

AROC Impairment Specific Report

Orthopaedic Replacements

INPATIENT – PATHWAY 3

July 2017 – June 2018

Anywhere Hospital



**Australasian
Faculty of
Rehabilitaion
Medicine**



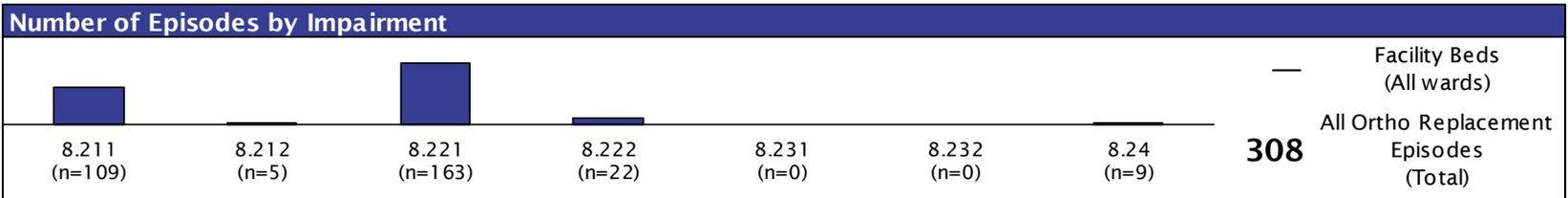
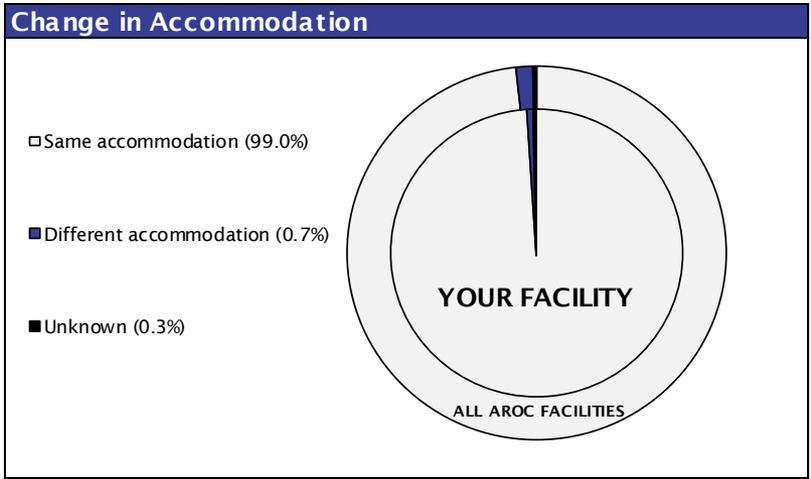
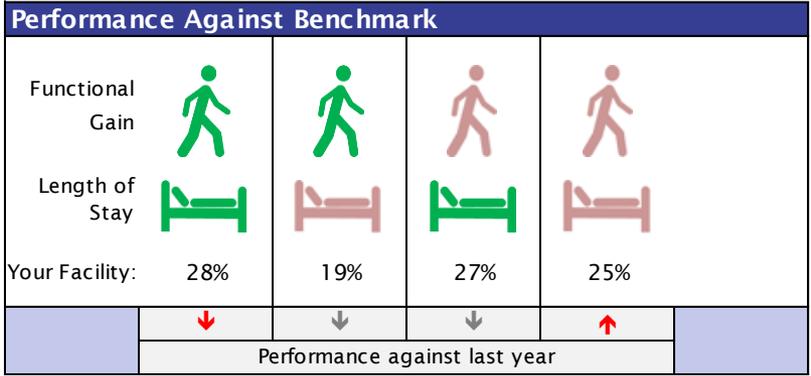
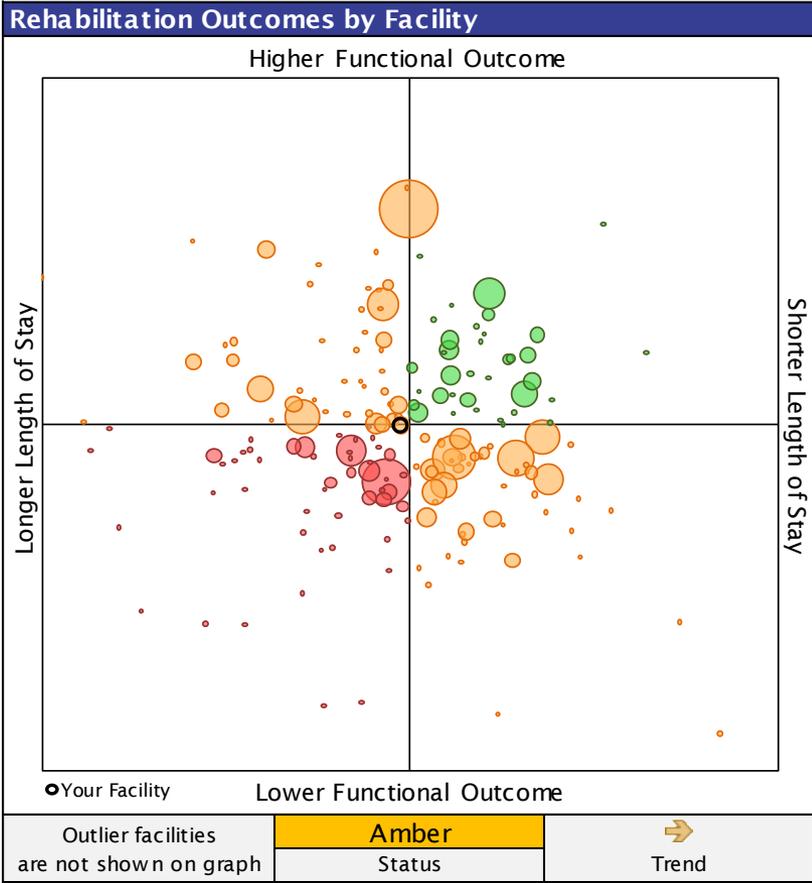
australian health services
research institute



**UNIVERSITY
OF WOLLONGONG
AUSTRALIA**

Orthopaedic replacements dashboard.....	3
Data used in this report.....	5
Orthopaedic replacements impairment codes.....	7
Orthopaedic replacements AN-SNAP classes.....	8
The BIG picture.....	9
Review of FIM item scoring by AN-SNAP class.....	20
Outcomes analysis.....	25
Explanatory data.....	45
Appendix 1: Glossary.....	96
Appendix 2: AROC impairment codes.....	104
Appendix 3: AN-SNAP classes.....	106
Acknowledgements.....	107
AROC contact details.....	108

Orthopaedic Replacements Dashboard



Orthopaedic Replacements Dashboard

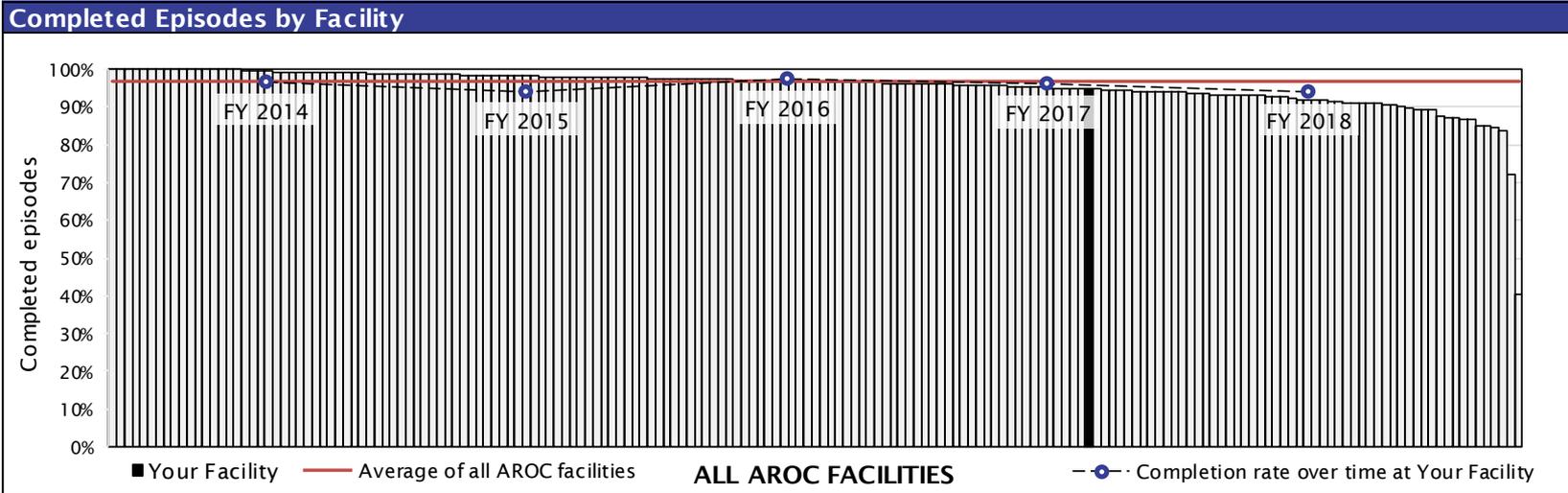


Key Indicators*	
YOUR FACILITY	ALL AROC FACILITIES
Average Age: 71.5	Average Age: 71.5
Mortality Rate: 0.0%	Mortality Rate: 0.0%
% with at least one comorbidity: 37%	% with at least one comorbidity: 38%
% with at least one complication: 15%	% with at least one complication: 13%
% episodes with start delays: 4%	% episodes with start delays: 5%
Days between onset and rehab episode: 5.9	Days between onset and rehab episode: 6.4
Days between clinically rehab ready & start date: 0.1	Days between clinically rehab ready & start date: 0.1

Facility FIM Training*	
FIM Credentialed Staff per 100 Episodes	FIM Credentialed Facility Trainers
0.0	0
Your Facility	Your Facility
6.1	2
ALL AROC FACILITIES (Mean)	AROC Suggested Minimum

* Mean value provided unless otherwise specified

*This includes all impairments from all wards



- Orthopaedic replacement episodes discharged during the reporting period (July 2017 – June 2018) and time series data covering five years.
- Benchmark group is ALL AROC FACILITIES.
- Casemix analysis uses version 4 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.

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.

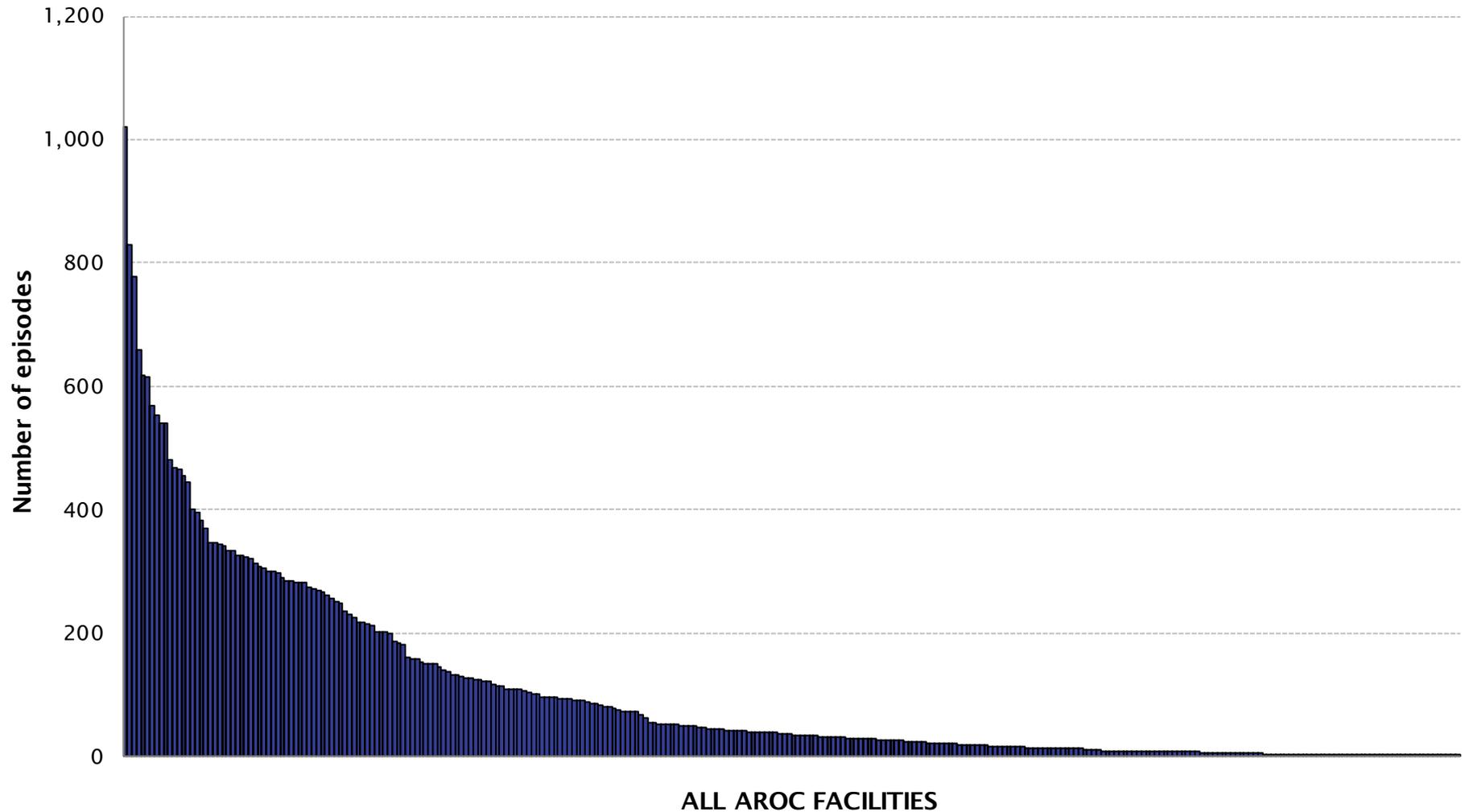
Levels of functioning for orthopaedic replacements are categorised by the following version 4 AN-SNAP classes:

- 4A21 - Orthopaedic conditions, all other (including replacements), weighted FIM motor 68-91
- 4A22 - Orthopaedic conditions, all other (including replacements), weighted FIM motor 50-67
- 4A23 - Orthopaedic conditions, all other (including replacements), weighted FIM motor 19-49
- 4AZ3 - Weighted FIM motor score 13-18, All other impairments, Age \geq 65
- 4AZ4 - Weighted FIM motor score 13-18, All other impairments, Age \leq 64

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



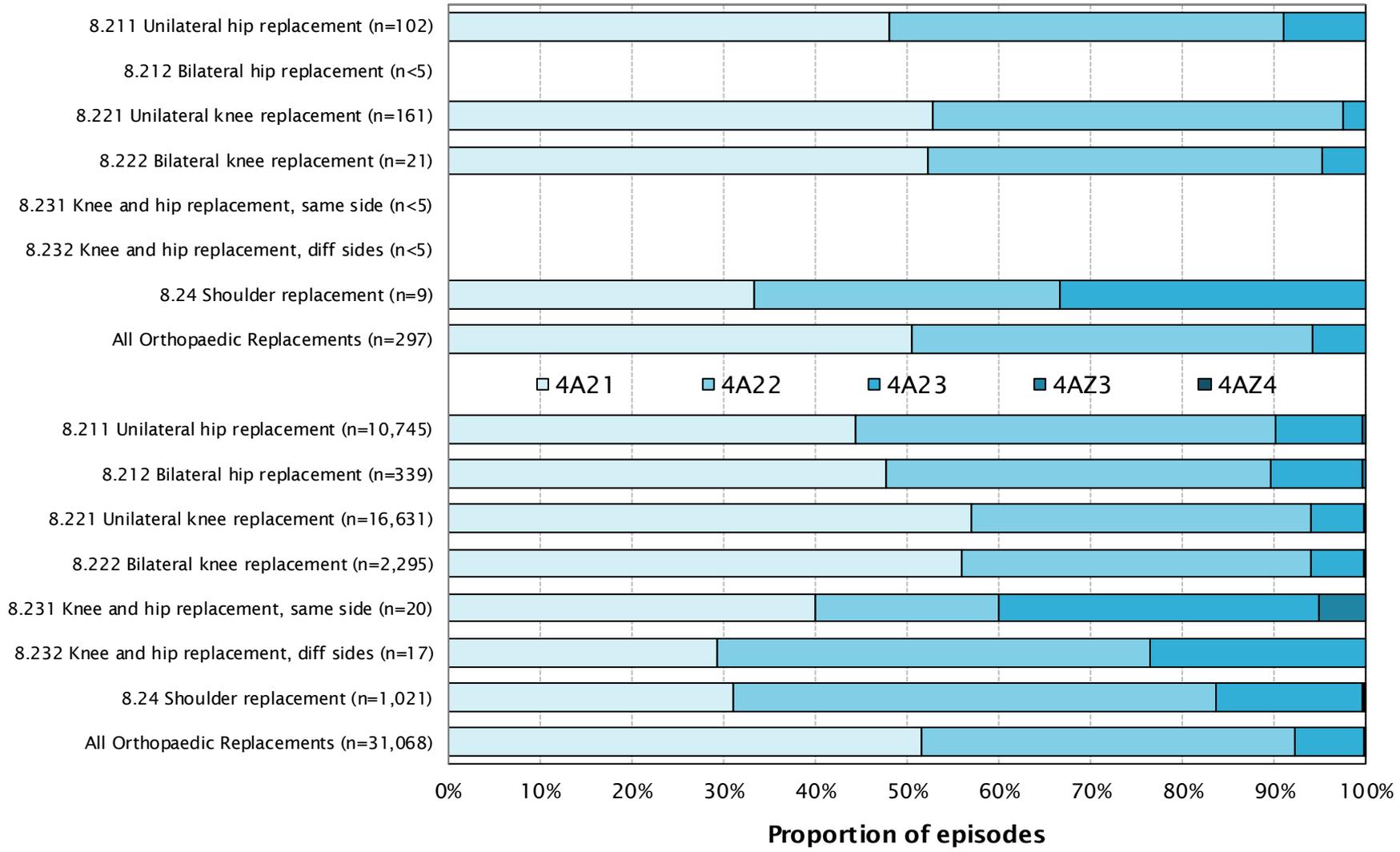
NOTE: 298 facilities reported at least one orthopaedic replacement episode, with 186 facilities reporting between 20 and 1,022 episodes in this reporting period

Proportion of episodes by impairment code and AN-SNAP class



YOUR FACILITY

ALL AROC FACILITIES



Episodes by impairment code and AN-SNAP class

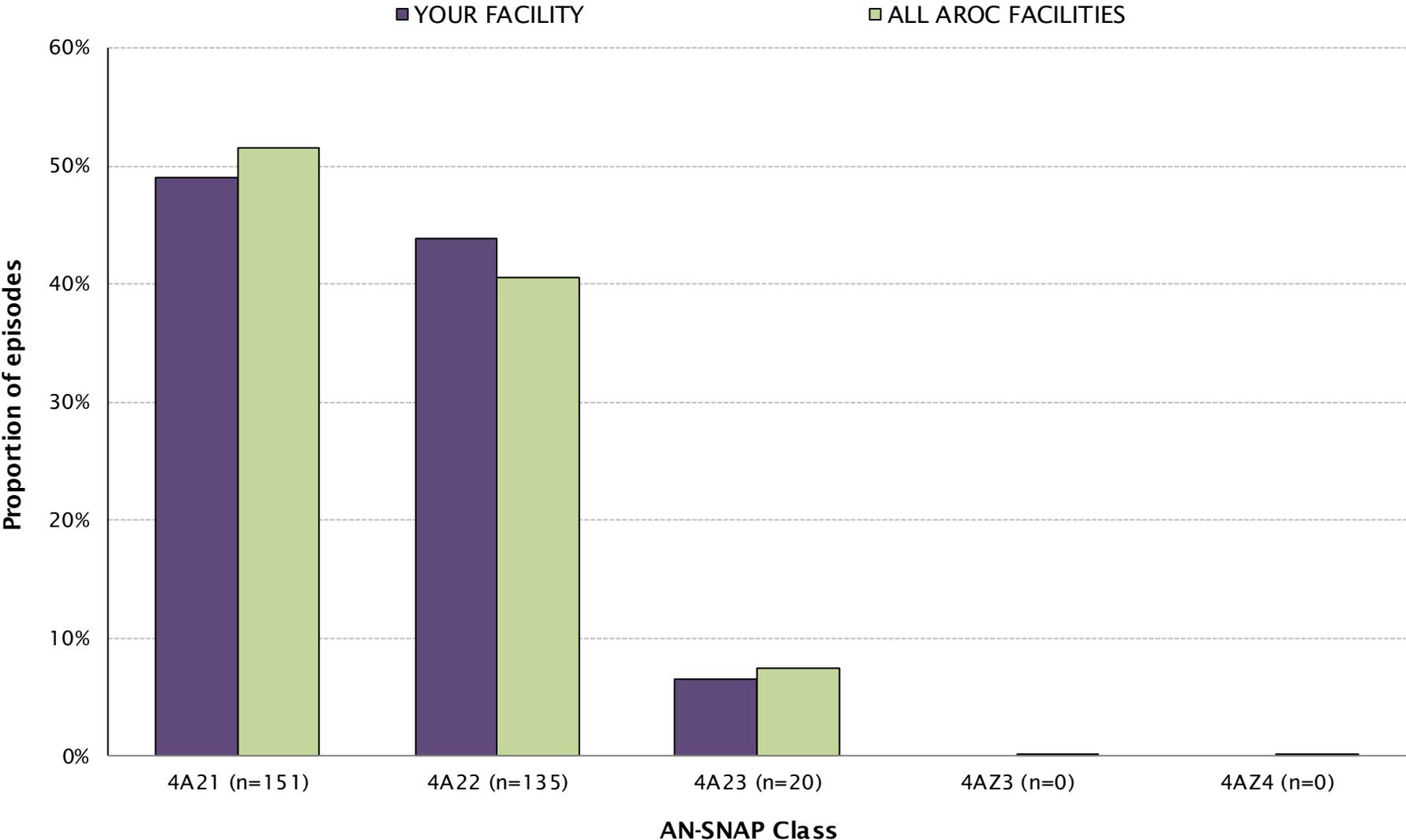


Impairment	YOUR FACILITY — N (%)						All Replacement AN-SNAP classes*
	4A21	4A22	4A23	4AZ3	4AZ4		
8.211 Unilateral hip replacement	49 (48.0)	44 (43.1)	9 (8.8)	0 (0.0)	0 (0.0)		102 (100.0)
8.212 Bilateral hip replacement	3 (75.0)	1 (25.0)	0 (0.0)	0 (0.0)	0 (0.0)		4 (100.0)
8.221 Unilateral knee replacement	85 (52.8)	72 (44.7)	4 (2.5)	0 (0.0)	0 (0.0)		161 (100.0)
8.222 Bilateral knee replacement	11 (52.4)	9 (42.9)	1 (4.8)	0 (0.0)	0 (0.0)		21 (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	3 (33.3)	3 (33.3)	3 (33.3)	0 (0.0)	0 (0.0)		9 (100.0)
All Orthopaedic Replacements	151 (50.8)	129 (43.4)	17 (5.7)	0 (0.0)	0 (0.0)		297 (100.0)

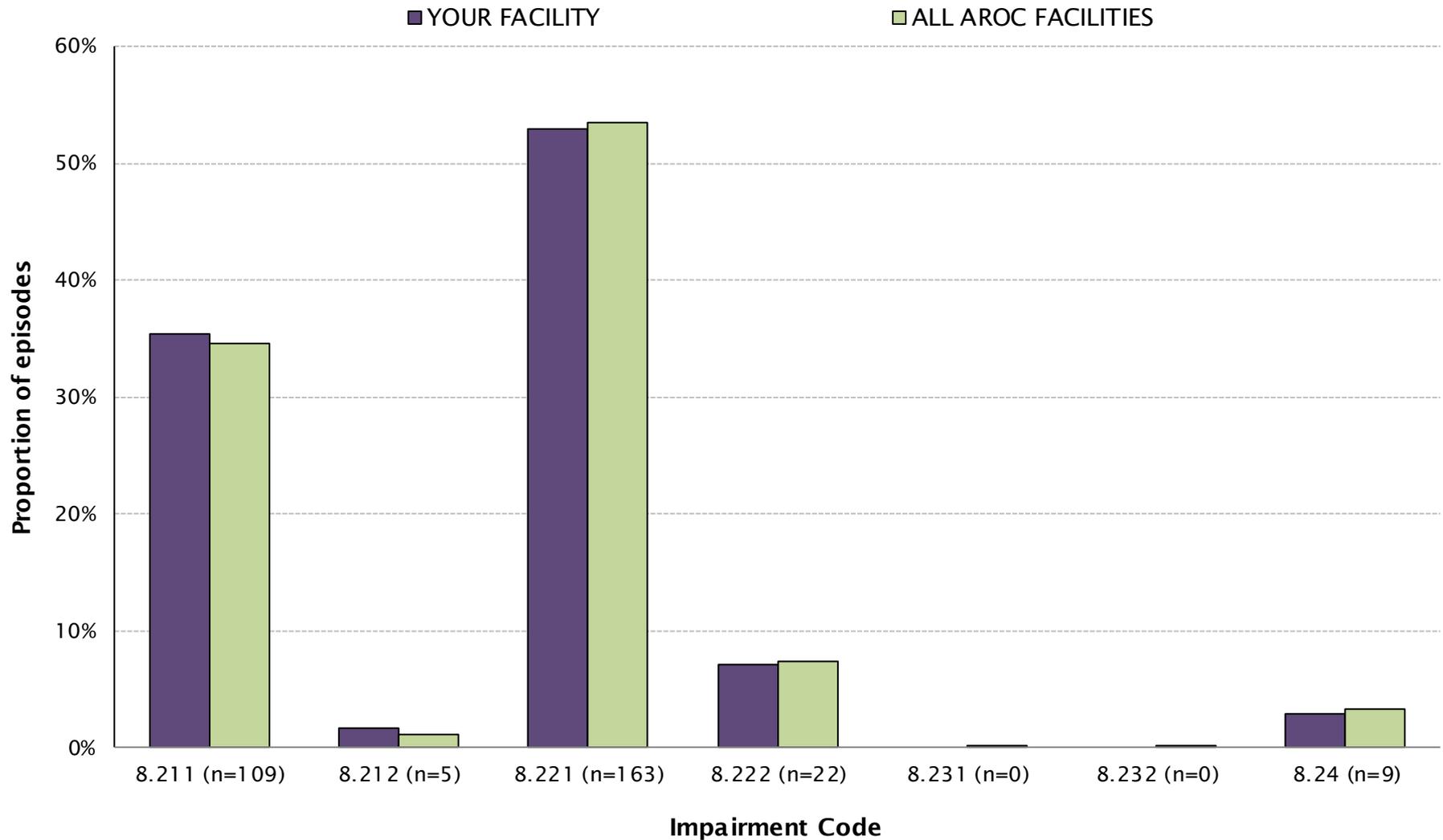
Impairment	ALL AROC FACILITIES — N (%)						All Replacement AN-SNAP classes*
	4A21	4A22	4A23	4AZ3	4AZ4		
8.211 Unilateral hip replacement	4,778 (44.5)	4,914 (45.7)	1,017 (9.5)	32 (0.3)	4 (0.0)		10,745 (100.0)
8.212 Bilateral hip replacement	162 (47.8)	142 (41.9)	34 (10.0)	1 (0.3)	0 (0.0)		339 (100.0)
8.221 Unilateral knee replacement	9,503 (57.1)	6,152 (37.0)	954 (5.7)	19 (0.1)	3 (0.0)		16,631 (100.0)
8.222 Bilateral knee replacement	1,286 (56.0)	875 (38.1)	132 (5.8)	1 (0.0)	1 (0.0)		2,295 (100.0)
8.231 Knee and hip replacement, same side	8 (40.0)	4 (20.0)	7 (35.0)	1 (5.0)	0 (0.0)		20 (100.0)
8.232 Knee and hip replacement, diff sides	5 (29.4)	8 (47.1)	4 (23.5)	0 (0.0)	0 (0.0)		17 (100.0)
8.24 Shoulder replacement	317 (31.0)	538 (52.7)	162 (15.9)	3 (0.3)	1 (0.1)		1,021 (100.0)
All Orthopaedic Replacements	16,059 (51.7)	12,633 (40.7)	2,310 (7.4)	57 (0.2)	9 (0.0)		31,068 (100.0)

