

# AROC Impairment Specific Report

## Stroke Report

### INPATIENT – PATHWAY 3

July 2022 – June 2023

Anywhere Hospital



**Australasian  
Faculty of  
Rehabilitation  
Medicine**



**UNIVERSITY  
OF WOLLONGONG  
AUSTRALIA**

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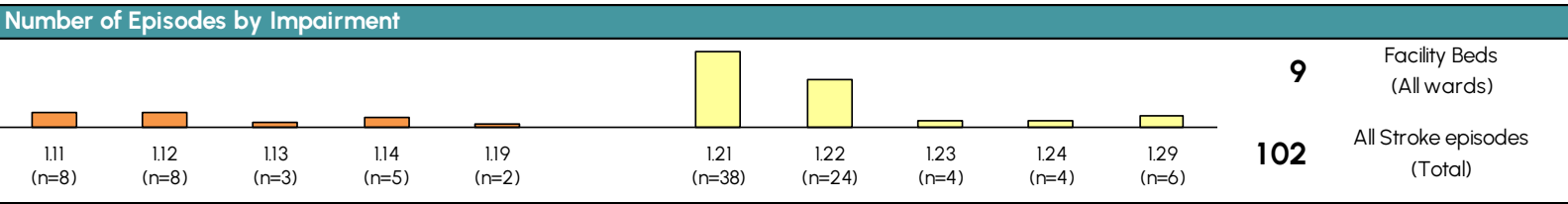
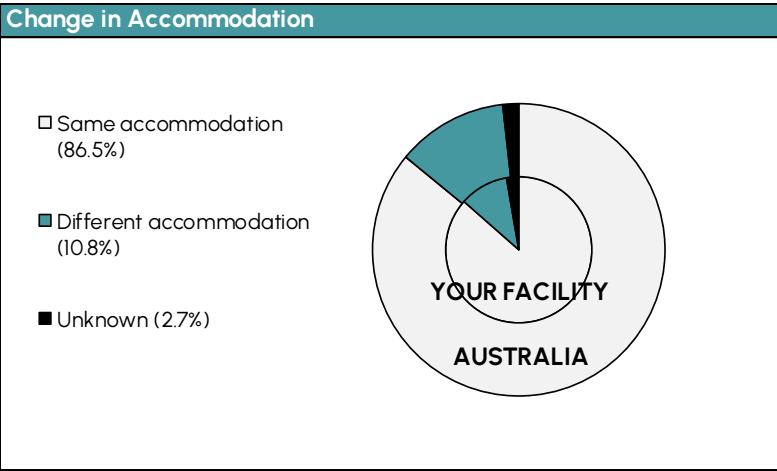
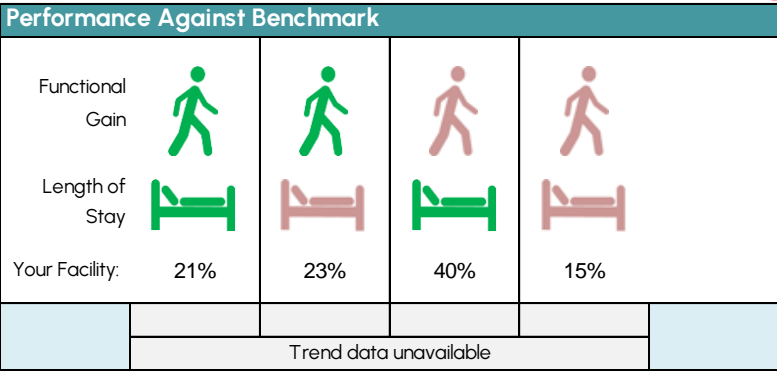
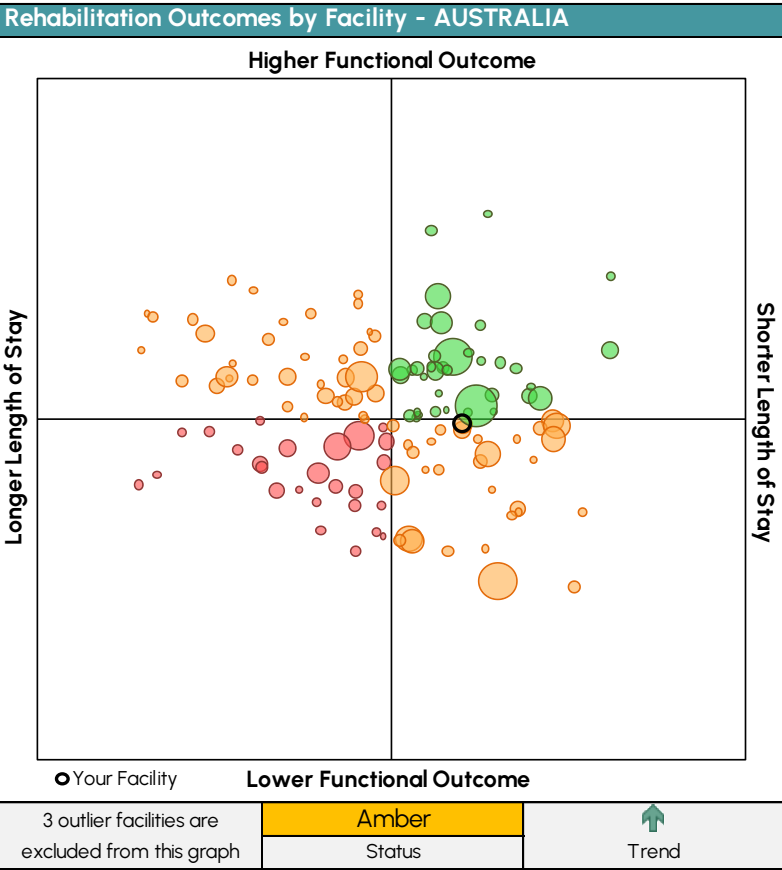
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## AN-SNAP Changes

- This is the third AROC report to use the Australian National Sub-Acute and Non-Acute Patient (AN-SNAP) Version 5 Classification, introduced by Independent Health and Aged Care Pricing Authority (IHACPA) in July 2022.
- Like previous AN-SNAP classification versions, Version 5 uses impairment, age, weighted FIM motor admission score and FIM cognition score to determine which rehabilitation class an episode should be assigned to. AN-SNAP Version 5 has 48 inpatient admitted overnight adult classes (the full list of classes can be found in Appendix 3).
- Information about how the **AN-SNAP class** has changed since Version 4 and a description of **Impairment specific weighted FIM scores** can be found in Appendix 1. Further information about AN-SNAP Version 5 is available on the IHACPA and AROC websites.

## What does using AN-SNAP V5 mean for this report?

- **DASHBOARD:** Where you are positioned in the quadrant graph from 2022 onwards is based on V5 casemix-adjusted data, however comparison data from years prior to 2022 uses V4 casemix-adjusted data.
- **OUTCOMES ANALYSIS:** All years' data presented in time-series analysis is casemix-adjusted using AN-SNAP V5 with 2023 as the base year.



# Stroke Dashboard



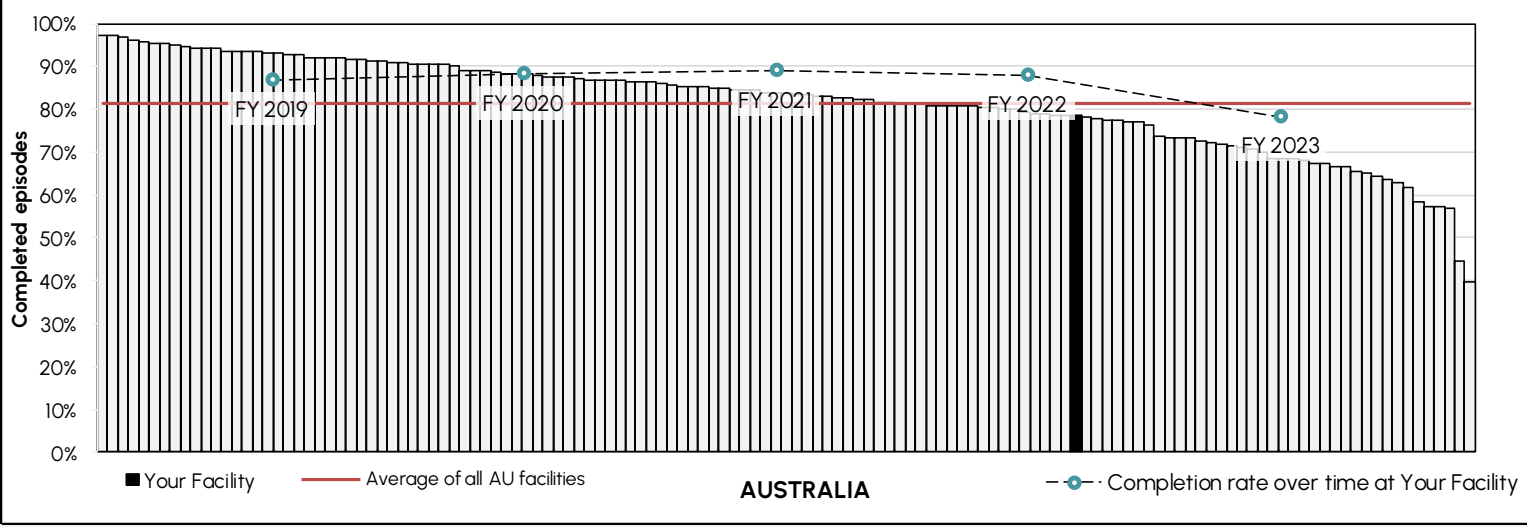
Key Indicators*	
YOUR FACILITY	AUSTRALIA
Average Age: <b>74.5</b>	Average Age: 73.1
Mortality Rate: <b>0.0%</b>	Mortality Rate: 0.6%
% with at least one comorbidity: <b>57%</b>	% with at least one comorbidity: 50%
% with at least one complication: <b>30%</b>	% with at least one complication: 31%
% episodes with start delays: <b>20%</b>	% episodes with start delays: 16%
Days between onset and rehab episode: <b>13.3</b>	Days between onset and rehab episode: 13.5
Days between clinically rehab ready & start date: <b>0.8</b>	Days between clinically rehab ready & start date: 0.9

\* Mean value provided unless otherwise specified

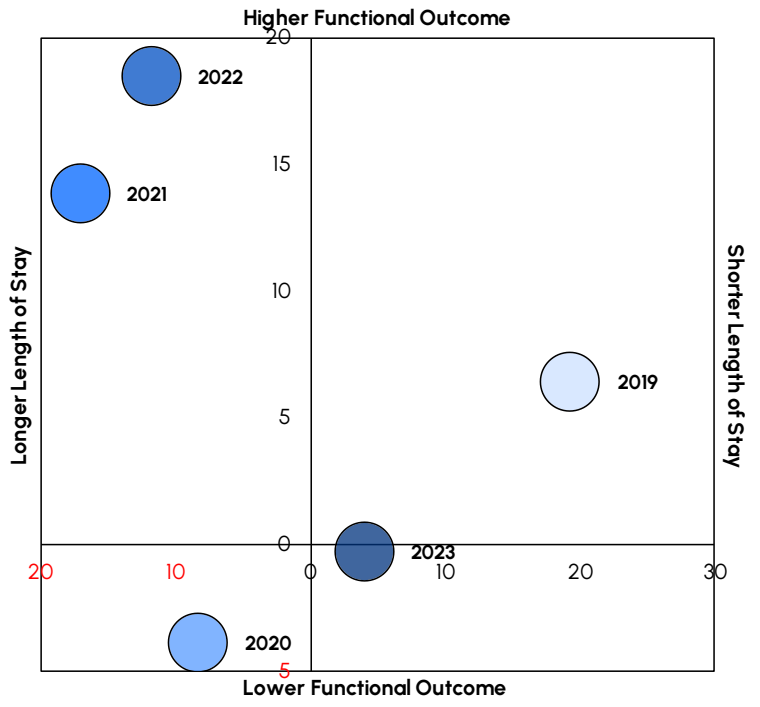
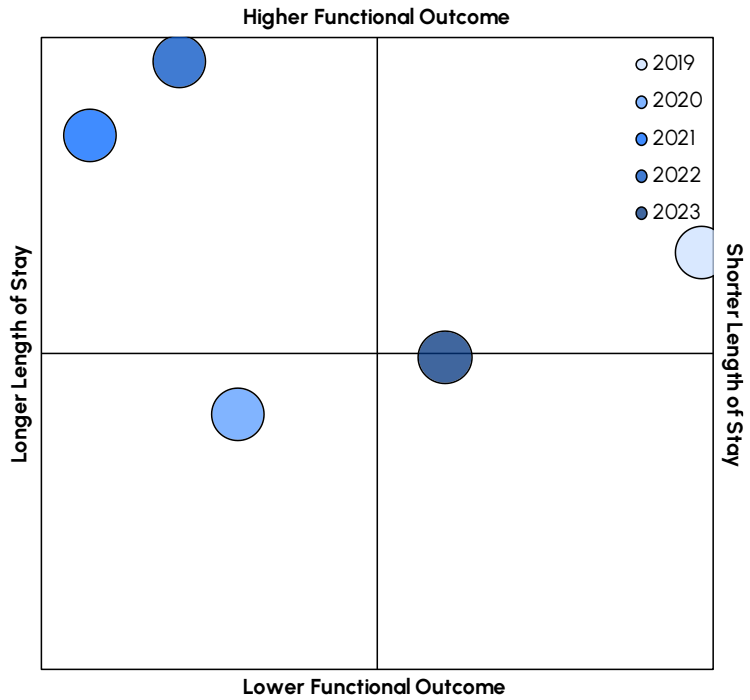
Facility FIM Training*	
FIM Credentialed Staff per 100 Episodes	FIM Credentialed Facility Trainers
7.1 Your Facility	<b>3</b> Your Facility
6.7 AUSTRALIA (Mean)	<b>2</b> AROC Suggested Minimum

\*This includes all impairments from all wards

## Completed Episodes by Facility



# Quadrant Positions – last 5 years



**NB: Data from before FY22 is benchmarked using AN-SNAP V4 classes. FY22 onwards benchmarked using AN-SNAP V5 classes.**

NOTE: Includes only completed episodes with valid FIM & LOS; where n<20 no dot will be shown

# Data used in this report

- Stroke episodes discharged during the reporting period (July 2022 – June 2023) and time series data covering five years.
- Benchmark group is AUSTRALIA.
- Casemix analysis uses version 5 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.

The immediate impact of COVID-19 in 2020 on rehabilitation was a 12% decline in the number of rehabilitation episodes following temporary suspension of elective surgeries, ward re-assignments and closures, and fewer traumatic accidents. There is still an ongoing impact of COVID-19 on rehabilitation in the form of reduced inpatient beds, increased patient complexity and staffing issues. See COVID-19 in Appendix 1 glossary for information about the collection of data for COVID patients.

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 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



Levels of functioning for stroke are categorised by the following version 5 AN-SNAP classes:

- 5AA1 Stroke, weighted FIM Motor 63 - 91, FIM Cognition 30 - 35
- 5AA2 Stroke, weighted FIM Motor 63 - 91, FIM Cognition 21 - 29
- 5AA3 Stroke, weighted FIM Motor 63 - 91, FIM Cognition 5 - 20
- 5AA4 Stroke, weighted FIM Motor 44 - 62, FIM Cognition 18 - 35
- 5AA5 Stroke, weighted FIM Motor 44 - 62, FIM Cognition 5 - 17
- 5AA6 Stroke, weighted FIM Motor 19 - 43, Age  $\geq$  80
- 5AA7 Stroke, weighted FIM Motor 19 - 43, Age 67 - 79
- 5AA8 Stroke, weighted FIM Motor 19 - 43 Age 18 - 66
- 5AZ3 weighted FIM Motor score 13-18, All other impairments, Age  $\geq$  79
- 5AZ4 weighted FIM Motor score 13-18, All other impairments, Age 18 - 78

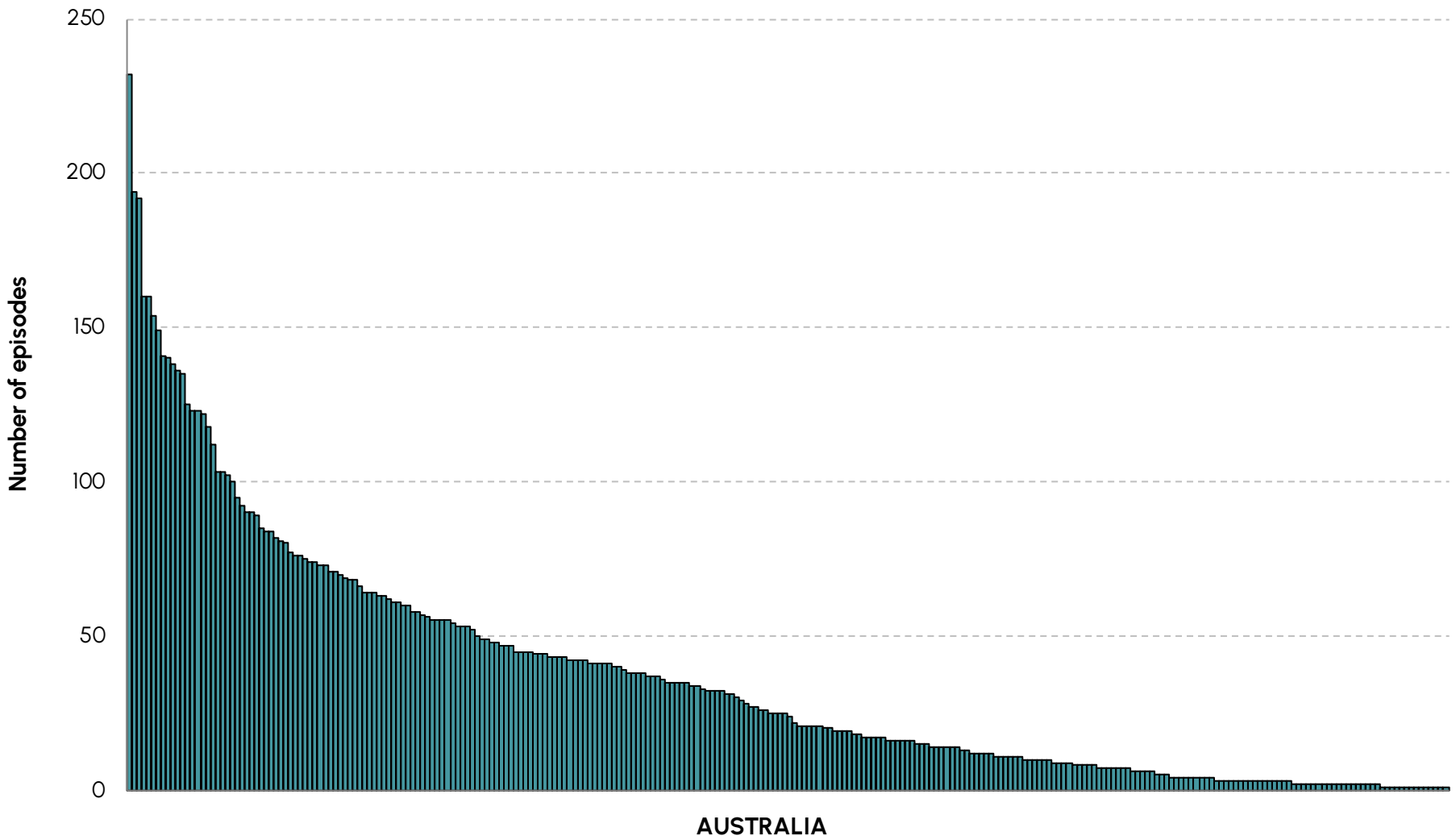
NOTE: A list of all AN SNAP classes can be found in Appendix 3



# The BIG Picture

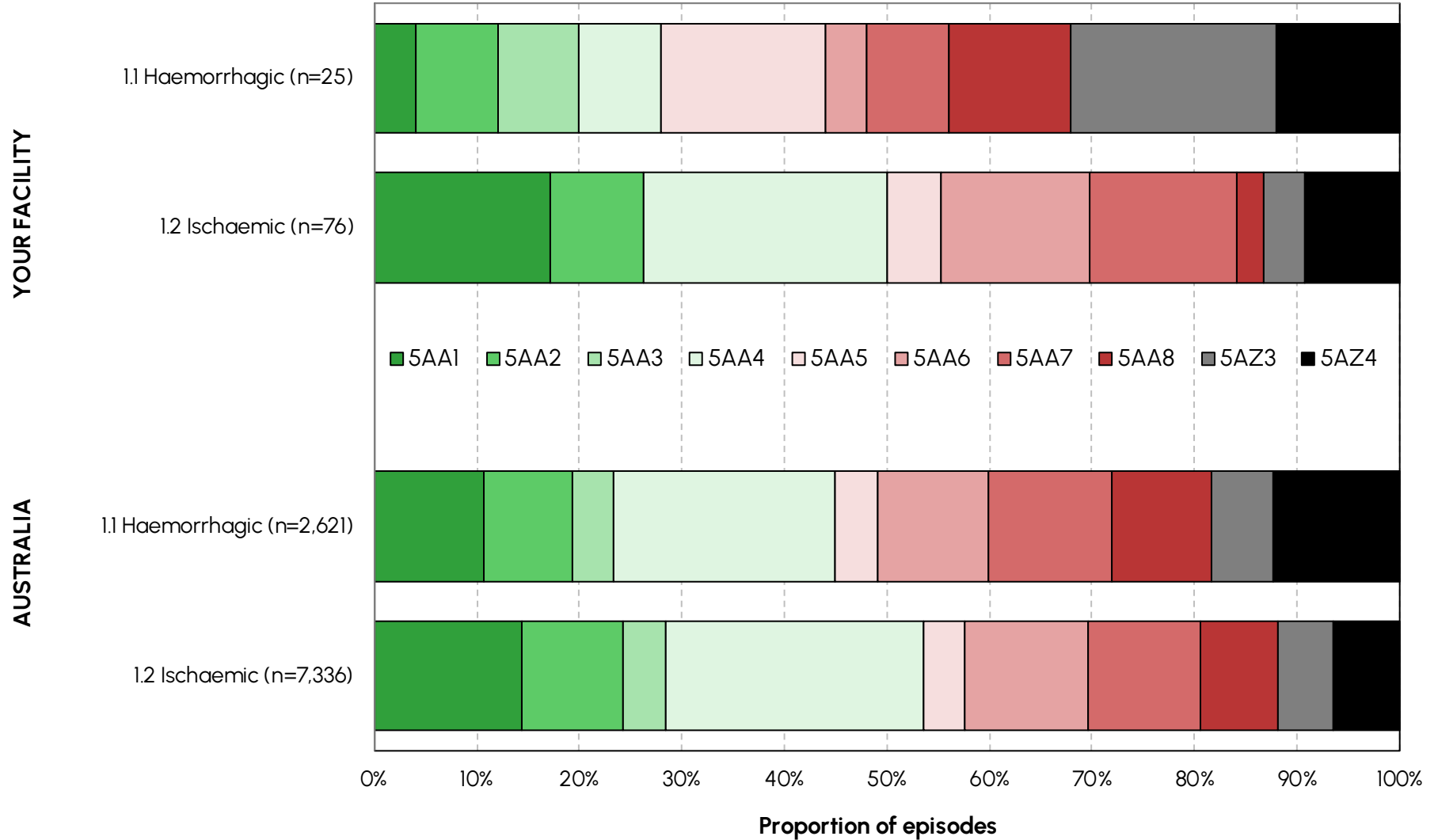


# Volume of stroke episodes by facility



NOTE: 270 facilities reported at least one stroke episode, with 144 facilities reporting between 20 and 232 episodes in this reporting period

# Proportion of episodes by impairment and AN-SNAP class



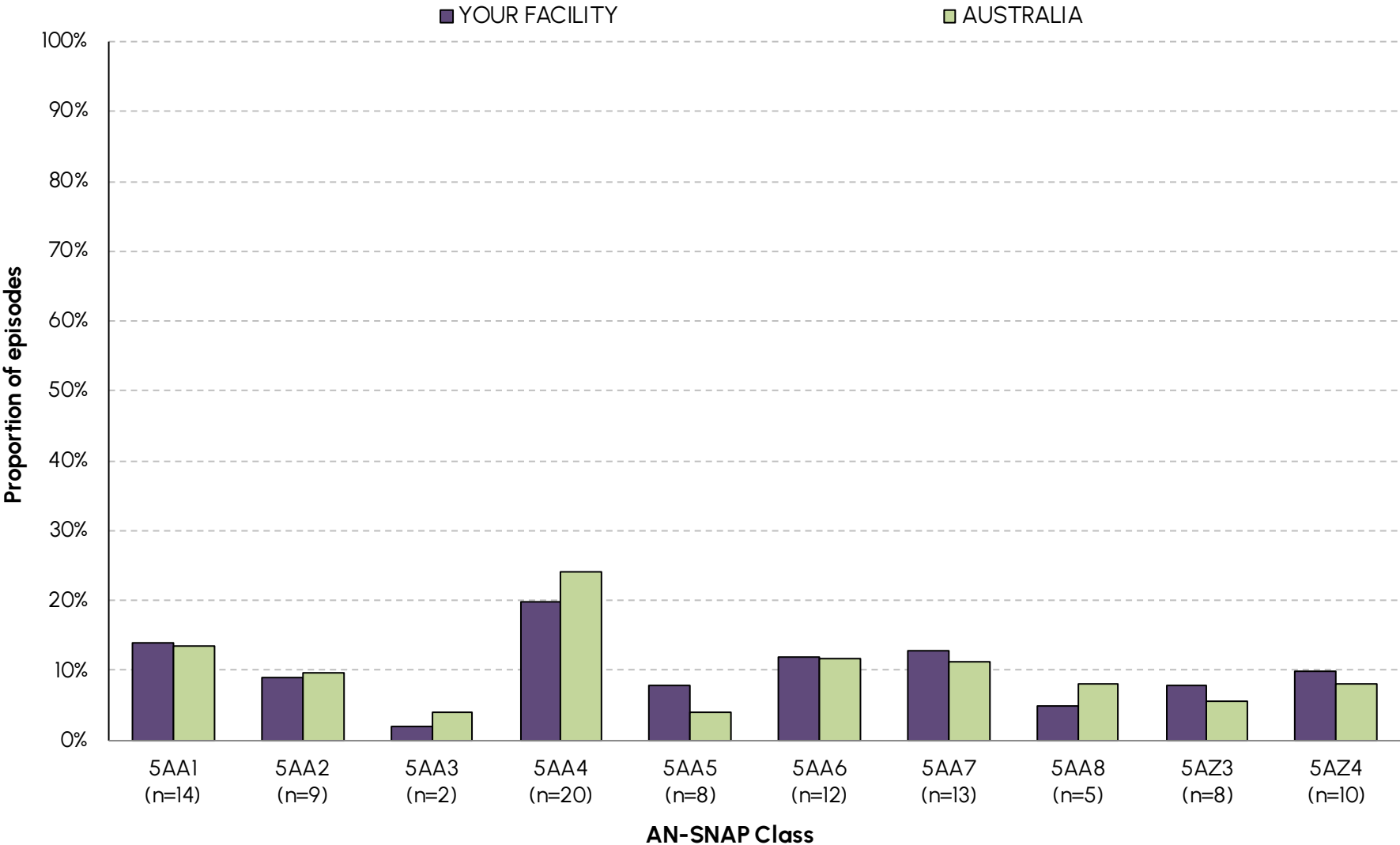
# Episodes by impairment and AN-SNAP class

AN-SNAP class V5	YOUR FACILITY					
	1.1 Haemorrhagic		1.2 Ischaemic		All Stroke	
	No.	%	No.	%	No.	%
5AA1 (motor 63-91, cognition 30-35)	1	4.0	13	17.1	14	13.9
5AA2 (motor 63-91, cognition 21-29)	2	8.0	7	9.2	9	8.9
5AA3 (motor 63-91, cognition 5-20)	2	8.0	0	0.0	2	2.0
5AA4 (motor 44-62, cognition 18-35)	2	8.0	18	23.7	20	19.8
5AA5 (motor 44-62, cognition 5-17)	4	16.0	4	5.3	8	7.9
5AA6 (motor 19-43, Age ≥ 80)	1	4.0	11	14.5	12	11.9
5AA7 (motor 19-43, Age 67-79)	2	8.0	11	14.5	13	12.9
5AA8 (motor 19-43, Age ≤ 66)	3	12.0	2	2.6	5	5.0
5AZ3 (motor 13-18, Age ≥ 79)	5	20.0	3	3.9	8	7.9
5AZ4 (motor 13-18, Age ≤ 78)	3	12.0	7	9.2	10	9.9
<b>All Stroke AN-SNAP Classes**</b>	<b>25</b>	<b>100.0</b>	<b>76</b>	<b>100.0</b>	<b>101</b>	<b>100.0</b>

AN-SNAP class V5	AUSTRALIA					
	1.1 Haemorrhagic		1.2 Ischaemic		All Stroke	
	No.	%	No.	%	No.	%
5AA1 (motor 63-91, cognition 30-35)	280	10.7	1,059	14.4	1,339	13.4
5AA2 (motor 63-91, cognition 21-29)	225	8.6	726	9.9	951	9.6
5AA3 (motor 63-91, cognition 5-20)	105	4.0	302	4.1	407	4.1
5AA4 (motor 44-62, cognition 18-35)	568	21.7	1,841	25.1	2,409	24.2
5AA5 (motor 44-62, cognition 5-17)	108	4.1	295	4.0	403	4.0
5AA6 (motor 19-43, Age ≥ 80)	284	10.8	886	12.1	1,170	11.8
5AA7 (motor 19-43, Age 67-79)	314	12.0	807	11.0	1,121	11.3
5AA8 (motor 19-43, Age ≤ 66)	258	9.8	548	7.5	806	8.1
5AZ3 (motor 13-18, Age ≥ 79)	157	6.0	401	5.5	558	5.6
5AZ4 (motor 13-18, Age ≤ 78)	322	12.3	471	6.4	793	8.0
<b>All Stroke AN-SNAP Classes**</b>	<b>2,621</b>	<b>100.0</b>	<b>7,336</b>	<b>100.0</b>	<b>9,957</b>	<b>100.0</b>

\*\*There were 1 episodes in YOUR FACILITY and 16 episodes in AUSTRALIA with AN-SNAP class 599A

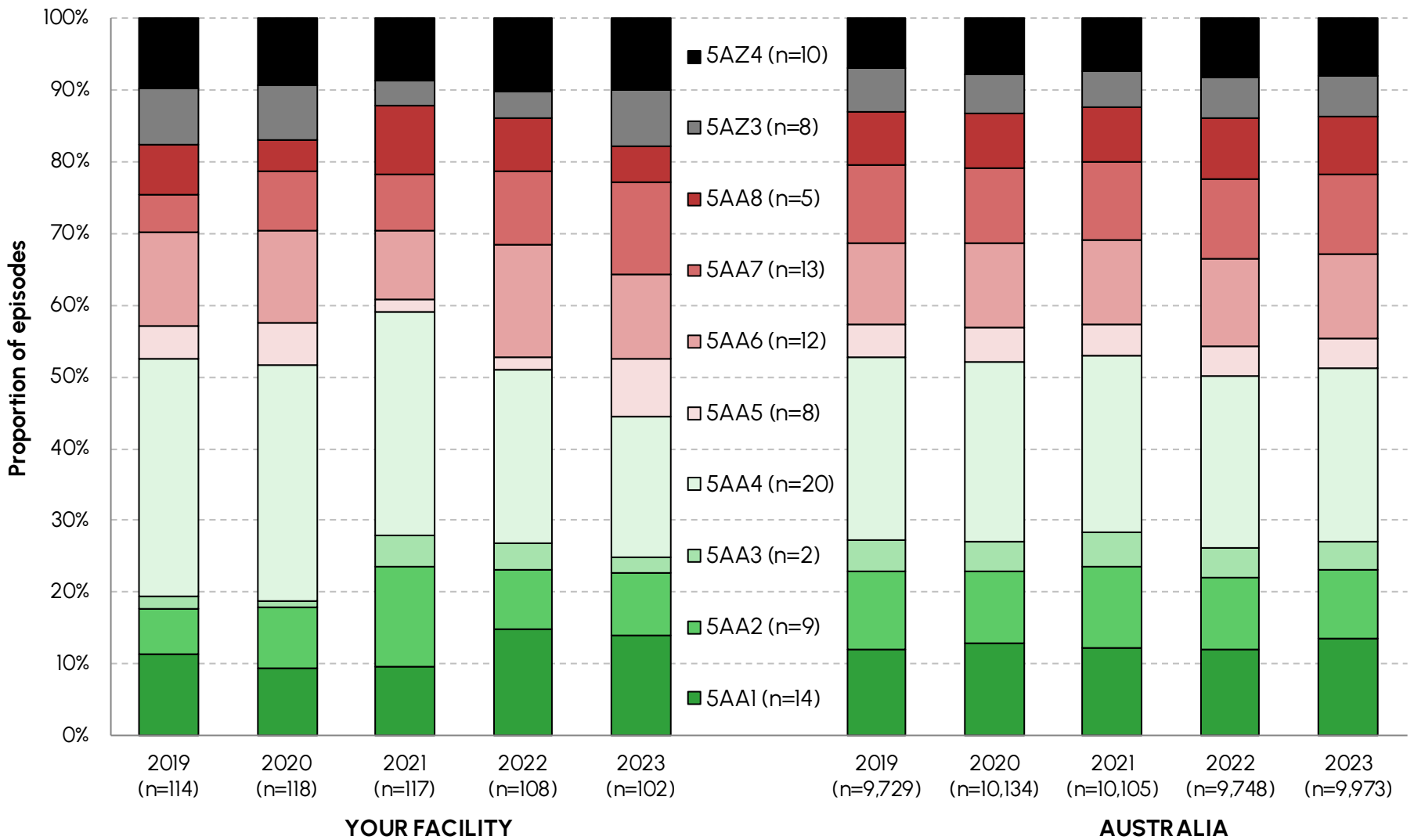
# Proportion of episodes by AN-SNAP class



# Proportion of episodes by impairment



# Proportion of episodes by AN-SNAP class over time



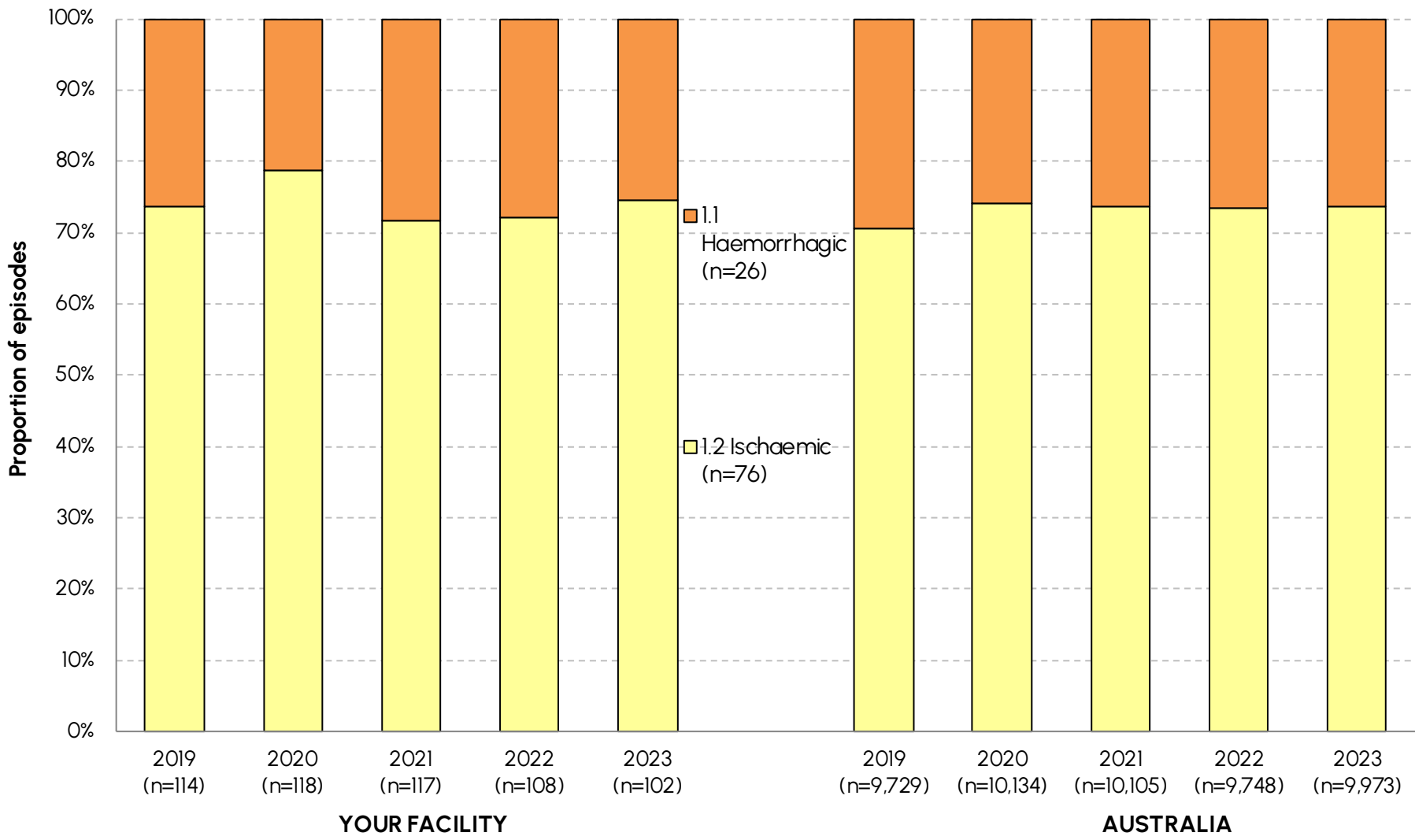


# Episodes by AN-SNAP class over time

AN-SNAP class V5	YOUR FACILITY — No.					AUSTRALIA — No.				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
5AA1 (motor 63-91, cognition 30-35)	13	11	11	16	14	1,158	1,306	1,242	1,174	1,339
5AA2 (motor 63-91, cognition 21-29)	7	10	16	9	9	1,068	1,016	1,145	974	951
5AA3 (motor 63-91, cognition 5-20)	2	1	5	4	2	422	424	466	392	407
5AA4 (motor 44-62, cognition 18-35)	38	39	36	26	20	2,476	2,539	2,500	2,337	2,409
5AA5 (motor 44-62, cognition 5-17)	5	7	2	2	8	432	476	433	401	403
5AA6 (motor 19-43, Age ≥ 80)	15	15	11	17	12	1,116	1,199	1,188	1,205	1,170
5AA7 (motor 19-43, Age 67-79)	6	10	9	11	13	1,057	1,053	1,094	1,070	1,121
5AA8 (motor 19-43, Age ≤ 66)	8	5	11	8	5	713	765	775	827	806
5AZ3 (motor 13-18, Age ≥ 79)	9	9	4	4	8	584	568	511	552	558
5AZ4 (motor 13-18, Age ≤ 78)	11	11	10	11	10	678	778	741	802	793
Ungroupable	0	0	2	0	1	25	10	10	14	16
<b>All Stroke AN-SNAP Classes</b>	<b>114</b>	<b>118</b>	<b>117</b>	<b>108</b>	<b>102</b>	<b>9,729</b>	<b>10,134</b>	<b>10,105</b>	<b>9,748</b>	<b>9,973</b>

