

AROC Impairment Specific Report

Orthopaedic Replacements

INPATIENT – PATHWAY 3

July 2023 – June 2024

Anywhere Hospital



**Australasian
Faculty of
Rehabilitation
Medicine**



**UNIVERSITY
OF WOLLONGONG
AUSTRALIA**

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What's new in this report?



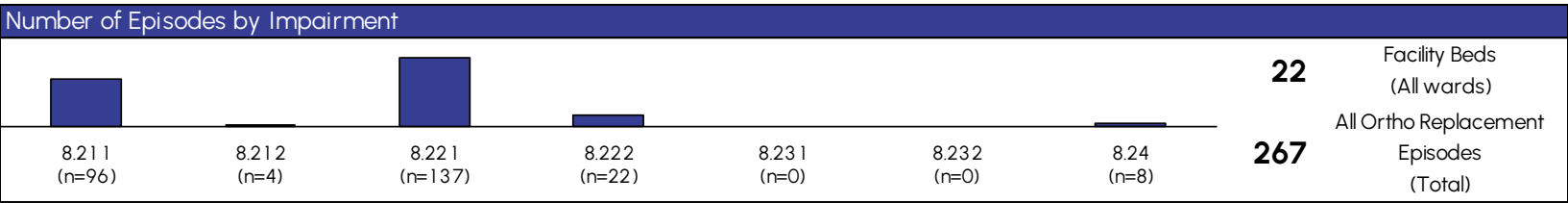
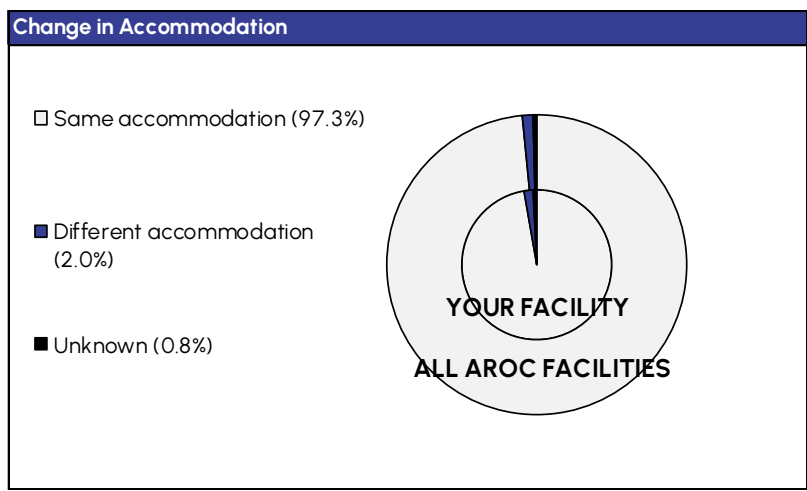
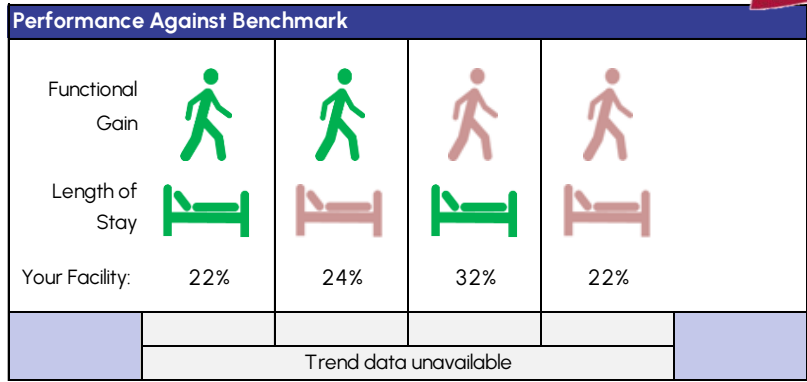
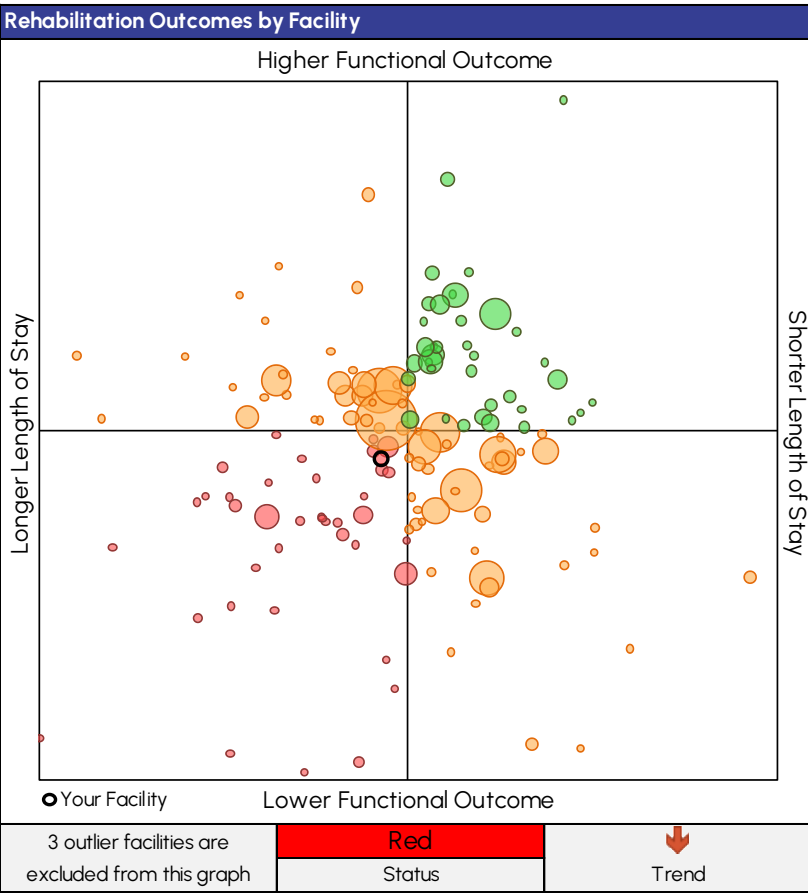
AN-SNAP Changes

- This AROC report uses 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 2024 as the base year.

Orthopaedic Replacements Dashboard



Orthopaedic Replacements Dashboard

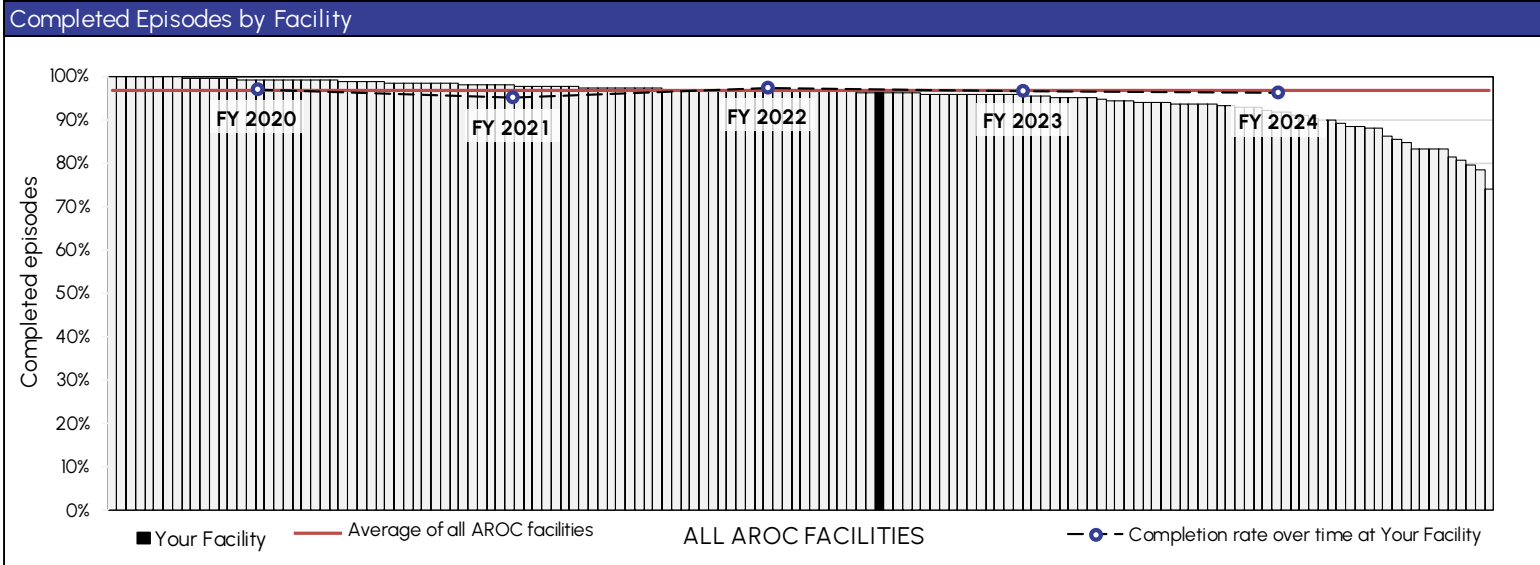


Key Indicators*	
YOUR FACILITY	ALL AROC FACILITIES
Average Age: 72.5	Average Age: 72.4
Mortality Rate: 0.0%	Mortality Rate: 0.0%
% with at least one comorbidity: 33%	% with at least one comorbidity: 36%
% with at least one complication: 11%	% with at least one complication: 9%
% episodes with start delays: 8%	% episodes with start delays: 6%
Days between onset and rehab episode: 6.7	Days between onset and rehab episode: 5.9
Days between clinically rehab ready & start date: 0.9	Days between clinically rehab ready & start date: 0.1

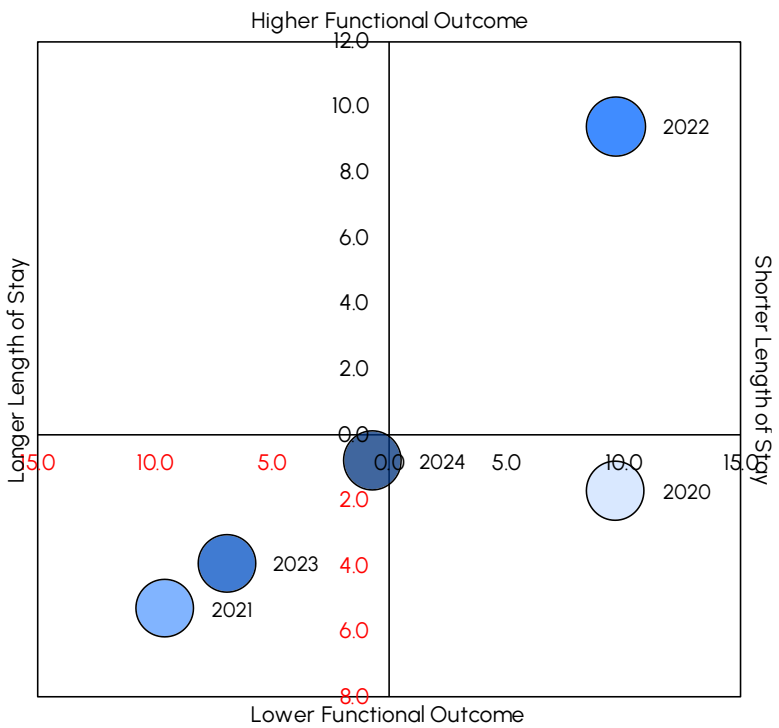
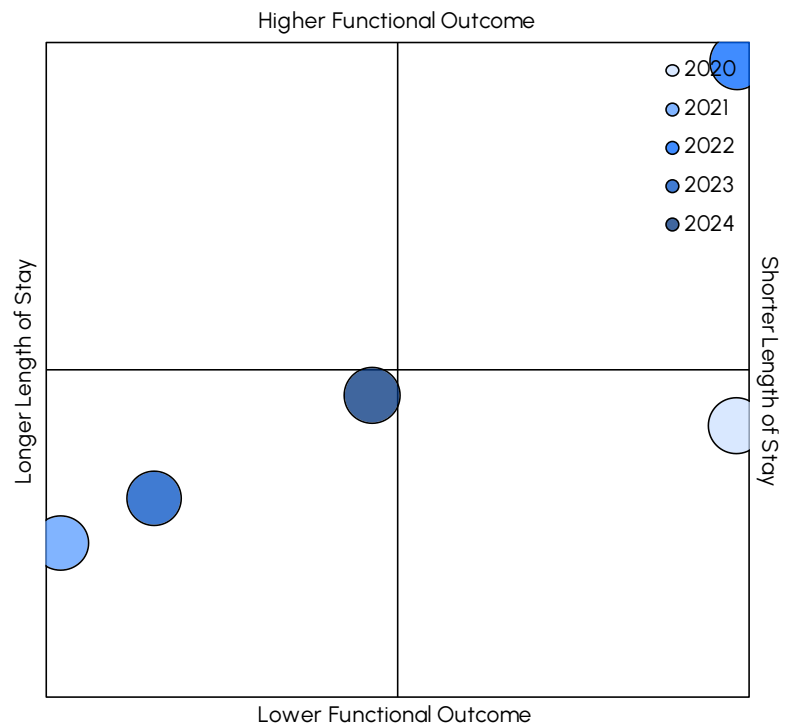
* Mean value provided unless otherwise specified

Facility FIM Training*	
FIM Credentialed Staff per 100 Episodes	FIM Credentialed Facility Trainers
7.8 Your Facility	3 Your Facility
7.2 ALL AROC FACILITIES (Mean)	2 AROC Suggested Minimum

*This includes all impairments from all wards



Quadrant Positions – last 5 years



NB: Data from before 2022 is benchmarked using AN-SNAP V4 classes. 2022 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

- Orthopaedic replacement episodes discharged during the reporting period (July 2023 – June 2024) and time series data covering five years.
- Benchmark group is ALL AROC FACILITIES.
- Casemix analysis uses version 5 AN-SNAP classes (Appendix 3). Casemix adjustment is calculated against ALL AROC FACILITIES' 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 orthopaedic replacement 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.

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

- 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

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

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

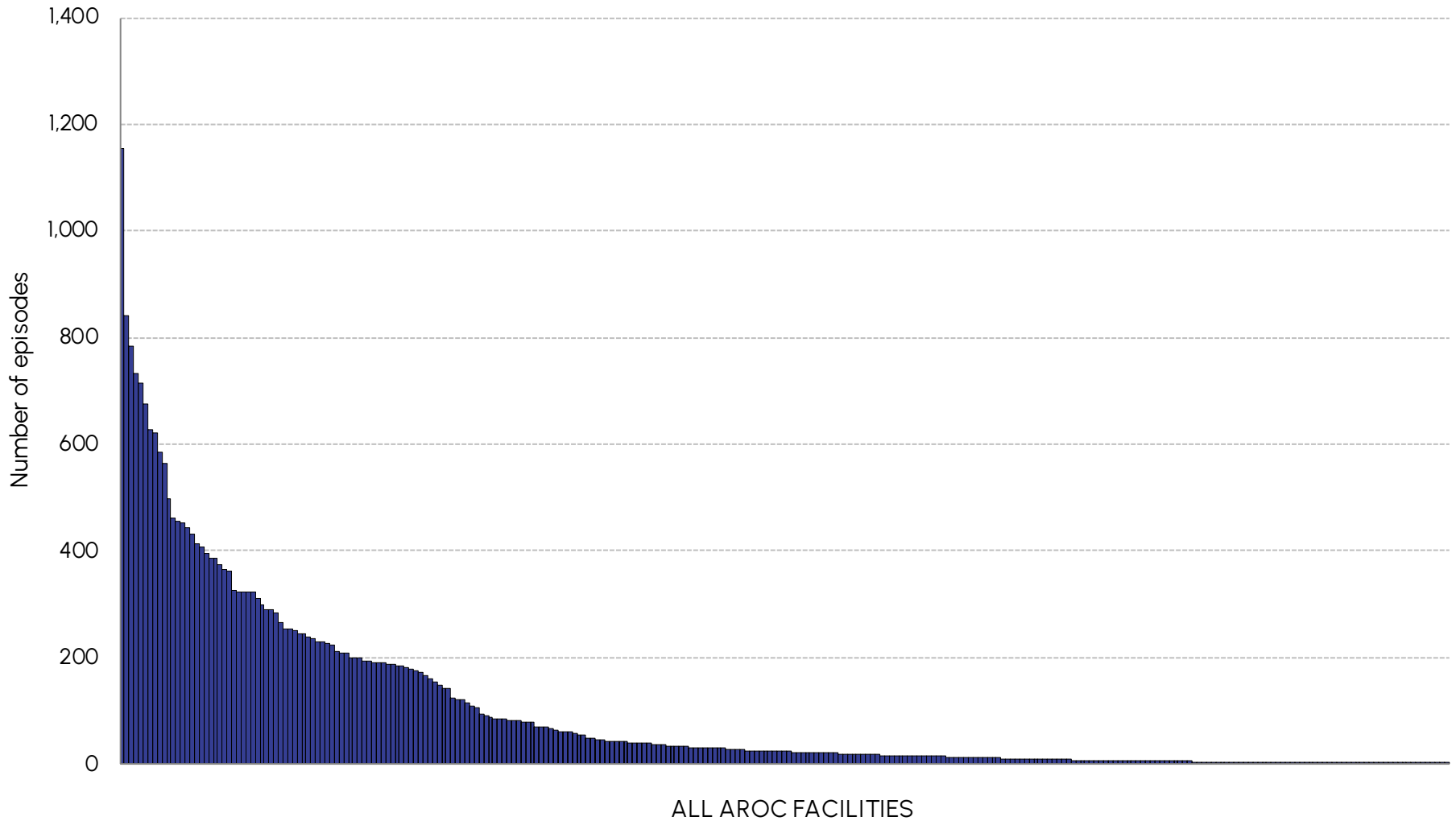
- 5A41 – Orthopaedic conditions, replacement (knee, hip, shoulder), Weighted FIM Motor 61 - 91
- 5A42 – Orthopaedic conditions, replacement (knee, hip, shoulder), Weighted FIM Motor 45 - 60
- 5A43 – Orthopaedic conditions, replacement (knee, hip, shoulder), Weighted FIM Motor 19 - 44
- 5AZ3 – Weighted 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.



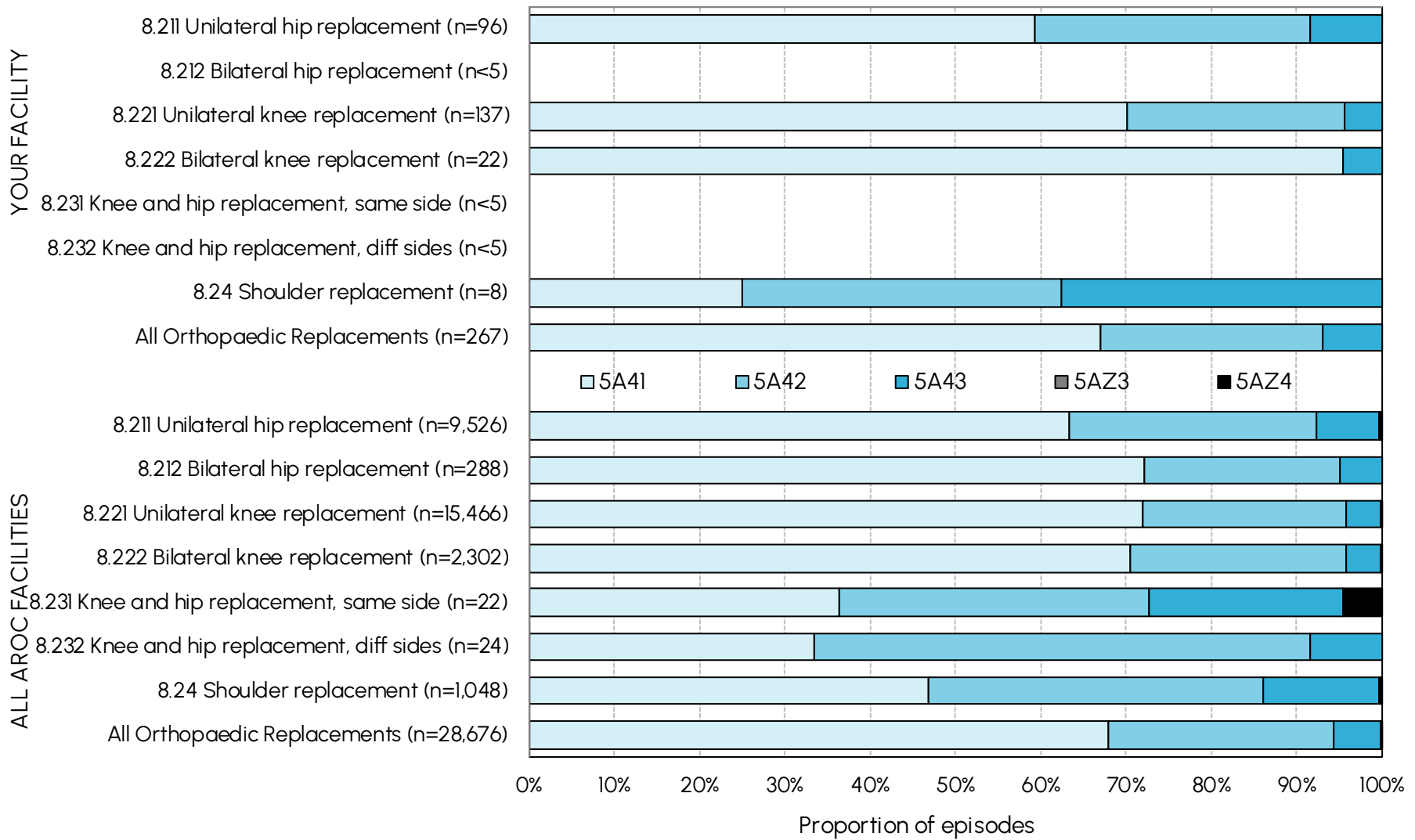
The BIG picture

Volume of episodes by facilities treating orthopaedic replacements



NOTE: 285 facilities reported at least one orthopaedic replacement episode, with 155 facilities reporting between 20 and 1,155 episodes in this reporting period

Proportion of episodes by impairment code and AN-SNAP class



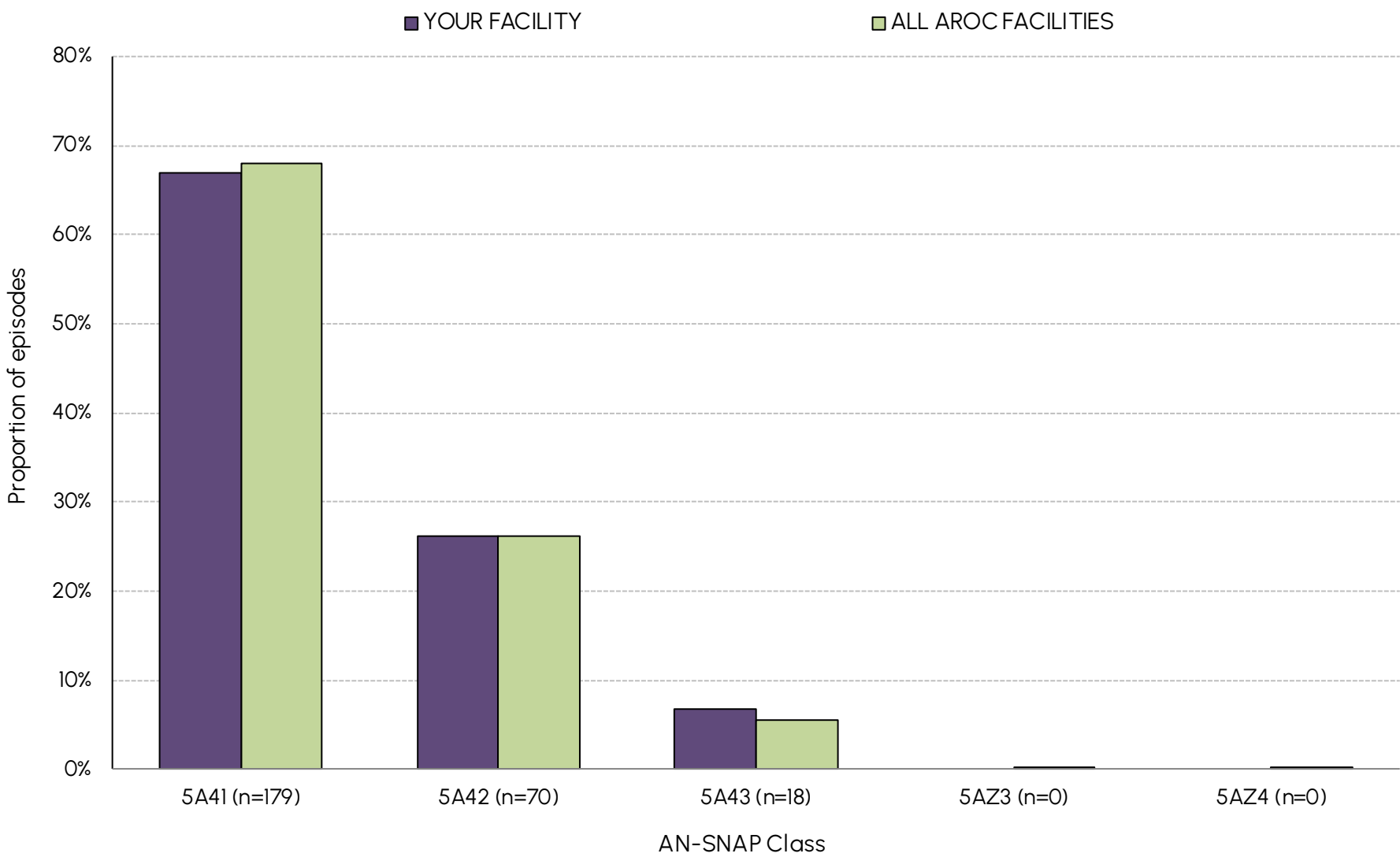
Episodes by impairment code and AN-SNAP class

Impairment	YOUR FACILITY — N (%)					All Replacement AN-SNAP classes*
	5A41	5A42	5A43	5AZ3	5AZ4	
8.211 Unilateral hip replacement	57 (59.4)	31 (32.3)	8 (8.3)	0 (0.0)	0 (0.0)	96 (100.0)
8.212 Bilateral hip replacement	3 (75.0)	1 (25.0)	0 (0.0)	0 (0.0)	0 (0.0)	4 (100.0)
8.221 Unilateral knee replacement	96 (70.1)	35 (25.5)	6 (4.4)	0 (0.0)	0 (0.0)	137 (100.0)
8.222 Bilateral knee replacement	21 (95.5)	0 (0.0)	1 (4.5)	0 (0.0)	0 (0.0)	22 (100.0)
8.231 Knee and hip replacement, same side	0 —	0 —	0 —	0 —	0 —	0 —
8.232 Knee and hip replacement, diff sides	0 —	0 —	0 —	0 —	0 —	0 —
8.24 Shoulder replacement	2 (25.0)	3 (37.5)	3 (37.5)	0 (0.0)	0 (0.0)	8 (100.0)
All Orthopaedic Replacements	179 (67.0)	70 (26.2)	18 (6.7)	0 (0.0)	0 (0.0)	267 (100.0)

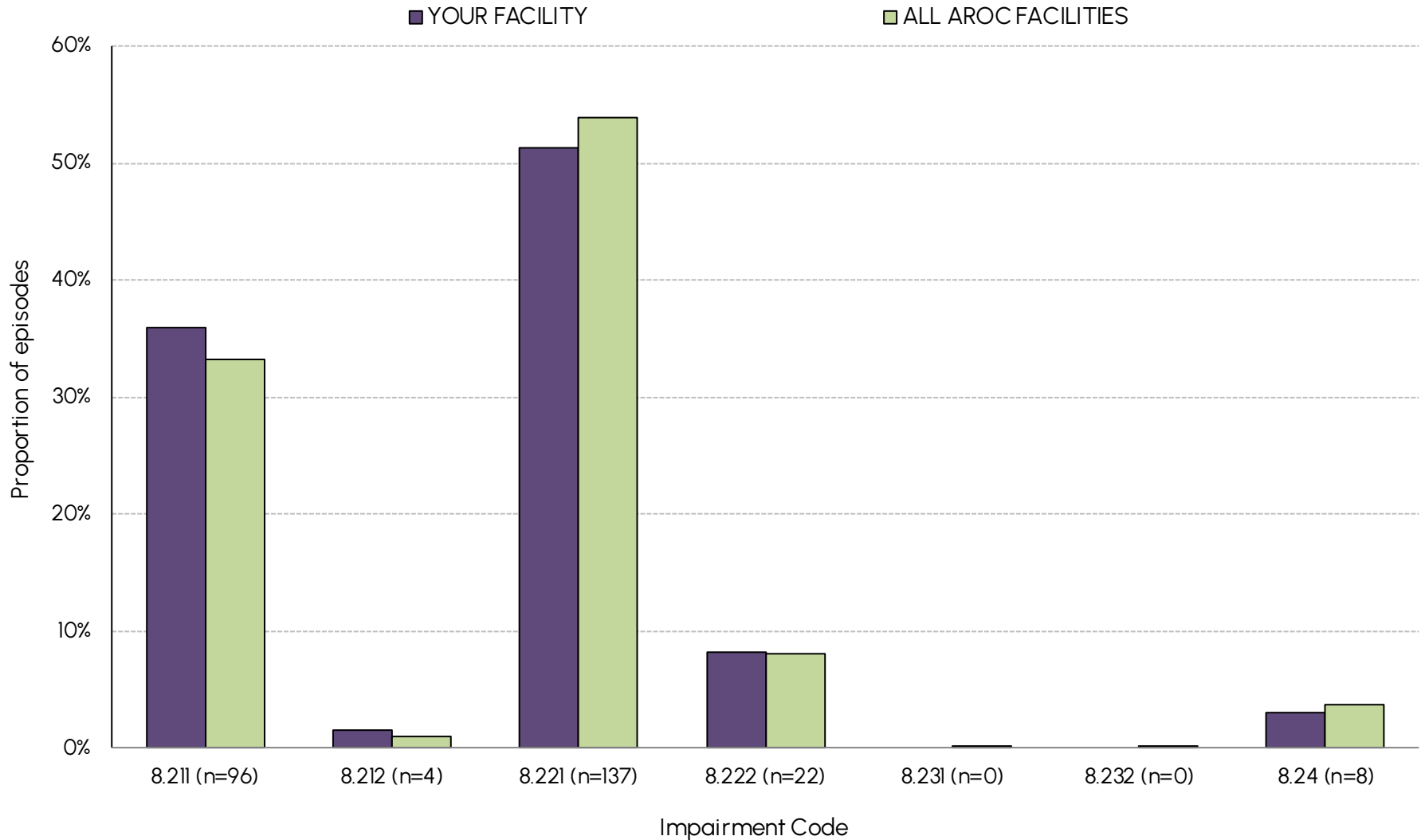
Impairment	ALL AROC FACILITIES — N (%)					All Replacement AN-SNAP classes*
	5A41	5A42	5A43	5AZ3	5AZ4	
8.211 Unilateral hip replacement	6,036 (63.4)	2,762 (29.0)	697 (7.3)	19 (0.2)	12 (0.1)	9,526 (100.0)
8.212 Bilateral hip replacement	208 (72.2)	66 (22.9)	14 (4.9)	0 (0.0)	0 (0.0)	288 (100.0)
8.221 Unilateral knee replacement	11,124 (71.9)	3,689 (23.9)	635 (4.1)	9 (0.1)	9 (0.1)	15,466 (100.0)
8.222 Bilateral knee replacement	1,623 (70.5)	583 (25.3)	94 (4.1)	0 (0.0)	2 (0.1)	2,302 (100.0)
8.231 Knee and hip replacement, same side	8 (36.4)	8 (36.4)	5 (22.7)	0 (0.0)	1 (4.5)	22 (100.0)
8.232 Knee and hip replacement, diff sides	8 (33.3)	14 (58.3)	2 (8.3)	0 (0.0)	0 (0.0)	24 (100.0)
8.24 Shoulder replacement	490 (46.8)	413 (39.4)	141 (13.5)	1 (0.1)	3 (0.3)	1,048 (100.0)
All Orthopaedic Replacements	19,497 (68.0)	7,535 (26.3)	1,588 (5.5)	29 (0.1)	27 (0.1)	28,676 (100.0)

*There were 0 episodes in YOUR FACILITY and 13 episodes in ALL AROC FACILITIES with AN-SNAP class 599A