*There were 2 episodes in YOUR FACILITY and 93 episodes in ALL AROC FACILITIES with AN-SNAP class 499A

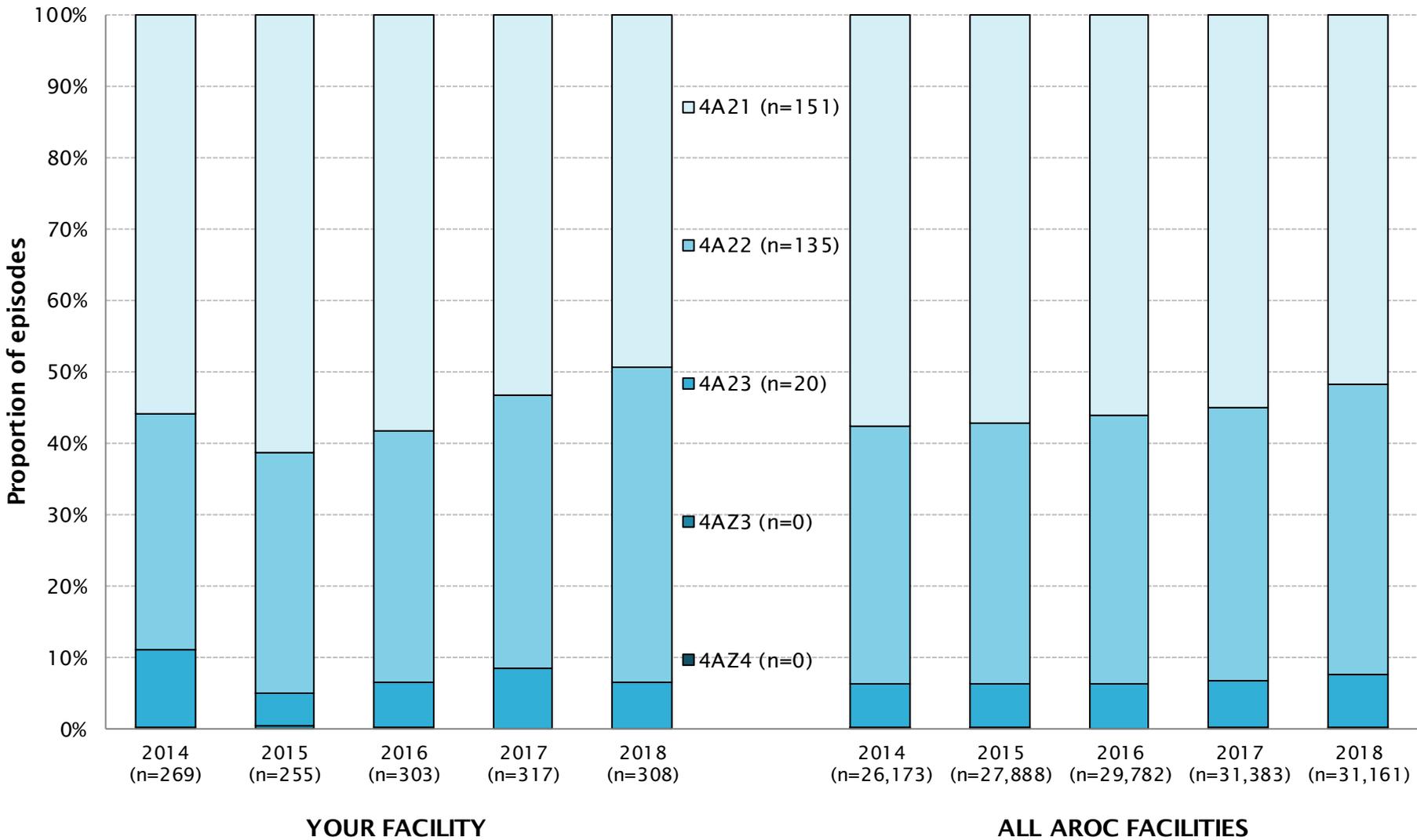
Proportion of episodes by AN-SNAP class



Proportion of episodes by impairment code



Proportion of episodes by AN-SNAP class over time

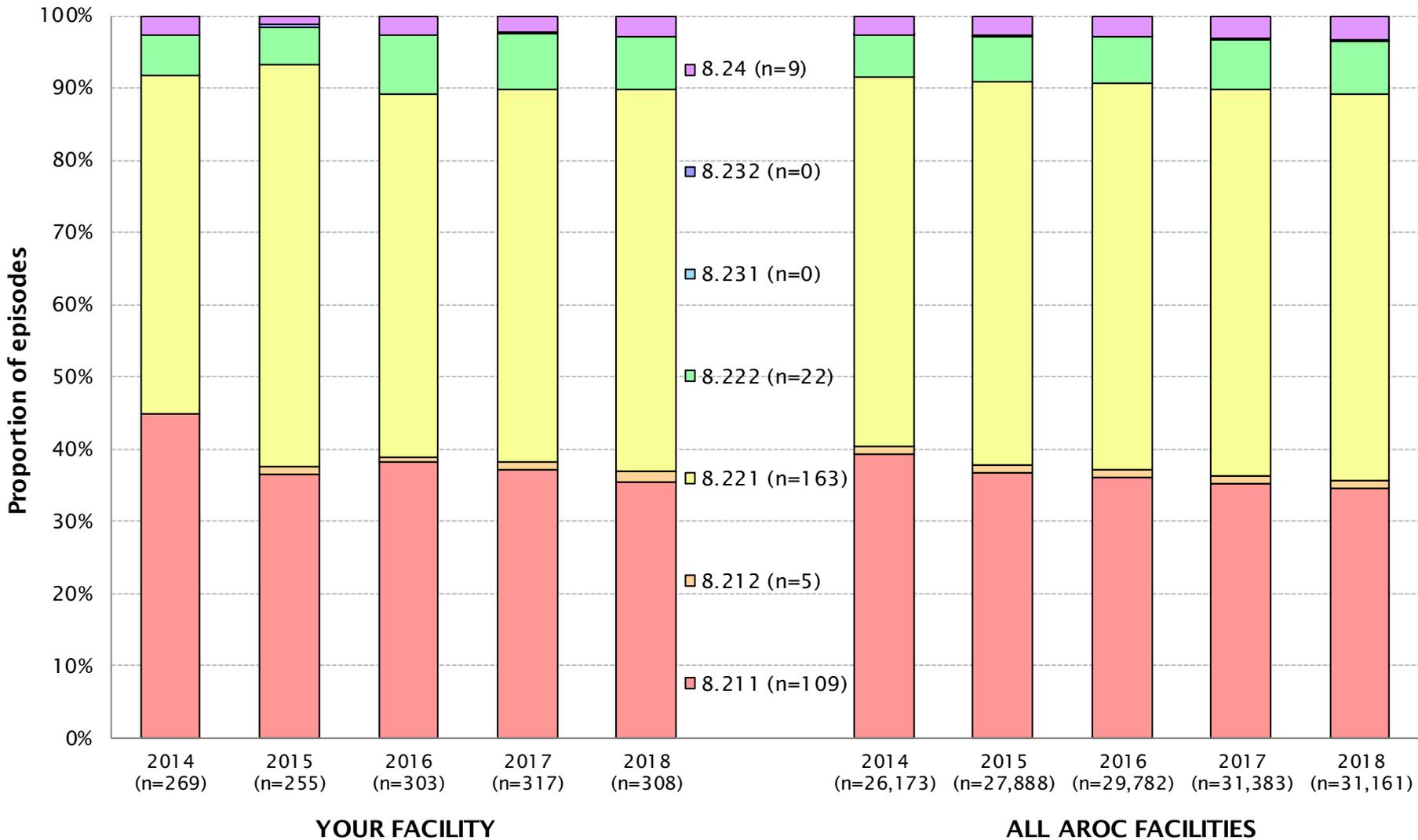


Episodes by AN-SNAP class over time

AN-SNAP class V4	YOUR FACILITY — N					ALL AROC FACILITIES — N				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
4A21 (weighted motor 68-91)	150	156	176	168	151	15,027	15,921	16,665	17,209	16,059
4A22 (weighted motor 50-67)	89	86	107	121	135	9,452	10,152	11,229	11,994	12,633
4A23 (weighted motor 19-49)	29	12	19	27	20	1,608	1,736	1,816	2,102	2,310
4AZ3 (weighted motor 13-18, Age ≥ 65)	1	1	1	0	0	55	47	39	49	57
4AZ4 (weighted motor 13-18, Age ≤ 64)	0	0	0	0	0	6	12	6	3	9
499A (Data error - ungroupable)	0	0	0	1	2	25	20	27	26	93
All Replacement AN-SNAP classes	269	255	303	317	308	26,173	27,888	29,782	31,383	31,161

AN-SNAP class V4	YOUR FACILITY — %					ALL AROC FACILITIES — %				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
4A21 (weighted motor 68-91)	55.8	61.2	58.1	53.0	49.0	57.4	57.1	56.0	54.8	51.5
4A22 (weighted motor 50-67)	33.1	33.7	35.3	38.2	43.8	36.1	36.4	37.7	38.2	40.5
4A23 (weighted motor 19-49)	10.8	4.7	6.3	8.5	6.5	6.1	6.2	6.1	6.7	7.4
4AZ3 (weighted motor 13-18, Age ≥ 65)	0.4	0.4	0.3	0.0	0.0	0.2	0.2	0.1	0.2	0.2
4AZ4 (weighted motor 13-18, Age ≤ 64)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
499A (Data error - ungroupable)	0.0	0.0	0.0	0.3	0.6	0.1	0.1	0.1	0.1	0.3
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				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
8.211 Unilateral hip replacement	121	93	116	118	109	10,313	10,219	10,764	11,029	10,768
8.212 Bilateral hip replacement	0	3	2	3	5	240	337	283	351	341
8.221 Unilateral knee replacement	126	142	152	164	163	13,405	14,816	15,978	16,823	16,682
8.222 Bilateral knee replacement	15	13	25	24	22	1,509	1,709	1,875	2,170	2,311
8.231 Knee and hip replacement, same side	0	0	0	1	0	10	26	24	19	20
8.232 Knee and hip replacement, diff sides	0	1	0	0	0	12	19	7	11	17
8.24 Shoulder replacement	7	3	8	7	9	684	762	851	980	1,022
All Orthopaedic Replacements	269	255	303	317	308	26,173	27,888	29,782	31,383	31,161

Impairment	YOUR FACILITY — %					ALL AROC FACILITIES — %				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
8.211 Unilateral hip replacement	45.0	36.5	38.3	37.2	35.4	39.4	36.6	36.1	35.1	34.6
8.212 Bilateral hip replacement	0.0	1.2	0.7	0.9	1.6	0.9	1.2	1.0	1.1	1.1
8.221 Unilateral knee replacement	46.8	55.7	50.2	51.7	52.9	51.2	53.1	53.6	53.6	53.5
8.222 Bilateral knee replacement	5.6	5.1	8.3	7.6	7.1	5.8	6.1	6.3	6.9	7.4
8.231 Knee and hip replacement, same side	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.1	0.1	0.1
8.232 Knee and hip replacement, diff sides	0.0	0.4	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
8.24 Shoulder replacement	2.6	1.2	2.6	2.2	2.9	2.6	2.7	2.9	3.1	3.3
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	308		31,161	
Incomplete episodes	16	(5.2)	1,059	(3.4)

Reason for incomplete:

Discharged home with end FIM=18	0	(0.0)	18	(1.7)
Discharged home with no end FIM	2	(12.5)	93	(8.8)
Discharged to another hospital	8	(50.0)	546	(51.6)
Discharged back to acute	5	(31.3)	260	(24.6)
Discharged at own risk	0	(0.0)	101	(9.5)
Change of care type (LOS<1 week)	0	(0.0)	4	(0.4)
Died	0	(0.0)	3	(0.3)
Other/Unknown Discharge	1	(6.3)	34	(3.2)

	YOUR FACILITY	
	Incomplete Episodes	Complete episodes

Impairment Code:

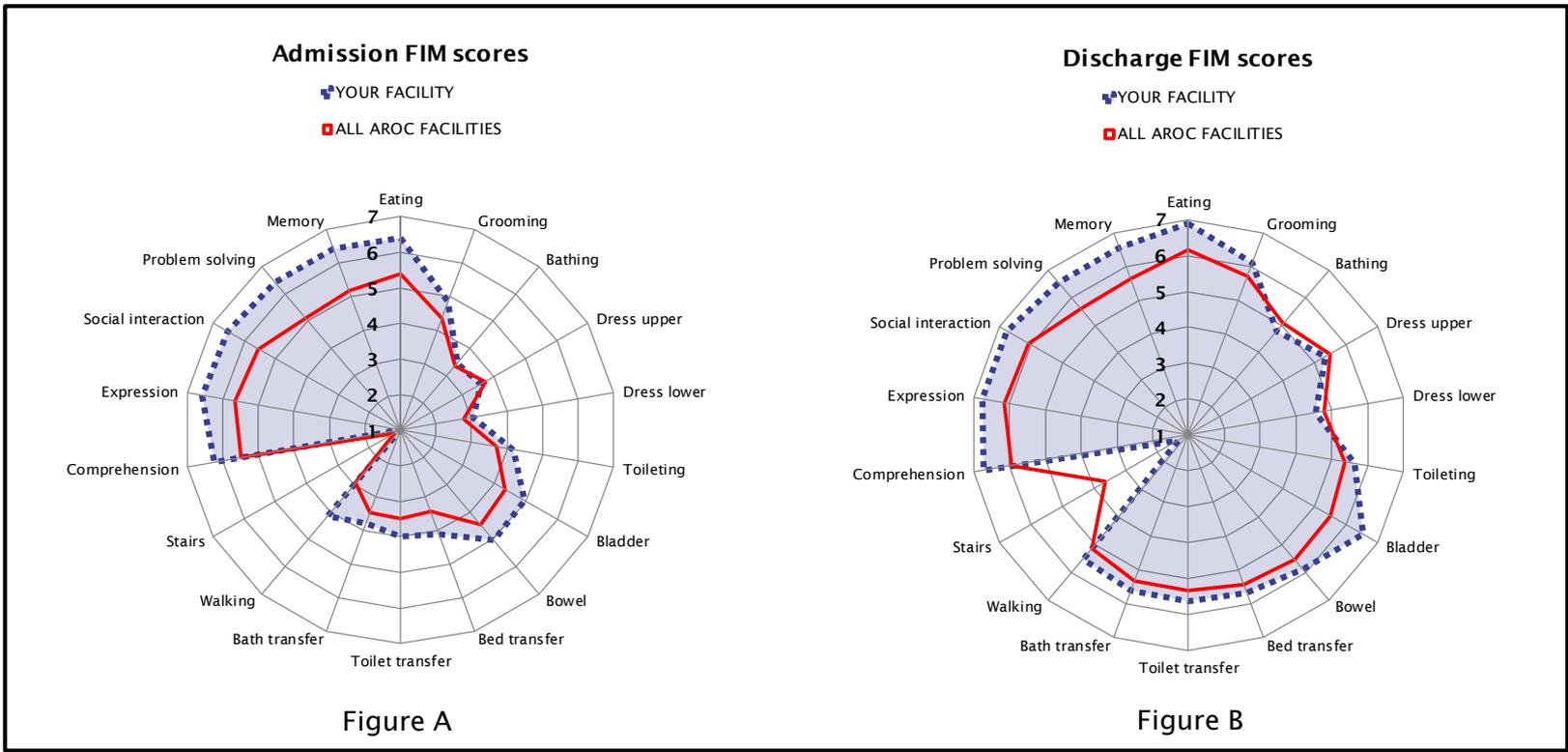
8.211 Unilateral hip replacement	9	(56.3)	100	(34.2)
8.212 Bilateral hip replacement	0	(0.0)	5	(1.7)
8.221 Unilateral knee replacement	5	(31.3)	158	(54.1)
8.222 Bilateral knee replacement	1	(6.3)	21	(7.2)
8.231 Knee and hip replacement, same side	0	(0.0)	0	(0.0)
8.232 Knee and hip replacement, diff sides	0	(0.0)	0	(0.0)
8.24 Shoulder replacement	1	(6.3)	8	(2.7)

AN-SNAP Class:

4A21 (weighted motor 68-91)	1	(7.1)	150	(51.4)
4A22 (weighted motor 50-67)	6	(42.9)	129	(44.2)
4A23 (weighted motor 19-49)	7	(50.0)	13	(4.5)
4A23 (weighted motor 13-18, Age ≥ 65)	0	(0.0)	0	(0.0)
4A24 (weighted motor 13-18, Age ≤ 64)	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

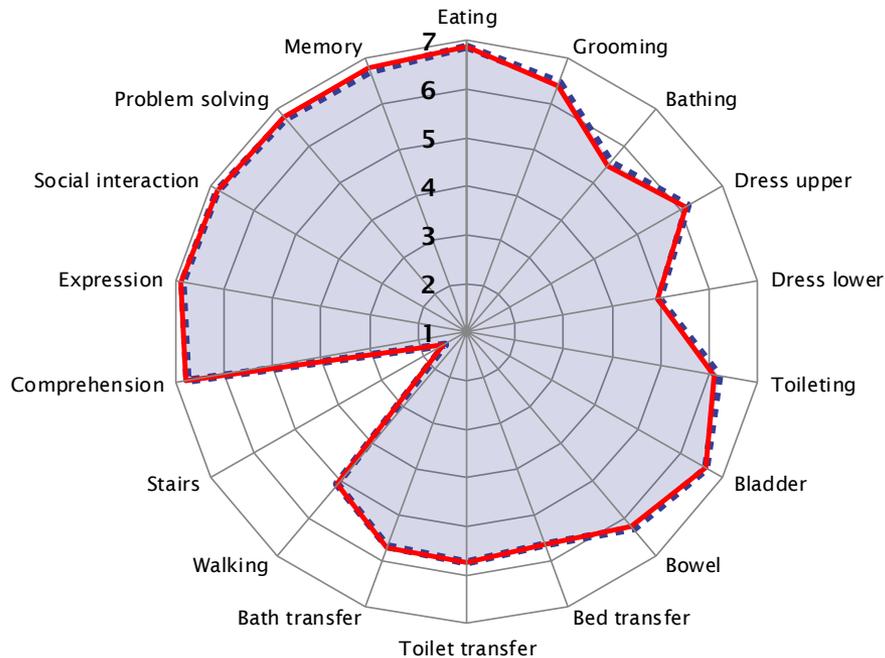
AN-SNAP class 4A21



4A21 Admission FIM scores

YOUR FACILITY (n=150)

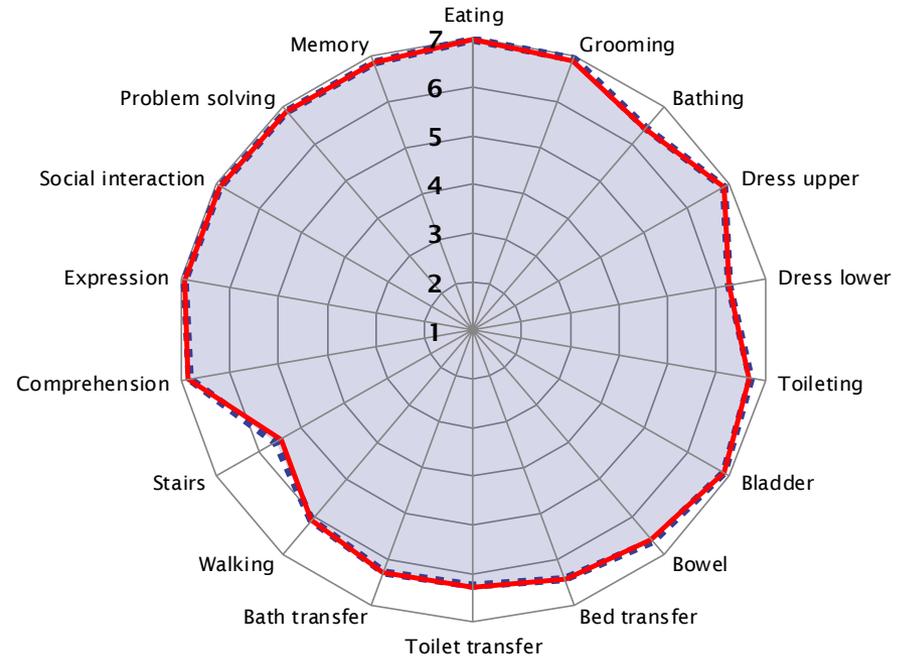
ALL AROC FACILITIES (n=15,783)



4A21 Discharge FIM scores

YOUR FACILITY (n=150)

ALL AROC FACILITIES (n=15,783)



NOTE: Includes only completed episodes with valid FIM scores

Comparative FIM item scoring

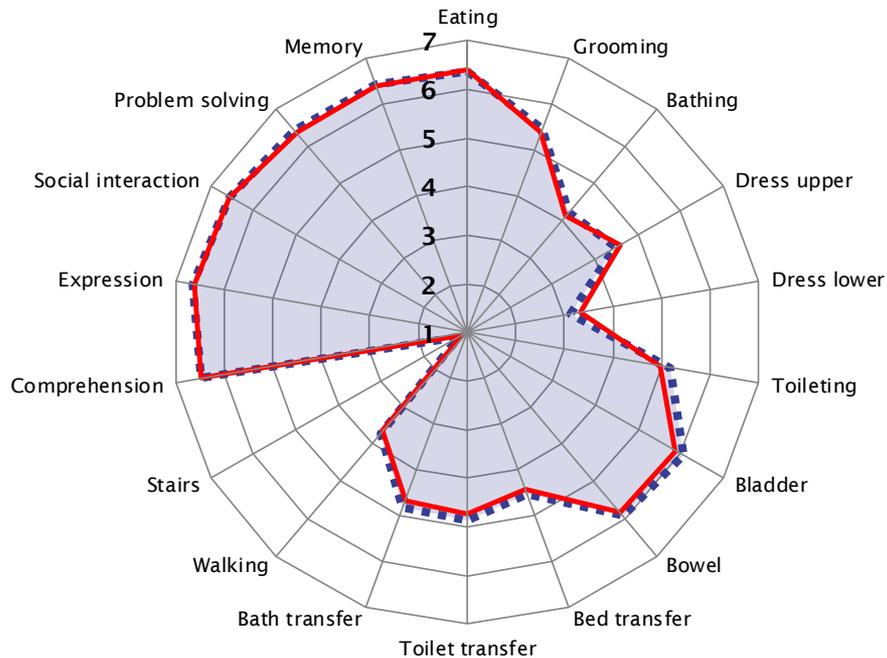
AN-SNAP class 4A22



4A22 Admission FIM scores

YOUR FACILITY (n=123)

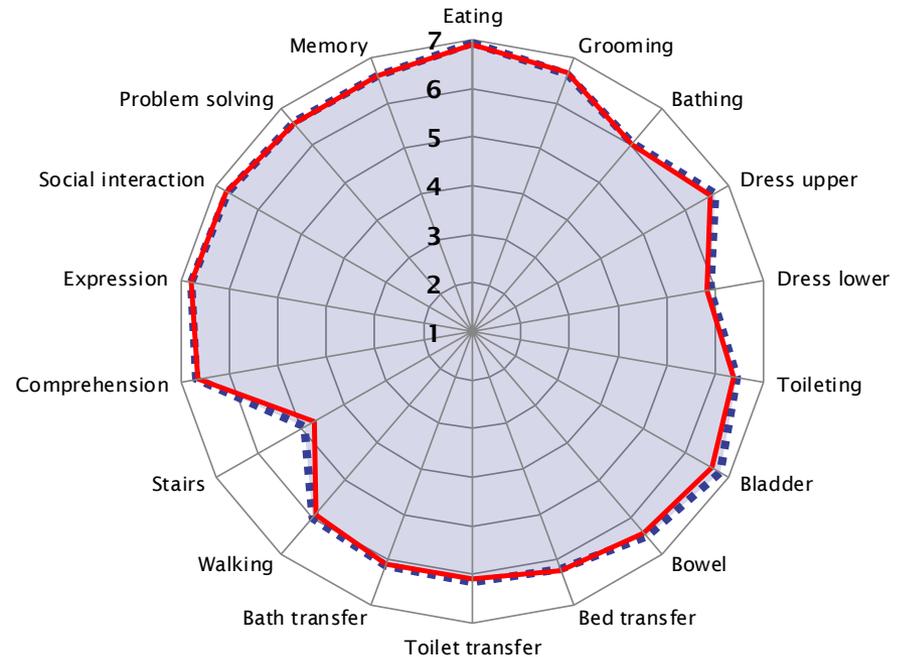
ALL AROC FACILITIES (n=12,218)



4A22 Discharge FIM scores

YOUR FACILITY (n=123)

ALL AROC FACILITIES (n=12,218)