AN-SNAP class V5	YOUR FACILITY — %					AUSTRALIA — %				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
5AA1 (motor 63-91, cognition 30-35)	11.4	9.3	9.4	14.8	13.7	11.9	12.9	12.3	12.0	13.4
5AA2 (motor 63-91, cognition 21-29)	6.1	8.5	13.7	8.3	8.8	11.0	10.0	11.3	10.0	9.5
5AA3 (motor 63-91, cognition 5-20)	1.8	0.8	4.3	3.7	2.0	4.3	4.2	4.6	4.0	4.1
5AA4 (motor 44-62, cognition 18-35)	33.3	33.1	30.8	24.1	19.6	25.4	25.1	24.7	24.0	24.2
5AA5 (motor 44-62, cognition 5-17)	4.4	5.9	1.7	1.9	7.8	4.4	4.7	4.3	4.1	4.0
5AA6 (motor 19-43, Age ≥ 80)	13.2	12.7	9.4	15.7	11.8	11.5	11.8	11.8	12.4	11.7
5AA7 (motor 19-43, Age 67-79)	5.3	8.5	7.7	10.2	12.7	10.9	10.4	10.8	11.0	11.2
5AA8 (motor 19-43, Age ≤ 66)	7.0	4.2	9.4	7.4	4.9	7.3	7.5	7.7	8.5	8.1
5AZ3 (motor 13-18, Age ≥ 79)	7.9	7.6	3.4	3.7	7.8	6.0	5.6	5.1	5.7	5.6
5AZ4 (motor 13-18, Age ≤ 78)	9.6	9.3	8.5	10.2	9.8	7.0	7.7	7.3	8.2	8.0
Ungroupable	0.0	0.0	1.7	0.0	1.0	0.3	0.1	0.1	0.1	0.2
<b>All Stroke AN-SNAP Classes</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

# Proportion of episodes by impairment over time



# Episodes by impairment over time

Impairment	YOUR FACILITY — No.					AUSTRALIA — No.				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
1.1 Haemorrhagic	30	25	33	30	26	2,854	2,626	2,667	2,589	2,630
1.2 Ischaemic	84	93	84	78	76	6,875	7,508	7,438	7,159	7,343
<b>All Stroke</b>	<b>114</b>	<b>118</b>	<b>117</b>	<b>108</b>	<b>102</b>	<b>9,729</b>	<b>10,134</b>	<b>10,105</b>	<b>9,748</b>	<b>9,973</b>

Impairment	YOUR FACILITY — %					AUSTRALIA — %				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
1.1 Haemorrhagic	26.3	21.2	28.2	27.8	25.5	29.3	25.9	26.4	26.6	26.4
1.2 Ischaemic	73.7	78.8	71.8	72.2	74.5	70.7	74.1	73.6	73.4	73.6
<b>All Stroke</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

# Summary of your incomplete episodes

Complete episode analysis	YOUR FACILITY		AUSTRALIA	
	No.	(%)	No.	(%)
Total reporting episodes	102		9,973	
Incomplete episodes	22	(21.6)	1,863	(18.7)

## Reason for incomplete:

Discharged home with end FIM=18	1	(4.5)	31	(1.7)
Discharged home with no end FIM	0	(0.0)	31	(1.7)
Discharged to another hospital	11	(50.0)	812	(43.6)
Discharged back to acute same hospital	9	(40.9)	720	(38.6)
Discharged at own risk	1	(4.5)	101	(5.4)
Change of care type (LOS<1 week)	0	(0.0)	21	(1.1)
Died	0	(0.0)	56	(3.0)
Other/Unknown Discharge	0	(0.0)	91	(4.9)

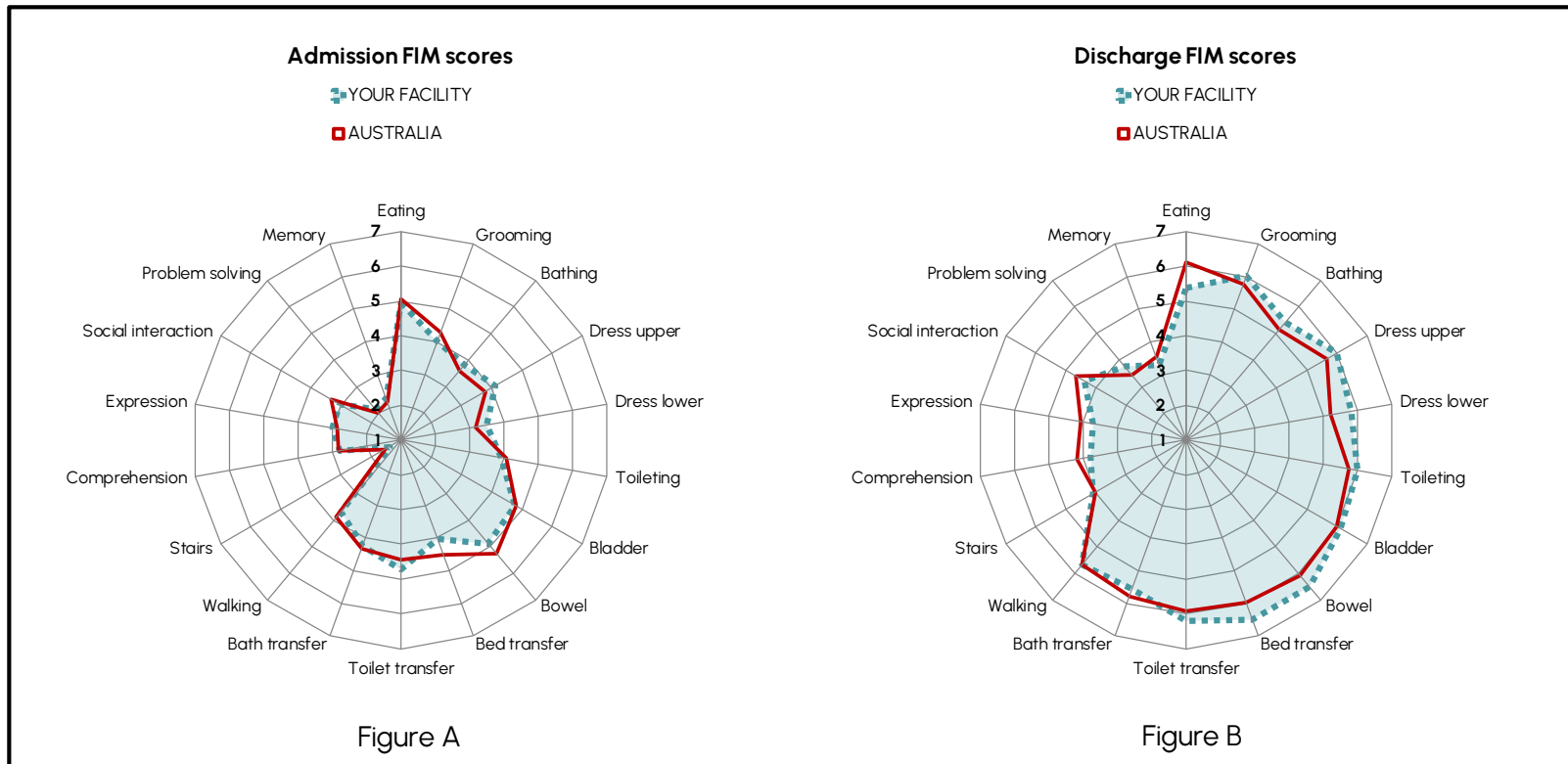
Impairment Group:	YOUR FACILITY			
	Incomplete Episodes		Complete episodes	
1.1 Haemorrhagic	7	(31.8)	19	(23.8)
1.2 Ischaemic	15	(68.2)	61	(76.3)

## AN-SNAP Class:

5AA1 (motor 63-91, cognition 30-35)	0	(0.0)	14	(18.4)
5AA2 (motor 63-91, cognition 21-29)	0	(0.0)	9	(11.8)
5AA3 (motor 63-91, cognition 5-20)	0	(0.0)	2	(2.6)
5AA4 (motor 44-62, cognition 18-35)	1	(6.7)	19	(25.0)
5AA5 (motor 44-62, cognition 5-17)	2	(13.3)	6	(7.9)
5AA6 (motor 19-43, Age ≥ 80)	2	(13.3)	10	(13.2)
5AA7 (motor 19-43, Age 67-79)	5	(33.3)	8	(10.5)
5AA8 (motor 19-43, Age ≤ 66)	2	(13.3)	3	(3.9)
5AZ3 (motor 13-18, Age ≥ 79)	3	(20.0)	5	(6.6)
5AZ4 (motor 13-18, Age ≤ 78)	7	(46.7)	3	(3.9)

# Review of FIM item scoring by AN-SNAP class

# Interpreting the comparative FIM item scoring charts



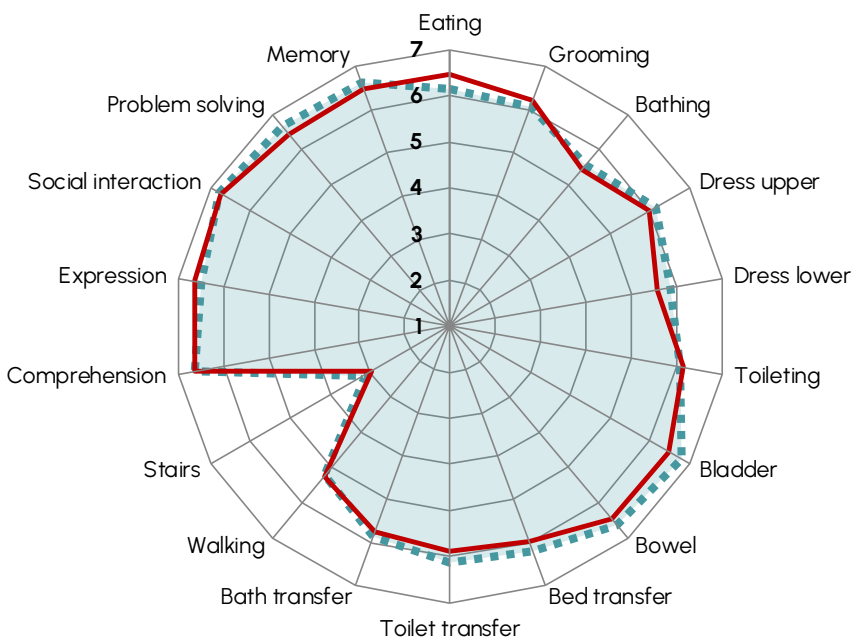
The FIM splat provides a graphic presentation of functional status in a radar chart. The 18 FIM items are arranged in order as 'spokes' of a wheel and the scoring levels from 1 (total dependence) to 7 (total independence) run from the centre outwards. The mean FIM item score for each item is indicated — 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 5AA1



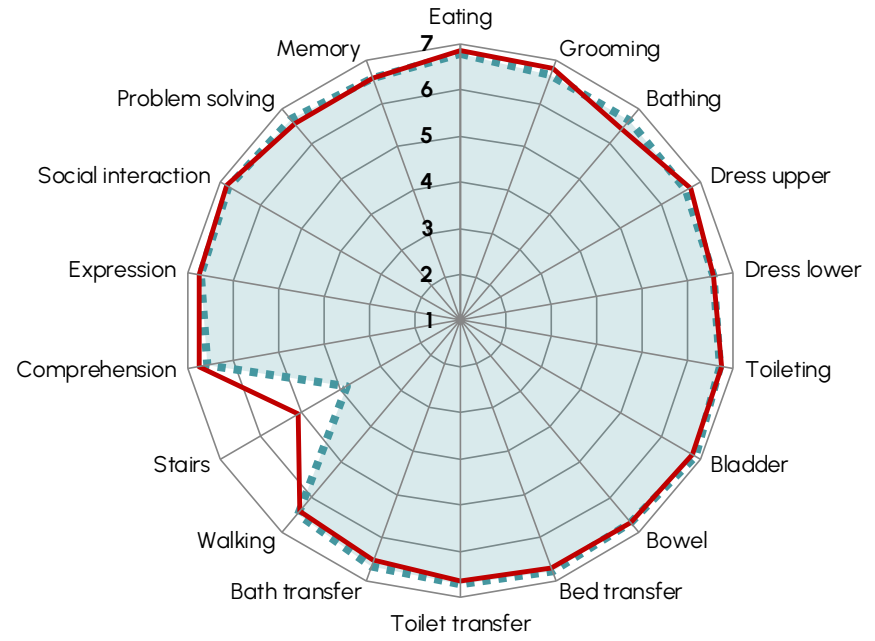
## 5AA1 Admission FIM scores

- YOUR FACILITY (n=14)
- AUSTRALIA (n=1,247)



## 5AA1 Discharge FIM scores

- YOUR FACILITY (n=14)
- AUSTRALIA (n=1,247)



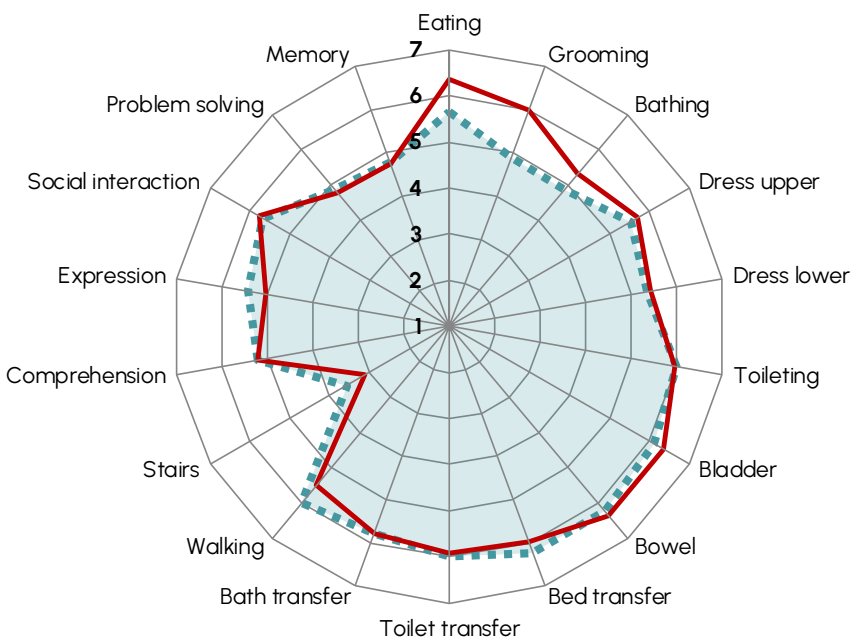
NOTE: Includes only completed episodes with valid FIM scores

# Comparative FIM item scoring AN-SNAP class 5AA2



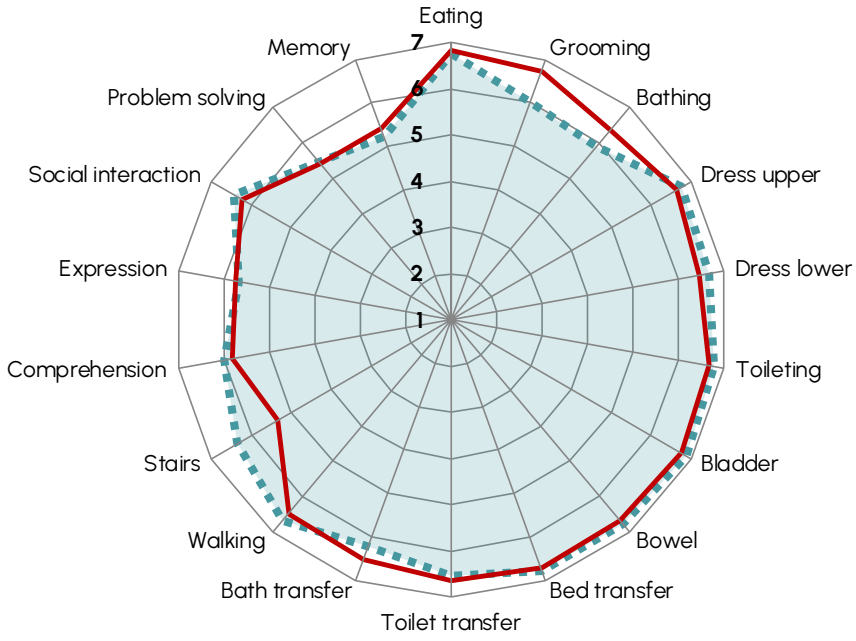
## 5AA2 Admission FIM scores

- YOUR FACILITY (n=9)
- AUSTRALIA (n=879)



## 5AA2 Discharge FIM scores

- YOUR FACILITY (n=9)
- AUSTRALIA (n=879)



NOTE: Includes only completed episodes with valid FIM scores

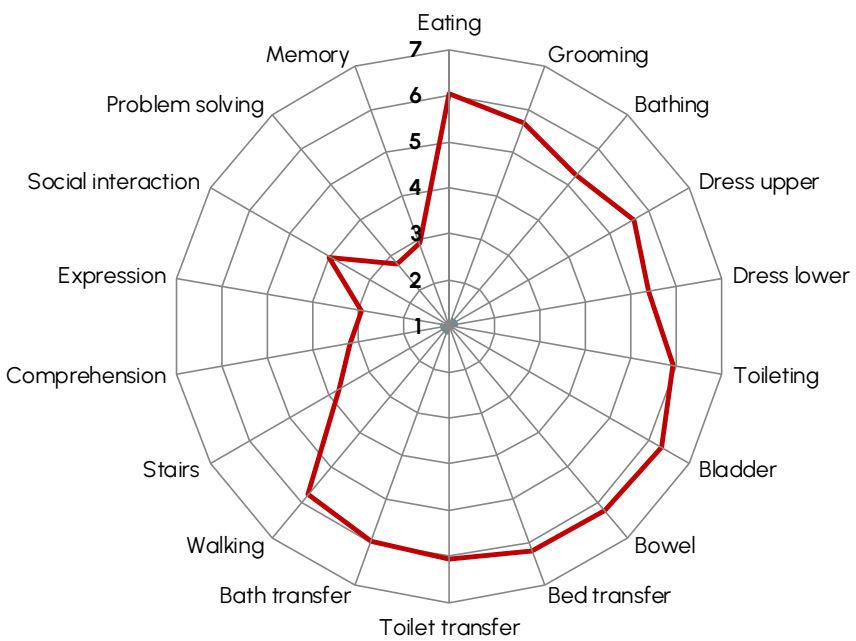


# Comparative FIM item scoring AN-SNAP class 5AA3



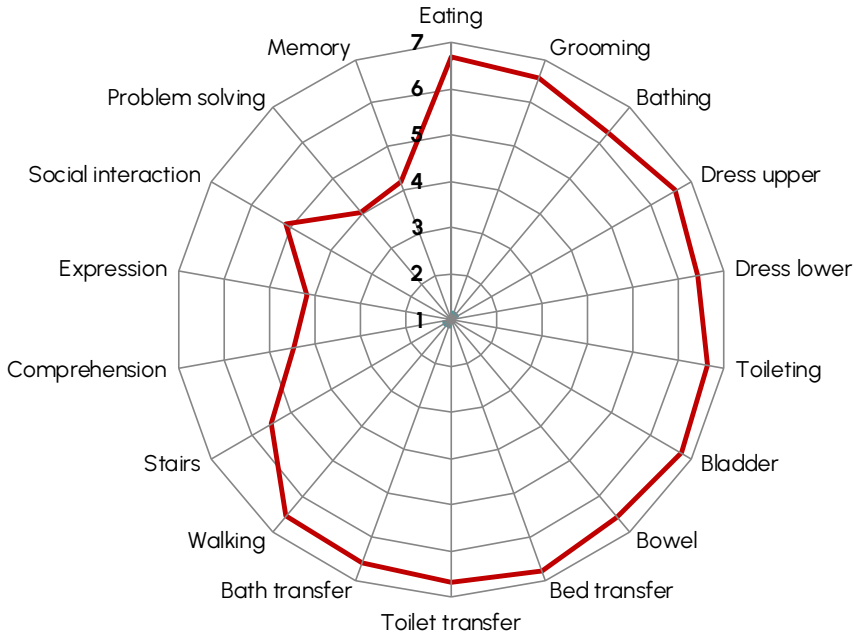
## 5AA3 Admission FIM scores

- YOUR FACILITY (n<5)
- AUSTRALIA (n=332)



## 5AA3 Discharge FIM scores

- YOUR FACILITY (n<5)
- AUSTRALIA (n=332)



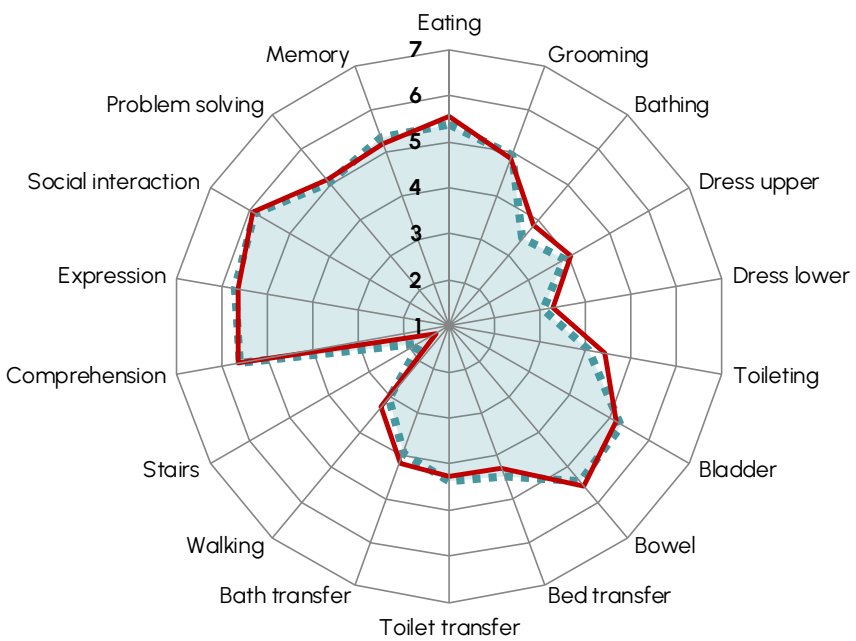
NOTE: Includes only completed episodes with valid FIM scores

# Comparative FIM item scoring AN-SNAP class 5AA4



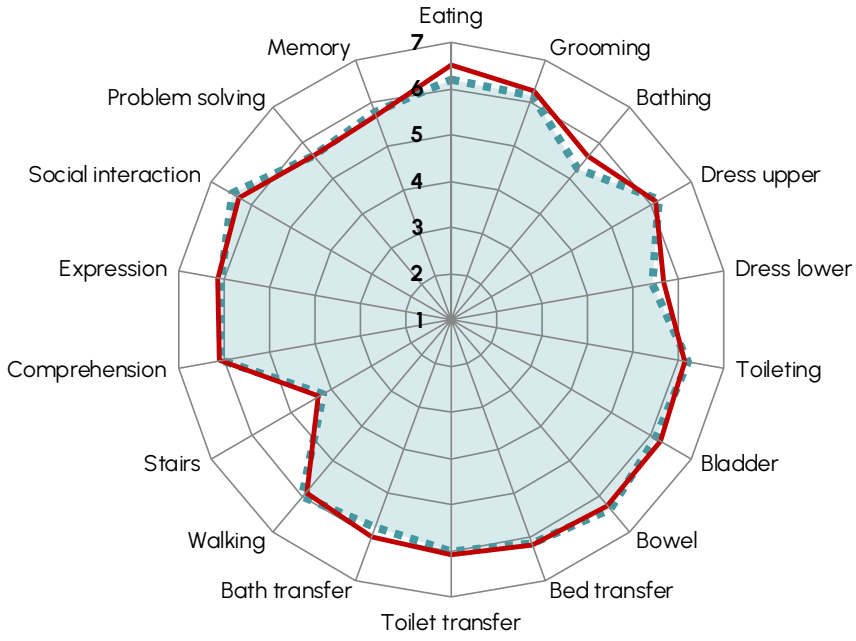
## 5AA4 Admission FIM scores

- YOUR FACILITY (n=19)
- AUSTRALIA (n=2,097)



## 5AA4 Discharge FIM scores

- YOUR FACILITY (n=19)
- AUSTRALIA (n=2,097)



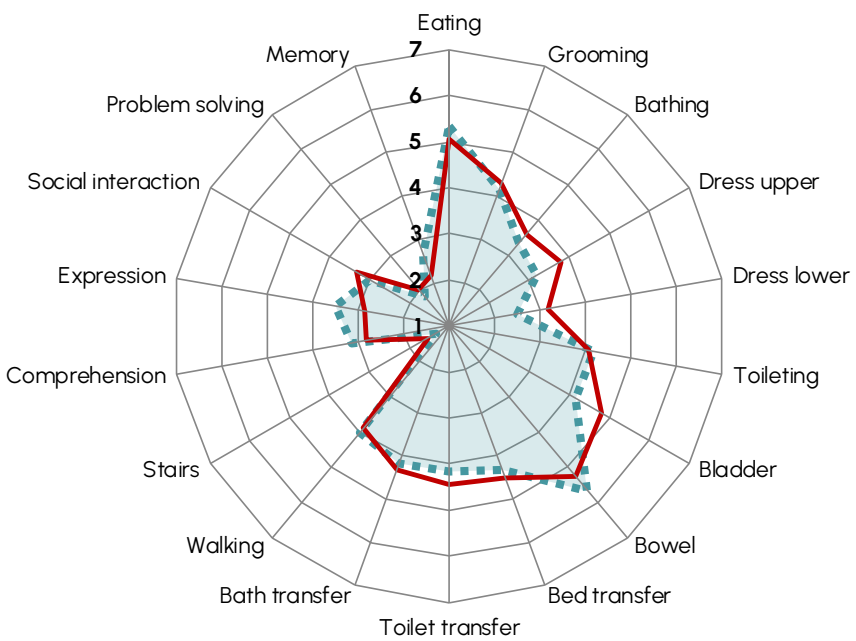
NOTE: Includes only completed episodes with valid FIM scores

# Comparative FIM item scoring AN-SNAP class 5AA5



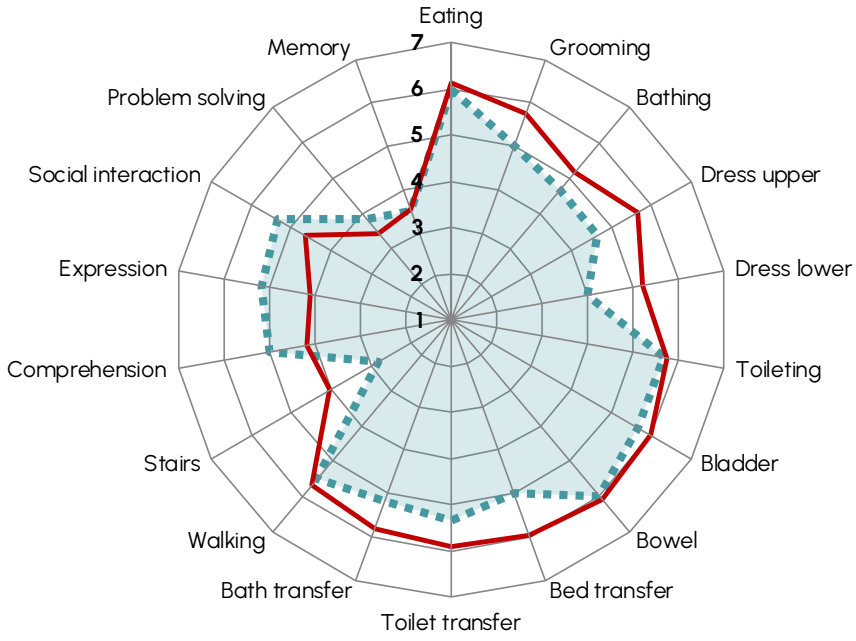
## 5AA5 Admission FIM scores

- YOUR FACILITY (n=6)
- AUSTRALIA (n=329)



## 5AA5 Discharge FIM scores

- YOUR FACILITY (n=6)
- AUSTRALIA (n=329)



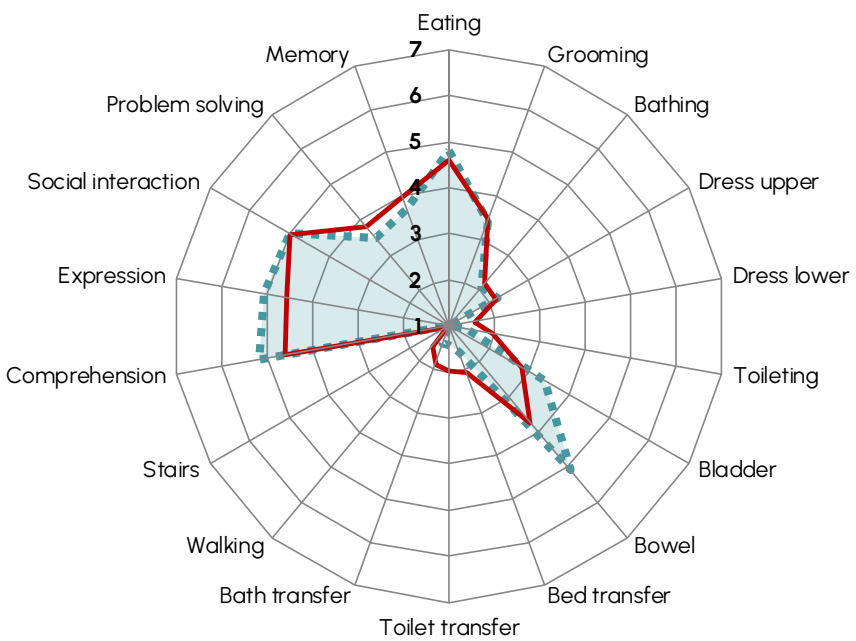
NOTE: Includes only completed episodes with valid FIM scores

# Comparative FIM item scoring AN-SNAP class 5AA6



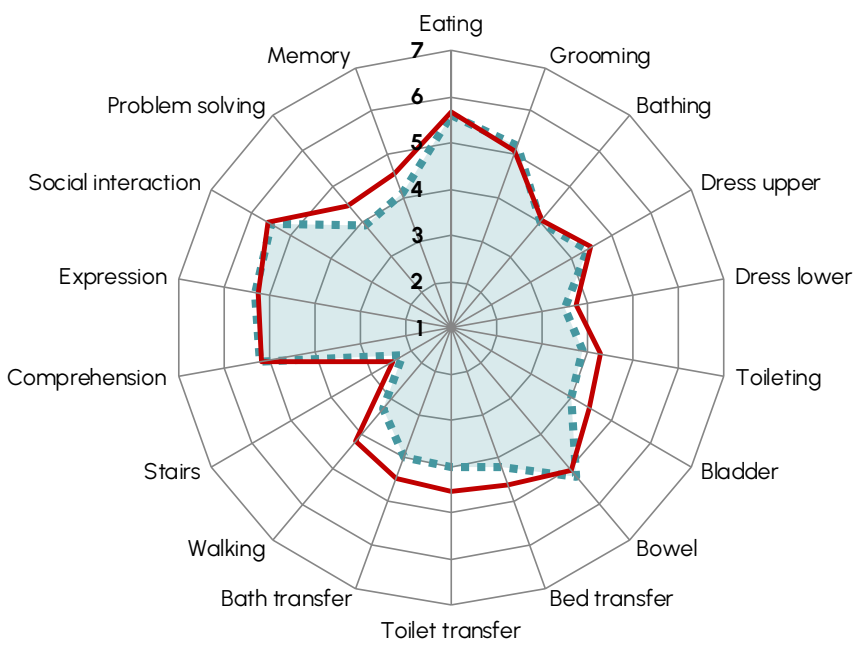
## 5AA6 Admission FIM scores

- YOUR FACILITY (n=10)
- AUSTRALIA (n=895)



## 5AA6 Discharge FIM scores

- YOUR FACILITY (n=10)
- AUSTRALIA (n=895)



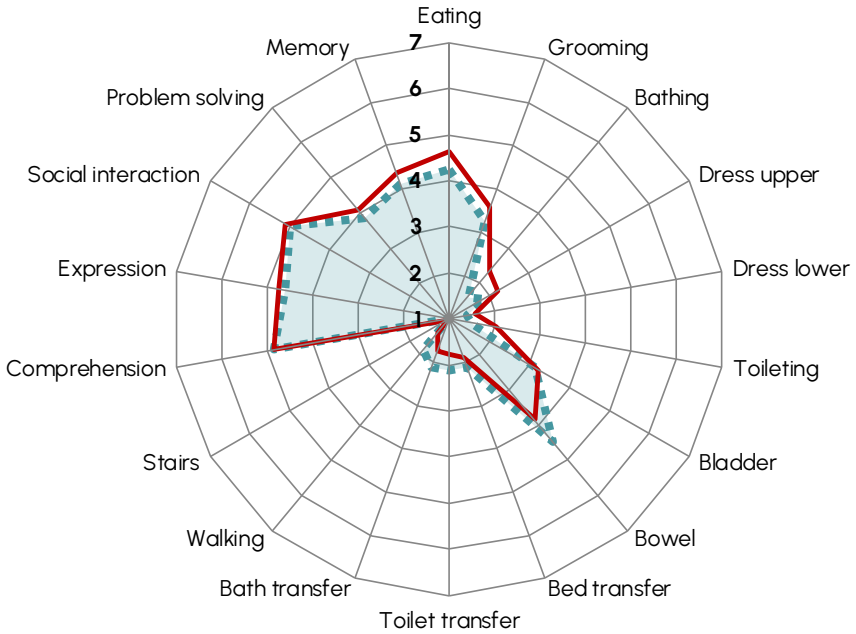
NOTE: Includes only completed episodes with valid FIM scores

# Comparative FIM item scoring AN-SNAP class 5AA7



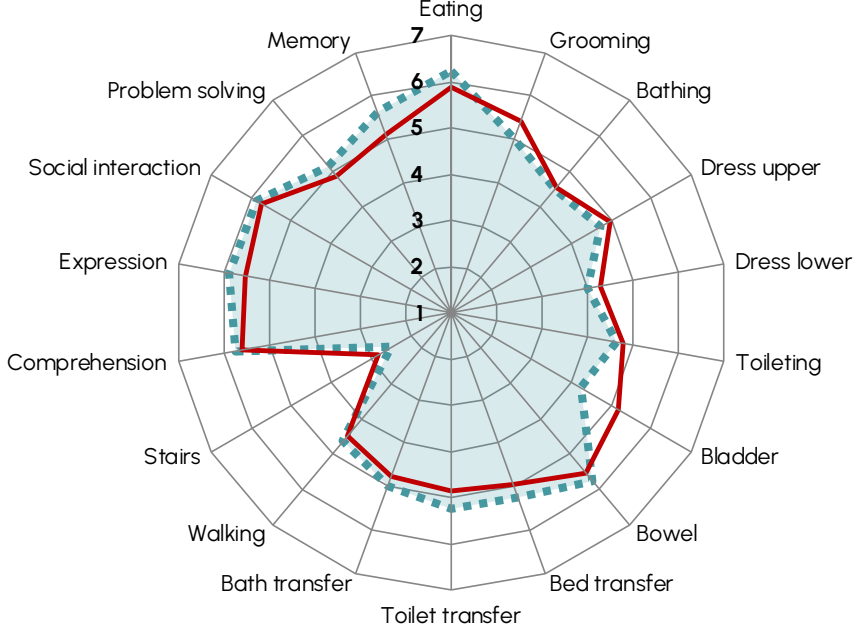
## 5AA7 Admission FIM scores

- YOUR FACILITY (n=8)
- AUSTRALIA (n=868)



## 5AA7 Discharge FIM scores

- YOUR FACILITY (n=8)
- AUSTRALIA (n=868)



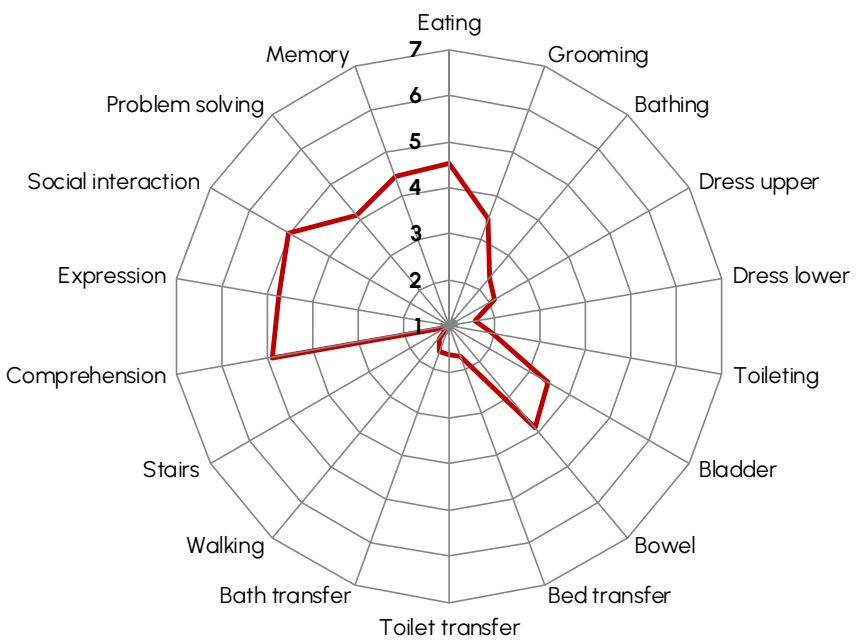
NOTE: Includes only completed episodes with valid FIM scores

# Comparative FIM item scoring AN-SNAP class 5AA8



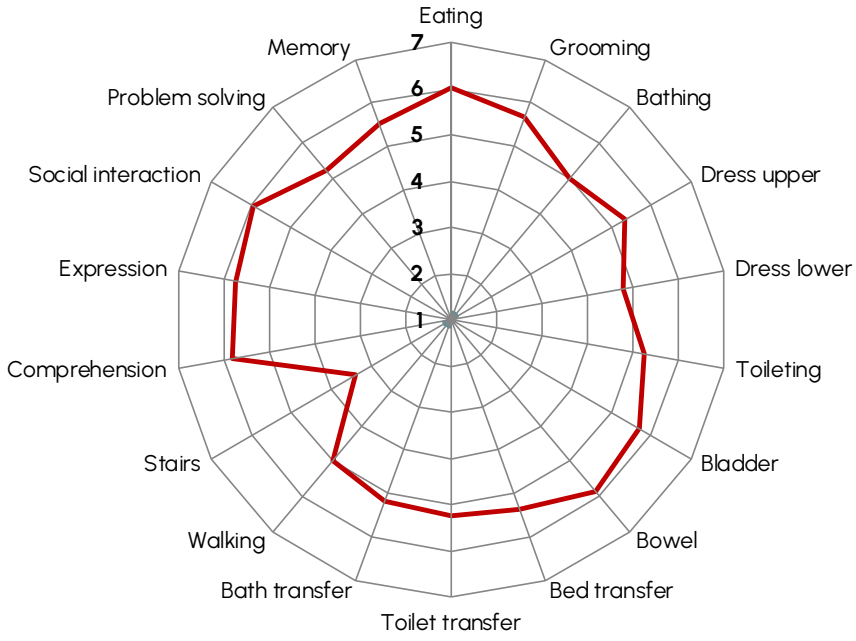
## 5AA8 Admission FIM scores

- YOUR FACILITY (n<5)
- AUSTRALIA (n=627)