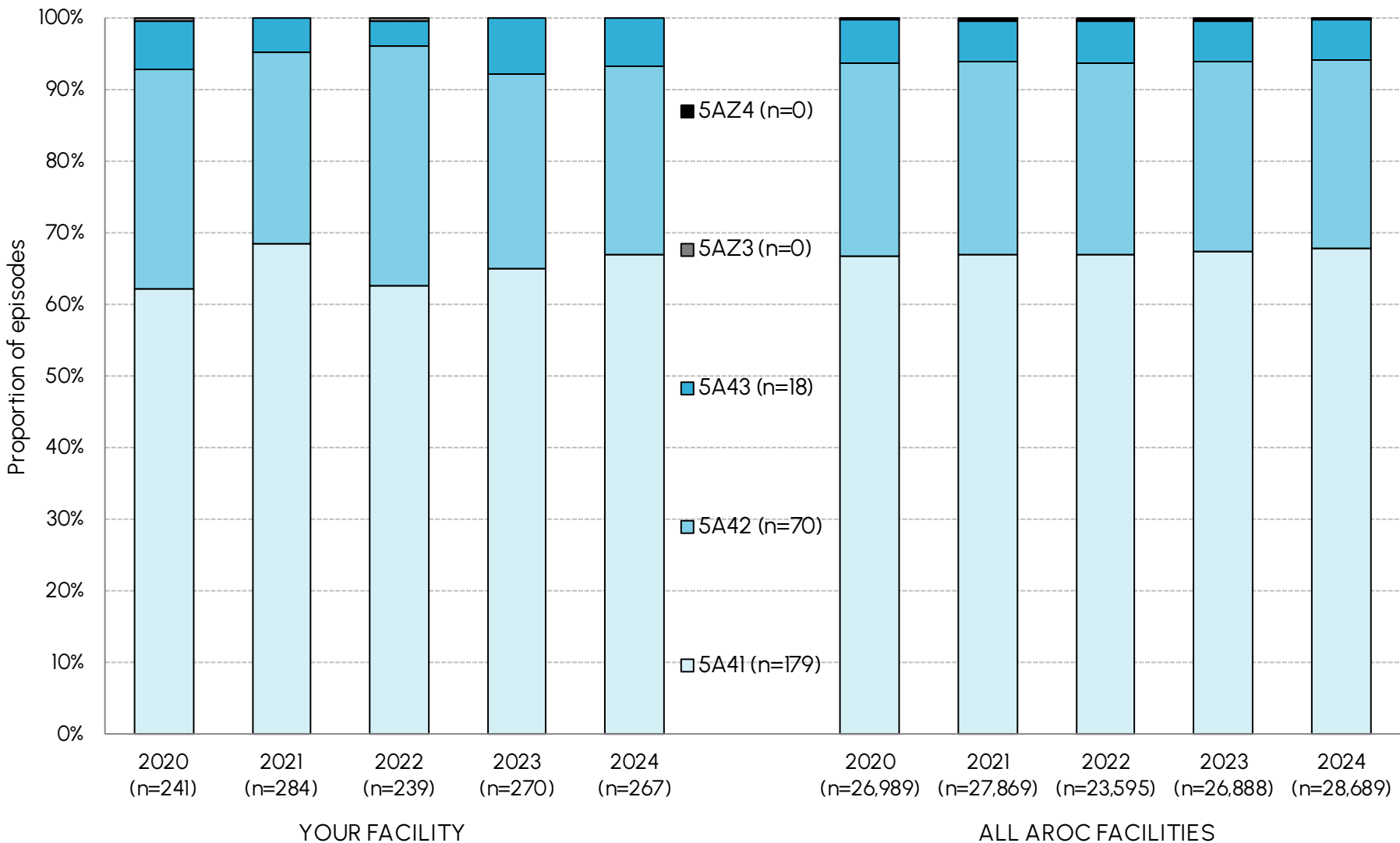
Proportion of episodes by AN-SNAP class



Proportion of episodes by impairment code



Proportion of episodes by AN-SNAP class over time

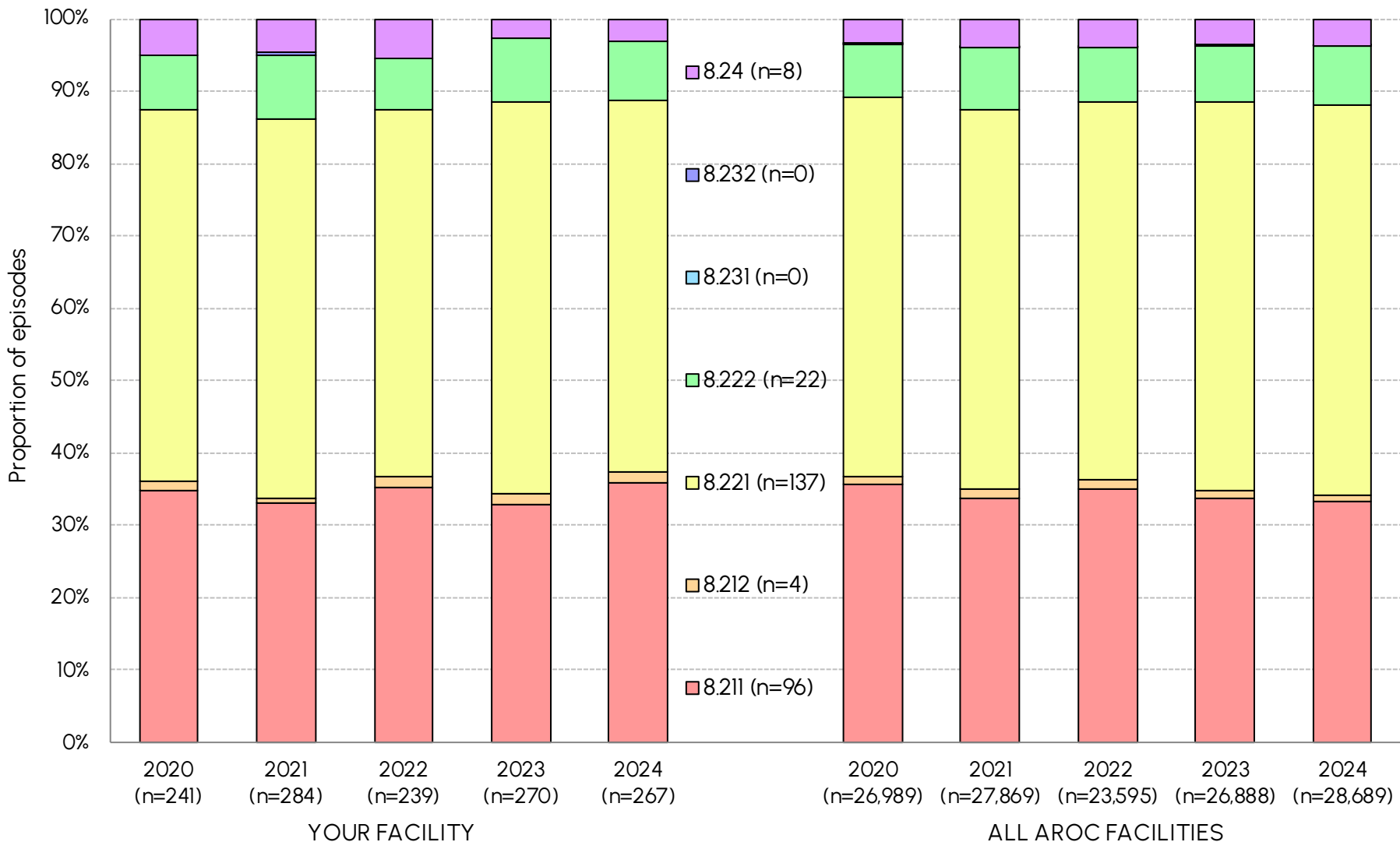


Episodes by AN-SNAP class over time

AN-SNAP class V5	YOUR FACILITY — N					ALL AROC FACILITIES — N				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
5A41 (weighted motor 61-91)	150	194	150	176	179	18,031	18,686	15,796	18,115	19,497
5A42 (weighted motor 45-60)	74	76	80	73	70	7,290	7,491	6,311	7,163	7,535
5A43 (weighted motor 19-44)	16	13	8	21	18	1,588	1,604	1,386	1,523	1,588
5AZ3 (motor 13-18, Age ≥ 79)	1	0	1	0	0	31	48	36	39	29
5AZ4 (motor 13-18, Age ≤ 78)	0	0	0	0	0	31	23	25	28	27
Ungroupable	0	1	0	0	0	18	17	41	20	13
All Replacement AN-SNAP classes	241	284	239	270	267	26,989	27,869	23,595	26,888	28,689

AN-SNAP class V5	YOUR FACILITY — %					ALL AROC FACILITIES — %				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
5A41 (weighted motor 61-91)	62.2	68.3	62.8	65.2	67.0	66.8	67.0	66.9	67.4	68.0
5A42 (weighted motor 45-60)	30.7	26.8	33.5	27.0	26.2	27.0	26.9	26.7	26.6	26.3
5A43 (weighted motor 19-44)	6.6	4.6	3.3	7.8	6.7	5.9	5.8	5.9	5.7	5.5
5AZ3 (motor 13-18, Age ≥ 79)	0.4	0.0	0.4	0.0	0.0	0.1	0.2	0.2	0.1	0.1
5AZ4 (motor 13-18, Age ≤ 78)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Ungroupable	0.0	0.4	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0
All Replacement AN-SNAP classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Proportion of episodes by impairment code over time



Episodes by impairment code over time

Impairment	YOUR FACILITY — N					ALL AROC FACILITIES — N				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
8.211 Unilateral hip replacement	84	94	84	89	96	9,629	9,392	8,284	9,071	9,533
8.212 Bilateral hip replacement	3	2	4	4	4	274	356	295	314	288
8.221 Unilateral knee replacement	124	149	121	146	137	14,163	14,623	12,294	14,433	15,471
8.222 Bilateral knee replacement	18	25	17	24	22	1,985	2,401	1,793	2,092	2,303
8.231 Knee and hip replacement, same side	0	0	0	0	0	18	17	9	21	22
8.232 Knee and hip replacement, diff sides	0	1	0	0	0	10	12	9	12	24
8.24 Shoulder replacement	12	13	13	7	8	910	1,068	911	945	1,048
All Orthopaedic Replacements	241	284	239	270	267	26,989	27,869	23,595	26,888	28,689

Impairment	YOUR FACILITY — %					ALL AROC FACILITIES — %				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
8.211 Unilateral hip replacement	34.9	33.1	35.1	33.0	36.0	35.7	33.7	35.1	33.7	33.2
8.212 Bilateral hip replacement	1.2	0.7	1.7	1.5	1.5	1.0	1.3	1.3	1.2	1.0
8.221 Unilateral knee replacement	51.5	52.5	50.6	54.1	51.3	52.5	52.5	52.1	53.7	53.9
8.222 Bilateral knee replacement	7.5	8.8	7.1	8.9	8.2	7.4	8.6	7.6	7.8	8.0
8.231 Knee and hip replacement, same side	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1
8.232 Knee and hip replacement, diff sides	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
8.24 Shoulder replacement	5.0	4.6	5.4	2.6	3.0	3.4	3.8	3.9	3.5	3.7
All Orthopaedic Replacements	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Summary of incomplete episodes

Complete episode analysis	YOUR FACILITY		ALL AROC FACILITIES	
	No.	(%)	No.	(%)
Total reporting episodes	267		28,689	
Incomplete episodes	10	(3.7)	971	(3.4)

Reason for incomplete:

Discharged home with end FIM=18	0	(0.0)	8	(0.8)
Discharged home with no end FIM	0	(0.0)	31	(3.2)
Discharged to another hospital	6	(60.0)	466	(48.0)
Discharged back to acute same hospital	3	(30.0)	318	(32.7)
Discharged at own risk	1	(10.0)	112	(11.5)
Change of care type (LOS<1 week)	0	(0.0)	5	(0.5)
Died	0	(0.0)	4	(0.4)
Other/Unknown Discharge	0	(0.0)	27	(2.8)

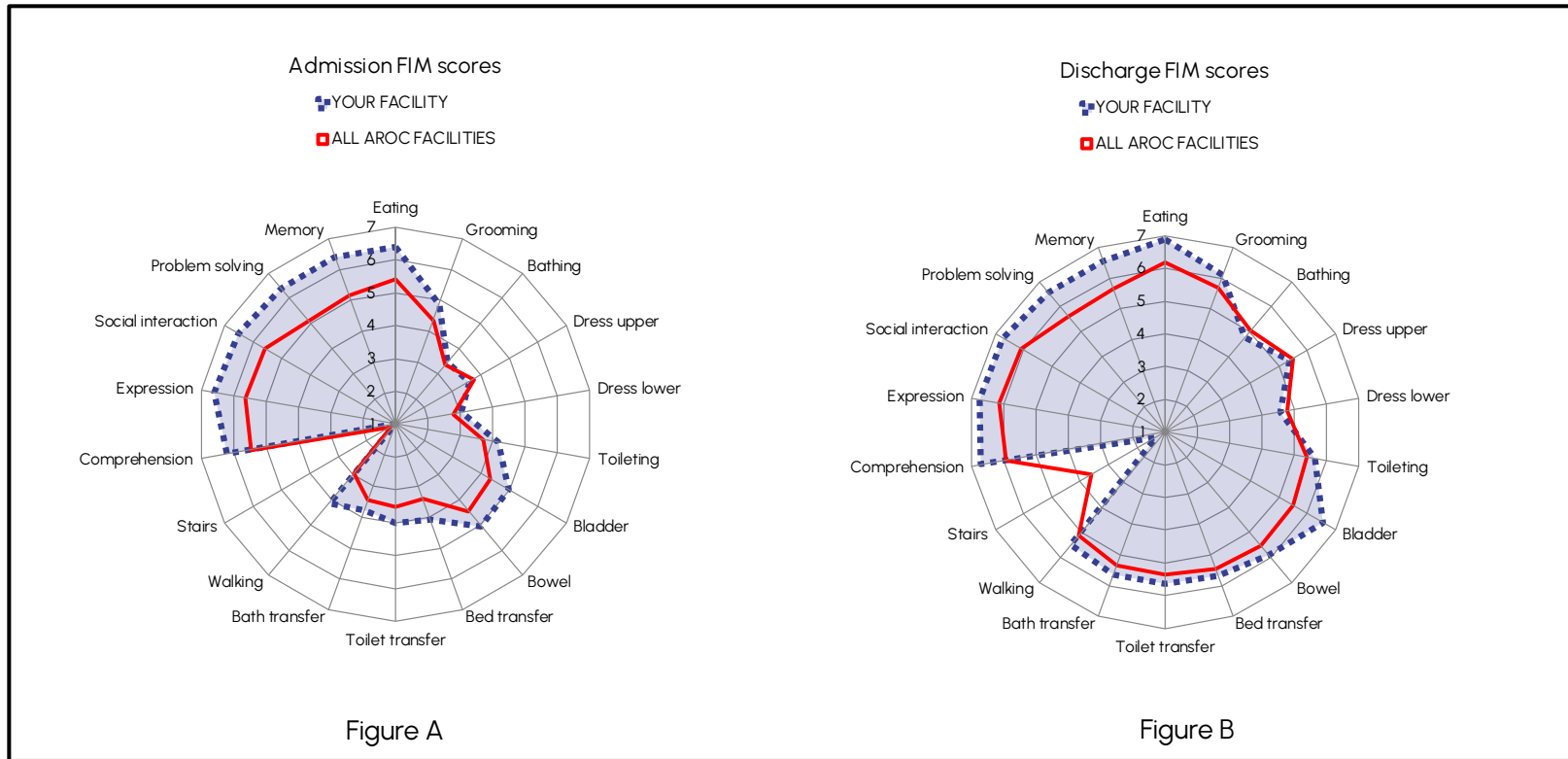
Impairment Code:	YOUR FACILITY	
	Incomplete Episodes	Complete episodes
8.211 Unilateral hip replacement	4 (40.0)	92 (35.8)
8.212 Bilateral hip replacement	0 (0.0)	4 (1.6)
8.221 Unilateral knee replacement	6 (60.0)	131 (51.0)
8.222 Bilateral knee replacement	0 (0.0)	22 (8.6)
8.231 Knee and hip replacement, same side	0 (0.0)	0 (0.0)
8.232 Knee and hip replacement, diff sides	0 (0.0)	0 (0.0)
8.24 Shoulder replacement	0 (0.0)	8 (3.1)

AN-SNAP Class:

5A41 (weighted motor 61-91)	2 (20.0)	177 (68.9)
5A42 (weighted motor 45-60)	3 (30.0)	67 (26.1)
5A43 (weighted motor 19-44)	5 (50.0)	13 (5.1)
5AZ3 (motor 13-18, Age ≥ 79)	0 (0.0)	0 (0.0)
5AZ4 (motor 13-18, Age ≤ 78)	0 (0.0)	0 (0.0)

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 ALL AROC FACILITIES data — differences in the two shaded areas indicate differences in mean admission/discharge scoring. Graphs include completed episodes with valid FIM scoring.

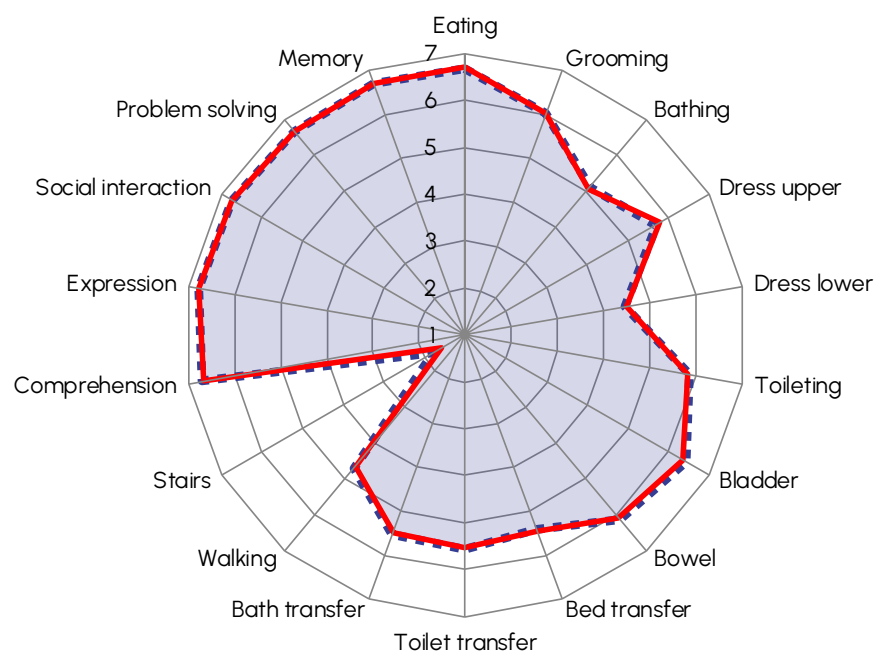
Comparative FIM item scoring AN-SNAP class 5A41



5A41 Admission FIM scores

YOUR FACILITY (n=177)

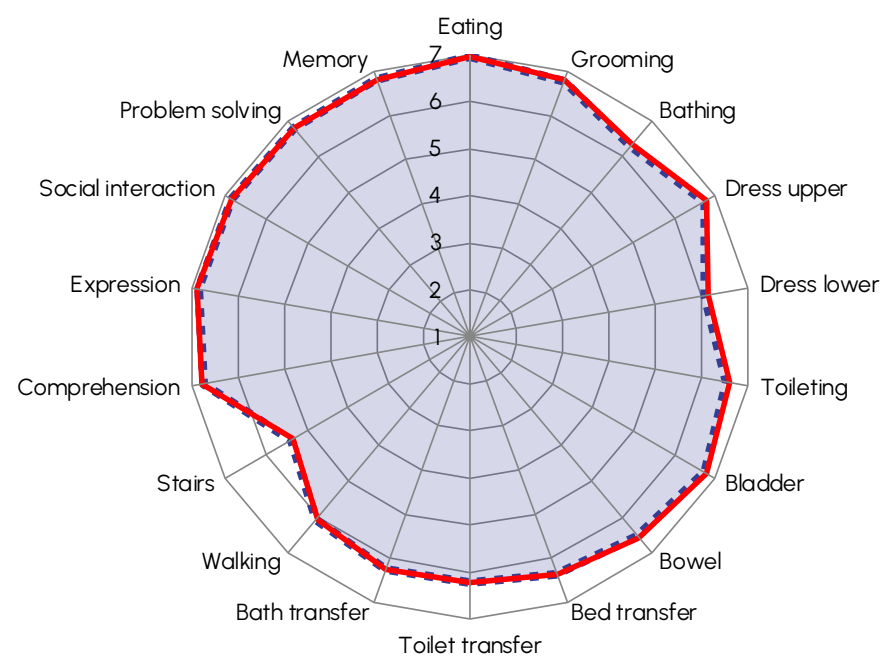
ALL AROC FACILITIES (n=19,107)



5A41 Discharge FIM scores

YOUR FACILITY (n=177)

ALL AROC FACILITIES (n=19,107)



NOTE: Includes only completed episodes with valid FIM scores

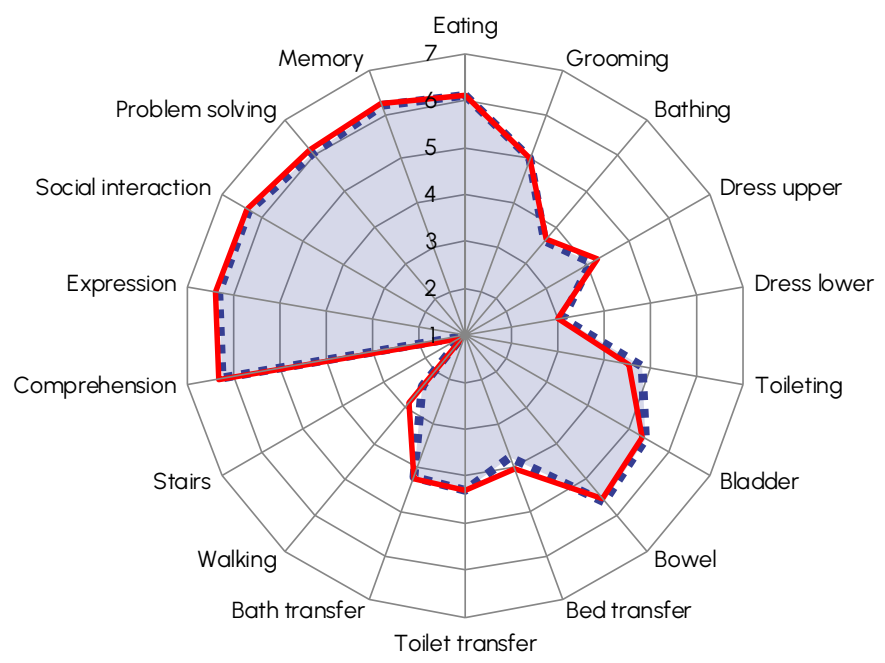
Comparative FIM item scoring AN-SNAP class 5A42



5A42 Admission FIM scores

YOUR FACILITY (n=67)

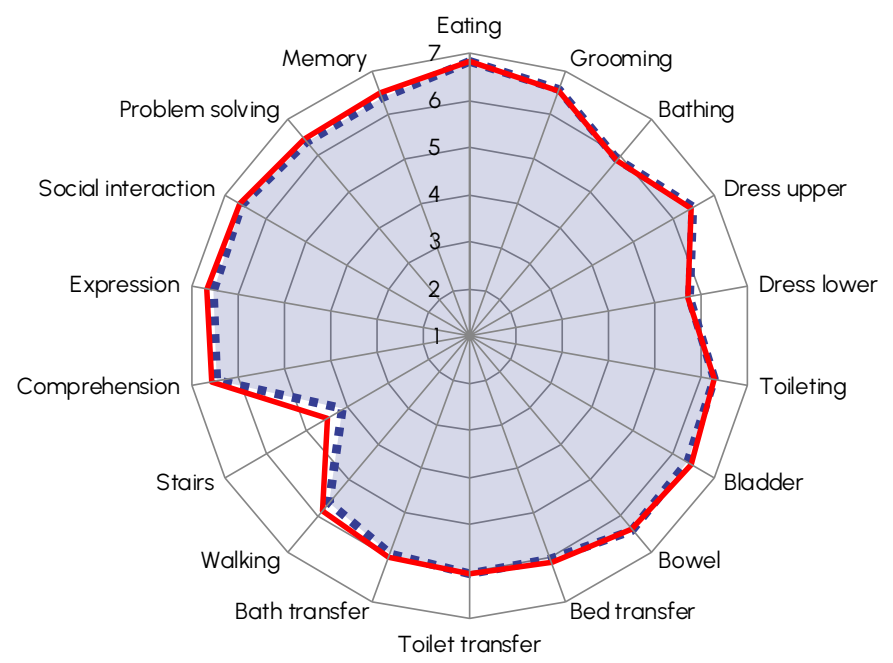
ALL AROC FACILITIES (n=7,214)



5A42 Discharge FIM scores

YOUR FACILITY (n=67)

ALL AROC FACILITIES (n=7,214)



NOTE: Includes only completed episodes with valid FIM scores

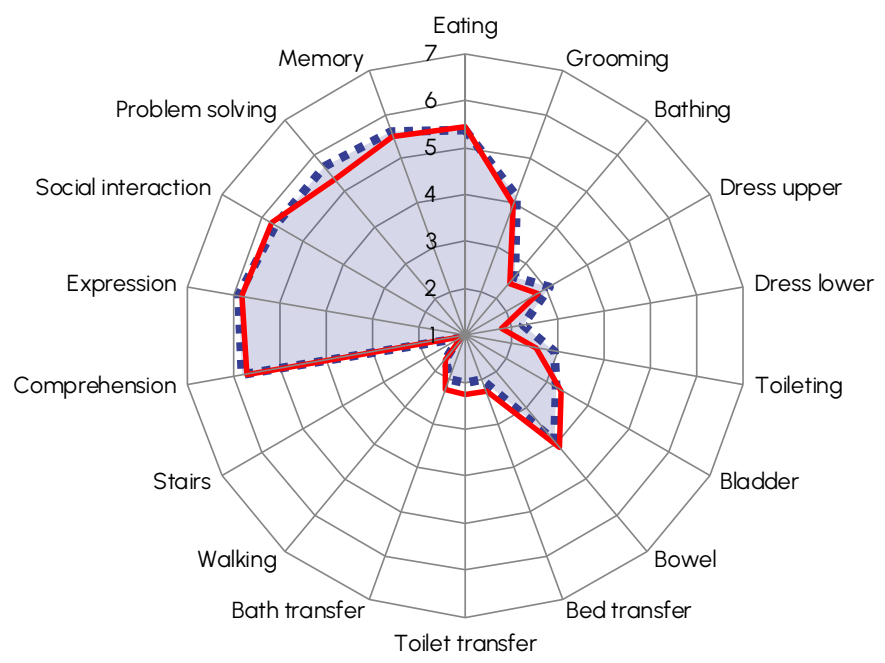
Comparative FIM item scoring AN-SNAP class 5A43



5A43 Admission FIM scores

■ YOUR FACILITY (n=13)

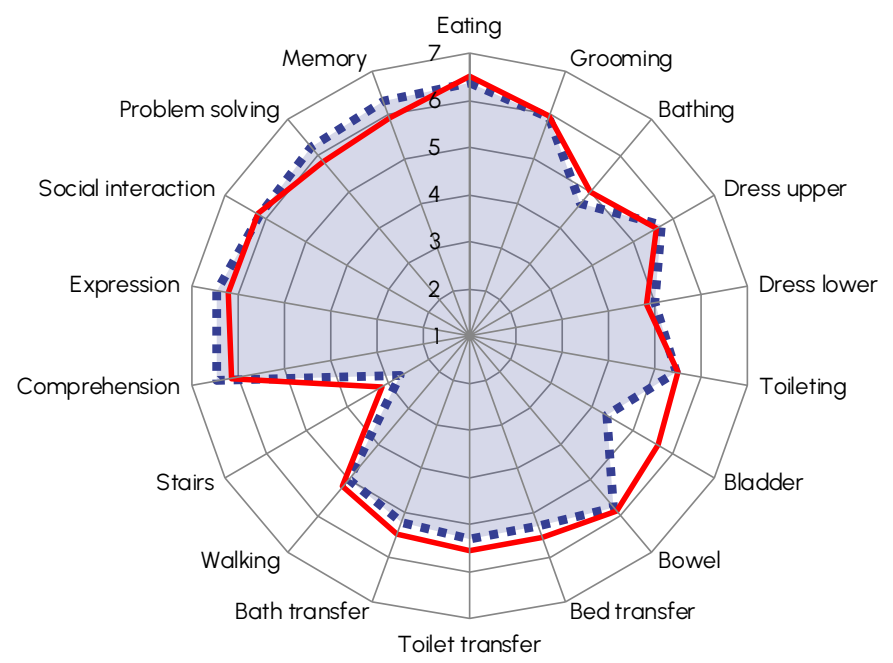
■ ALL AROC FACILITIES (n=1,358)



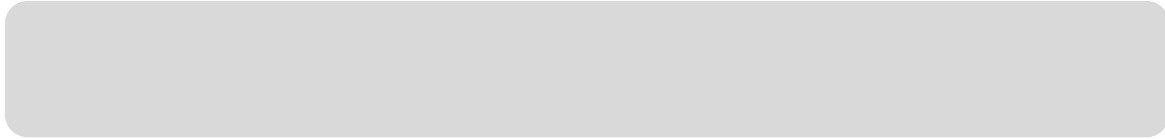
5A43 Discharge FIM scores

■ YOUR FACILITY (n=13)

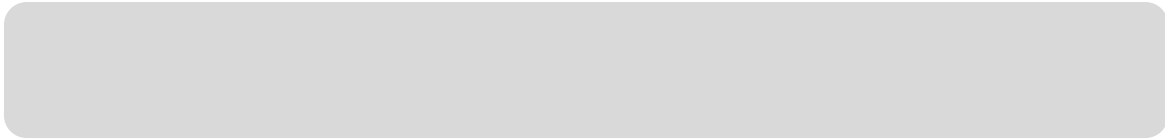
■ ALL AROC FACILITIES (n=1,358)



NOTE: Includes only completed episodes with valid FIM scores



Outcome analysis



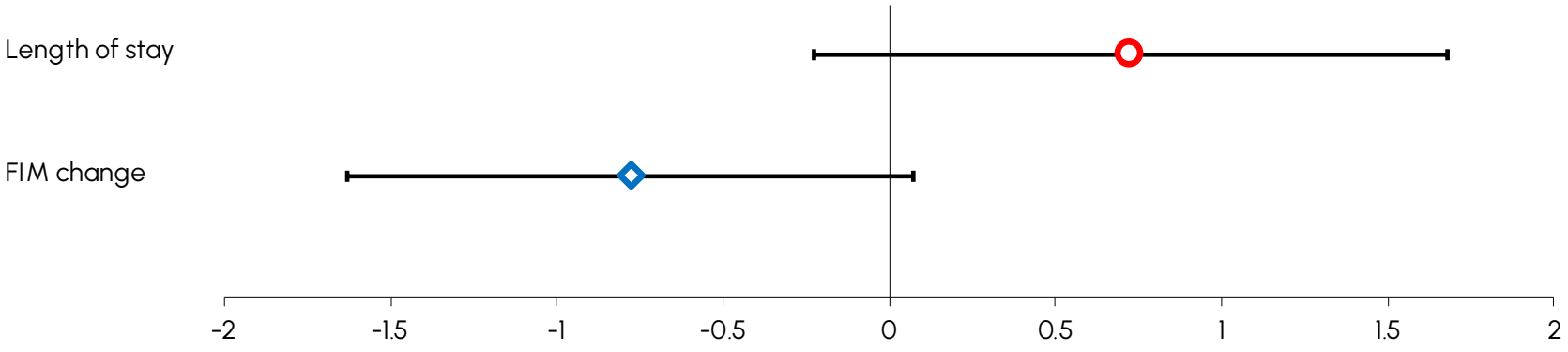
Completed episodes by AN-SNAP class and impairment code

AN-SNAP class V5	YOUR FACILITY			ALL AROC FACILITIES		
	All episodes	Completed episodes	% Complete	All episodes	Completed episodes	% Complete
5A41 (weighted motor 61-91)	179	177	98.9	19,497	19,107	98.0
5A42 (weighted motor 45-60)	70	67	95.7	7,535	7,215	95.8
5A43 (weighted motor 19-44)	18	13	72.2	1,588	1,358	85.5
5AZ3 (motor 13-18, Age ≥ 79)	0	0	—	29	18	62.1
5AZ4 (motor 13-18, Age ≤ 78)	0	0	—	27	14	51.9
Ungroupable	0	0	—	13	6	46.2
All Replacement AN-SNAP classes	267	257	96.3	28,689	27,718	96.6

Impairment	YOUR FACILITY			ALL AROC FACILITIES		
	All episodes	Completed episodes	% Complete	All episodes	Completed episodes	% Complete
8.211 Unilateral hip replacement	96	92	95.8	9,533	9,106	95.5
8.212 Bilateral hip replacement	4	4	100.0	288	280	97.2
8.221 Unilateral knee replacement	137	131	95.6	15,471	15,041	97.2
8.222 Bilateral knee replacement	22	22	100.0	2,303	2,252	97.8
8.231 Knee and hip replacement, same side	0	0	—	22	21	95.5
8.232 Knee and hip replacement, diff sides	0	0	—	24	23	95.8
8.24 Shoulder replacement	8	8	100.0	1,048	995	94.9
All Replacement AN-SNAP classes	267	257	96.3	28,689	27,718	96.6

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

Casemix-adjusted* relative means

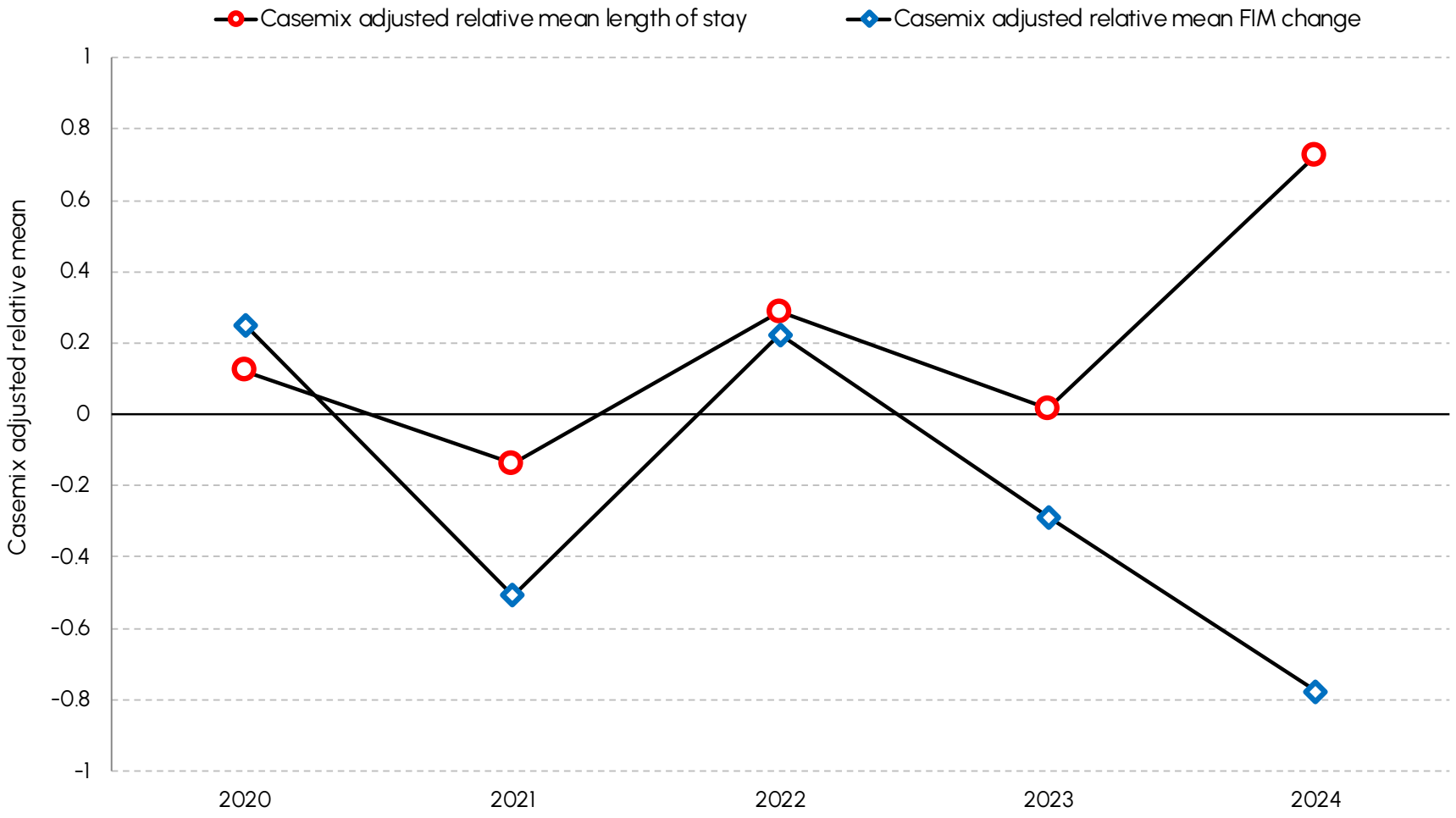


Casemix-adjusted relative means with 95% confidence intervals

Outcome measures	YOUR FACILITY		ALL AROC FACILITIES
	Casemix-adjusted* relative mean	95% CI	IQR
Length of stay	0.7	-0.2 to 1.7	-3.4 to 2.5
FIM change	-0.8	-1.6 to 0.1	-4.3 to 4.2