NOTE: Includes only completed episodes with valid FIM scores

Comparative FIM item scoring

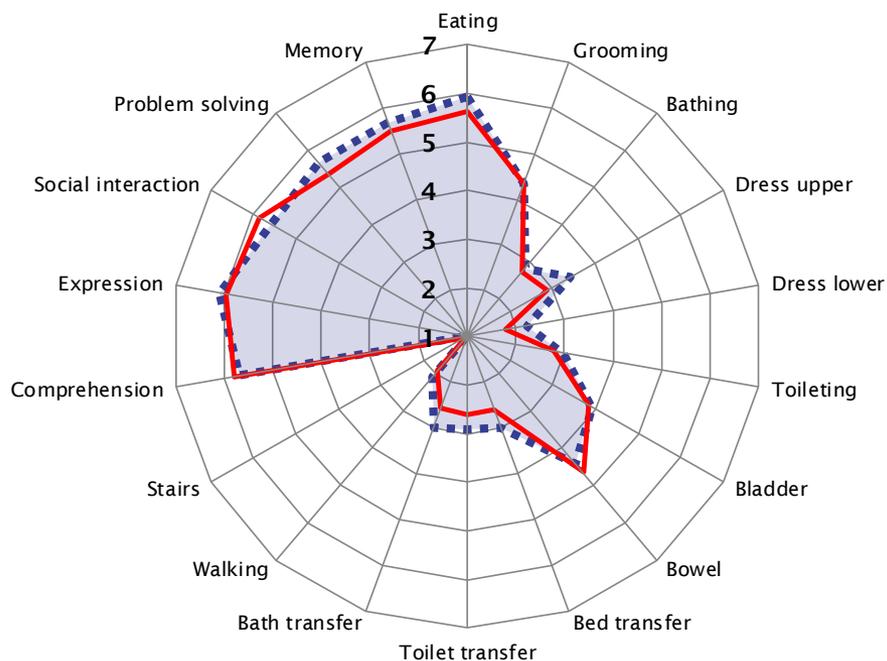
AN-SNAP class 4A23



4A23 Admission FIM scores

YOUR FACILITY (n=12)

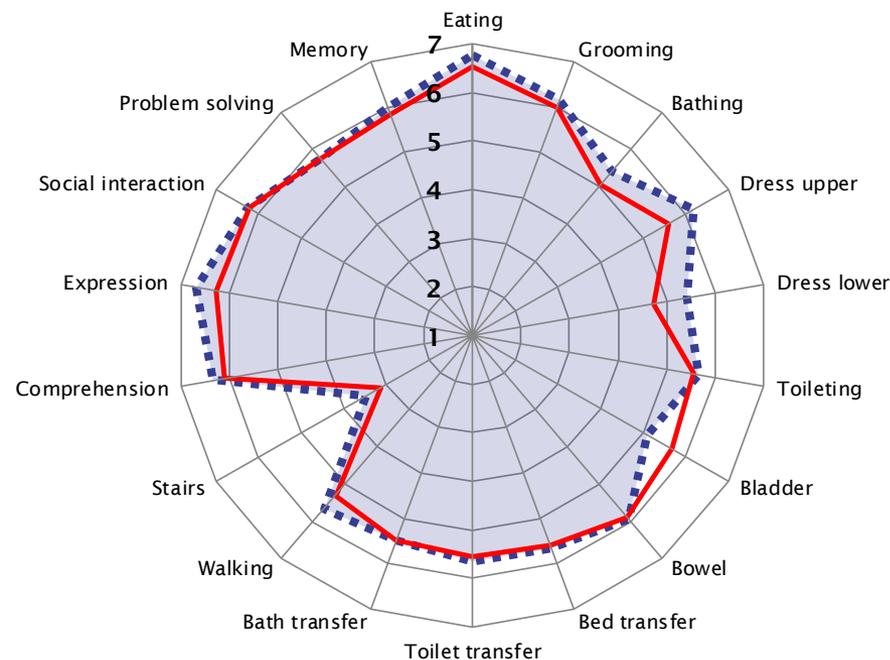
ALL AROC FACILITIES (n=2,050)



4A23 Discharge FIM scores

YOUR FACILITY (n=12)

ALL AROC FACILITIES (n=2,050)



NOTE: Includes only completed episodes with valid FIM scores

Outcome analysis

Completed episodes by AN-SNAP class and impairment code

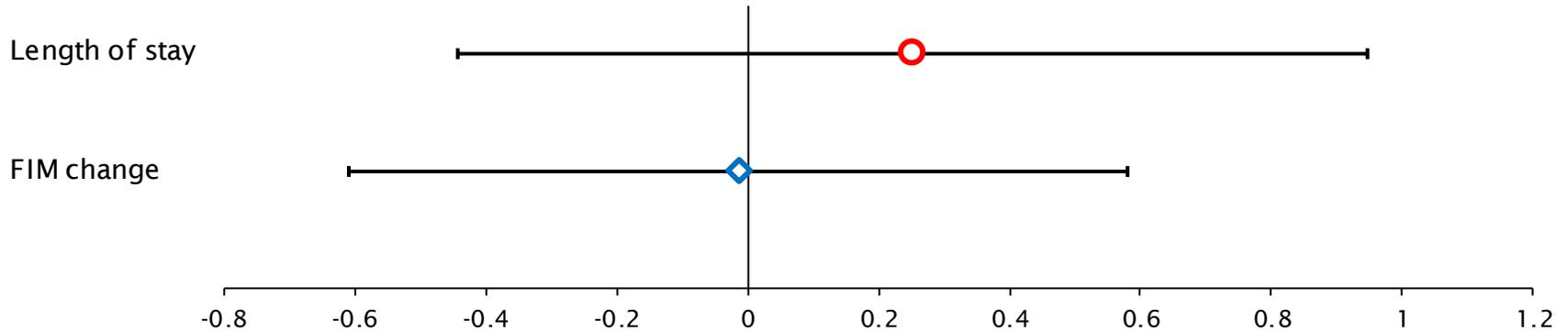


AN-SNAP class V4	YOUR FACILITY			ALL AROC FACILITIES		
	All episodes	Completed episodes	% Complete	All episodes	Completed episodes	% Complete
4A21 (weighted motor 68-91)	151	150	99.3	16,059	15,784	98.3
4A22 (weighted motor 50-67)	135	123	91.1	12,633	12,218	96.7
4A23 (weighted motor 19-49)	20	12	60.0	2,310	2,050	88.7
4AZ3 (weighted motor 13-18, Age ≥ 65)	0	0	—	57	42	73.7
4AZ4 (weighted motor 13-18, Age ≤ 64)	0	0	—	9	4	44.4
499A (Data error - ungroupable)	2	0	0.0	93	4	4.3
All Replacement AN-SNAP classes	308	285	92.5	31,161	30,102	96.6

Impairment	YOUR FACILITY			ALL AROC FACILITIES		
	All episodes	Completed episodes	% Complete	All episodes	Completed episodes	% Complete
8.211 Unilateral hip replacement	109	95	87.2	10,768	10,301	95.7
8.212 Bilateral hip replacement	5	4	80.0	341	325	95.3
8.221 Unilateral knee replacement	163	158	96.9	16,682	16,208	97.2
8.222 Bilateral knee replacement	22	20	90.9	2,311	2,262	97.9
8.231 Knee and hip replacement, same side	0	0	—	20	18	90.0
8.232 Knee and hip replacement, diff sides	0	0	—	17	16	94.1
8.24 Shoulder replacement	9	8	88.9	1,022	972	95.1
All Replacement AN-SNAP classes	308	285	92.5	31,161	30,102	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

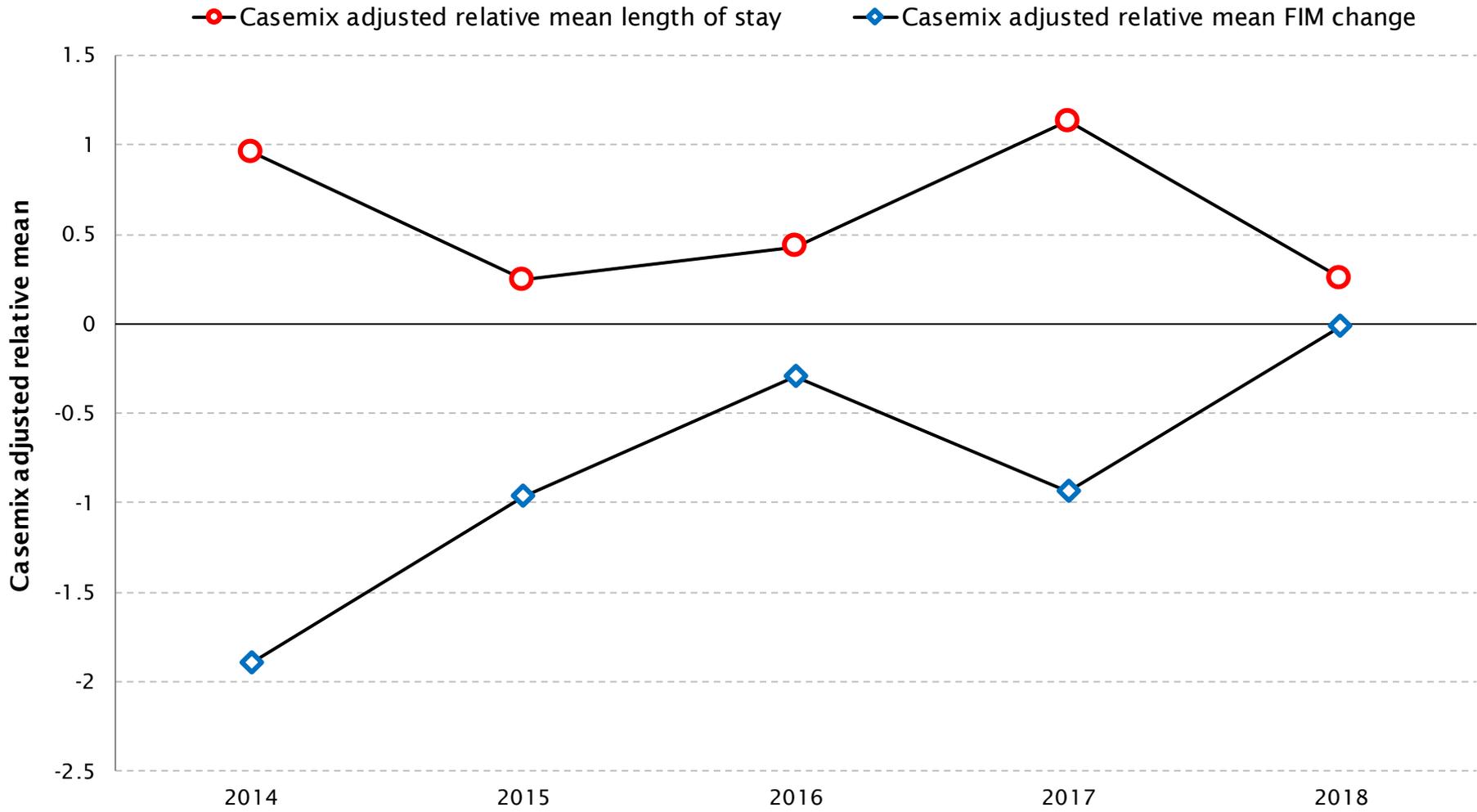


Casemix-adjusted relative means with 95% confidence intervals

Outcome measures	YOUR FACILITY		ALL AROC FACILITIES
	Casemix-adjusted* relative mean	95% CI	IQR
Length of stay	0.3	-0.4 to 1.0	-3.6 to 2.4
FIM change	0.0	-0.6 to 0.7	-4.1 to 3.9

*Includes only completed episodes with valid FIM scores and LOS

Casemix-adjusted* relative means over time



*Casemix adjusted values based on FY 2018

YOUR FACILITY

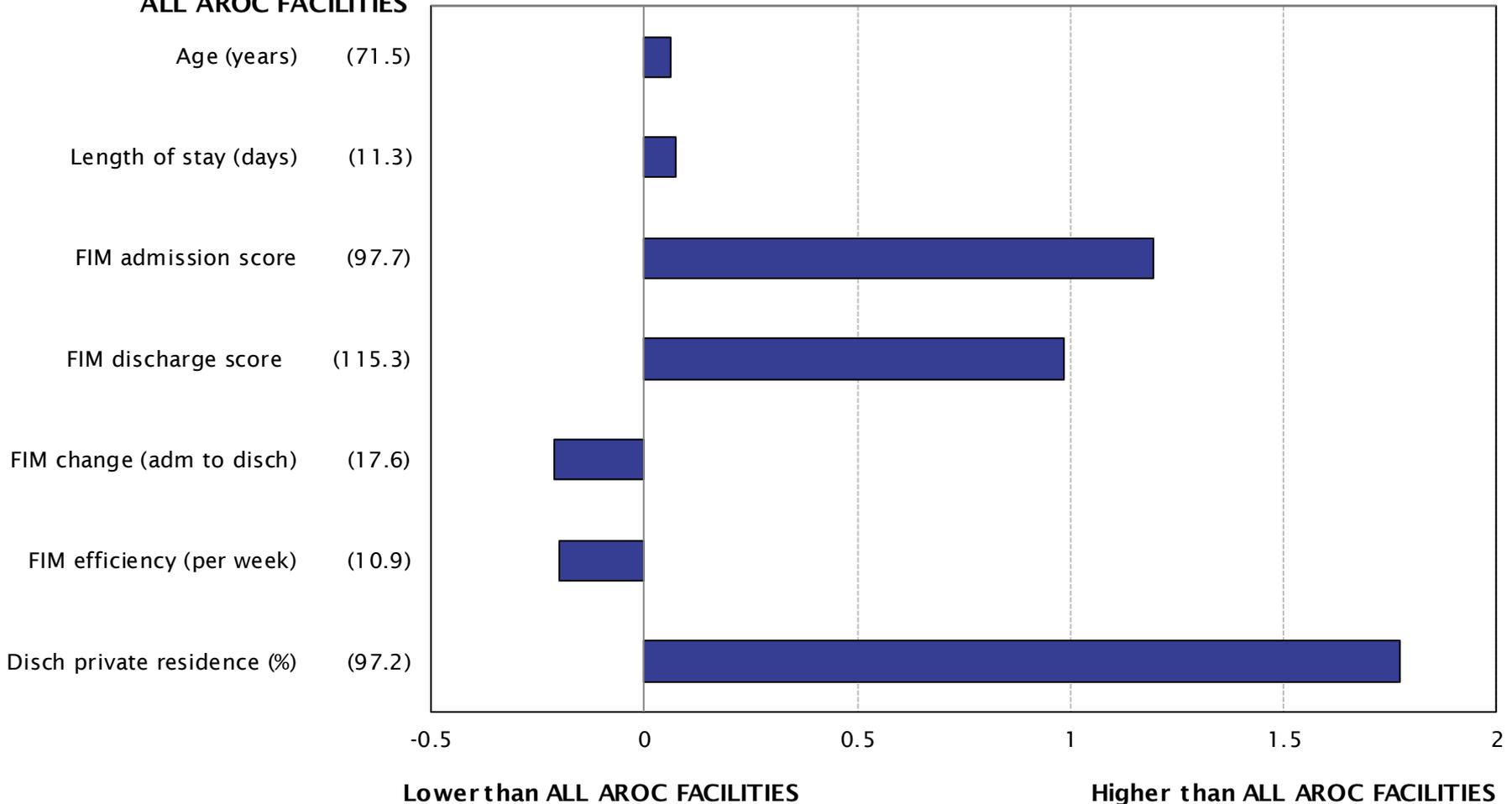
NOTE: Includes only completed episodes with valid FIM scores and LOS; where n<5 the casemix-adjusted relative mean will not be shown

Outcome measures – difference from all AROC



How YOUR FACILITY is different to ALL AROC FACILITIES

ALL AROC FACILITIES

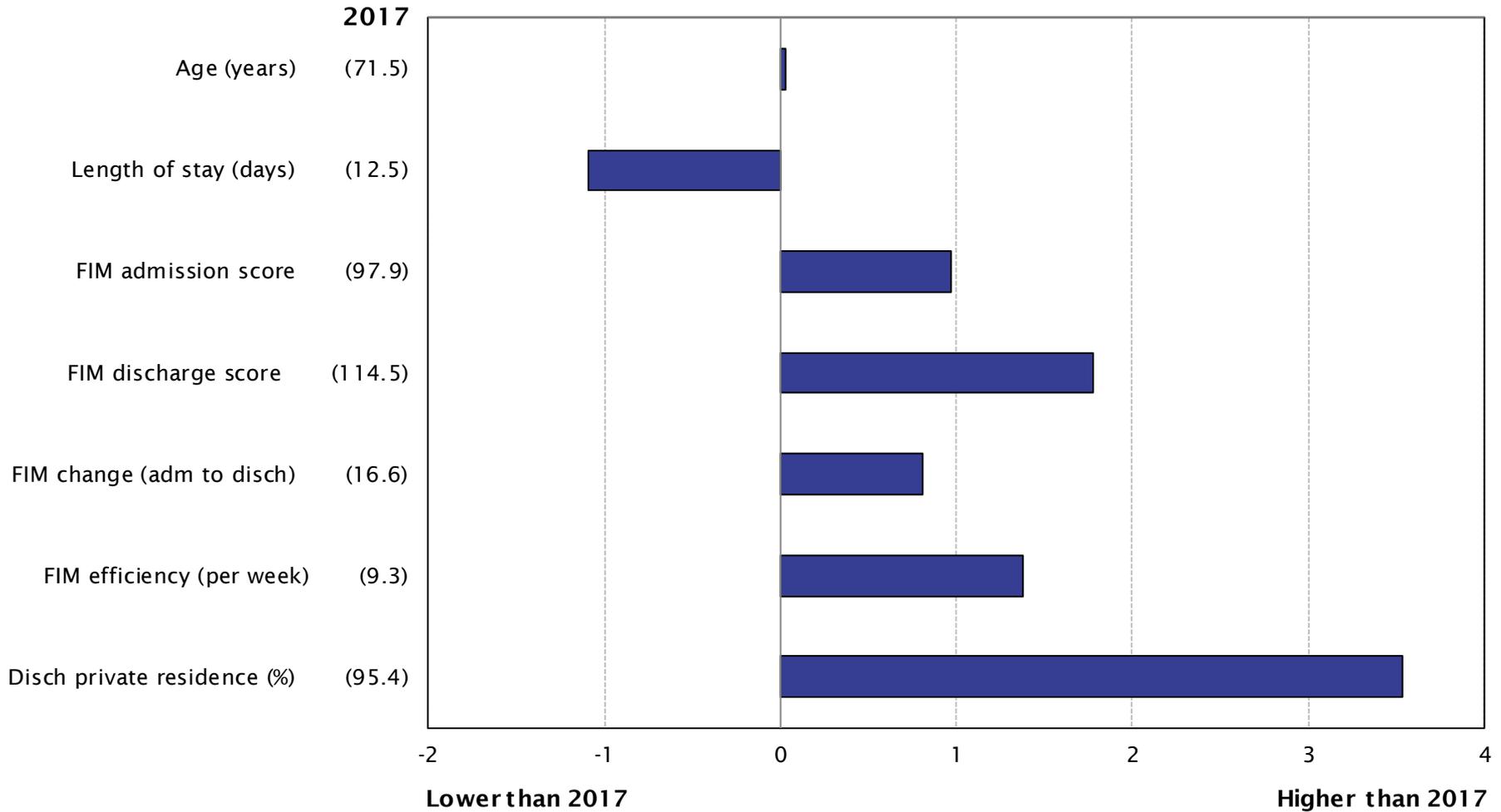


NOTE: Includes only completed episodes with valid FIM scores and LOS

Outcome measures – difference from last year

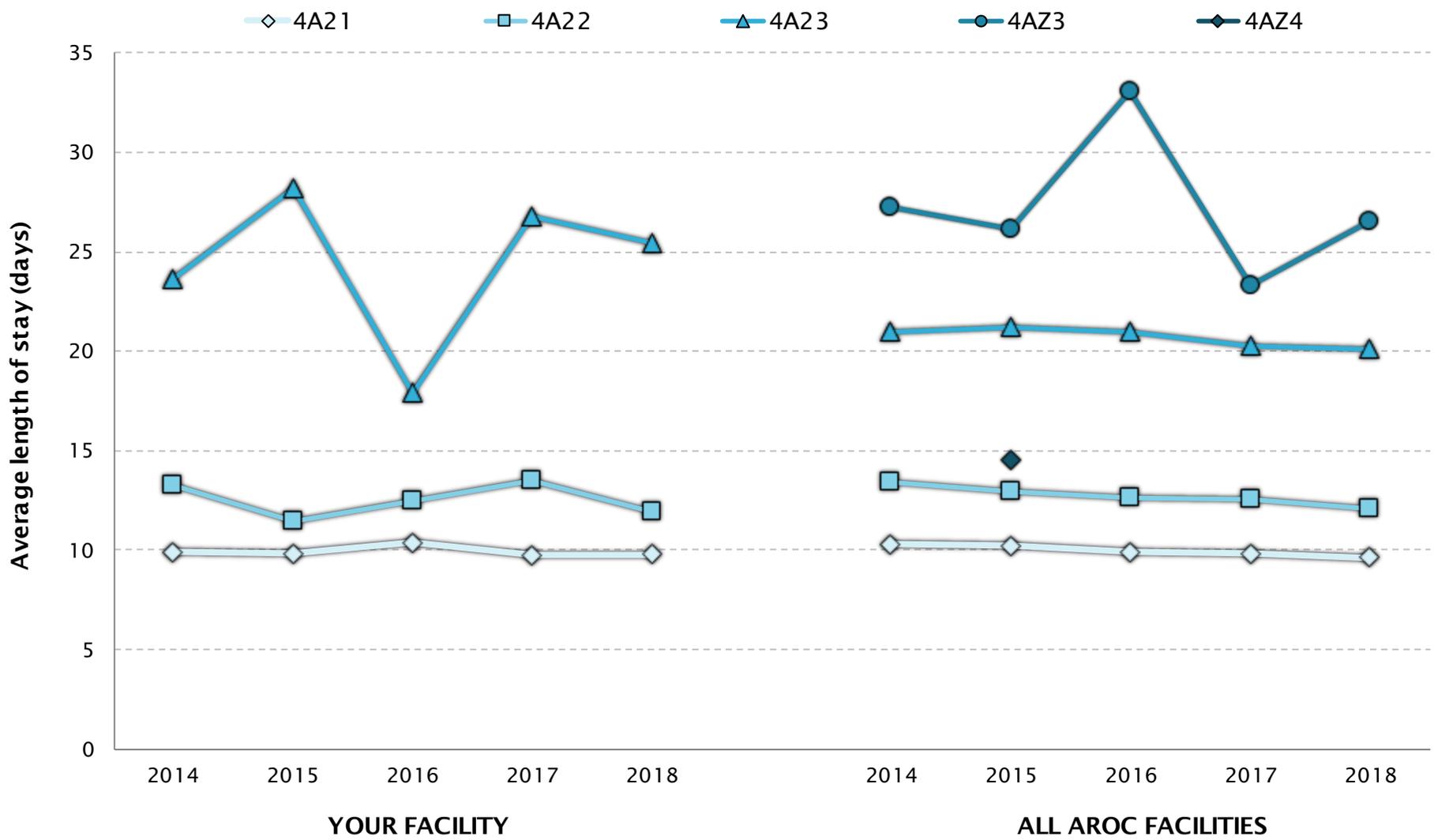


How YOUR FACILITY has changed since 2017



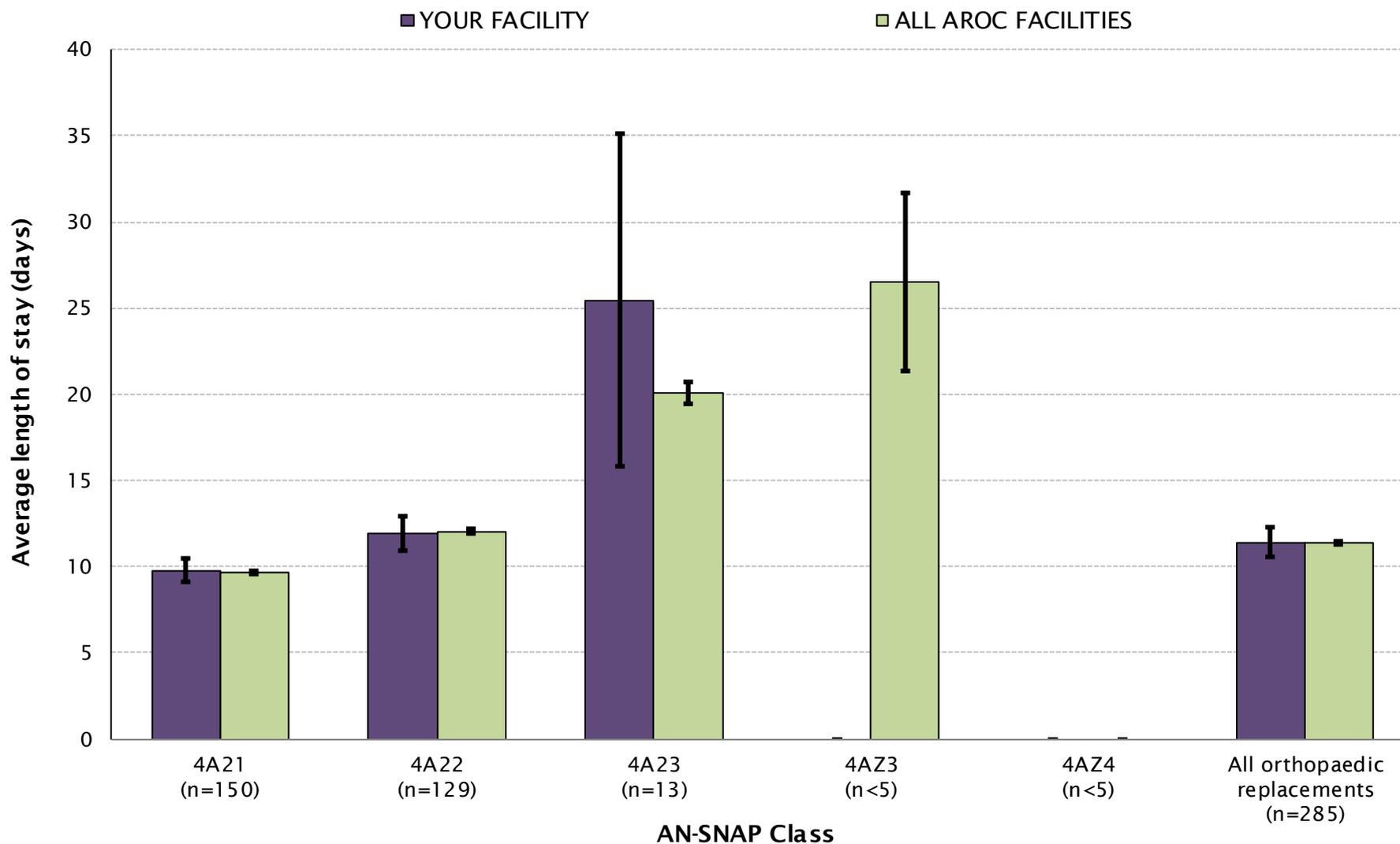
NOTE: Includes only completed episodes with valid FIM scores and LOS