## 5AA8 Discharge FIM scores

- YOUR FACILITY (n<5)
- AUSTRALIA (n=627)



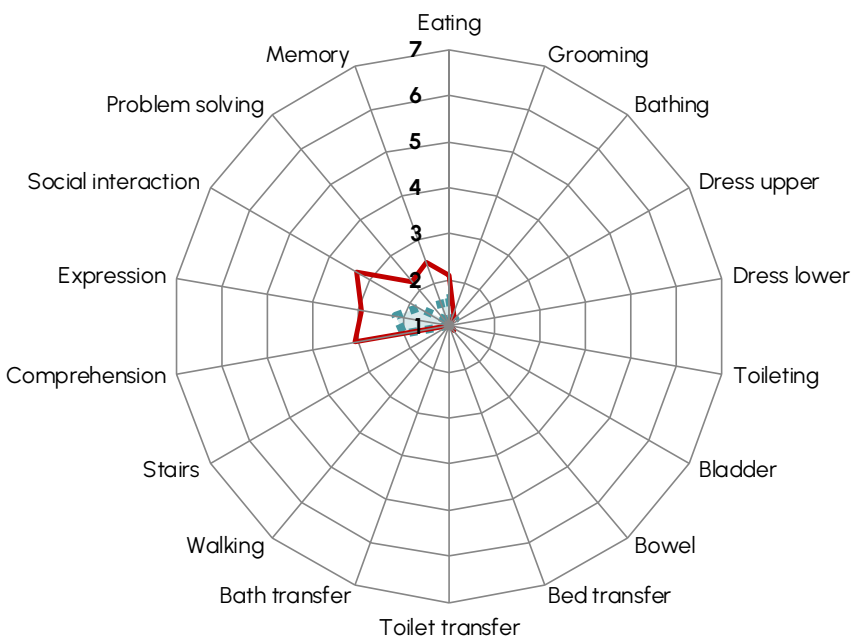
NOTE: Includes only completed episodes with valid FIM scores

# Comparative FIM item scoring AN-SNAP class 5AZ3



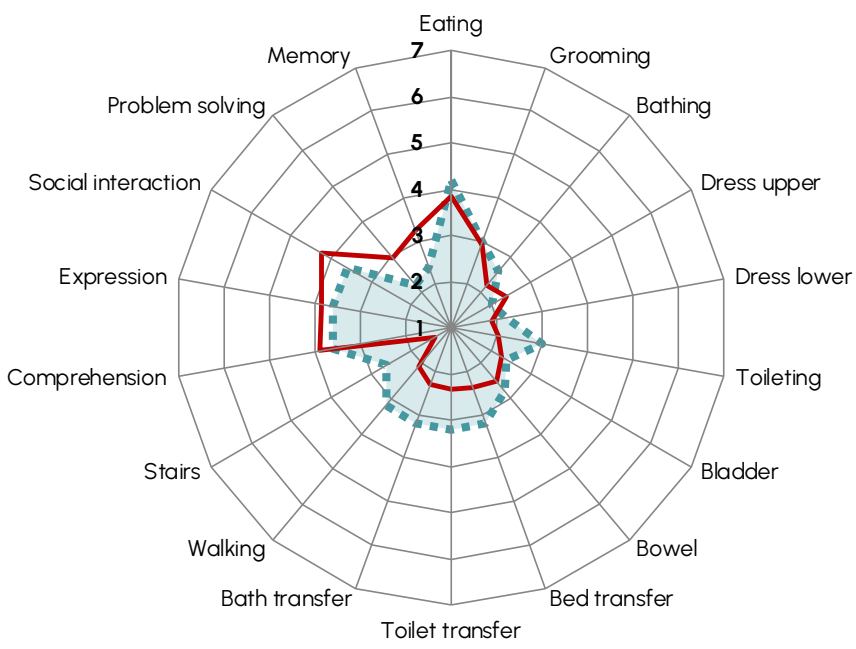
## 5AZ3 Admission FIM scores

- YOUR FACILITY (n=5)
- AUSTRALIA (n=332)



## 5AZ3 Discharge FIM scores

- YOUR FACILITY (n=5)
- AUSTRALIA (n=332)



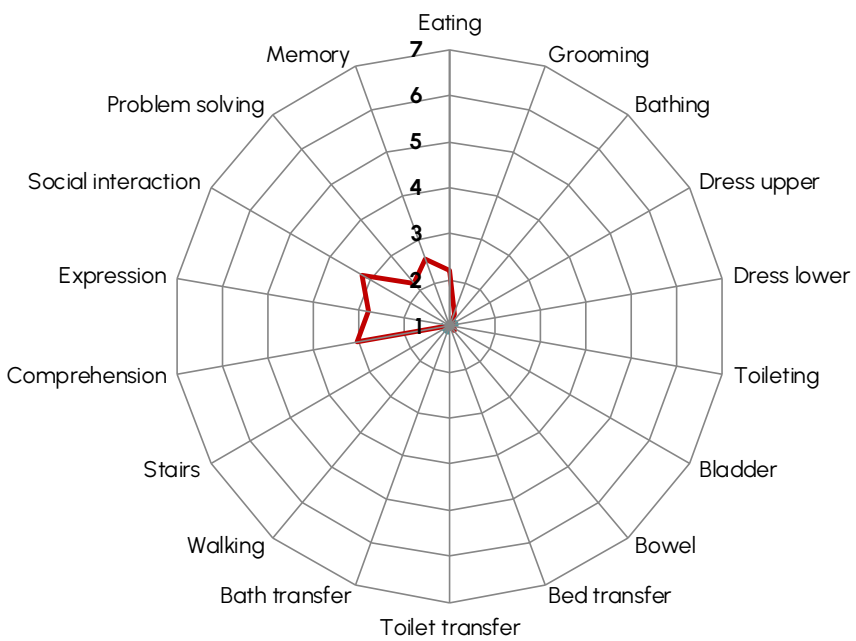
NOTE: Includes only completed episodes with valid FIM scores

# Comparative FIM item scoring AN-SNAP class 5AZ4



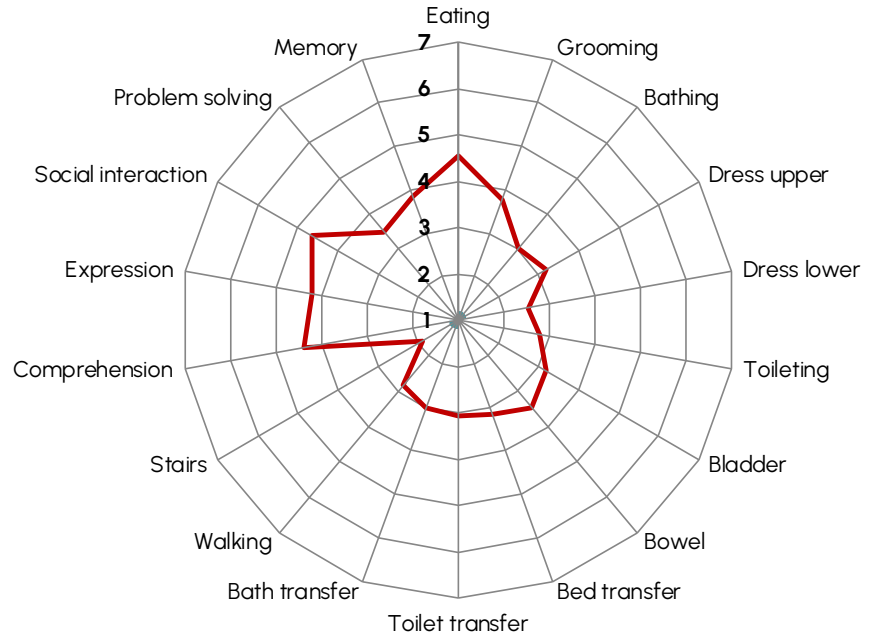
## 5AZ4 Admission FIM scores

- YOUR FACILITY (n<5)
- AUSTRALIA (n=488)



## 5AZ4 Discharge FIM scores

- YOUR FACILITY (n<5)
- AUSTRALIA (n=488)



NOTE: Includes only completed episodes with valid FIM scores





# Outcomes Analysis

# Completed episodes by AN-SNAP class and impairment

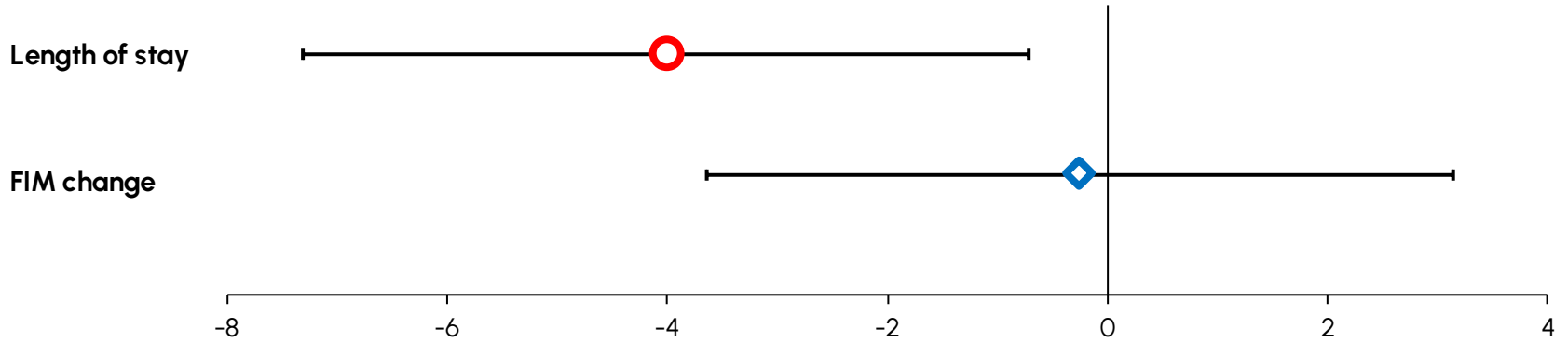


AN-SNAP class V5	YOUR FACILITY			AUSTRALIA		
	All episodes	Completed episodes	% Complete	All episodes	Completed episodes	% Complete
5AA1 (motor 63-91, cognition 30-35)	14	14	100.0	1,339	1,247	93.1
5AA2 (motor 63-91, cognition 21-29)	9	9	100.0	951	879	92.4
5AA3 (motor 63-91, cognition 5-20)	2	2	100.0	407	333	81.8
5AA4 (motor 44-62, cognition 18-35)	20	19	95.0	2,409	2,097	87.0
5AA5 (motor 44-62, cognition 5-17)	8	6	75.0	403	329	81.6
5AA6 (motor 19-43, Age ≥ 80)	12	10	83.3	1,170	896	76.6
5AA7 (motor 19-43, Age 67-79)	13	8	61.5	1,121	869	77.5
5AA8 (motor 19-43, Age ≤ 66)	5	3	60.0	806	627	77.8
5AZ3 (motor 13-18, Age ≥ 79)	8	5	62.5	558	337	60.4
5AZ4 (motor 13-18, Age ≤ 78)	10	3	30.0	793	489	61.7
<b>All Stroke AN-SNAP Classes</b>	<b>101</b>	<b>79</b>	<b>78.2</b>	<b>9,957</b>	<b>8,103</b>	<b>81.4</b>

Impairment	YOUR FACILITY			AUSTRALIA		
	All episodes	Completed episodes	% Complete	All episodes	Completed episodes	% Complete
1.1 Haemorrhagic	26	19	73.1	2,630	2,116	80.5
1.2 Ischaemic	76	61	80.3	7,343	5,994	81.6
<b>All Stroke</b>	<b>102</b>	<b>80</b>	<b>78.4</b>	<b>9,973</b>	<b>8,110</b>	<b>81.3</b>

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

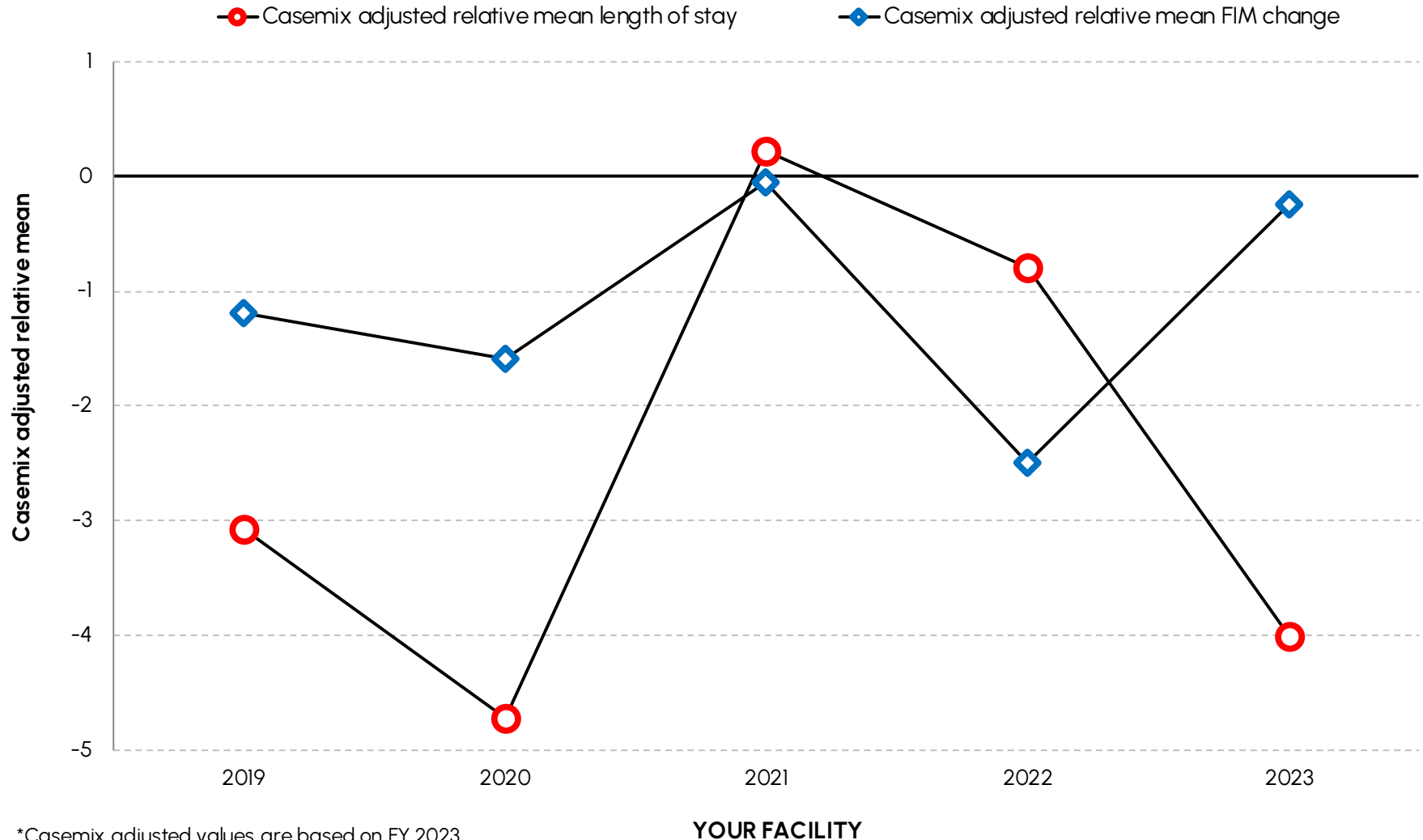


Casemix-adjusted relative means with 95% confidence intervals

Outcome measure	YOUR FACILITY		AUSTRALIA
	Casemix-adjusted* relative mean	95% CI	National IQR
Length of stay	-4.0	-7.3 to -0.7	-9.9 to 6.1
FIM change	-0.2	-3.6 to 3.1	-8.8 to 8.6

\*Includes only completed episodes with valid FIM scores and LOS

# Casemix-adjusted\* relative means over time



\*Casemix adjusted values are based on FY 2023

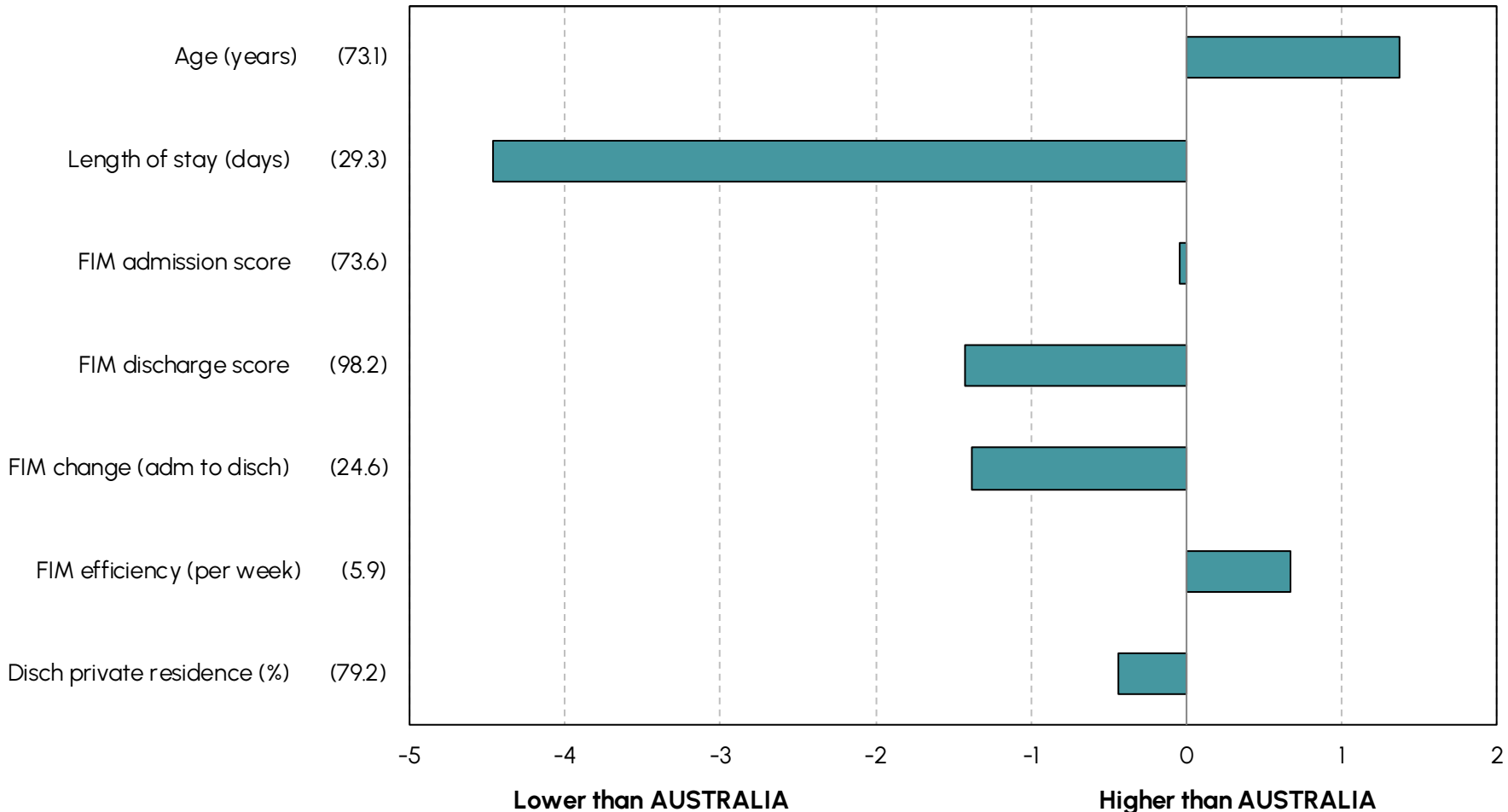
NOTE: Includes only completed episodes with valid FIM scores and LOS; where n<5 the casemix-adjusted relative mean will not be shown

# Outcome measures – difference from National



## How YOUR FACILITY is different to AUSTRALIA

### AUSTRALIA

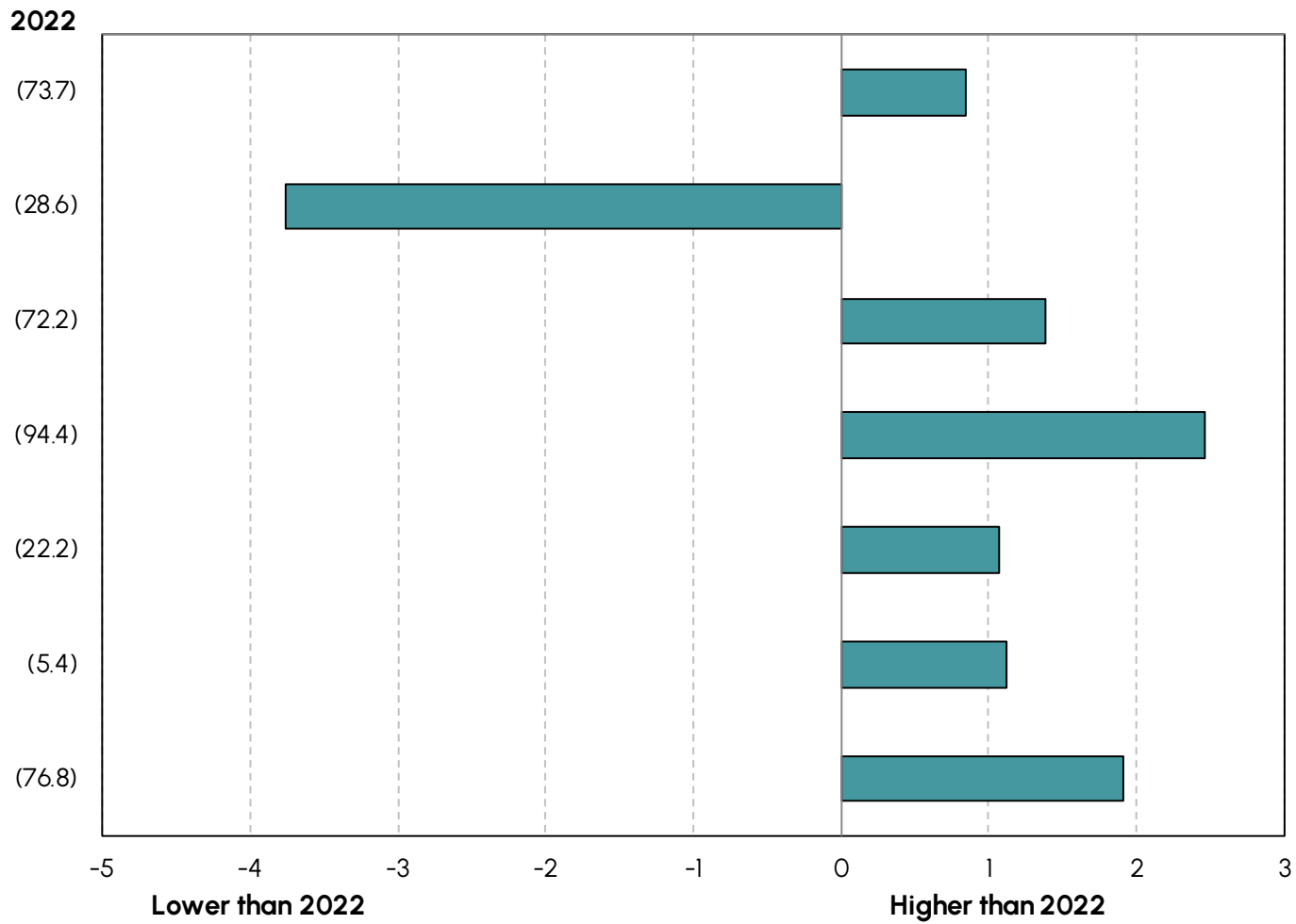


NOTE: Includes only completed episodes with valid FIM scores and LOS

# Outcome measures – difference from last year

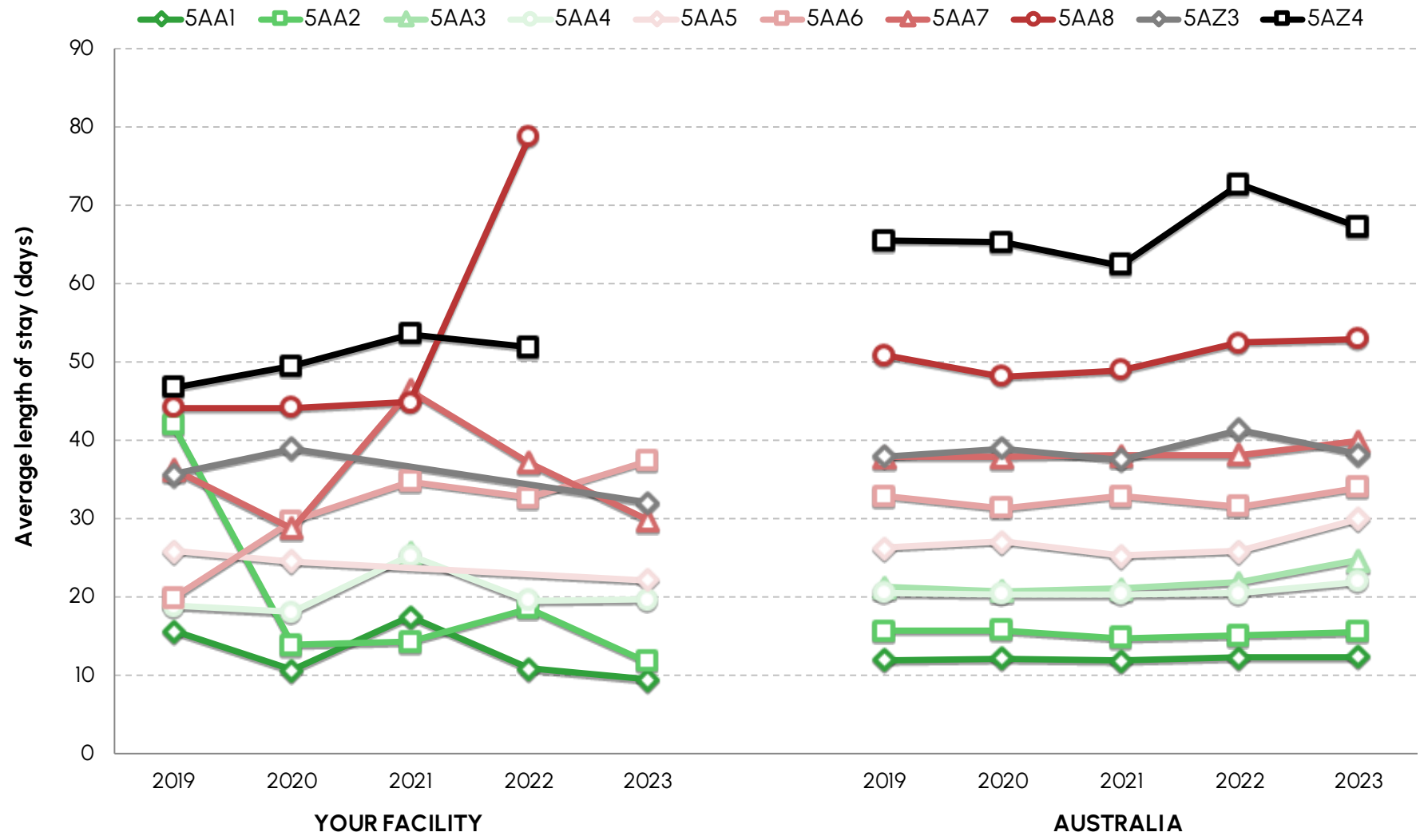


## How YOUR FACILITY has changed since 2022



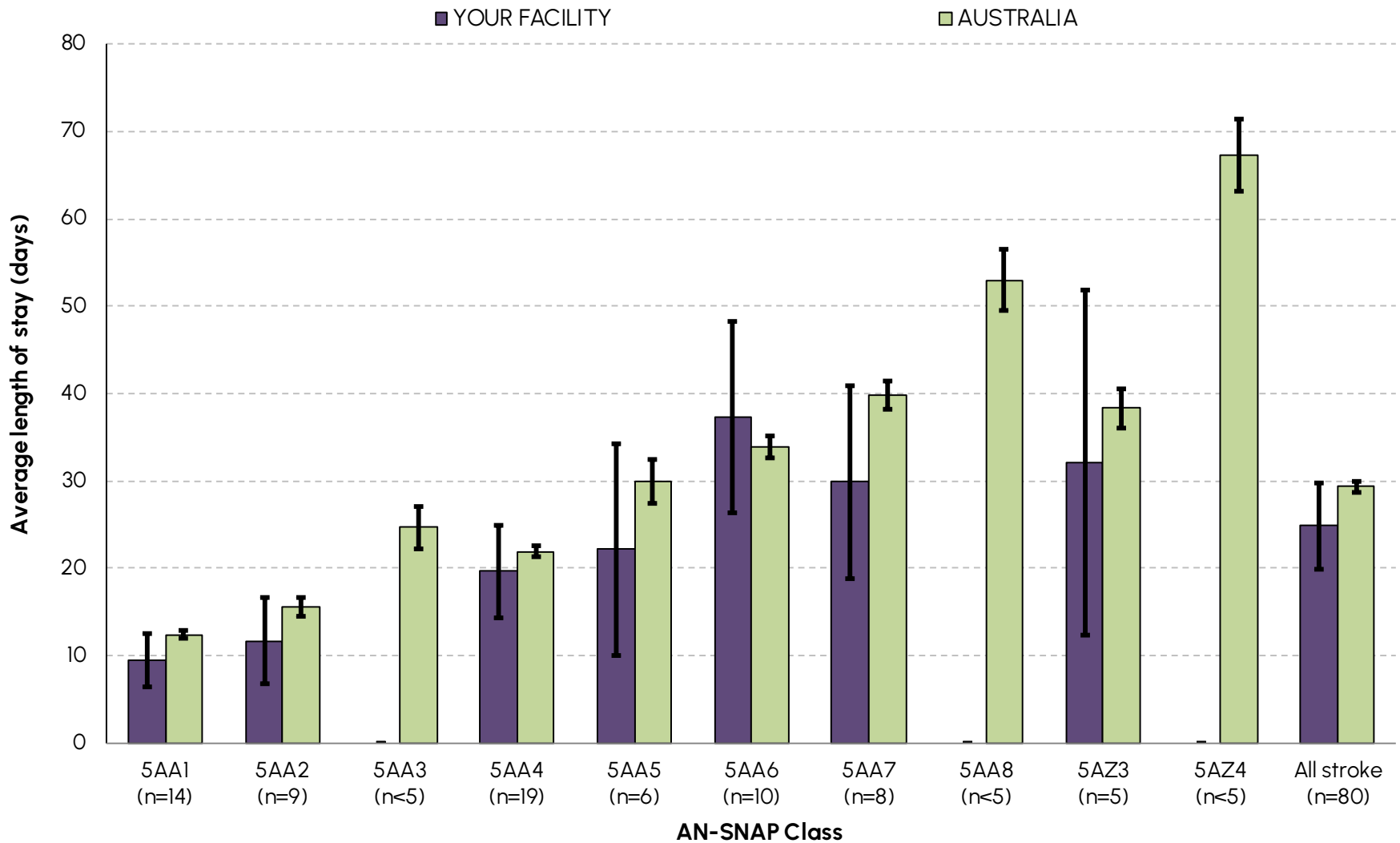
NOTE: Includes only completed episodes with valid FIM scores and LOS

# 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

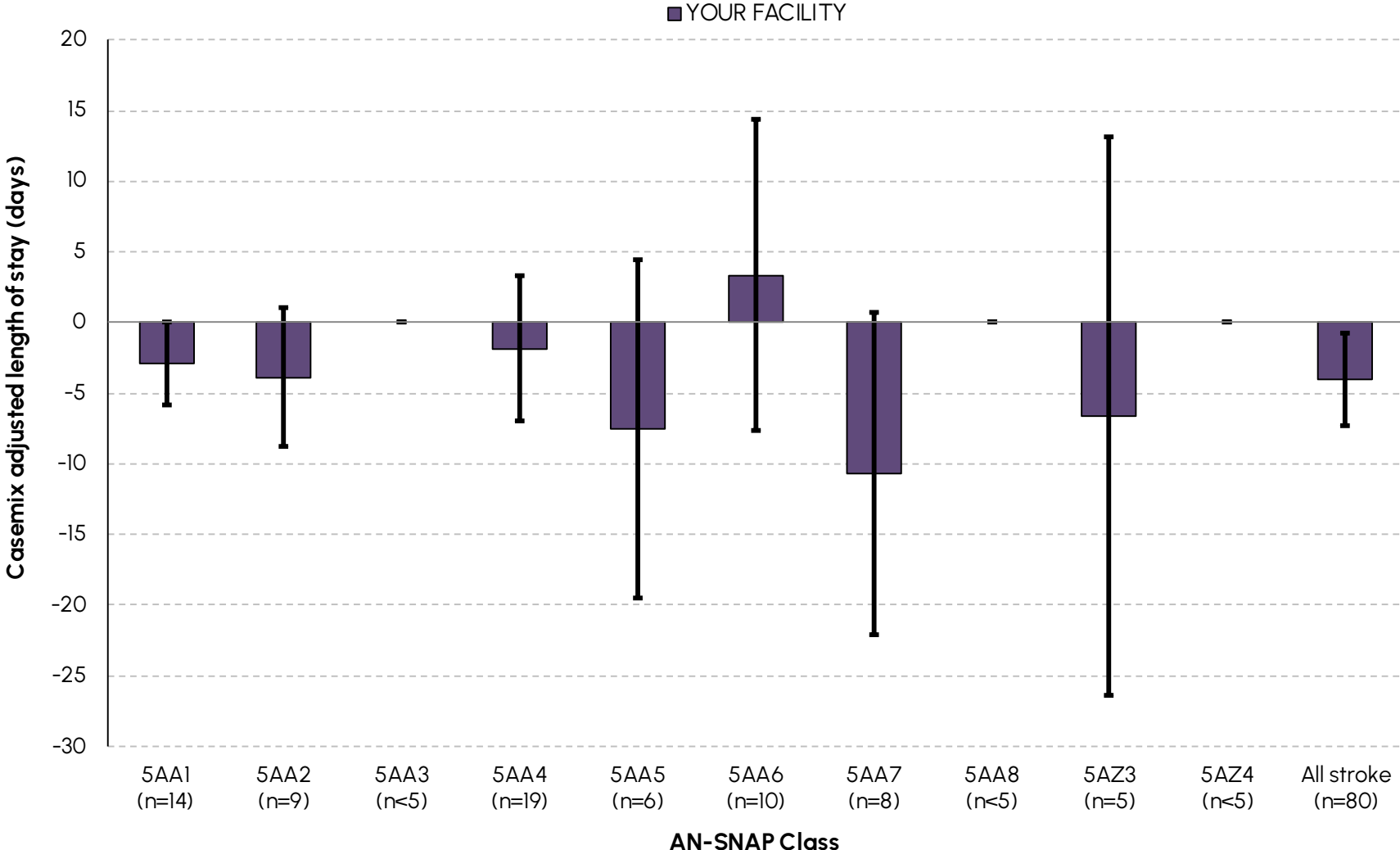
# Average length of stay by AN-SNAP class



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

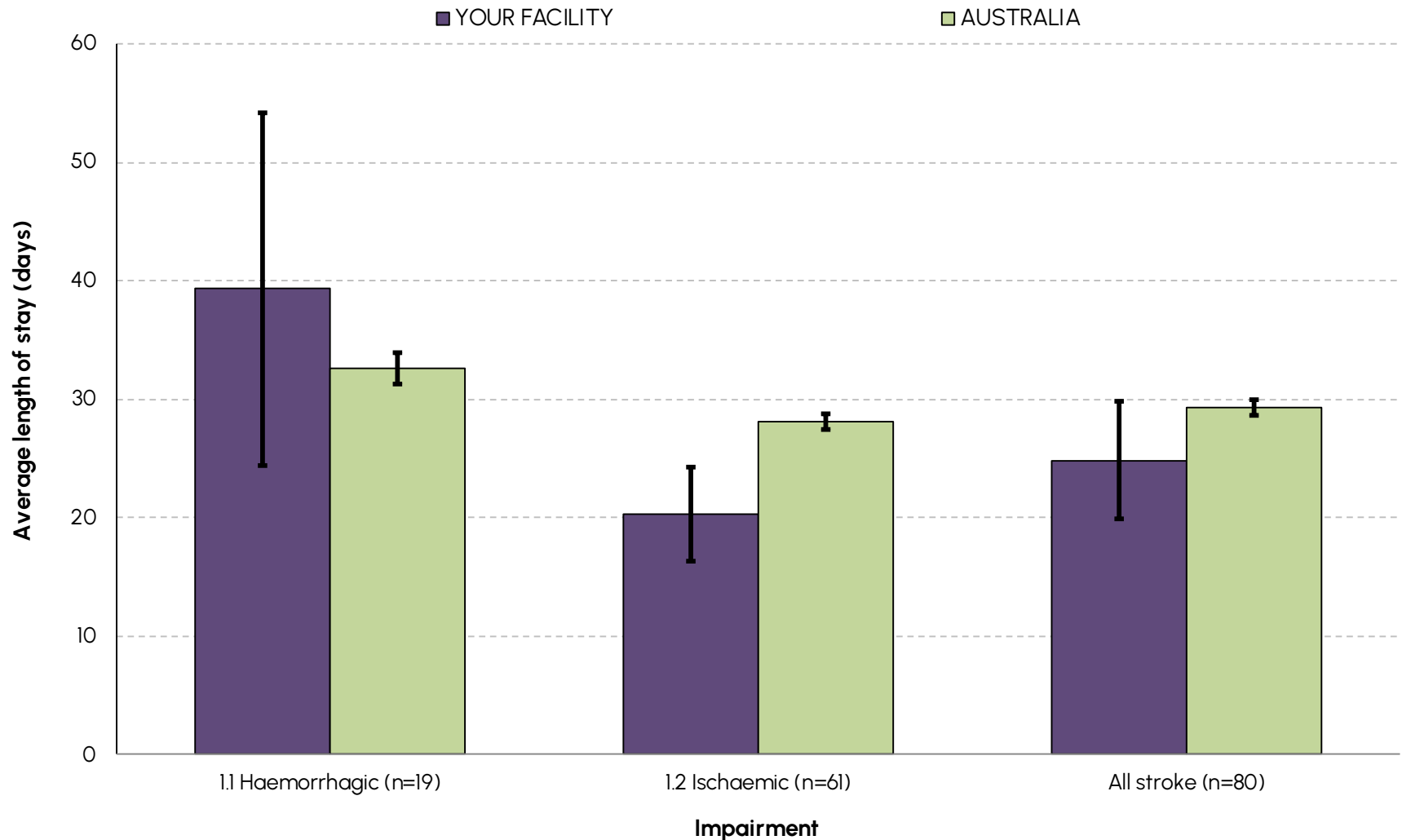


# Casemix-adjusted relative mean length of stay by AN-SNAP class



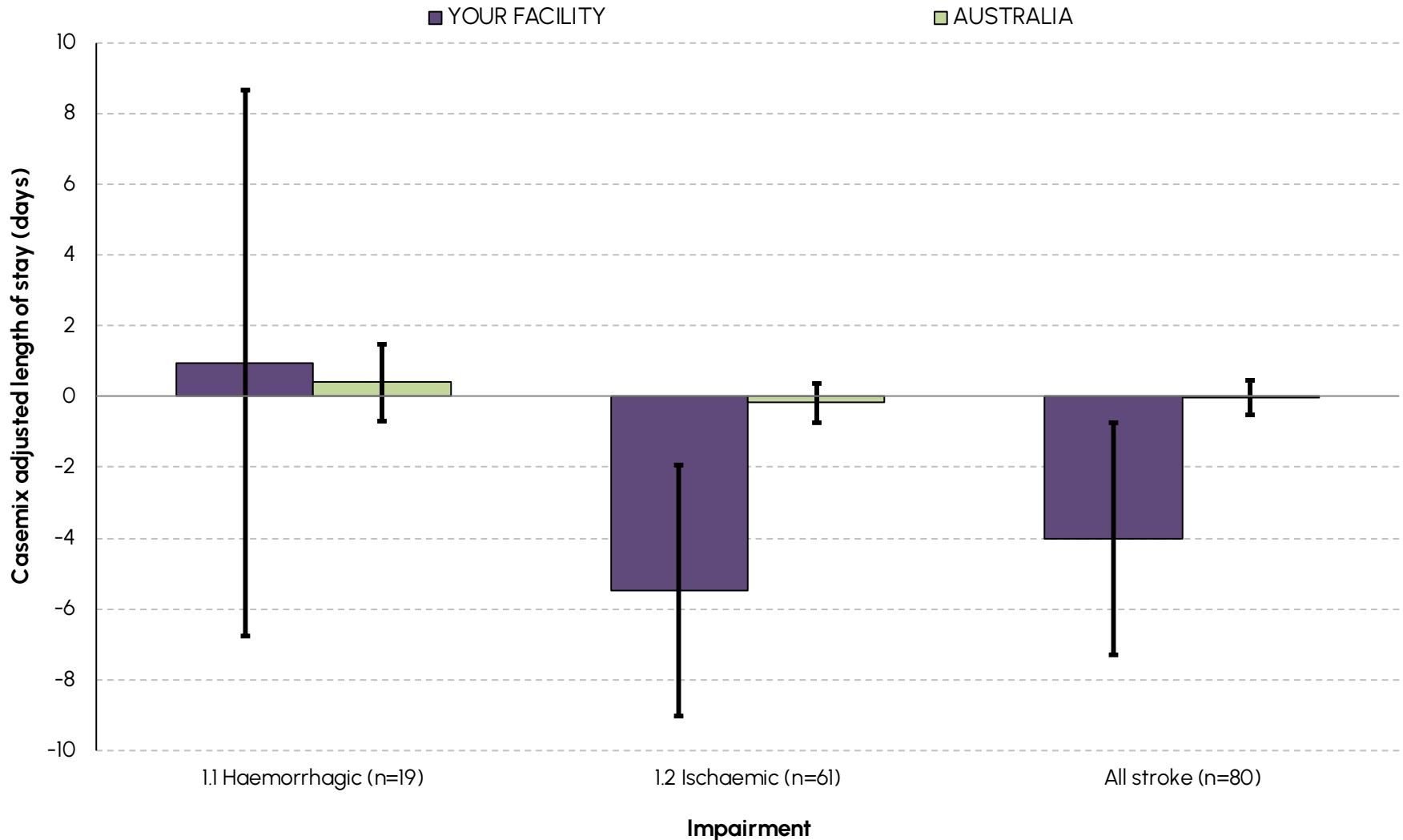
NOTE: Includes only completed episodes with valid LOS; where n<5 CARMi LOS will not be shown