*Includes only completed episodes with valid FIM scores and LOS

Casemix-adjusted* relative means over time



*Casemix adjusted values based on FY 2024

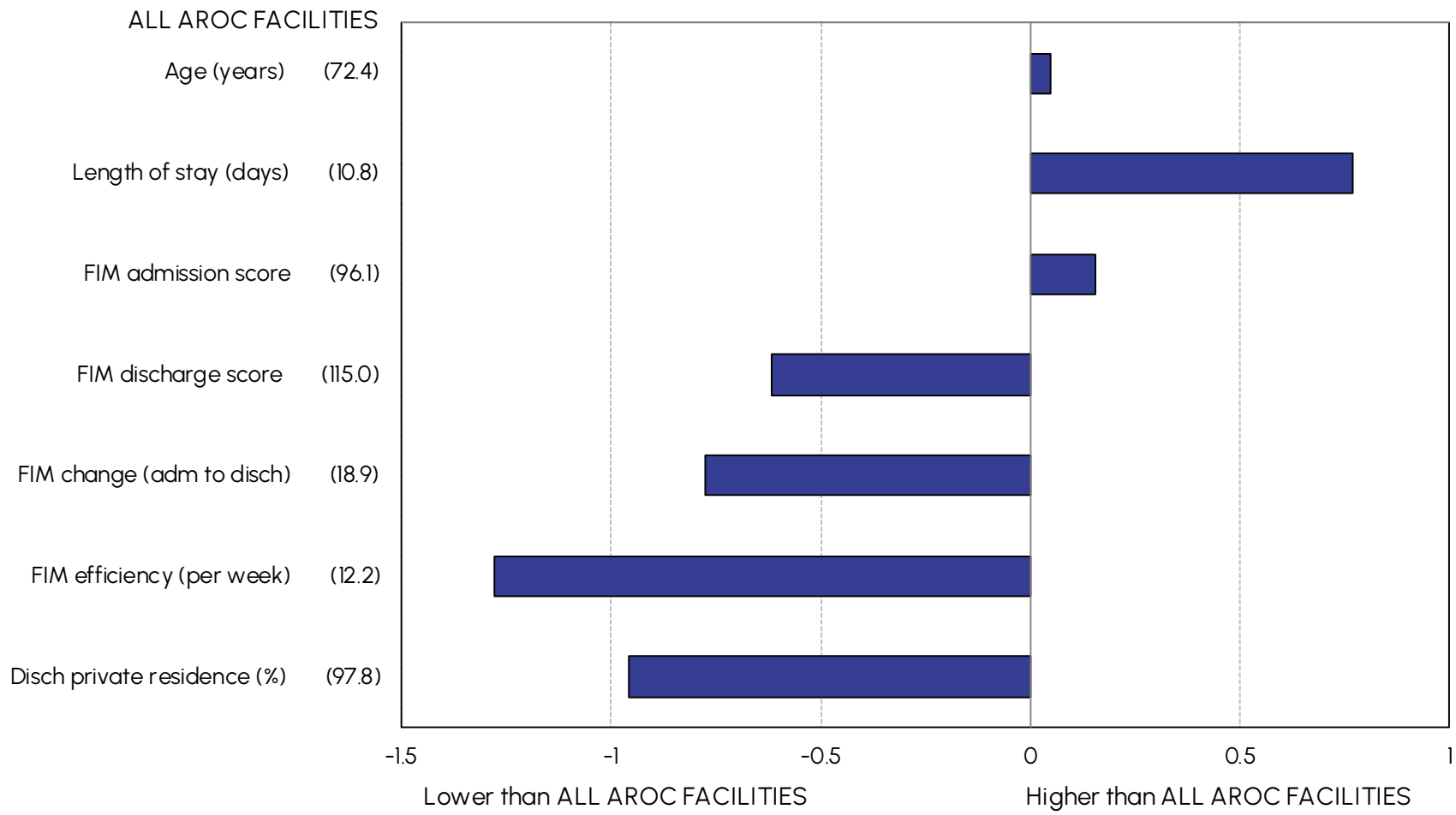
YOUR FACILITY

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

Outcome measures – difference from all AROC



How YOUR FACILITY is different to ALL AROC FACILITIES

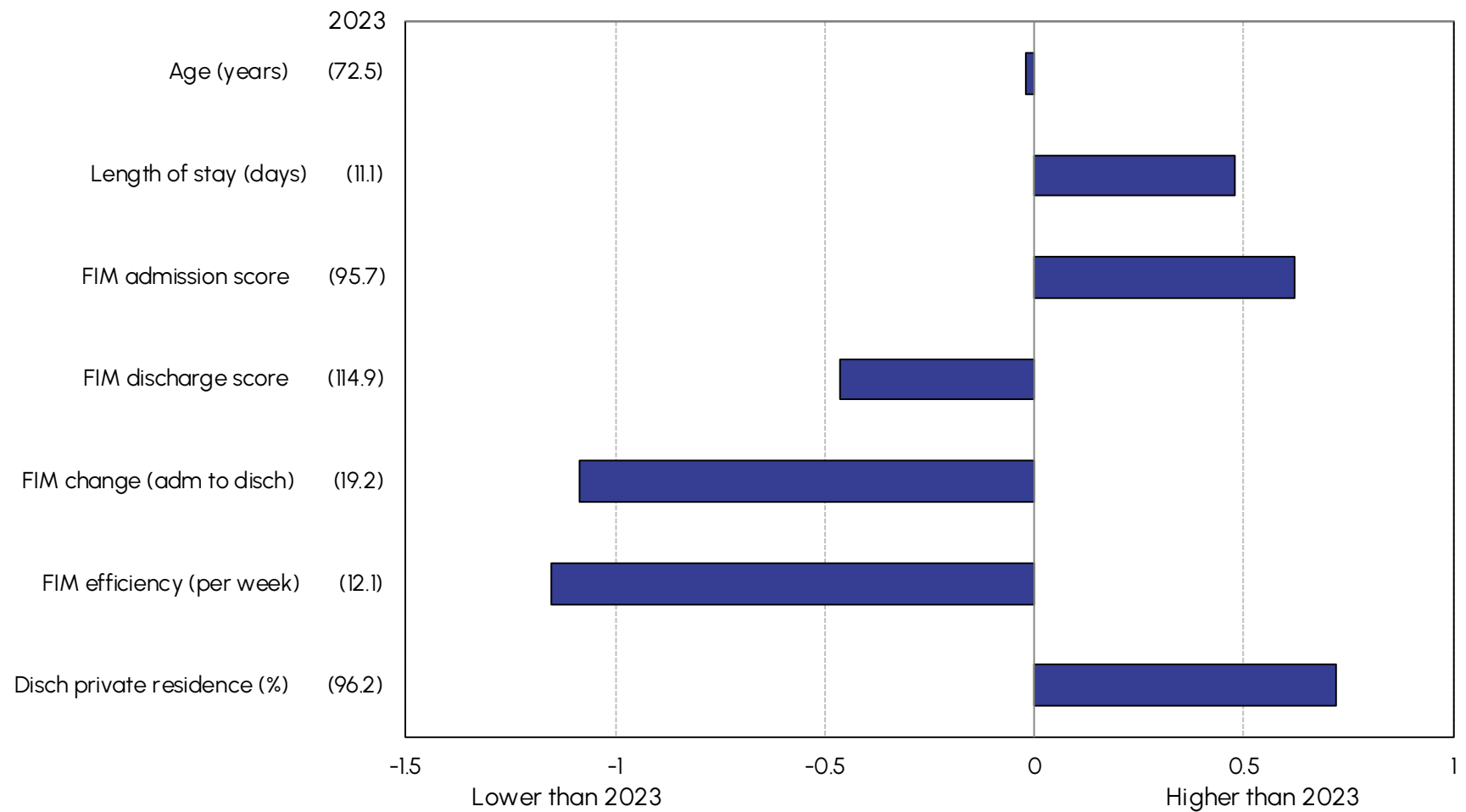


NOTE: Includes only completed episodes with valid FIM scores and LOS

Outcome measures – difference from last year

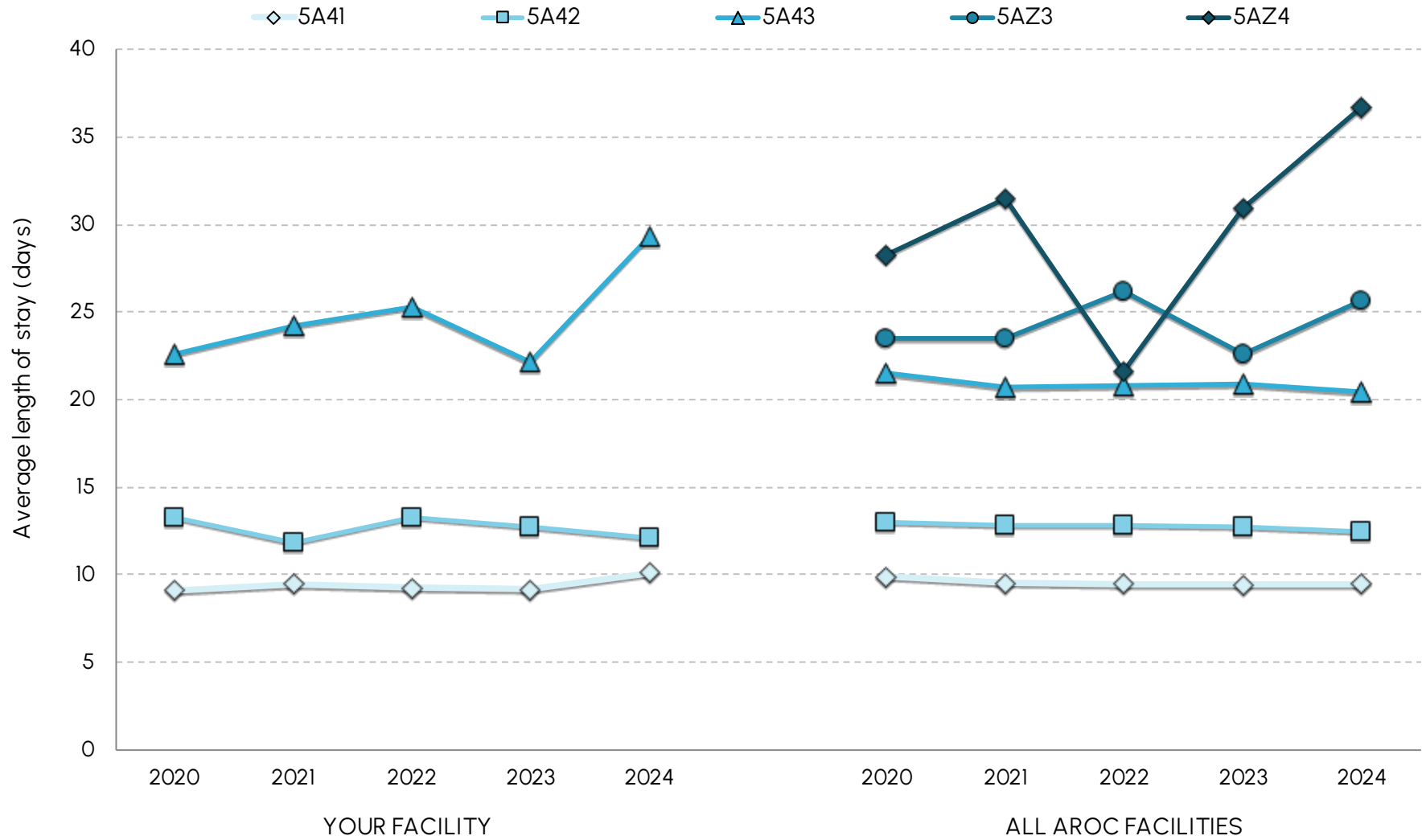


How YOUR FACILITY has changed since 2023



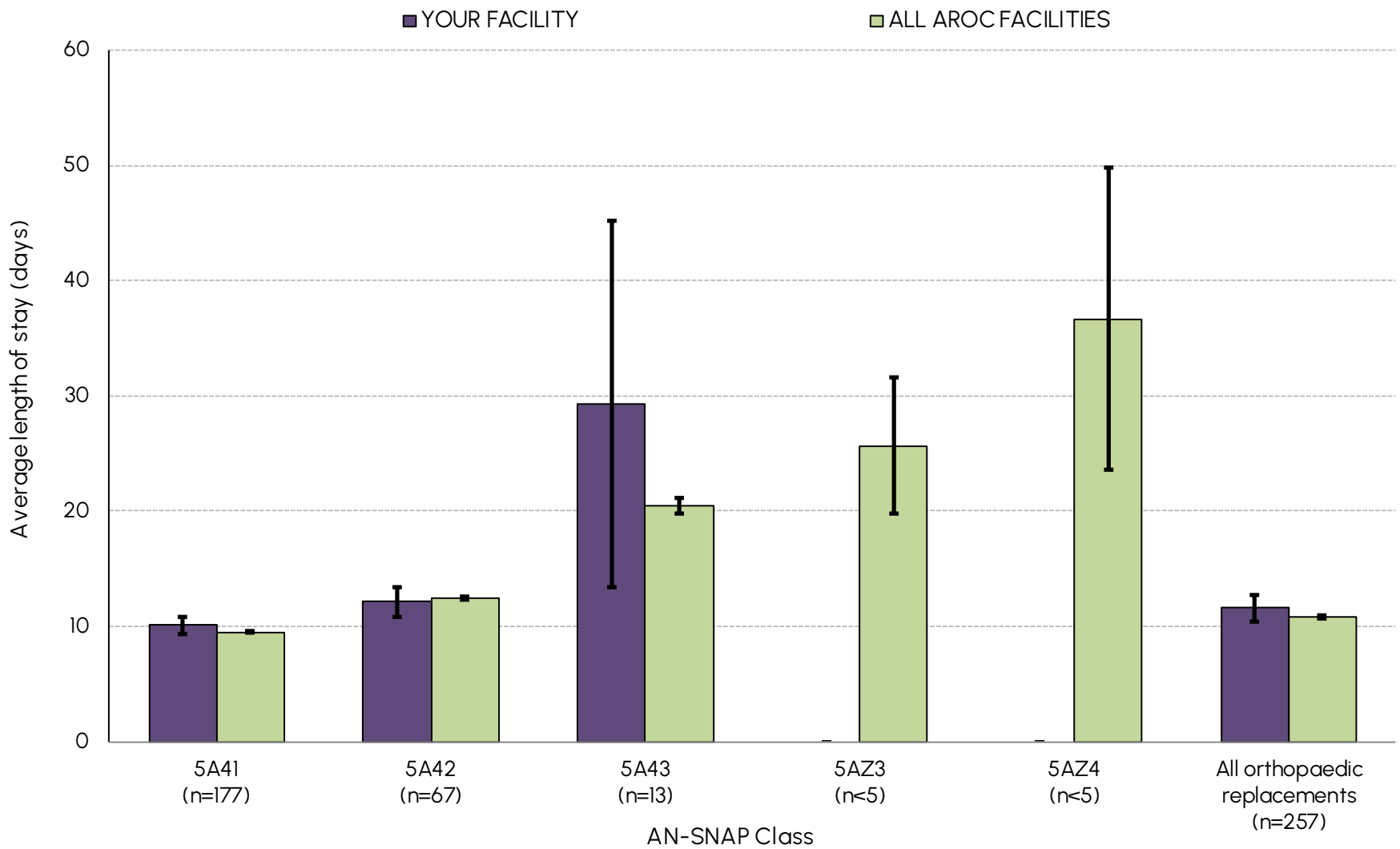
NOTE: Includes only completed episodes with valid FIM scores and LOS

Average length of stay by AN-SNAP class over time



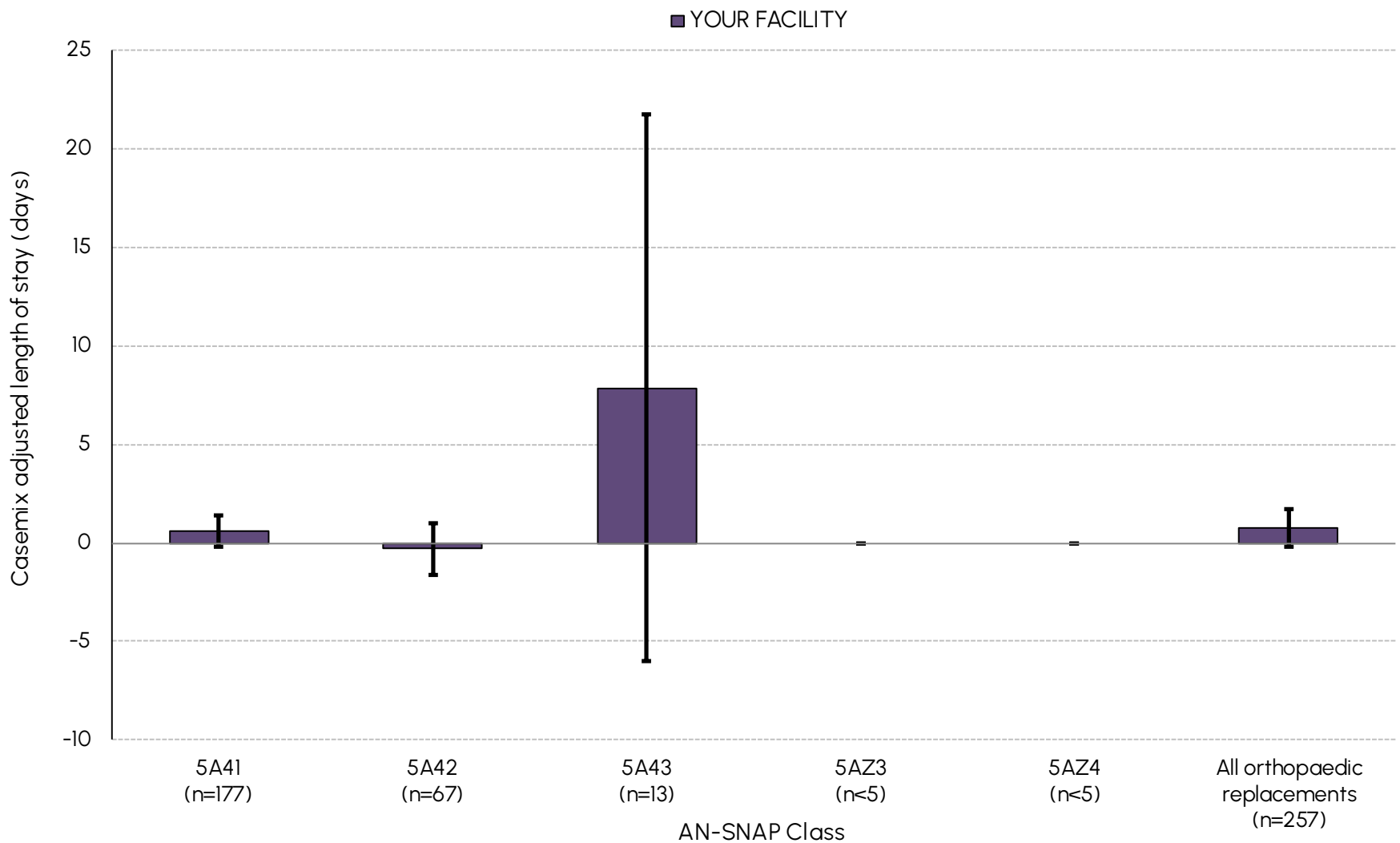
NOTE: Includes only completed episodes with valid LOS; where n<5 average LOS will not be shown

Average length of stay by AN-SNAP class



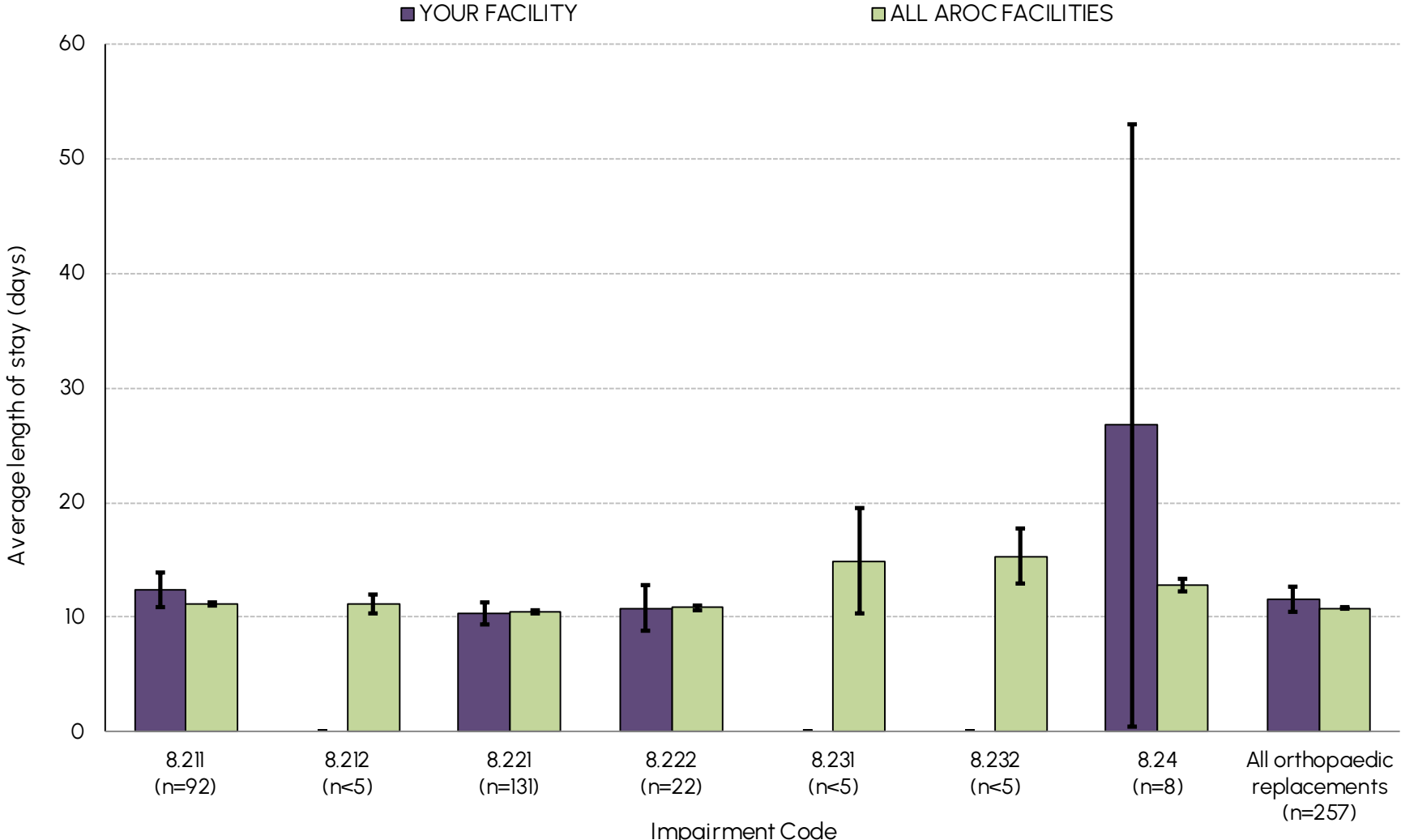
NOTE: Includes only completed episodes with valid LOS, where n<5 average LOS will not be shown

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



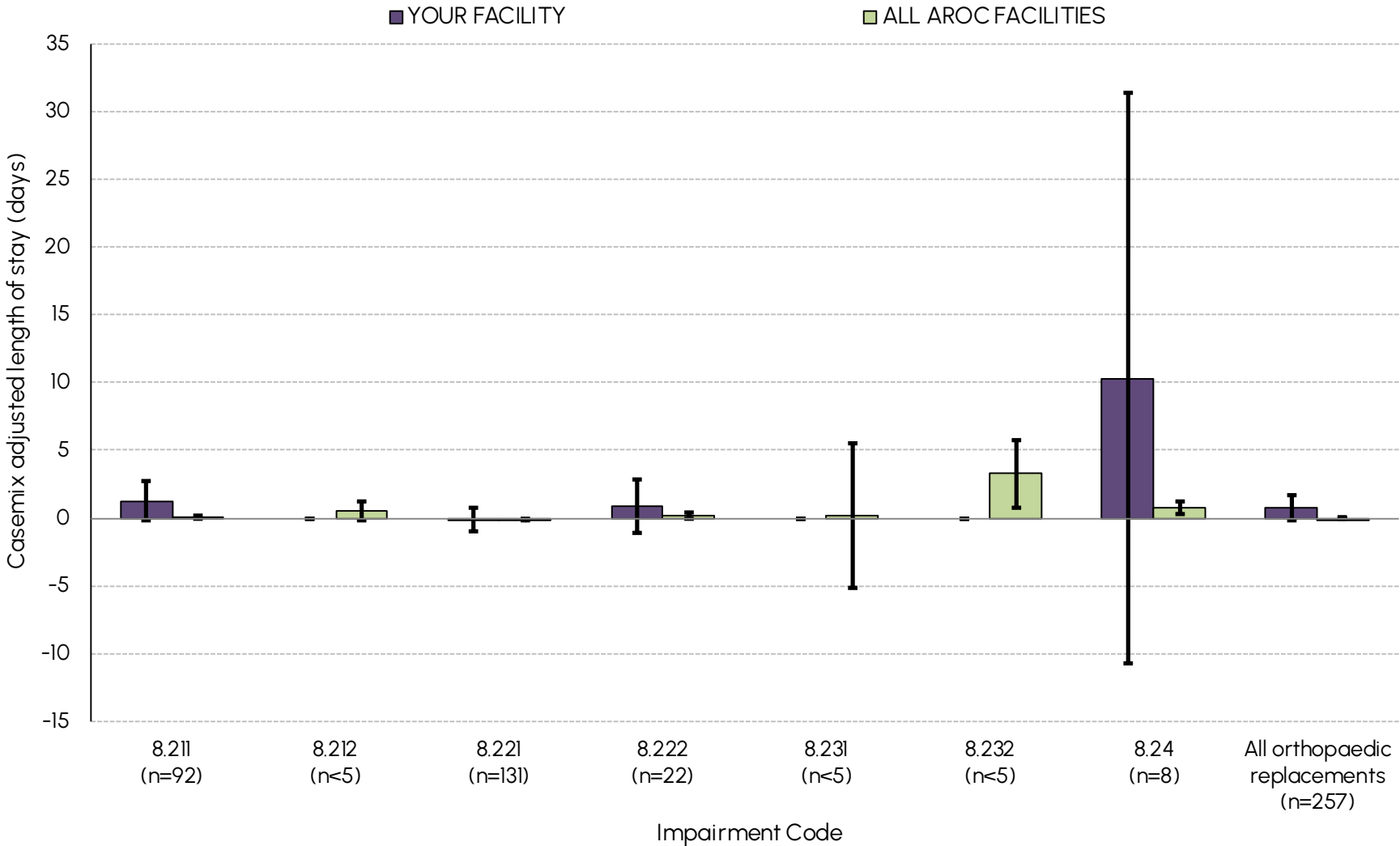
NOTE: Includes only completed episodes with valid LOS; where n<5 CARMi LOS will not be shown

Average length of stay by impairment



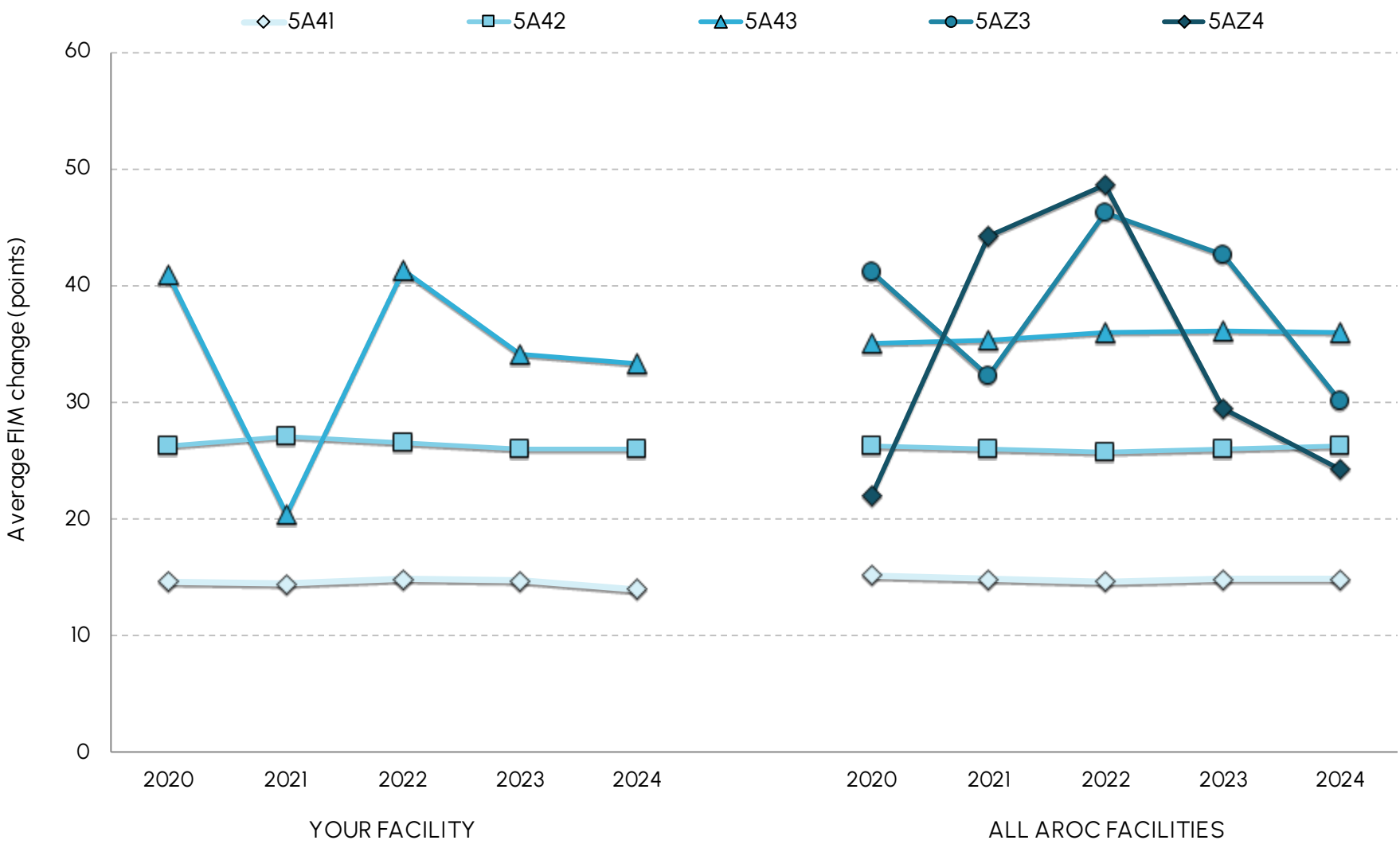
NOTE: Includes only completed episodes with valid LOS, where n<5 average LOS will not be shown

Casemix-adjusted relative mean length of stay by impairment



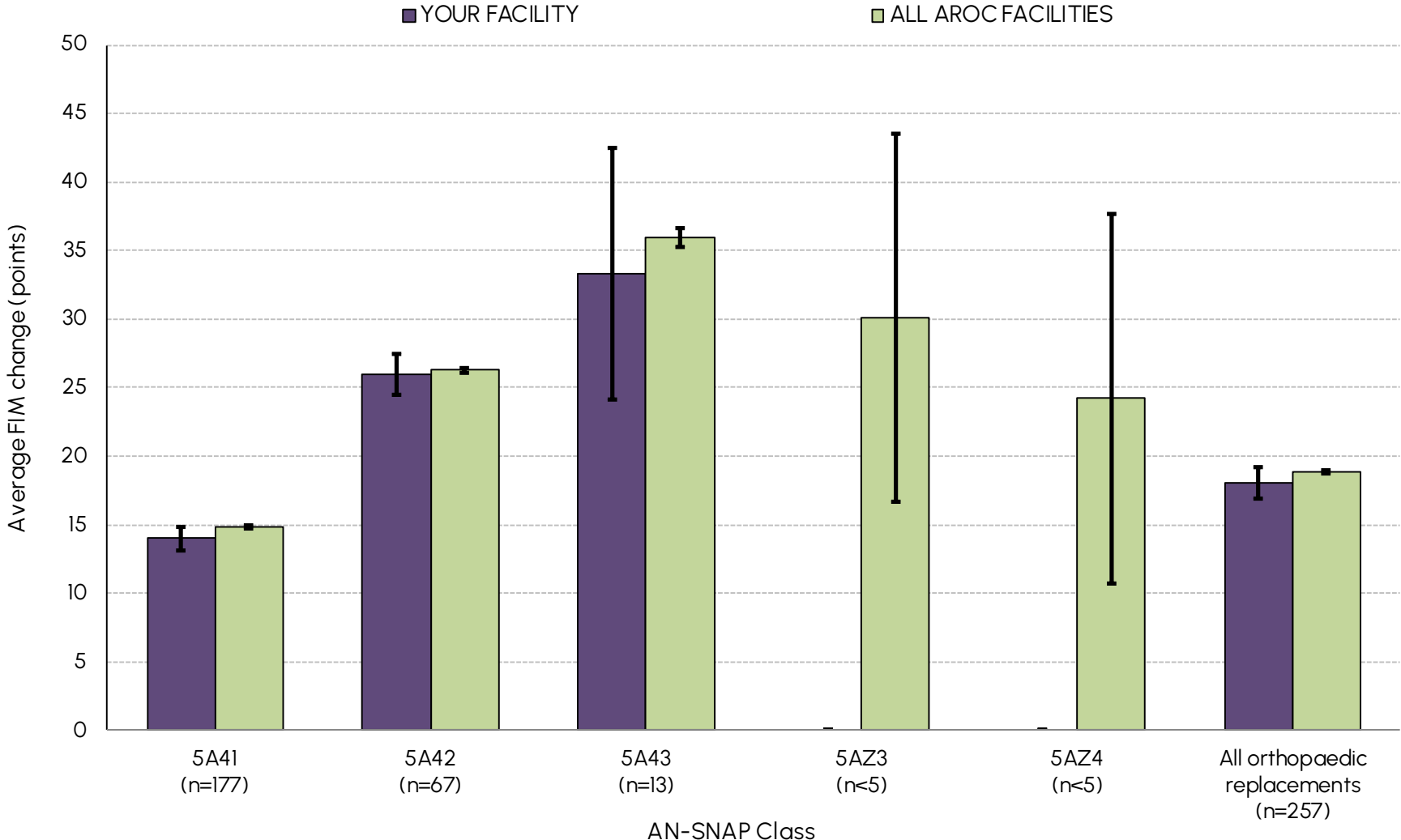
NOTE: Includes only completed episodes with valid LOS; where n<5 CARM LOS will not be shown

Average FIM change by AN-SNAP class over time



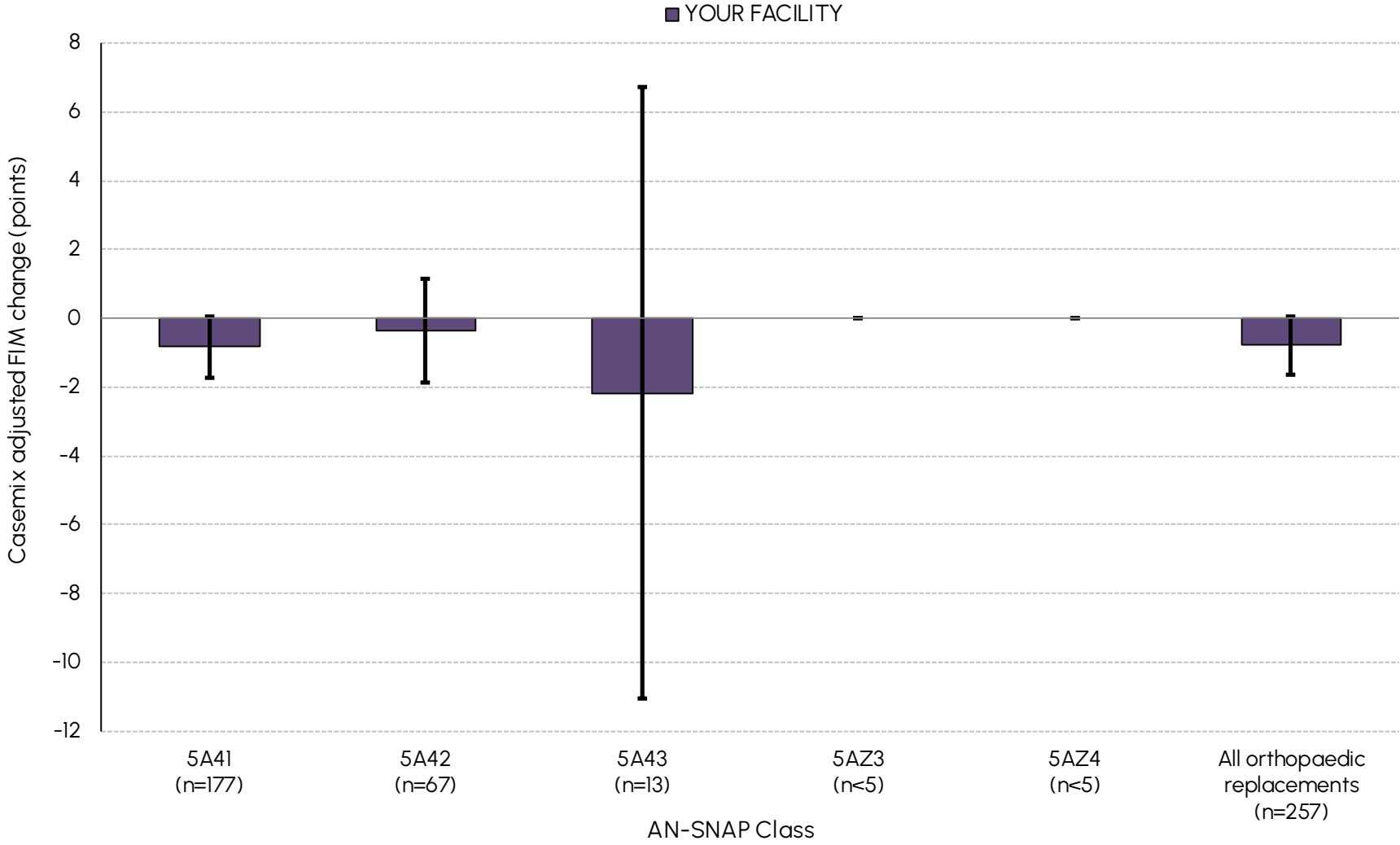
NOTE: Includes only completed episodes with valid FIM scores; where n<5 average FIM change will not be shown