Average length of stay by AN-SNAP class over time



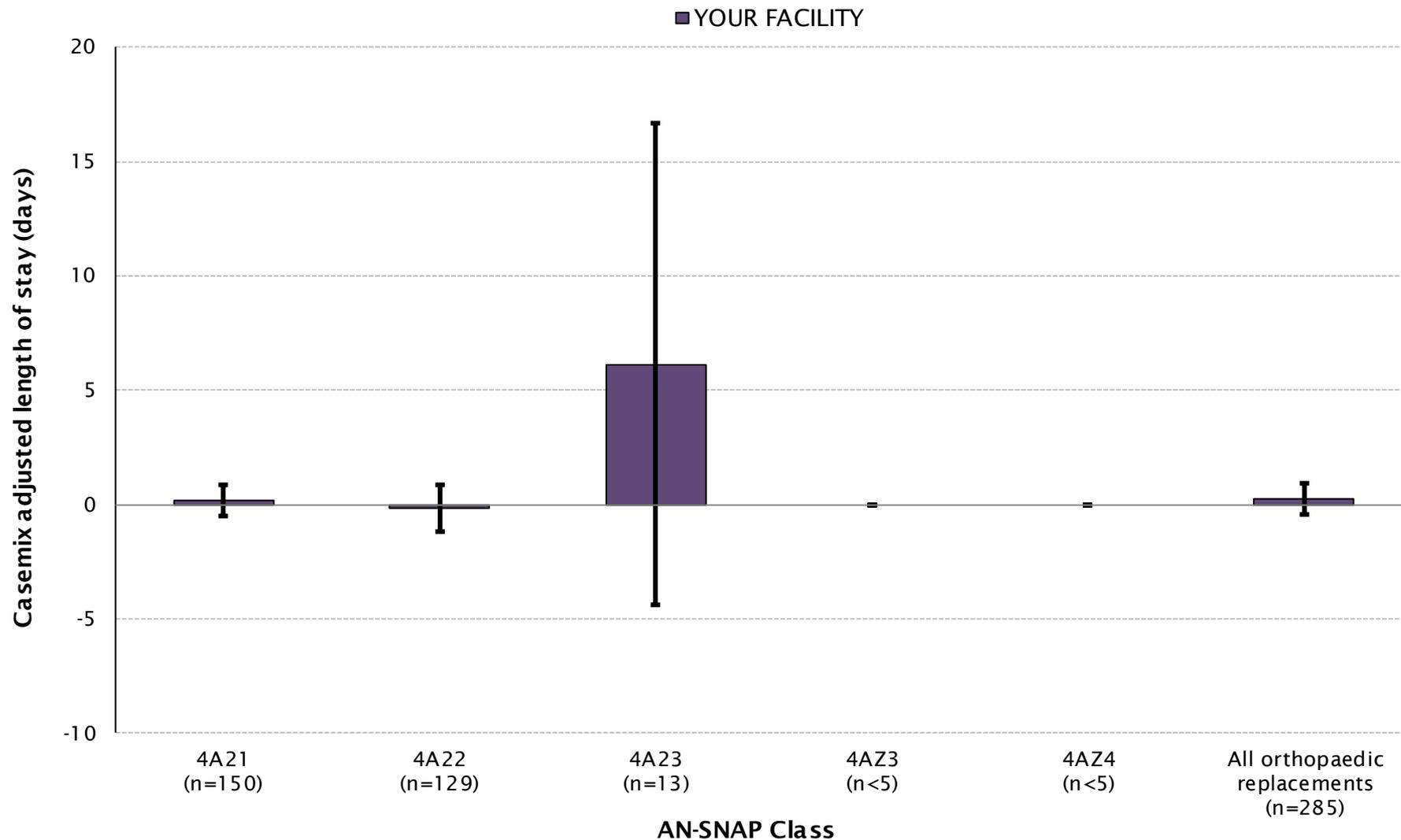
NOTE: Includes only completed episodes with valid LOS; where n<5 average LOS will not be shown

Average length of stay by AN-SNAP class



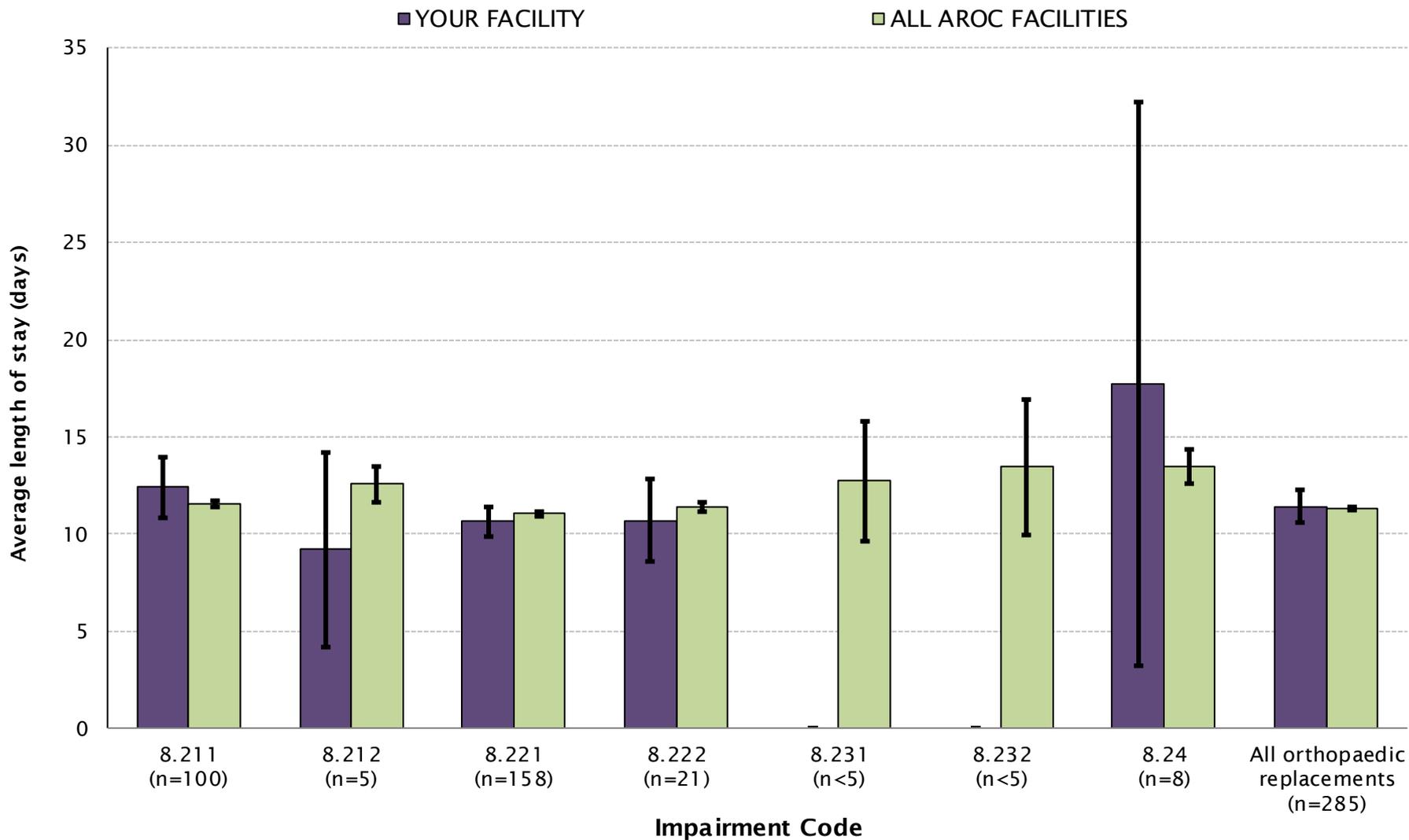
NOTE: Includes only completed episodes with valid LOS, where n<5 average LOS will not be shown

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



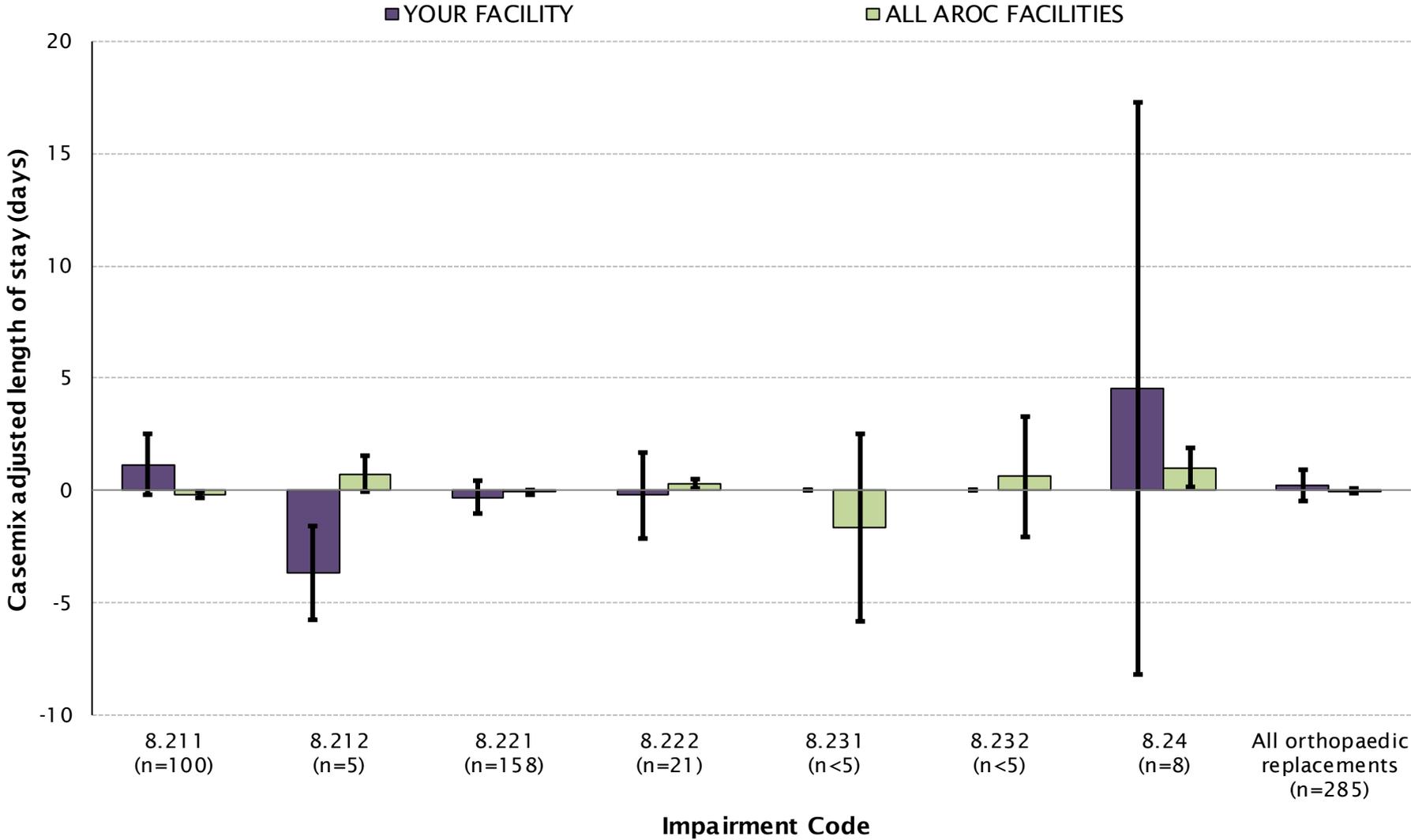
NOTE: Includes only completed episodes with valid LOS; where n<5 CARMi LOS will not be shown

Average length of stay by impairment



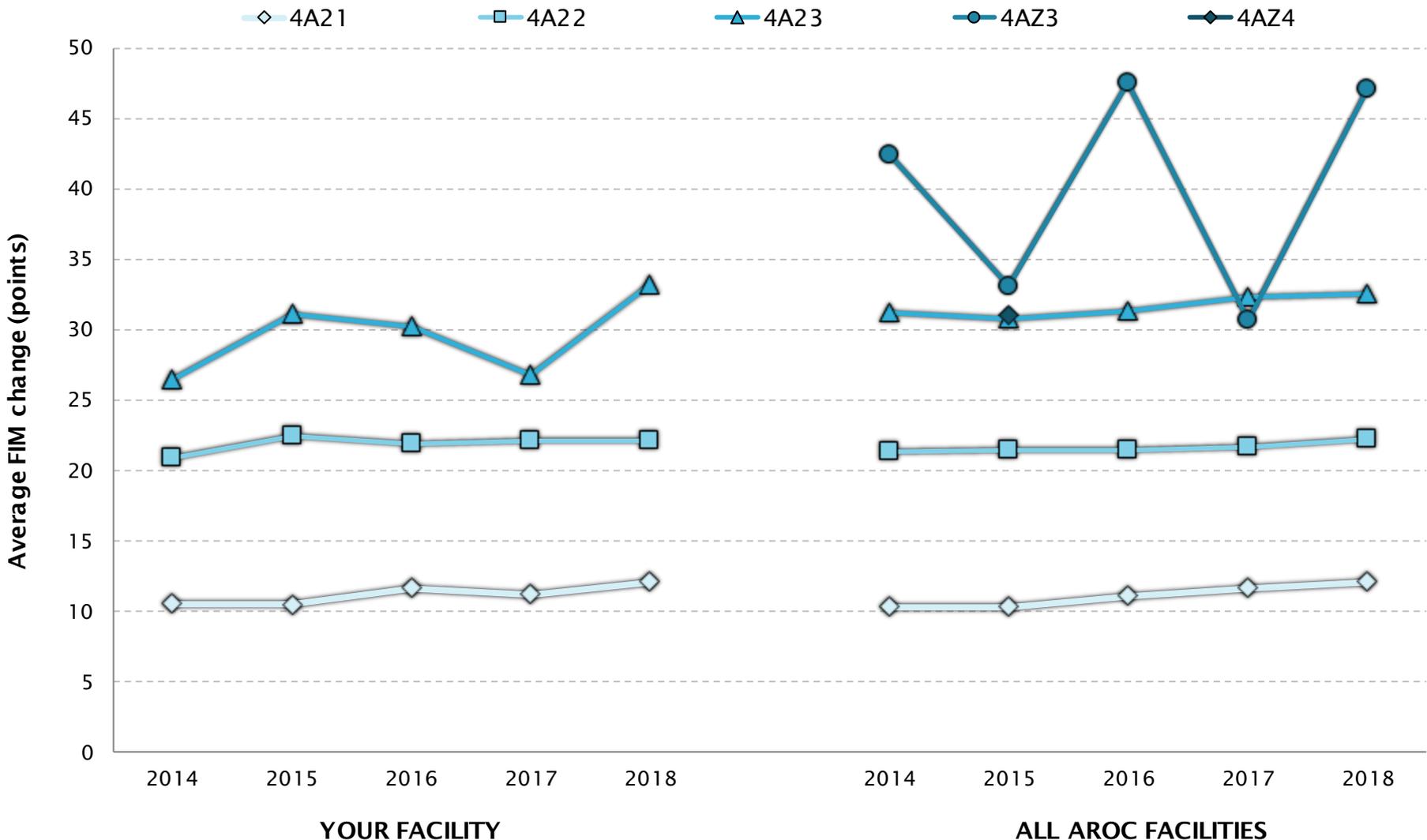
NOTE: Includes only completed episodes with valid LOS, where n<5 average LOS will not be shown

Casemix-adjusted relative mean length of stay by impairment



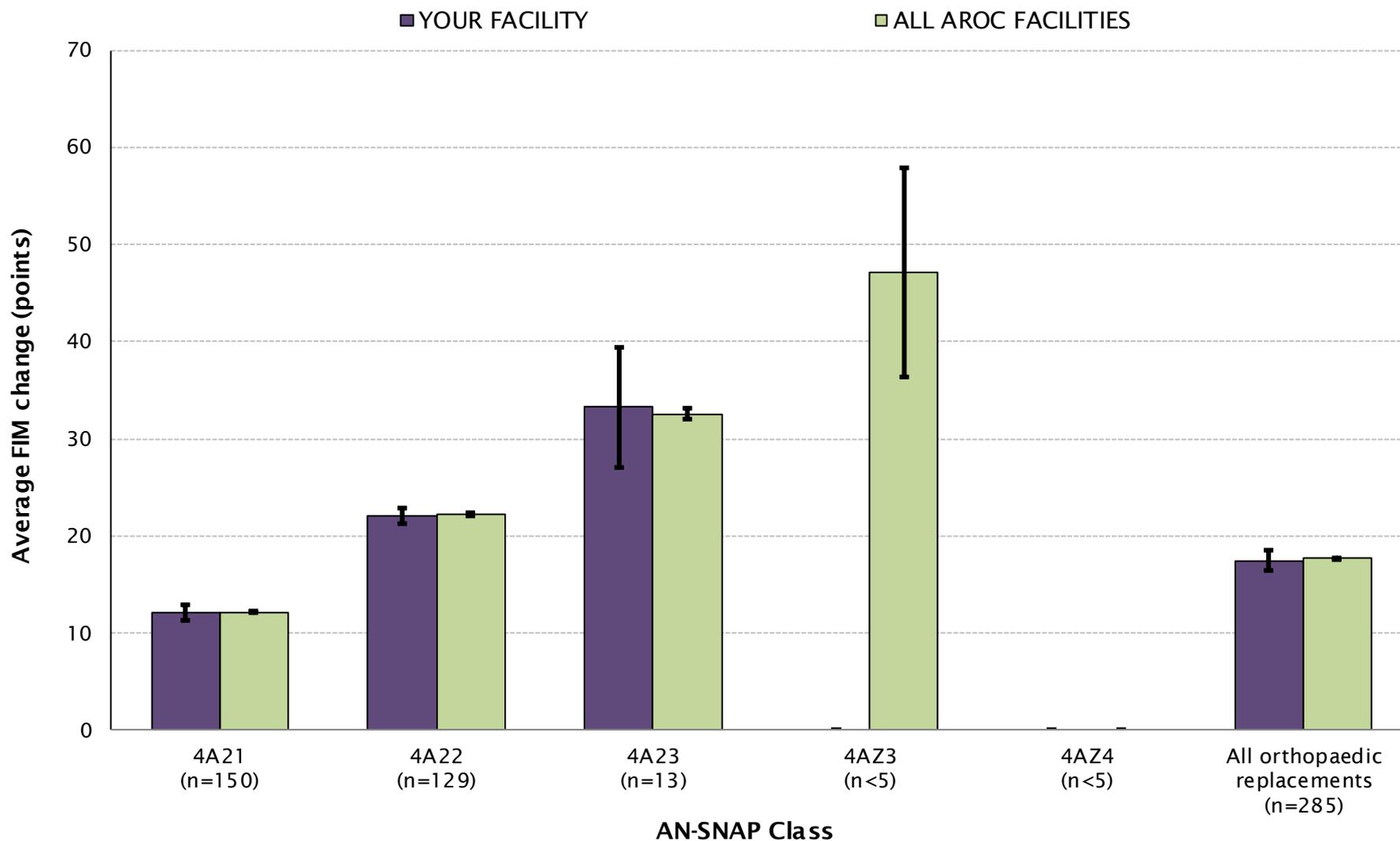
NOTE: Includes only completed episodes with valid LOS; where n<5 CARMI LOS will not be shown

Average FIM change by AN-SNAP class over time



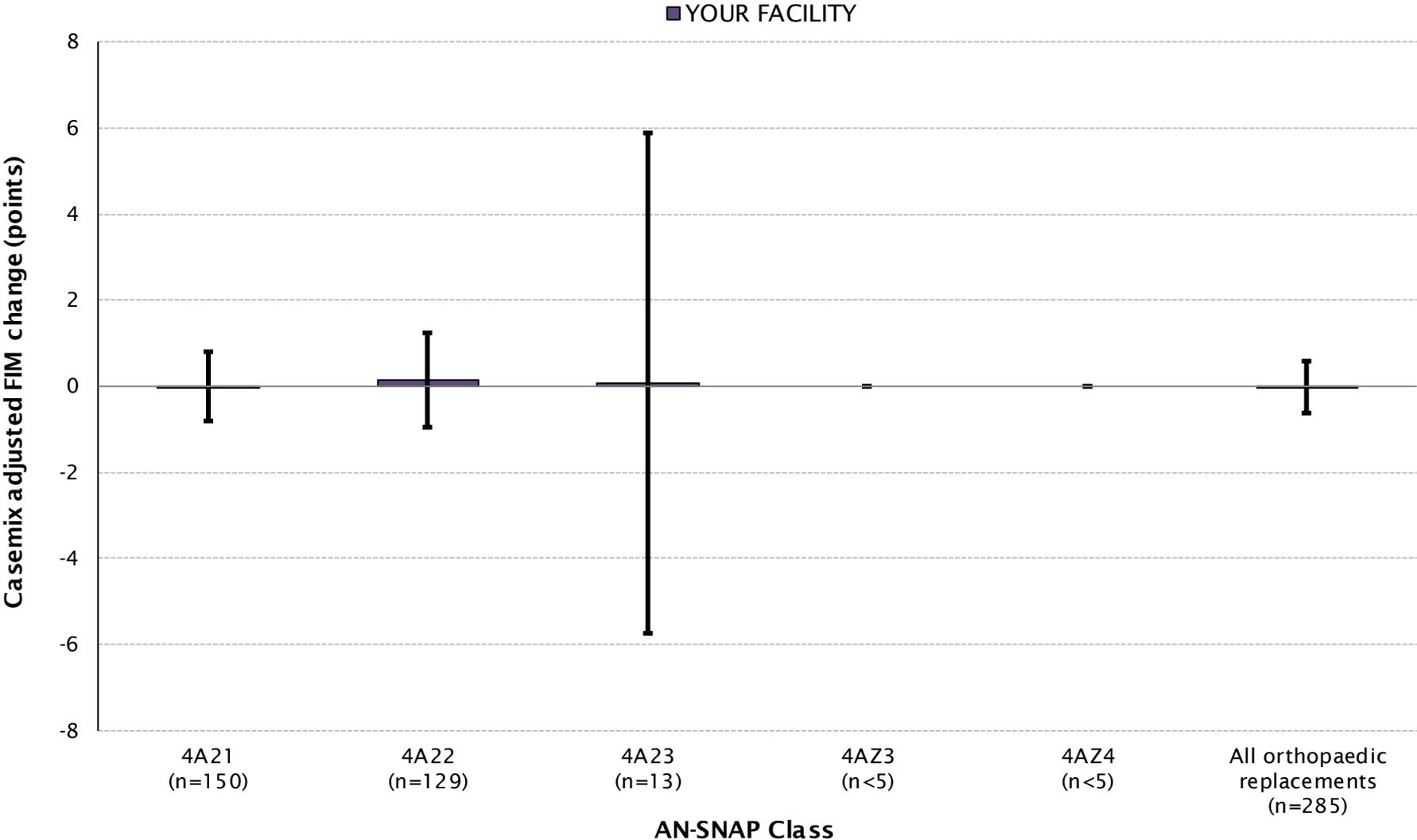
NOTE: Includes only completed episodes with valid FIM scores; where n<5 average FIM change will not be shown

Average FIM change by AN-SNAP class



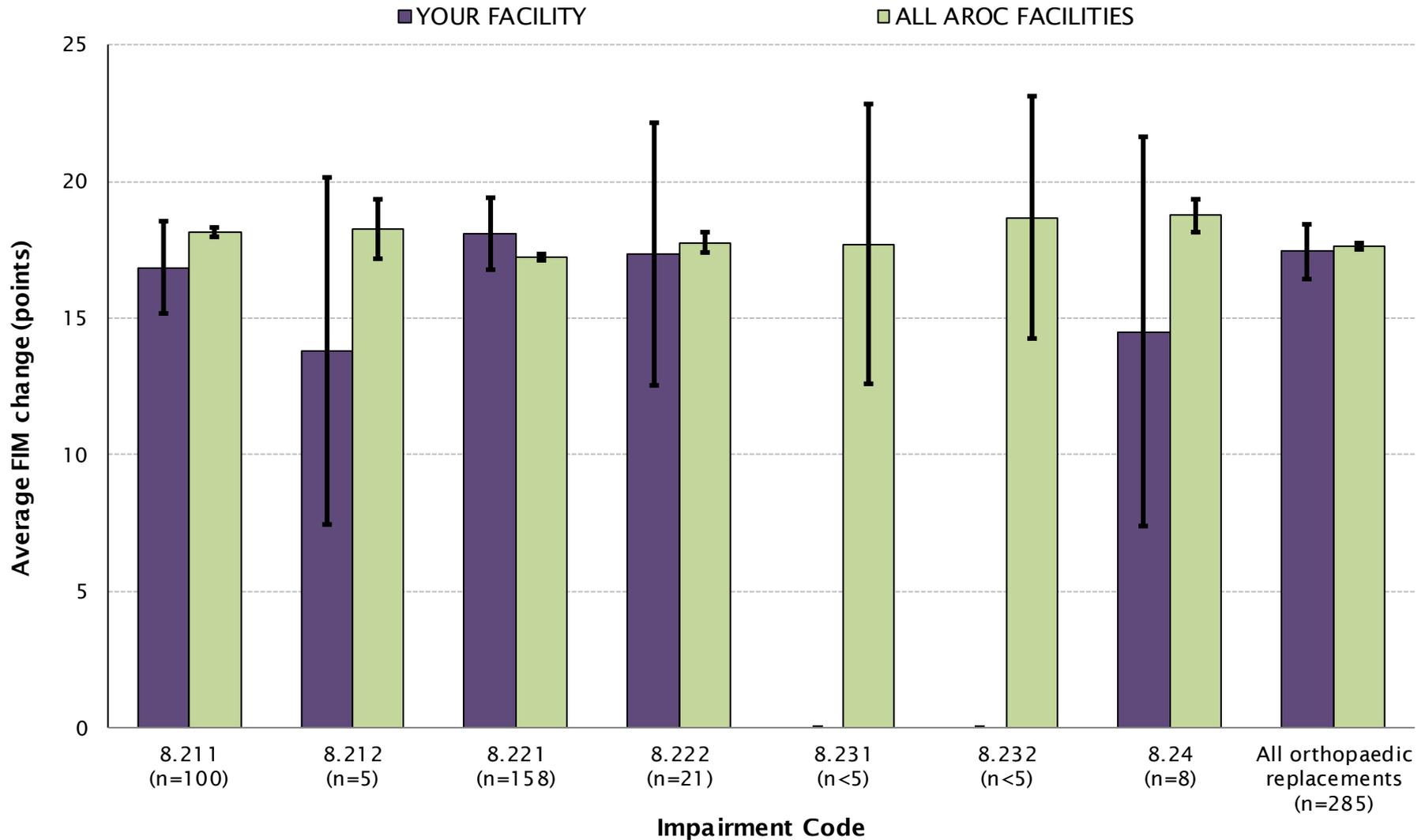
NOTE: Includes only completed episodes with valid FIM scores, where n<5 average FIM change will not be shown

