode start and end.

- The **FIM motor score** is the sum of the scores obtained for the first thirteen (13) items in the FIM instrument. A higher FIM motor score indicates a greater level of functional independence in motor skills.

- The **FIM cognition score** is the sum of the scores obtained for the final five (5) items in the FIM instrument. A higher FIM cognition score indicates better cognitive function.

FIM change

The change in functional status from the beginning to the end of the episode is measured by the change in FIM score. This is calculated as the FIM score at the end of the episode minus the FIM score at the start of the episode. In some instances the change in total FIM score (the sum of items 1 to 18) is calculated. In other cases either the change in FIM motor score (the sum of items 1 to 13) or the change in FIM cognition score (the sum of items 14 to 18) is calculated.

A higher FIM score corresponds to higher level of function while a lower FIM score represents less functional independence. This means that a positive value for the change in FIM score indicates functional improvement during the episode. A negative value for the change in FIM score indicates a decline in functional independence during the episode.

FIM efficiency

The FIM efficiency indicates the average FIM improvement per day. This statistic is calculated as the mean FIM change divided by the mean length of stay (LOS).

Appendix 1: Glossary

Impairment-specific weighted FIM motor scores

Impairment-specific weighted FIM motor scores are new to the inpatient (admitted overnight adult) rehabilitation AN-SNAP V4 classes. Weights reflect the **relative impact** of each item on the **cost** of caring for the rehabilitation patient. If an item has a weight of more than 1, it will have an impact on the cost of care that is more than average – a weight less than 1 implies the impact will be less than average. Within each impairment type, the weights are scaled to sum to 13 – thus both weighted and unweighted scores range from a minimum of 13 to a maximum of 91. Where impairments are grouped together in the classification, a single set of weights for that group has been derived. The exception is Major Multiple Trauma (MMT) where there were too few episodes to develop relative weights and so all weights were set to 1.

Interquartile range (IQR)

The middle 50% — between the 25% percentile and the 75% percentile.

Length of stay (LOS)

The length of stay (LOS) of an episode is the number of days on which care has been provided. It is calculated as the end date minus the start date, minus the number of leave days during the episode.

Mean

The mean, or average, is a measure of the "centre" of your data. It is calculated by adding all data values and dividing by the number of values. The mean can be used to calculate a total. For example, if the mean length of stay were 21 days for a group of 30 episodes, the total number of bed days could be calculated as 21 multiplied by 30.

Appendix 1: Glossary

Mean or median - which to use?

The mean and the median are both measures of the "centre" of your data. For data that are symmetric about the mean (e.g. normally distributed data), the mean and the median will be close to each other. However they may have very different values for some data sets.

As an example, consider length of stay. Typically, most episodes within a class will have roughly the same length of stay. However, there will be a few episodes that are longer than the others and a smaller number that are very long. These longer lengths of stay have the effect of increasing the mean length of stay, but have little or no effect on the median.

If you want to know how long episodes in this class "typically" stay, you will probably be interested in the median as this gives you the middle value - half the episodes are longer and half the episodes are shorter. If, however, your interest is in allocation of resources and you want to know how long episodes stay on average, or if you want to get an idea of the total number of days of care provided to episodes in this class, you will need to look at the mean. (The total days can be calculated by multiplying the mean with the number in the class).

Median

The median provides the middle value of your data – half the values lie above it and half the values lie below. For example, if your median length of stay were 20 days, half of your episodes would have stayed for 20 days or less, while the other half would have stayed 20 days or longer. Note that the median, unlike the mean, cannot be used to calculate the total number of bed days.