# Average length of stay by impairment



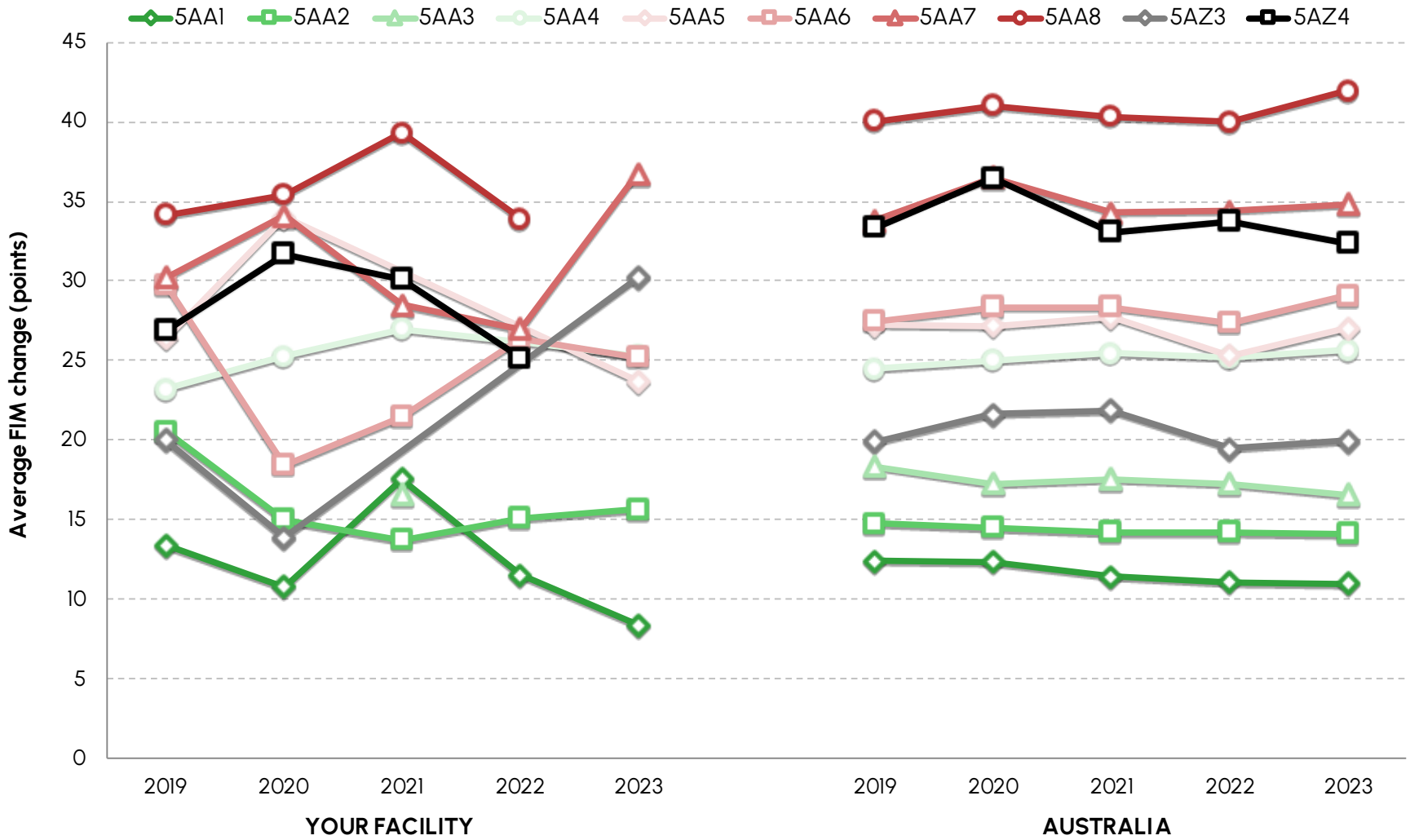
NOTE: Includes only completed episodes with valid LOS; where n<5 ALOS will not be shown

# Casemix-adjusted relative mean length of stay by impairment



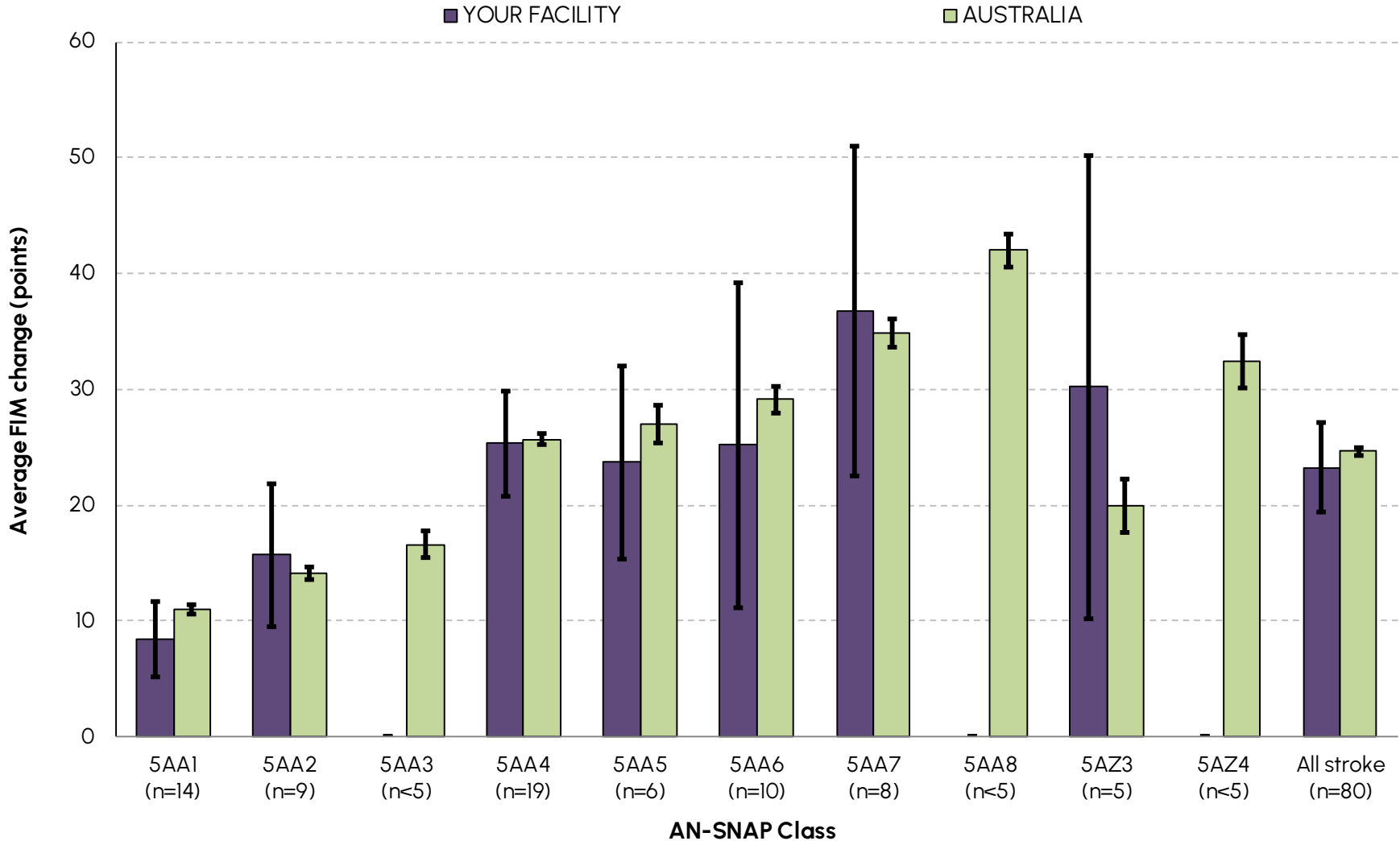
NOTE: Includes only completed episodes with valid LOS; where n<5 CARMI LOS will not be shown

# Average FIM change by AN-SNAP class over time



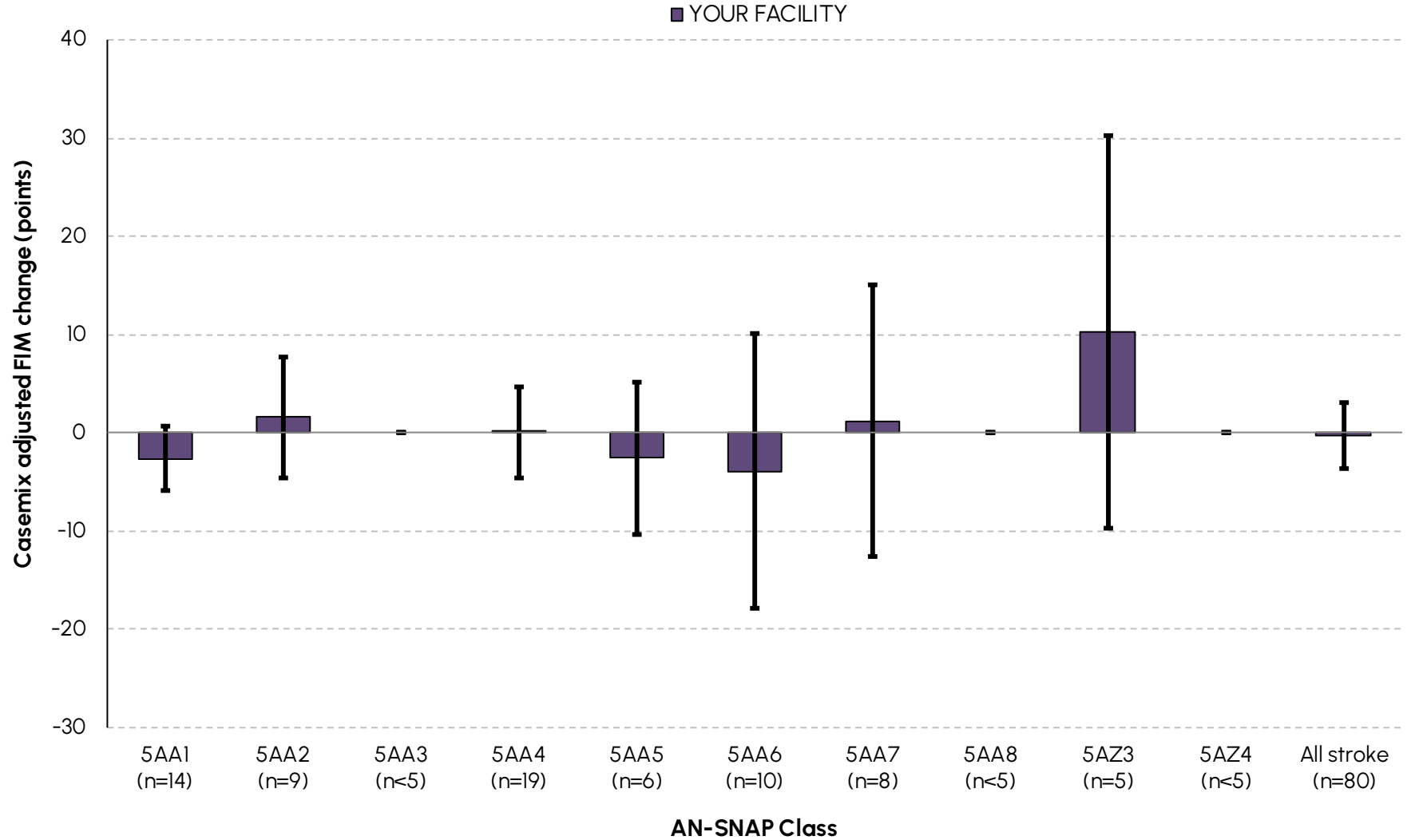
NOTE: Includes only completed episodes with valid FIM scores; where n<5 average FIM change will not be shown

# Average FIM change by AN-SNAP class



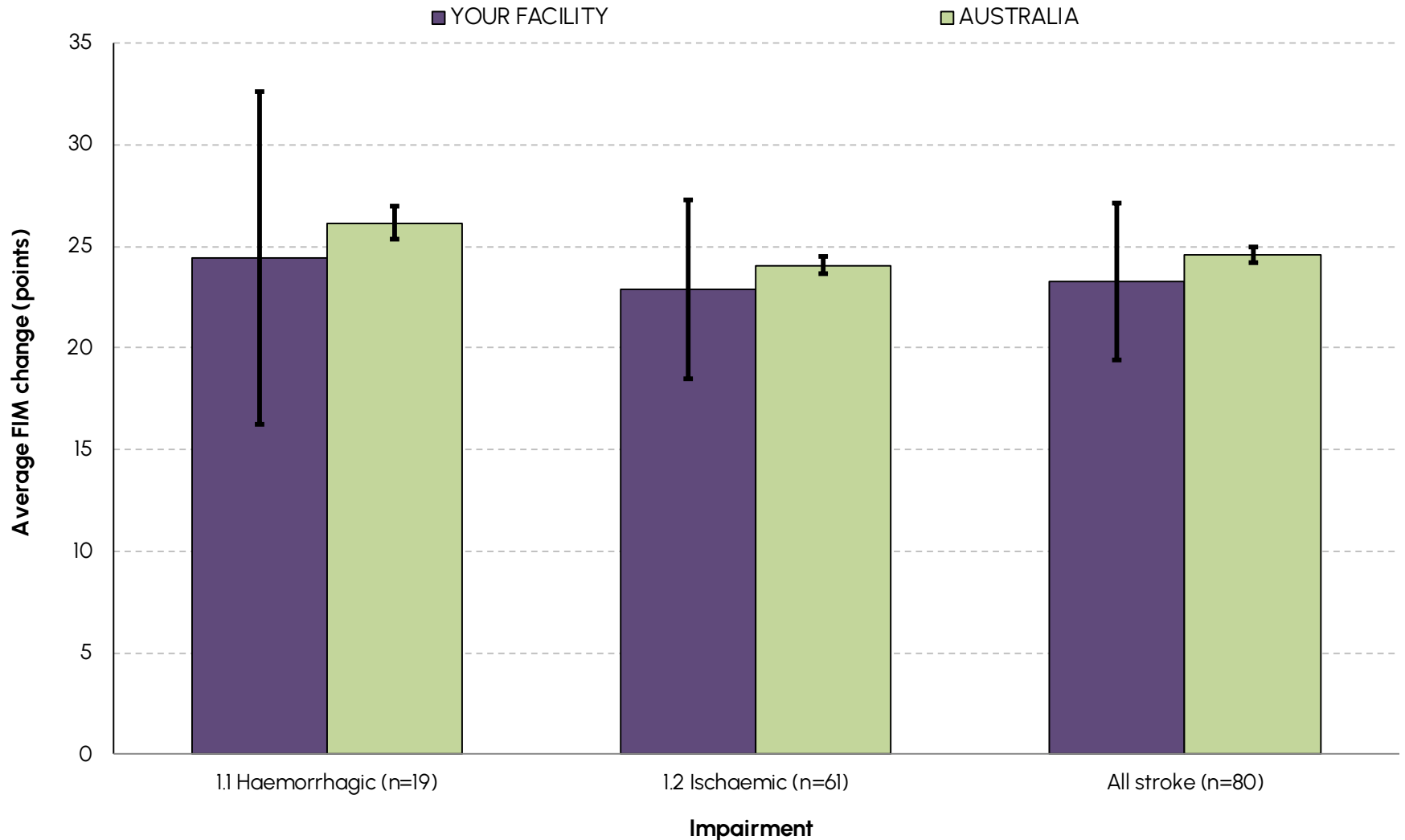
NOTE: Includes only completed episodes with valid FIM scores; where n<5 average FIM change will not be shown

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



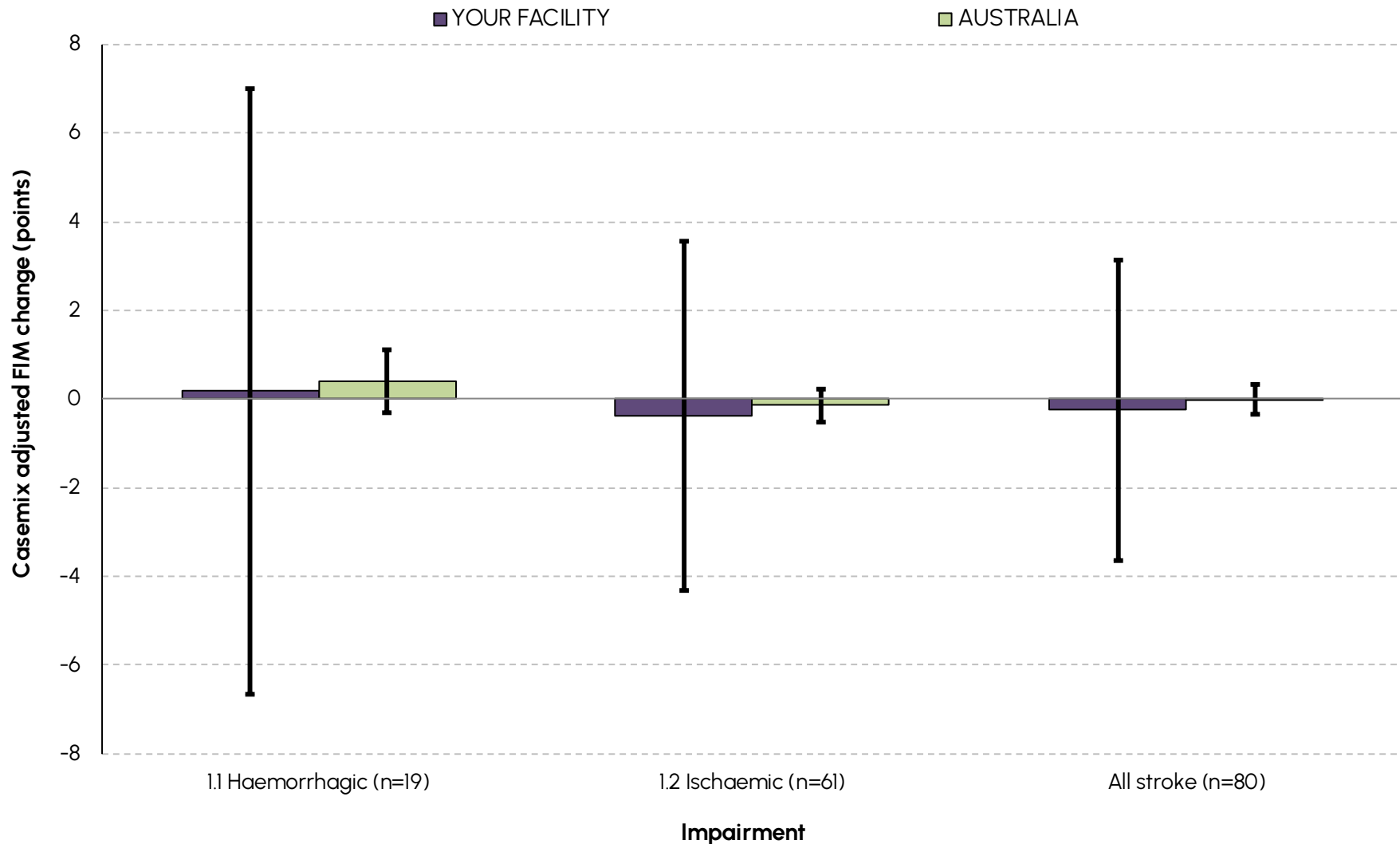
NOTE: Includes only completed episodes with valid FIM scores; where n<5 CARMi FIM change will not be shown

# Average FIM change by impairment



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 impairment



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



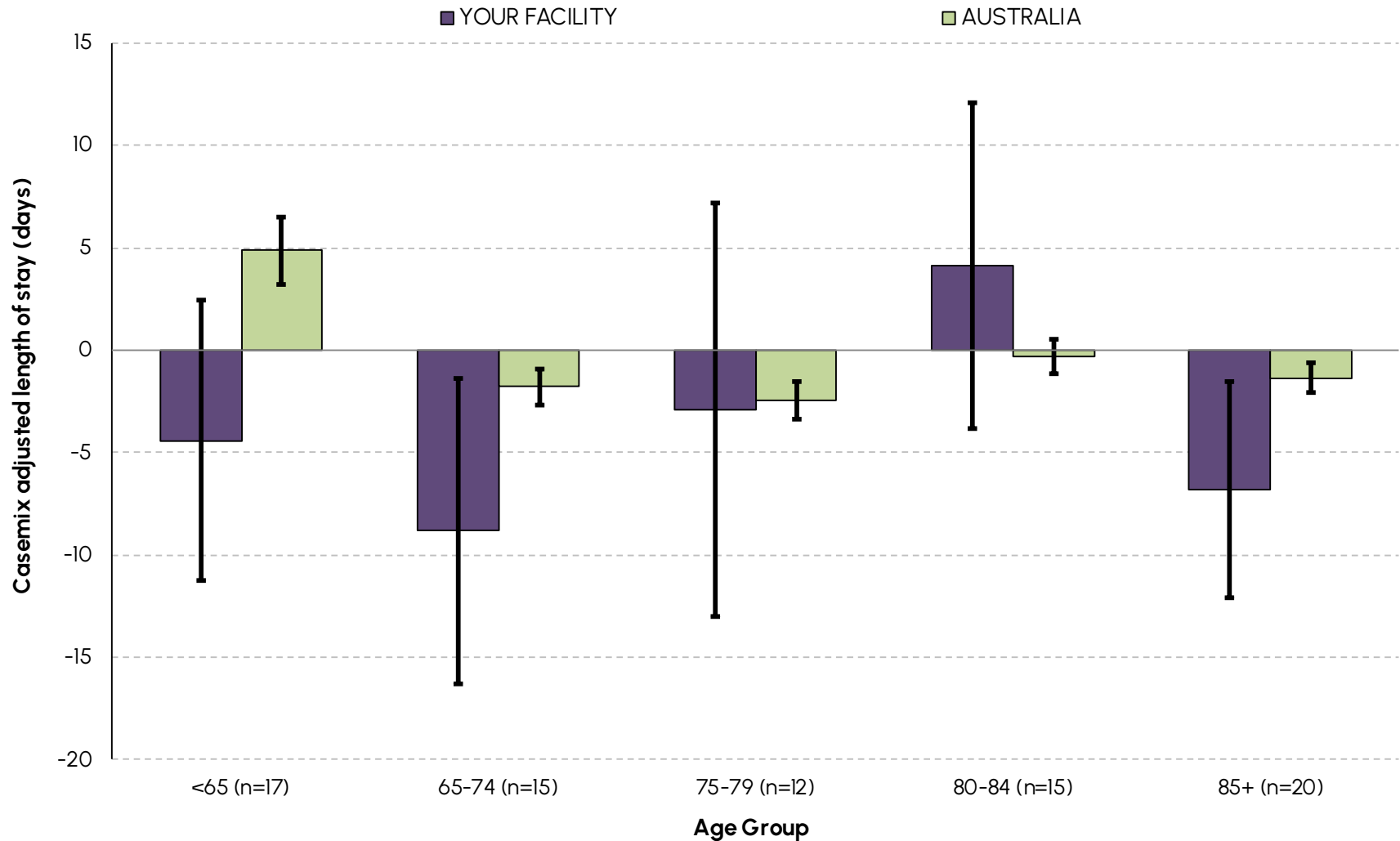
# Casemix-adjusted relative mean and average length of stay and FIM change by AN-SNAP class and impairment

AN-SNAP class V5	YOUR FACILITY						AUSTRALIA					
	CARMi (95%CI)			Average (95%CI)			CARMi (95%CI)			Average (95%CI)		
	LOS	FIM change		LOS	FIM change		LOS	FIM change		LOS	FIM change	
5AA1 (motor 63-91, cognition 30-35)	-2.9 (-5.9 - 0.1)	-2.6 (-5.9 - 0.6)		9.4 (6.4 - 12.4)	8.4 (5.1 - 11.6)		12.3 (11.9 - 12.8)	11.0 (10.6 - 11.4)		15.6 (14.5 - 16.6)	14.1 (13.5 - 14.7)	
5AA2 (motor 63-91, cognition 21-29)	-3.9 (-8.8 - 1.1)	1.6 (-4.5 - 7.7)		11.7 (6.7 - 16.6)	15.7 (9.6 - 21.8)		15.6 (14.5 - 16.6)	14.1 (13.5 - 14.7)		24.7 (22.2 - 27.1)	16.6 (15.4 - 17.8)	
5AA3 (motor 63-91, cognition 5-20)	—	—		—	—		24.7 (22.2 - 27.1)	16.6 (15.4 - 17.8)		21.9 (21.3 - 22.5)	25.6 (25.2 - 26.1)	
5AA4 (motor 44-62, cognition 18-35)	-1.8 (-7.0 - 3.3)	0.0 (-4.6 - 4.6)		19.6 (14.4 - 24.9)	25.3 (20.7 - 29.9)		21.9 (21.3 - 22.5)	25.6 (25.2 - 26.1)		29.9 (27.4 - 32.4)	27.0 (25.4 - 28.6)	
5AA5 (motor 44-62, cognition 5-17)	-7.5 (-19.5 - 4.4)	-2.6 (-10.4 - 5.2)		22.2 (10.0 - 34.3)	23.7 (15.3 - 32.0)		29.9 (27.4 - 32.4)	27.0 (25.4 - 28.6)		33.9 (32.7 - 35.2)	29.1 (27.9 - 30.3)	
5AA6 (motor 19-43, Age ≥ 80)	3.3 (-7.7 - 14.4)	-3.9 (-17.9 - 10.1)		37.3 (26.3 - 48.3)	25.2 (11.2 - 39.2)		33.9 (32.7 - 35.2)	29.1 (27.9 - 30.3)		39.9 (38.3 - 41.5)	34.8 (33.6 - 36.1)	
5AA7 (motor 19-43, Age 67-79)	-10.7 (-22.2 - 0.7)	1.2 (-12.6 - 15.0)		29.9 (18.8 - 40.9)	36.8 (22.5 - 51.0)		39.9 (38.3 - 41.5)	34.8 (33.6 - 36.1)		53.0 (49.5 - 56.5)	42.0 (40.5 - 43.5)	
5AA8 (motor 19-43, Age ≤ 66)	—	—		—	—		53.0 (49.5 - 56.5)	42.0 (40.5 - 43.5)		38.3 (36.0 - 40.6)	20.0 (17.7 - 22.2)	
5AZ3 (motor 13-18, Age ≥ 79)	-6.6 (-26.4 - 13.1)	10.2 (-9.7 - 30.2)		32.0 (12.2 - 51.8)	30.2 (10.2 - 50.2)		38.3 (36.0 - 40.6)	20.0 (17.7 - 22.2)		67.3 (63.1 - 71.5)	32.4 (30.1 - 34.7)	
5AZ4 (motor 13-18, Age ≤ 78)	—	—		—	—		67.3 (63.1 - 71.5)	32.4 (30.1 - 34.7)		29.3 (28.7 - 29.9)	24.6 (24.2 - 25.0)	
<b>All Stroke AN-SNAP Classes</b>	<b>-4.0 (-7.3 - -0.7)</b>	<b>-0.2 (-3.6 - 3.1)</b>		<b>24.8 (19.9 - 29.8)</b>	<b>23.2 (19.4 - 27.1)</b>		<b>29.3 (28.7 - 29.9)</b>	<b>24.6 (24.2 - 25.0)</b>				

Impairment	YOUR FACILITY						AUSTRALIA					
	CARMi (95%CI)			Average (95%CI)			CARMi (95%CI)			Average (95%CI)		
	LOS	FIM change		LOS	FIM change		LOS	FIM change		LOS	FIM change	
1.1 Haemorrhagic	1.0 (-6.8 - 8.7)	0.2 (-6.6 - 7.0)		39.3 (24.4 - 54.2)	24.4 (16.2 - 32.6)		32.6 (31.3 - 33.9)	26.2 (25.4 - 27.0)		28.1 (27.4 - 28.8)	24.1 (23.6 - 24.5)	
1.2 Ischaemic	-5.5 (-9.0 - -1.9)	-0.4 (-4.3 - 3.6)		20.3 (16.3 - 24.3)	22.9 (18.5 - 27.3)		28.1 (27.4 - 28.8)	24.1 (23.6 - 24.5)		29.3 (28.7 - 29.9)	24.6 (24.2 - 25.0)	
<b>All Stroke</b>	<b>-4.0 (-7.3 - -0.7)</b>	<b>-0.2 (-3.6 - 3.1)</b>		<b>24.8 (19.9 - 29.8)</b>	<b>23.2 (19.4 - 27.1)</b>		<b>29.3 (28.7 - 29.9)</b>	<b>24.6 (24.2 - 25.0)</b>				

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

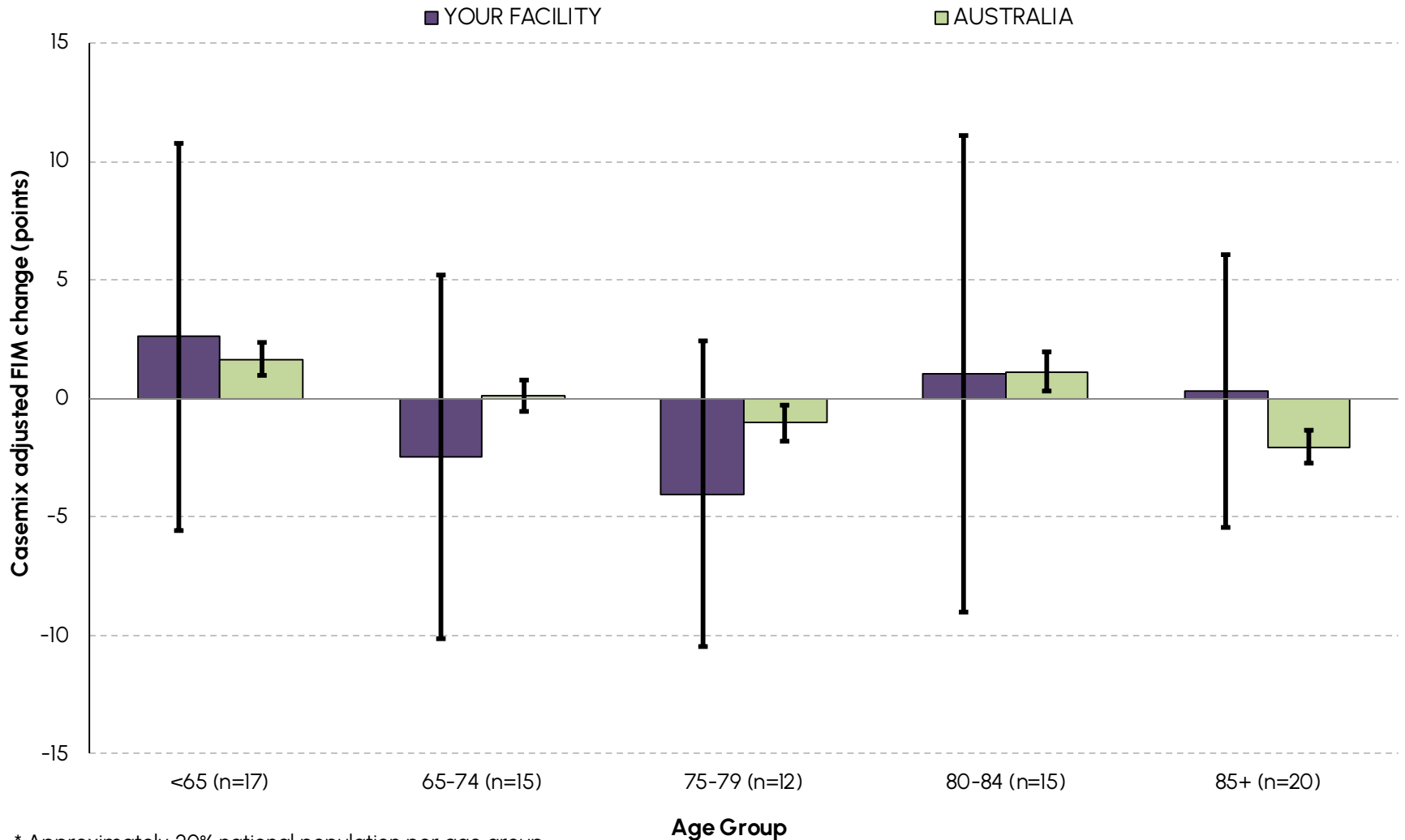
# Casemix-adjusted relative mean length of stay by age group\*



\* 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\*

Age group	YOUR FACILITY		AUSTRALIA	
	Mean LOS (95% CI)	Mean FIM change (95% CI)	Mean LOS (95% CI)	Mean FIM change (95% CI)
<65	21.2 (12.1 – 30.2)	24.4 (13.9 – 34.8)	37.3 (35.4 – 39.2)	27.4 (26.5 – 28.3)
65-74	20.0 (14.0 – 26.0)	22.1 (12.8 – 31.4)	28.9 (27.9 – 30.0)	25.3 (24.5 – 26.1)
75-79	26.1 (12.3 – 39.9)	20.8 (12.8 – 28.9)	27.0 (25.9 – 28.1)	23.9 (23.0 – 24.8)
80-84	30.6 (20.2 – 41.0)	25.9 (16.0 – 35.8)	25.5 (24.5 – 26.5)	23.9 (23.0 – 24.8)
85+	20.5 (14.0 – 27.0)	22.3 (15.7 – 28.8)	25.3 (24.5 – 26.1)	21.8 (21.1 – 22.5)

Age group	YOUR FACILITY		AUSTRALIA	
	CARMI LOS (95% CI)	CARMI FIM change (95% CI)	CARMI LOS (95% CI)	CARMI FIM change (95% CI)
<65	-4.4 (-11.2 – 2.4)	2.6 (-5.6 – 10.8)	4.9 (3.2 – 6.5)	1.7 (1.0 – 2.4)
65-74	-8.8 (-16.3 – -1.4)	-2.5 (-10.2 – 5.2)	-1.8 (-2.6 – -0.9)	0.1 (-0.5 – 0.8)
75-79	-2.9 (-13.0 – 7.2)	-4.0 (-10.5 – 2.4)	-2.4 (-3.4 – -1.5)	-1.0 (-1.8 – -0.3)
80-84	4.1 (-3.8 – 12.1)	1.0 (-9.0 – 11.1)	-0.3 (-1.2 – 0.6)	1.1 (0.3 – 2.0)
85+	-6.8 (-12.1 – -1.5)	0.3 (-5.5 – 6.1)	-1.3 (-2.0 – -0.6)	-2.0 (-2.7 – -1.4)