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



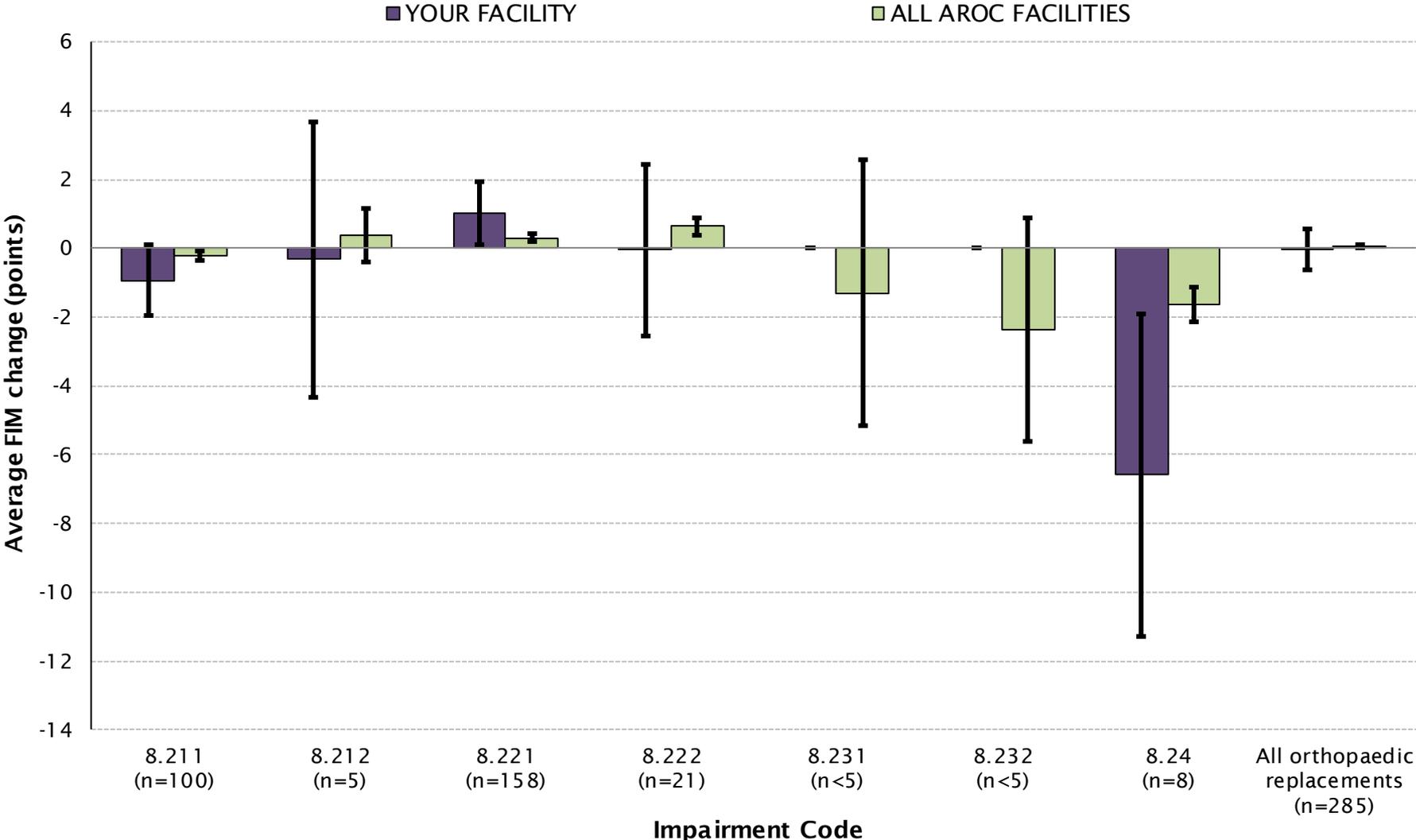
NOTE: Includes only completed episodes with valid FIM scores, where n<5 CARMi FIM change will not be shown

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

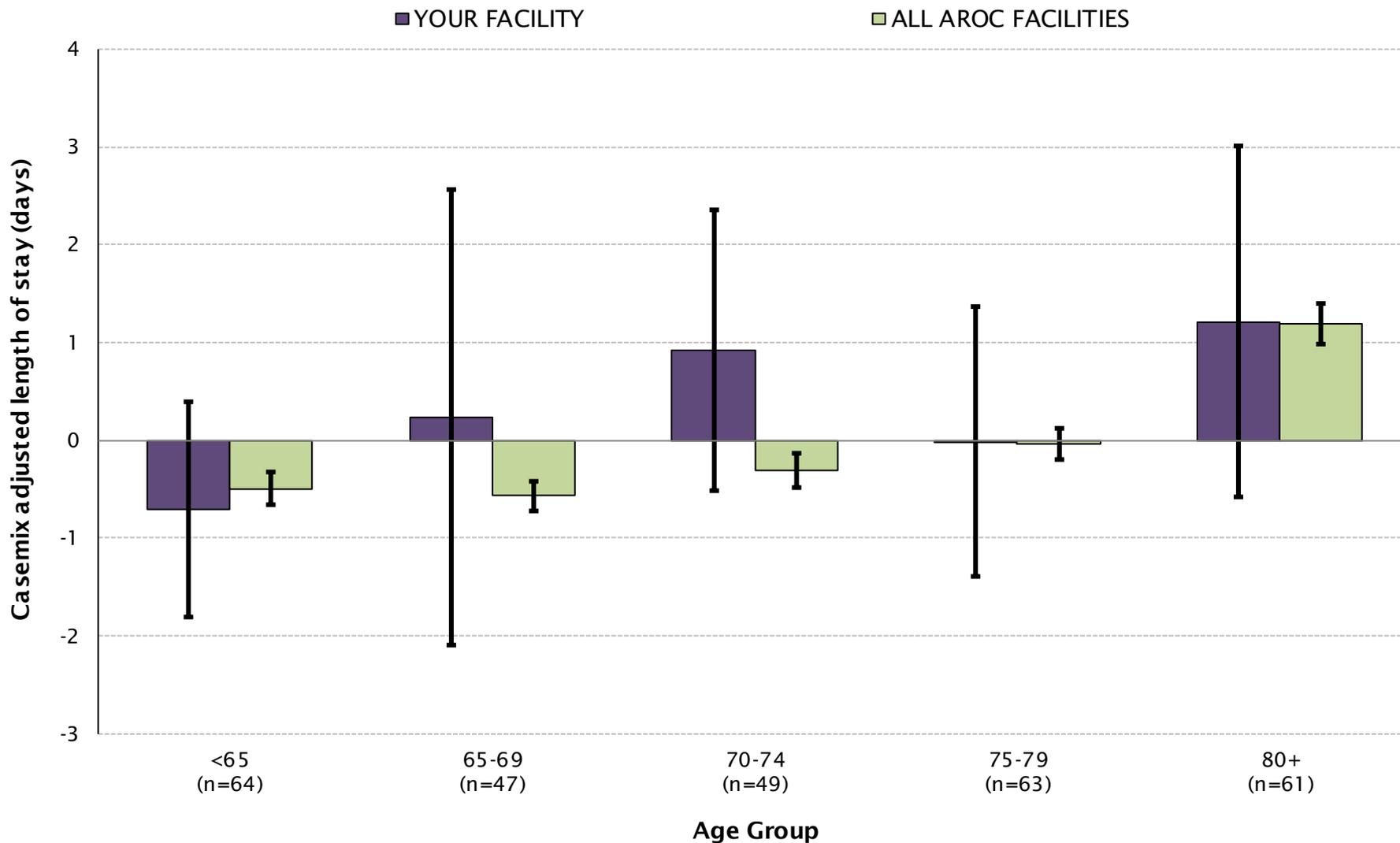
Casemix-adjusted relative mean and average length of stay and FIM change by AN-SNAP class and impairment

AN-SNAP class V4	YOUR FACILITY				ALL AROC FACILITIES			
	CARMi (95%CI)		Average (95%CI)		CARMi (95%CI)		Average (95%CI)	
	LOS	FIM change	LOS	FIM change	LOS	FIM change	LOS	FIM change
4A21 (weighted motor 68-91)	0.2 (-0.5 - 0.8)	0.0 (-0.8 - 0.8)	9.8 (9.1 - 10.4)	12.1 (11.3 - 12.9)	9.6 (9.5 - 9.7)	12.1 (12.0 - 12.2)		
4A22 (weighted motor 50-67)	-0.2 (-1.2 - 0.9)	0.2 (-0.9 - 1.2)	11.9 (10.9 - 12.9)	22.1 (21.2 - 23.4)	12.0 (11.9 - 12.2)	22.2 (22.1 - 22.3)		
4A23 (weighted motor 19-49)	6.1 (-4.4 - 16.6)	0.1 (-5.8 - 5.9)	25.5 (15.8 - 36.9)	33.2 (27.0 - 38.7)	20.1 (19.4 - 20.7)	32.5 (32.0 - 33.1)		
4AZ3 (weighted motor 13-18, Age ≥ 65)	—	—	—	—	26.5 (21.3 - 31.7)	47.1 (36.4 - 57.8)		
4AZ4 (weighted motor 13-18, Age ≤ 64)	—	—	—	—	—	—		
All Replacement AN-SNAP classes	0.3 (-0.4 - 1.0)	0.0 (-0.6 - 0.7)	11.4 (10.6 - 12.2)	17.4 (16.4 - 18.4)	11.3 (11.3 - 11.4)	17.6 (17.5 - 17.8)		

Impairment	YOUR FACILITY				ALL AROC FACILITIES			
	CARMi (95%CI)		Average (95%CI)		CARMi (95%CI)		Average (95%CI)	
	LOS	FIM change	LOS	FIM change	LOS	FIM change	LOS	FIM change
8.211 Unilateral hip replacement	1.1 (-0.2 - 2.5)	-0.9 (-2.0 - 0.1)	12.4 (10.8 - 14.0)	16.9 (15.2 - 18.2)	11.6 (11.4 - 11.7)	18.2 (18.0 - 18.3)		
8.212 Bilateral hip replacement	-3.7 (-5.8 - -1.6)	-0.3 (-4.3 - 3.7)	9.2 (4.2 - 8.8)	13.8 (7.5 - 19.0)	12.6 (11.7 - 13.5)	18.3 (17.2 - 19.4)		
8.221 Unilateral knee replacement	-0.3 (-1.0 - 0.4)	1.0 (0.1 - 2.0)	10.6 (9.9 - 11.4)	18.1 (16.8 - 19.4)	11.0 (10.9 - 11.2)	17.2 (17.1 - 17.4)		
8.222 Bilateral knee replacement	-0.2 (-2.1 - 1.7)	-0.1 (-2.6 - 2.4)	10.7 (8.6 - 13.2)	17.3 (12.5 - 21.8)	11.4 (11.2 - 11.7)	17.8 (17.4 - 18.1)		
8.231 Knee and hip replacement, same side	—	—	—	—	12.7 (9.7 - 15.8)	17.7 (12.6 - 22.8)		
8.232 Knee and hip replacement, diff sides	—	—	—	—	13.4 (9.9 - 16.9)	18.7 (14.2 - 23.1)		
8.24 Shoulder replacement	4.6 (-8.2 - 17.3)	-6.6 (-11.3 - -1.9)	17.8 (3.3 - 32.2)	14.5 (7.4 - 21.6)	13.5 (12.6 - 14.3)	18.8 (18.1 - 19.4)		
All Orthopaedic Replacements	0.3 (-0.4 - 1.0)	0.0 (-0.6 - 0.7)	11.4 (10.6 - 12.2)	17.4 (16.4 - 18.4)	11.3 (11.3 - 11.4)	17.6 (17.5 - 17.8)		

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

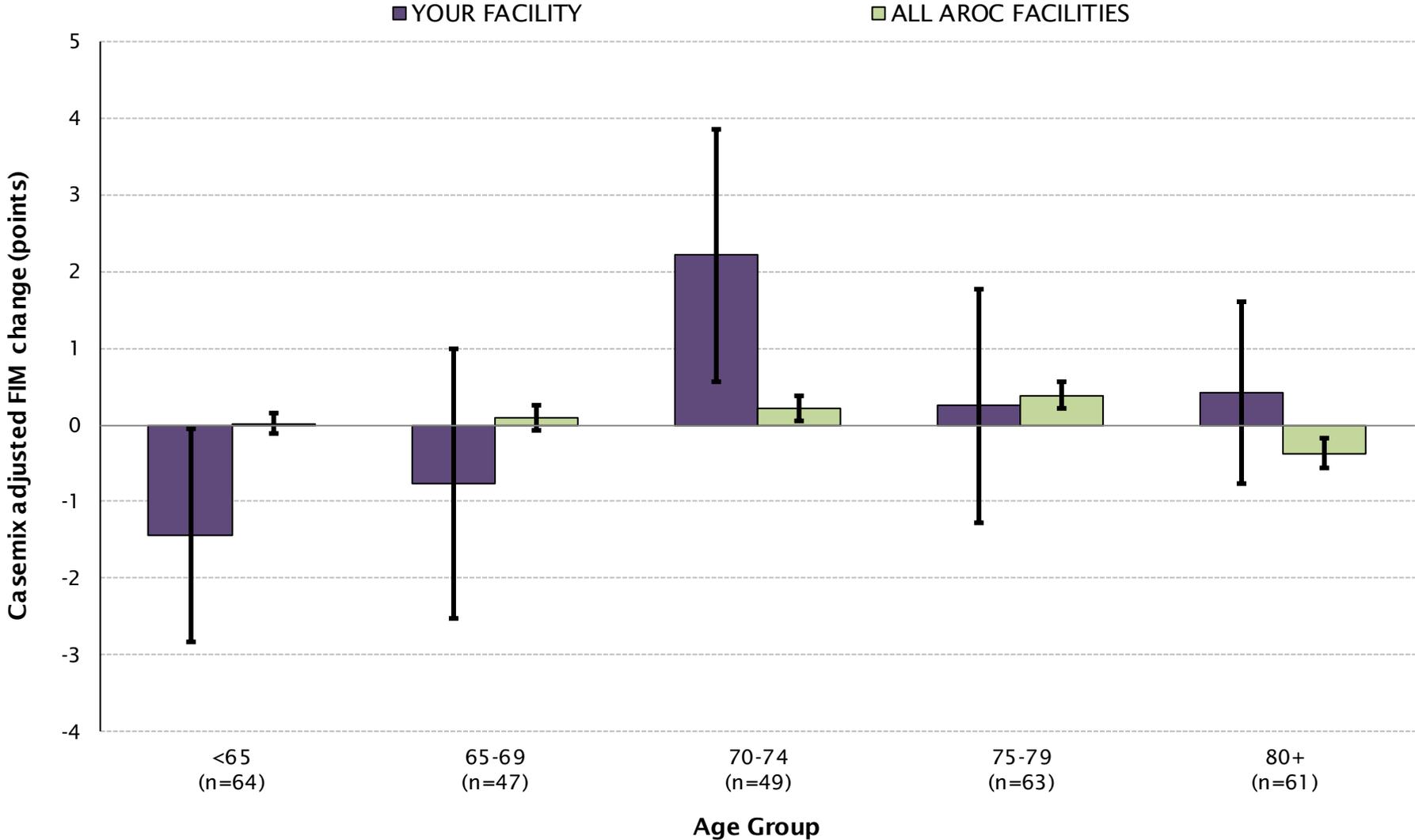
Casemix-adjusted relative mean length of stay by age group*



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	9.8 (8.7 - 10.8)	14.2 (12.4 - 15.9)	10.2 (10.0 - 10.3)	15.7 (15.5 - 15.9)
65-69	11.5 (8.7 - 14.3)	16.8 (14.7 - 18.8)	10.4 (10.2 - 10.5)	16.5 (16.3 - 16.8)
70-74	11.8 (10.4 - 13.2)	18.7 (16.0 - 21.4)	10.8 (10.6 - 11.0)	17.2 (17.0 - 17.5)
75-79	11.3 (9.9 - 12.8)	18.5 (16.2 - 20.7)	11.6 (11.4 - 11.7)	18.7 (18.5 - 19.0)
80+	12.9 (10.8 - 14.9)	19.3 (17.4 - 21.2)	13.7 (13.5 - 13.9)	20.1 (19.9 - 20.4)

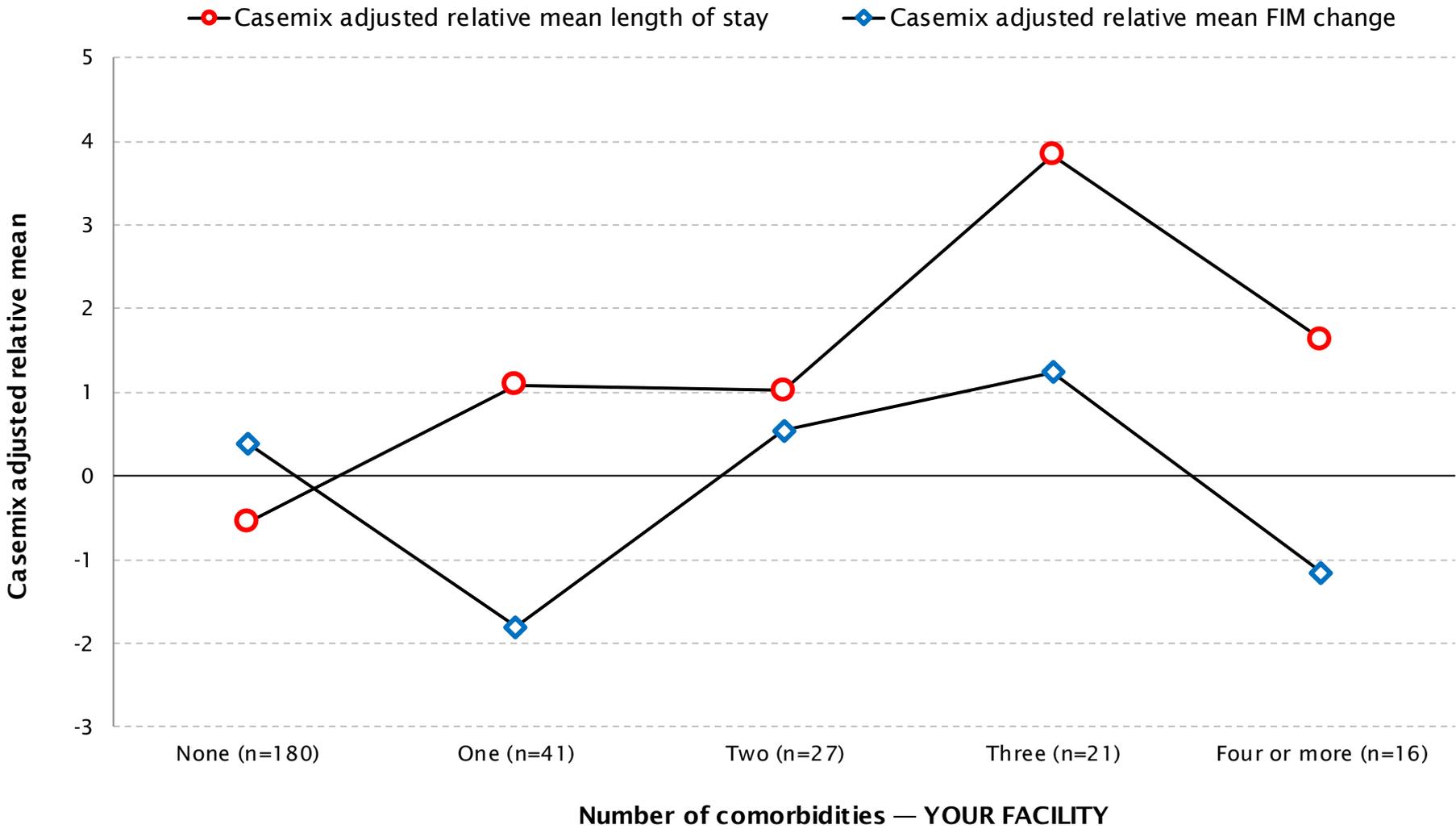
Age group	YOUR FACILITY		ALL AROC FACILITIES	
	CARMI LOS (95%CI)	CARMI FIM change (95%CI)	CARMI LOS (95%CI)	CARMI FIM change (95%CI)
<65	-0.7 (-1.8 - 0.4)	-1.4 (-2.8 - -0.1)	-0.5 (-0.7 - -0.3)	0.0 (-0.1 - 0.1)
65-69	0.2 (-2.1 - 2.6)	-0.8 (-2.5 - 1.0)	-0.6 (-0.7 - -0.4)	0.1 (-0.1 - 0.3)
70-74	0.9 (-0.5 - 2.4)	2.2 (0.6 - 3.9)	-0.3 (-0.5 - -0.1)	0.2 (0.1 - 0.4)
75-79	0.0 (-1.4 - 1.4)	0.2 (-1.3 - 1.8)	0.0 (-0.2 - 0.1)	0.4 (0.2 - 0.6)
80+	1.2 (-0.6 - 3.0)	0.4 (-0.8 - 1.6)	1.2 (1.0 - 1.4)	-0.4 (-0.6 - -0.2)

*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

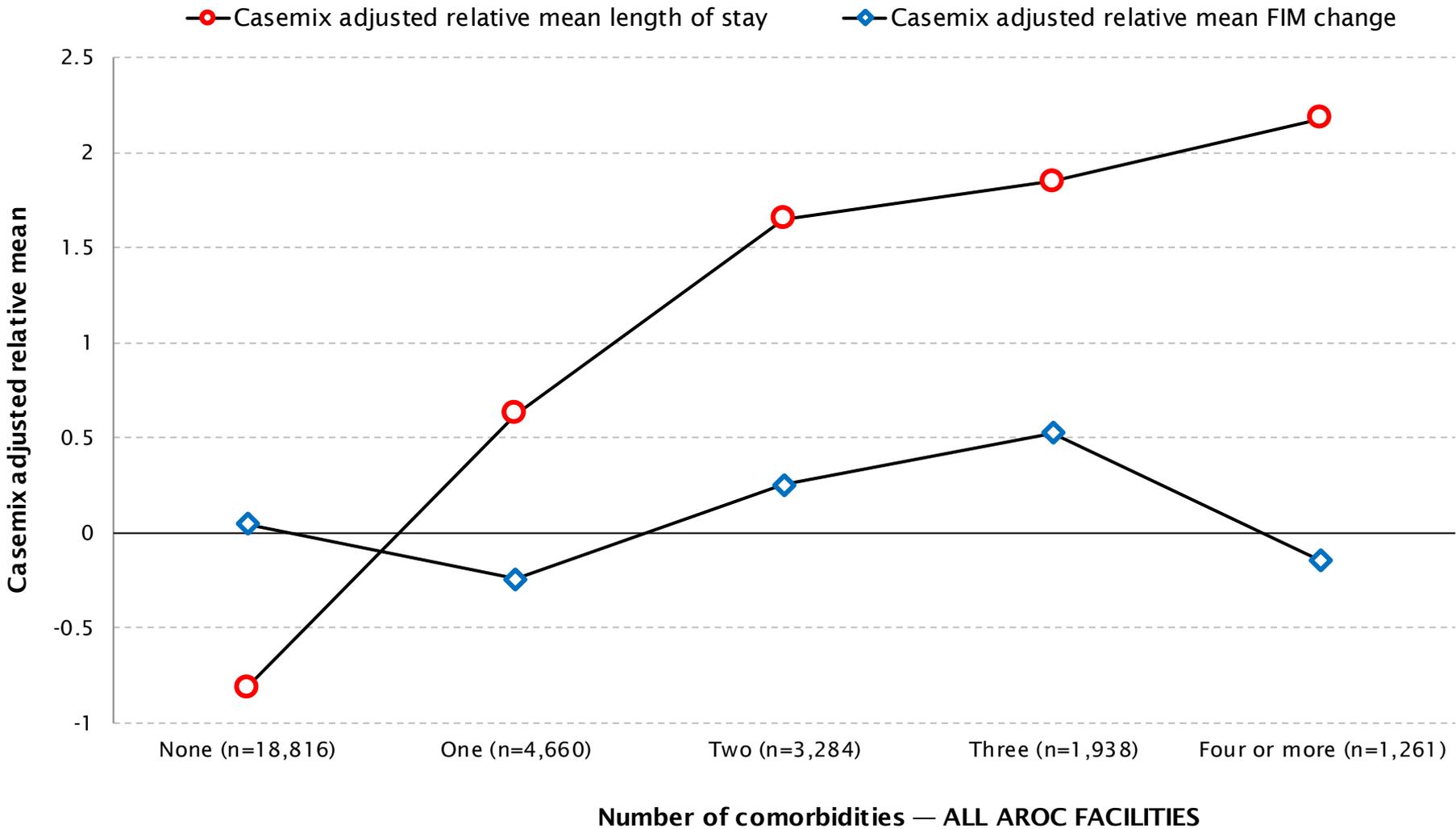
Explanatory data

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



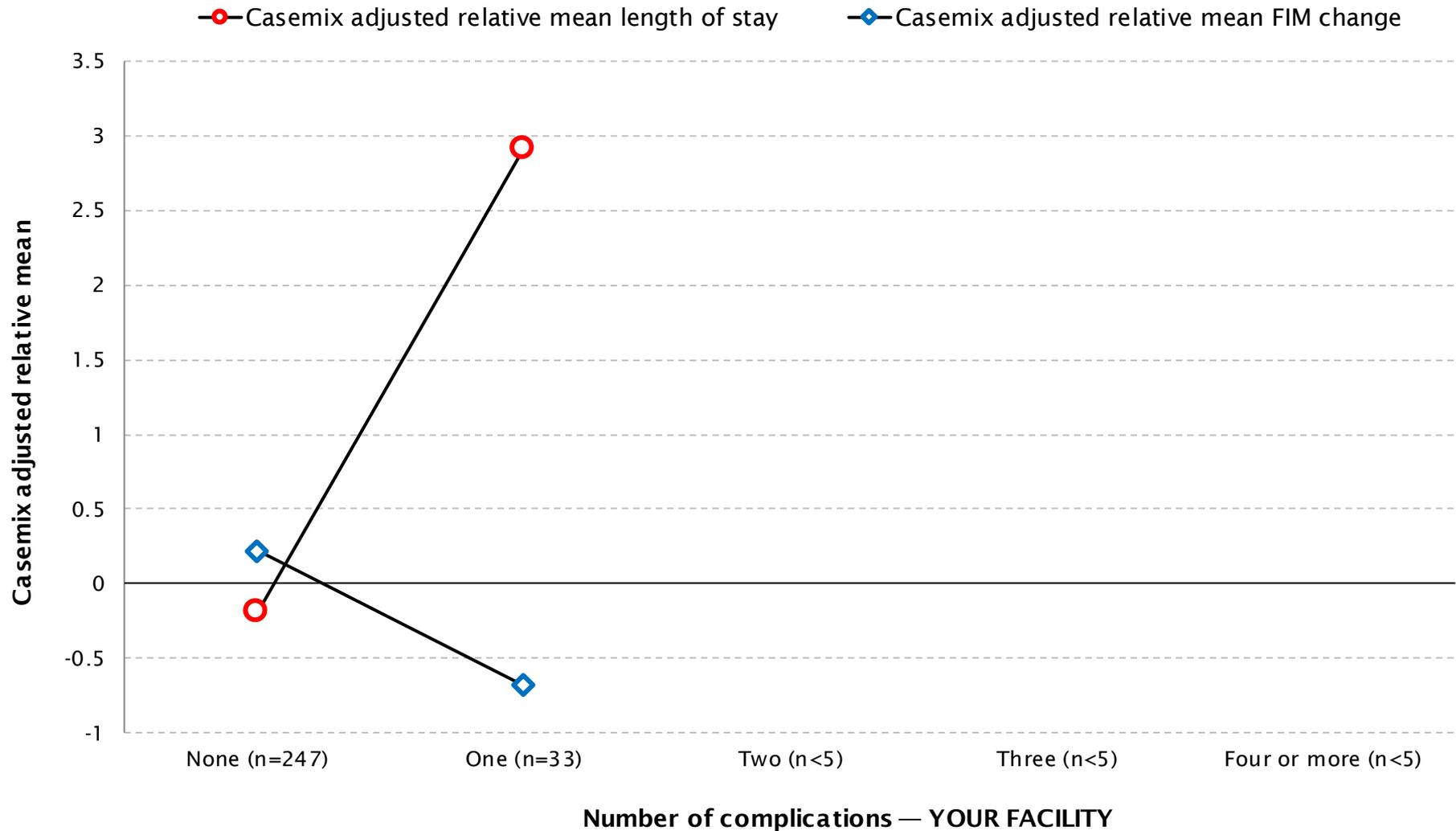
NOTE: Includes only completed episodes with valid FIM scores and LOS; where n<5 the casemix-adjusted relative mean will not be shown