Average FIM change by AN-SNAP class



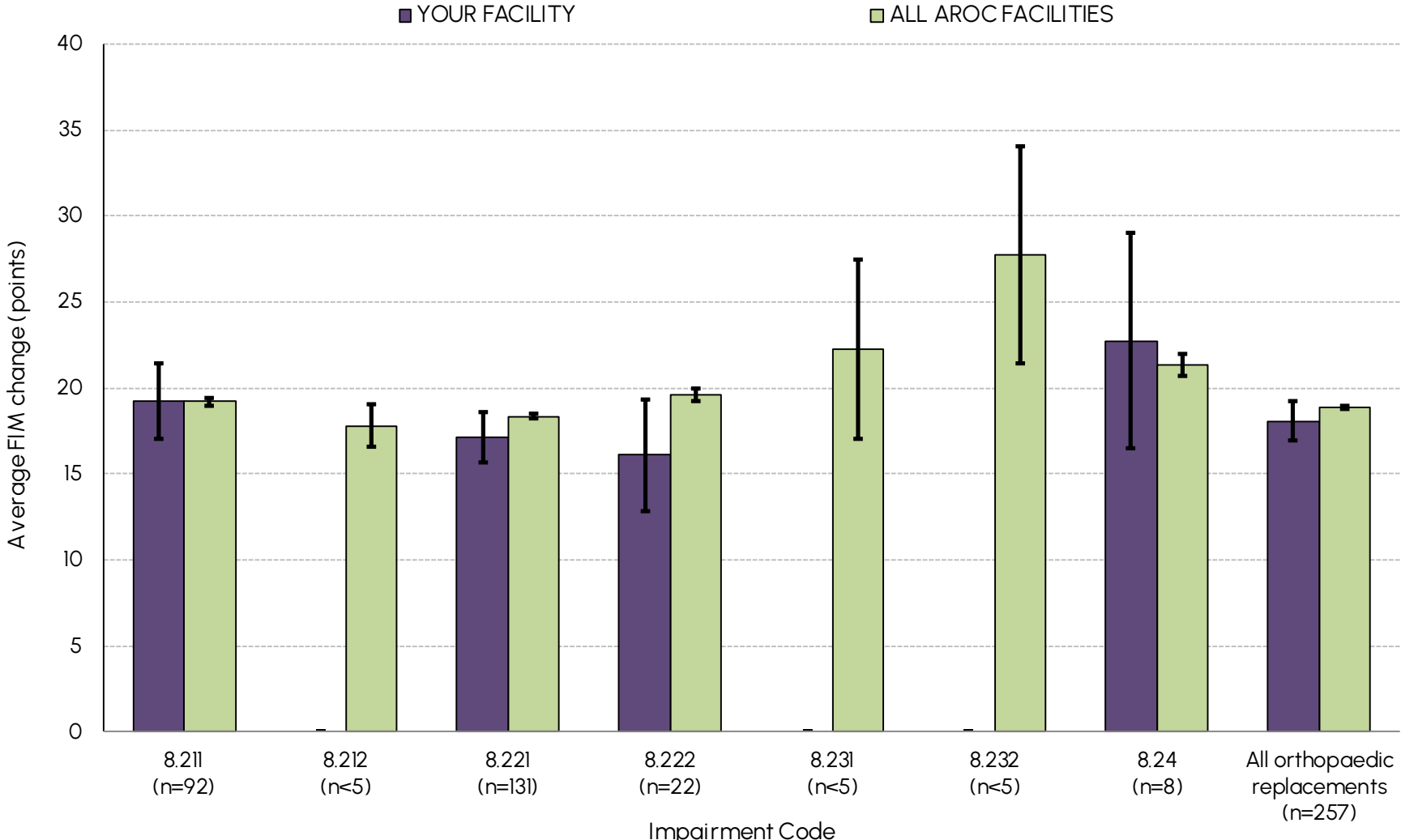
NOTE: Includes only completed episodes with valid FIM scores, where n<5 average FIM change will not be shown

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



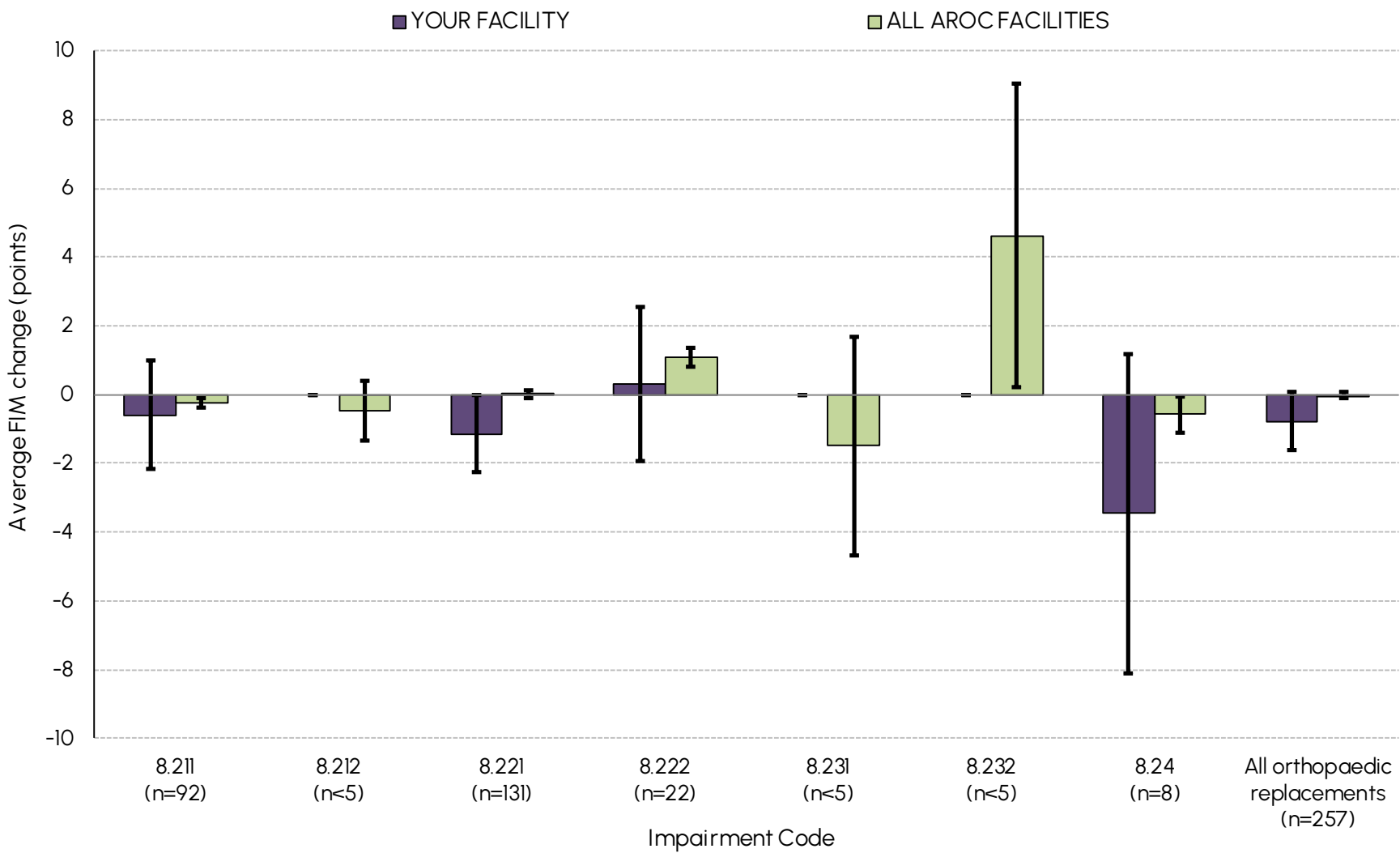
NOTE: Includes only completed episodes with valid FIM scores, where n<5 CARMi FIM change will not be shown

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

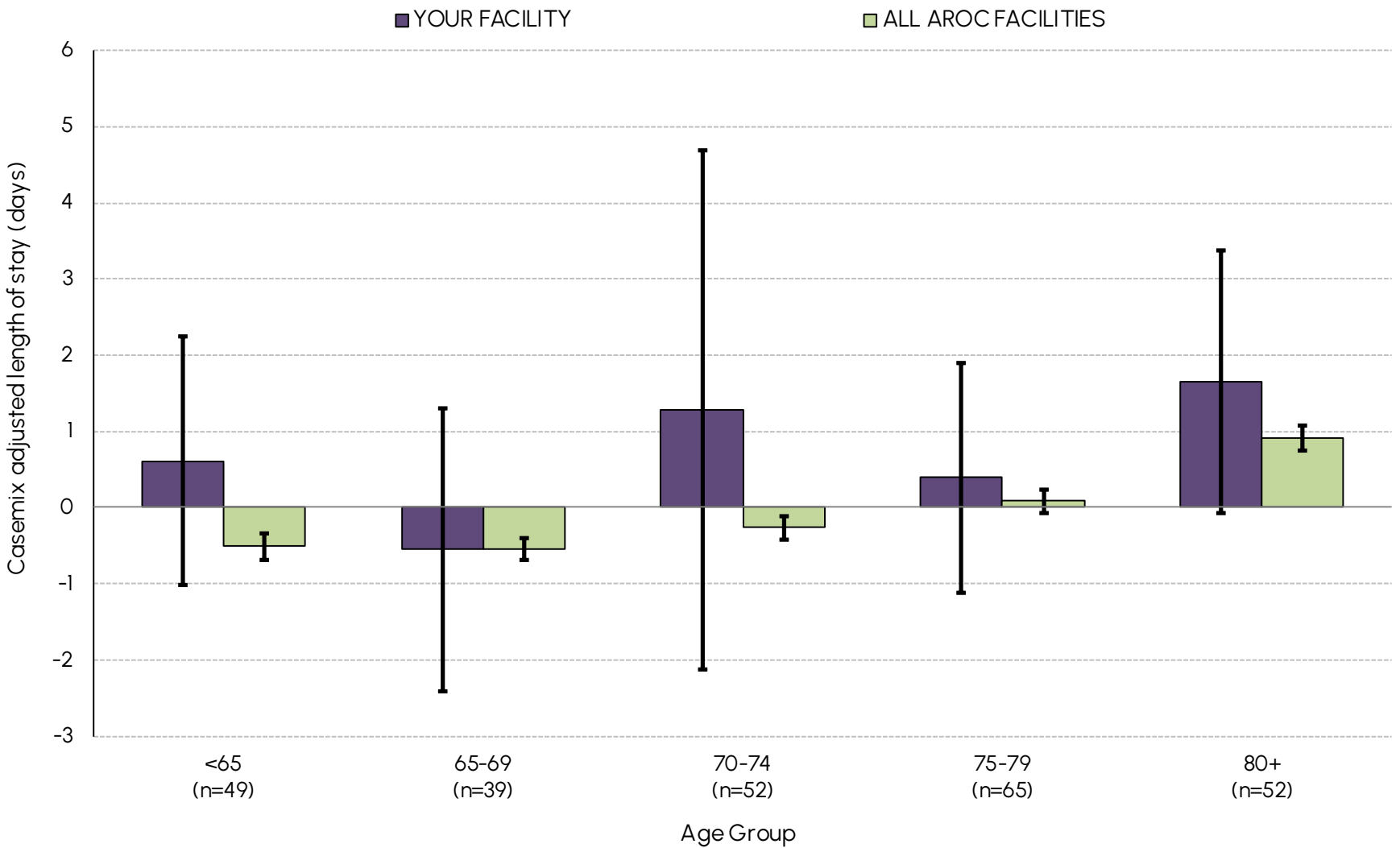
Casemix-adjusted relative mean and average length of stay and FIM change by AN-SNAP class and impairment

AN-SNAP class V5	YOUR FACILITY				ALL AROC FACILITIES	
	CARMi (95%CI)		Average (95%CI)		Average (95%CI)	
	LOS	FIM change	LOS	FIM change	LOS	FIM change
5A41 (weighted motor 61-91)	0.6 (-0.2 – 1.4)	-0.8 (-1.7 – 0.1)	10.1 (9.3 – 10.9)	14.0 (13.1 – 14.9)	9.5 (9.4 – 9.6)	14.8 (14.7 – 14.9)
5A42 (weighted motor 45-60)	-0.3 (-1.6 – 1.0)	-0.4 (-1.9 – 1.1)	12.1 (10.8 – 13.4)	25.9 (24.4 – 27.5)	12.4 (12.3 – 12.6)	26.3 (26.1 – 26.5)
5A43 (weighted motor 19-44)	7.9 (-6.0 – 21.8)	-2.2 (-11.1 – 6.7)	29.3 (13.4 – 45.2)	33.3 (24.2 – 42.4)	20.5 (19.8 – 21.2)	35.9 (35.2 – 36.7)
5AZ3 (motor 13-18, Age ≥ 79)	—	—	—	—	25.6 (19.7 – 31.6)	30.1 (16.7 – 43.6)
5AZ4 (motor 13-18, Age ≤ 78)	—	—	—	—	36.7 (23.6 – 49.8)	24.2 (10.8 – 37.7)
All Replacement AN-SNAP classes	0.7 (-0.2 – 1.7)	-0.8 (-1.6 – 0.1)	11.6 (10.5 – 12.7)	18.1 (16.9 – 19.2)	10.8 (10.7 – 10.9)	18.9 (18.7 – 19.0)

Impairment	YOUR FACILITY				ALL AROC FACILITIES	
	CARMi (95%CI)		Average (95%CI)		Average (95%CI)	
	LOS	FIM change	LOS	FIM change	LOS	FIM change
8.211 Unilateral hip replacement	1.2 (-0.2 – 2.7)	-0.6 (-2.2 – 1.0)	12.4 (10.8 – 13.9)	19.2 (17.0 – 21.4)	11.1 (11.0 – 11.3)	19.2 (19.0 – 19.4)
8.212 Bilateral hip replacement	—	—	—	—	11.1 (10.3 – 12.0)	17.8 (16.6 – 19.0)
8.221 Unilateral knee replacement	-0.1 (-1.0 – 0.7)	-1.1 (-2.3 – 0.0)	10.4 (9.4 – 11.3)	17.1 (15.7 – 18.6)	10.5 (10.4 – 10.6)	18.4 (18.2 – 18.5)
8.222 Bilateral knee replacement	0.8 (-1.1 – 2.8)	0.3 (-1.9 – 2.5)	10.8 (8.9 – 12.8)	16.1 (12.8 – 19.3)	10.8 (10.6 – 11.0)	19.6 (19.2 – 20.0)
8.231 Knee and hip replacement, same side	—	—	—	—	14.9 (10.3 – 19.5)	22.3 (17.1 – 27.5)
8.232 Knee and hip replacement, diff sides	—	—	—	—	15.3 (13.0 – 17.7)	27.8 (21.5 – 34.1)
8.24 Shoulder replacement	10.3 (-10.8 – 31.4)	-3.5 (-8.1 – 1.2)	26.8 (0.5 – 53.0)	22.8 (16.5 – 29.0)	12.8 (12.3 – 13.4)	21.4 (20.7 – 22.0)
All Orthopaedic Replacements	0.7 (-0.2 – 1.7)	-0.8 (-1.6 – 0.1)	11.6 (10.5 – 12.7)	18.1 (16.9 – 19.2)	10.8 (10.7 – 10.9)	18.9 (18.7 – 19.0)

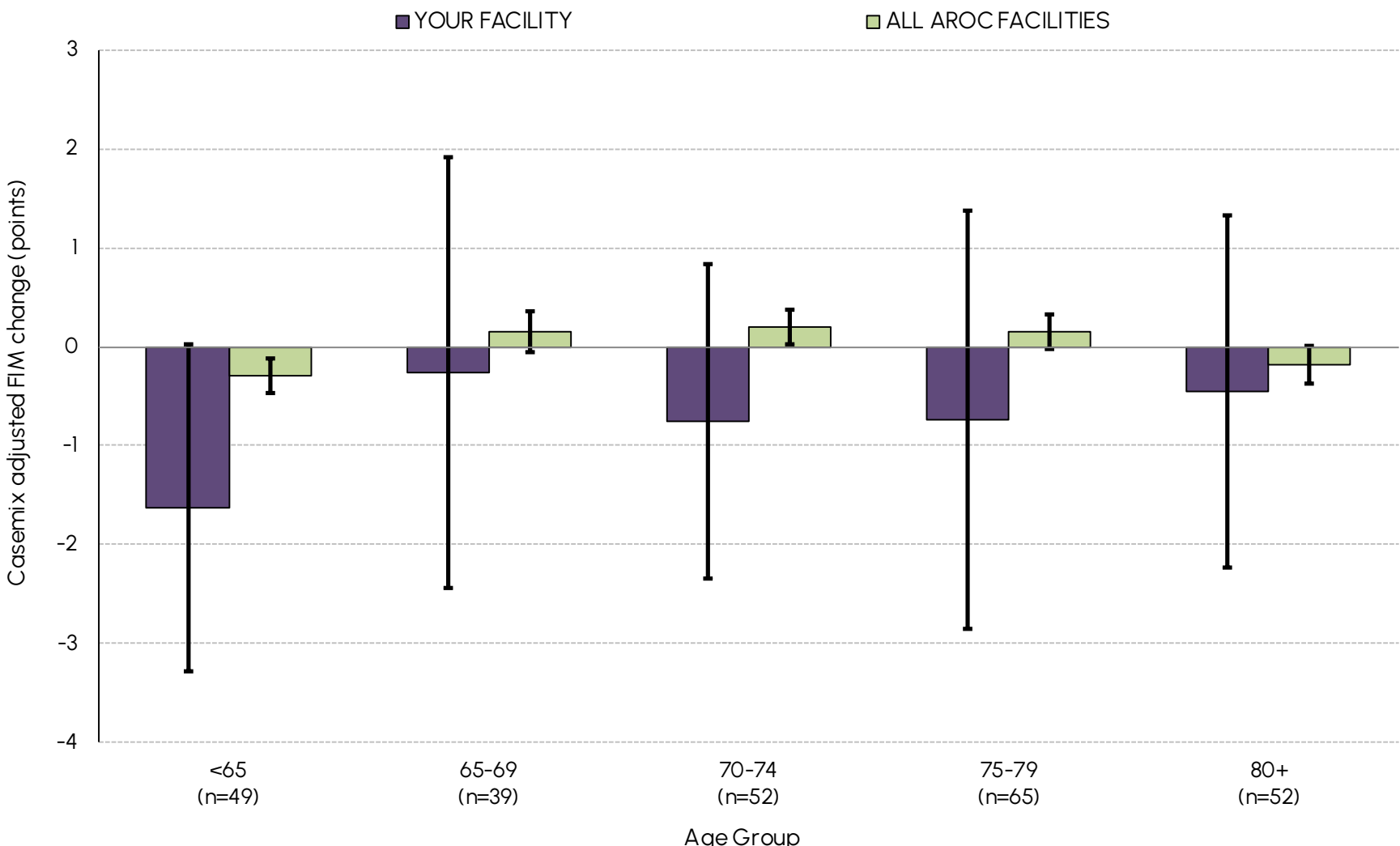
NOTE: Includes only completed episodes with valid FIM scores and LOS, where n<5 no values are shown

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



NOTE: Includes only completed episodes with valid LOS and age, where n<5 CARMi LOS will not be shown
 * Approximately 20% total population per age group

Casemix-adjusted relative mean FIM change by age group*



NOTE: Includes only completed episodes with valid FIM scores and age, where n<5 CARMI FIM change will not be shown
 * Approximately 20% total population per age group

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

Age group	YOUR FACILITY		ALL AROC FACILITIES	
	LOS (95%CI)	FIM change (95%CI)	LOS (95%CI)	FIM change (95%CI)
<65	11.3 (9.7 – 12.9)	16.1 (13.7 – 18.5)	9.8 (9.6 – 10.0)	17.2 (17.0 – 17.4)
65-69	9.5 (7.8 – 11.3)	16.9 (14.6 – 19.3)	10.0 (9.8 – 10.1)	18.2 (17.9 – 18.5)
70-74	12.4 (8.0 – 16.7)	18.3 (16.0 – 20.6)	10.4 (10.2 – 10.5)	18.6 (18.4 – 18.8)
75-79	11.2 (9.6 – 12.8)	18.2 (15.6 – 20.9)	10.9 (10.8 – 11.1)	19.1 (18.9 – 19.4)
80+	13.1 (11.1 – 15.1)	20.4 (17.7 – 23.1)	12.5 (12.3 – 12.7)	20.7 (20.4 – 20.9)

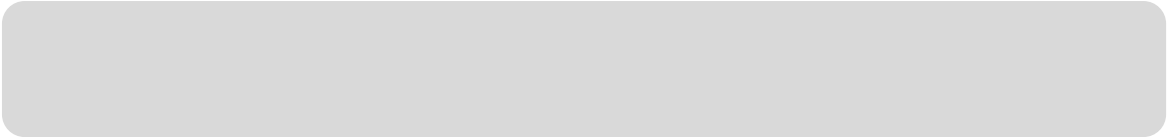
Age group	YOUR FACILITY		ALL AROC FACILITIES	
	CARMi LOS (95%CI)	CARMi FIM change (95%CI)	CARMi LOS (95%CI)	CARMi FIM change (95%CI)
<65	0.6 (-1.0 – 2.2)	-1.6 (-3.3 – 0.0)	-0.5 (-0.7 – -0.3)	-0.3 (-0.5 – -0.1)
65-69	-0.6 (-2.4 – 1.3)	-0.3 (-2.4 – 1.9)	-0.5 (-0.7 – -0.4)	0.2 (0.0 – 0.4)
70-74	1.3 (-2.1 – 4.7)	-0.8 (-2.3 – 0.8)	-0.3 (-0.4 – -0.1)	0.2 (0.0 – 0.4)
75-79	0.4 (-1.1 – 1.9)	-0.7 (-2.9 – 1.4)	0.1 (-0.1 – 0.2)	0.2 (0.0 – 0.3)
80+	1.6 (-0.1 – 3.4)	-0.4 (-2.2 – 1.3)	0.9 (0.7 – 1.1)	-0.2 (-0.4 – 0.0)

*Approximately 20% total population per age group

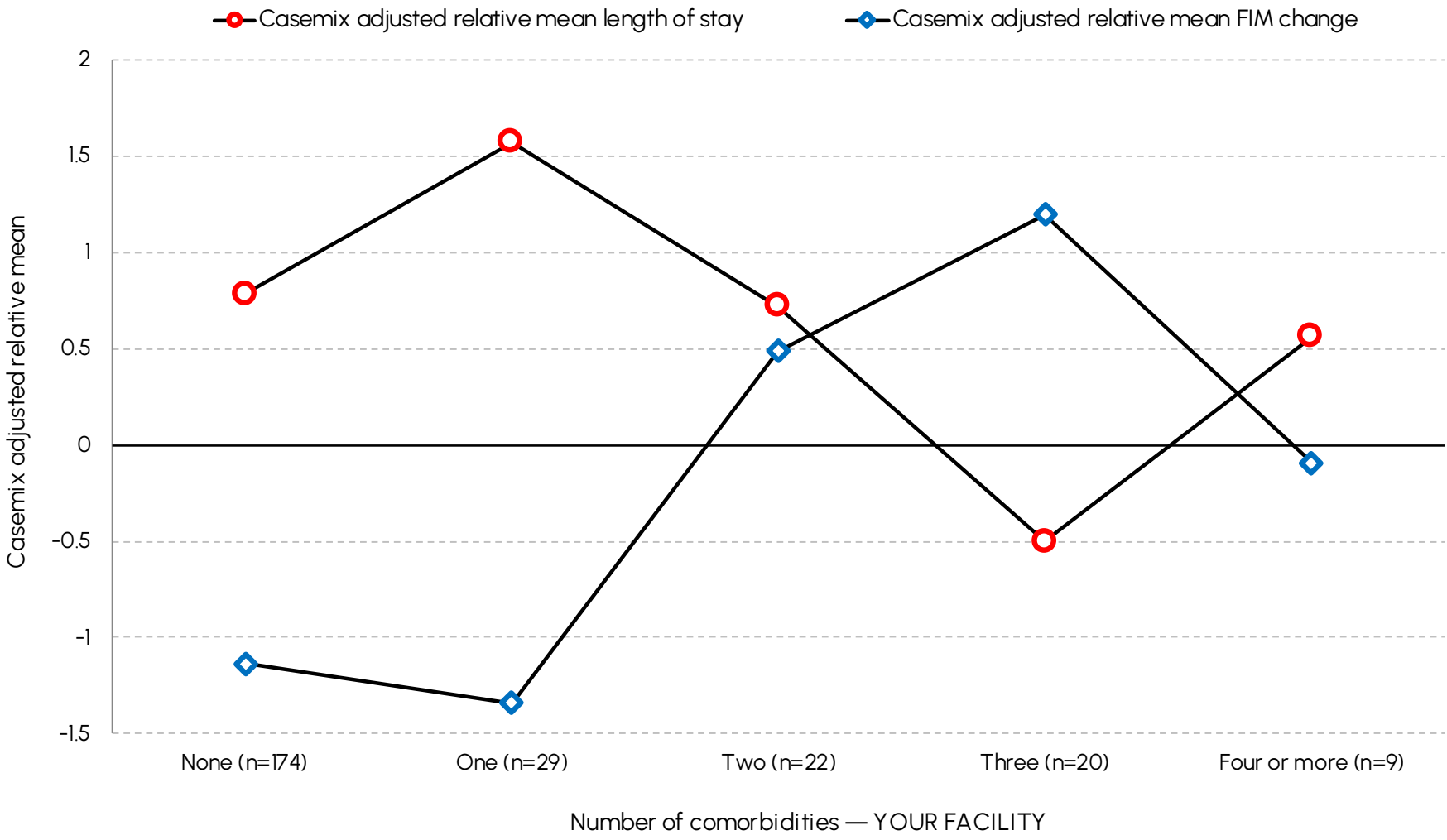
NOTE: Includes only completed episodes with valid FIM scores and LOS and age, where n<5 no values are shown



Explanatory data

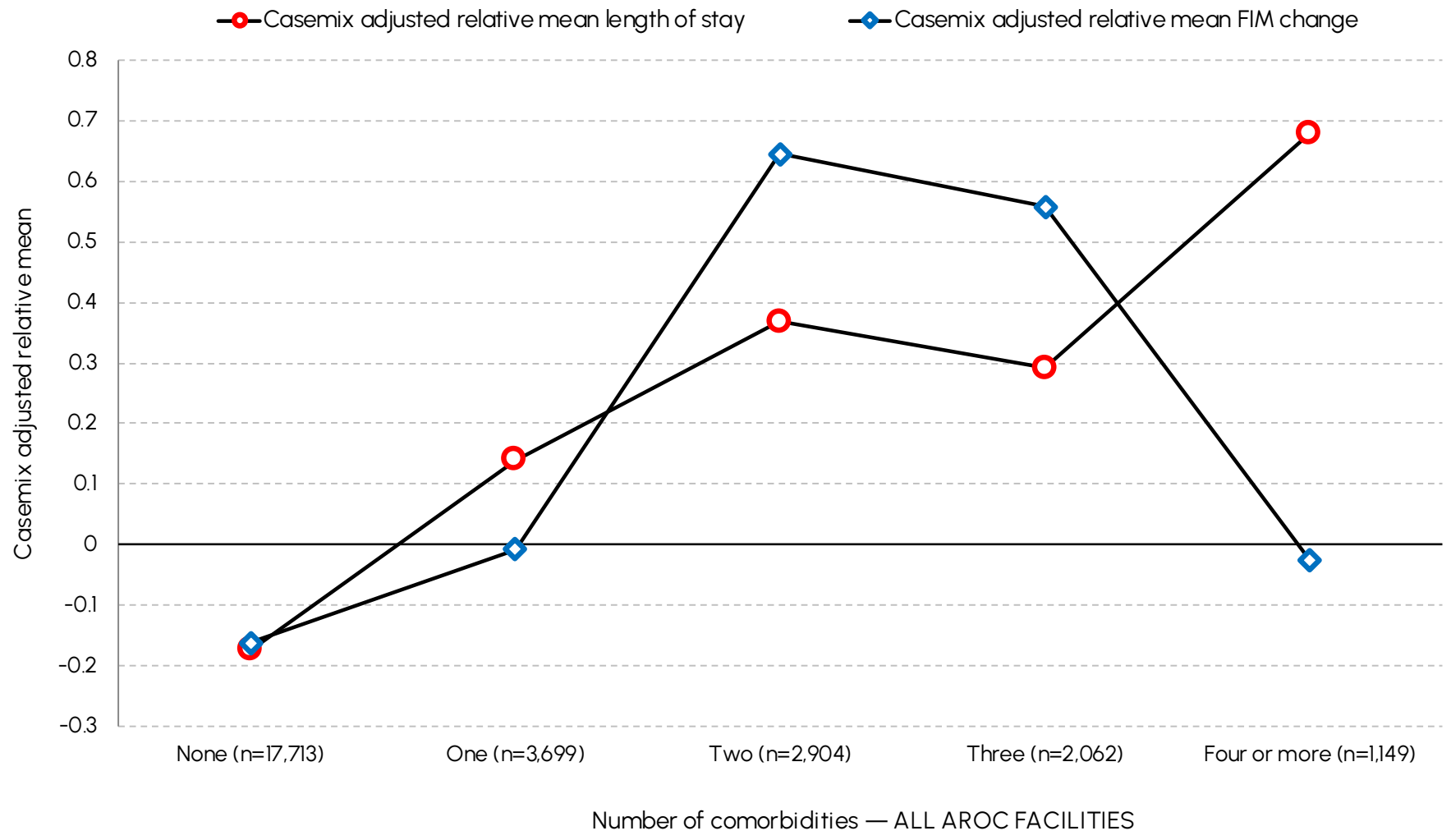


Casemix-adjusted relative mean length of stay and FIM change by number of comorbidities



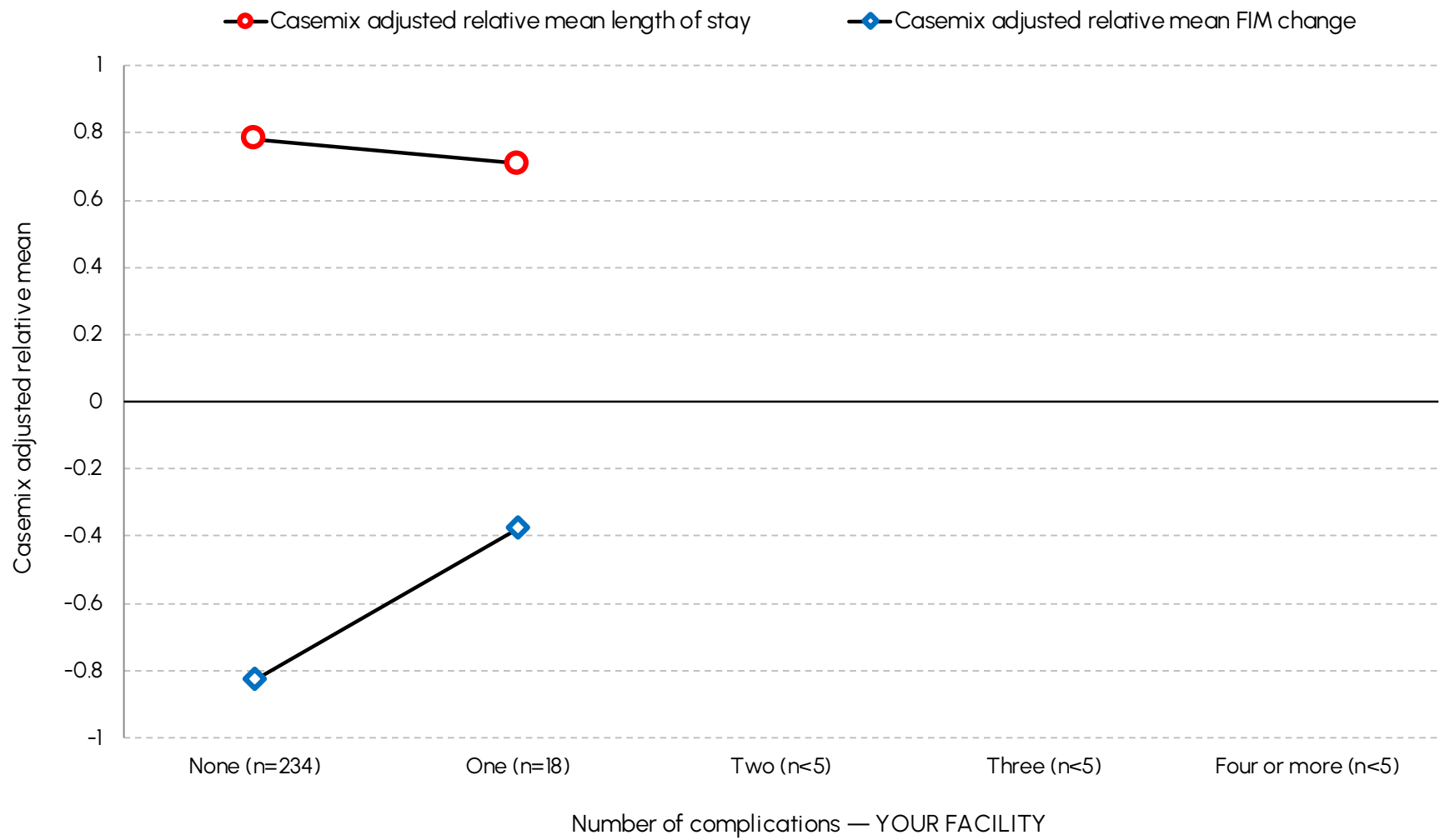
NOTE: Includes only completed episodes with valid FIM scores and LOS; where n<5 the casemix-adjusted relative mean will not be shown