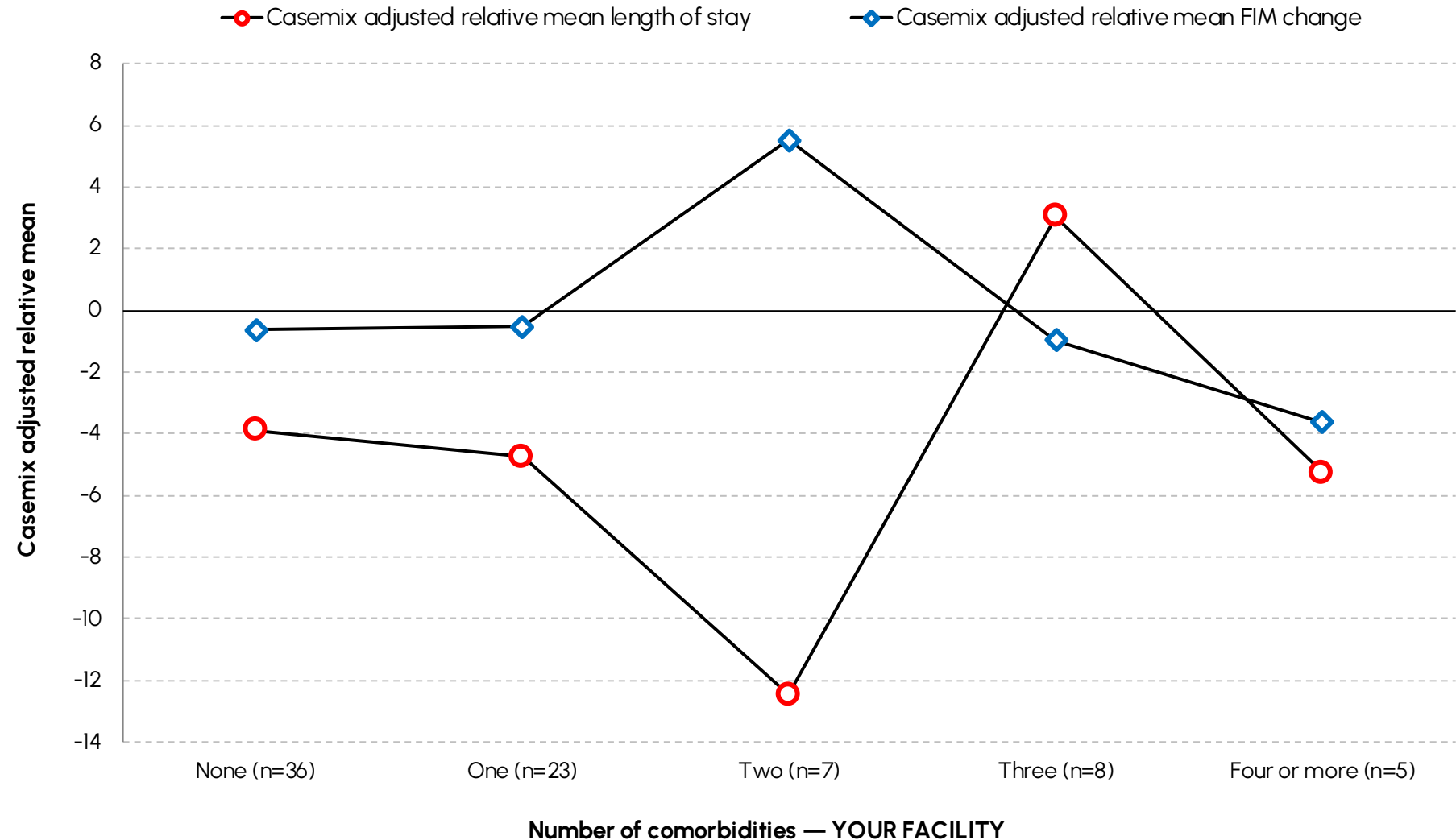
\*Approximately 20% national population per age group

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



# Explanatory data

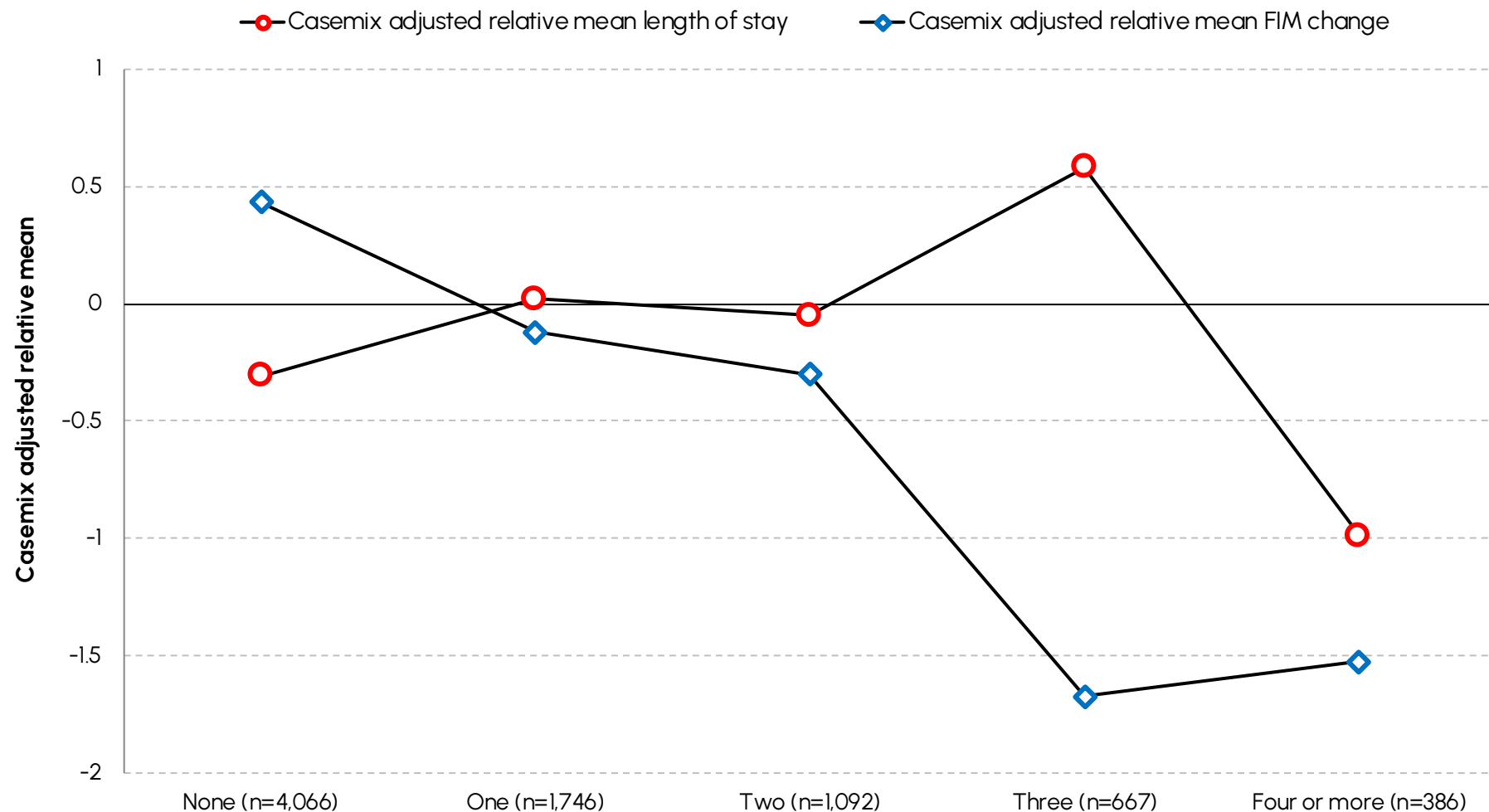
# Casemix-adjusted relative mean length of stay and FIM change by number of comorbidities



**Number of comorbidities — YOUR FACILITY**

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

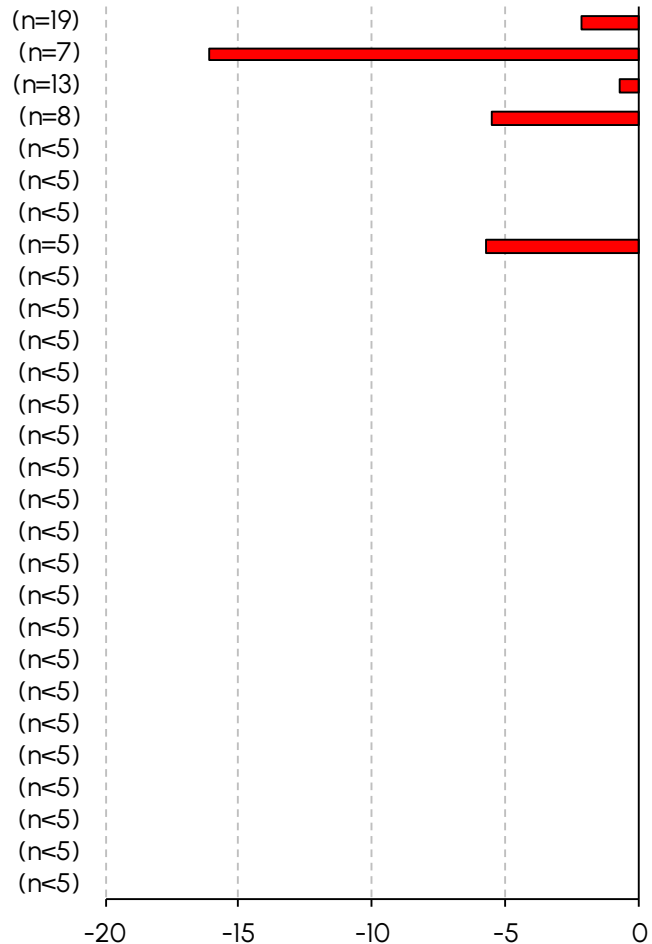
# Casemix-adjusted relative mean length of stay and FIM change by number of comorbidities



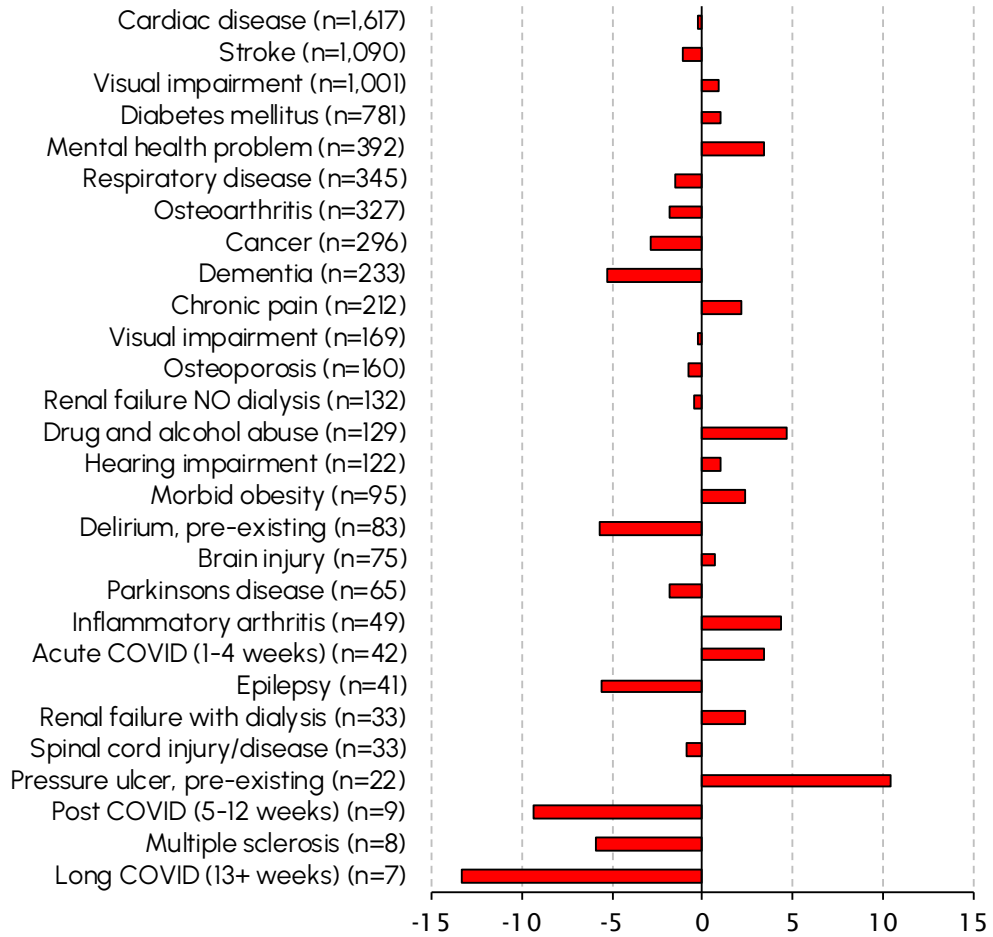
## Number of comorbidities — AUSTRALIA

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



**CARMILOS — YOUR FACILITY**



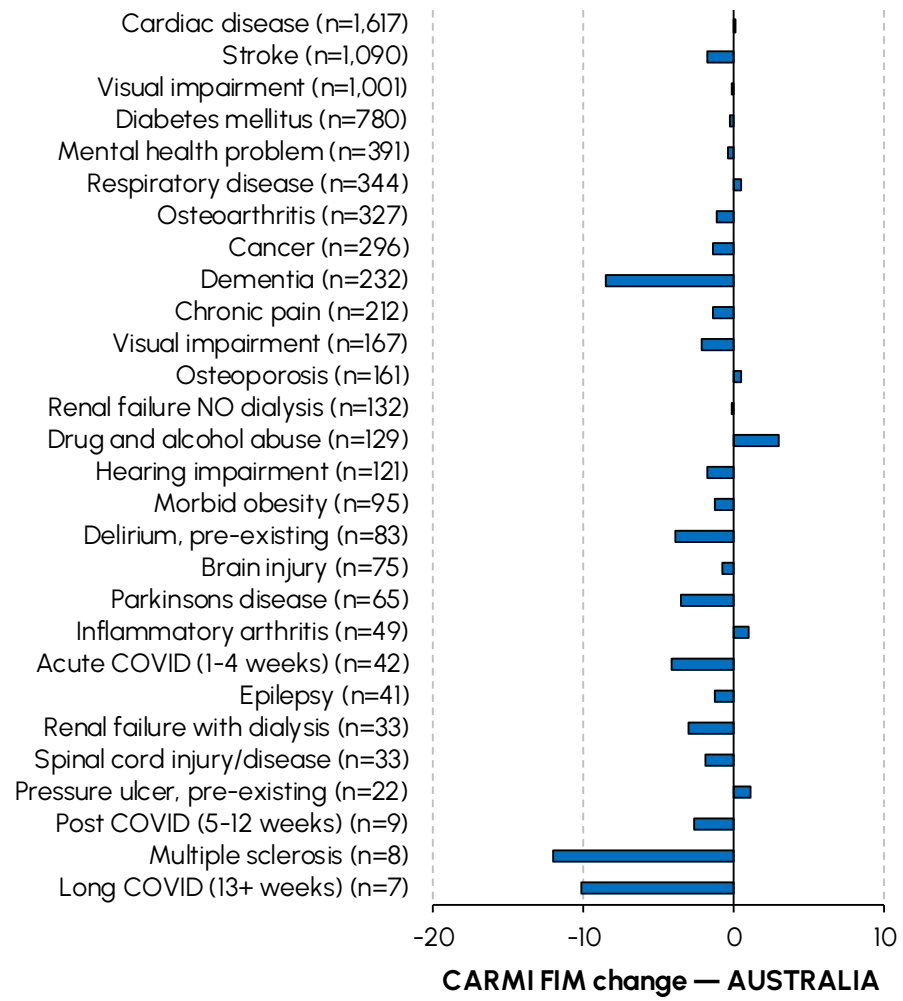
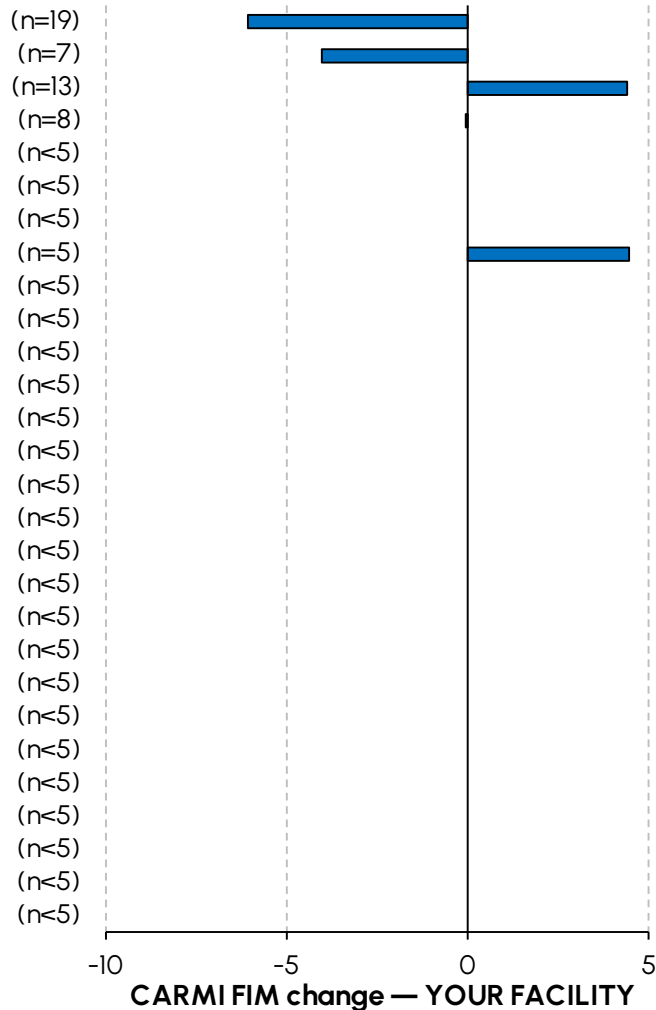
**CARMILOS — AUSTRALIA**

\* 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



\* No data included where number of episodes <5  
 NOTE: Includes only completed episodes with valid FIM scores

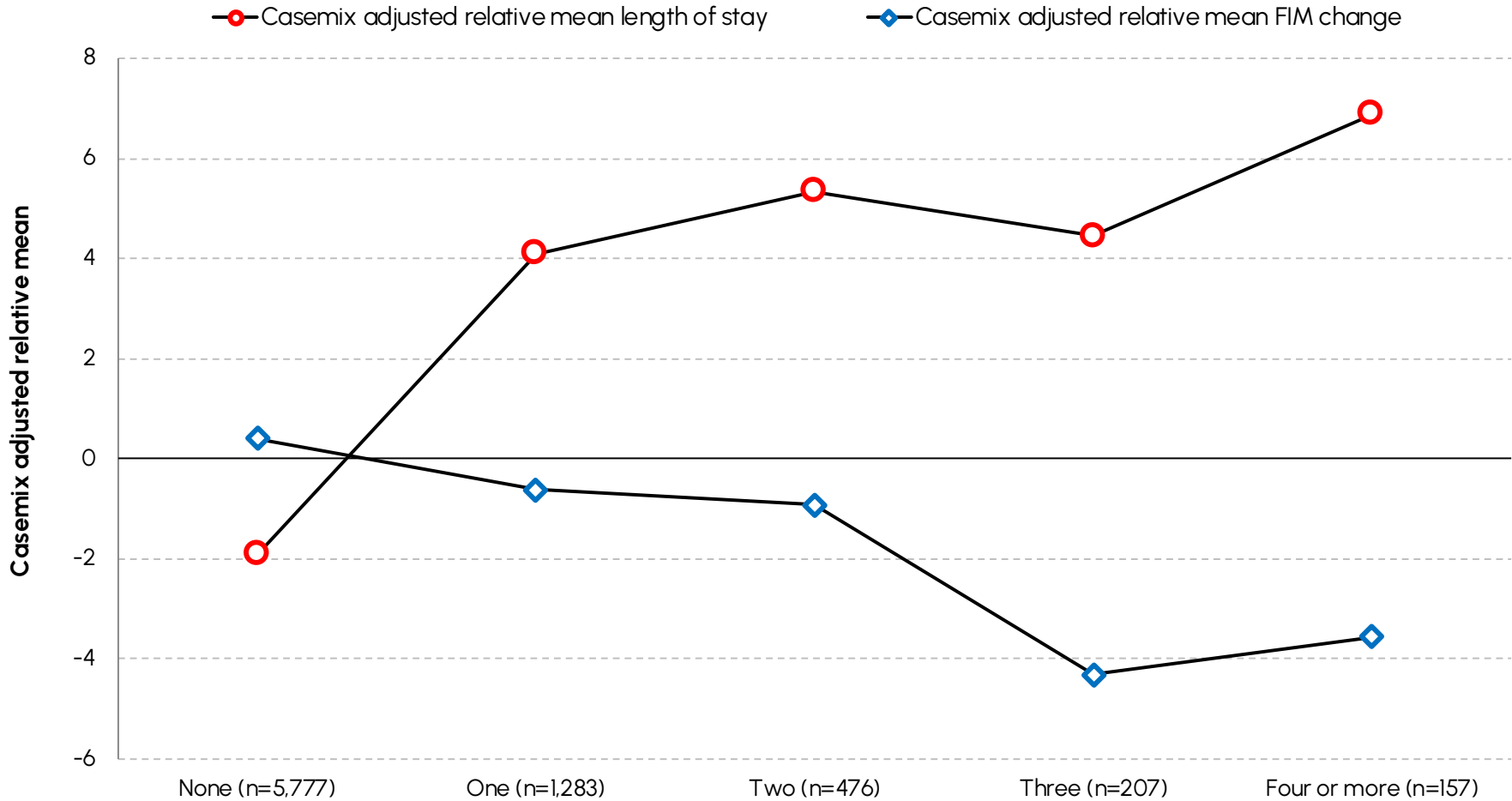
# Casemix-adjusted relative mean length of stay and FIM change by number of complications



### Number of complications — YOUR FACILITY

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

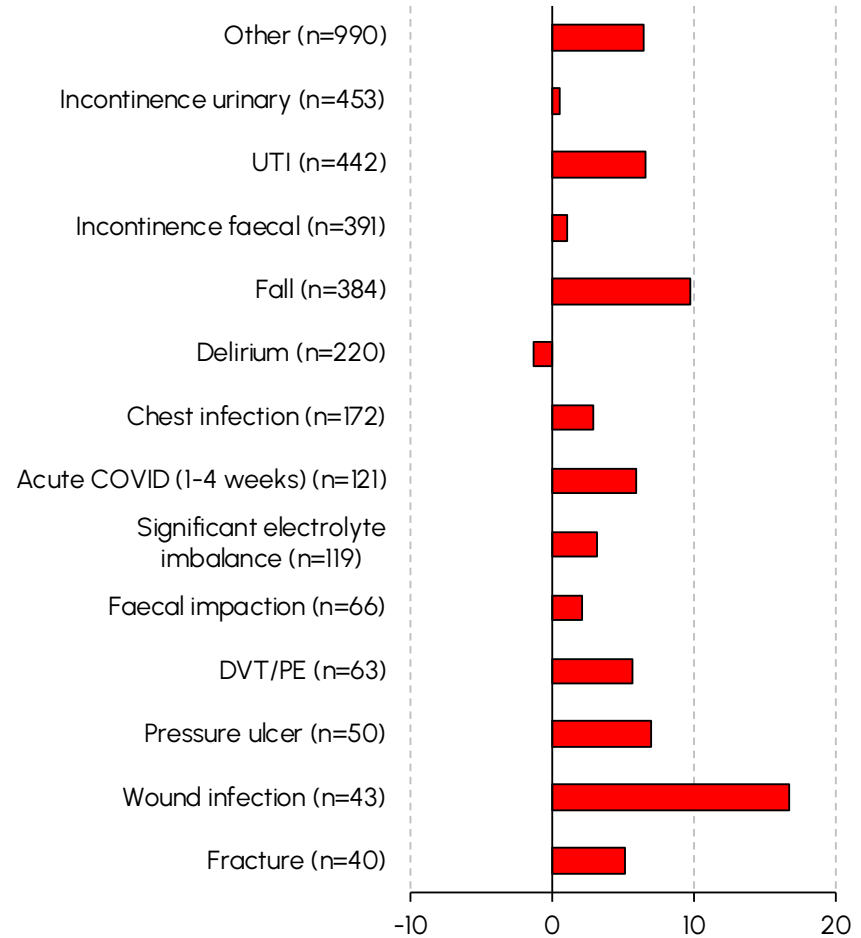
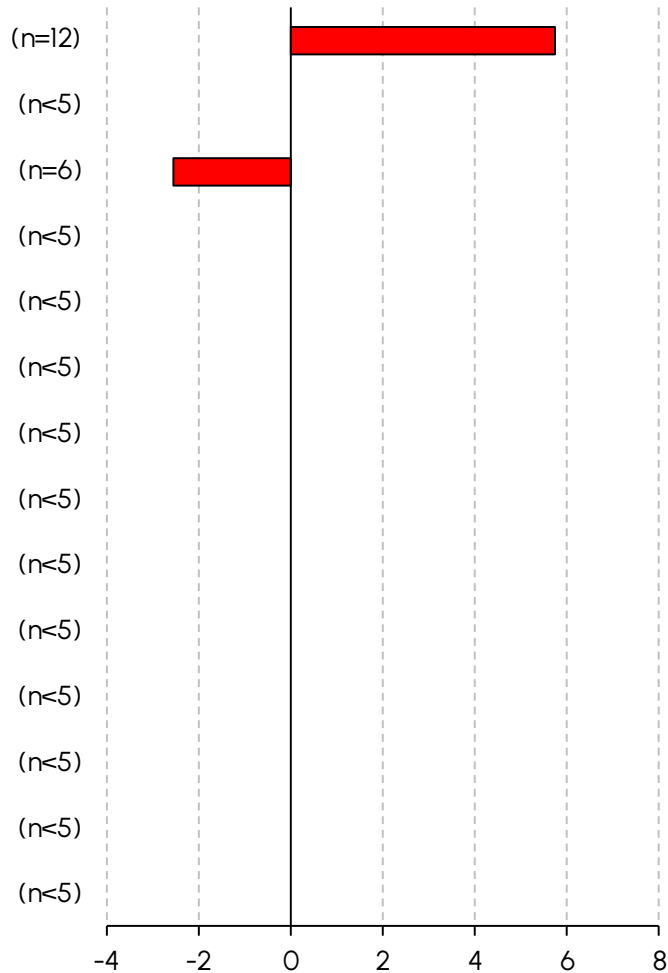
# Casemix-adjusted relative mean length of stay and FIM change by number of complications



## 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



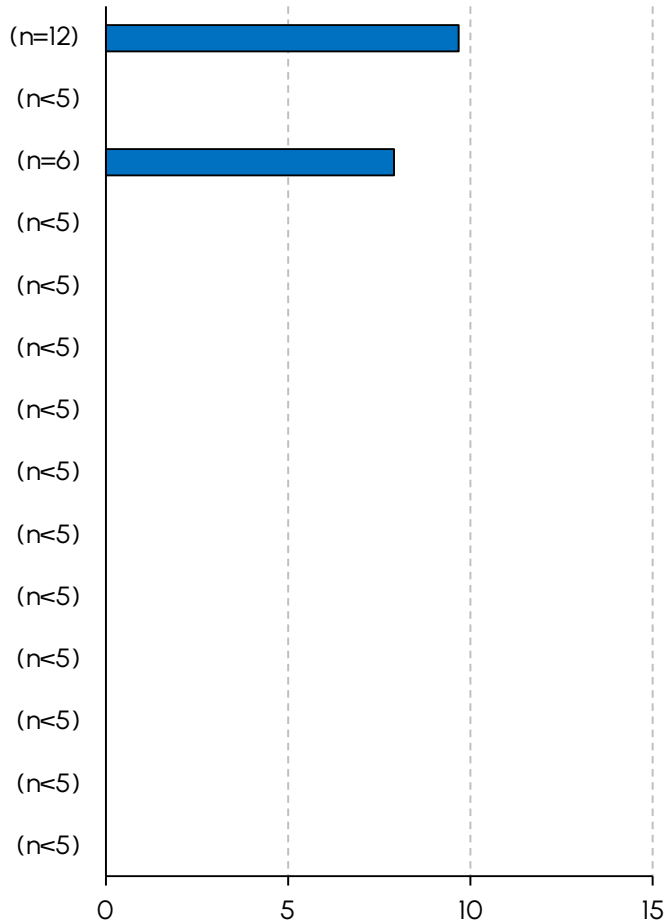
## CARMILOS — YOUR FACILITY

\* No data included where number of episodes <5

NOTE: Includes only completed episodes with valid LOS

## CARMILOS — AUSTRALIA

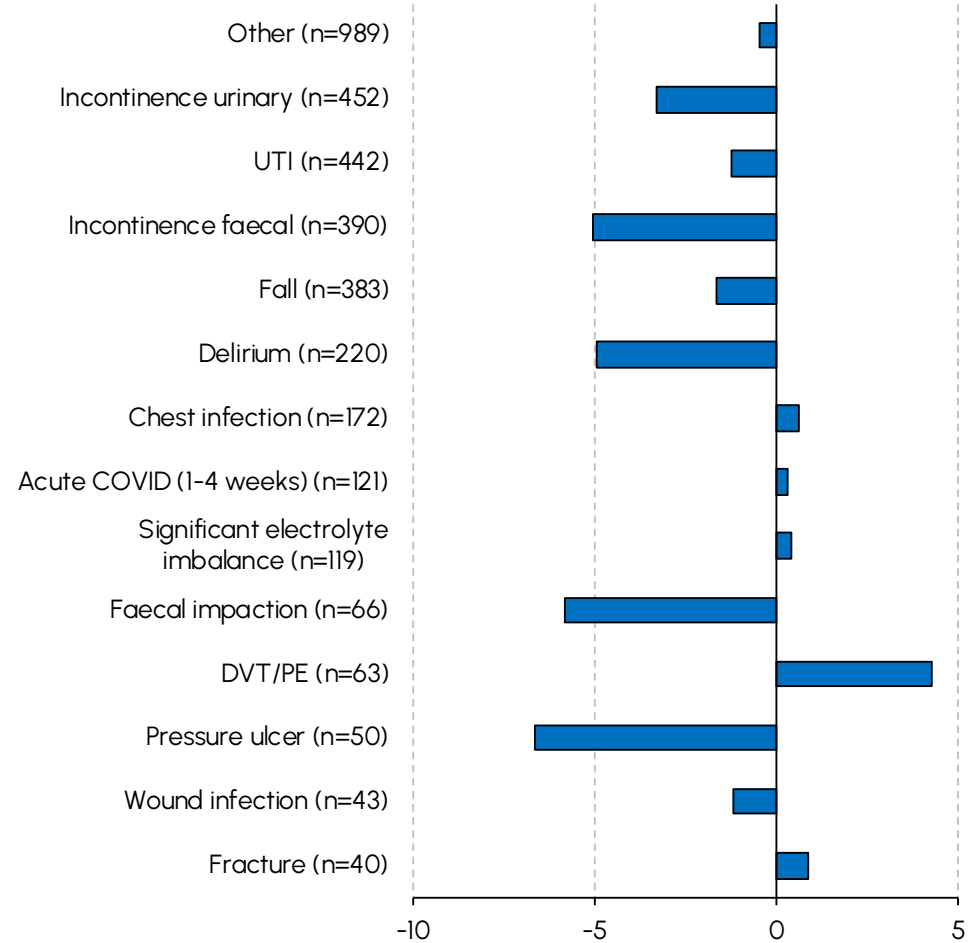
# Casemix-adjusted relative mean FIM change by type of complication



**CARMi FIM change — YOUR FACILITY**

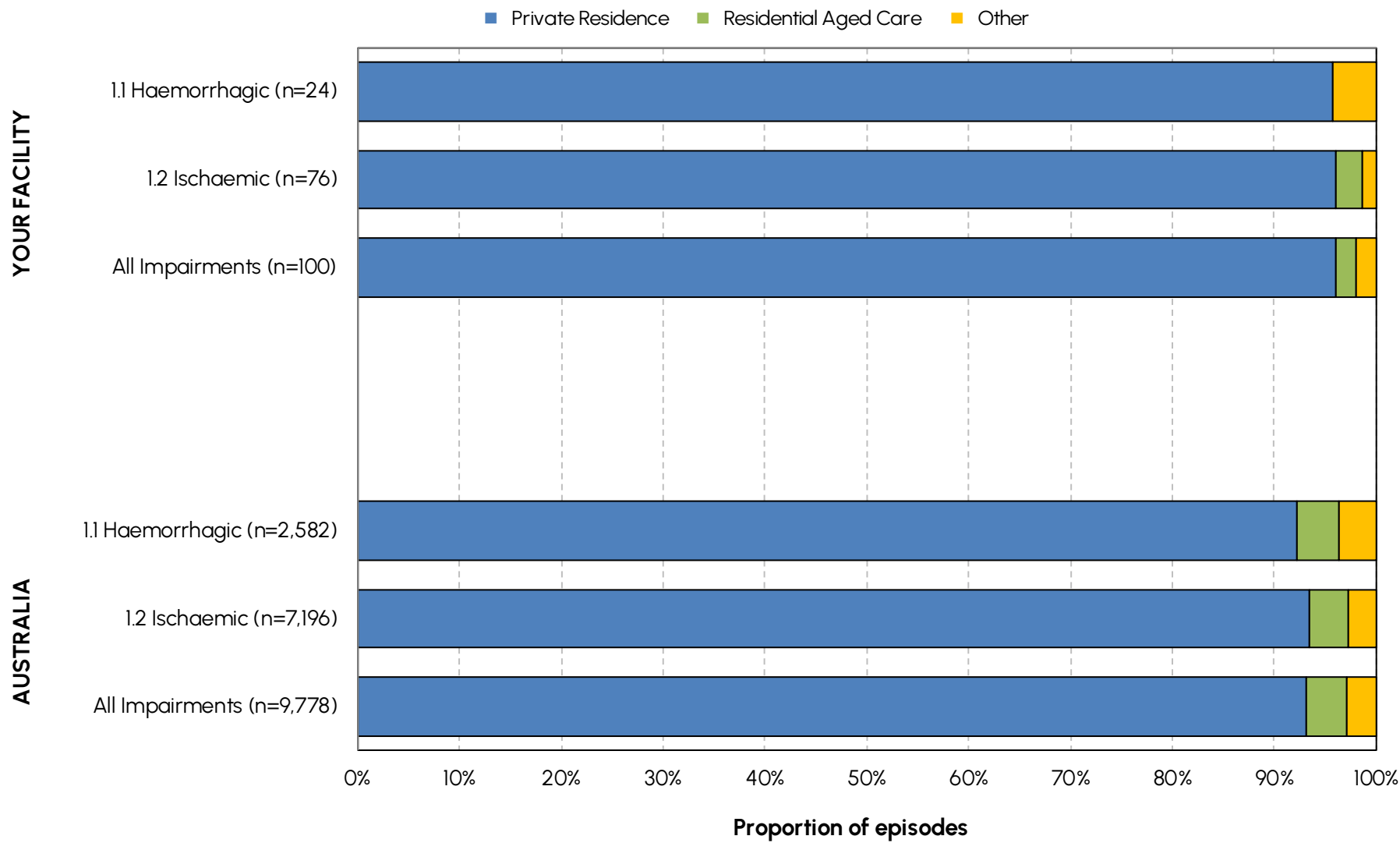
\* No data included where number of episodes <5

NOTE: Includes only completed episodes with valid FIM scores



**CARMi FIM change — AUSTRALIA**

# Type of accommodation prior to impairment

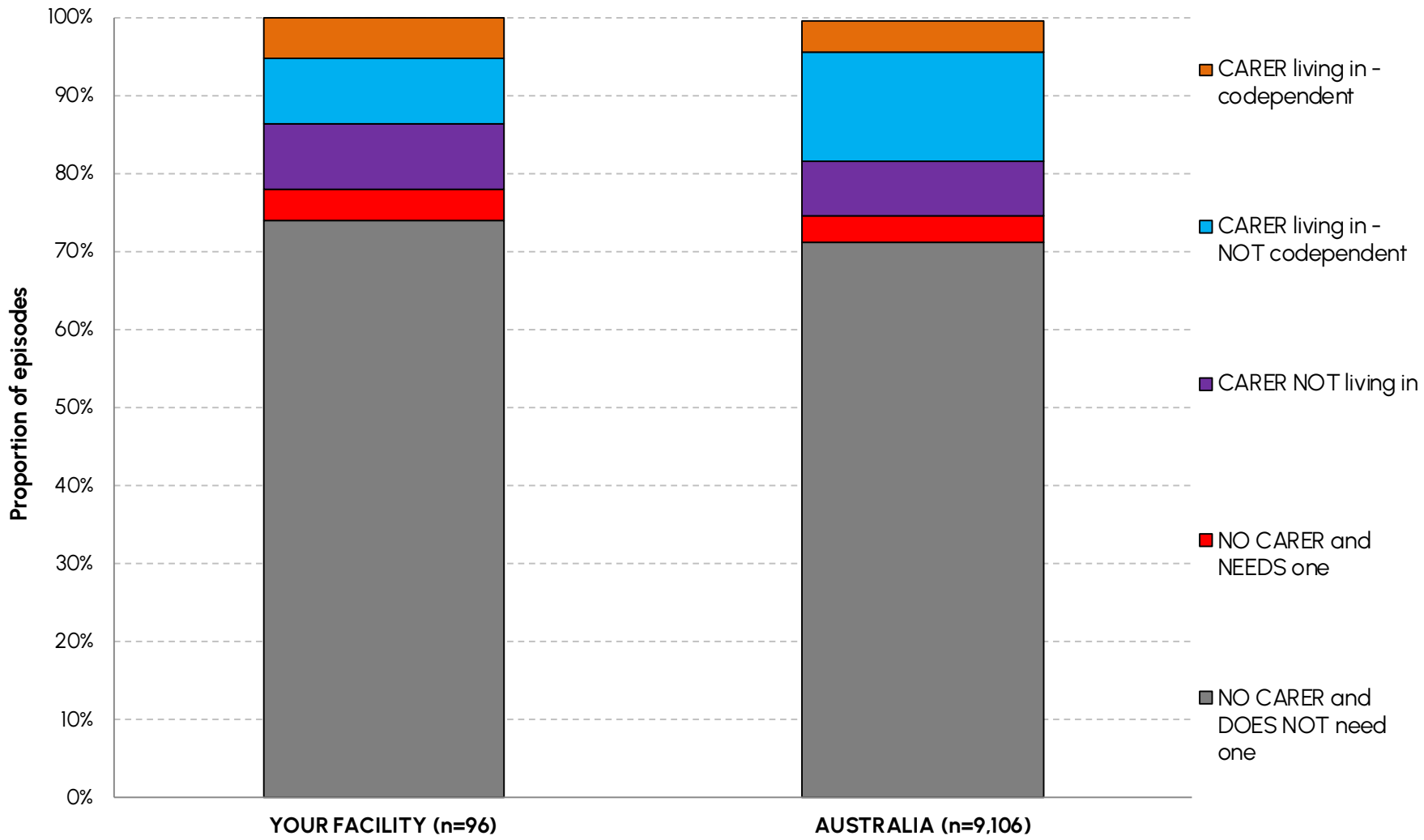


# Type of accommodation prior to impairment

Impairment	YOUR FACILITY — N (%)				All episodes
	Private residence	Residential Aged Care	Other	Unknown	
1.1 Haemorrhagic	23 (88.5)	0 (0.0)	1 (3.8)	2	26 (100.0)
1.2 Ischaemic	73 (96.1)	2 (2.6)	1 (1.3)	0	76 (100.0)
<b>All Stroke</b>	<b>96 (94.1)</b>	<b>2 (2.0)</b>	<b>2 (2.0)</b>	<b>2</b>	<b>102 (100.0)</b>

Impairment	AUSTRALIA — N (%)				All episodes
	Private residence	Residential Aged Care	Other	Unknown	
1.1 Haemorrhagic	2,381 (90.5)	108 (4.1)	93 (3.5)	48	2,630 (100.0)
1.2 Ischaemic	6,725 (91.6)	278 (3.8)	193 (2.6)	147	7,343 (100.0)
<b>All Stroke</b>	<b>9,106 (91.3)</b>	<b>386 (3.9)</b>	<b>286 (2.9)</b>	<b>195</b>	<b>9,973 (100.0)</b>