Appendix 1: Glossary

Relative Functional Gain (RFG) and Relative Functional Efficiency (RFE)

FIM change measures the absolute difference between admission FIM and discharge FIM scores, i.e. client 1 had a 10 point improvement (admission 46 - discharge 56) and client 2 also had a ten point improvement (admission 116 - discharge 126). FIM change does not take into account the proportion of FIM change possible, i.e. client 1 improved 10 points out of possible 80 (126-46) and client 2 improved 10 points out of a possible 10 (126-116). So not all patients that improve 10 FIM points are the same. This proportion of FIM change possible is known as the Relative Functional Gain (RFG) and tries to take into account the amount of FIM gain possible. RFG is calculated as follows:

- If actual FIM change > 0 [improved]
    - **(Discharge FIM - Admission FIM)/(126 - Admission FIM)**
        - e.g. (90 – 50)/(126-50) = 40/76 = 52.6%
- If actual FIM change < 0 [declined]
    - **(Discharge FIM - Admission FIM)/ (Admission FIM)**
        - e.g. (90 – 100)/100 = -10/100 = -10%
- If actual FIM change = 0 [no change]
    - 0%

FIM efficiency measures the absolute difference between admission FIM and discharge FIM scores per day, without taking into account the proportion of FIM change possible. The Relative Functional Gain per day is known as the Relative Functional Efficiency (RFE), and is calculated as the RFG divided by the length of stay (LOS).

Submitted versus reporting episodes

Submitted episodes are those submitted to AROC either via direct data entry or upload through AROC Online Services. These episodes have not been concatenated.

The reporting data used by AROC in this report is made up of concatenated episodes. For most episodes there is no difference between the submitted episode and the one used for reporting.

Appendix 1: Glossary

Valid FIM

For an episode to have a Valid FIM flag it must be a complete episode and each of the 18 items on admission and discharge must have been answered with a valid response of 1-7.

Valid LOS

For an episode to have a Valid LOS flag it must be a complete episode with a length of stay ranging between 1 and 500 days.

Version 4 data set

The version 4 (V4) AROC dataset was introduced on 1 July 2012. V4 is designed as a bank of data items, combinations of which are used to describe 6 possible pathways of care (see the AROC website for more information about the different pathways). NOTE: This report utilises only Pathway 3 data (inpatient direct care).

Appendix 2: AROC Impairment Codes

STROKE

Haemorrhagic
1.11 Left body involvement
1.12 Right body involvement
1.13 Bilateral involvement
1.14 No paresis
1.19 Other Orthopaedic fractures

Ischaemic
1.21 Left body involvement (right brain)
1.22 Right body involvement (left brain)
1.23 Bilateral involvement
1.24 No paresis
1.29 Other Orthopaedic fractures

BRAIN DYSFUNCTION

Non-traumatic
2.11 Sub-arachnoid haemorrhage
2.12 Anoxic brain damage
2.13 Other non-traumatic brain dysfunction

Traumatic
2.21 Open injury
2.22 Closed injury

NEUROLOGICAL CONDITIONS
3.1 Multiple Sclerosis
3.2 Parkinsonism
3.3 Polyneuropathy
3.4 Guillian-Barre
3.5 Cerebral palsy
3.8 Neuromuscular disorders
3.9 Other neurological conditions

SPINAL CORD DYSFUNCTION

Non traumatic spinal cord dysfunction
4.111 Paraplegia, incomplete
4.112 Paraplegia, complete
4.1211 Quadriplegia, incomplete C1-4
4.1212 Quadriplegia, incomplete C5-8
4.1221 Quadriplegia, complete C1-4
4.1222 Quadriplegia, complete C5-8
4.13 Other non-traumatic spinal cord dysfunction

Traumatic spinal cord dysfunction
4.211 Paraplegia, incomplete
4.212 Paraplegia, complete
4.2211 Quadriplegia, incomplete C1-4
4.2212 Quadriplegia, incomplete C5-8
4.2221 Quadriplegia, complete C1-4
4.2222 Quadriplegia, complete C5-8
4.23 Other traumatic spinal cord dysfunction

AMPUTATION OF LIMB

Not resulting from trauma
5.11 Single upper above elbow
5.12 Single upper below elbow
5.13 Single lower above knee (includes through knee)
5.14 Single lower below knee
5.15 Double lower above knee (includes through knee)
5.16 Double lower above/below knee
5.17 Double lower below knee
5.18 Partial foot (single or double)
5.19 Other amputation not from trauma