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



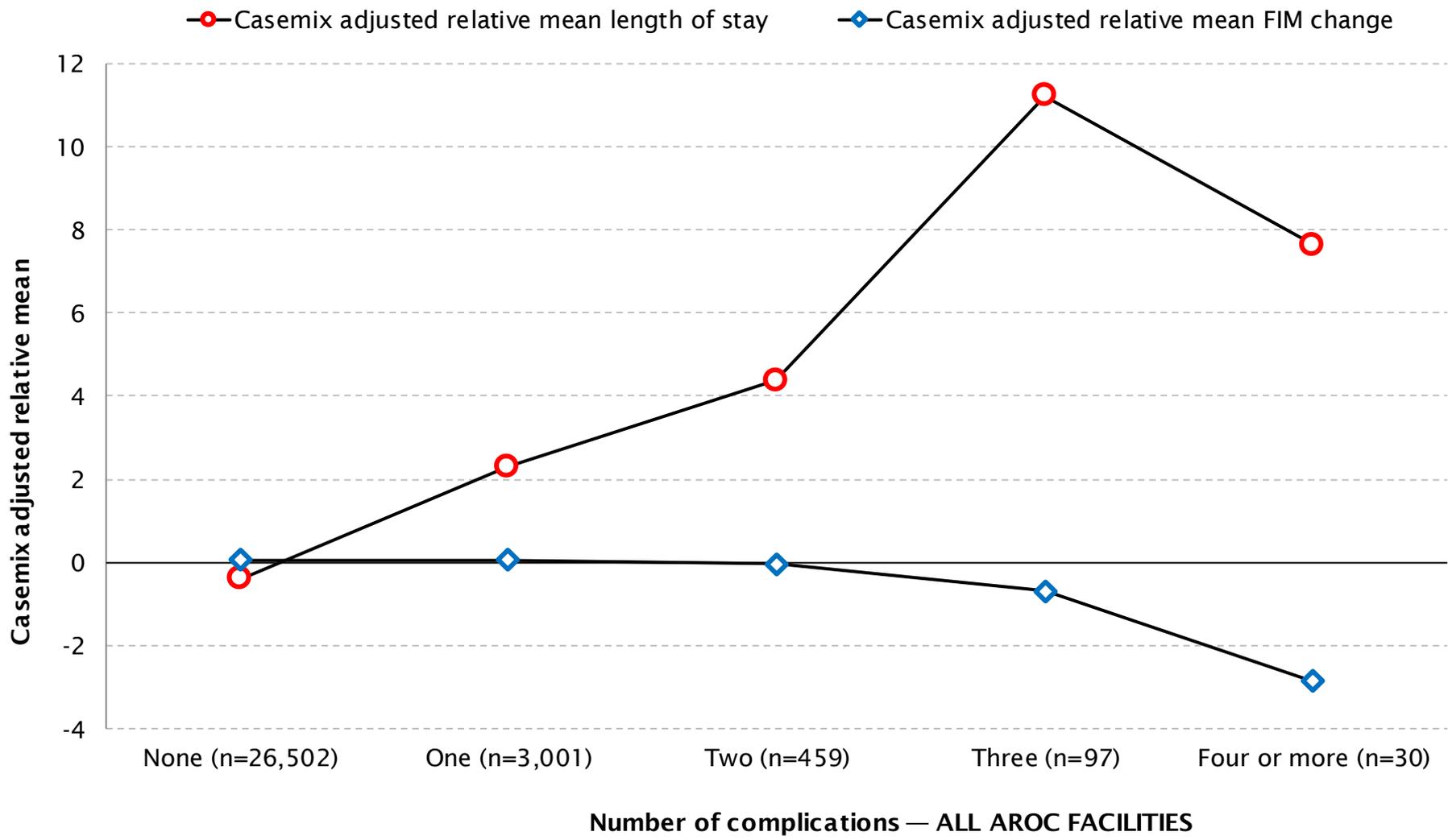
NOTE: Includes only completed episodes with valid FIM scores and LOS; where n<5 the casemix-adjusted relative mean will not be shown

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



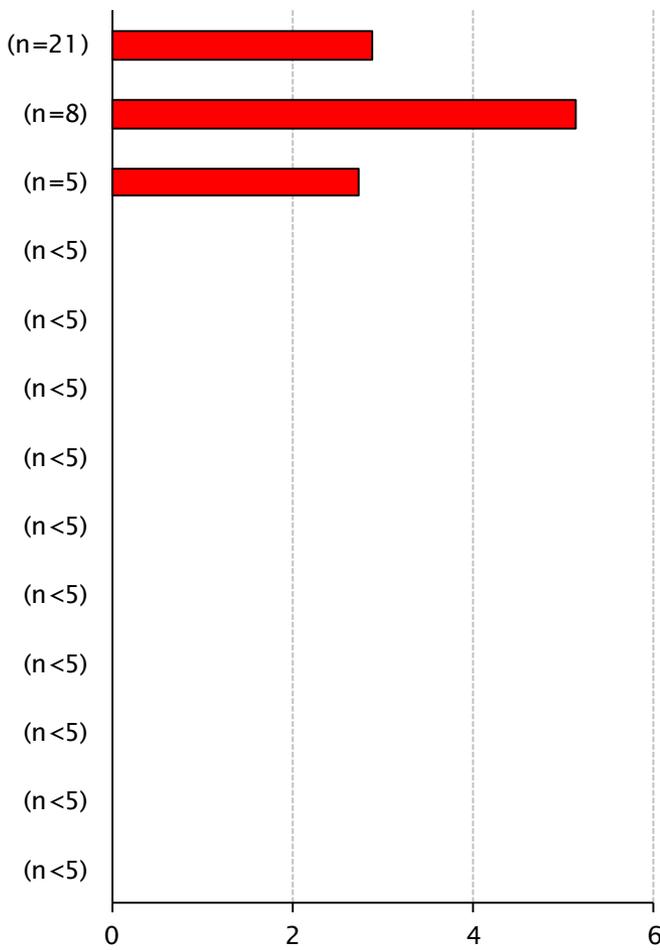
NOTE: Includes only completed episodes with valid FIM scores and LOS; where n<5 the casemix-adjusted relative mean will not be shown

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

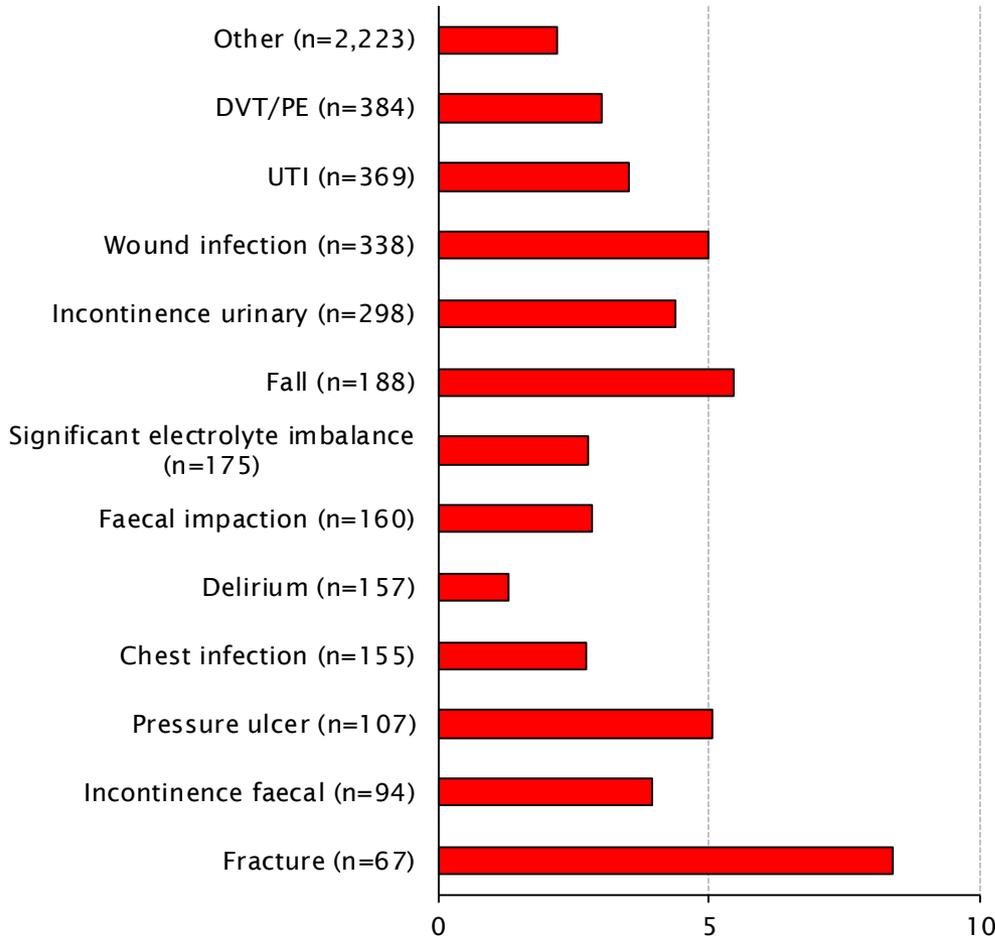


NOTE: Includes only completed episodes with valid FIM scores and LOS; where n<5 the casemix-adjusted relative mean will not be shown

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



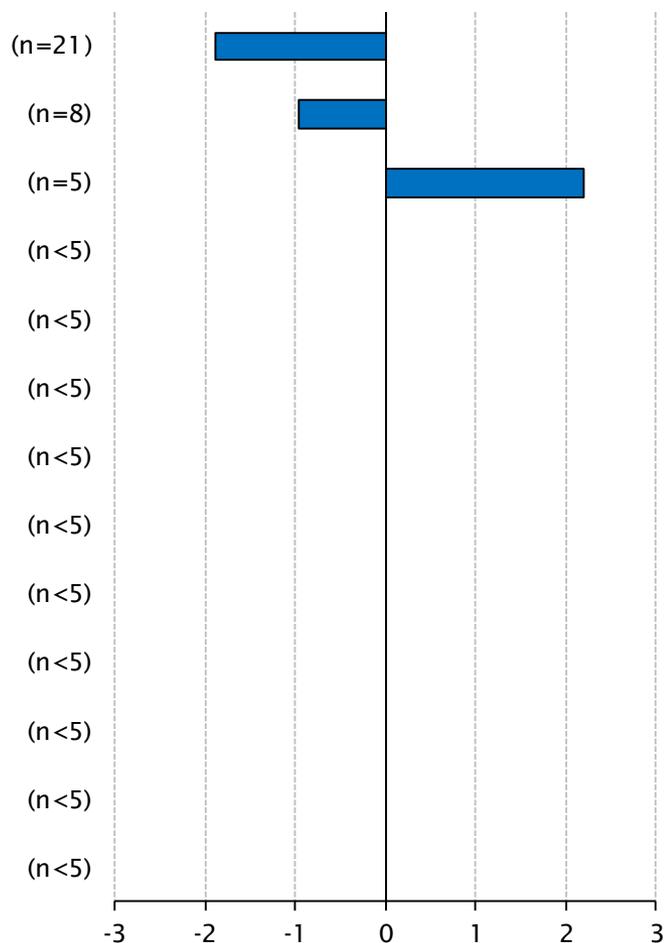
CARMi LOS — YOUR FACILITY



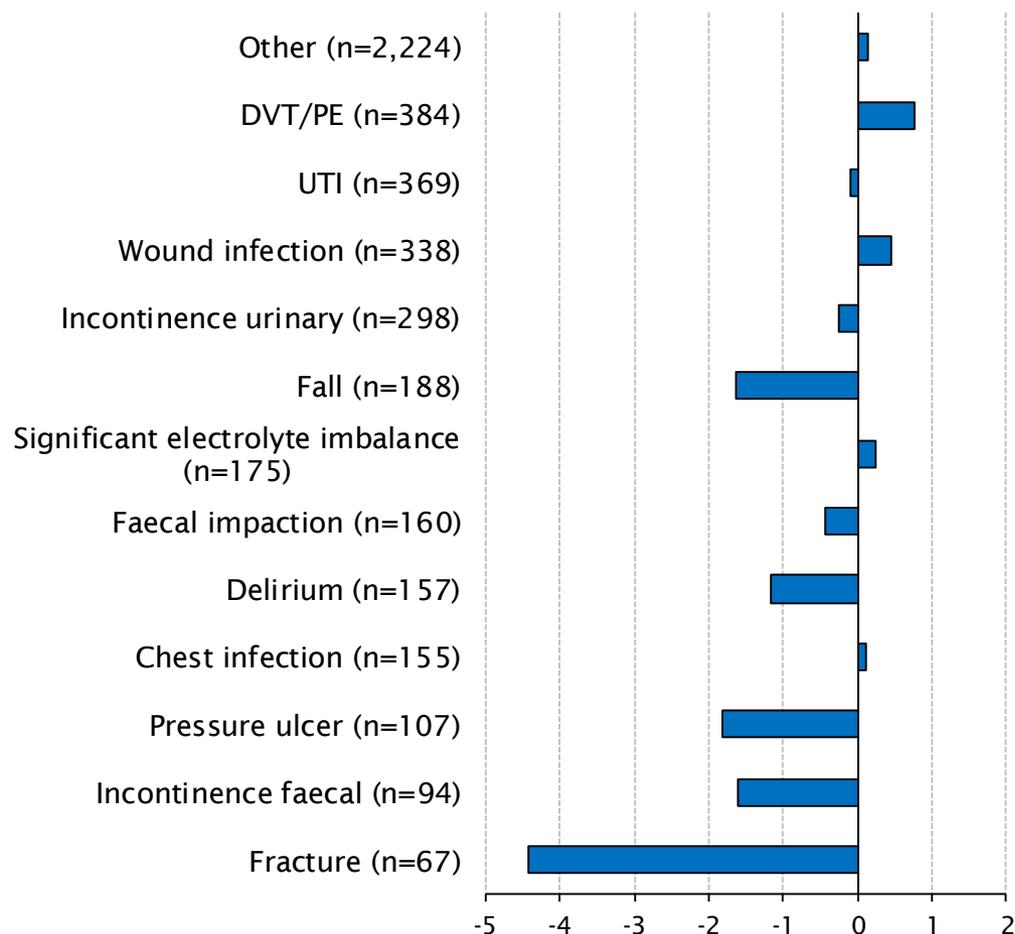
CARMi LOS — ALL AROC FACILITIES

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

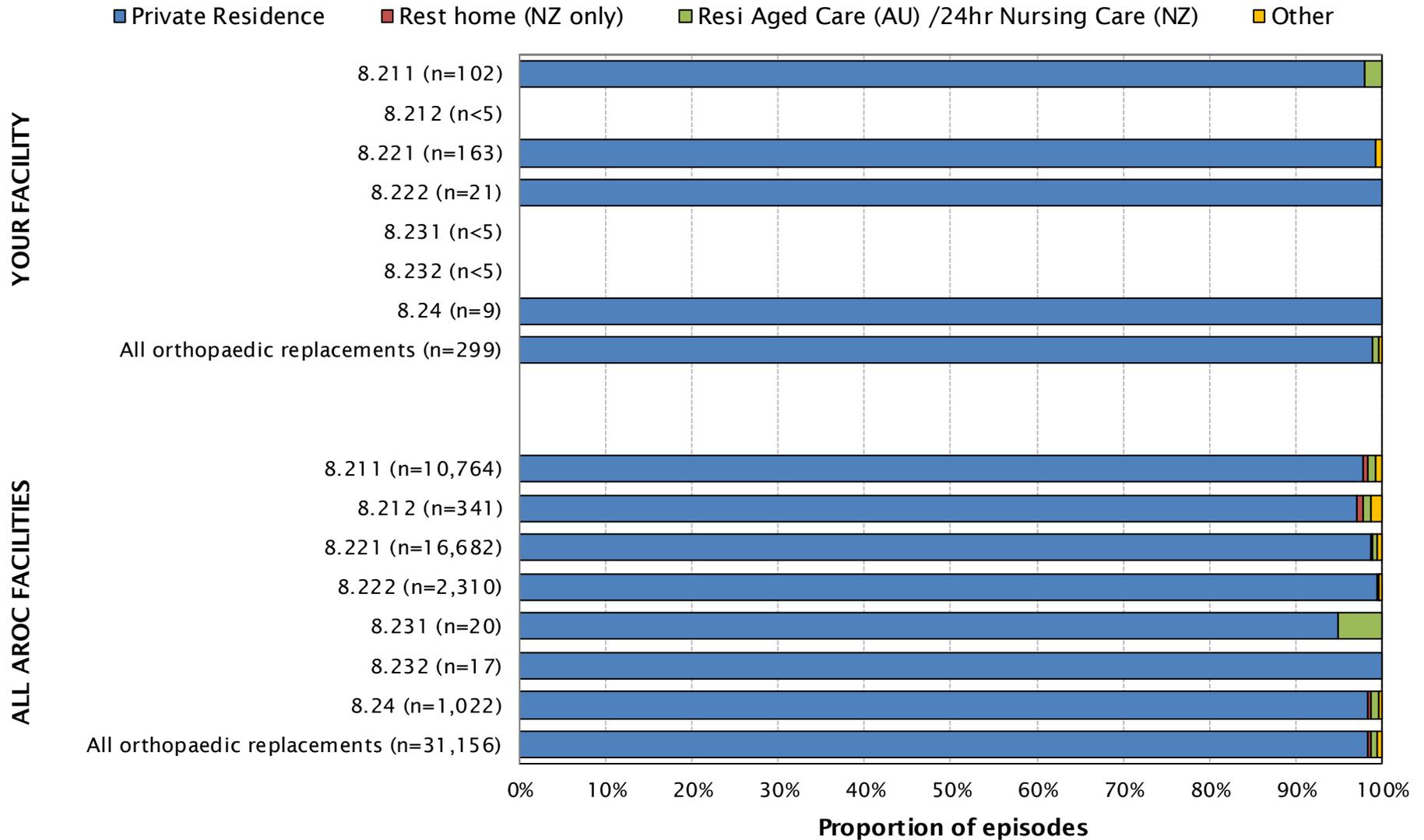


CARMi FIM change — ALL AROC FACILITIES

NOTE: Includes only completed episodes with valid FIM scores

* No data included where number of episodes <5

Type of accommodation prior to impairment



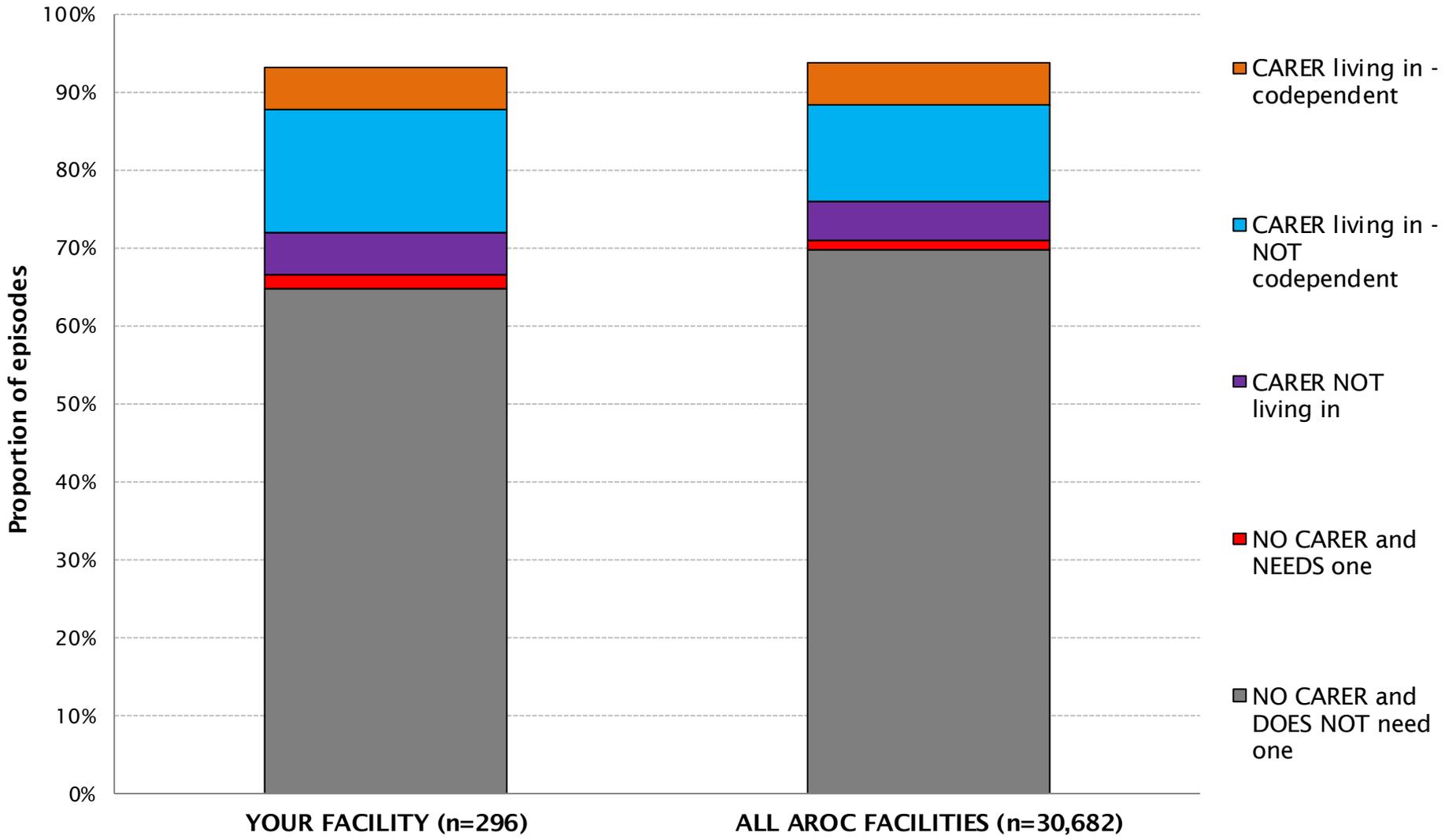
Type of accommodation prior to impairment



YOUR FACILITY — N (%)						
Impairment	Private residence	Residential Aged Care	Other	Unknown	All episodes	
8.211 Unilateral hip replacement	100 (98.0)	2 (2.0)	0 (0.0)	0	102	(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	162 (99.4)	0 (0.0)	1 (0.6)	0	163	(100.0)
8.222 Bilateral knee replacement	21 (100.0)	0 (0.0)	0 (0.0)	0	21	(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	9 (100.0)	0 (0.0)	0 (0.0)	0	9	(100.0)
All Orthopaedic Replacements	296 (99.0)	2 (0.7)	1 (0.3)	0	299	(100.0)