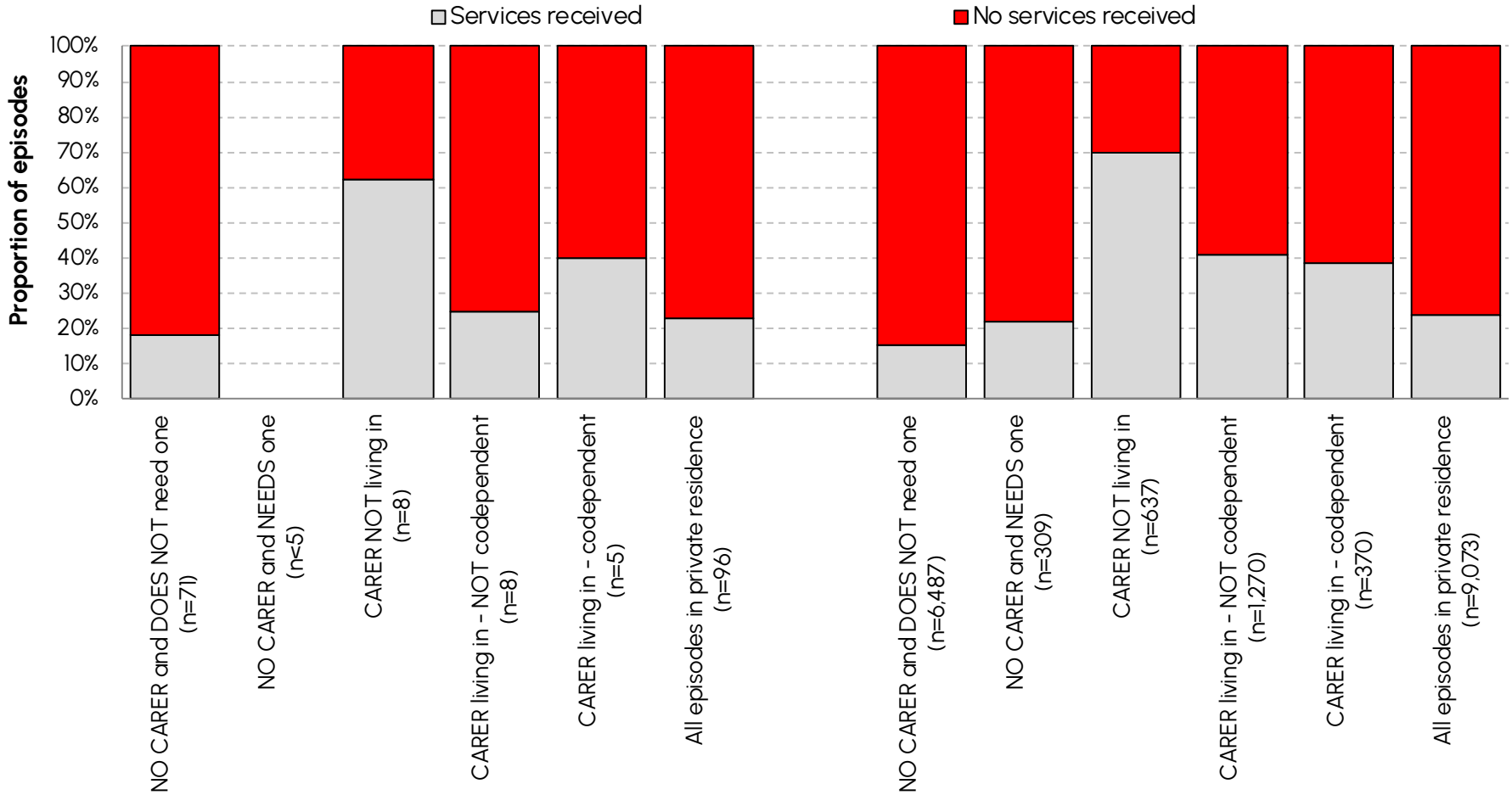
# Carer status prior to impairment



NOTE: Includes only those episodes coming from private residence



# Any services received prior to impairment by carer status



**YOUR FACILITY (n=96)**

**AUSTRALIA (n=9,073)**

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

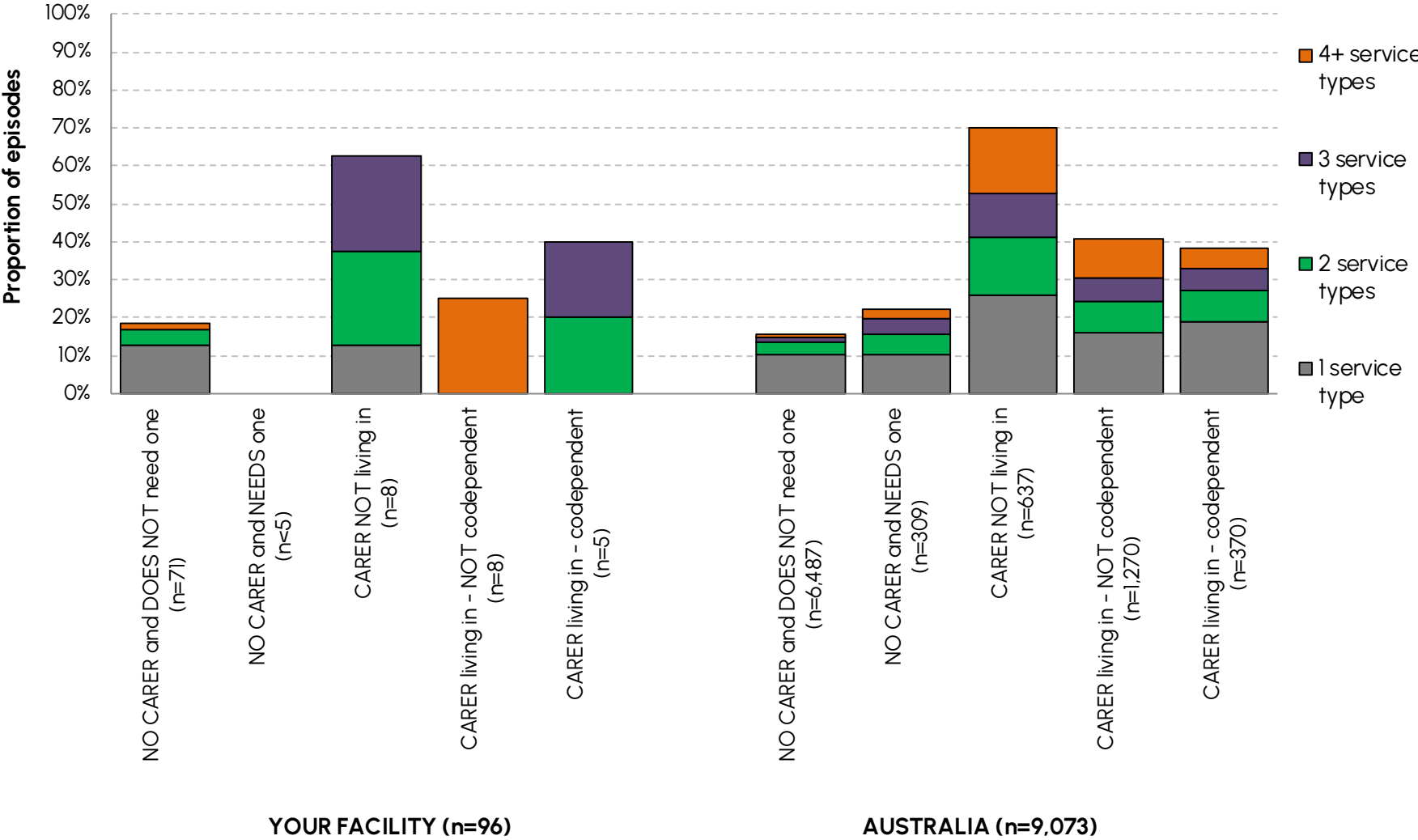
# Carer status and any services received prior to impairment

Carer status prior to this impairment	YOUR FACILITY		AUSTRALIA	
	No.	%	No.	%
NO CARER and DOES NOT need one	71	74.0	6,487	71.5
NO CARER and NEEDS one	4	4.2	309	3.4
CARER NOT living in	8	8.3	637	7.0
CARER living in - NOT codependent	8	8.3	1,271	14.0
CARER living in - codependent	5	5.2	370	4.1
Missing	0		32	
<b>All episodes in private residence</b>	<b>96</b>	<b>100.0</b>	<b>9,106</b>	<b>100.0</b>

Any services received prior to this impairment?				
Carer status prior to this impairment	YOUR FACILITY		AUSTRALIA	
	Yes (%)	No (%)	Yes (%)	No (%)
NO CARER and DOES NOT need one	18.3	81.7	15.5	84.5
NO CARER and NEEDS one	—	—	22.0	78.0
CARER NOT living in	62.5	37.5	70.0	30.0
CARER living in - NOT codependent	25.0	75.0	40.8	59.2
CARER living in - codependent	40.0	60.0	38.4	61.6
<b>All episodes in private residence</b>	<b>22.9</b>	<b>77.1</b>	<b>24.0</b>	<b>76.0</b>

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

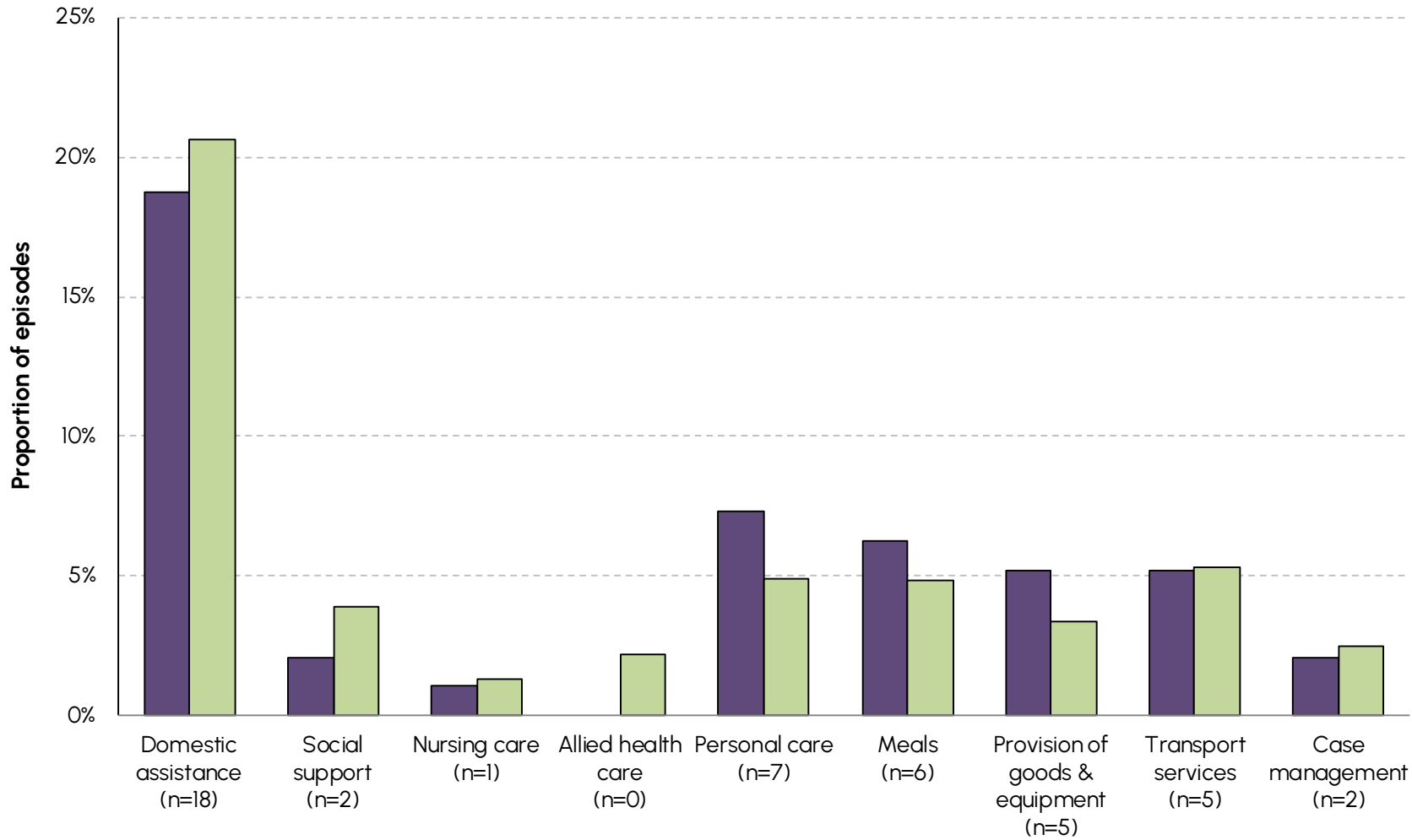
# Number of services received prior to impairment by carer status



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

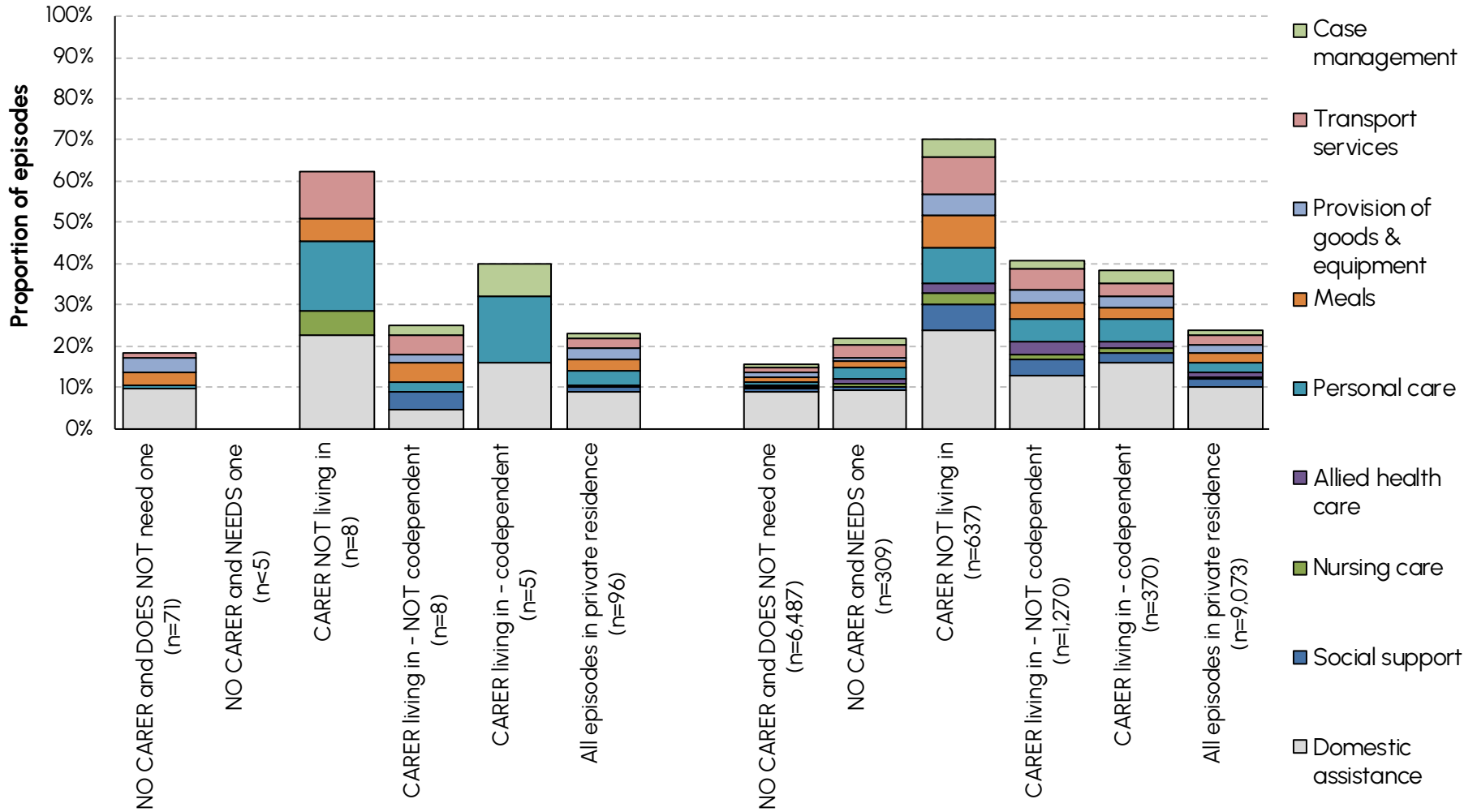
# Type of services received prior to impairment

■ YOUR FACILITY (n=96)      ■ AUSTRALIA (n=9,073)



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



**YOUR FACILITY (n=96)**

**AUSTRALIA (n=9,073)**

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						All episodes in private residence
	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		
Number of episodes in private residence	71	4	8	8	5	<b>96</b>	
<b>Percent of episodes receiving:</b>							
No services	81.7	100.0	37.5	75.0	60.0	<b>77.1</b>	
1 service type	12.7	0.0	12.5	0.0	0.0	<b>10.4</b>	
2 service types	4.2	0.0	25.0	0.0	20.0	<b>6.3</b>	
3 service types	0.0	0.0	25.0	0.0	20.0	<b>3.1</b>	
4 or more service types	1.4	0.0	0.0	25.0	0.0	<b>3.1</b>	
<b>Service Type received</b>							
Domestic assistance	14.1	0.0	50.0	25.0	40.0	<b>18.8</b>	
Social support	0.0	0.0	0.0	25.0	0.0	<b>2.1</b>	
Nursing care	0.0	0.0	12.5	0.0	0.0	<b>1.0</b>	
Allied health care	0.0	0.0	0.0	0.0	0.0	<b>0.0</b>	
Personal care	1.4	0.0	37.5	12.5	40.0	<b>7.3</b>	
Meals	4.2	0.0	12.5	25.0	0.0	<b>6.3</b>	
Provision of goods & equipment	5.6	0.0	0.0	12.5	0.0	<b>5.2</b>	
Transport services	1.4	0.0	25.0	25.0	0.0	<b>5.2</b>	
Case management	0.0	0.0	0.0	12.5	20.0	<b>2.1</b>	

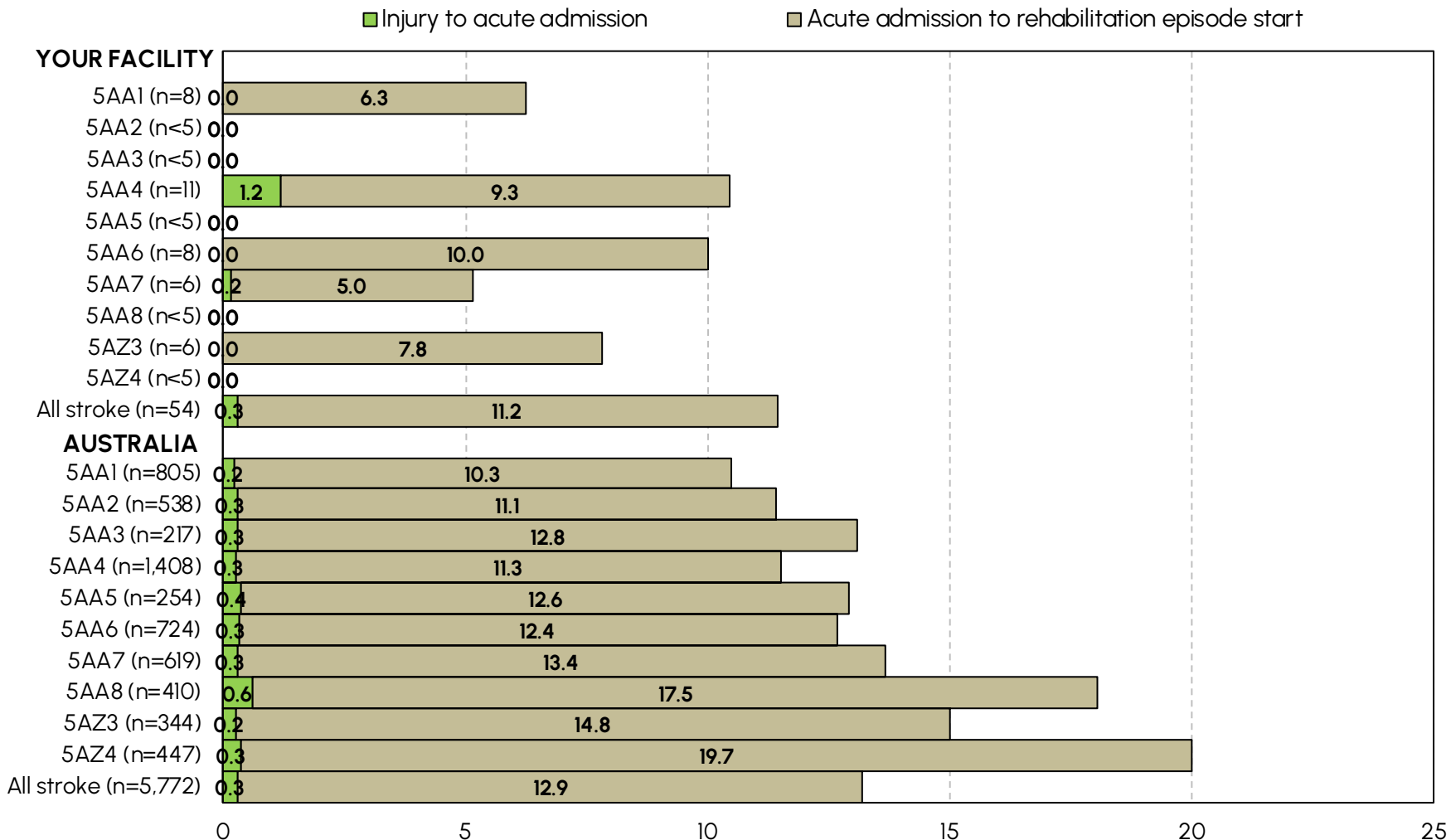
NOTE: Includes only those episodes coming from private residence and with known carer status and known services status.

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

Carer status prior to discharge - AUSTRALIA						
Services received prior to this impairment	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	6,487	309	637	1,270	370	<b>9,073</b>
<b>Percent of episodes receiving:</b>						
No services	84.5	78.0	30.0	59.2	61.6	<b>76.0</b>
1 service type	10.4	10.4	25.7	16.0	18.9	<b>12.6</b>
2 service types	3.0	5.2	15.5	8.2	8.4	<b>4.9</b>
3 service types	1.3	4.2	11.5	6.1	5.7	<b>3.0</b>
4 or more service types	0.8	2.3	17.3	10.5	5.4	<b>3.5</b>
<b>Service Type received</b>						
Domestic assistance	13.8	17.8	60.0	32.9	32.7	<b>20.6</b>
Social support	1.5	2.3	15.7	10.0	5.1	<b>3.9</b>
Nursing care	0.4	1.0	6.9	3.0	1.9	<b>1.3</b>
Allied health care	0.7	2.3	6.0	7.3	3.8	<b>2.2</b>
Personal care	1.0	5.5	21.8	14.3	11.1	<b>4.9</b>
Meals	2.3	3.2	20.1	10.3	5.9	<b>4.8</b>
Provision of goods & equipment	1.4	1.3	13.2	8.0	5.7	<b>3.4</b>
Transport services	2.1	6.5	22.3	13.0	6.2	<b>5.3</b>
Case management	1.0	2.9	10.7	4.9	6.2	<b>2.5</b>

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



\*No data provided when less than 5 episodes have dates

**Average number of days between dates**

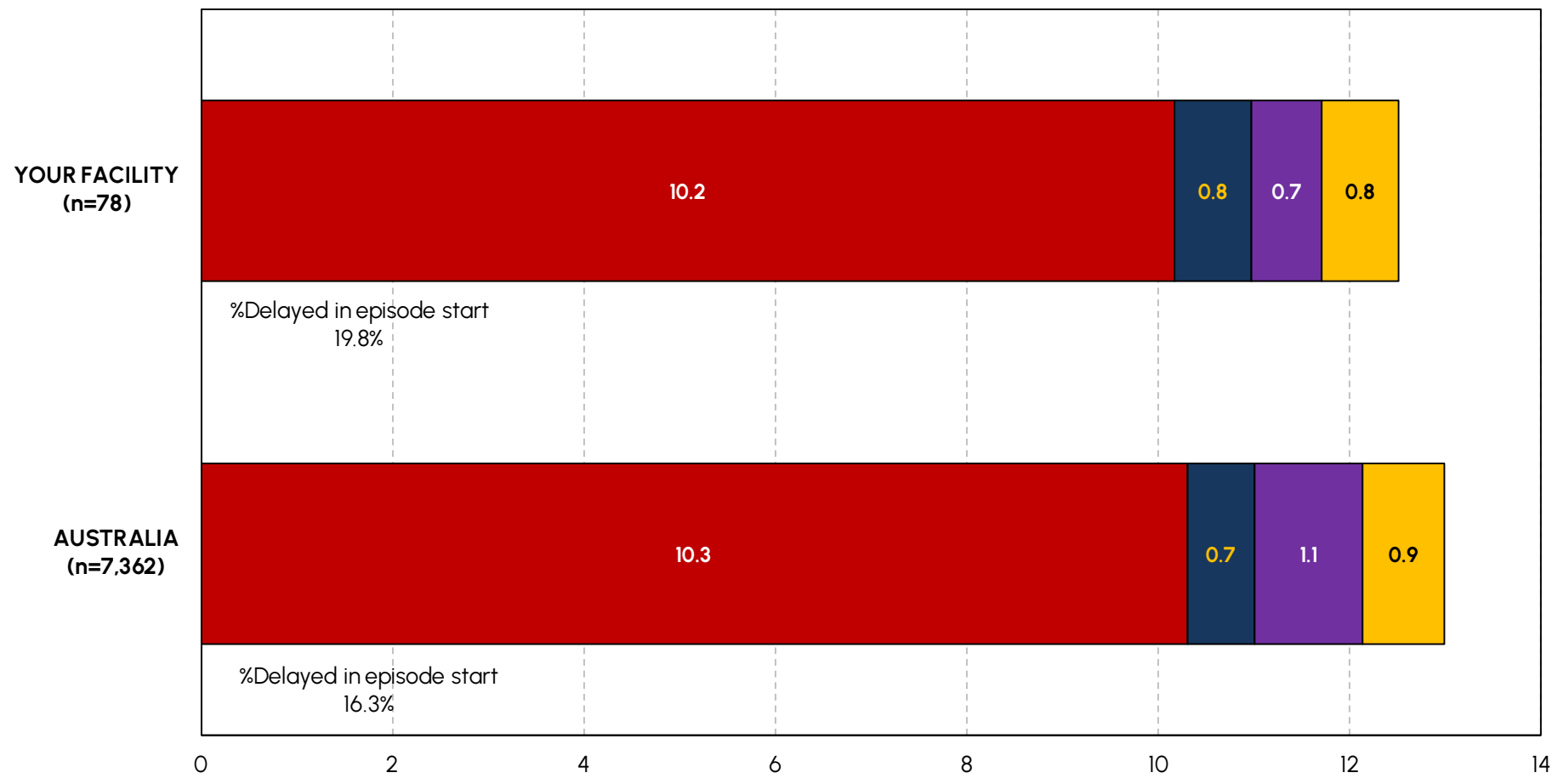
NOTE: Includes first admissions where all dates have been entered



# Days from referral to rehabilitation episode start

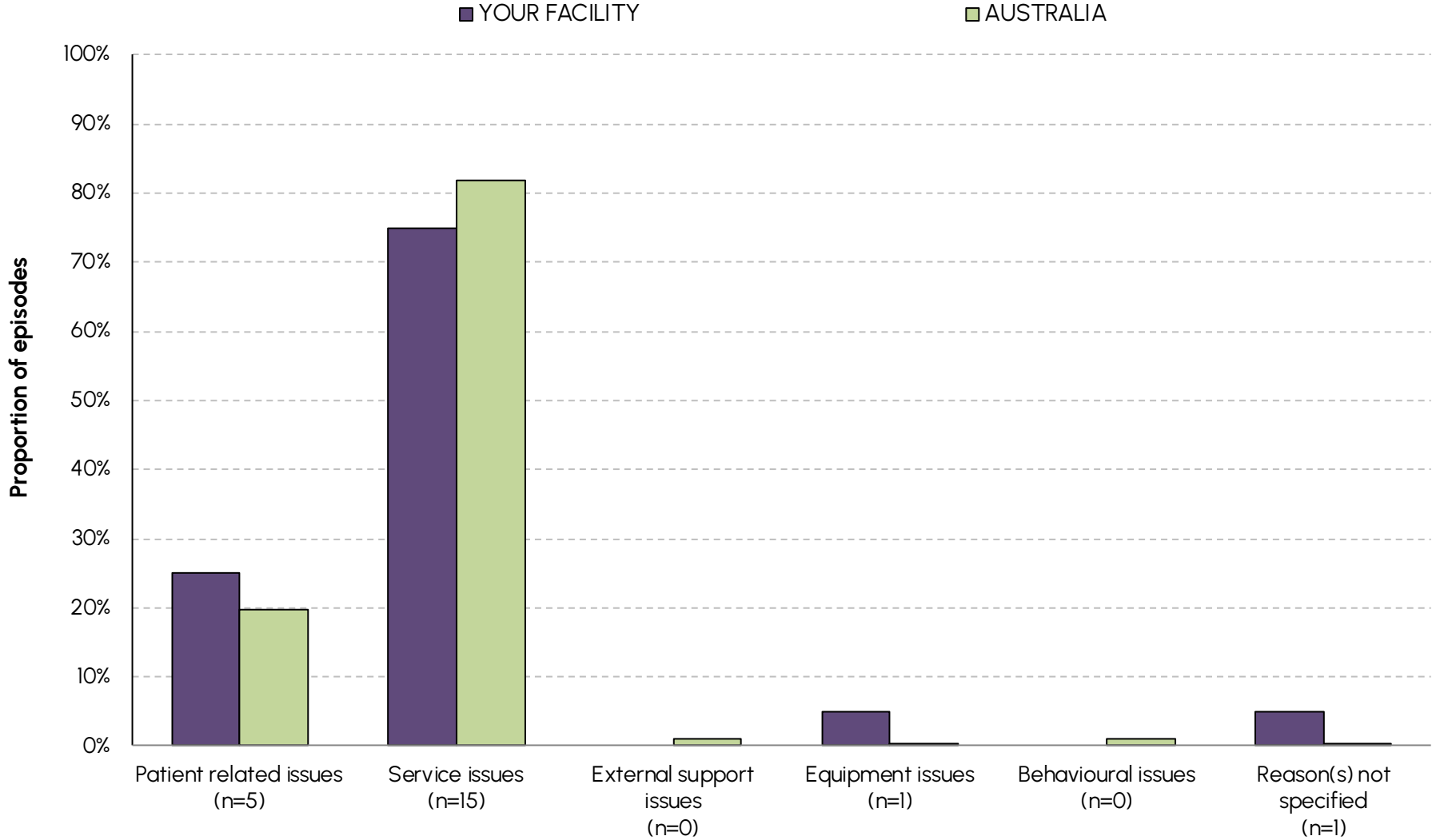


■ Injury to Referral    
 ■ Referral to assessment    
 ■ Assessment to clinically rehab ready    
 ■ Clinically rehab ready to rehab episode start



\*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



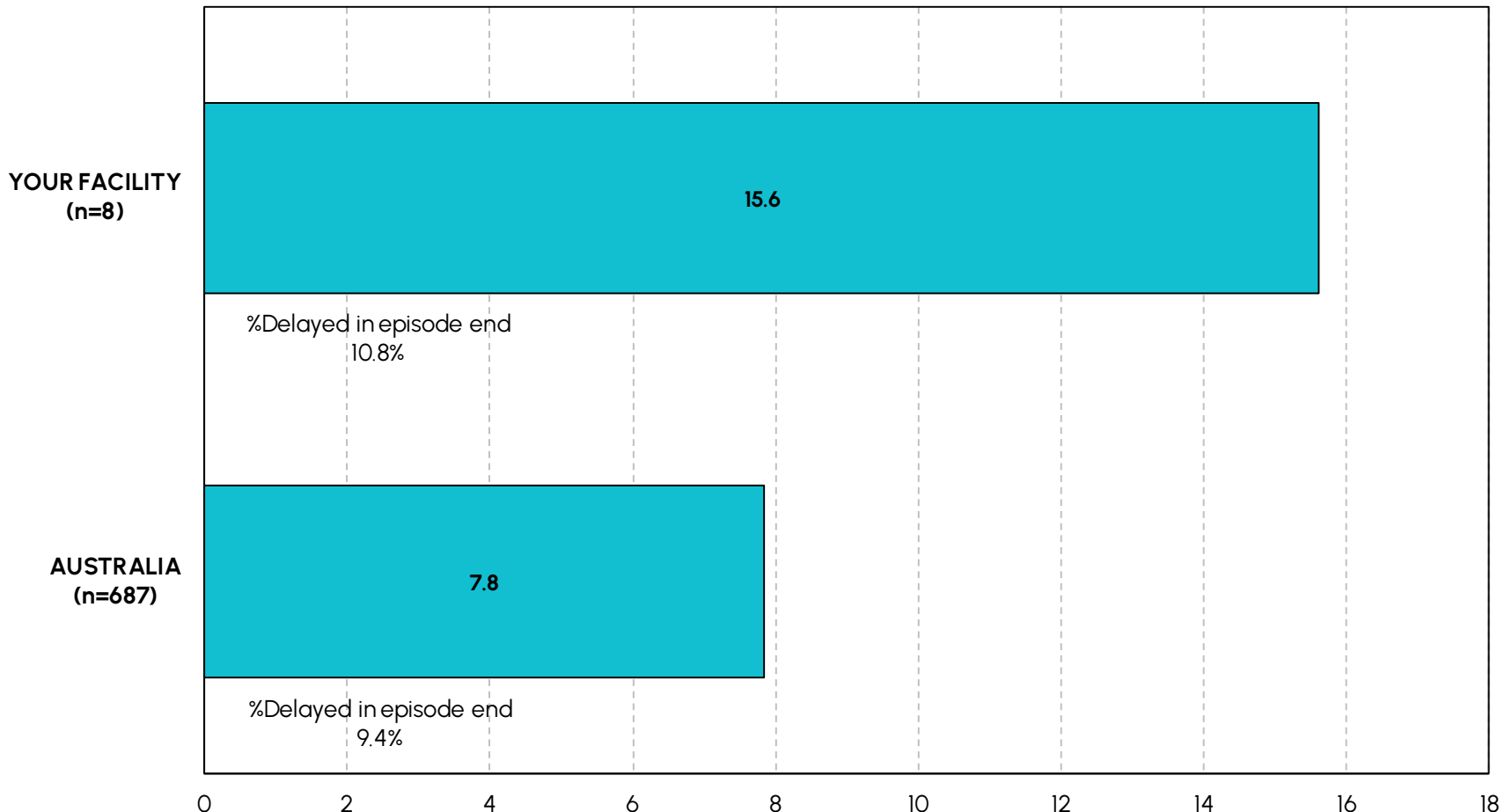
# Delays in episode start

Delay in episode start	YOUR FACILITY		AUSTRALIA	
	No.	%	No.	%
No delay	81	80.2	8,024	83.7
Delay in episode start	20	19.8	1,558	16.3
Missing	1		391	
<b>All episodes</b>	<b>102</b>	<b>100.0</b>	<b>9,973</b>	<b>100.0</b>

Reasons for delay in episode start	YOUR FACILITY		AUSTRALIA	
	No.	%	No.	%
Patient related issues	5	25.0	309	19.8
Service issues	15	75.0	1,274	81.8
External support issues	0	0.0	14	0.9
Equipment issues	1	5.0	1	0.1
Behavioural issues	0	0.0	16	1.0
Reason(s) not specified	1	5.0	5	0.3

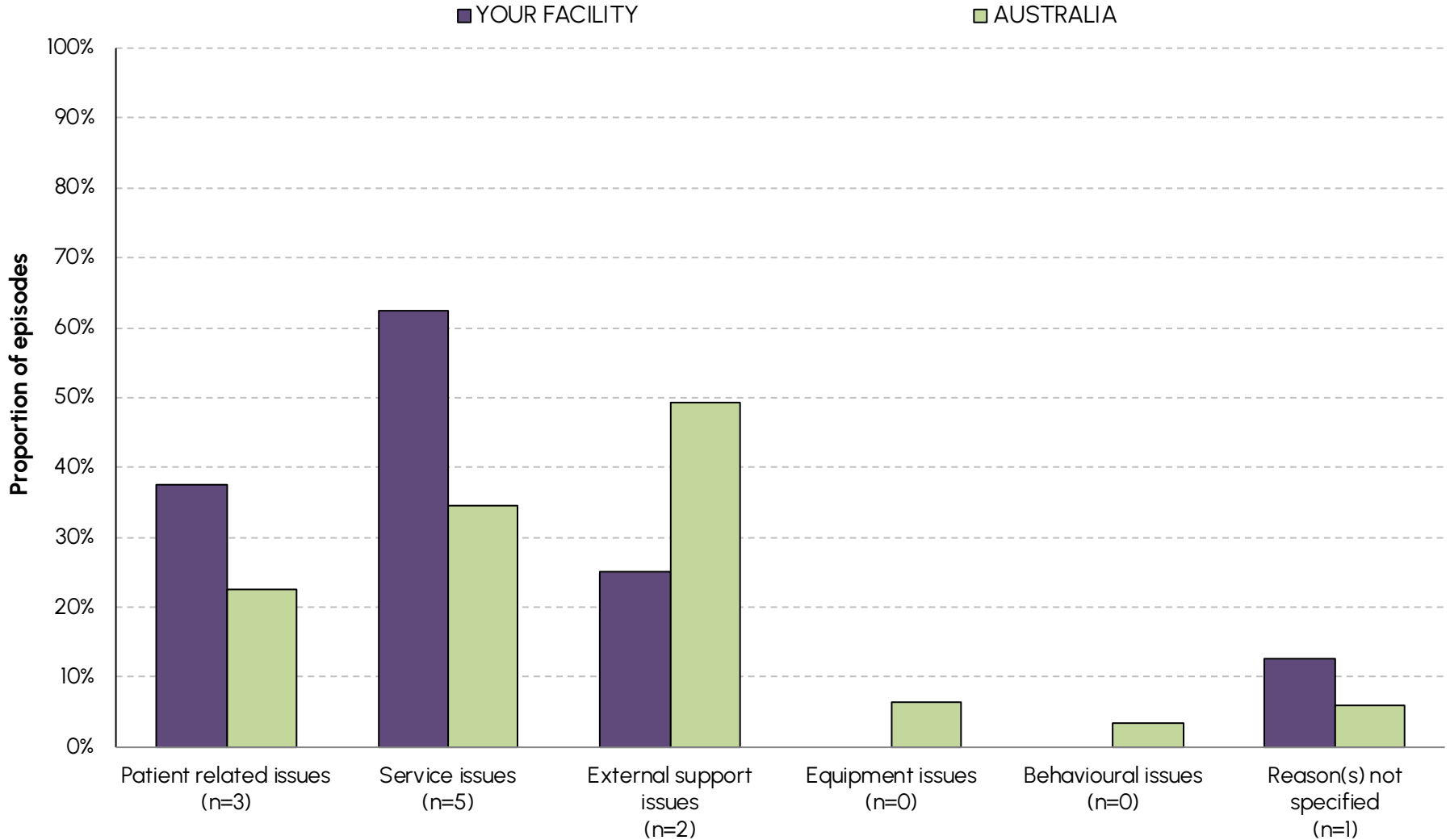
# Days from clinically ready to discharge

■ 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

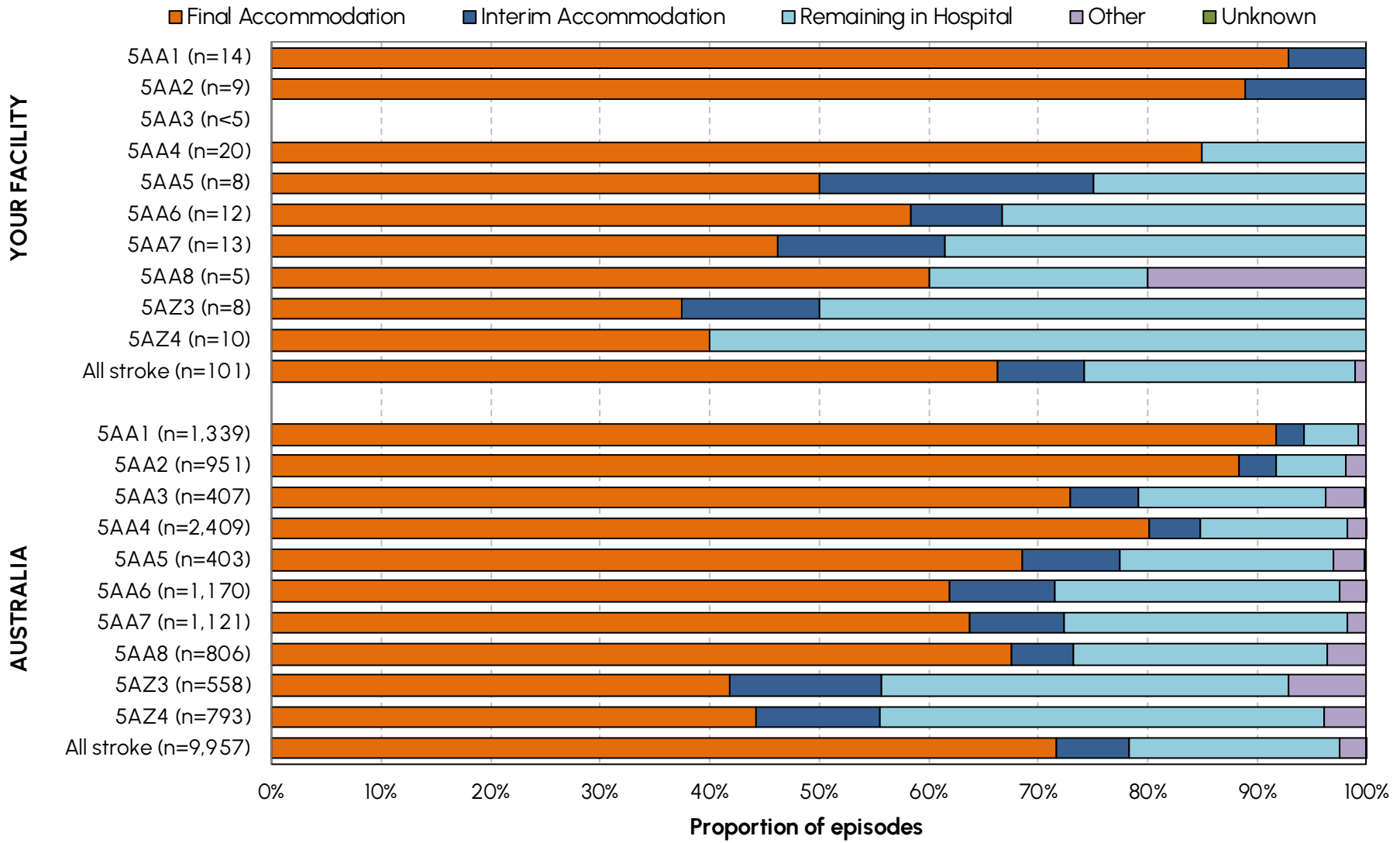
# Delays in episode end

Delay in episode end	YOUR FACILITY		AUSTRALIA	
	No.	%	No.	%
No delay	66	89.2	6,969	90.6
Delay in episode end	8	10.8	721	9.4
Missing	3		263	
<b>All episodes</b>	<b>77</b>	<b>100.0</b>	<b>7,953</b>	<b>100.0</b>

Reasons for delay in episode end	YOUR FACILITY		AUSTRALIA	
	No.	%	No.	%
Patient related issues	3	37.5	162	22.5
Service issues	5	62.5	249	34.5
External support issues	2	25.0	356	49.4
Equipment issues	0	0.0	46	6.4
Behavioural issues	0	0.0	24	3.3
Reason(s) not specified	1	12.5	42	5.8

NOTE: Includes completed episodes only.