AMPUTATION OF LIMB

Resulting from trauma
5.21 Single upper above elbow
5.22 Single upper below elbow
5.23 Single lower above knee (includes through knee)
5.24 Single lower below knee
5.25 Double lower above knee (includes through knee)
5.26 Double lower above/below knee
5.27 Double lower below knee
5.28 Partial foot (single or double)
5.29 Other amputation from trauma

ARTHRITIS
6.1 Rheumatoid arthritis
6.2 Osteoarthritis
6.9 Other arthritis

PAIN SYNDROMES
7.1 Neck pain
7.2 Back Pain
7.3 Extremity pain
7.4 Headache (includes migraine)
7.5 Multi-site pain
7.9 Other pain (includes abdo/chest wall)

Appendix 2: AROC Impairment Codes

ORTHOPAEDIC CONDITIONS

Fractures (includes dislocation)

8.111   Fracture of hip, unilateral (incl. #NOF)

8.112   Fracture of hip, bilateral (incl. #NOF)

8.12   Fracture of shaft of femur

8.13   Fracture of pelvis

8.141   Fracture of knee

8.142   Fracture of lower leg, ankle, foot

8.15   Fracture of upper limb

8.16   Fracture of spine

8.17   Fracture of multiple sites

8.19   Other orthopaedic fracture

Post Orthopaedic Surgery

8.211   Unilateral hip replacement

8.212   Bilateral hip replacement

8.221   Unilateral knee replacement

8.222   Bilateral knee replacement

8.231   Knee and hip replacement, same side

8.232   Knee and hip replacement, diff sides

8.24   Shoulder replacement

8.25   Post spinal surgery

8.26   Other orthopaedic surgery

Soft tissue injury

8.3   Soft tissue injury

CARDIAC

9.1   Following recent onset of new cardiac impairment

9.2   Chronic cardiac insufficiency

9.3   Heart and heart/lung transplant

PULMONARY

10.1   Chronic obstructive pulmonary disease

10.2   Lung transplant

10.9   Other pulmonary

BURNS

11   Burns

CONGENITAL DEFORMITIES

12.1   Spina bifida

12.9   Other congenital deformity

OTHER DISABLING IMPAIRMENTS

13.1   Lymphoedema

13.3   Conversion disorder

13.9   Other disabling impairments that cannot be classified into a specific group

MAJOR MULTIPLE TRAUMA

14.1   Brain + spinal cord injury

14.2   Brain + multiple fracture/amputation

14.3   Spinal cord + multi fracture/amputation

14.9   Other multiple trauma

DEVELOPMENTAL DISABILITIES

15.1   Developmental disabilities (excludes cerebral palsy)

RE-CONDITIONING/RESTORATIVE

16.1   Re-conditioning following surgery

16.2   Reconditioning following medical illness

16.3   Cancer rehabilitation

Appendix 3: AN-SNAP V4 Overnight Rehabilitation Classes

Class	Description of AN- SNAP class	Class	Description of AN- SNAP class
4AZ1	Weighted FIM motor score 13- 18, Brain, Spine, MMT, Age ≥ 49	4AE1	Amputation of limb, Age ≥ 54, weighted FIM motor 68- 91
4AZ2	Weighted FIM motor score 13- 18, Brain, Spine, MMT, Age ≤ 48	4AE2	Amputation of limb, Age ≥ 54, weighted FIM motor 31- 67
4AZ3	Weighted FIM motor score 13- 18, All other impairments, Age ≥ 65	4AE3	Amputation of limb, Age ≥ 54, weighted FIM motor 19- 30
4AZ4	Weighted FIM motor score 13- 18, All other impairments, Age ≤ 64	4AE4	Amputation of limb, Age ≤ 53, weighted FIM motor 19- 91
4AA1	Stroke, weighted FIM motor 51- 91, FIM cognition 29- 35	4AH1	Orthopaedic conditions, fractures, weighted FIM motor 49- 91, FIM cognition 33- 35