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



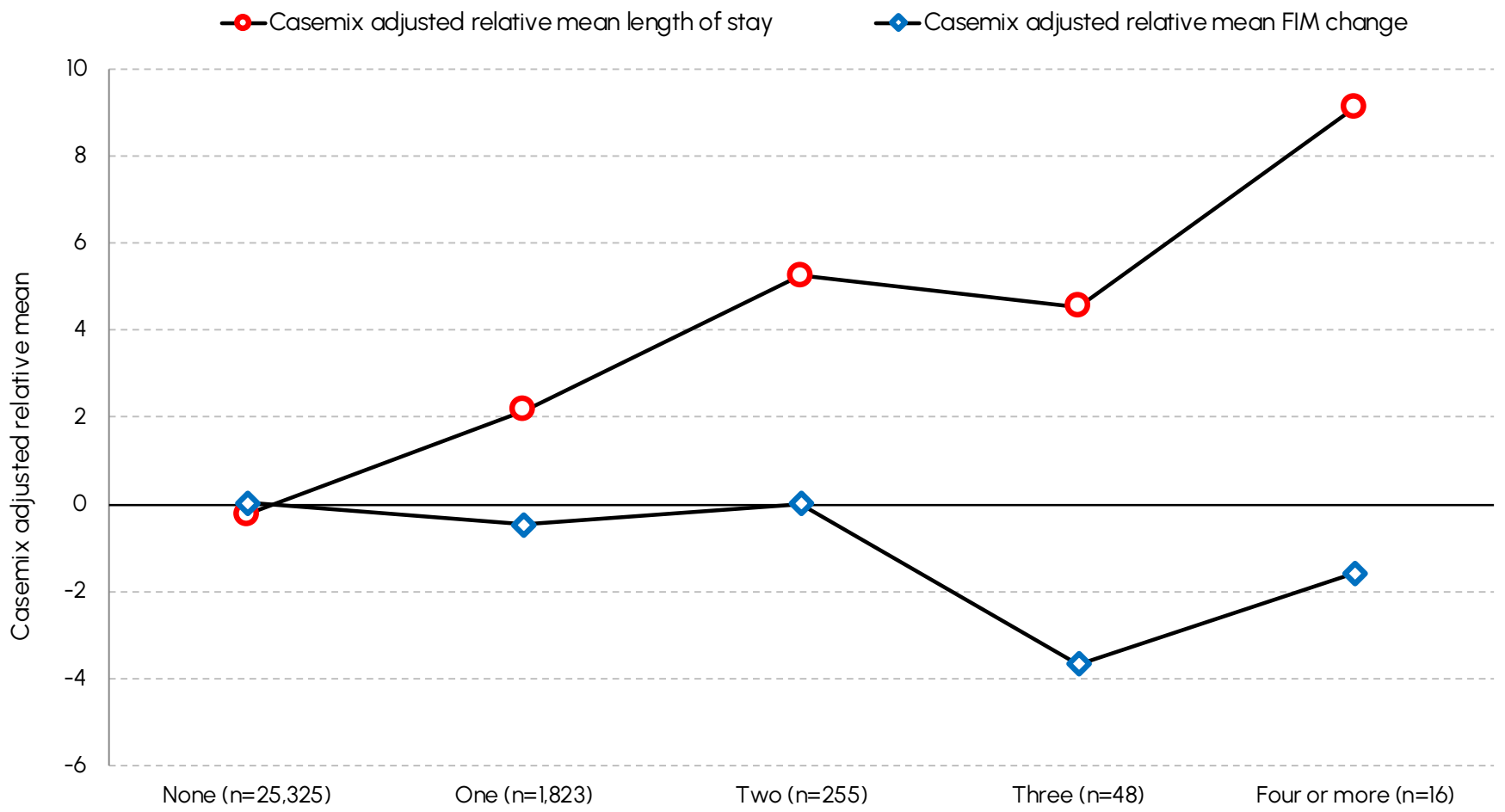
NOTE: Includes only completed episodes with valid FIM scores and LOS; where n<5 the casemix-adjusted relative mean will not be shown

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



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

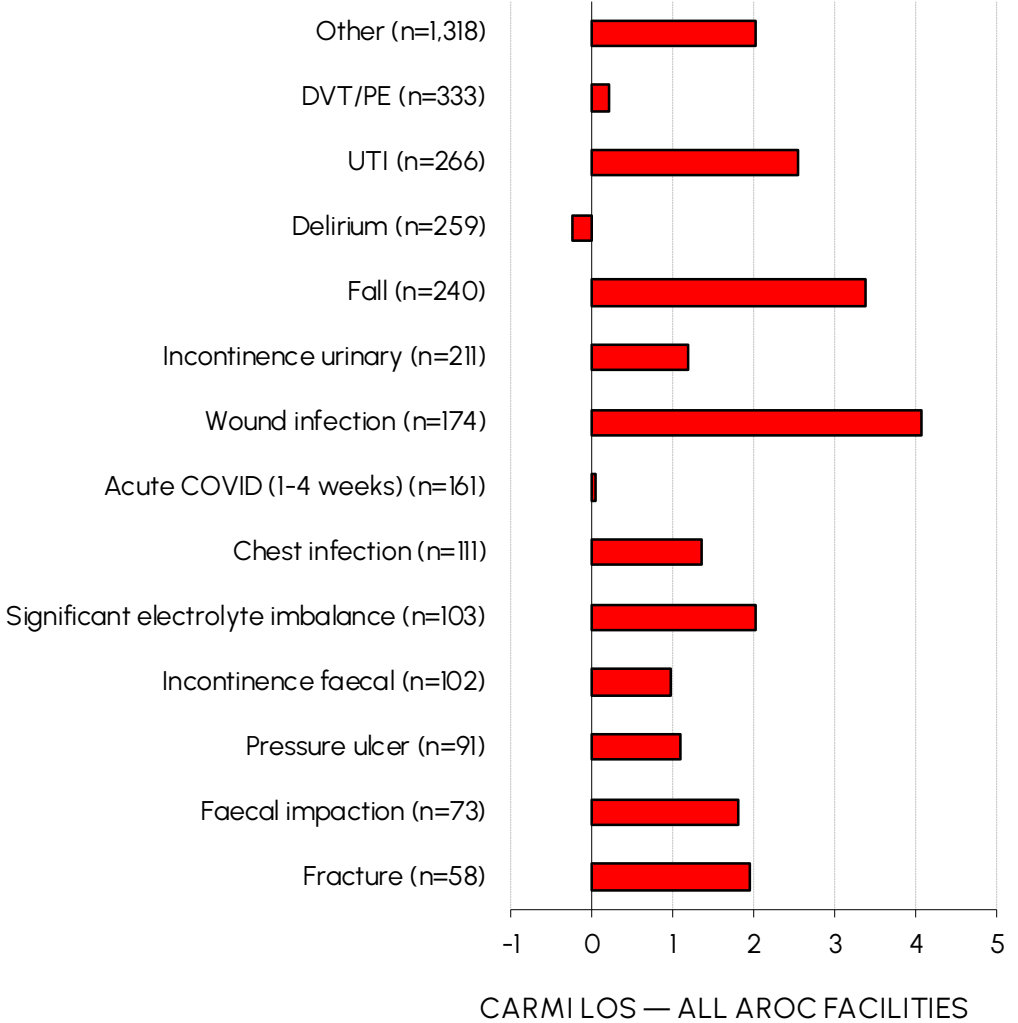
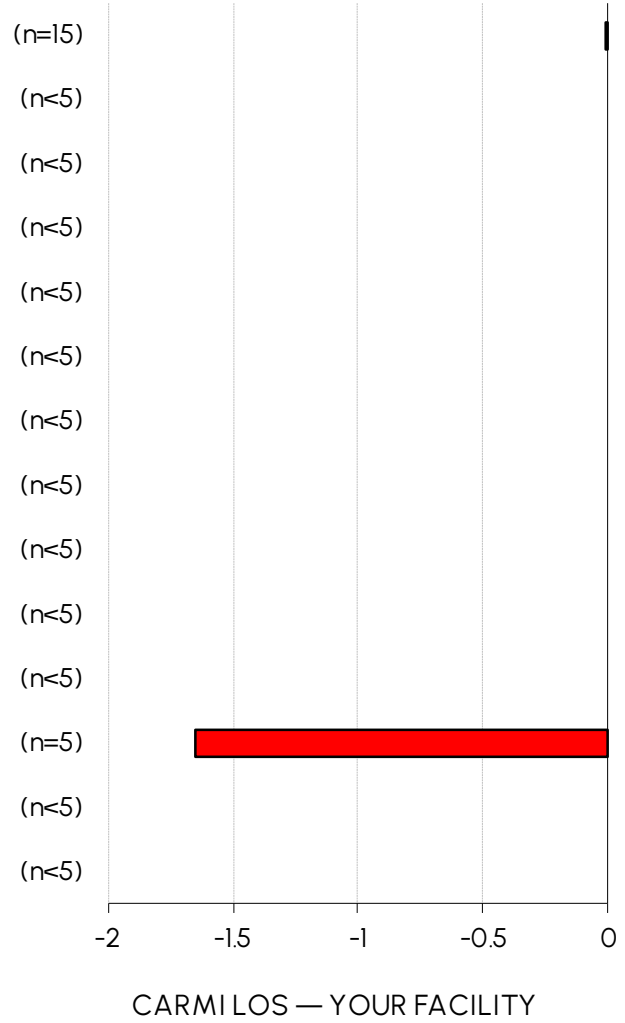
Casemix-adjusted relative mean length of stay and FIM change by number of complications



Number of complications — ALL AROC FACILITIES

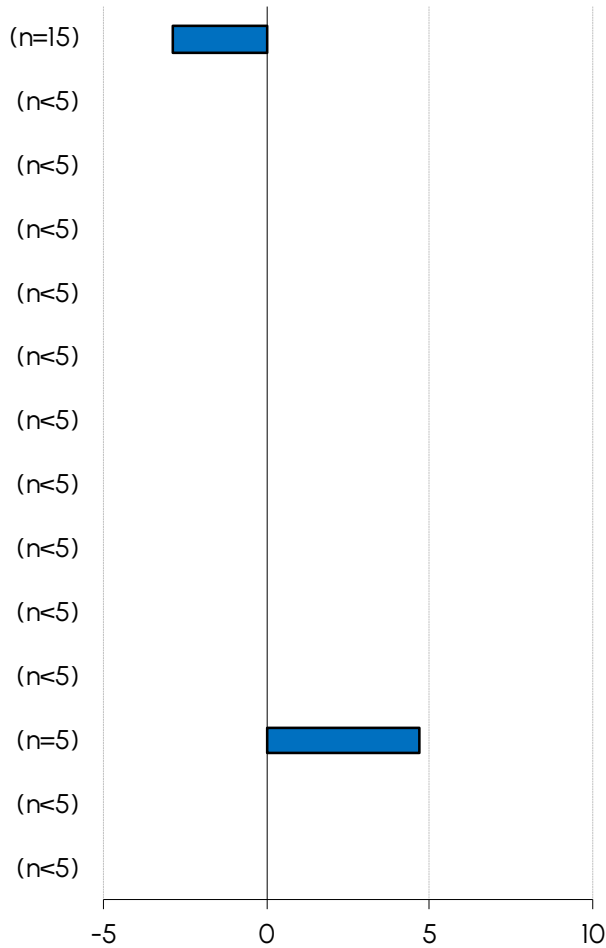
NOTE: Includes only completed episodes with valid FIM scores and LOS; where n<5 the casemix-adjusted relative mean will not be shown

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

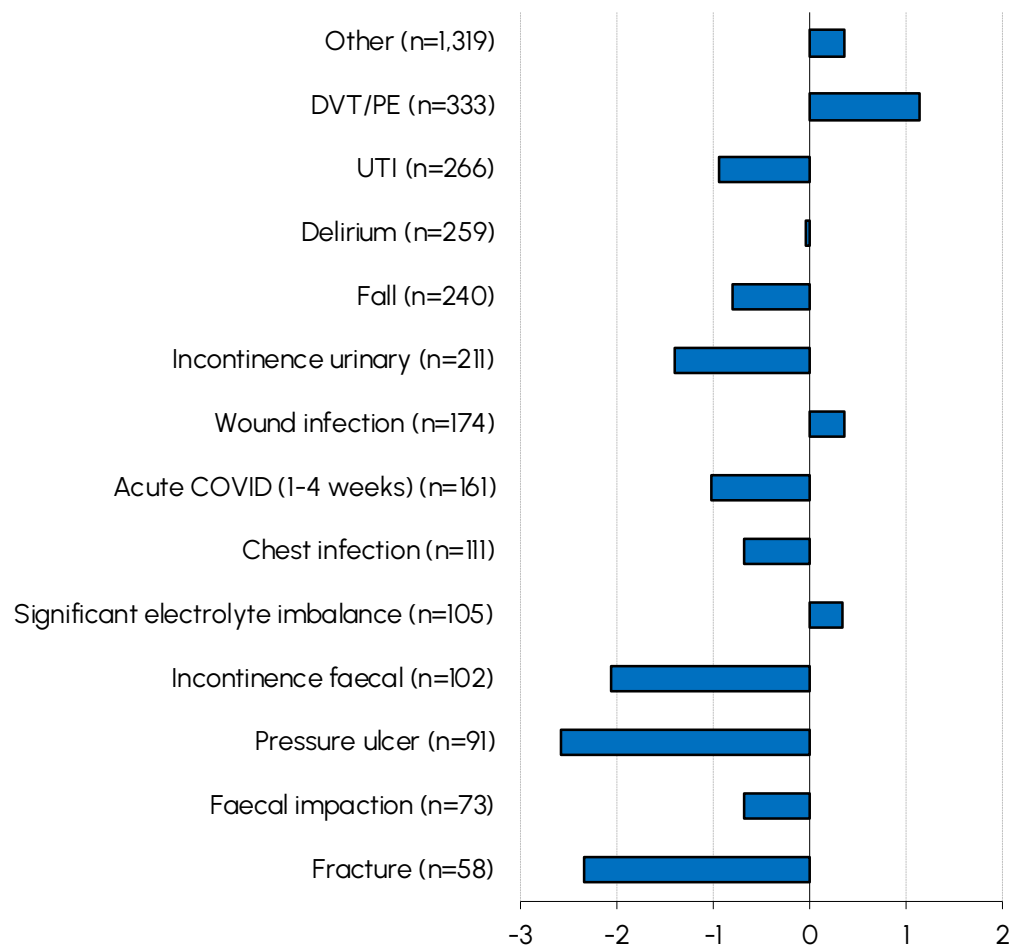


NOTE: Includes only completed episodes with valid LOS
 * No data included where number of episodes <5

Casemix-adjusted relative mean FIM change by type of complication



CARMi FIM change — YOUR FACILITY



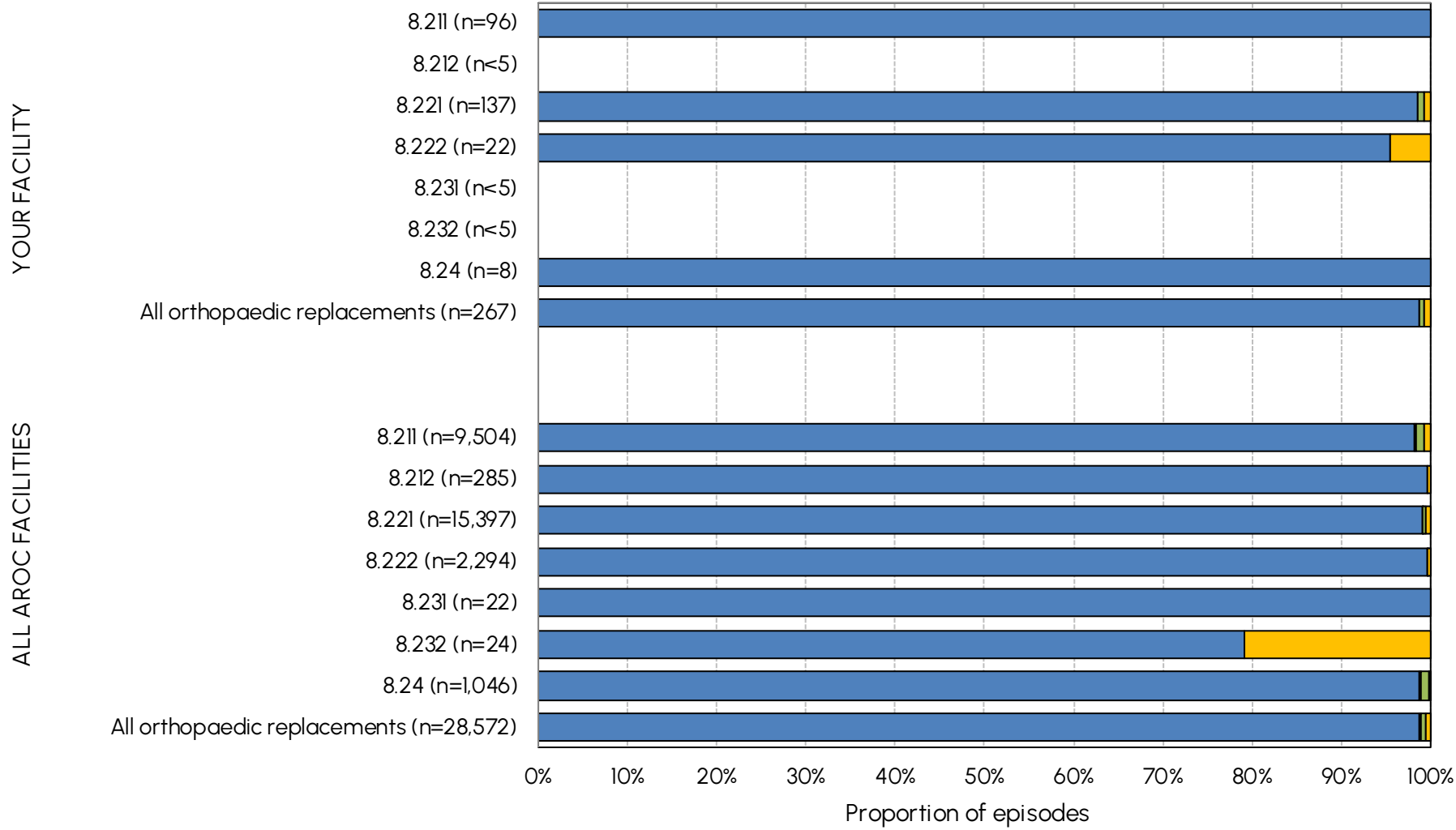
CARMi FIM change — ALL AROC FACILITIES

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

Type of accommodation prior to impairment



■ Private Residence
 ■ Rest home (NZ only)
 ■ Residential Aged Care (AU) /24hr Nursing Care (NZ)
 ■ Other

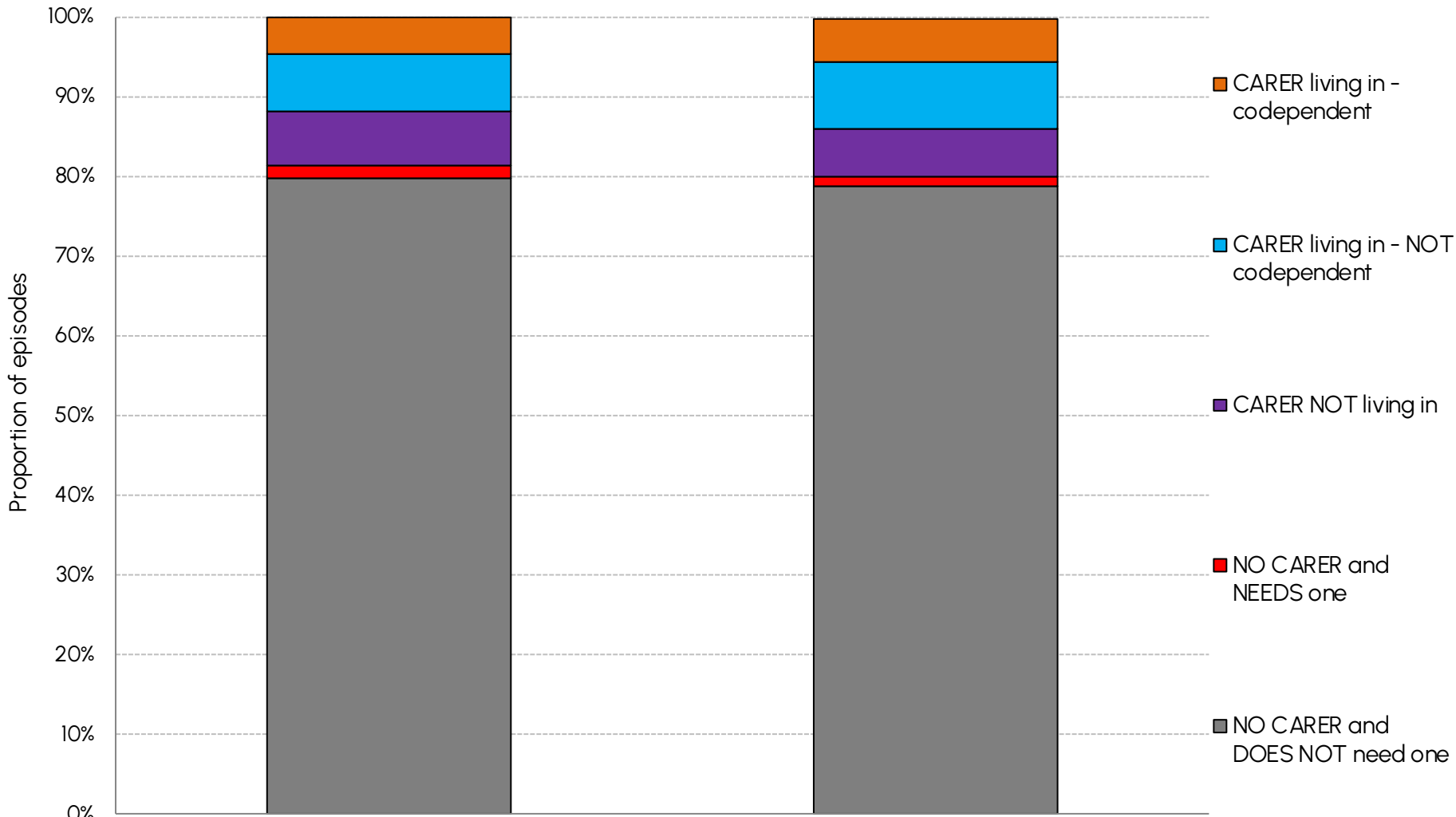


Type of accommodation prior to impairment

Impairment	YOUR FACILITY — N (%)					All episodes
	Private residence	Residential Aged		Other	Unknown	
		Care				
8.211 Unilateral hip replacement	96 (100.0)	0 (0.0)	0 (0.0)	0	96 (100.0)	
8.212 Bilateral hip replacement	4 (100.0)	0 (0.0)	0 (0.0)	0	4 (100.0)	
8.221 Unilateral knee replacement	135 (98.5)	1 (0.7)	1 (0.7)	0	137 (100.0)	
8.222 Bilateral knee replacement	21 (95.5)	0 (0.0)	1 (4.5)	0	22 (100.0)	
8.231 Knee and hip replacement, same side	0 —	0 —	0 —	0	0 —	
8.232 Knee and hip replacement, diff sides	0 —	0 —	0 —	0	0 —	
8.24 Shoulder replacement	8 (100.0)	0 (0.0)	0 (0.0)	0	8 (100.0)	
All Orthopaedic Replacements	264 (98.9)	1 (0.4)	2 (0.7)	0	267 (100.0)	

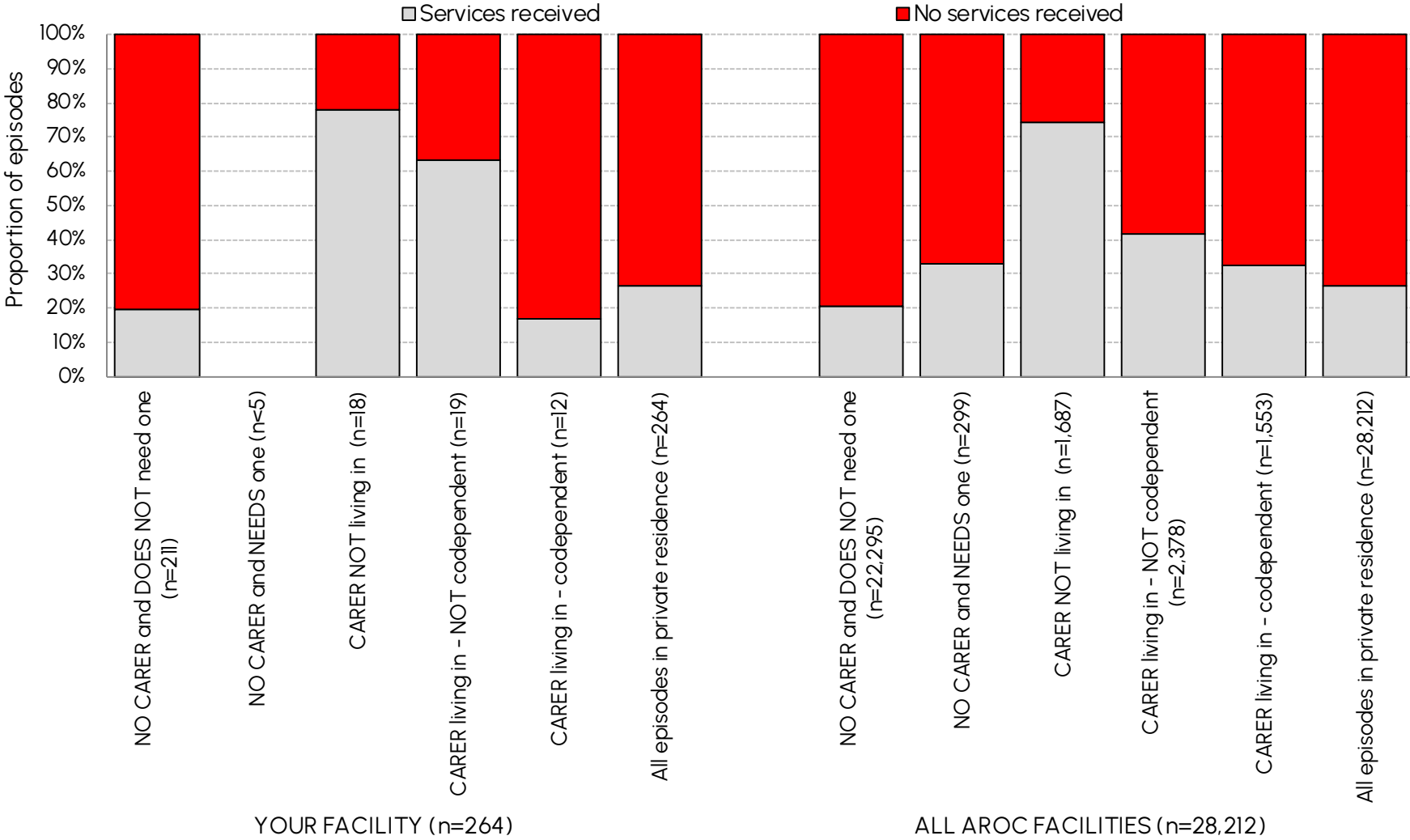
Impairment	ALL AROC FACILITIES — N (%)						All episodes
	Private residence	Rest Home (NZ only)	Residential Aged		Other	Unknown	
			Care (AU) / 24hr	nursing care (NZ)			
8.211 Unilateral hip replacement	9,332 (97.9)	22 (0.2)	93 (1.0)	57 (0.6)	29	9,533 (100.0)	
8.212 Bilateral hip replacement	284 (98.6)	0 (0.0)	0 (0.0)	1 (0.3)	3	288 (100.0)	
8.221 Unilateral knee replacement	15,261 (98.6)	16 (0.1)	51 (0.3)	69 (0.4)	74	15,471 (100.0)	
8.222 Bilateral knee replacement	2,288 (99.3)	1 (0.0)	0 (0.0)	5 (0.2)	9	2,303 (100.0)	
8.231 Knee and hip replacement, same side	22 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0	22 (100.0)	
8.232 Knee and hip replacement, diff sides	19 (79.2)	0 (0.0)	0 (0.0)	5 (20.8)	0	24 (100.0)	
8.24 Shoulder replacement	1,034 (98.7)	2 (0.2)	8 (0.8)	2 (0.2)	2	1,048 (100.0)	
All Orthopaedic Replacements	28,240 (98.4)	41 (0.1)	152 (0.5)	139 (0.5)	117	28,689 (100.0)	

Carer status prior to impairment



NOTE: Includes only those episodes coming from private residence.

Any services received prior to impairment by carer status



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

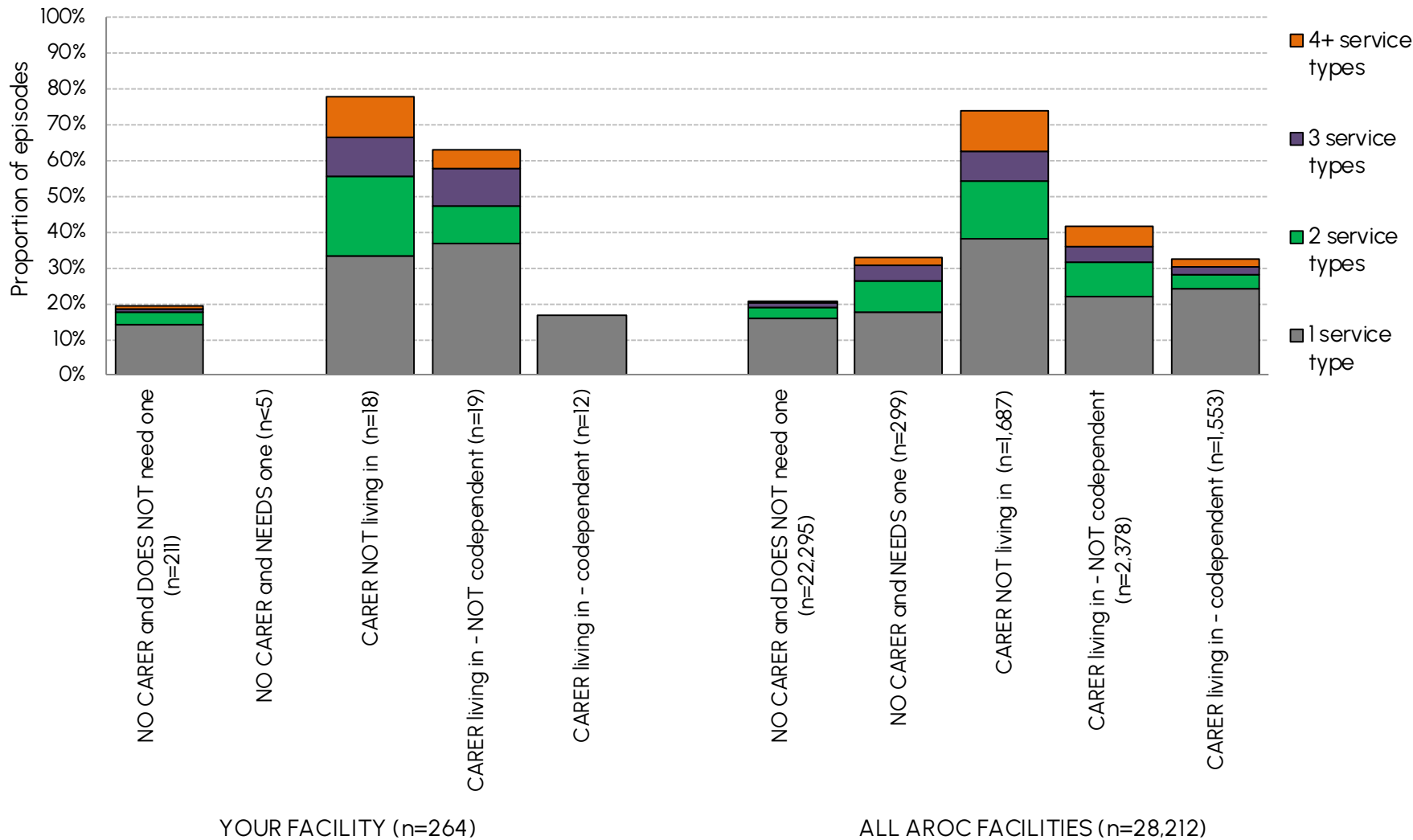
Carer status and any services received prior to impairment

Carer status prior to this impairment	YOUR FACILITY		ALL AROC FACILITIES	
	No.	%	No.	%
NO CARER and DOES NOT need one	211	79.9	22,295	79.0
NO CARER and NEEDS one	4	1.5	299	1.1
CARER NOT living in	18	6.8	1,687	6.0
CARER living in - NOT codependent	19	7.2	2,378	8.4
CARER living in - codependent	12	4.5	1,553	5.5
Missing	0		28	
All episodes in private residence	264	100.0	28,240	100.0

Carer status prior to this impairment	Any services received prior to this impairment?			
	YOUR FACILITY		ALL AROC FACILITIES	
	Yes (%)	No (%)	Yes (%)	No (%)
NO CARER and DOES NOT need one	19.4	80.6	20.7	79.3
NO CARER and NEEDS one	—	—	33.1	66.9
CARER NOT living in	77.8	22.2	74.1	25.9
CARER living in - NOT codependent	63.2	36.8	41.7	58.3
CARER living in - codependent	16.7	83.3	32.6	67.4
All episodes in private residence	26.5	73.5	26.5	73.5

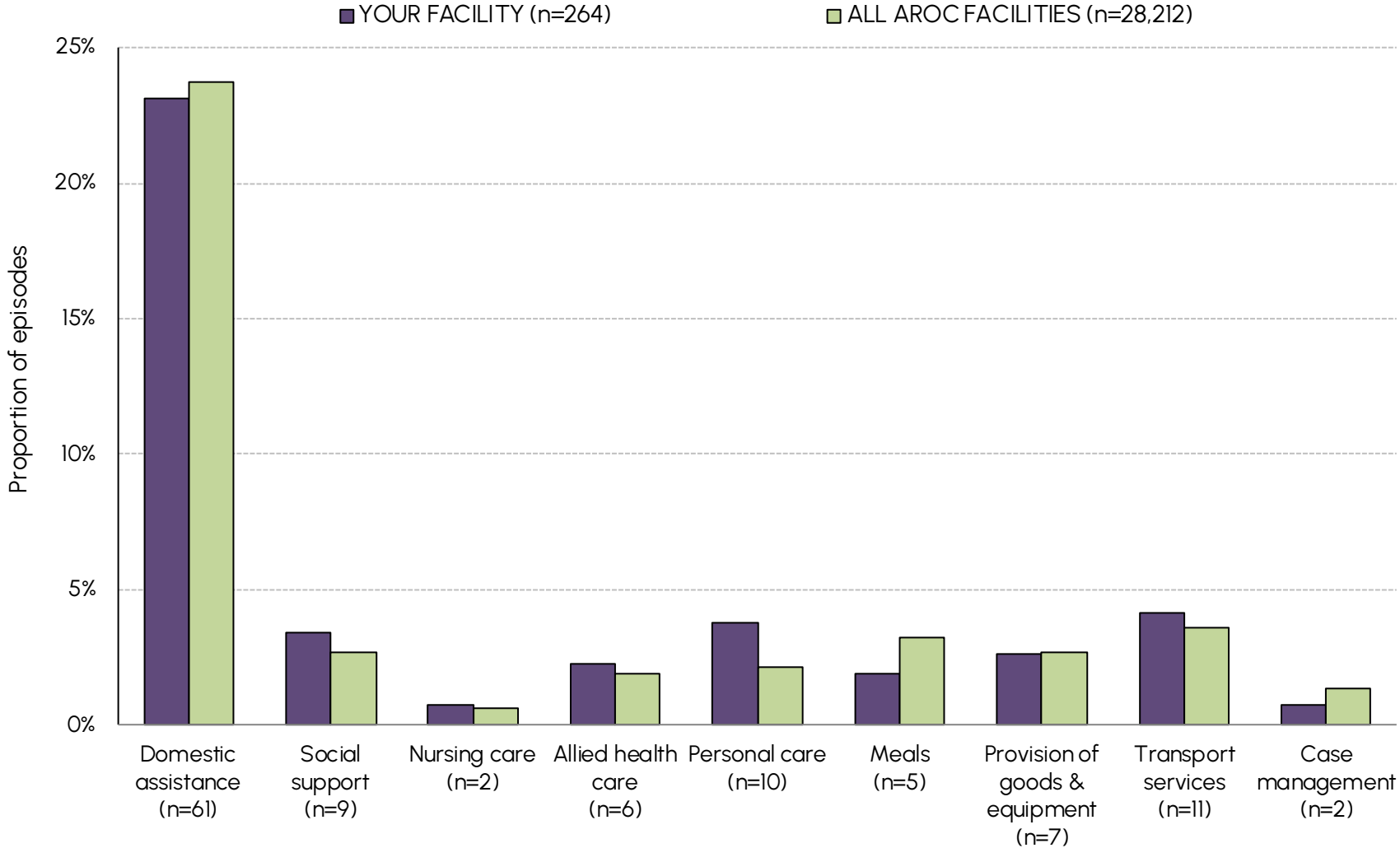
NOTE: Includes only those episodes coming from private residence and with known carer status.