# Discharge destination by AN-SNAP class



# Discharge destination by AN-SNAP class

AN-SNAP class V5	YOUR FACILITY — N					AUSTRALIA — N				
	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown
5AA1 (motor 63-91, cognition 30-35)	13	1	0	0	0	1,228	35	65	11	0
5AA2 (motor 63-91, cognition 21-29)	8	1	0	0	0	840	33	60	18	0
5AA3 (motor 63-91, cognition 5-20)	2	0	0	0	0	297	25	70	14	1
5AA4 (motor 44-62, cognition 18-35)	17	0	3	0	0	1,932	110	324	42	1
5AA5 (motor 44-62, cognition 5-17)	4	2	2	0	0	276	36	79	11	1
5AA6 (motor 19-43, Age ≥ 80)	7	1	4	0	0	725	112	304	28	1
5AA7 (motor 19-43, Age 67-79)	6	2	5	0	0	714	97	291	19	0
5AA8 (motor 19-43, Age ≤ 66)	3	0	1	1	0	545	45	187	29	0
5AZ3 (motor 13-18, Age ≥ 79)	3	1	4	0	0	233	78	207	40	0
5AZ4 (motor 13-18, Age ≤ 78)	4	0	6	0	0	351	89	322	31	0
<b>All Stroke AN-SNAP Classes</b>	<b>67</b>	<b>8</b>	<b>25</b>	<b>1</b>	<b>0</b>	<b>7,141</b>	<b>660</b>	<b>1,909</b>	<b>243</b>	<b>4</b>

AN-SNAP class V5	YOUR FACILITY — %					AUSTRALIA — %				
	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown
5AA1 (motor 63-91, cognition 30-35)	92.9	7.1	0.0	0.0	0.0	91.7	2.6	4.9	0.8	0.0
5AA2 (motor 63-91, cognition 21-29)	88.9	11.1	0.0	0.0	0.0	88.3	3.5	6.3	1.9	0.0
5AA3 (motor 63-91, cognition 5-20)	100.0	0.0	0.0	0.0	0.0	73.0	6.1	17.2	3.4	0.2
5AA4 (motor 44-62, cognition 18-35)	85.0	0.0	15.0	0.0	0.0	80.2	4.6	13.4	1.7	0.0
5AA5 (motor 44-62, cognition 5-17)	50.0	25.0	25.0	0.0	0.0	68.5	8.9	19.6	2.7	0.2
5AA6 (motor 19-43, Age ≥ 80)	58.3	8.3	33.3	0.0	0.0	62.0	9.6	26.0	2.4	0.1
5AA7 (motor 19-43, Age 67-79)	46.2	15.4	38.5	0.0	0.0	63.7	8.7	26.0	1.7	0.0
5AA8 (motor 19-43, Age ≤ 66)	60.0	0.0	20.0	20.0	0.0	67.6	5.6	23.2	3.6	0.0
5AZ3 (motor 13-18, Age ≥ 79)	37.5	12.5	50.0	0.0	0.0	41.8	14.0	37.1	7.2	0.0
5AZ4 (motor 13-18, Age ≤ 78)	40.0	0.0	60.0	0.0	0.0	44.3	11.2	40.6	3.9	0.0
<b>All Stroke AN-SNAP Classes</b>	<b>66.3</b>	<b>7.9</b>	<b>24.8</b>	<b>1.0</b>	<b>0.0</b>	<b>71.7</b>	<b>6.6</b>	<b>19.2</b>	<b>2.4</b>	<b>0.0</b>



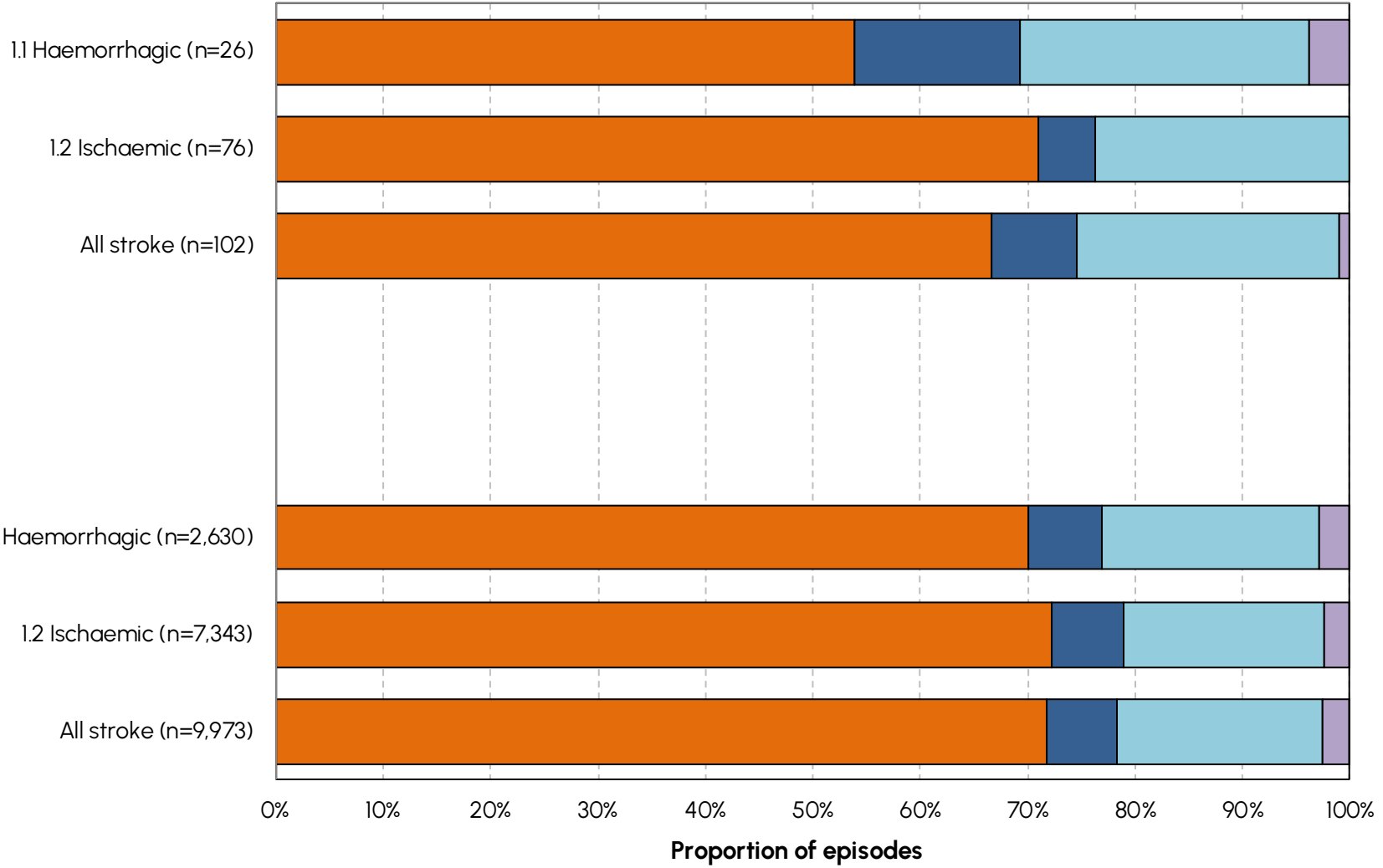
# Discharge destination by impairment code



■ Final Accommodation    
 ■ Interim Accommodation    
 ■ Remaining in Hospital    
 ■ Other    
 ■ Unknown

YOUR FACILITY

AUSTRALIA



# Discharge destination by impairment

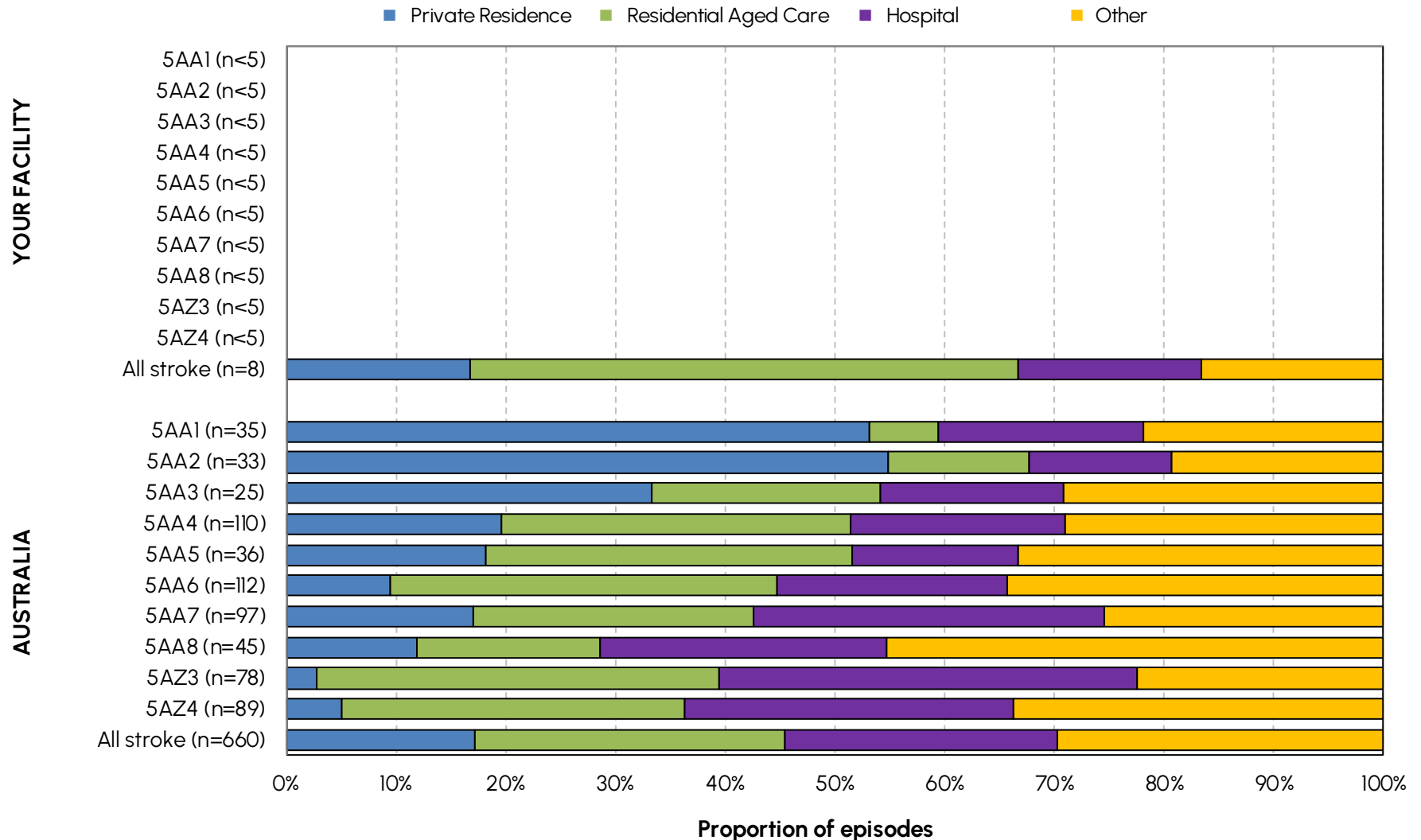
Impairment	YOUR FACILITY — N					AUSTRALIA — N				
	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown
1.1 Haemorrhagic	14	4	7	1	0	1,843	178	533	75	1
1.2 Ischaemic	54	4	18	0	0	5,310	482	1,379	168	4
<b>All Stroke</b>	<b>68</b>	<b>8</b>	<b>25</b>	<b>1</b>	<b>0</b>	<b>7,153</b>	<b>660</b>	<b>1,912</b>	<b>243</b>	<b>5</b>

Impairment	YOUR FACILITY — %					AUSTRALIA — %				
	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown
1.1 Haemorrhagic	53.8	15.4	26.9	3.8	0.0	70.1	6.8	20.3	2.9	0.0
1.2 Ischaemic	71.1	5.3	23.7	0.0	0.0	72.3	6.6	18.8	2.3	0.1
<b>All Stroke</b>	<b>66.7</b>	<b>7.8</b>	<b>24.5</b>	<b>1.0</b>	<b>0.0</b>	<b>71.7</b>	<b>6.6</b>	<b>19.2</b>	<b>2.4</b>	<b>0.1</b>

# Discharge destination



# Interim accommodation post discharge by AN-SNAP class



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

# Interim accommodation post discharge by AN-SNAP class

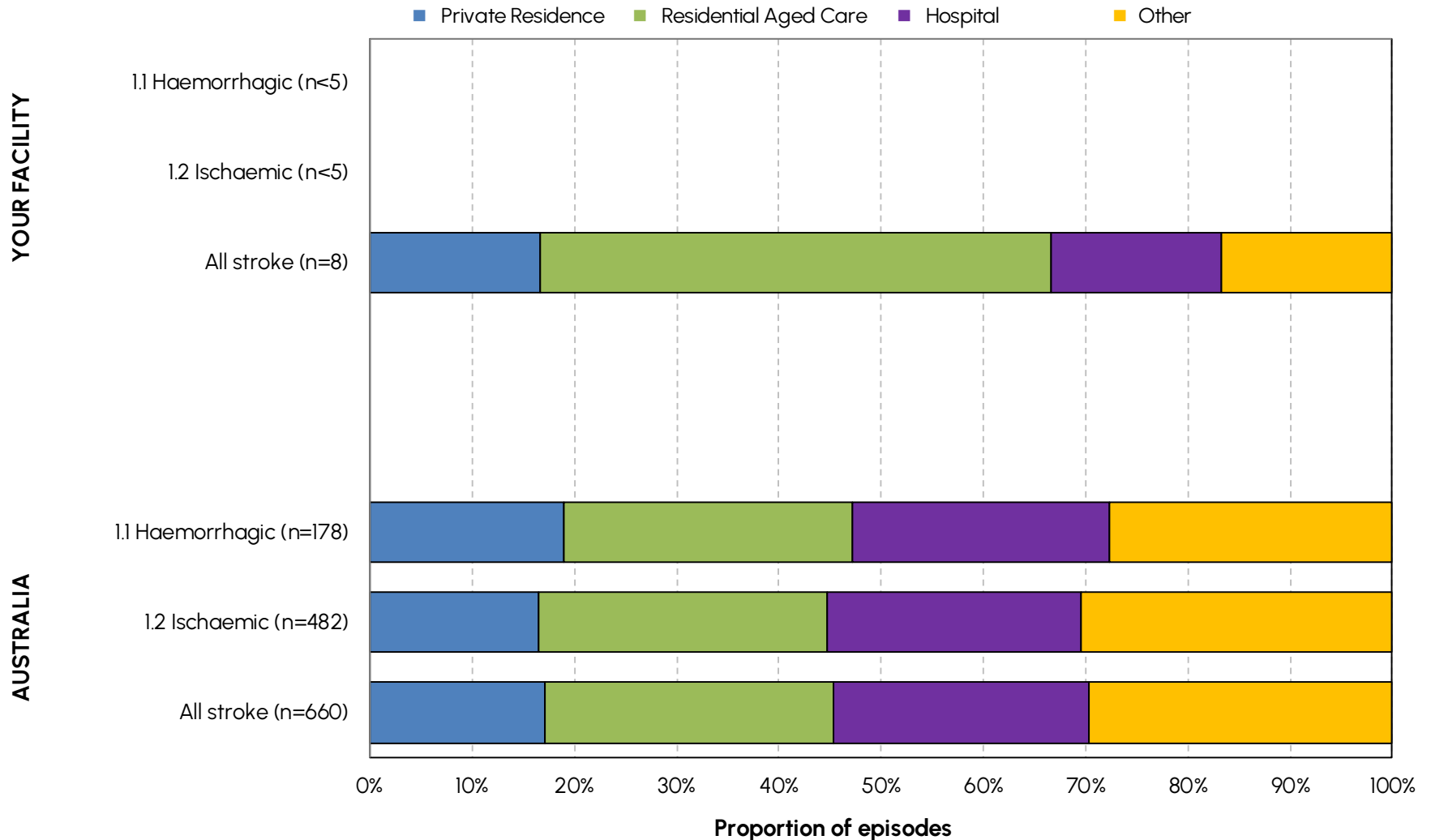
AN-SNAP class V5	YOUR FACILITY — N (%)				
	Residential Aged				All episodes**
	Private residence	Care	Hospital	Other	
5AA1 (motor 63-91, cognition 30-35)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
5AA2 (motor 63-91, cognition 21-29)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
5AA3 (motor 63-91, cognition 5-20)	0 —	0 —	0 —	0 —	0 —
5AA4 (motor 44-62, cognition 18-35)	0 —	0 —	0 —	0 —	0 —
5AA5 (motor 44-62, cognition 5-17)	0 (0.0)	1 (50.0)	0 (0.0)	0 (0.0)	2 (100.0)
5AA6 (motor 19-43, Age ≥ 80)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)
5AA7 (motor 19-43, Age 67-79)	0 (0.0)	1 (50.0)	1 (50.0)	0 (0.0)	2 (100.0)
5AA8 (motor 19-43, Age ≤ 66)	0 —	0 —	0 —	0 —	0 —
5AZ3 (motor 13-18, Age ≥ 79)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
5AZ4 (motor 13-18, Age ≤ 78)	0 —	0 —	0 —	0 —	0 —
<b>All Stroke AN-SNAP Classes</b>	<b>1 (12.5)</b>	<b>3 (37.5)</b>	<b>1 (12.5)</b>	<b>1 (12.5)</b>	<b>8 (100.0)</b>

AN-SNAP class V5	AUSTRALIA — N (%)				
	Residential Aged				All episodes**
	Private residence	Care	Hospital	Other	
5AA1 (motor 63-91, cognition 30-35)	17 (48.6)	2 (5.7)	6 (17.1)	7 (20.0)	35 (100.0)
5AA2 (motor 63-91, cognition 21-29)	17 (51.5)	4 (12.1)	4 (12.1)	6 (18.2)	33 (100.0)
5AA3 (motor 63-91, cognition 5-20)	8 (32.0)	5 (20.0)	4 (16.0)	5 (20.0)	25 (100.0)
5AA4 (motor 44-62, cognition 18-35)	21 (19.1)	34 (30.9)	21 (19.1)	31 (28.2)	110 (100.0)
5AA5 (motor 44-62, cognition 5-17)	6 (16.7)	11 (30.6)	5 (13.9)	11 (30.6)	36 (100.0)
5AA6 (motor 19-43, Age ≥ 80)	10 (8.9)	37 (33.0)	22 (19.6)	32 (28.6)	112 (100.0)
5AA7 (motor 19-43, Age 67-79)	16 (16.5)	24 (24.7)	30 (30.9)	22 (22.7)	97 (100.0)
5AA8 (motor 19-43, Age ≤ 66)	5 (11.1)	7 (15.6)	11 (24.4)	19 (42.2)	45 (100.0)
5AZ3 (motor 13-18, Age ≥ 79)	2 (2.6)	26 (33.3)	27 (34.6)	16 (20.5)	78 (100.0)
5AZ4 (motor 13-18, Age ≤ 78)	4 (4.5)	25 (28.1)	24 (27.0)	25 (28.1)	89 (100.0)
<b>All Stroke AN-SNAP Classes</b>	<b>106 (16.1)</b>	<b>175 (26.5)</b>	<b>154 (23.3)</b>	<b>174 (26.4)</b>	<b>660 (100.0)</b>

\*\* There was 2 episode(s) in YOUR FACILITY and 51 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

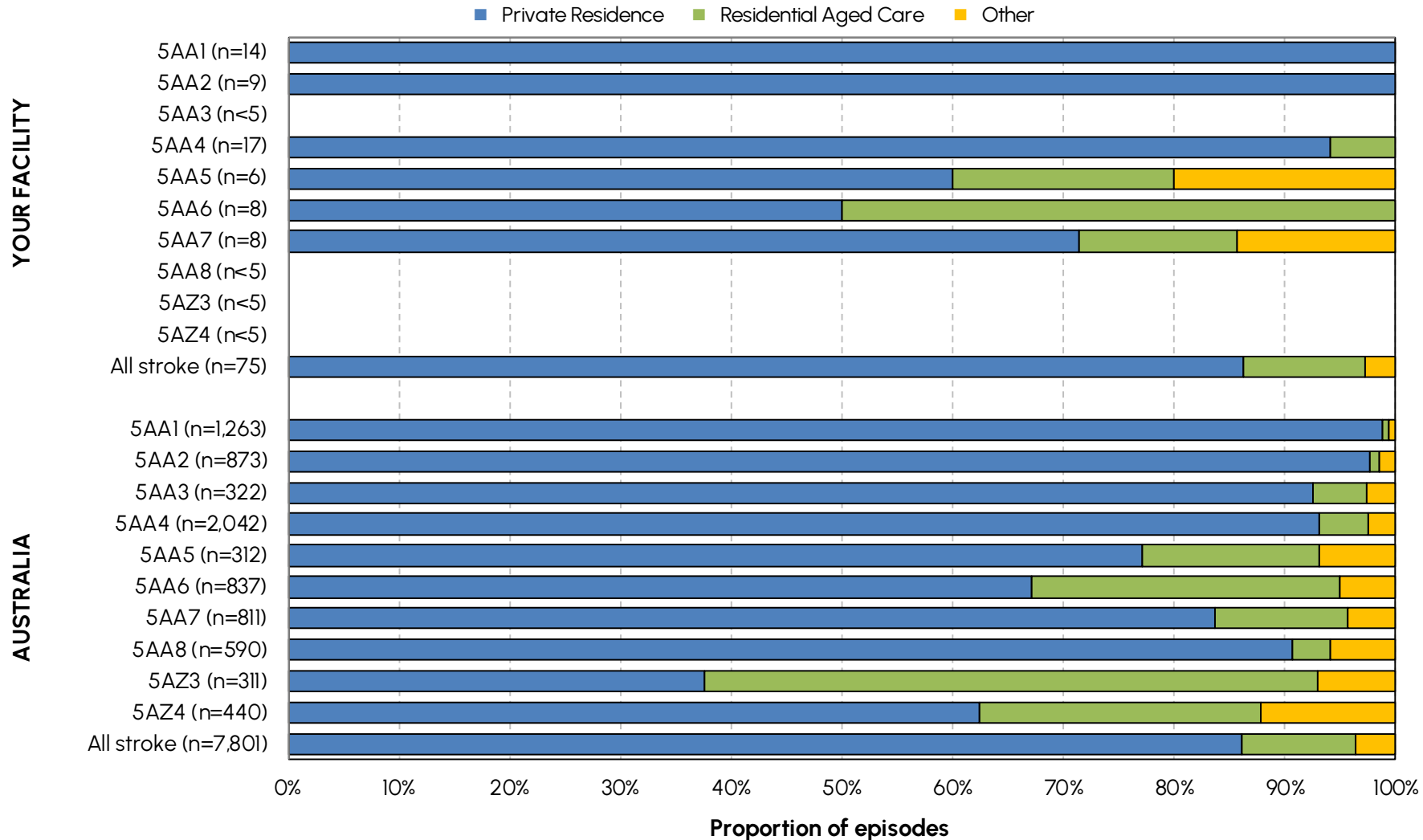
YOUR FACILITY — N (%)					
Impairment	Private residence	Residential Aged Care	Hospital	Other	All episodes**
1.1 Haemorrhagic	0 (0.0)	1 (25.0)	1 (25.0)	1 (25.0)	4 (100.0)
1.2 Ischaemic	1 (25.0)	2 (50.0)	0 (0.0)	0 (0.0)	4 (100.0)
<b>All Stroke</b>	<b>1 (12.5)</b>	<b>3 (37.5)</b>	<b>1 (12.5)</b>	<b>1 (12.5)</b>	<b>8 (100.0)</b>

AUSTRALIA — N (%)					
Impairment	Private residence	Residential Aged Care	Hospital	Other	All episodes**
1.1 Haemorrhagic	31 (17.4)	46 (25.8)	41 (23.0)	43 (24.2)	178 (100.0)
1.2 Ischaemic	75 (15.6)	129 (26.8)	113 (23.4)	131 (27.2)	482 (100.0)
<b>All Stroke</b>	<b>106 (16.1)</b>	<b>175 (26.5)</b>	<b>154 (23.3)</b>	<b>174 (26.4)</b>	<b>660 (100.0)</b>

\*\* There was 2 episode(s) in YOUR FACILITY and 51 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



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



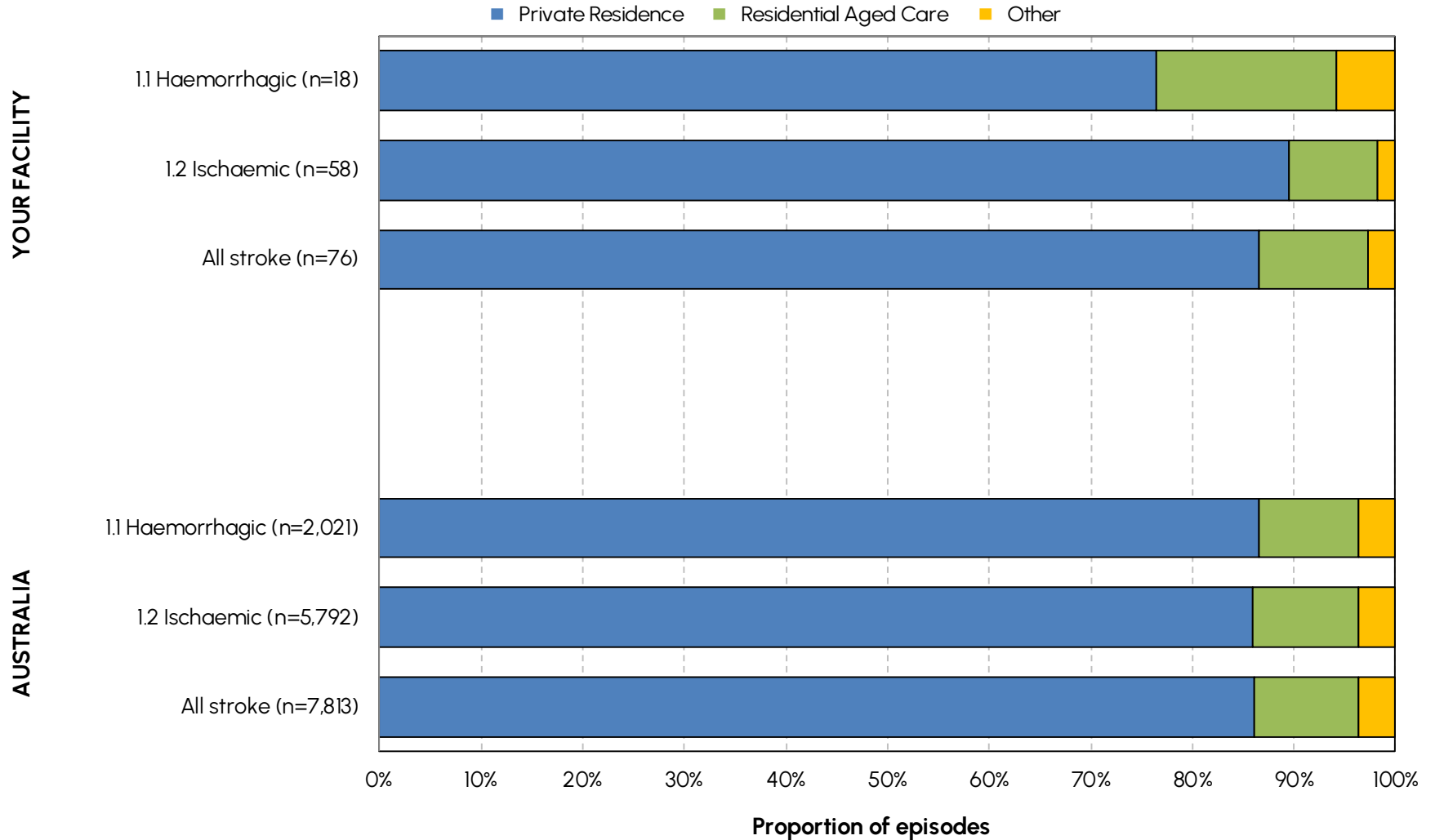
# Final accommodation post discharge by AN-SNAP class

AN-SNAP class V5	YOUR FACILITY — N (%)				
	Private residence	Residential Aged Care	Other	Missing	All episodes
5AA1 (motor 63-91, cognition 30-35)	14 (100.0)	0 (0.0)	0 (0.0)	0	14 (100.0)
5AA2 (motor 63-91, cognition 21-29)	9 (100.0)	0 (0.0)	0 (0.0)	0	9 (100.0)
5AA3 (motor 63-91, cognition 5-20)	2 (100.0)	0 (0.0)	0 (0.0)	0	2 (100.0)
5AA4 (motor 44-62, cognition 18-35)	16 (94.1)	1 (5.9)	0 (0.0)	0	17 (100.0)
5AA5 (motor 44-62, cognition 5-17)	3 (60.0)	1 (20.0)	1 (20.0)	1	5 (100.0)
5AA6 (motor 19-43, Age ≥ 80)	4 (50.0)	4 (50.0)	0 (0.0)	0	8 (100.0)
5AA7 (motor 19-43, Age 67-79)	5 (71.4)	1 (14.3)	1 (14.3)	1	7 (100.0)
5AA8 (motor 19-43, Age ≤ 66)	3 (100.0)	0 (0.0)	0 (0.0)	0	3 (100.0)
5AZ3 (motor 13-18, Age ≥ 79)	3 (75.0)	1 (25.0)	0 (0.0)	0	4 (100.0)
5AZ4 (motor 13-18, Age ≤ 78)	4 (100.0)	0 (0.0)	0 (0.0)	0	4 (100.0)
<b>All Stroke AN-SNAP Classes</b>	<b>63 (86.3)</b>	<b>8 (11.0)</b>	<b>2 (2.7)</b>	<b>2</b>	<b>73 (100.0)</b>

AN-SNAP class V5	AUSTRALIA — N (%)				
	Private residence	Residential Aged Care	Other	Missing	All episodes
5AA1 (motor 63-91, cognition 30-35)	1,214 (96.1)	7 (0.6)	8 (0.6)	34	1,263 (100.0)
5AA2 (motor 63-91, cognition 21-29)	841 (96.3)	7 (0.8)	13 (1.5)	12	873 (100.0)
5AA3 (motor 63-91, cognition 5-20)	287 (89.1)	15 (4.7)	8 (2.5)	12	322 (100.0)
5AA4 (motor 44-62, cognition 18-35)	1,823 (89.3)	85 (4.2)	49 (2.4)	85	2,042 (100.0)
5AA5 (motor 44-62, cognition 5-17)	233 (74.7)	48 (15.4)	21 (6.7)	10	312 (100.0)
5AA6 (motor 19-43, Age ≥ 80)	538 (64.3)	224 (26.8)	40 (4.8)	35	837 (100.0)
5AA7 (motor 19-43, Age 67-79)	653 (80.5)	93 (11.5)	34 (4.2)	31	811 (100.0)
5AA8 (motor 19-43, Age ≤ 66)	496 (84.1)	19 (3.2)	32 (5.4)	43	590 (100.0)
5AZ3 (motor 13-18, Age ≥ 79)	112 (36.0)	165 (53.1)	21 (6.8)	13	311 (100.0)
5AZ4 (motor 13-18, Age ≤ 78)	256 (58.2)	104 (23.6)	50 (11.4)	30	440 (100.0)
<b>All Stroke AN-SNAP Classes</b>	<b>6,453 (82.7)</b>	<b>767 (9.8)</b>	<b>276 (3.5)</b>	<b>305</b>	<b>7,801 (100.0)</b>

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

# Final accommodation post discharge by impairment



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

# Final accommodation post discharge by impairment

YOUR FACILITY — N (%)					
Impairment	Residential Aged				
	Private residence	Care	Other	Missing	All episodes
1.1 Haemorrhagic	13 (76.5)	3 (17.6)	1 (5.9)	1	17 (100.0)
1.2 Ischaemic	51 (89.5)	5 (8.8)	1 (1.8)	1	57 (100.0)
<b>All Stroke</b>	<b>64 (86.5)</b>	<b>8 (10.8)</b>	<b>2 (2.7)</b>	<b>2</b>	<b>74 (100.0)</b>

AUSTRALIA — N (%)					
Impairment	Residential Aged				
	Private residence	Care	Other	Missing	All episodes
1.1 Haemorrhagic	1,672 (82.7)	188 (9.3)	71 (3.5)	90	2,021 (100.0)
1.2 Ischaemic	4,790 (82.7)	581 (10.0)	205 (3.5)	216	5,792 (100.0)
<b>All Stroke</b>	<b>6,462 (82.7)</b>	<b>769 (9.8)</b>	<b>276 (3.5)</b>	<b>306</b>	<b>7,813 (100.0)</b>

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

# Interim and final accommodation post discharge



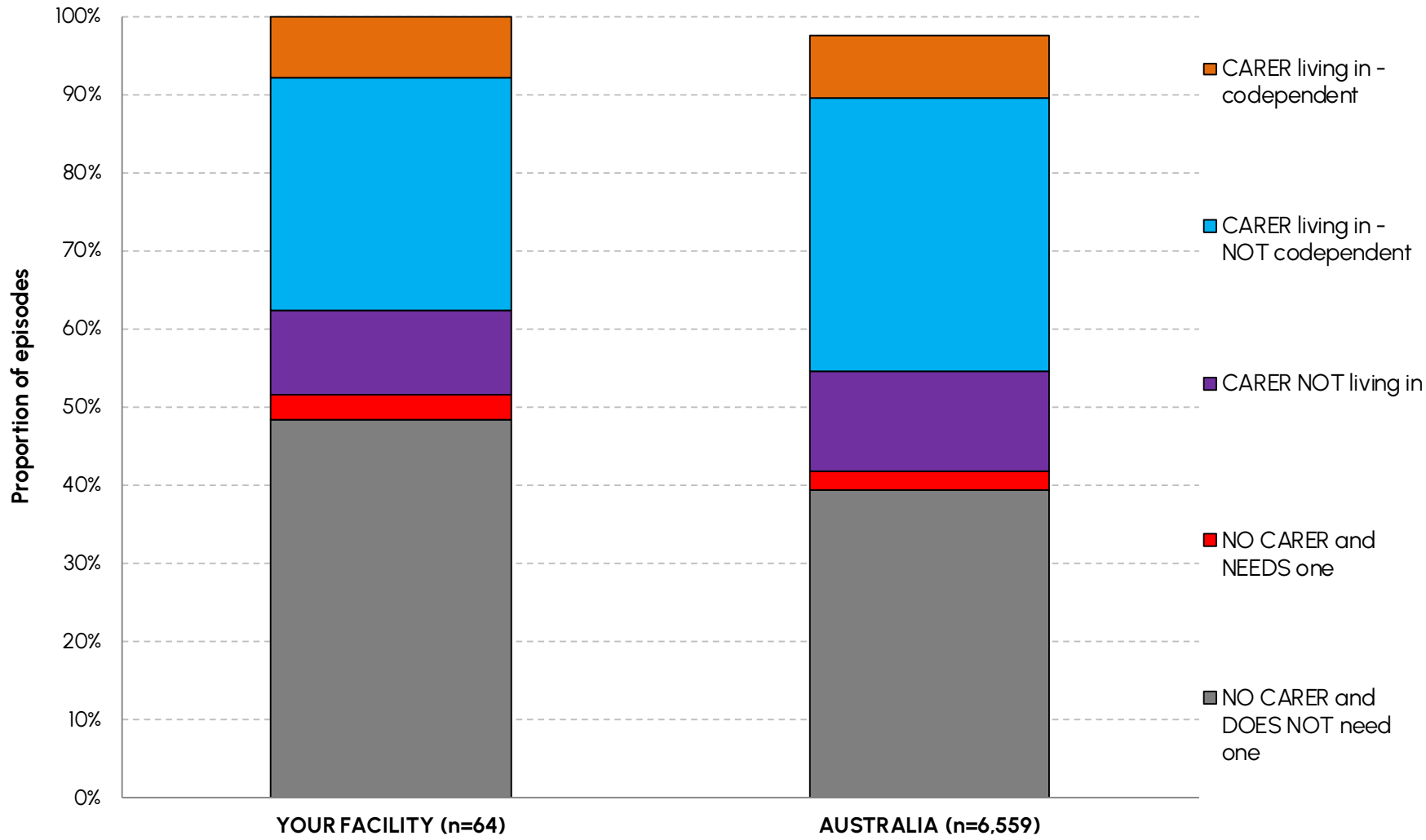
NOTE: Includes only those episodes with mode of episode end equal to either final or interim accommodation