4AA2	Stroke, weighted FIM motor 51- 91, FIM cognition 19- 28	4AH2	Orthopaedic conditions, fractures, weighted FIM motor 49- 91, FIM cognition 5- 32
4AA3	Stroke, weighted FIM motor 51- 91, FIM cognition 5- 18	4AH3	Orthopaedic conditions, fractures, weighted FIM motor 38- 48
4AA4	Stroke, weighted FIM motor 36- 50, Age ≥ 68	4AH4	Orthopaedic conditions, fractures, weighted FIM motor 19- 37
4AA5	Stroke, weighted FIM motor 36- 50, Age ≤ 67	4A21	Orthopaedic conditions, all other, weighted FIM motor 68- 91
4AA6	Stroke, weighted FIM motor 19- 35, Age ≥ 68	4A22	Orthopaedic conditions, all other, weighted FIM motor 50- 67
4AA7	Stroke, weighted FIM motor 19- 35, Age ≤ 67	4A23	Orthopaedic conditions, all other, weighted FIM motor 19- 49
4AB1	Brain dysfunction, weighted FIM motor 71- 91, FIM cognition 26- 35	4A31	Cardiac, Pain syndromes, Pulmonary, weighted FIM motor 72- 91
4AB2	Brain dysfunction, weighted FIM motor 71- 91, FIM cognition 5- 25	4A32	Cardiac, Pain syndromes, Pulmonary, weighted FIM motor 55- 71
4AB3	Brain dysfunction, weighted FIM motor 41- 70, FIM cognition 26- 35	4A33	Cardiac, Pain syndromes, Pulmonary, weighted FIM motor 34- 54
4AB4	Brain dysfunction, weighted FIM motor 41- 70, FIM cognition 17- 25	4A34	Cardiac, Pain syndromes, Pulmonary, weighted FIM motor 19- 33
4AB5	Brain dysfunction, weighted FIM motor 41- 70, FIM cognition 5- 16	4AP1	Major Multiple Trauma, weighted FIM motor 19- 91
4AB6	Brain dysfunction, weighted FIM motor 29- 40	4AR1	Reconditioning, weighted FIM motor 67- 91
4AB7	Brain dysfunction, weighted FIM motor 19- 28	4AR2	Reconditioning, weighted FIM motor 50- 66, FIM cognition 26- 35
4AC1	Neurological conditions, weighted FIM motor 62- 91	4AR3	Reconditioning, weighted FIM motor 50- 66, FIM cognition 5- 25
4AC2	Neurological conditions, weighted FIM motor 43- 61	4AR4	Reconditioning, weighted FIM motor 34- 49, FIM cognition 31- 35
4AC3	Neurological conditions, weighted FIM motor 19- 42	4AR5	Reconditioning, weighted FIM motor 34- 49, FIM cognition 5- 30
4AD1	Spinal cord dysfunction, Age ≥ 50, weighted FIM motor 42- 91	4AR6	Reconditioning, weighted FIM motor 19- 33
4AD2	Spinal cord dysfunction, Age ≥ 50, weighted FIM motor 19- 41	4A91	All other impairments, weighted FIM motor 55- 91
4AD3	Spinal cord dysfunction, Age ≤ 49, weighted FIM motor 34- 91	4A92	All other impairments, weighted FIM motor 33- 54
4AD4	Spinal cord dysfunction, Age ≤ 49, weighted FIM motor 19- 33	4A93	All other impairments, weighted FIM motor 19- 32
		499A	Adult Overnight Rehabilitation - Ungroupable

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- **Disclaimer**
  AROC has made every effort to ensure that the data used in these reports are accurate. Data submitted to AROC are checked for anomalies and facilities are asked to re-submit data prior to the production of AROC reports. We have provided general guidelines on the interpretation of the information reported but would advise readers to use their professional judgement in considering all information contained in this report.

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Australasian Rehabilitation Outcomes Centre
Australian Health Services Research Institute
iC Enterprise 1, Innovation Campus
University of Wollongong NSW 2522
Phone: +61 2 4221 4411
Email: aroc@uow.edu.au
Web: aroc.org.au