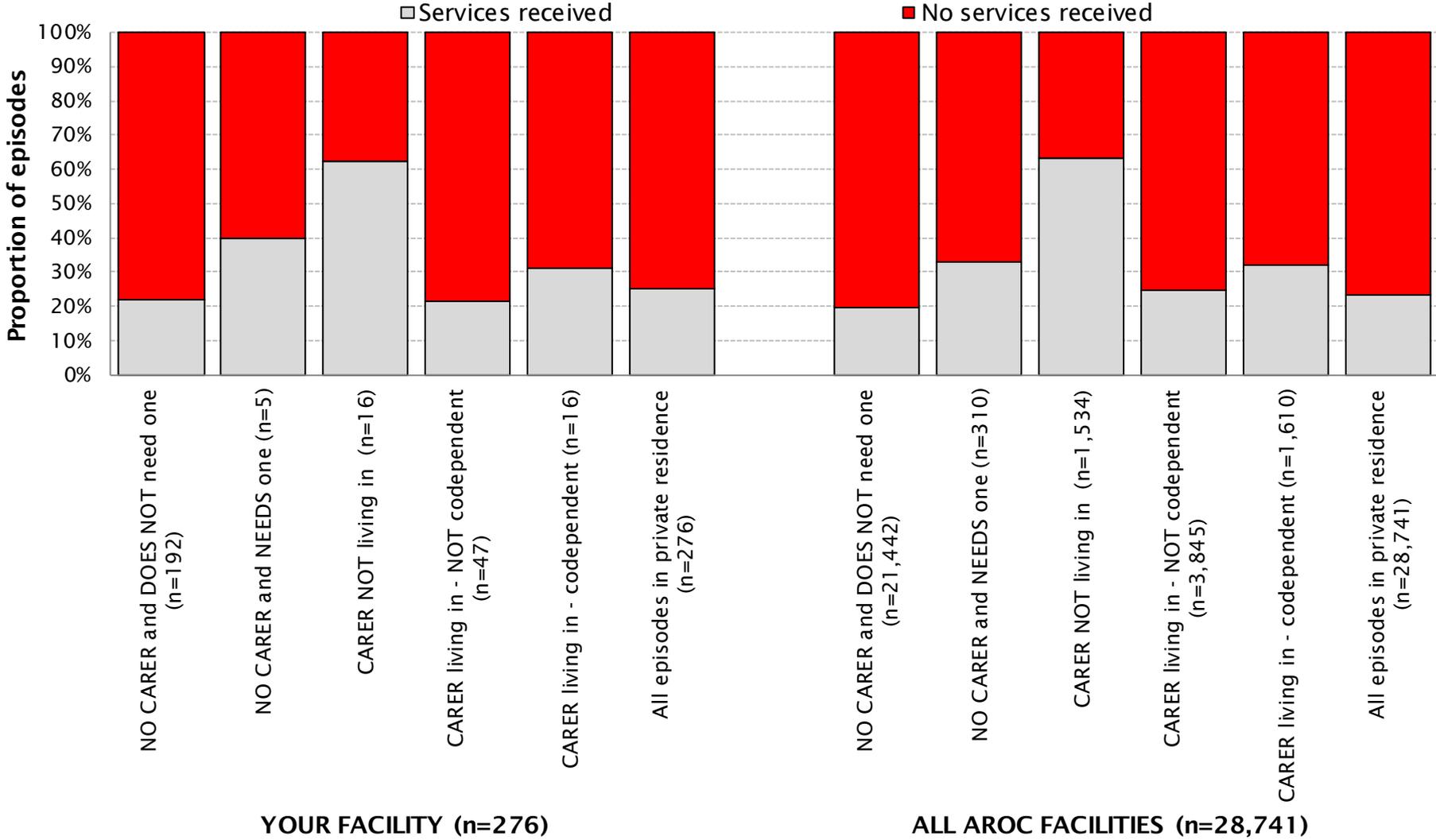
ALL AROC FACILITIES — N (%)						
Impairment	Private residence	Rest Home (NZ only)	Resi Aged Care (AU) / 24hr nursing care (NZ)	Other	Unknown	All episodes
8.211 Unilateral hip replacement	10,540 (97.9)	59 (0.5)	97 (0.9)	68 (0.6)	4	10,768 (100.0)
8.212 Bilateral hip replacement	331 (97.1)	3 (0.9)	3 (0.9)	4 (1.2)	0	341 (100.0)
8.221 Unilateral knee replacement	16,473 (98.7)	43 (0.3)	90 (0.5)	76 (0.5)	0	16,682 (100.0)
8.222 Bilateral knee replacement	2,297 (99.4)	5 (0.2)	3 (0.1)	5 (0.2)	1	2,311 (100.0)
8.231 Knee and hip replacement, same side	19 (95.0)	0 (0.0)	1 (5.0)	0 (0.0)	0	20 (100.0)
8.232 Knee and hip replacement, diff sides	17 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0	17 (100.0)
8.24 Shoulder replacement	1,005 (98.3)	4 (0.4)	9 (0.9)	4 (0.4)	0	1,022 (100.0)
All Orthopaedic Replacements	30,682 (98.5)	114 (0.4)	203 (0.7)	157 (0.5)	5	31,161 (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

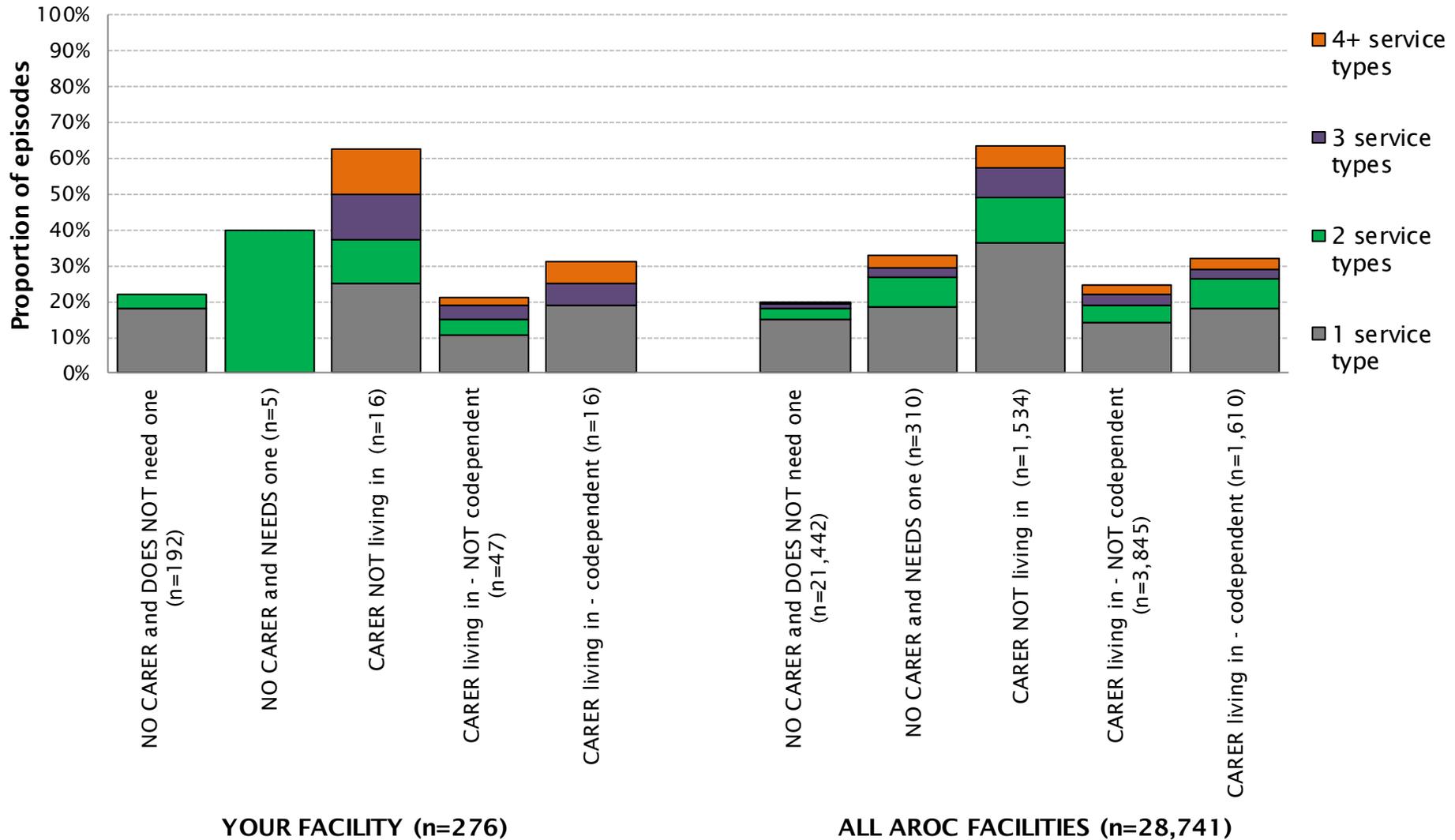


Carer status prior to this impairment	YOUR FACILITY		ALL AROC FACILITIES	
	No.	%	No.	%
NO CARER and DOES NOT need one	192	69.6	21,460	74.6
NO CARER and NEEDS one	5	1.8	310	1.1
CARER NOT living in	16	5.8	1,534	5.3
CARER living in - NOT codependent	47	17.0	3,858	13.4
CARER living in - codependent	16	5.8	1,612	5.6
Missing	20		1,908	
All episodes in private residence	296	100.0	30,682	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	21.9	78.1	19.5	80.5
NO CARER and NEEDS one	40.0	60.0	32.9	67.1
CARER NOT living in	62.5	37.5	63.4	36.6
CARER living in - NOT codependent	21.3	78.7	24.6	75.4
CARER living in - codependent	31.3	68.8	32.0	68.0
All episodes in private residence	25.0	75.0	23.4	76.6

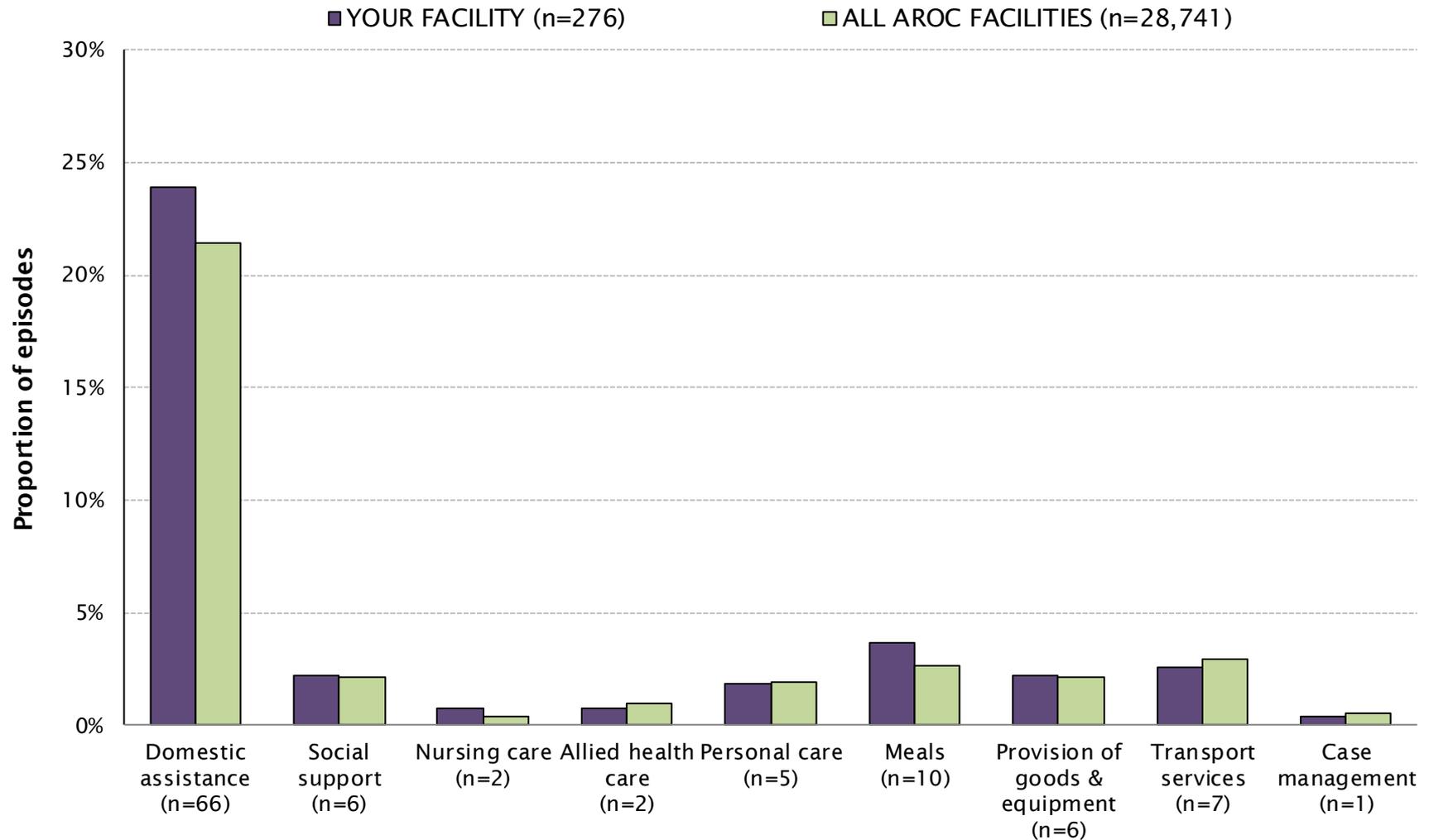
NOTE: Includes only those episodes coming from private residence and with known carer status.

Number of services received prior to impairment by carer status



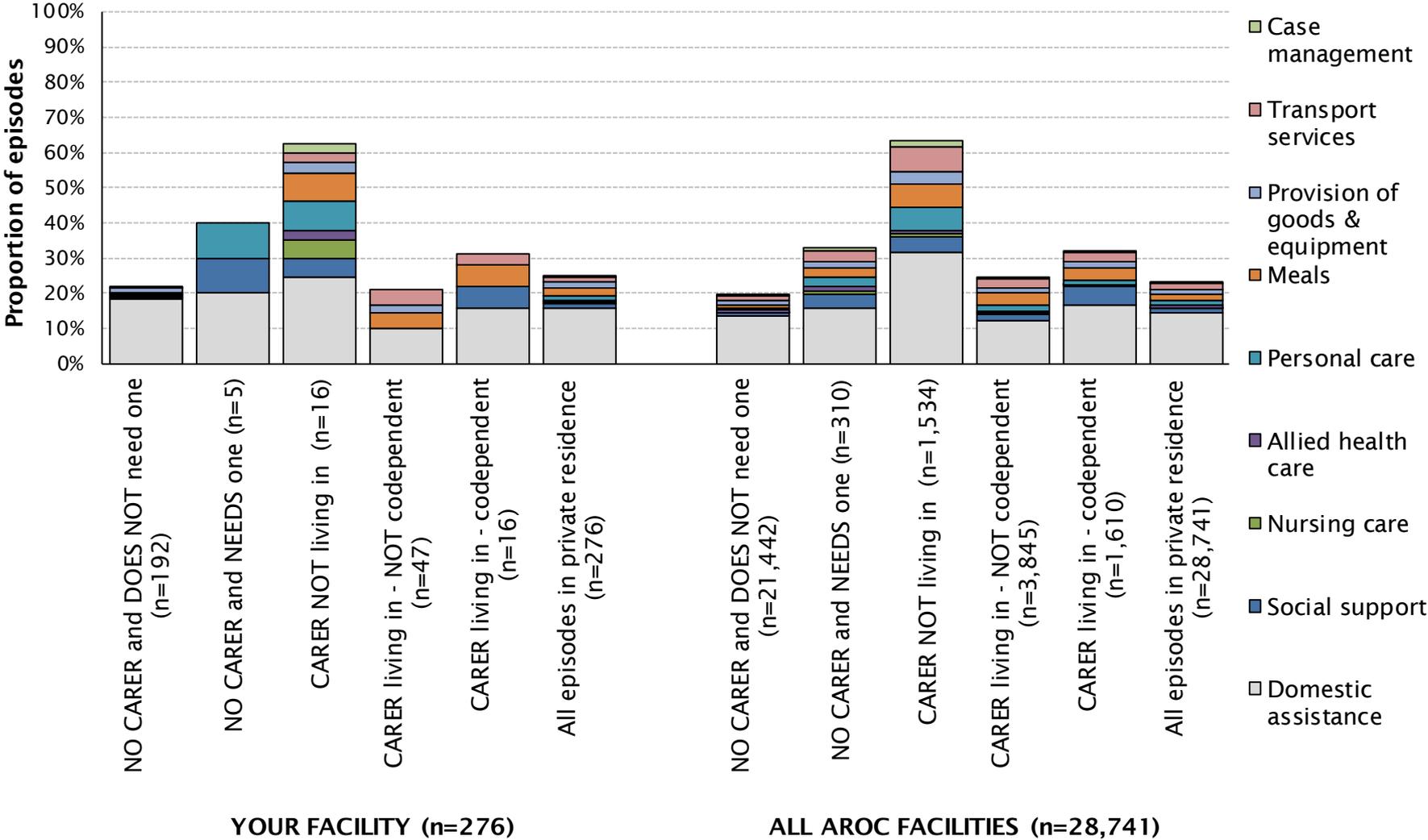
NOTE: Includes only those episodes coming from private residence and with known carer status and known services status

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



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 - YOUR FACILITY						
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	192	5	16	47	16	276
Percent of episodes receiving:						
No services	78.1	60.0	37.5	78.7	68.8	75.0
1 service type	18.2	0.0	25.0	10.6	18.8	17.0
2 service types	3.6	40.0	12.5	4.3	0.0	4.7
3 service types	0.0	0.0	12.5	4.3	6.3	1.8
4 or more service types	0.0	0.0	12.5	2.1	6.3	1.4
Service Type received						
Domestic assistance	21.4	40.0	56.3	19.1	31.3	23.9
Social support	0.5	20.0	12.5	0.0	12.5	2.2
Nursing care	0.0	0.0	12.5	0.0	0.0	0.7
Allied health care	0.5	0.0	6.3	0.0	0.0	0.7
Personal care	0.5	20.0	18.8	0.0	0.0	1.8
Meals	0.5	0.0	18.8	8.5	12.5	3.6
Provision of goods & equipment	1.6	0.0	6.3	4.3	0.0	2.2
Transport services	0.5	0.0	6.3	8.5	6.3	2.5
Case management	0.0	0.0	6.3	0.0	0.0	0.4

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 - ALL AROC FACILITIES						
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	21,442	310	1,534	3,845	1,610	28,741
Percent of episodes receiving:						
No services	80.5	67.1	36.6	75.4	68.0	76.6
1 service type	15.1	18.7	36.5	14.2	18.0	16.3
2 service types	3.2	8.1	12.6	4.9	8.3	4.3
3 service types	0.9	2.6	8.1	2.9	2.9	1.7
4 or more service types	0.3	3.5	6.2	2.5	2.9	1.1
Service Type received						
Domestic assistance	17.9	29.4	58.3	22.0	29.3	21.4
Social support	0.9	7.1	8.0	3.1	8.9	2.1
Nursing care	0.2	1.3	1.7	0.6	0.6	0.4
Allied health care	1.0	2.6	2.1	0.8	0.2	1.0
Personal care	0.8	4.5	12.1	3.5	2.6	1.9
Meals	1.0	5.2	12.2	6.3	5.7	2.6
Provision of goods & equipment	1.8	2.9	6.3	2.1	3.1	2.1
Transport services	1.6	6.1	13.4	5.3	4.8	2.9
Case management	0.3	1.3	3.1	0.5	0.7	0.5

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

Days from injury to episode start with an acute admission by AN-SNAP class



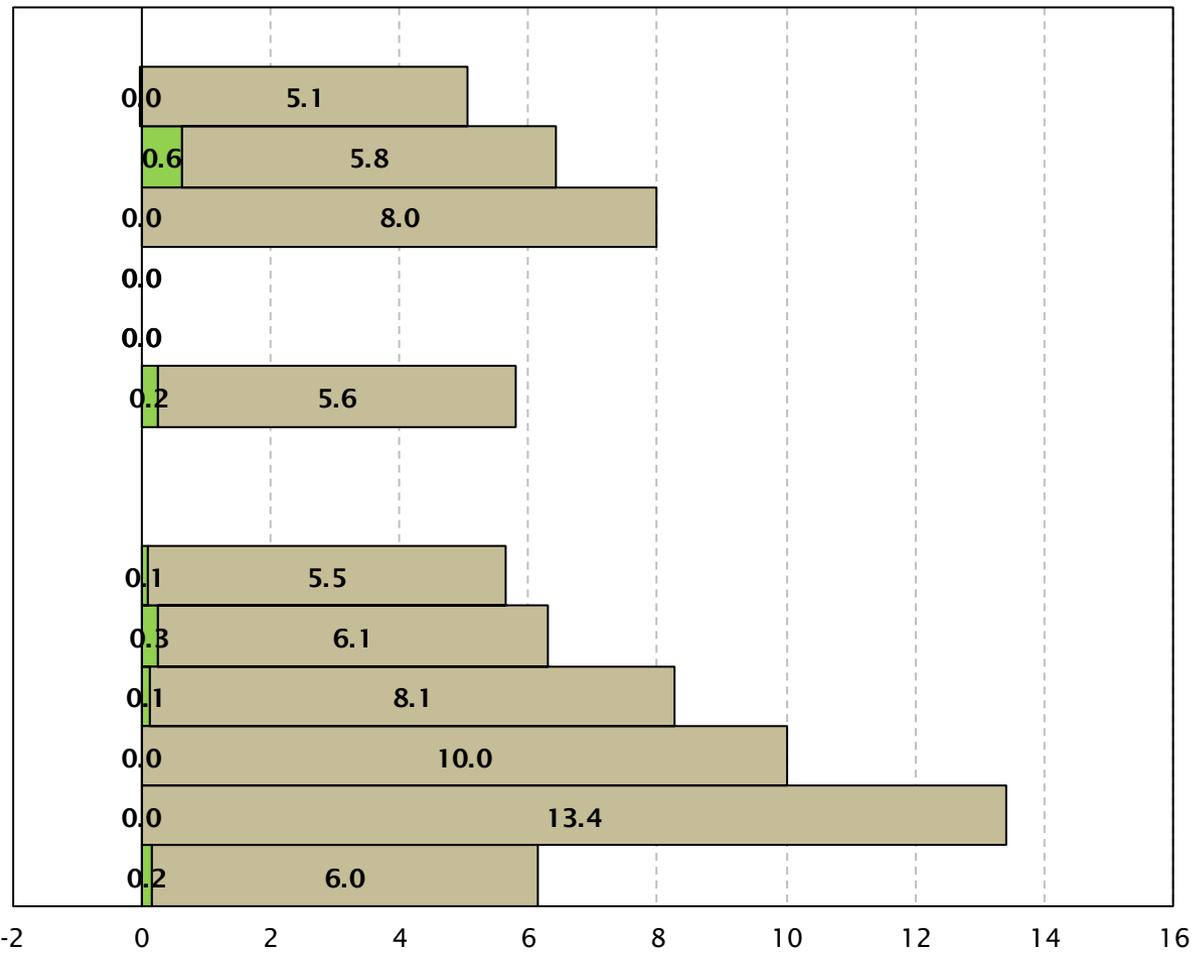
■ Injury to acute admission ■ Acute admission to rehabilitation episode start

YOUR FACILITY

- 4A21 (n=88)
- 4A22 (n=65)
- 4A23 (n=11)
- 4AZ3 (n<5)
- 4AZ4 (n<5)
- All orthopaedic replacements (n=165)

ALL AROC FACILITIES

- 4A21 (n=9,116)
- 4A22 (n=7,517)
- 4A23 (n=1,334)
- 4AZ3 (n=39)
- 4AZ4 (n=5)
- All orthopaedic replacements (n=18,069)



Average number of days between dates

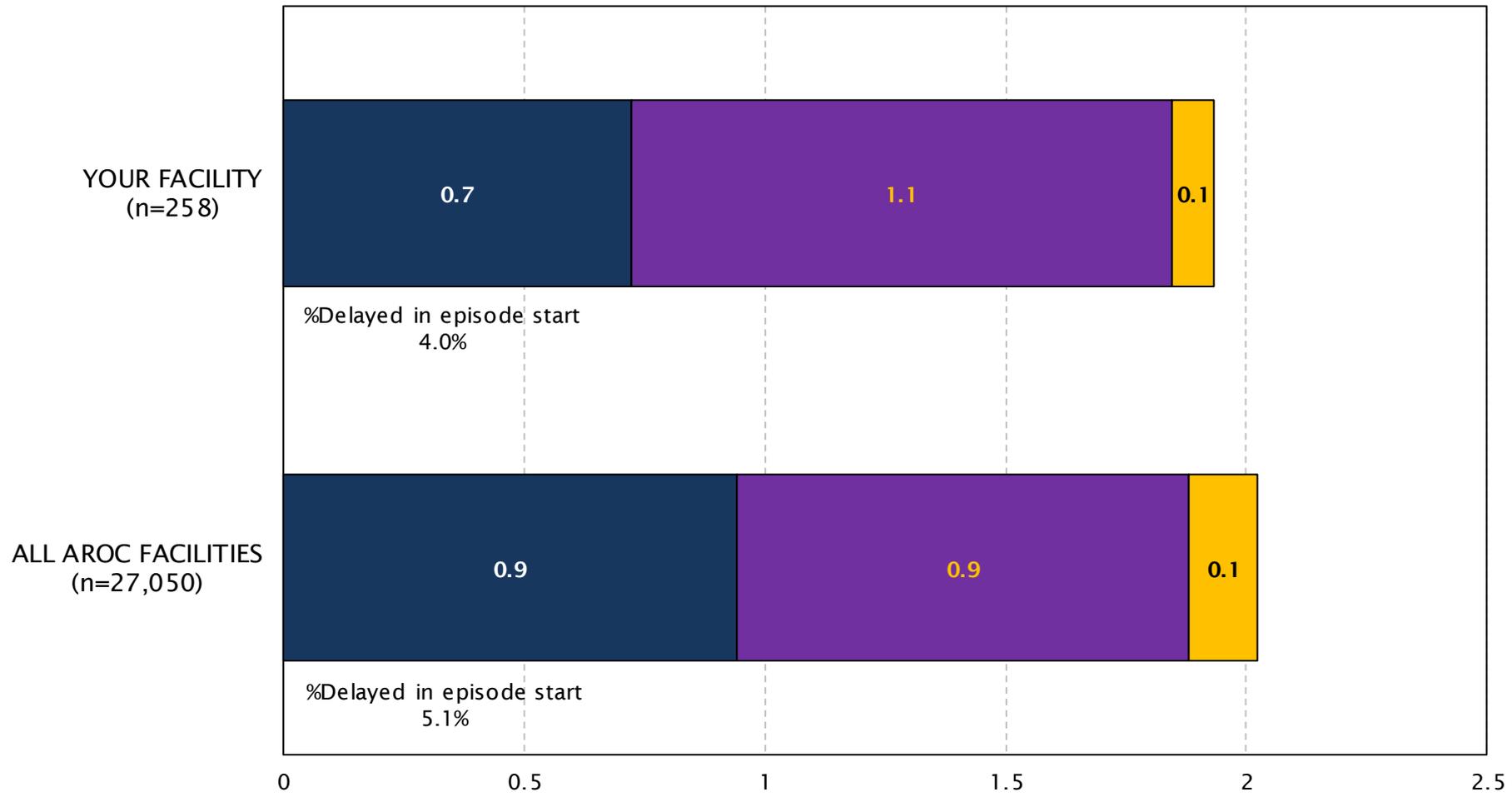
*No data provided when less than 5 episodes have dates