Number of services received prior to impairment by carer status



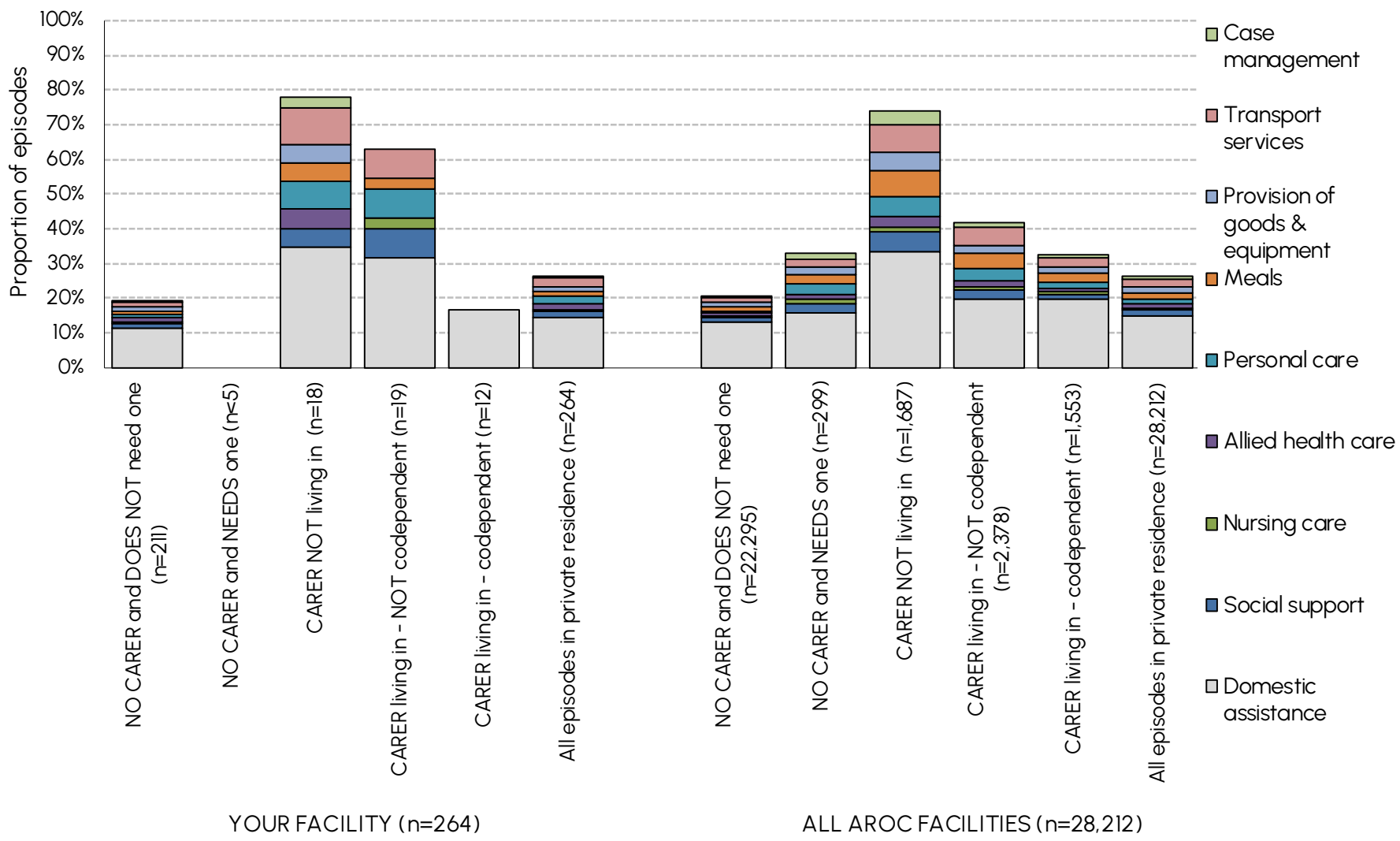
NOTE: Includes only those episodes coming from private residence and with known carer status and known services status

Type of services received prior to impairment



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=264)

ALL AROC FACILITIES (n=28,212)

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	211	4	18	19	12		264
Percent of episodes receiving:							
No services	80.6	75.0	22.2	36.8	83.3		73.5
1 service type	14.2	0.0	33.3	36.8	16.7		17.0
2 service types	3.3	25.0	22.2	10.5	0.0		5.3
3 service types	0.9	0.0	11.1	10.5	0.0		2.3
4 or more service types	0.9	0.0	11.1	5.3	0.0		1.9
Service Type received							
Domestic assistance	16.1	25.0	72.2	57.9	16.7		23.1
Social support	1.9	0.0	11.1	15.8	0.0		3.4
Nursing care	0.5	0.0	0.0	5.3	0.0		0.8
Allied health care	1.9	0.0	11.1	0.0	0.0		2.3
Personal care	1.4	25.0	16.7	15.8	0.0		3.8
Meals	0.9	0.0	11.1	5.3	0.0		1.9
Provision of goods & equipment	2.4	0.0	11.1	0.0	0.0		2.7
Transport services	1.9	0.0	22.2	15.8	0.0		4.2
Case management	0.5	0.0	5.6	0.0	0.0		0.8

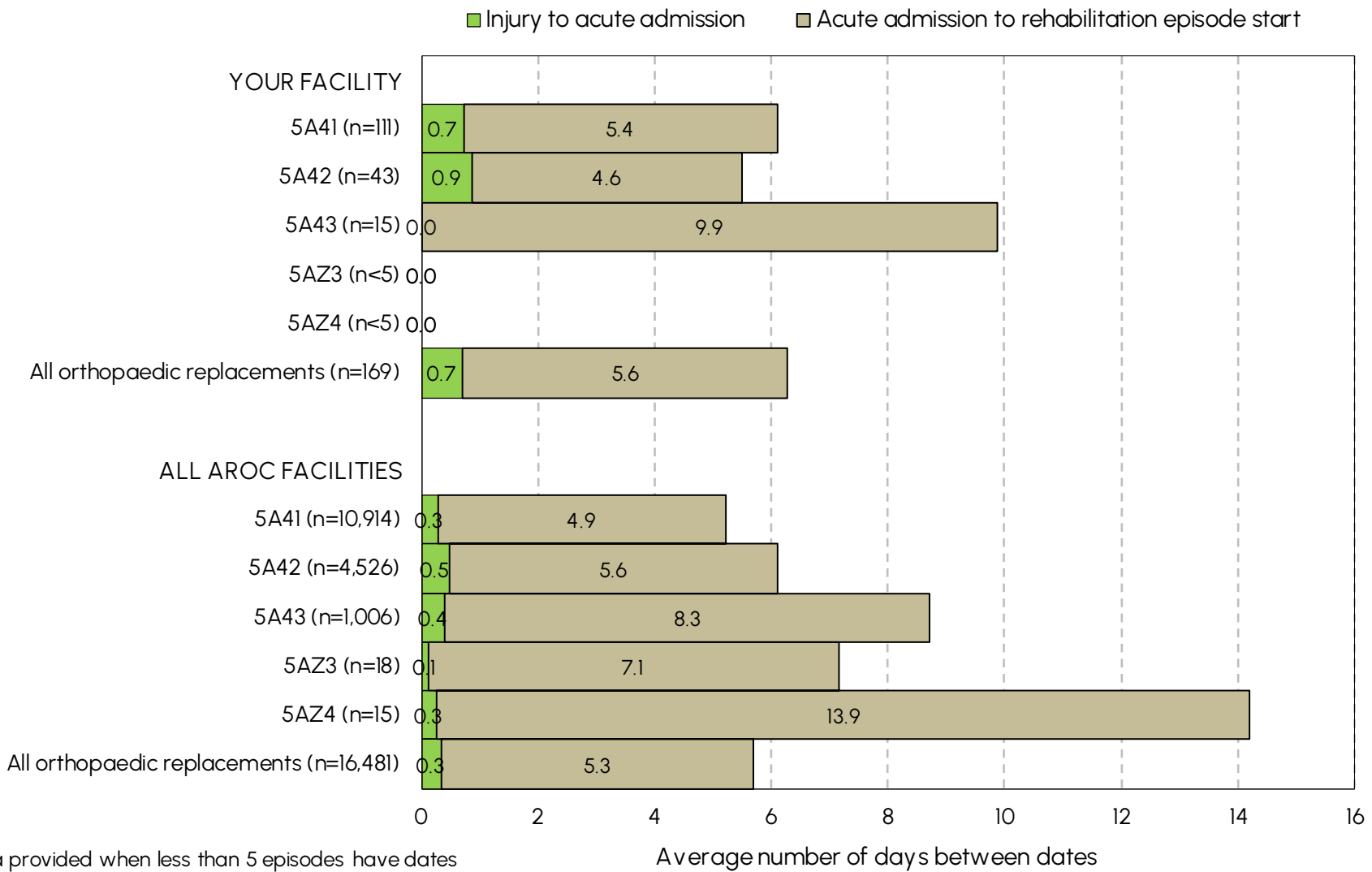
NOTE: Includes only those episodes coming from private residence and with known carer status and known services status

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

Services received prior to this impairment	Carer status prior to discharge - ALL AROC FACILITIES						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	22,295	299	1,687	2,378	1,553	28,212	
Percent of episodes receiving:							
No services	79.3	66.9	25.9	58.3	67.4	73.5	
1 service type	15.8	17.7	38.4	22.0	24.1	18.1	
2 service types	3.3	8.7	16.0	9.6	4.1	4.7	
3 service types	1.0	4.3	8.1	4.5	2.3	1.9	
4 or more service types	0.7	2.3	11.6	5.6	2.1	1.8	
Service Type received							
Domestic assistance	18.2	28.8	68.9	38.7	30.3	23.8	
Social support	1.7	4.3	12.4	5.5	2.3	2.7	
Nursing care	0.3	2.7	2.5	1.2	1.0	0.6	
Allied health care	1.5	2.0	6.0	3.3	1.5	1.9	
Personal care	0.7	6.0	12.4	7.1	3.0	2.1	
Meals	1.6	4.7	15.8	8.7	4.2	3.2	
Provision of goods & equipment	1.8	3.7	10.6	4.7	2.7	2.7	
Transport services	1.9	4.3	16.8	10.1	3.8	3.6	
Case management	0.7	3.3	8.1	2.3	1.5	1.4	

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

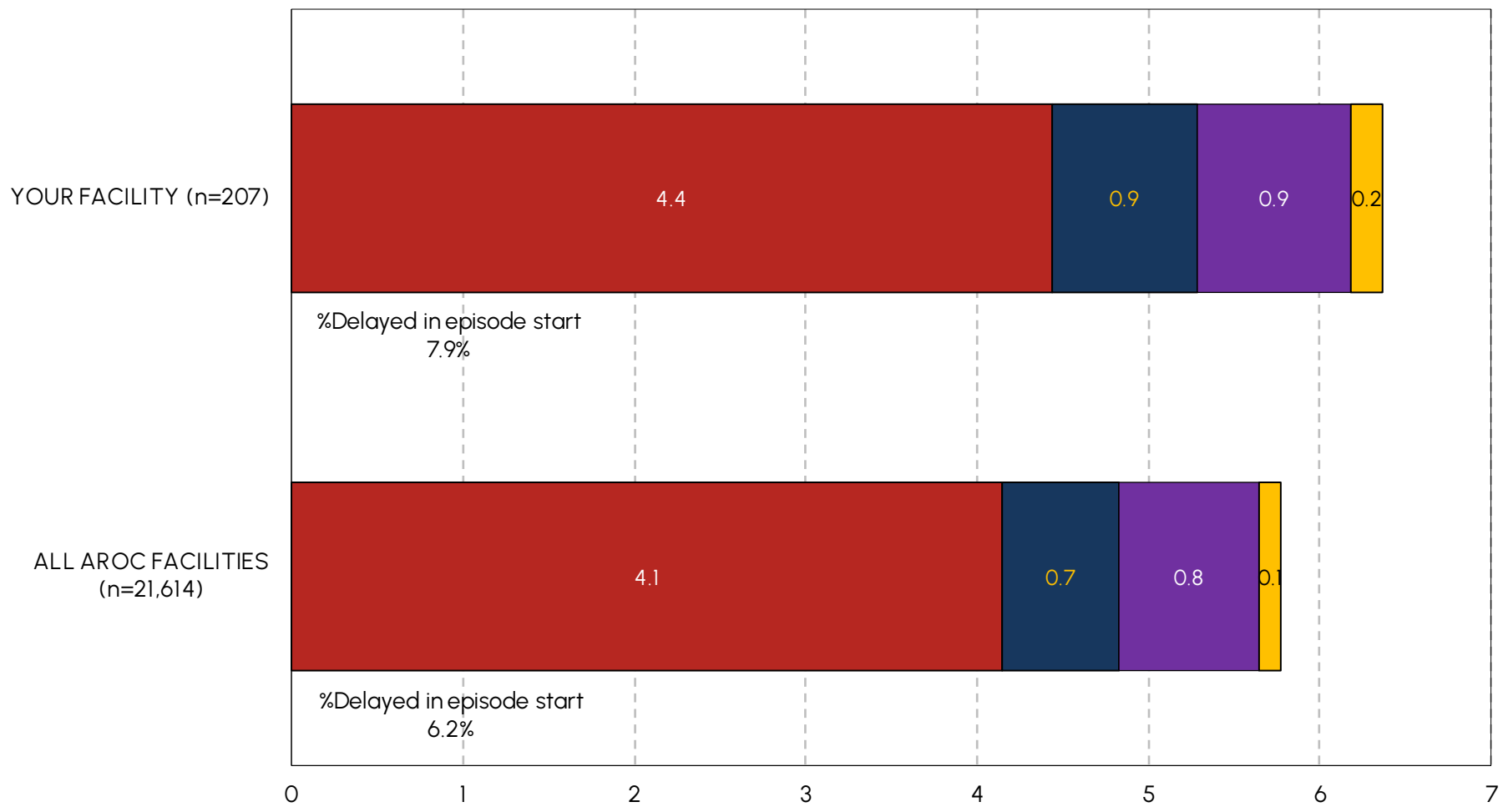


*No data provided when less than 5 episodes have dates
 NOTE: Includes first admissions where all dates have been entered only

Days from referral to rehabilitation episode start



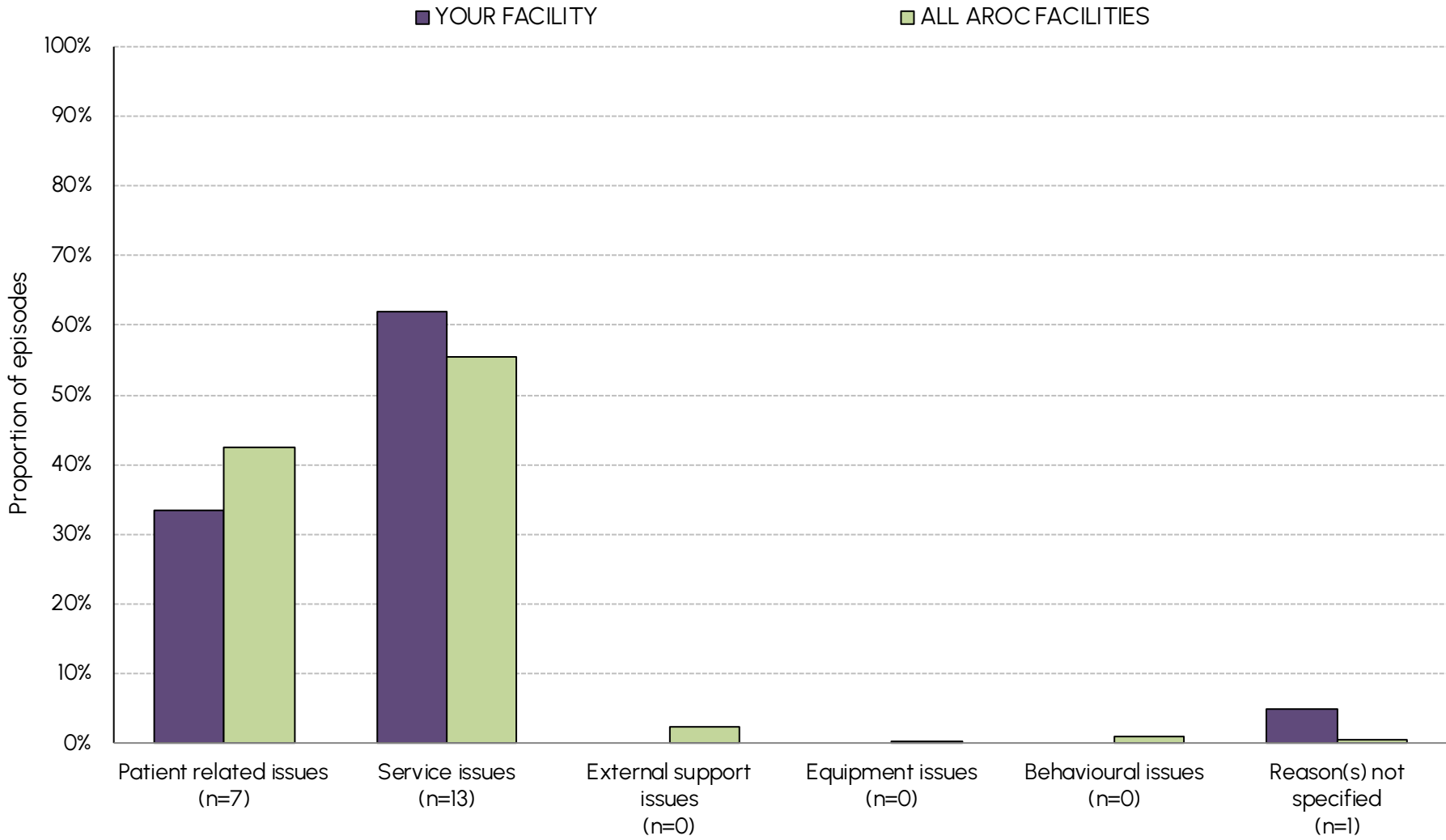
■ Injury to Referral
 ■ Referral to assessment
 ■ Assessment to clinically rehab ready
 ■ Clinically rehab ready to rehab episode start



*No data provided when less than 5 episodes have dates
 NOTE: Includes first admissions where all dates have been entered only

Average number of days between dates

Type of delay in episode start



Delays in episode start

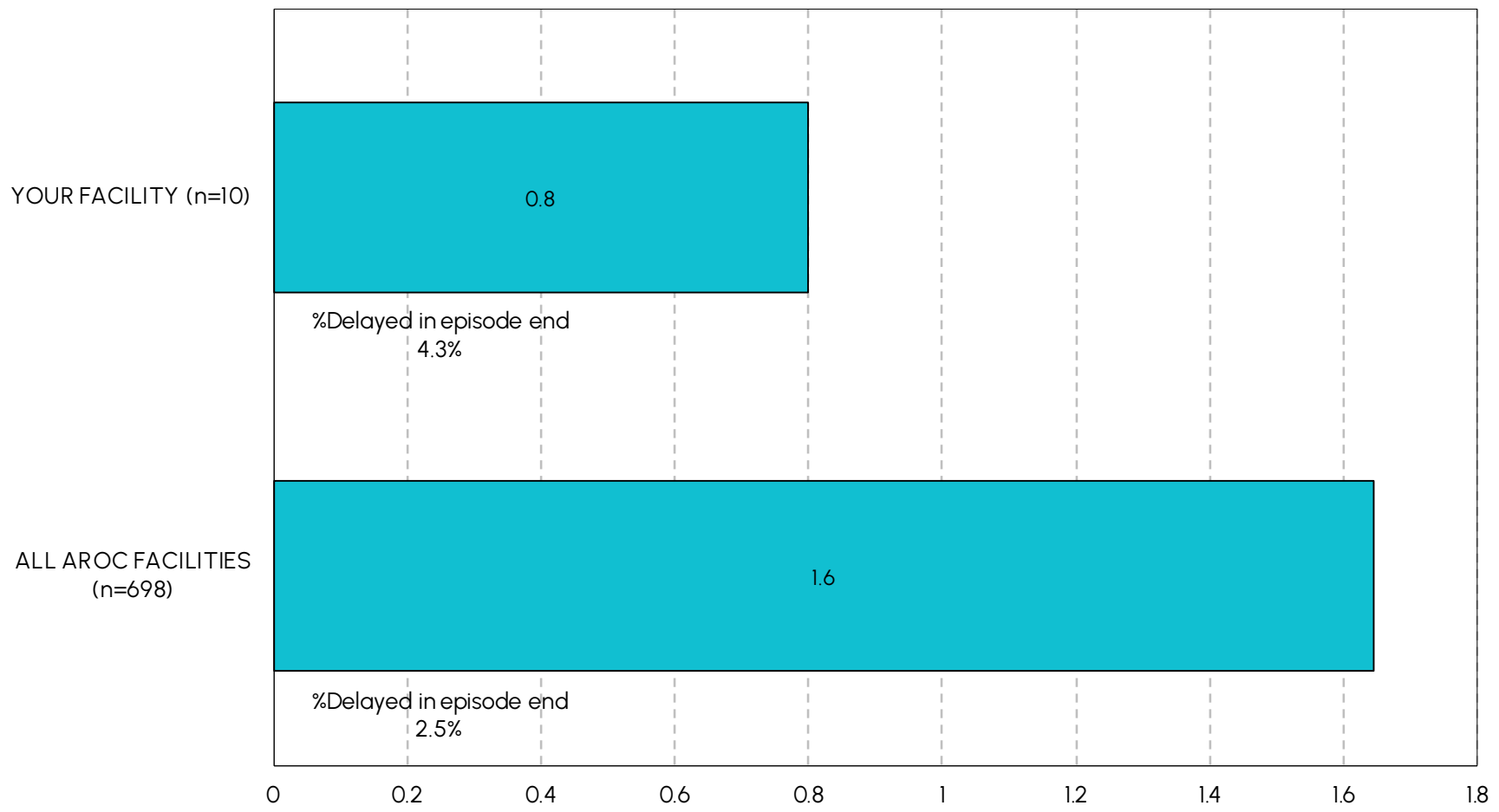
	YOUR FACILITY		ALL AROC FACILITIES	
	No.	%	No.	%
Delay in episode start				
No delay	245	92.1	26,781	93.8
Delay in episode start	21	7.9	1,778	6.2
Missing	1		130	
All episodes	267	100.0	28,689	100.0

	YOUR FACILITY		ALL AROC FACILITIES	
	No.	%	No.	%
Reasons for delay in episode start				
Patient related issues	7	33.3	753	42.4
Service issues	13	61.9	987	55.5
External support issues	0	0.0	40	2.2
Equipment issues	0	0.0	5	0.3
Behavioural issues	0	0.0	17	1.0
Reason(s) not specified	1	4.8	7	0.4

Days from clinically ready to discharge



■ Community Ready to episode end (where a delay was reported)

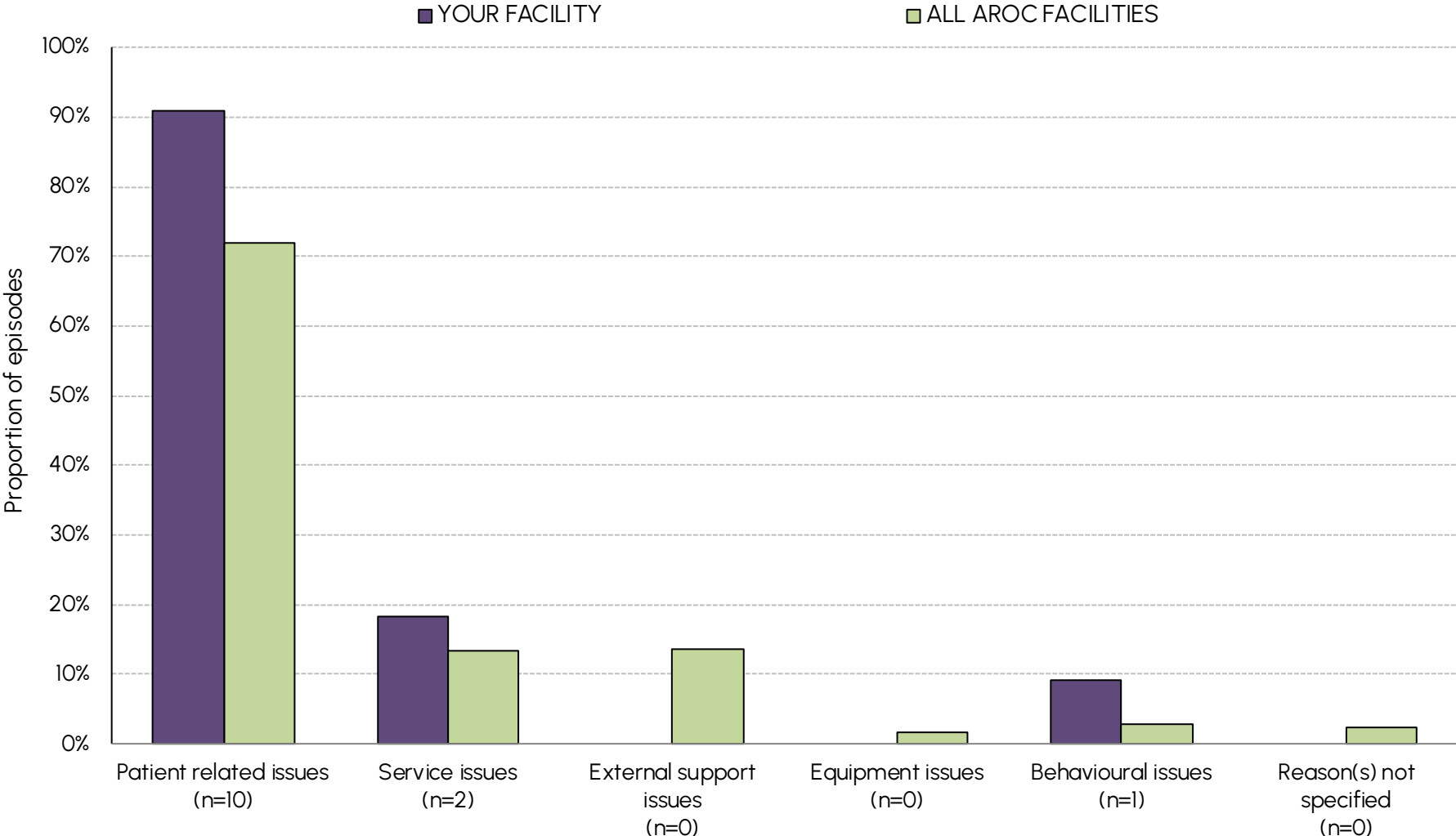


*No data provided when less than 5 episodes have dates

Average number of days between 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		ALL AROC FACILITIES	
	No.	%	No.	%
No delay	246	95.7	26,957	97.5
Delay in episode end	11	4.3	705	2.5
Missing	0		46	
All episodes	257	100.0	27,708	100.0

Reasons for delay in episode end	YOUR FACILITY		ALL AROC FACILITIES	
	No.	%	No.	%
Patient related issues	10	90.9	507	71.9
Service issues	2	18.2	94	13.3
External support issues	0	0.0	96	13.6
Equipment issues	0	0.0	11	1.6
Behavioural issues	1	9.1	20	2.8
Reason(s) not specified	0	0.0	17	2.4

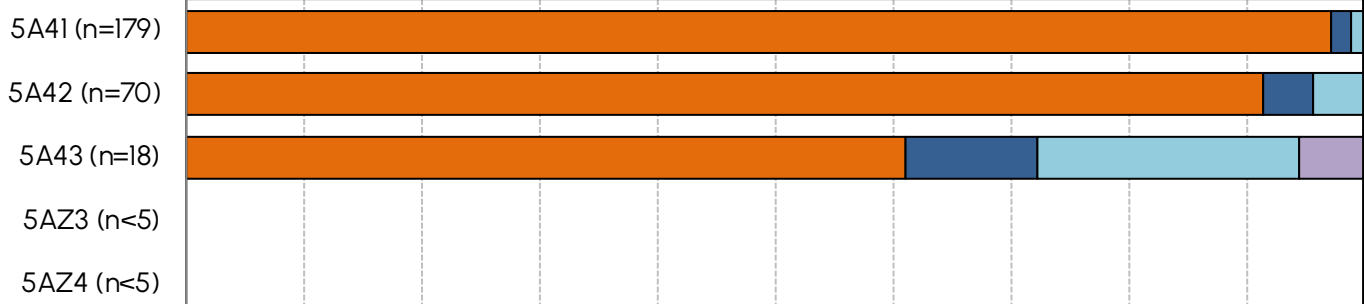
NOTE: Includes completed episodes only

Discharge destination by AN-SNAP class



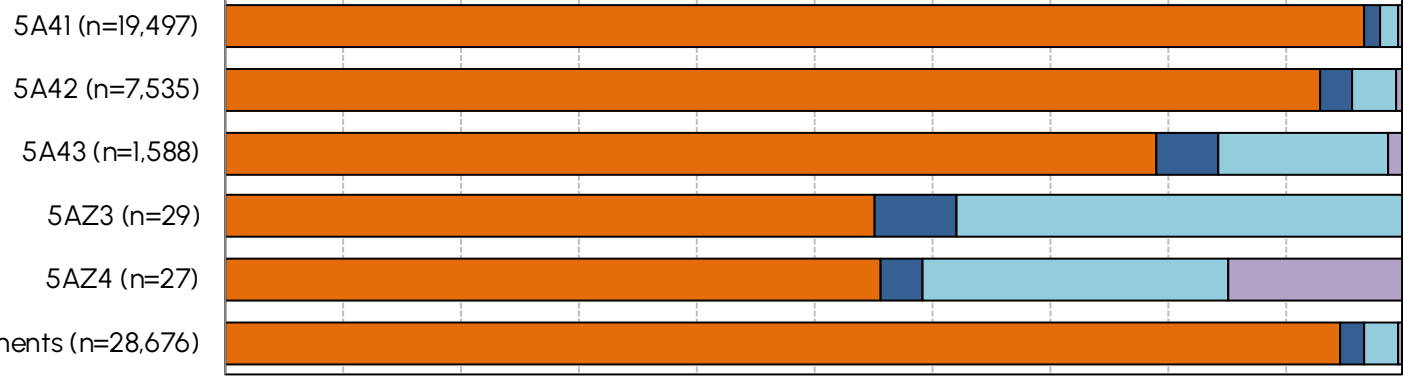
■ Final Accommodation
 ■ Interim Accommodation
 ■ Remaining in Hospital
 ■ Other
 ■ Unknown

YOUR FACILITY



All orthopaedic replacements (n=267)

ALL AROC FACILITIES



0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Proportion of episodes

Discharge destination by AN-SNAP class

AN-SNAP class V5	YOUR FACILITY — N					ALL AROC FACILITIES — N				
	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown
5A41 (weighted motor 61-91)	174	3	2	0	0	18,837	283	303	70	4
5A42 (weighted motor 45-60)	64	3	3	0	0	7,009	203	282	38	3
5A43 (weighted motor 19-44)	11	2	4	1	0	1,255	84	228	20	1
5AZ3 (motor 13-18, Age ≥ 79)	0	0	0	0	0	16	2	11	0	0
5AZ4 (motor 13-18, Age ≤ 78)	0	0	0	0	0	15	1	7	4	0
All Replacement AN-SNAP classes	249	8	9	1	0	27,132	573	831	132	8

AN-SNAP class V5	YOUR FACILITY — %					ALL AROC FACILITIES — %				
	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown
5A41 (weighted motor 61-91)	97.2	1.7	1.1	0.0	0.0	96.6	1.5	1.6	0.4	0.0
5A42 (weighted motor 45-60)	91.4	4.3	4.3	0.0	0.0	93.0	2.7	3.7	0.5	0.0
5A43 (weighted motor 19-44)	61.1	11.1	22.2	5.6	0.0	79.0	5.3	14.4	1.3	0.1
5AZ3 (motor 13-18, Age ≥ 79)	—	—	—	—	—	55.2	6.9	37.9	0.0	0.0
5AZ4 (motor 13-18, Age ≤ 78)	—	—	—	—	—	55.6	3.7	25.9	14.8	0.0
All Replacement AN-SNAP classes	93.3	3.0	3.4	0.4	0.0	94.6	2.0	2.9	0.5	0.0