# Interim and final accommodation post discharge

Accommodation	YOUR FACILITY				AUSTRALIA			
	Interim	(%)	Final	(%)	Interim	(%)	Final	(%)
Private residence	1	(16.7%)	63	(88.7%)	106	(17.4%)	6,453	(87.6%)
Residential Aged Care	3	(50.0%)	8	(11.3%)	175	(28.7%)	767	(10.4%)
Community group home	0	(0.0%)	0	(0.0%)	3	(0.5%)	31	(0.4%)
Boarding house	0	(0.0%)	0	(0.0%)	2	(0.3%)	13	(0.2%)
Transitional living unit	1	(16.7%)	0	(0.0%)	130	(21.3%)	51	(0.7%)
Hospital	1	(16.7%)	—		154	(25.3%)	—	
Other	0	(0.0%)	0	(0.0%)	39	(6.4%)	48	(0.7%)
Missing/Unknown	2		4		51		438	
<b>All episodes</b>	<b>8</b>	<b>(100.0)</b>	<b>75</b>	<b>(100.0)</b>	<b>660</b>	<b>(100.0)</b>	<b>7,801</b>	<b>(100.0)</b>

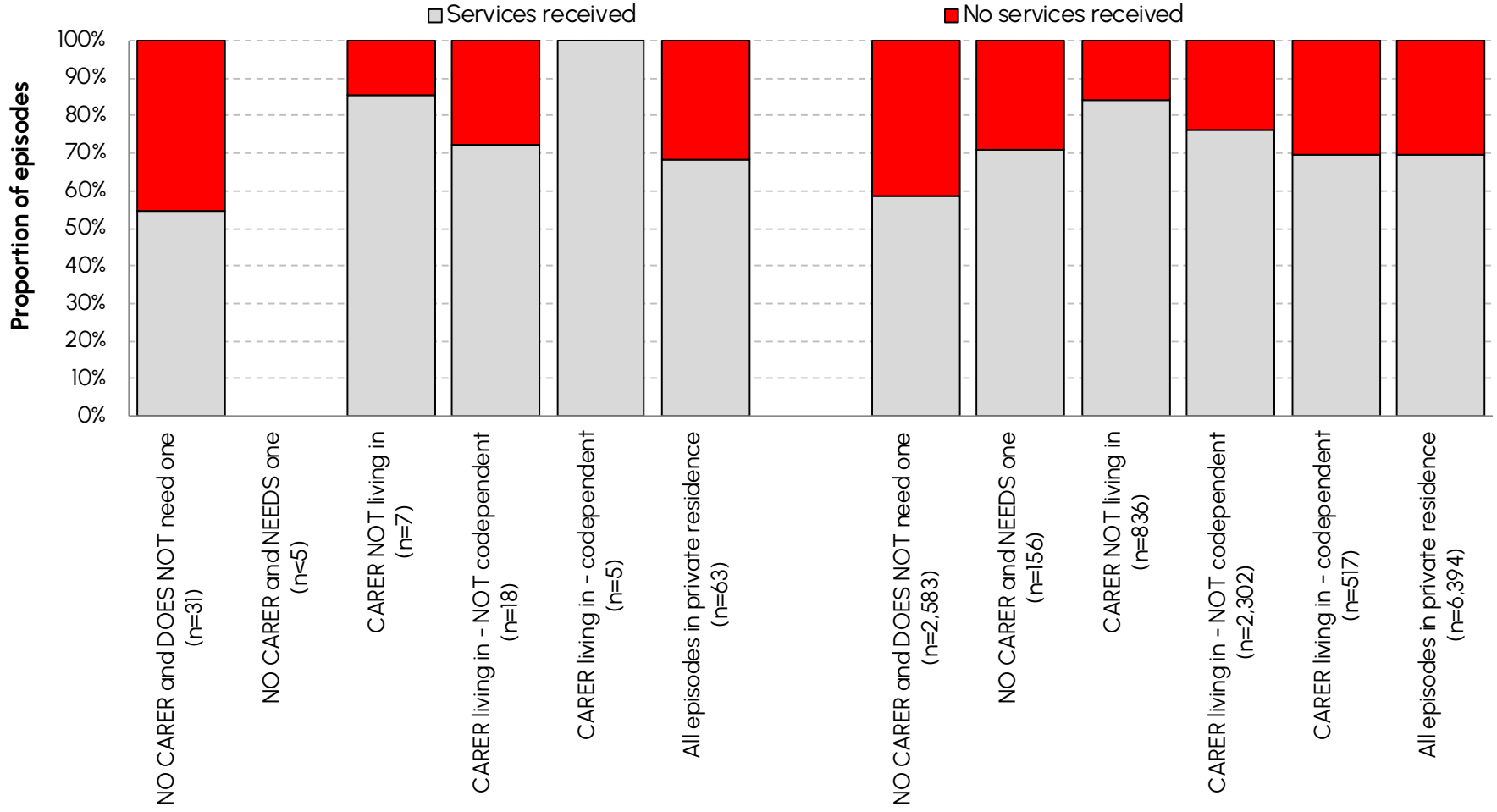
NOTE: Includes only those episodes with mode of episode end equal to either final or interim accommodation

# Carer status post discharge



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

# Any services received post discharge by carer status



**YOUR FACILITY (n=63)**

**AUSTRALIA (n=6,394)**

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

# Carer status and any services received post discharge

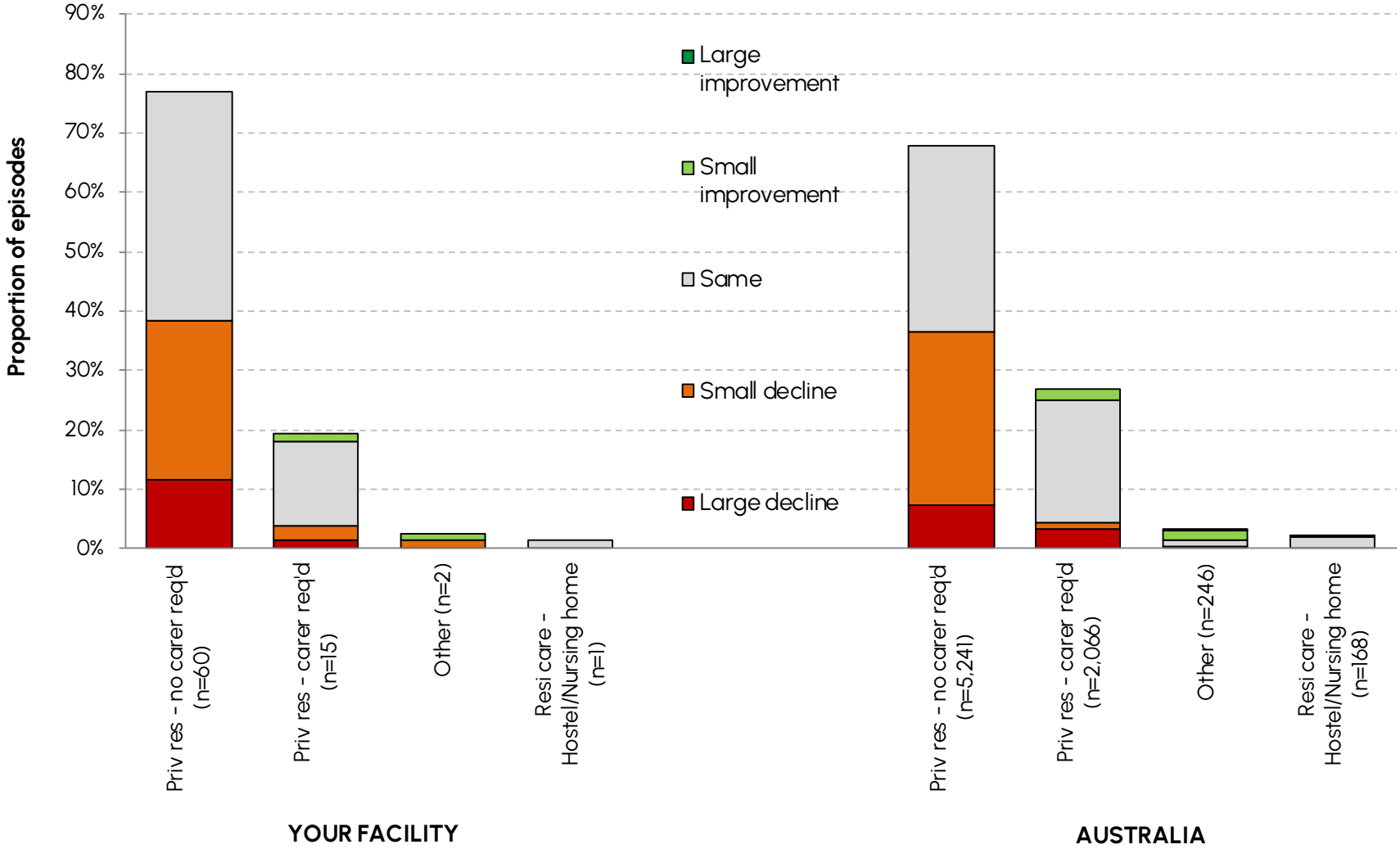
Carer status post discharge	YOUR FACILITY		AUSTRALIA	
	No.	%	No.	%
NO CARER and DOES NOT need one	31	48.4	2,588	40.4
NO CARER and NEEDS one	2	3.1	156	2.4
CARER NOT living in	7	10.9	837	13.1
CARER living in - NOT codependent	19	29.7	2,306	36.0
CARER living in - codependent	5	7.8	517	8.1
Missing	0		155	
<b>All episodes in private residence</b>	<b>64</b>	<b>100.0</b>	<b>6,559</b>	<b>100.0</b>

Carer status post discharge	Any services received post discharge?			
	YOUR FACILITY		AUSTRALIA	
	Yes (%)	No (%)	Yes (%)	No (%)
NO CARER and DOES NOT need one	54.8	45.2	58.4	41.6
NO CARER and NEEDS one	—	—	71.2	28.8
CARER NOT living in	85.7	14.3	84.0	16.0
CARER living in - NOT codependent	72.2	27.8	76.3	23.7
CARER living in - codependent	100.0	0.0	69.8	30.2
<b>All episodes in private residence</b>	<b>68.3</b>	<b>31.7</b>	<b>69.4</b>	<b>30.6</b>

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

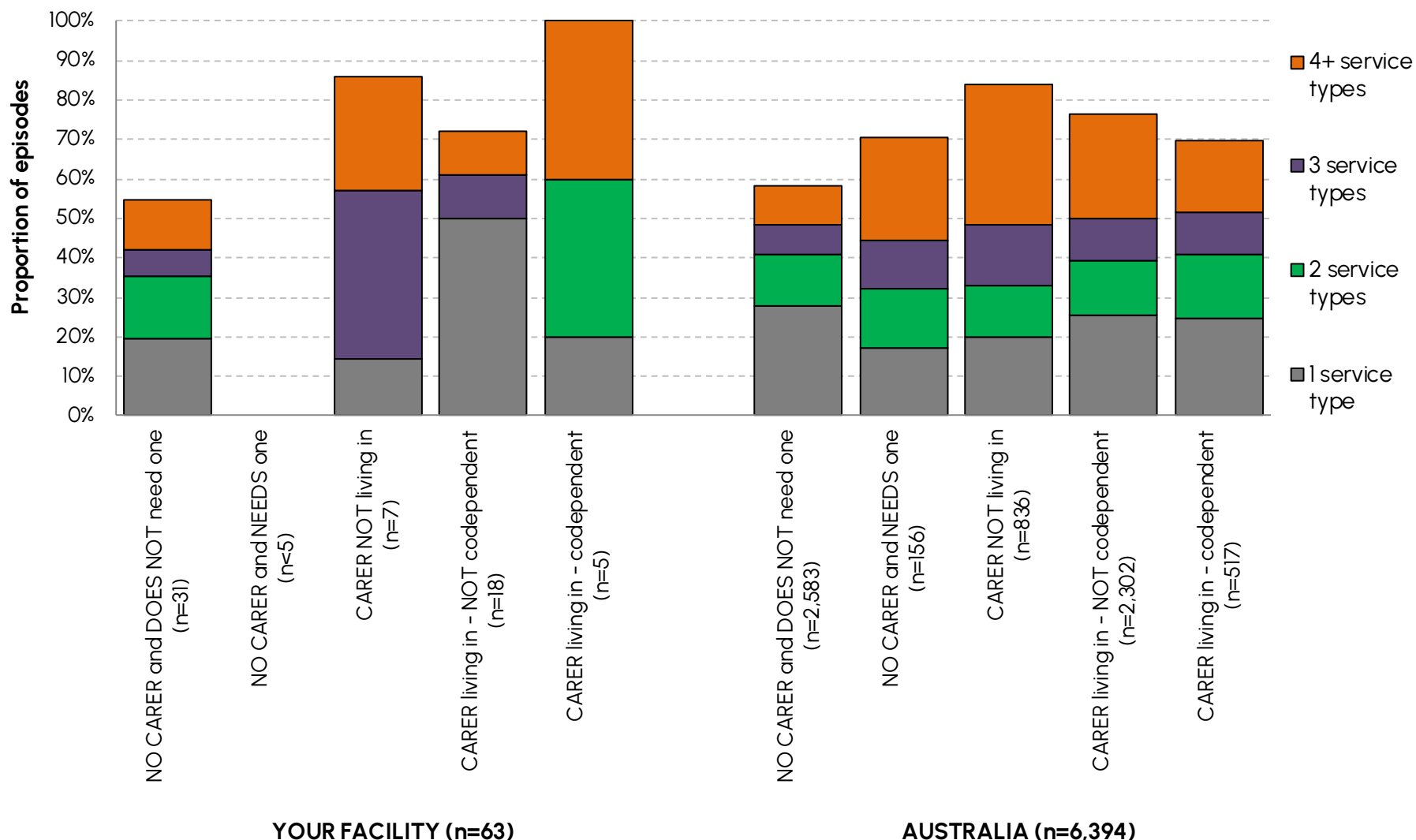


# Change in prior accommodation post discharge



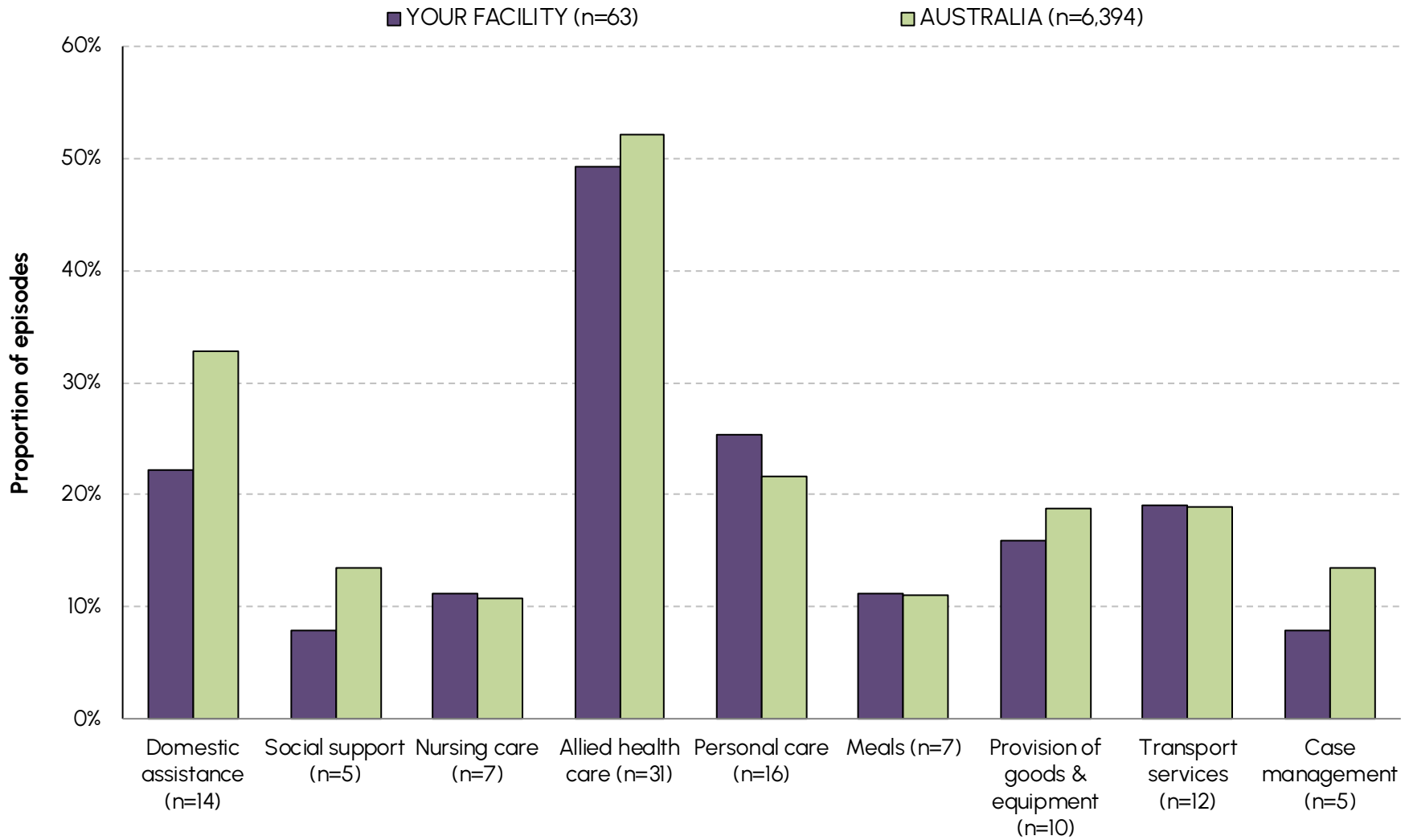
NOTE: Includes only those episodes whose final accommodation is private residence and with known carer status and known services status

# Number of services received post discharge by carer status



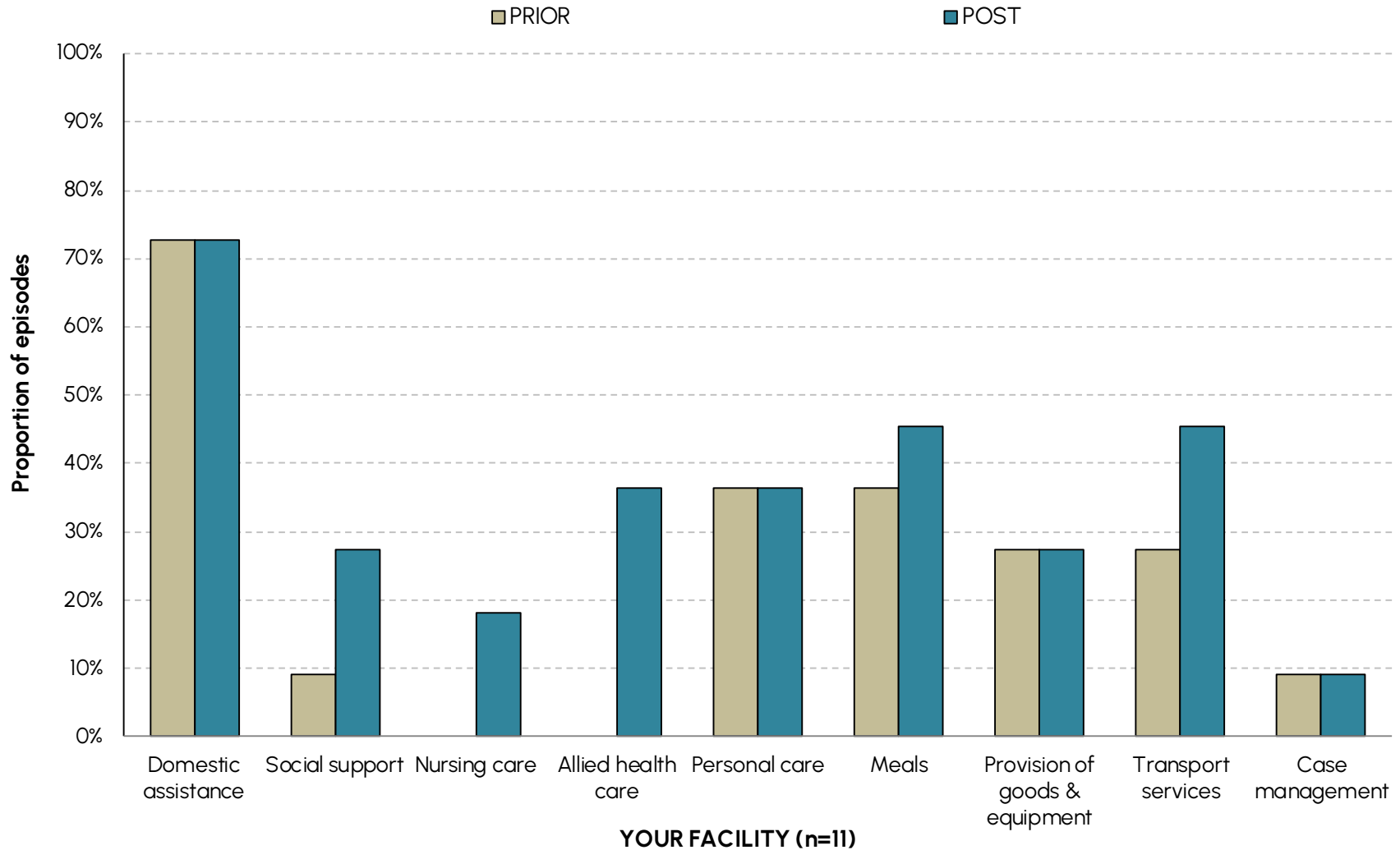
NOTE: Includes only those episodes whose final accommodation is private residence and with known carer status and known services status

# Type of services received post discharge



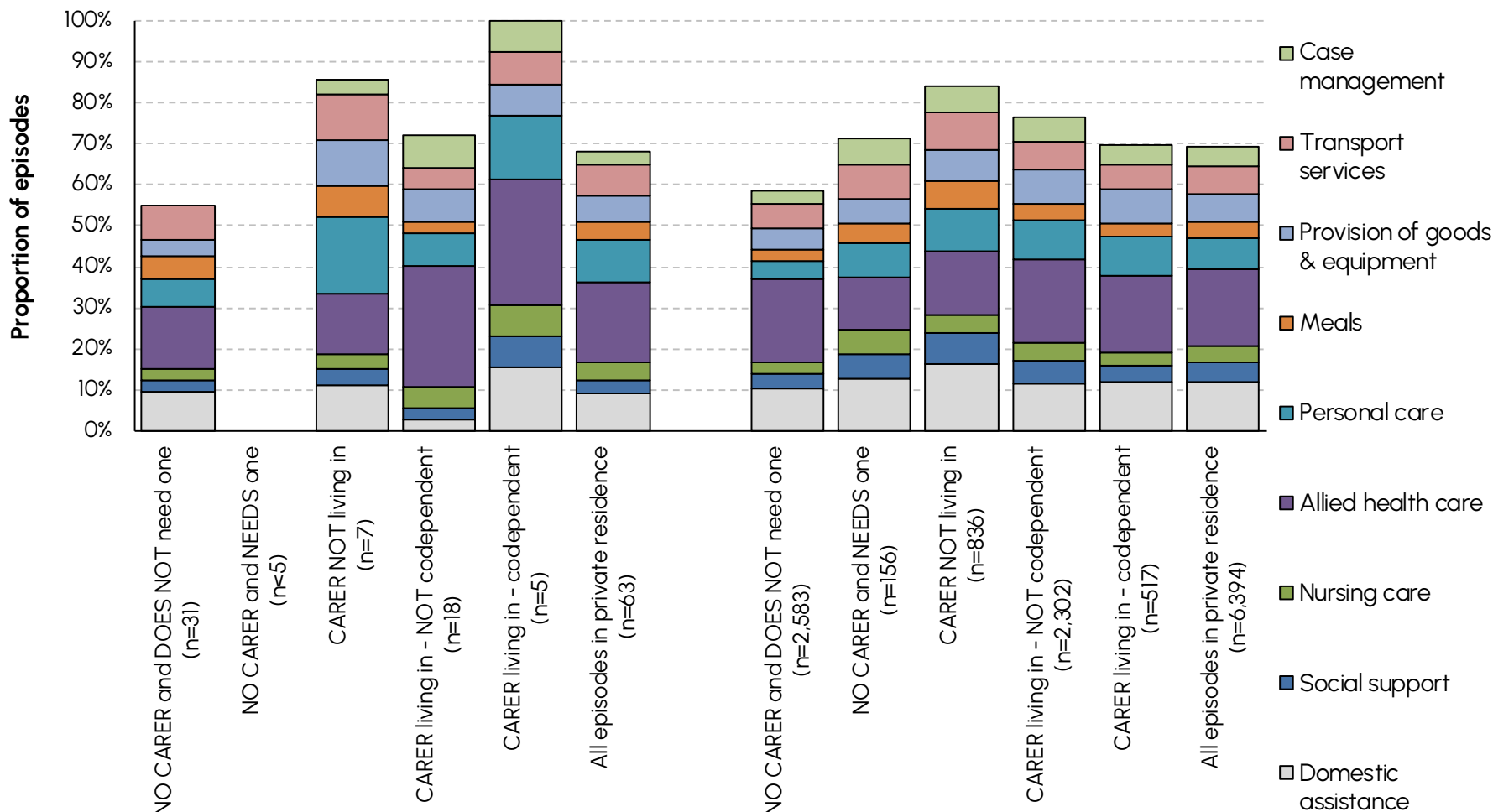
NOTE: Includes only those episodes whose final accommodation is private residence and with known carer status and known services status

# Type of services received pre and post rehabilitation



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



**YOUR FACILITY (n=63)**

**AUSTRALIA (n=6,394)**

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



Carer status post discharge - YOUR FACILITY						
Services received post discharge	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	31	2	7	18	5	<b>63</b>
<b>Percent of episodes receiving:</b>						
No services	45.2	0.0	14.3	27.8	0.0	<b>31.7</b>
1 service type	19.4	50.0	14.3	50.0	20.0	<b>28.6</b>
2 service types	16.1	0.0	0.0	0.0	40.0	<b>11.1</b>
3 service types	6.5	50.0	42.9	11.1	0.0	<b>12.7</b>
4 or more service types	12.9	0.0	28.6	11.1	40.0	<b>15.9</b>
<b>Service Type received</b>						
Domestic assistance	22.6	50.0	42.9	5.6	40.0	<b>22.2</b>
Social support	6.5	0.0	14.3	5.6	20.0	<b>7.9</b>
Nursing care	6.5	50.0	14.3	11.1	20.0	<b>11.1</b>
Allied health care	35.5	50.0	57.1	61.1	80.0	<b>49.2</b>
Personal care	16.1	50.0	71.4	16.7	40.0	<b>25.4</b>
Meals	12.9	0.0	28.6	5.6	0.0	<b>11.1</b>
Provision of goods & equipment	9.7	0.0	42.9	16.7	20.0	<b>15.9</b>
Transport services	19.4	0.0	42.9	11.1	20.0	<b>19.0</b>
Case management	0.0	0.0	14.3	16.7	20.0	<b>7.9</b>

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

Carer status post discharge - AUSTRALIA						
Services received post discharge	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	2,583	156	836	2,302	517	<b>6,394</b>
<b>Percent of episodes receiving:</b>						
No services	41.6	28.8	16.0	23.7	30.2	<b>30.6</b>
1 service type	28.0	17.3	19.7	25.3	24.6	<b>25.4</b>
2 service types	12.7	14.7	13.3	13.8	16.4	<b>13.5</b>
3 service types	7.5	12.2	15.2	11.0	10.4	<b>10.2</b>
4 or more service types	10.1	26.3	35.6	26.2	18.4	<b>20.3</b>
<b>Service Type received</b>						
Domestic assistance	22.8	43.6	56.2	34.9	30.4	<b>32.6</b>
Social support	7.0	21.2	25.0	16.7	10.8	<b>13.5</b>
Nursing care	6.5	19.9	15.0	13.7	8.1	<b>10.7</b>
Allied health care	44.3	44.2	53.3	61.2	48.5	<b>51.9</b>
Personal care	9.6	28.2	35.2	28.7	24.8	<b>21.5</b>
Meals	6.1	17.3	23.3	12.2	8.3	<b>11.0</b>
Provision of goods & equipment	10.8	20.5	26.2	24.4	21.1	<b>18.8</b>
Transport services	12.8	28.2	31.0	21.2	15.9	<b>18.8</b>
Case management	6.9	21.8	21.8	17.4	12.2	<b>13.4</b>

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

## 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 5, introduced in July 2022 and used in these reports, uses the episode's impairment, age, weighted FIM motor admission score and FIM cognition score to determine which of 48 inpatient (admitted overnight adult) rehabilitation classes the episode should be assigned to.

Between AN-SNAP V4 and V5 there have been some minor refinements to the positioning of age and FIM score splits, and minor revisions to the impairment-specific weights used for the FIM item scores in the calculation of a motor score; orthopaedic replacement classes (lost in Version 4) have returned and brain injury classes are now split first on cognition FIM scores and second on motor FIM scores. 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 V5 please refer to the AROC website.

## AROC

The Australasian Rehabilitation Outcomes Centre (AROC) is the Australian and New Zealand rehabilitation medicine **integrated outcomes centre** that collects rehabilitation outcome measures at point-of-care from both private and public rehabilitation services across both countries. Established in 2002 it is a joint initiative of the Australasian rehabilitation sector (providers, payers, regulators and consumers) and current membership encompasses close to 100% of all Australian and New Zealand rehabilitation services, who 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.

## 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.

## COVID-19

The immediate impact of COVID-19 in 2020 on rehabilitation was a 12% decline in the number of rehabilitation episodes following temporary suspension of elective surgeries, ward re-assignments and closures, and fewer traumatic accidents. There is still an ongoing impact of COVID-19 on rehabilitation in the form of reduced inpatient beds, increased patient complexity and staffing issues.

The extent of the impact of COVID-19 on the demand for rehabilitation in both the inpatient or community rehabilitation is still being realised. To help measure the impact of COVID, and importantly long COVID, AROC added COVID specific impairment codes, comorbidity and complication codes to the AROC datasets effective July 2022. Appendix 2 lists the COVID impairment codes, which map to AN-SNAP V5 classes 5A91-5A93 & 5AZ3-5AZ4. COVID related data provided to AROC through the adjunct data collection along with entries in the patient comment field have been mapped to the new COVID codes.

- **Guidelines for the collection and coding of COVID-19 AROC data** can be found at <https://documents.uow.edu.au/content/groups/public/@web/@chsd/@aroc/documents/doc/uow272916.pdf>
- **The AROC COVID Coding Decision Tree** can be found at <https://documents.uow.edu.au/content/groups/public/@web/@chsd/@aroc/documents/doc/uow272917.pdf>
- Updated **Data Collection Forms** can be found at <https://ahsri.atlassian.net/wiki/spaces/AD/pages/17268778/Data+Collection+Forms>
- Services who do not have access to the new COVID codes are asked to identify patients who have had COVID-19 in the AROC data set services by entering the relevant **COVID-19 impairment code, comorbidity or complication** (as appropriate) in the patient comment field.

## COVID-19 (cont.)

The potential sequelae of COVID-19 appear to be numerous, so the functional deficits of these patients that result in the need for rehabilitation can be quite varied. To enable comprehensive reporting of rehabilitation outcomes for these patients, the National COVID-19 rehabilitation adjunct data collection was created, in collaboration with the NSW Agency for Clinical Innovation's Rehabilitation Community of Practice.

The national COVID-19 rehabilitation adjunct data collection covers all care settings – in-reach, inpatient and ambulatory – and services do not need to be an AROC member to participate. The data collection is to be completed for **ALL** patients who have received a positive diagnosis of COVID-19 and are now participating in rehabilitation in any care setting (even if COVID codes have been used in the AROC data collection). Where possible and appropriate, the National COVID-19 rehabilitation adjunct data will be linked with the AROC inpatient and/or ambulatory data collections.

The National COVID-19 rehabilitation adjunct data collection is entered online at  
<https://apps.ahsri.uow.edu.au/redcap/surveys/?s=DR4AE3FHAX>

All relevant data items must be known prior to commencing data entry as there is no save and resume function. For convenience a data collection form is provided as an optional mechanism to collect the data (available here  
<https://apps.ahsri.uow.edu.au/downloads/CovidCollection.pdf>).

## 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 = recommenced rehabilitation episode following suspension.**

## Data completeness score

The data completeness 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).

## Impairment-specific weighted FIM motor scores

AN-SNAP v5, like Version 4, uses impairment-specific weighted FIM motor scores in the inpatient (admitted overnight adult) rehabilitation 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 the FIM motor item stairs where 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.

## 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.

## 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.



## **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. The Valid FIM flag is used in analysis which measures FIM scores as an outcome.

## **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. The Valid LOS flag is used in analysis which measures LOS as an outcome.

## **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 4 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 haemorrhagic stroke

### 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 ischaemic stroke

## 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

## COVID-19 CONDITIONS

- 18.1 COVID-19 with pulmonary issues
- 18.2 COVID-19 with deconditioning
- 18.9 COVID-19 all other

# Appendix 3: AN-SNAP V5 Overnight Rehabilitation Classes



Class	Description of AN-SNAP class
5AA1	Stroke, Weighted FIM Motor 63 - 91, FIM Cognition 30 - 35
5AA2	Stroke, Weighted FIM Motor 63 - 91, FIM Cognition 21 - 29
5AA3	Stroke, Weighted FIM Motor 63 - 91, FIM Cognition 5 - 20
5AA4	Stroke, Weighted FIM Motor 44 - 62, FIM Cognition 18 - 35
5AA5	Stroke, Weighted FIM Motor 44 - 62, FIM Cognition 5 - 17
5AA6	Stroke, Weighted FIM Motor 19 - 43, Age >= 80
5AA7	Stroke, Weighted FIM Motor 19 - 43, Age 67 - 79
5AA8	Stroke, Weighted FIM Motor 19 - 43 Age 18 - 66
5AB1	Brain dysfunction, FIM Cognition 27 - 35 Weighted FIM Motor 59 - 91
5AB2	Brain dysfunction, FIM Cognition 27 - 35 Weighted FIM Motor 19 - 58
5AB3	Brain dysfunction, FIM Cognition 19 - 26 Weighted FIM Motor 50 - 91
5AB4	Brain dysfunction, FIM Cognition 19 - 26 Weighted FIM Motor 19 - 49
5AB5	Brain dysfunction, FIM Cognition 5 - 18 Weighted FIM Motor 39 - 91
5AB6	Brain dysfunction, FIM Cognition 5 - 18 Weighted FIM Motor 19 - 38
5AC1	Neurological conditions, Weighted FIM Motor 70 - 91
5AC2	Neurological conditions, Weighted FIM Motor 50 - 69
5AC3	Neurological conditions, Weighted FIM Motor 19 - 49
5AD1	Spinal cord dysfunction, Weighted FIM Motor 55 - 91
5AD2	Spinal cord dysfunction, Weighted FIM Motor 37 - 54
5AD3	Spinal cord dysfunction, Weighted FIM Motor 19 - 36
5AE1	Amputation of limb, Weighted FIM Motor 19-91
5AH1	Orthopaedic conditions, fractures, Weighted FIM Motor 48 - 91, FIM Cognition 33 - 35
5AH2	Orthopaedic conditions, fractures, Weighted FIM Motor 48 - 91, FIM Cognition 21 - 32
5AH3	Orthopaedic conditions, fractures, Weighted FIM Motor 48 - 91, FIM Cognition 5 - 20

Class	Description of AN-SNAP class
5AH4	Orthopaedic conditions, fractures, Weighted FIM Motor 19 - 47
5A41	Orthopaedic conditions, replacement (knee, hip, shoulder), Weighted FIM Motor 61 - 91
5A42	Orthopaedic conditions, replacement (knee, hip, shoulder), Weighted FIM Motor 45 - 60
5A43	Orthopaedic conditions, replacement (knee, hip, shoulder), Weighted FIM Motor 19 - 44
5A21	Orthopaedic conditions, all other, Weighted FIM Motor 57 - 91
5A22	Orthopaedic conditions, all other, Weighted FIM Motor 41 - 56
5A23	Orthopaedic conditions, all other, Weighted FIM Motor 19 - 40
5A31	Cardiac, Pain syndromes, and Pulmonary, Weighted FIM Motor 66 - 91
5A32	Cardiac, Pain syndromes, and Pulmonary, Weighted FIM Motor 38 - 65
5A33	Cardiac, Pain syndromes, and Pulmonary, Weighted FIM Motor 19 - 37
5AP1	Major Multiple Trauma, Weighted FIM Motor 51 - 91
5AP2	Major Multiple Trauma, Weighted FIM Motor 19 - 50
5AR1	Reconditioning, Weighted FIM Motor 64 - 91, FIM Cognition 29 - 35
5AR2	Reconditioning, Weighted FIM Motor 64 - 91, FIM Cognition 5 - 28
5AR3	Reconditioning, Weighted FIM Motor 48 - 63, FIM Cognition 19 - 35
5AR4	Reconditioning, Weighted FIM Motor 48 - 63, FIM Cognition 5 - 18
5AR5	Reconditioning, Weighted FIM Motor 19 - 47
5A91	All other impairments, Weighted FIM Motor 61 - 91
5A92	All other impairments, Weighted FIM Motor 42 - 60
5A93	All other impairments, Weighted FIM Motor 19 - 41
5AZ1	Weighted FIM Motor score 13-18, Brain, Spine, MMT, Burns, Age >= 59
5AZ2	Weighted FIM Motor score 13-18, Brain, Spine, MMT, Burns, Age 18 - 58
5AZ3	Weighted FIM Motor score 13-18, All other impairments, Age >= 79
5AZ4	Weighted FIM Motor score 13-18, All other impairments, Age 18 - 78

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- **Disclaimer**

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