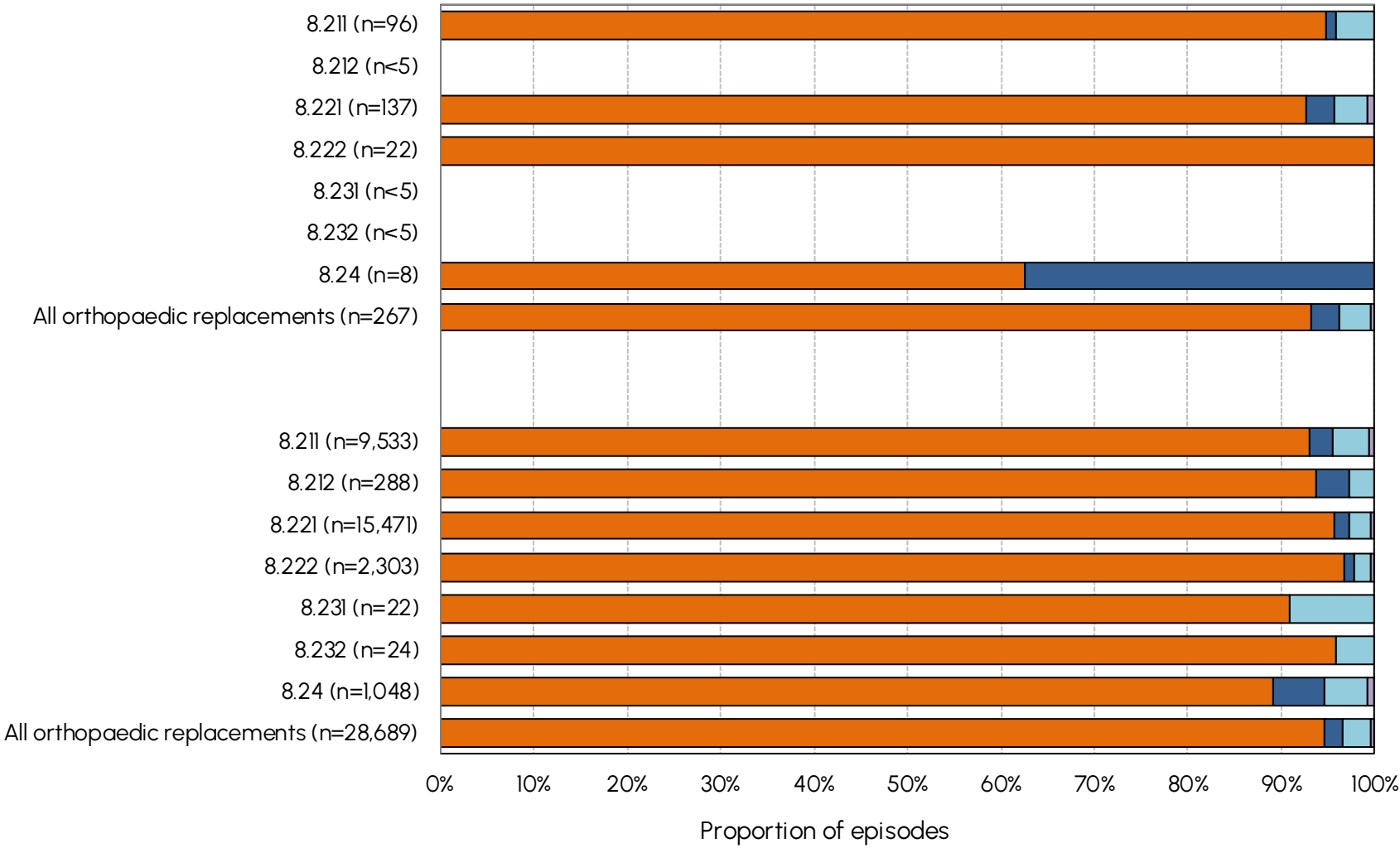
Discharge destination by impairment



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

YOUR FACILITY

ALL AROC FACILITIES

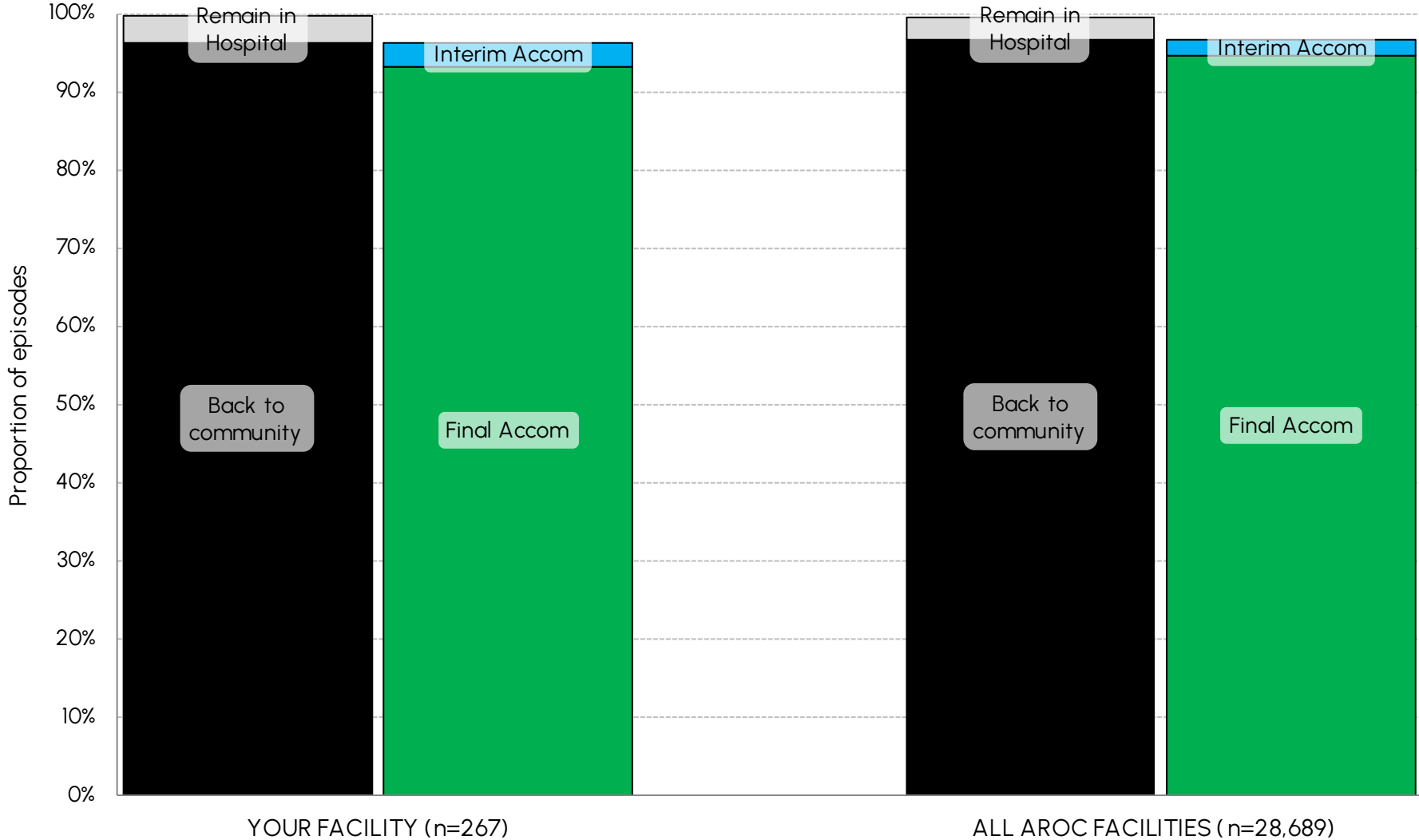


Discharge destination by impairment

Impairment	YOUR FACILITY — N					ALL AROC FACILITIES — N				
	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown
8.211 Unilateral hip replacement	91	1	4	0	0	8,873	223	378	54	5
8.212 Bilateral hip replacement	4	0	0	0	0	270	10	8	0	0
8.221 Unilateral knee replacement	127	4	5	1	0	14,794	255	355	63	4
8.222 Bilateral knee replacement	22	0	0	0	0	2,227	27	40	8	1
8.231 Knee and hip replacement, same side	0	0	0	0	0	20	0	2	0	0
8.232 Knee and hip replacement, diff sides	0	0	0	0	0	23	0	1	0	0
8.24 Shoulder replacement	5	3	0	0	0	934	58	48	7	1
All Orthopaedic Replacements	249	8	9	1	0	27,141	573	832	132	11

Impairment	YOUR FACILITY — %					ALL AROC FACILITIES — %				
	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown
8.211 Unilateral hip replacement	94.8	1.0	4.2	0.0	0.0	93.1	2.3	4.0	0.6	0.1
8.212 Bilateral hip replacement	100.0	0.0	0.0	0.0	0.0	93.8	3.5	2.8	0.0	0.0
8.221 Unilateral knee replacement	92.7	2.9	3.6	0.7	0.0	95.6	1.6	2.3	0.4	0.0
8.222 Bilateral knee replacement	100.0	0.0	0.0	0.0	0.0	96.7	1.2	1.7	0.3	0.0
8.231 Knee and hip replacement, same side	—	—	—	—	—	90.9	0.0	9.1	0.0	0.0
8.232 Knee and hip replacement, diff sides	—	—	—	—	—	95.8	0.0	4.2	0.0	0.0
8.24 Shoulder replacement	62.5	37.5	0.0	0.0	0.0	89.1	5.5	4.6	0.7	0.1
All Orthopaedic Replacements	93.3	3.0	3.4	0.4	0.0	94.6	2.0	2.9	0.5	0.0

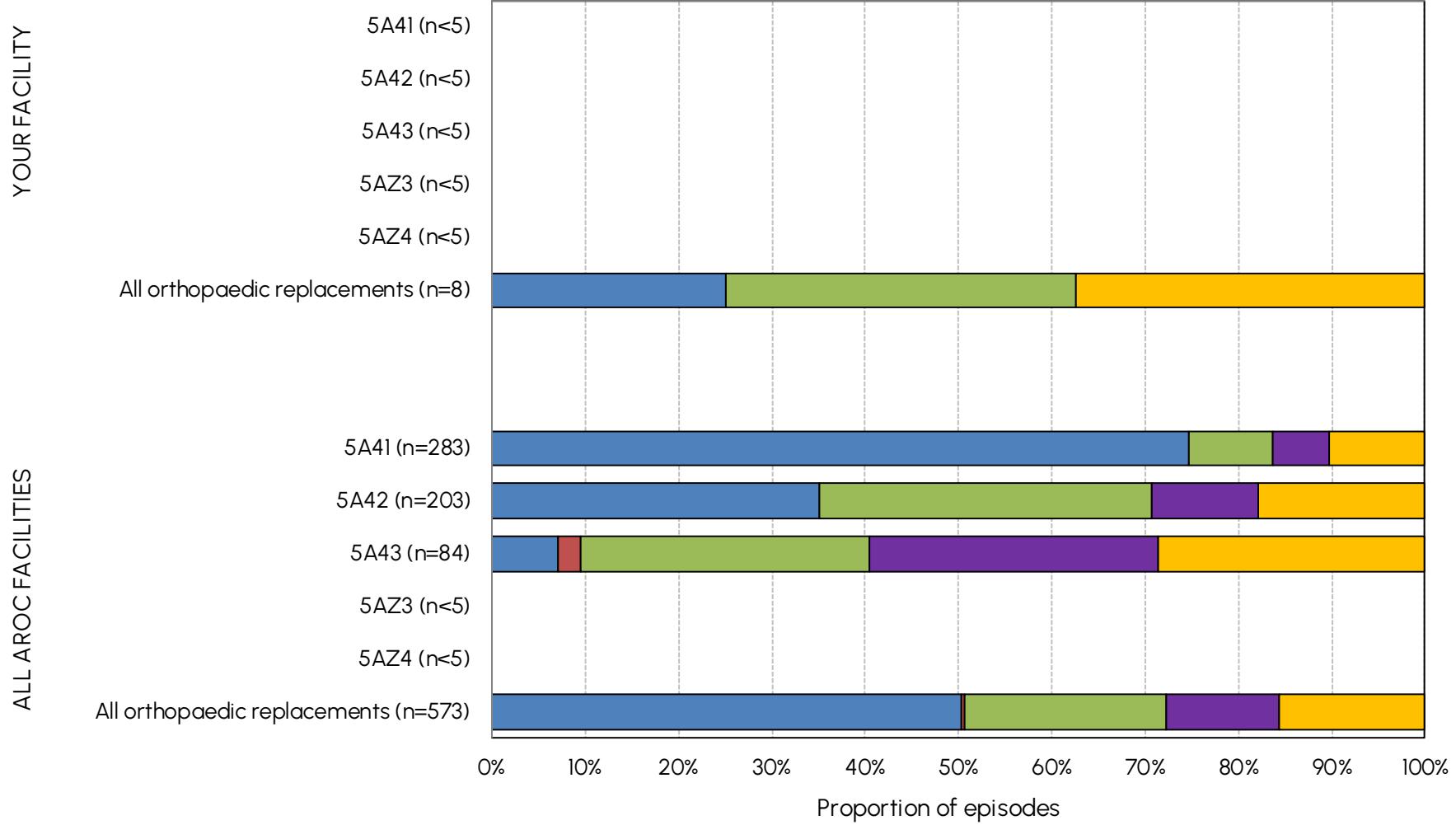
Discharge destination



Interim accommodation post discharge by AN-SNAP class



■ Private Residence
 ■ Rest home (NZ only)
 ■ Residential Aged Care (AU) / 24hr Nursing Care (NZ)
 ■ Hospital
 ■ Other



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

Interim accommodation post discharge by AN-SNAP class



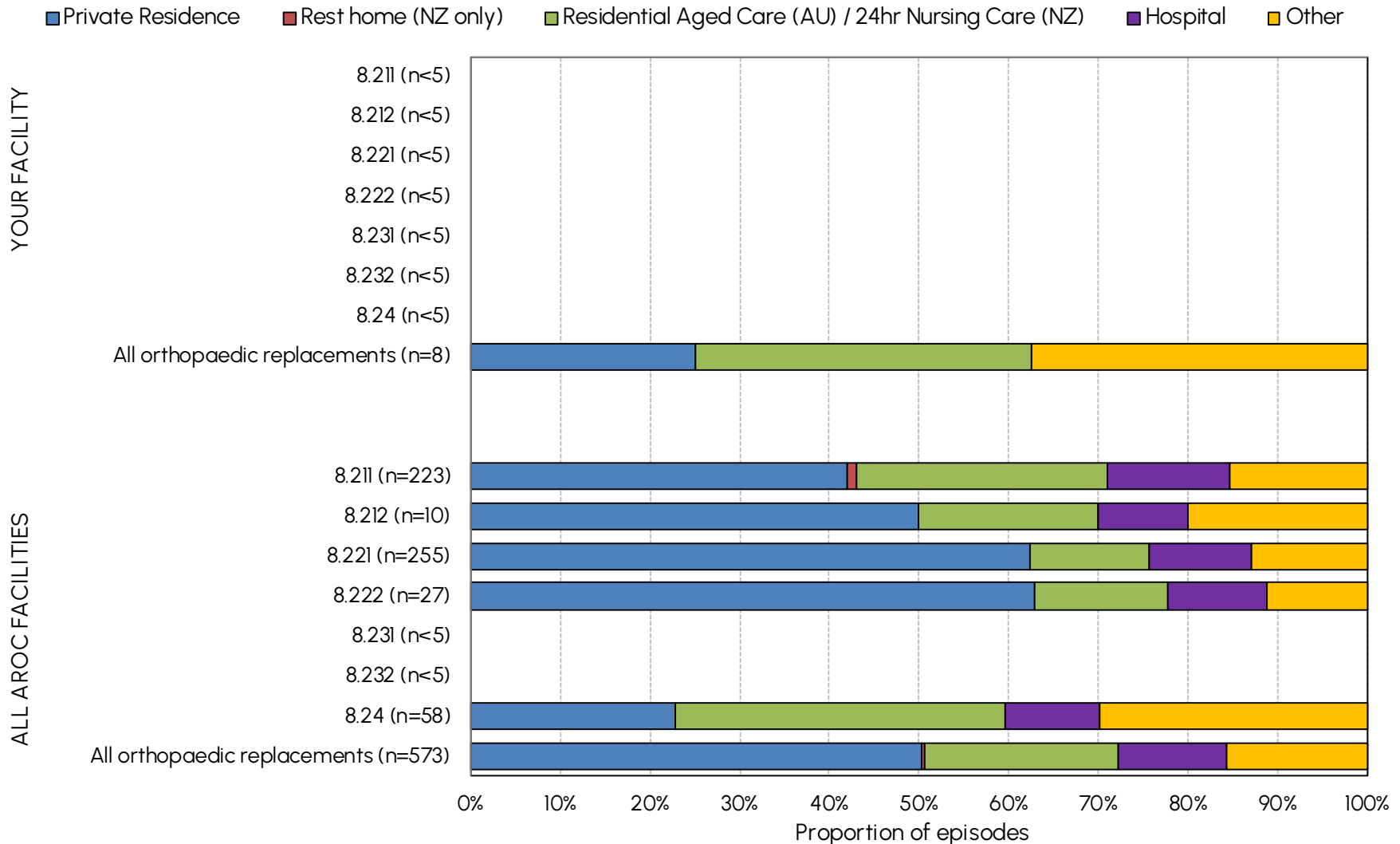
YOUR FACILITY — N (%)					
AN-SNAP class V5	Private residence	Residential Aged Care	Hospital	Other	All episodes**
5A41 (weighted motor 61-91)	2 (66.7)	0 (0.0)	0 (0.0)	0 (0.0)	3 (100.0)
5A42 (weighted motor 45-60)	0 (0.0)	2 (66.7)	0 (0.0)	1 (33.3)	3 (100.0)
5A43 (weighted motor 19-44)	0 (0.0)	1 (50.0)	0 (0.0)	1 (50.0)	2 (100.0)
5AZ3 (motor 13-18, Age ≥ 79)	0 —	0 —	0 —	0 —	0 —
5AZ4 (motor 13-18, Age ≤ 78)	0 —	0 —	0 —	0 —	0 —
All Replacement AN-SNAP classes	2 (25.0)	3 (37.5)	0 (0.0)	2 (25.0)	8 (100.0)

ALL AROC FACILITIES — N (%)						
AN-SNAP class V5	Private residence	Rest Home (NZ only)	Residential Aged Care (AU) / 24hr Nursing Care (NZ)	Hospital	Other	All episodes**
5A41 (weighted motor 61-91)	210 (74.2)	0 (0.0)	25 (8.8)	17 (6.0)	28 (9.9)	283 (100.0)
5A42 (weighted motor 45-60)	71 (35.0)	0 (0.0)	72 (35.5)	23 (11.3)	34 (16.7)	203 (100.0)
5A43 (weighted motor 19-44)	6 (7.1)	2 (2.4)	26 (31.0)	26 (31.0)	24 (28.6)	84 (100.0)
5AZ3 (motor 13-18, Age ≥ 79)	0 (0.0)	0 (0.0)	0 (0.0)	2 (100.0)	0 (0.0)	2 (100.0)
5AZ4 (motor 13-18, Age ≤ 78)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
All Replacement AN-SNAP classes	287 (50.1)	2 (0.3)	123 (21.5)	69 (12.0)	86 (15.0)	573 (100.0)

** There were 1 episode(s) in YOUR FACILITY and 6 episodes in ALL AROC FACILITIES 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



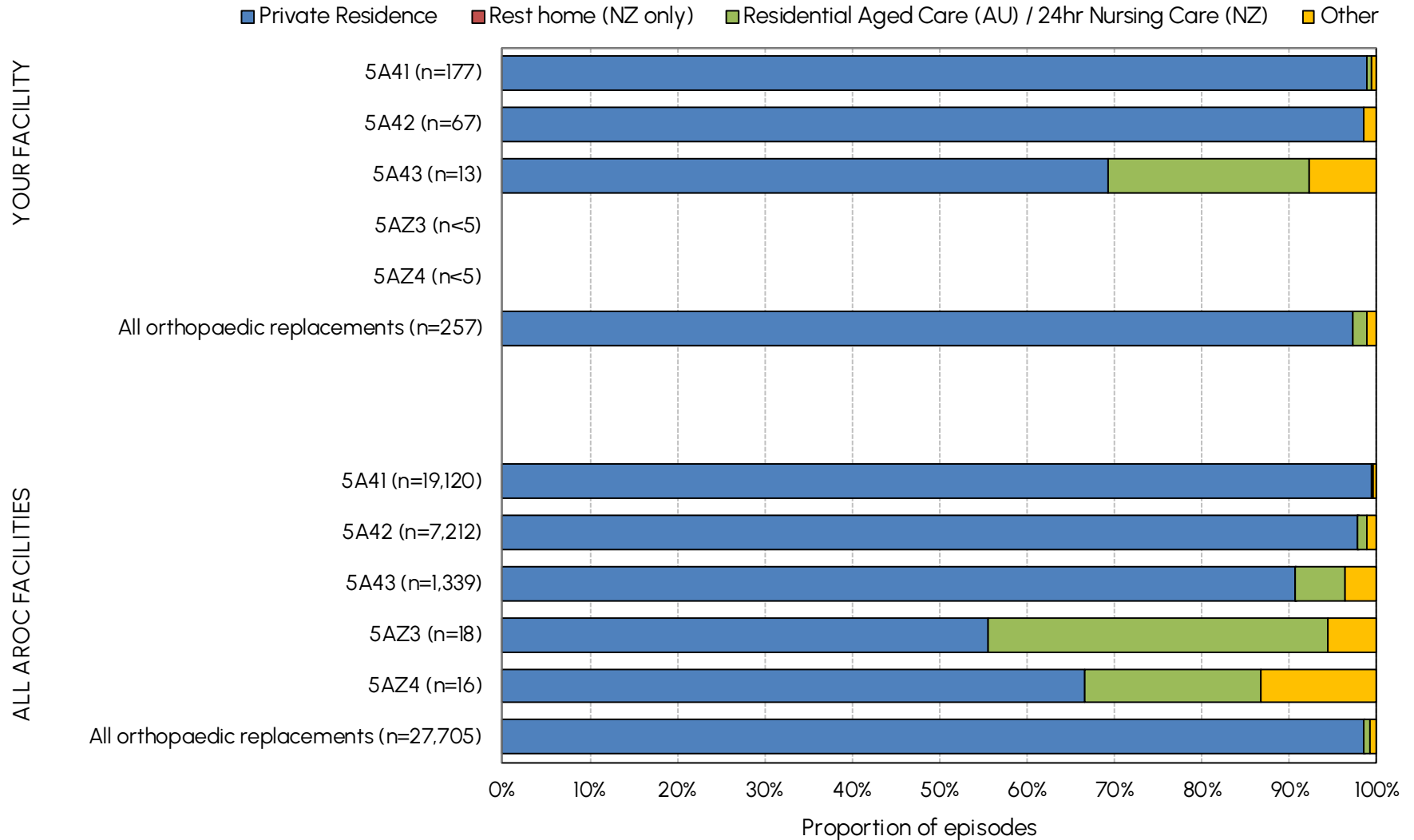
Impairment	YOUR FACILITY — N (%)					All episodes**
	Private residence	Residential Aged Care	Hospital	Other		
8.211 Unilateral hip replacement	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
8.212 Bilateral hip replacement	0 —	0 —	0 —	0 —	0 —	0 —
8.221 Unilateral knee replacement	1 (25.0)	1 (25.0)	0 (0.0)	1 (25.0)	1 (25.0)	4 (100.0)
8.222 Bilateral knee replacement	0 —	0 —	0 —	0 —	0 —	0 —
8.231 Knee and hip replacement, same side	0 —	0 —	0 —	0 —	0 —	0 —
8.232 Knee and hip replacement, diff sides	0 —	0 —	0 —	0 —	0 —	0 —
8.24 Shoulder replacement	0 (0.0)	2 (66.7)	0 (0.0)	1 (33.3)	1 (33.3)	3 (100.0)
All Orthopaedic Replacements	2 (25.0)	3 (37.5)	0 (0.0)	2 (25.0)	2 (25.0)	8 (100.0)

Impairment	ALL AROC FACILITIES — N (%)					
	Private residence	Rest Home (NZ only)	Residential Aged Care (AU) / 24hr Nursing Care (NZ)	Hospital	Other	All episodes**
8.211 Unilateral hip replacement	93 (41.7)	2 (0.9)	62 (27.8)	30 (13.5)	34 (15.2)	223 (100.0)
8.212 Bilateral hip replacement	5 (50.0)	0 (0.0)	2 (20.0)	1 (10.0)	2 (20.0)	10 (100.0)
8.221 Unilateral knee replacement	159 (62.4)	0 (0.0)	34 (13.3)	29 (11.4)	32 (12.5)	255 (100.0)
8.222 Bilateral knee replacement	17 (63.0)	0 (0.0)	4 (14.8)	3 (11.1)	3 (11.1)	27 (100.0)
8.231 Knee and hip replacement, same side	0 —	0 —	0 —	0 —	0 —	0 —
8.232 Knee and hip replacement, diff sides	0 —	0 —	0 —	0 —	0 —	0 —
8.24 Shoulder replacement	13 (22.4)	0 (0.0)	21 (36.2)	6 (10.3)	15 (25.9)	58 (100.0)
All Orthopaedic Replacements	287 (50.1)	2 (0.3)	123 (21.5)	69 (12.0)	86 (15.0)	573 (100.0)

** There were 1 episode(s) in YOUR FACILITY and 6 episodes in ALL AROC FACILITIES 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

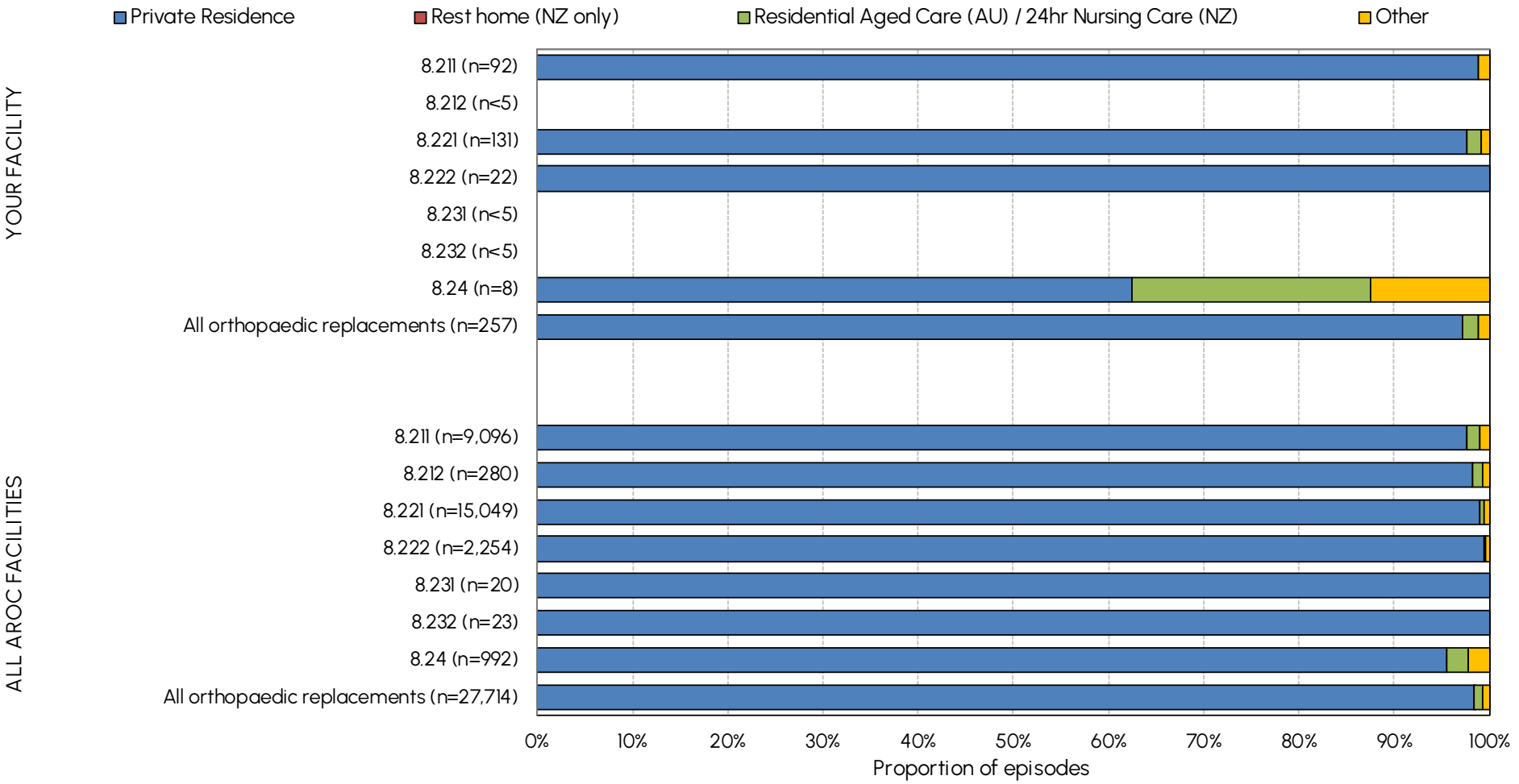


AN-SNAP class V5	YOUR FACILITY — N (%)				
	Private residence	Residential Aged		Missing	All episodes
		Care	Other		
5A41 (weighted motor 61-91)	175 (98.9)	1 (0.6)	1 (0.6)	0	177 (100.0)
5A42 (weighted motor 45-60)	65 (98.5)	0 (0.0)	1 (1.5)	1	66 (100.0)
5A43 (weighted motor 19-44)	9 (69.2)	3 (23.1)	1 (7.7)	0	13 (100.0)
5AZ3 (motor 13-18, Age ≥ 79)	0 —	0 —	0 —	0	0 —
5AZ4 (motor 13-18, Age ≤ 78)	0 —	0 —	0 —	0	0 —
All Replacement AN-SNAP classes	249 (97.3)	4 (1.6)	3 (1.2)	1	256 (100.0)

AN-SNAP class V5	ALL AROC FACILITIES — N (%)					
	Private residence	Rest Home (NZ only)	Residential Aged		Missing	All episodes
			Care (AU) / 24hr	Other		
5A41 (weighted motor 61-91)	18,942 (99.1)	0 (0.0)	59 (0.3)	72 (0.4)	47	19,120 (100.0)
5A42 (weighted motor 45-60)	6,995 (97.0)	1 (0.0)	76 (1.1)	82 (1.1)	58	7,212 (100.0)
5A43 (weighted motor 19-44)	1,191 (88.9)	1 (0.1)	75 (5.6)	48 (3.6)	24	1,339 (100.0)
5AZ3 (motor 13-18, Age ≥ 79)	10 (55.6)	0 (0.0)	7 (38.9)	1 (5.6)	0	18 (100.0)
5AZ4 (motor 13-18, Age ≤ 78)	10 (62.5)	0 (0.0)	3 (18.8)	2 (12.5)	1	16 (100.0)
All Replacement AN-SNAP classes	27,148 (98.0)	2 (0.0)	220 (0.8)	205 (0.7)	130	27,705 (100.0)

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

Final accommodation post discharge by impairment



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

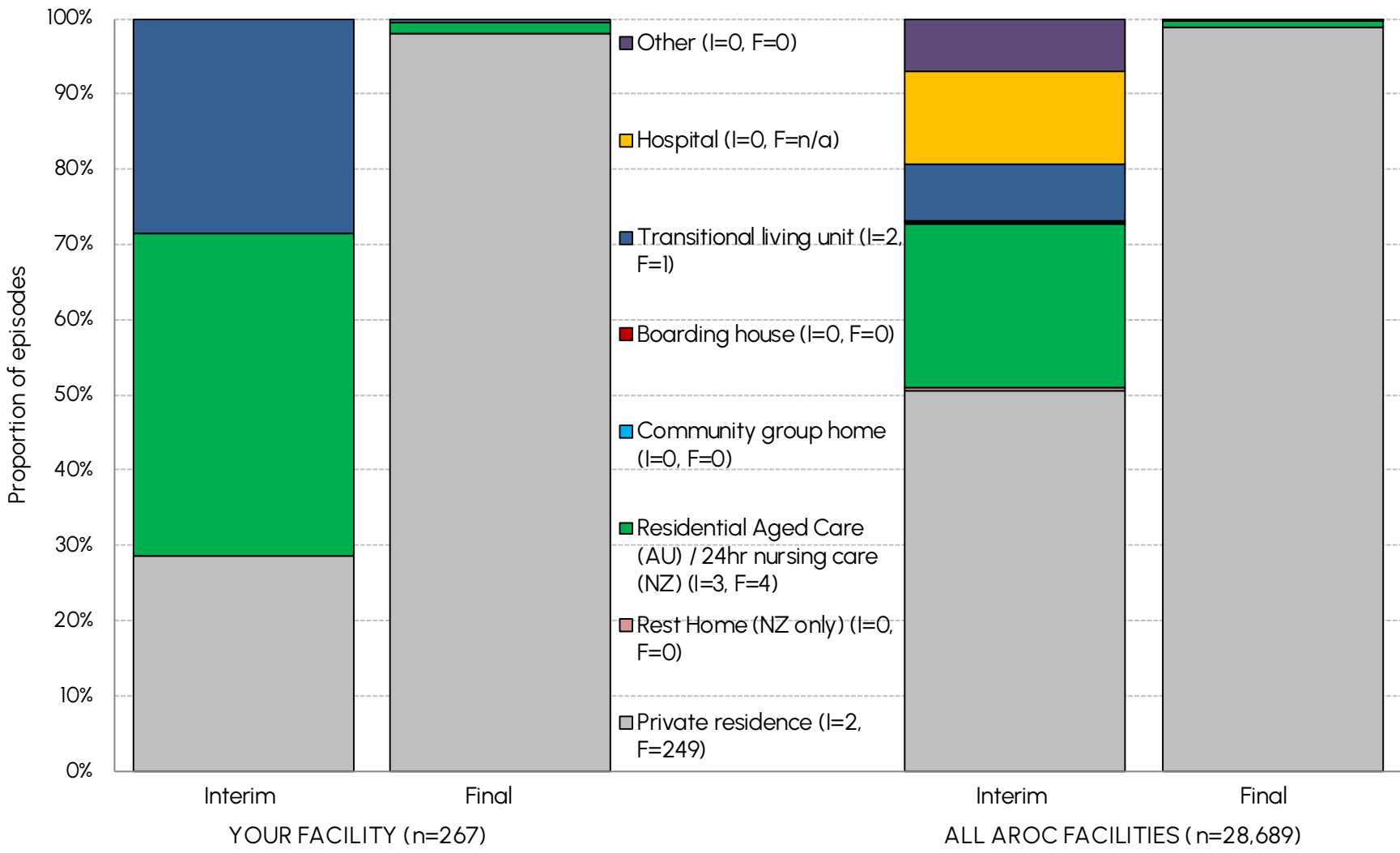
Final accommodation post discharge by impairment

Impairment	YOUR FACILITY — N (%)					All episodes
	Private residence	Residential Aged	Other	Missing		
		Care				
8.211 Unilateral hip replacement	91 (98.9)	0 (0.0)	1 (1.1)	0		92 (100.0)
8.212 Bilateral hip replacement	4 (100.0)	0 (0.0)	0 (0.0)	0		4 (100.0)
8.221 Unilateral knee replacement	127 (97.7)	2 (1.5)	1 (0.8)	1		130 (100.0)
8.222 Bilateral knee replacement	22 (100.0)	0 (0.0)	0 (0.0)	0		22 (100.0)
8.231 Knee and hip replacement, same side	0 —	0 —	0 —	0		0 —
8.232 Knee and hip replacement, diff sides	0 —	0 —	0 —	0		0 —
8.24 Shoulder replacement	5 (62.5)	2 (25.0)	1 (12.5)	0		8 (100.0)
All Orthopaedic Replacements	249 (97.3)	4 (1.6)	3 (1.2)	1		256 (100.0)

Impairment	ALL AROC FACILITIES — N (%)						All episodes
	Private residence	Rest Home (NZ only)	Residential Aged	Other	Missing		
			Care (AU) / 24hr Nursing Care (NZ)				
8.211 Unilateral hip replacement	8,815 (96.9)	2 (0.0)	125 (1.4)	90 (1.0)	64		9,096 (100.0)
8.212 Bilateral hip replacement	275 (98.2)	0 (0.0)	3 (1.1)	2 (0.7)	0		280 (100.0)
8.221 Unilateral knee replacement	14,843 (98.6)	0 (0.0)	68 (0.5)	81 (0.5)	57		15,049 (100.0)
8.222 Bilateral knee replacement	2,239 (99.3)	0 (0.0)	2 (0.1)	10 (0.4)	3		2,254 (100.0)
8.231 Knee and hip replacement, same side	20 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0		20 (100.0)
8.232 Knee and hip replacement, diff sides	17 (73.9)	0 (0.0)	0 (0.0)	0 (0.0)	6		23 (100.0)
8.24 Shoulder replacement	948 (95.6)	0 (0.0)	22 (2.2)	22 (2.2)	0		992 (100.0)
All Orthopaedic Replacements	27,157 (98.0)	2 (0.0)	220 (0.8)	205 (0.7)	130		27,714 (100.0)

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

Interim and final accommodation post discharge



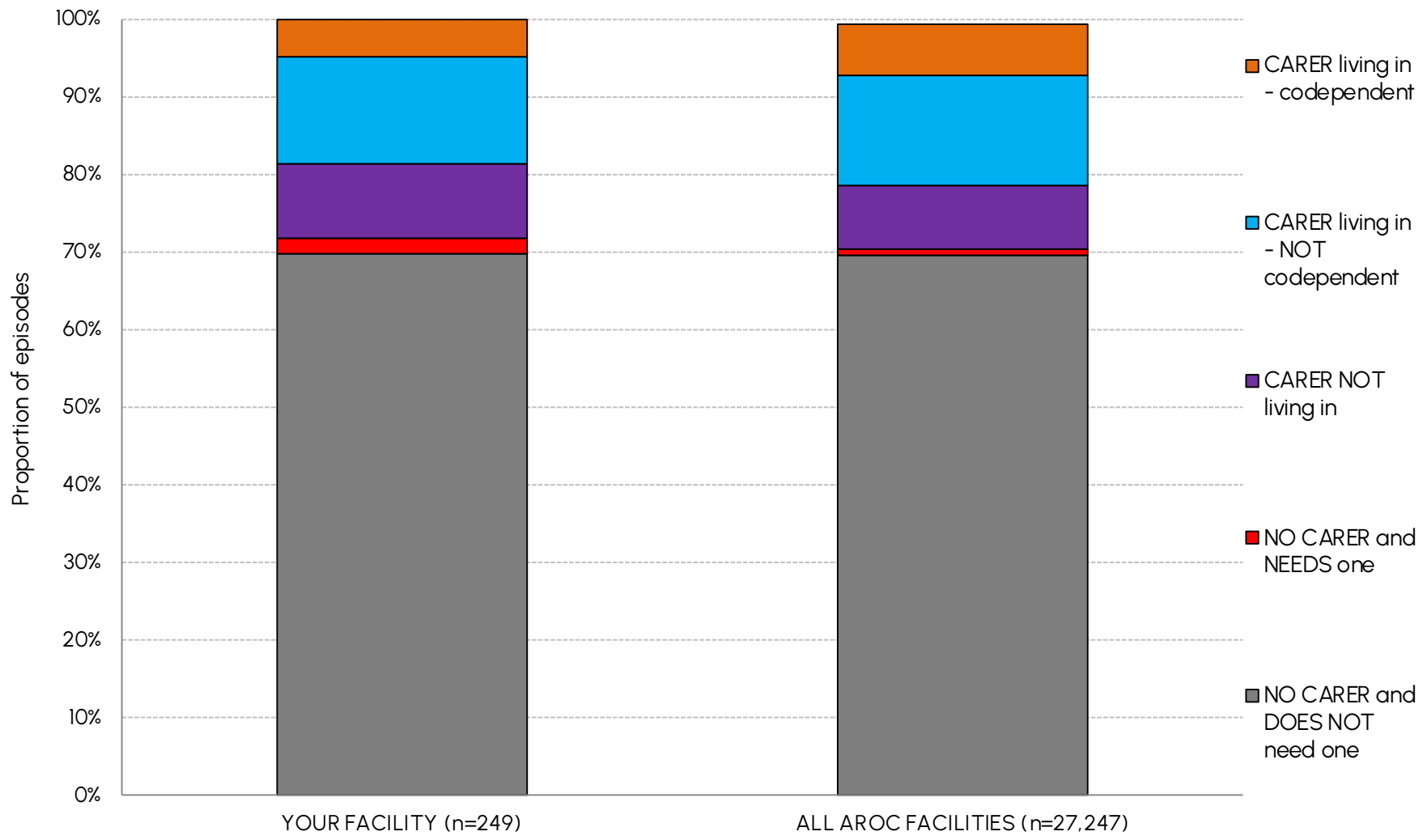
NOTE: Includes only those episodes with mode of episode end equal to either final or interim accommodation

Interim and final accommodation post discharge

Accommodation	YOUR FACILITY		ALL AROC FACILITIES	
	Interim (%)	Final (%)	Interim (%)	Final (%)
Private residence	2 (28.6)	249 (98.0)	287 (50.6)	27,148 (98.8)
Rest Home (NZ only)			2 (0.4)	2 (0.0)
Resi Aged Care (AU) / 24hr Nursing Care (NZ)	3 (42.9)	4 (1.6)	123 (21.7)	220 (0.8)
Community group home	0 (0.0)	0 (0.0)	2 (0.4)	10 (0.0)
Boarding house	0 (0.0)	0 (0.0)	1 (0.2)	10 (0.0)
Transitional living unit	2 (28.6)	1 (0.4)	43 (7.6)	30 (0.1)
Hospital	0 (0.0)	n/a	69 (12.2)	n/a
Other	0 (0.0)	0 (0.0)	40 (7.1)	46 (0.2)
Missing/Unknown	1	3	6	239
All episodes	8 (100.0)	257 (100.0)	573 (100.0)	27,705 (100.0)

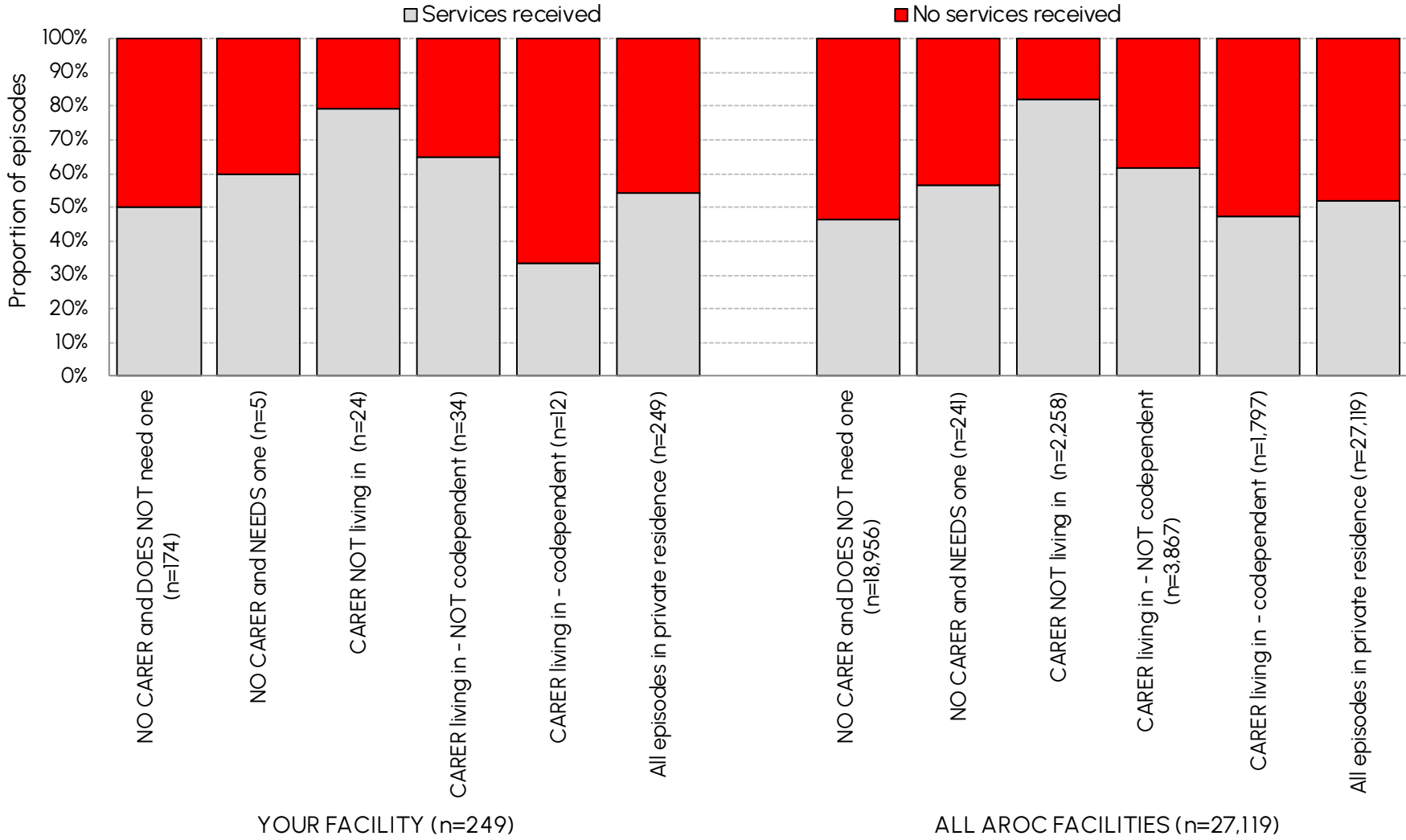
NOTE: Includes only those episodes with mode of episode end equal to either final or interim accommodation

Carer status post discharge



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

Any services received post discharge by carer status



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

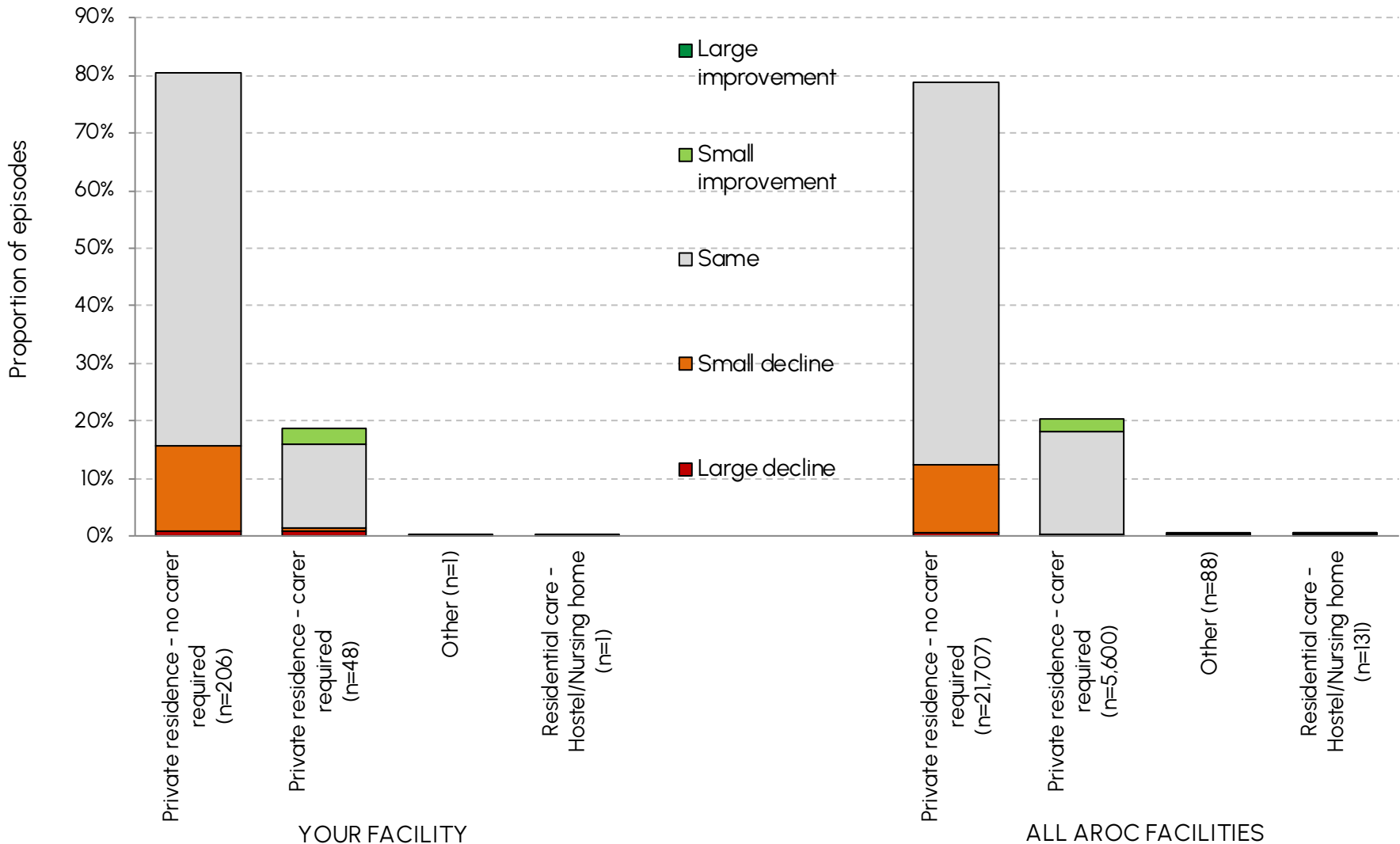
Carer status and any services received post discharge

Carer status post discharge	YOUR FACILITY		ALL AROC FACILITIES	
	No.	%	No.	%
NO CARER and DOES NOT need one	174	69.9	18,956	69.9
NO CARER and NEEDS one	5	2.0	241	0.9
CARER NOT living in	24	9.6	2,258	8.3
CARER living in - NOT codependent	34	13.7	3,867	14.3
CARER living in - codependent	12	4.8	1,797	6.6
Missing	0		128	
All episodes in private residence	249	100.0	27,247	100.0

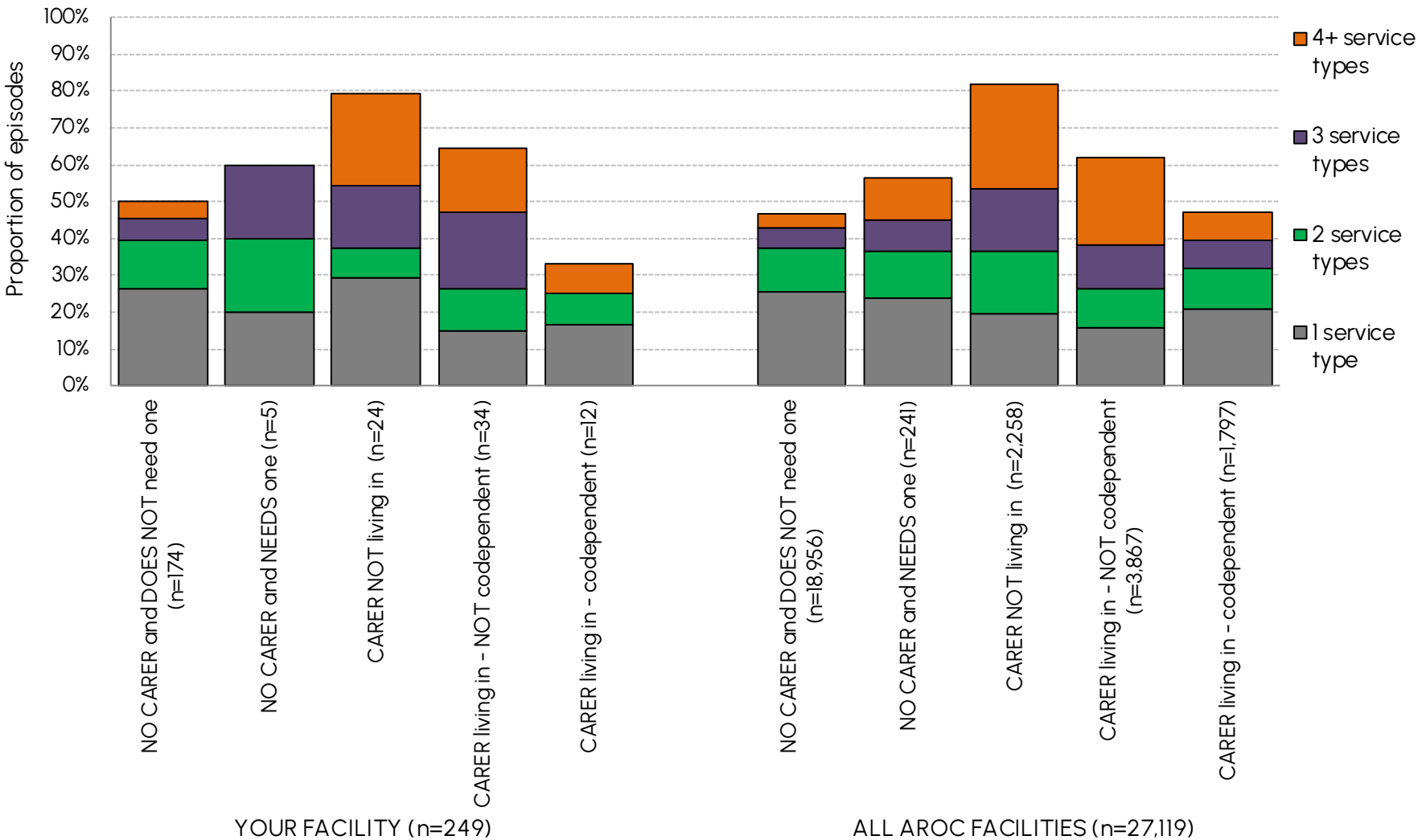
Any services received post discharge?				
Carer status post discharge	YOUR FACILITY		ALL AROC FACILITIES	
	Yes (%)	No (%)	Yes (%)	No (%)
NO CARER and DOES NOT need one	50.0	50.0	46.6	53.4
NO CARER and NEEDS one	60.0	40.0	56.4	43.6
CARER NOT living in	79.2	20.8	81.9	18.1
CARER living in - NOT codependent	64.7	35.3	61.8	38.2
CARER living in - codependent	33.3	66.7	47.1	52.9
All episodes in private residence	54.2	45.8	51.9	48.1

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

Change in prior accommodation post discharge

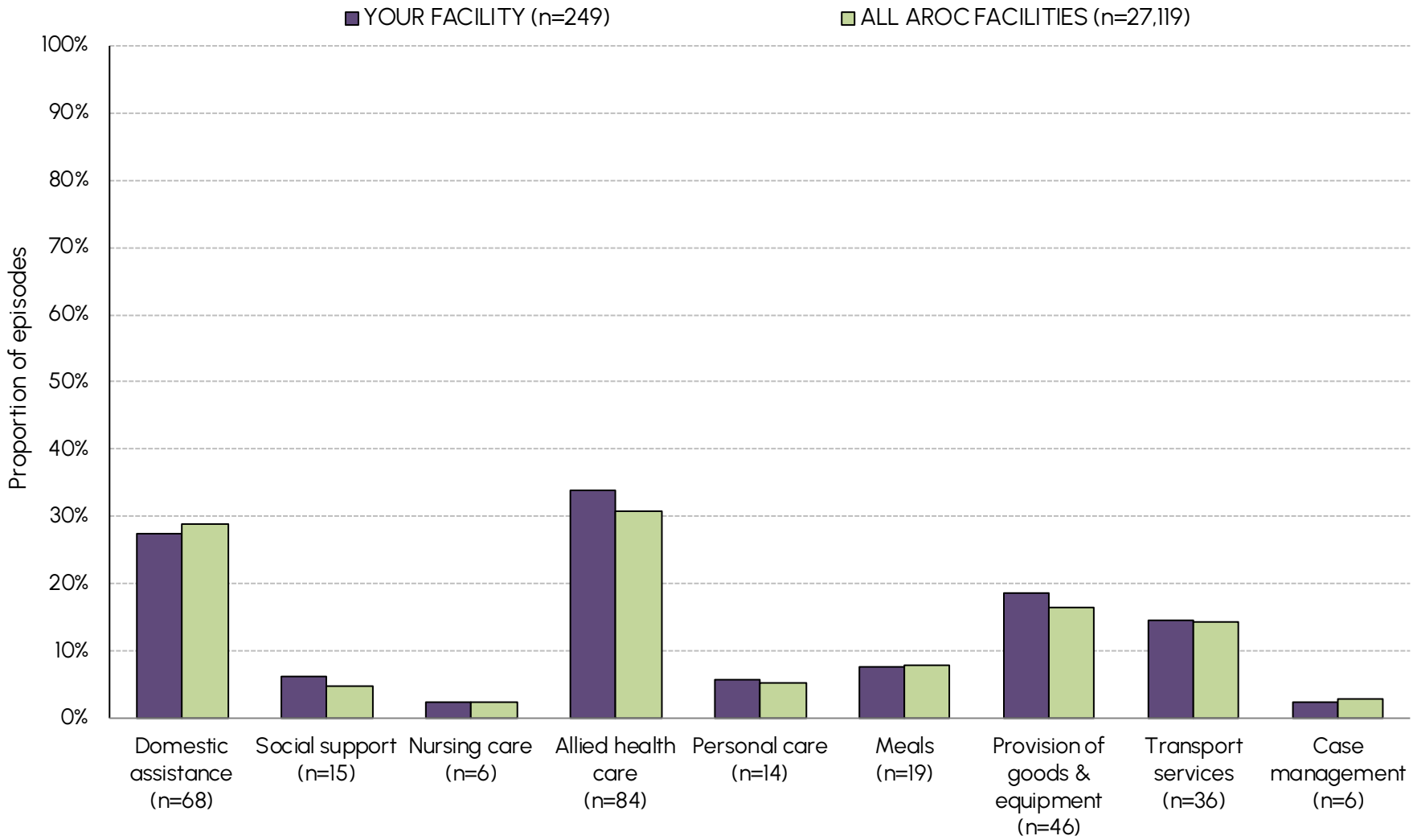


Number of services received post discharge by carer status



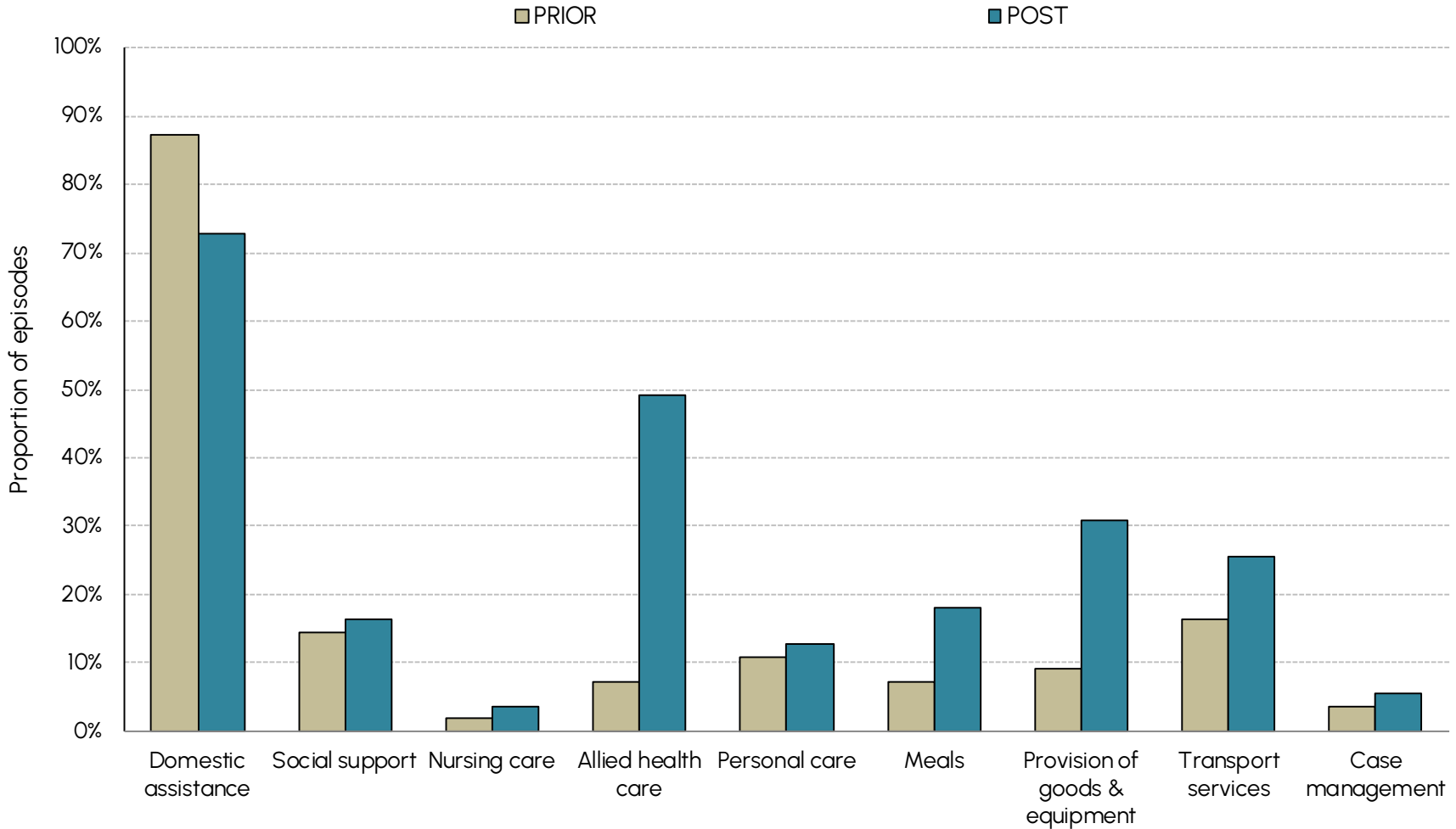
NOTE: Includes only those episodes whose final accommodation is private residence and with known carer status and known services status

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

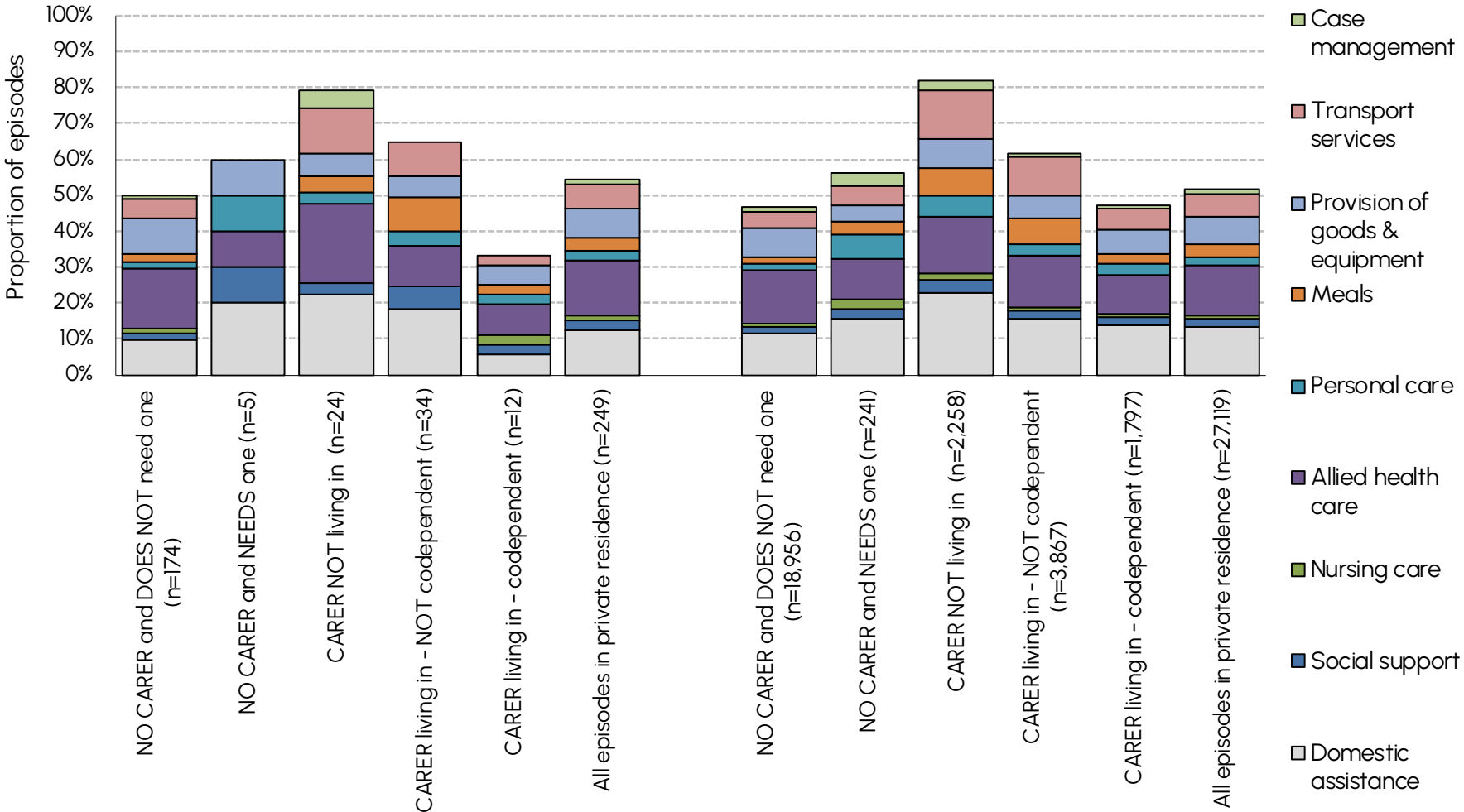
Type of services received pre and post rehabilitation



YOUR FACILITY (n=55)

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

Type of services received post discharge by carer status



YOUR FACILITY (n=249)

ALL AROC FACILITIES (n=27,119)

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 by carer status – Your facility

Services received post discharge	Carer status post discharge - YOUR FACILITY					
	NO CARER and DOES NOT need one	NO CARER and NEEDS one	CARER NOT living in	CARER living in - NOT codependent	CARER living in - codependent	All episodes in private residence
Number of episodes in private residence	174	5	24	34	12	249
Percent of episodes receiving:						
No services	50.0	40.0	20.8	35.3	66.7	45.8
1 service type	26.4	20.0	29.2	14.7	16.7	24.5
2 service types	13.2	20.0	8.3	11.8	8.3	12.4
3 service types	5.7	20.0	16.7	20.6	0.0	8.8
4 or more service types	4.6	0.0	25.0	17.6	8.3	8.4
Service Type received						
Domestic assistance	18.4	40.0	58.3	52.9	16.7	27.3
Social support	2.9	20.0	8.3	17.6	8.3	6.0
Nursing care	2.9	0.0	0.0	0.0	8.3	2.4
Allied health care	31.6	20.0	58.3	32.4	25.0	33.7
Personal care	3.4	20.0	8.3	11.8	8.3	5.6
Meals	3.4	0.0	12.5	26.5	8.3	7.6
Provision of goods & equipment	19.0	20.0	16.7	17.6	16.7	18.5
Transport services	10.3	0.0	33.3	26.5	8.3	14.5
Case management	1.7	0.0	12.5	0.0	0.0	2.4

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 by carer status – All AROC Facilities

Carer status post discharge - ALL AROC FACILITIES						
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	18,956	241	2,258	3,867	1,797	27,119
Percent of episodes receiving:						
No services	53.4	43.6	18.1	38.2	52.9	48.1
1 service type	25.5	23.7	19.6	15.7	20.9	23.3
2 service types	11.8	12.9	16.9	10.8	11.2	12.1
3 service types	5.4	8.3	17.1	11.8	7.2	7.4
4 or more service types	4.0	11.6	28.2	23.5	7.8	9.1
Service Type received						
Domestic assistance	20.7	38.2	66.6	45.6	30.4	28.9
Social support	3.5	6.2	11.0	7.2	4.3	4.8
Nursing care	1.7	7.1	4.6	3.0	2.2	2.2
Allied health care	27.2	27.4	47.3	41.5	23.9	30.7
Personal care	2.7	16.6	16.4	9.4	6.4	5.2
Meals	3.4	9.5	22.9	21.3	6.8	7.8
Provision of goods & equipment	15.2	10.8	23.6	19.7	14.9	16.5
Transport services	8.1	13.3	39.1	31.4	12.2	14.3
Case management	2.2	9.1	8.3	3.2	2.0	2.9

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.

Appendix 1: Glossary

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:

$LOS_{diff} = \text{episode's LOS} - \text{mean LOS appropriate AN-SNAP class.}$

$\text{Casemix-adjusted relative mean} = \text{Sum of } LOS_{diff} \text{ for all episodes divided by Number of episodes}$

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 quality score

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

Functional Independence Measure (FIM)

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

- The FIM motor score is the sum of the scores obtained for the first thirteen (13) items in the FIM instrument. A higher FIM motor score indicates a greater level of functional independence in motor skills.
- The FIM cognition score is the sum of the scores obtained for the final five (5) items in the FIM instrument. A higher FIM cognition score indicates better cognitive function.

FIM change

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

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

FIM efficiency

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

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.

Appendix 1: Glossary

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

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

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

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

Submitted versus reporting episodes

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

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

Appendix 1: Glossary



Valid FIM

For an episode to have a Valid FIM flag it must be a complete episode and each of the 18 items on admission and discharge must have been answered with a valid response of 1-7. 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	Class	Description of AN-SNAP class
5AA1	Stroke, Weighted FIM Motor 63 - 91, FIM Cognition 30 - 35	5AH4	Orthopaedic conditions, fractures, Weighted FIM Motor 19 - 47
5AA2	Stroke, Weighted FIM Motor 63 - 91, FIM Cognition 21 - 29	5A41	Orthopaedic conditions, replacement (knee, hip, shoulder), Weighted FIM Motor 61 - 91
5AA3	Stroke, Weighted FIM Motor 63 - 91, FIM Cognition 5 - 20	5A42	Orthopaedic conditions, replacement (knee, hip, shoulder), Weighted FIM Motor 45 - 60
5AA4	Stroke, Weighted FIM Motor 44 - 62, FIM Cognition 18 - 35	5A43	Orthopaedic conditions, replacement (knee, hip, shoulder), Weighted FIM Motor 19 - 44
5AA5	Stroke, Weighted FIM Motor 44 - 62, FIM Cognition 5 - 17	5A21	Orthopaedic conditions, all other, Weighted FIM Motor 57 - 91
5AA6	Stroke, Weighted FIM Motor 19 - 43, Age >= 80	5A22	Orthopaedic conditions, all other, Weighted FIM Motor 41 - 56
5AA7	Stroke, Weighted FIM Motor 19 - 43, Age 67 - 79	5A23	Orthopaedic conditions, all other, Weighted FIM Motor 19 - 40
5AA8	Stroke, Weighted FIM Motor 19 - 43 Age 18 - 66	5A31	Cardiac, Pain syndromes, and Pulmonary, Weighted FIM Motor 66 - 91
5AB1	Brain dysfunction, FIM Cognition 27 - 35 Weighted FIM Motor 59 - 91	5A32	Cardiac, Pain syndromes, and Pulmonary, Weighted FIM Motor 38 - 65
5AB2	Brain dysfunction, FIM Cognition 27 - 35 Weighted FIM Motor 19 - 58	5A33	Cardiac, Pain syndromes, and Pulmonary, Weighted FIM Motor 19 - 37
5AB3	Brain dysfunction, FIM Cognition 19 - 26 Weighted FIM Motor 50 - 91	5AP1	Major Multiple Trauma, Weighted FIM Motor 51 - 91
5AB4	Brain dysfunction, FIM Cognition 19 - 26 Weighted FIM Motor 19 - 49	5AP2	Major Multiple Trauma, Weighted FIM Motor 19 - 50
5AB5	Brain dysfunction, FIM Cognition 5 - 18 Weighted FIM Motor 39 - 91	5AR1	Reconditioning, Weighted FIM Motor 64 - 91, FIM Cognition 29 - 35
5AB6	Brain dysfunction, FIM Cognition 5 - 18 Weighted FIM Motor 19 - 38	5AR2	Reconditioning, Weighted FIM Motor 64 - 91, FIM Cognition 5 - 28
5AC1	Neurological conditions, Weighted FIM Motor 70 - 91	5AR3	Reconditioning, Weighted FIM Motor 48 - 63, FIM Cognition 19 - 35
5AC2	Neurological conditions, Weighted FIM Motor 50 - 69	5AR4	Reconditioning, Weighted FIM Motor 48 - 63, FIM Cognition 5 - 18
5AC3	Neurological conditions, Weighted FIM Motor 19 - 49	5AR5	Reconditioning, Weighted FIM Motor 19 - 47
5AD1	Spinal cord dysfunction, Weighted FIM Motor 55 - 91	5A91	All other impairments, Weighted FIM Motor 61 - 91
5AD2	Spinal cord dysfunction, Weighted FIM Motor 37 - 54	5A92	All other impairments, Weighted FIM Motor 42 - 60
5AD3	Spinal cord dysfunction, Weighted FIM Motor 19 - 36	5A93	All other impairments, Weighted FIM Motor 19 - 41
5AE1	Amputation of limb, Weighted FIM Motor 19-91	5AZ1	Weighted FIM Motor score 13-18, Brain, Spine, MMT, Burns, Age >= 59
5AH1	Orthopaedic conditions, fractures, Weighted FIM Motor 48 - 91, FIM Cognition 33 - 35	5AZ2	Weighted FIM Motor score 13-18, Brain, Spine, MMT, Burns, Age 18 - 58
5AH2	Orthopaedic conditions, fractures, Weighted FIM Motor 48 - 91, FIM Cognition 21 - 32	5AZ3	Weighted FIM Motor score 13-18, All other impairments, Age >= 79
5AH3	Orthopaedic conditions, fractures, Weighted FIM Motor 48 - 91, FIM Cognition 5 - 20	5AZ4	Weighted FIM Motor score 13-18, All other impairments, Age 18 - 78


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- Disclaimer

AROC has made every effort to ensure that the data used in these reports are accurate. Data submitted to AROC are checked for anomalies and facilities are asked to re-submit data prior to the production of AROC reports. We have provided general guidelines on the interpretation of the information reported but would advise readers to use their professional judgement in considering all information contained in this report.
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Anywhere Hospital AROC Impairment Specific Report on Orthopaedic Replacements (Inpatient - pathway 3), July 2023 – June 2024.
Australasian Rehabilitation Outcomes Centre (2024).

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