NOTE: Includes first admissions where all dates have been entered only

Days from referral to rehabilitation episode start



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

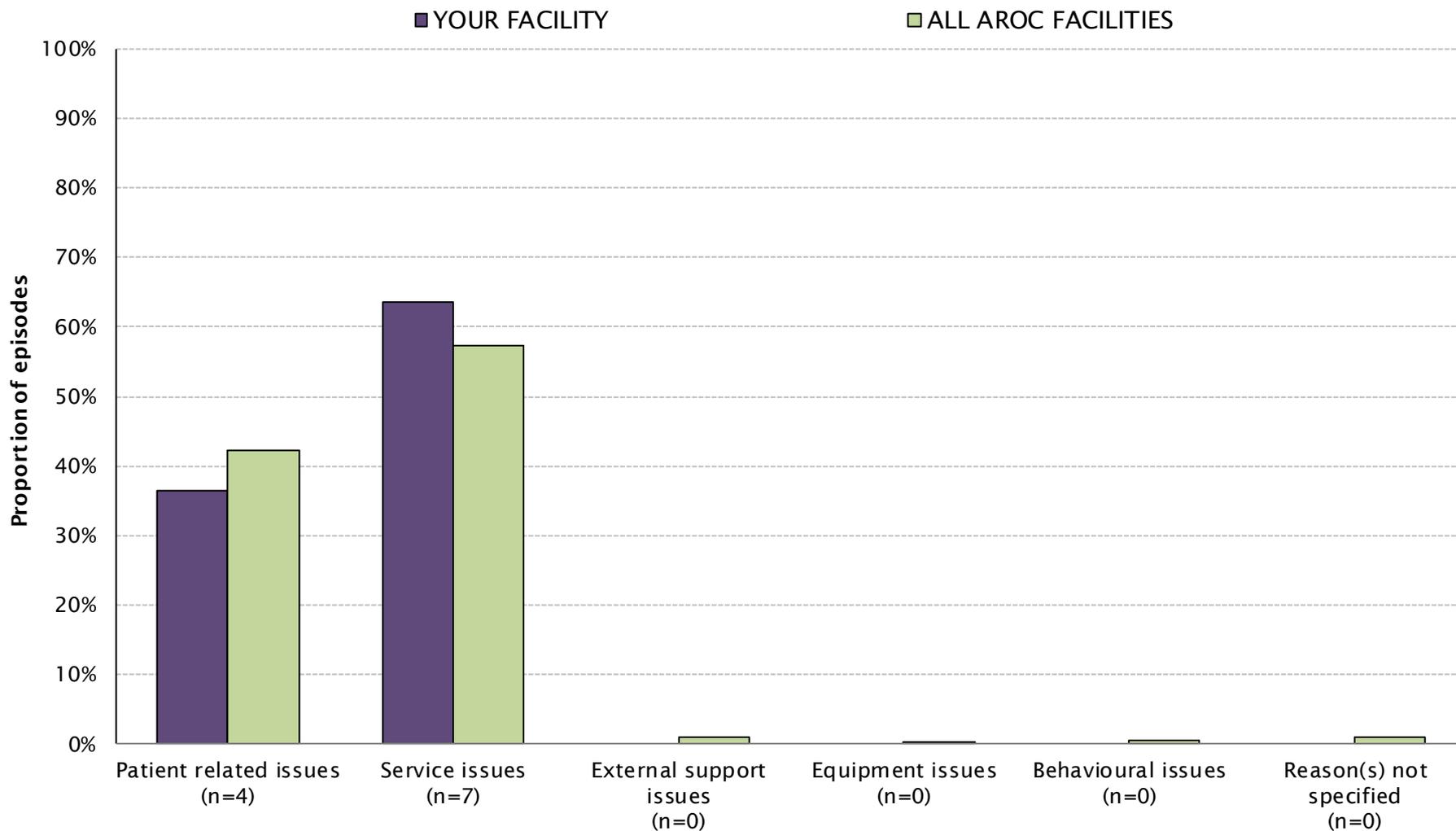


*No data provided when less than 5 episodes have dates

Average number of days between dates

NOTE: Includes first admissions where all dates have been entered only

Type of delay in episode start



Delays in episode start

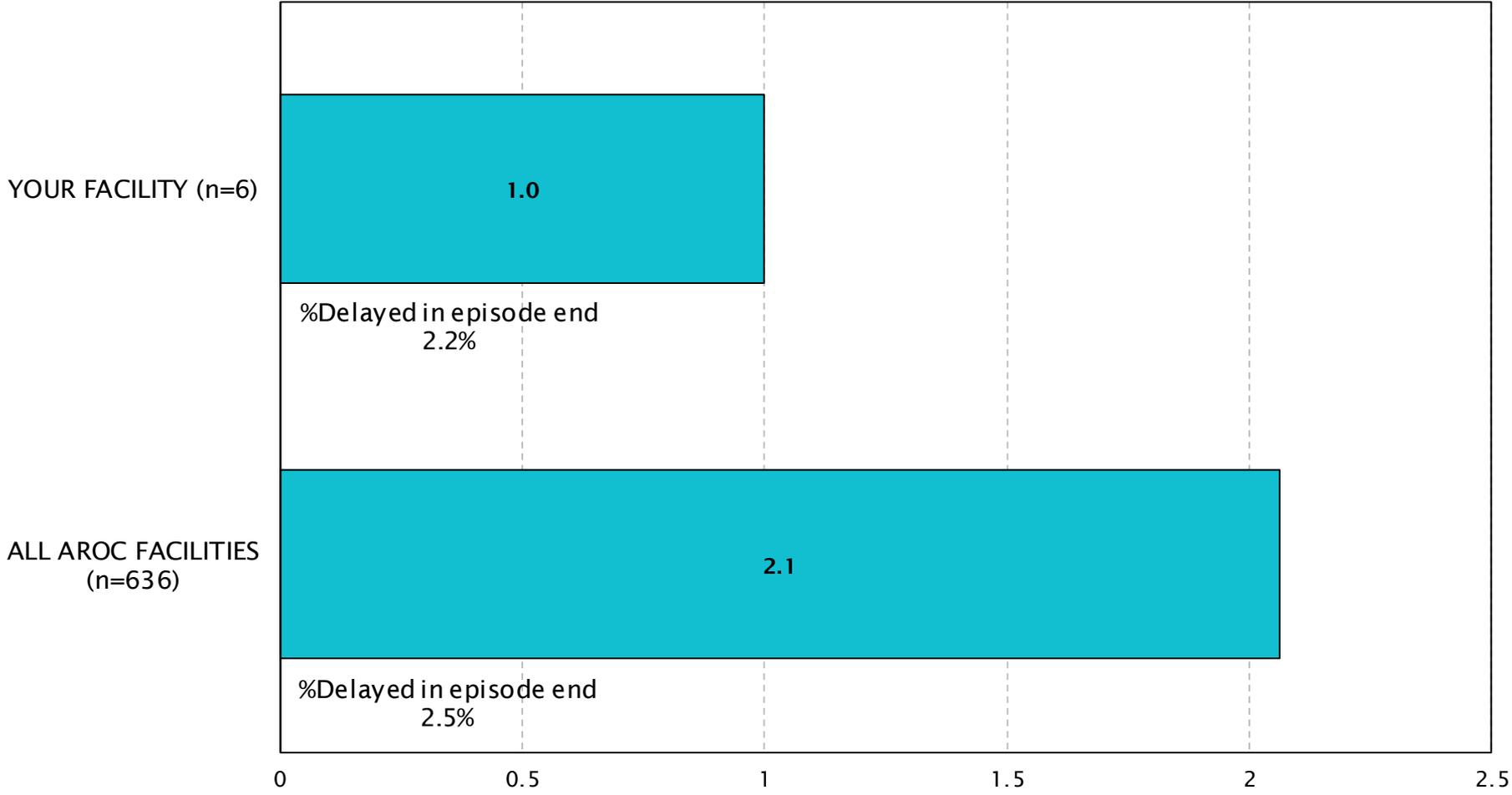
Delay in episode start	YOUR FACILITY		ALL AROC FACILITIES	
	No.	%	No.	%
No delay	267	96.0	27,634	94.9
Delay in episode start	11	4.0	1,483	5.1
Missing	21		2,044	
All episodes	299	100.0	31,161	100.0

Reasons for delay in episode start	YOUR FACILITY		ALL AROC FACILITIES	
	No.	%	No.	%
Patient related issues	4	36.4	627	42.3
Service issues	7	63.6	849	57.2
External support issues	0	0.0	14	0.9
Equipment issues	0	0.0	3	0.2
Behavioural issues	0	0.0	5	0.3
Reason(s) not specified	0	0.0	12	0.8

Days from clinically ready to discharge



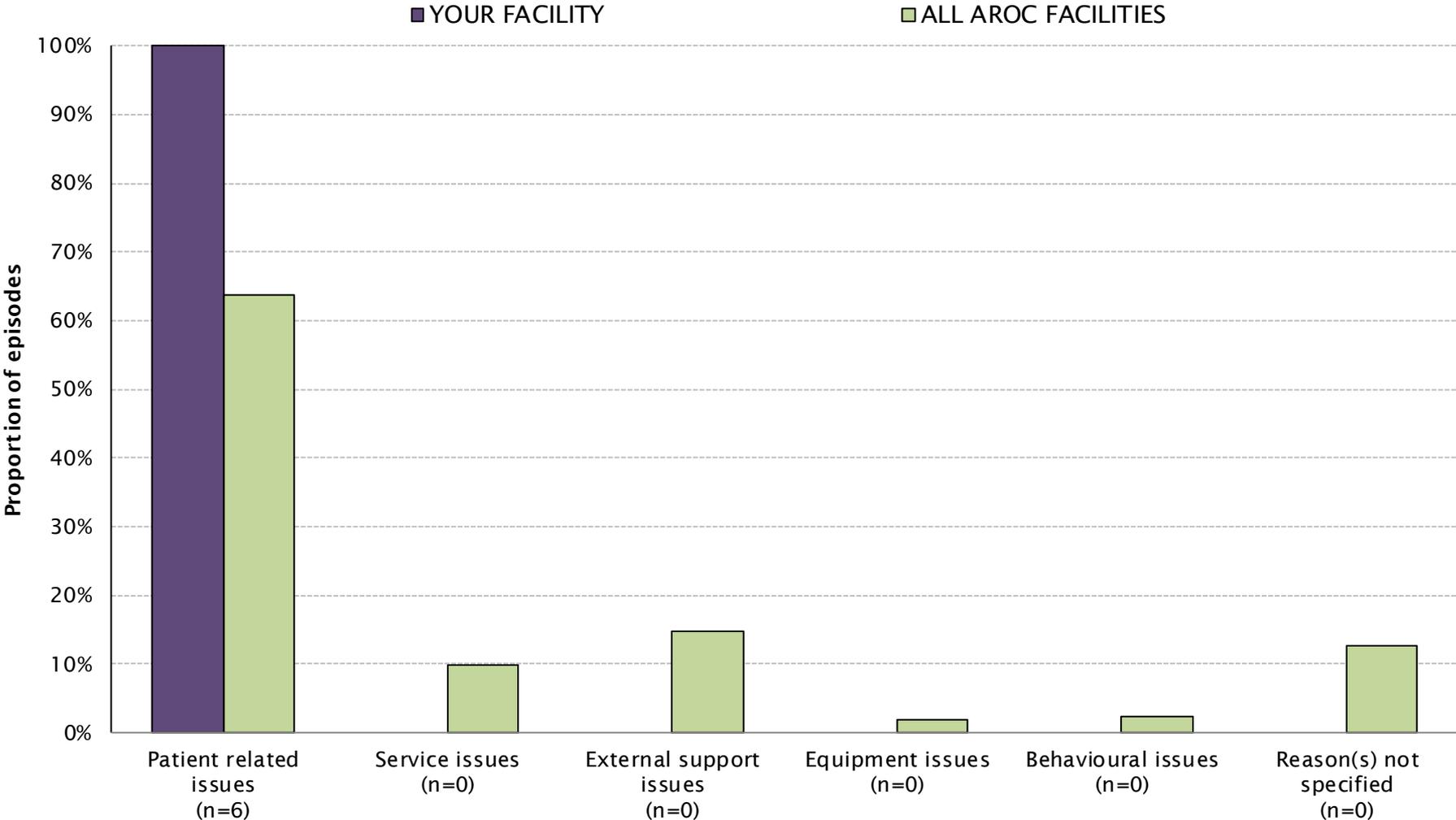
■ Clinically ready for discharge to episode end (where a delay was reported)



*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		ALL AROC FACILITIES	
	No.	%	No.	%
No delay	261	97.8	27,483	97.5
Delay in episode end	6	2.2	710	2.5
Missing	18		1,894	
All episodes	285	100.0	30,087	100.0

Reasons for delay in episode end	YOUR FACILITY		ALL AROC FACILITIES	
	No.	%	No.	%
Patient related issues	6	100.0	452	63.7
Service issues	0	0.0	69	9.7
External support issues	0	0.0	104	14.6
Equipment issues	0	0.0	13	1.8
Behavioural issues	0	0.0	16	2.3
Reason(s) not specified	0	0.0	90	12.7

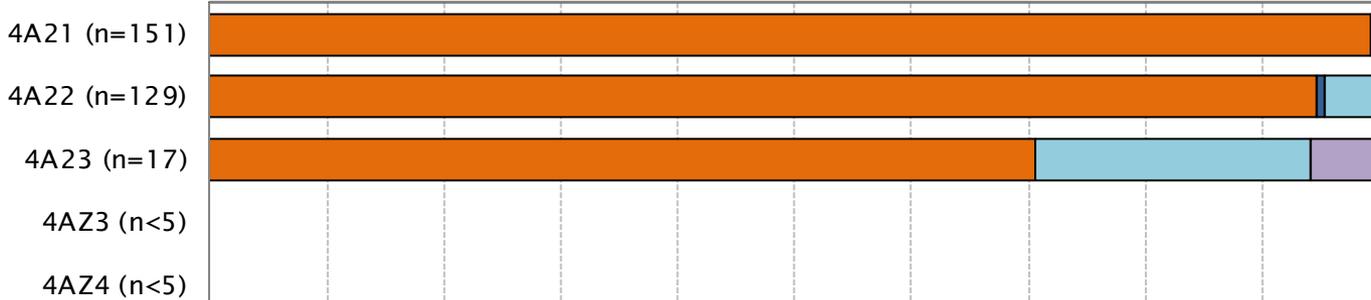
NOTE: Includes completed episodes only

Discharge destination by AN-SNAP class



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

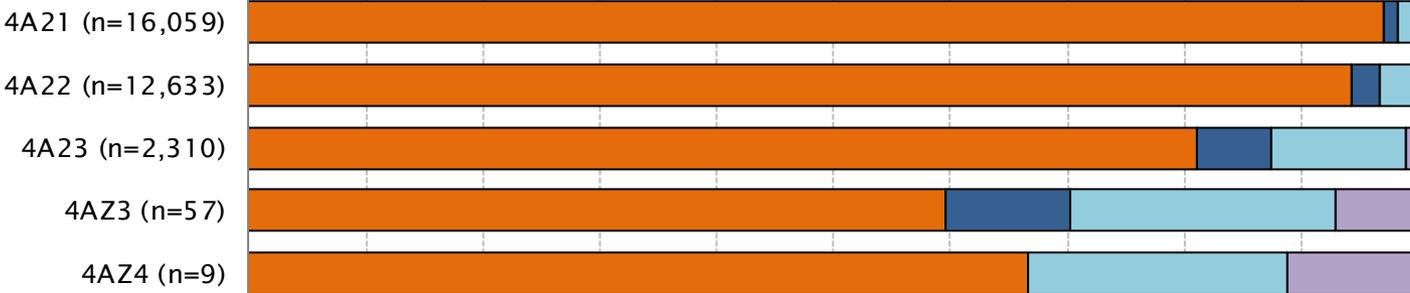
YOUR FACILITY



All orthopaedic replacements (n=297)



ALL AROC FACILITIES



All orthopaedic replacements (n=31,068)

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

Proportion of episodes

Discharge destination by AN-SNAP class

AN-SNAP class V4	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
4A21 (weighted motor 68-91)	150	0	1	0	0	15,592	191	223	47	6
4A22 (weighted motor 50-67)	122	1	6	0	0	11,924	287	375	46	1
4A23 (weighted motor 19-49)	12	0	4	1	0	1,874	146	267	23	0
4AZ3 (weighted motor 13-18, Age ≥ 65)	0	0	0	0	0	34	6	13	4	0
4AZ4 (weighted motor 13-18, Age ≤ 64)	0	0	0	0	0	6	0	2	1	0
All Replacement AN-SNAP classes	284	1	11	1	0	29,430	630	880	121	7

AN-SNAP class V4	YOUR FACILITY — %					ALL AROC FACILITIES — %				
	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown
4A21 (weighted motor 68-91)	99.3	0.0	0.7	0.0	0.0	97.1	1.2	1.4	0.3	0.0
4A22 (weighted motor 50-67)	94.6	0.8	4.7	0.0	0.0	94.4	2.3	3.0	0.4	0.0
4A23 (weighted motor 19-49)	70.6	0.0	23.5	5.9	0.0	81.1	6.3	11.6	1.0	0.0
4AZ3 (weighted motor 13-18, Age ≥ 65)	—	—	—	—	—	59.6	10.5	22.8	7.0	0.0
4AZ4 (weighted motor 13-18, Age ≤ 64)	—	—	—	—	—	66.7	0.0	22.2	11.1	0.0
All Replacement AN-SNAP classes	95.6	0.3	3.7	0.3	0.0	94.7	2.0	2.8	0.4	0.0

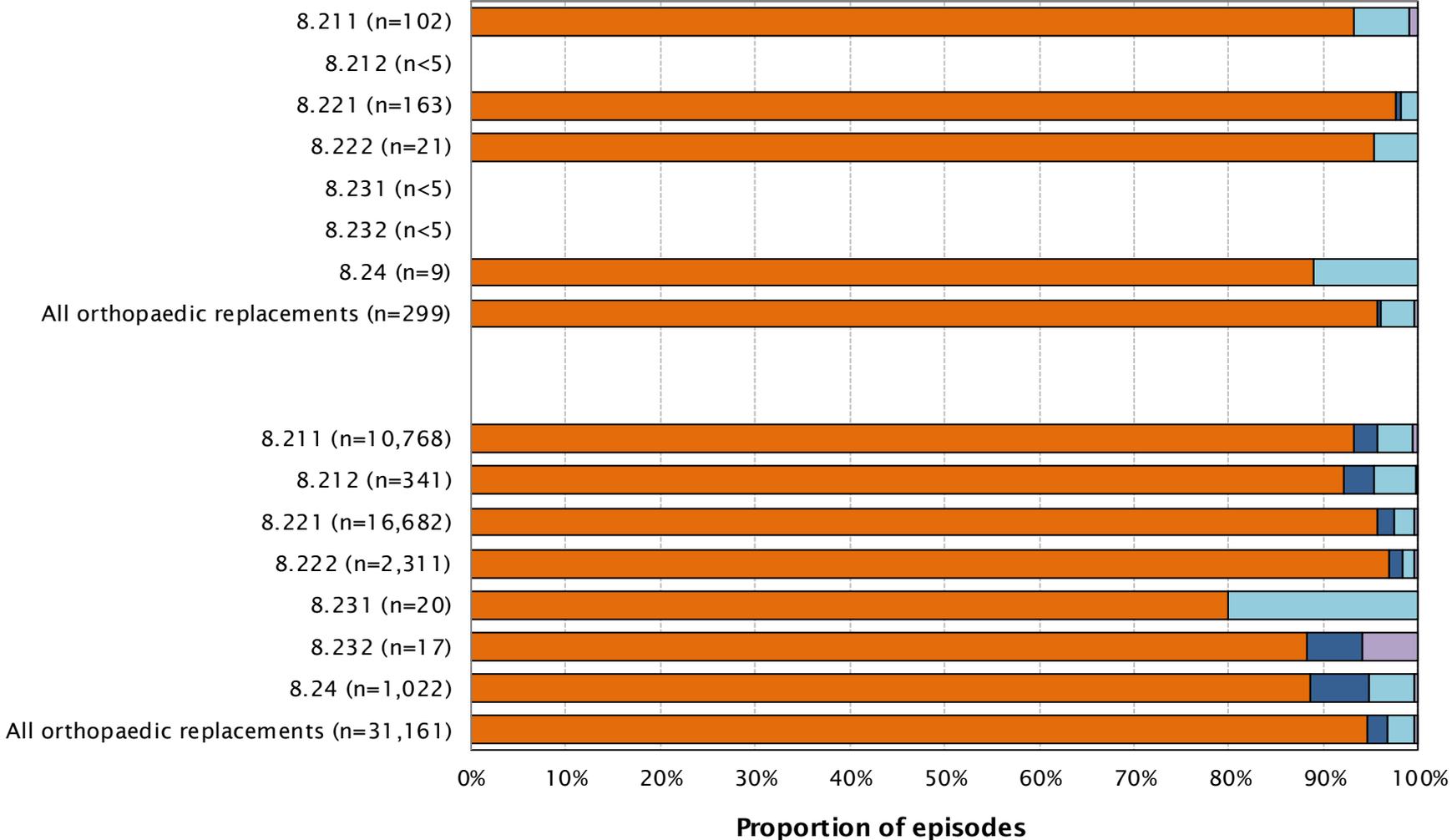
Discharge destination by impairment



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

YOUR FACILITY

ALL AROC FACILITIES



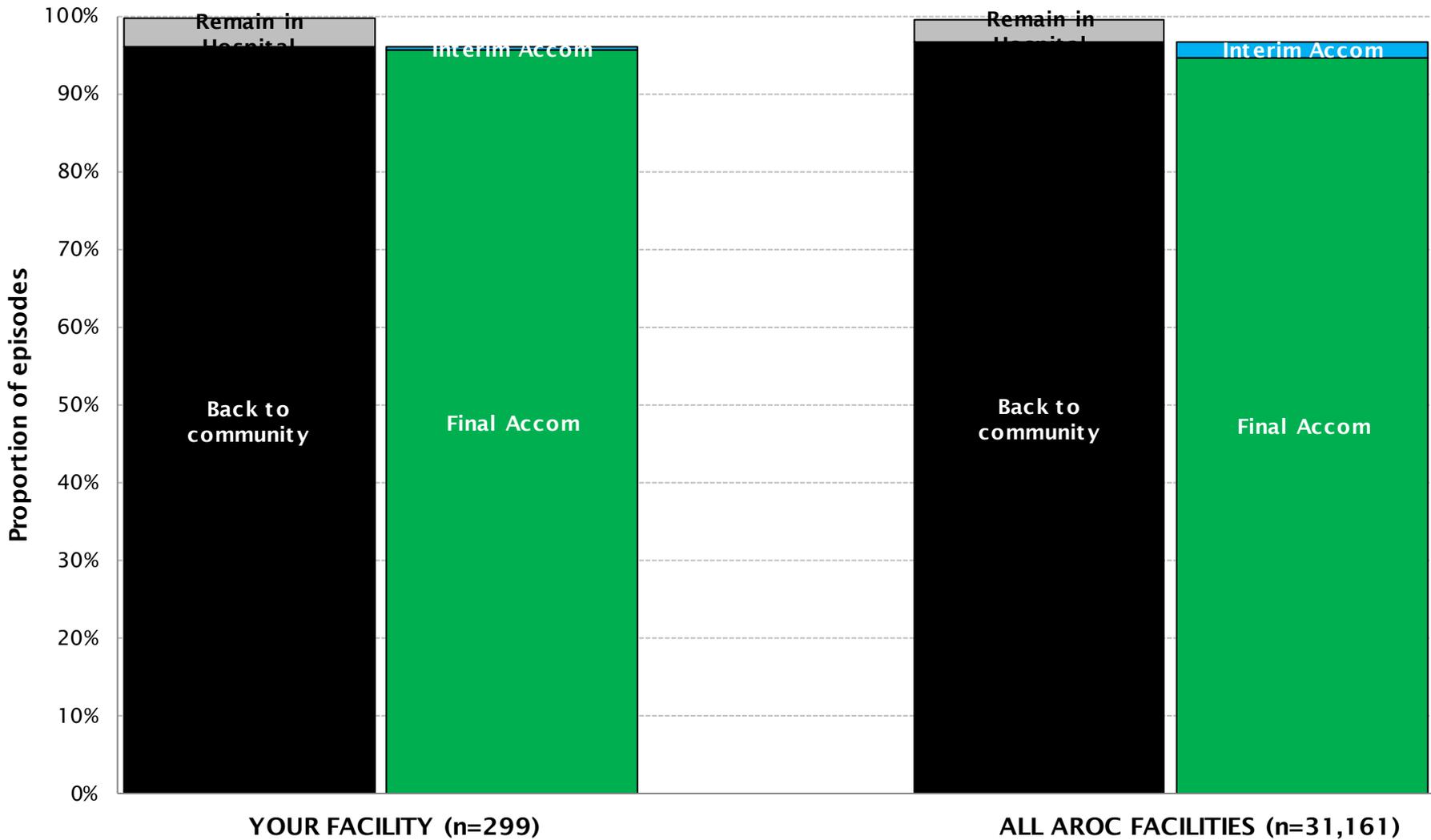
Discharge destination by impairment



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	95	0	6	1	0	10,044	250	413	56	5
8.212 Bilateral hip replacement	4	0	0	0	0	314	11	15	1	0
8.221 Unilateral knee replacement	159	1	3	0	0	15,973	276	371	54	8
8.222 Bilateral knee replacement	20	0	1	0	0	2,238	36	29	6	2
8.231 Knee and hip replacement, same side	0	0	0	0	0	16	0	4	0	0
8.232 Knee and hip replacement, diff sides	0	0	0	0	0	15	1	0	1	0
8.24 Shoulder replacement	8	0	1	0	0	906	62	49	5	0
All Orthopaedic Replacements	286	1	11	1	0	29,506	636	881	123	15

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	93.1	0.0	5.9	1.0	0.0	93.3	2.3	3.8	0.5	0.0
8.212 Bilateral hip replacement	100.0	0.0	0.0	0.0	0.0	92.1	3.2	4.4	0.3	0.0
8.221 Unilateral knee replacement	97.5	0.6	1.8	0.0	0.0	95.7	1.7	2.2	0.3	0.0
8.222 Bilateral knee replacement	95.2	0.0	4.8	0.0	0.0	96.8	1.6	1.3	0.3	0.1
8.231 Knee and hip replacement, same side	—	—	—	—	—	80.0	0.0	20.0	0.0	0.0
8.232 Knee and hip replacement, diff sides	—	—	—	—	—	88.2	5.9	0.0	5.9	0.0
8.24 Shoulder replacement	88.9	0.0	11.1	0.0	0.0	88.6	6.1	4.8	0.5	0.0
All Orthopaedic Replacements	95.7	0.3	3.7	0.3	0.0	94.7	2.0	2.8	0.4	0.0

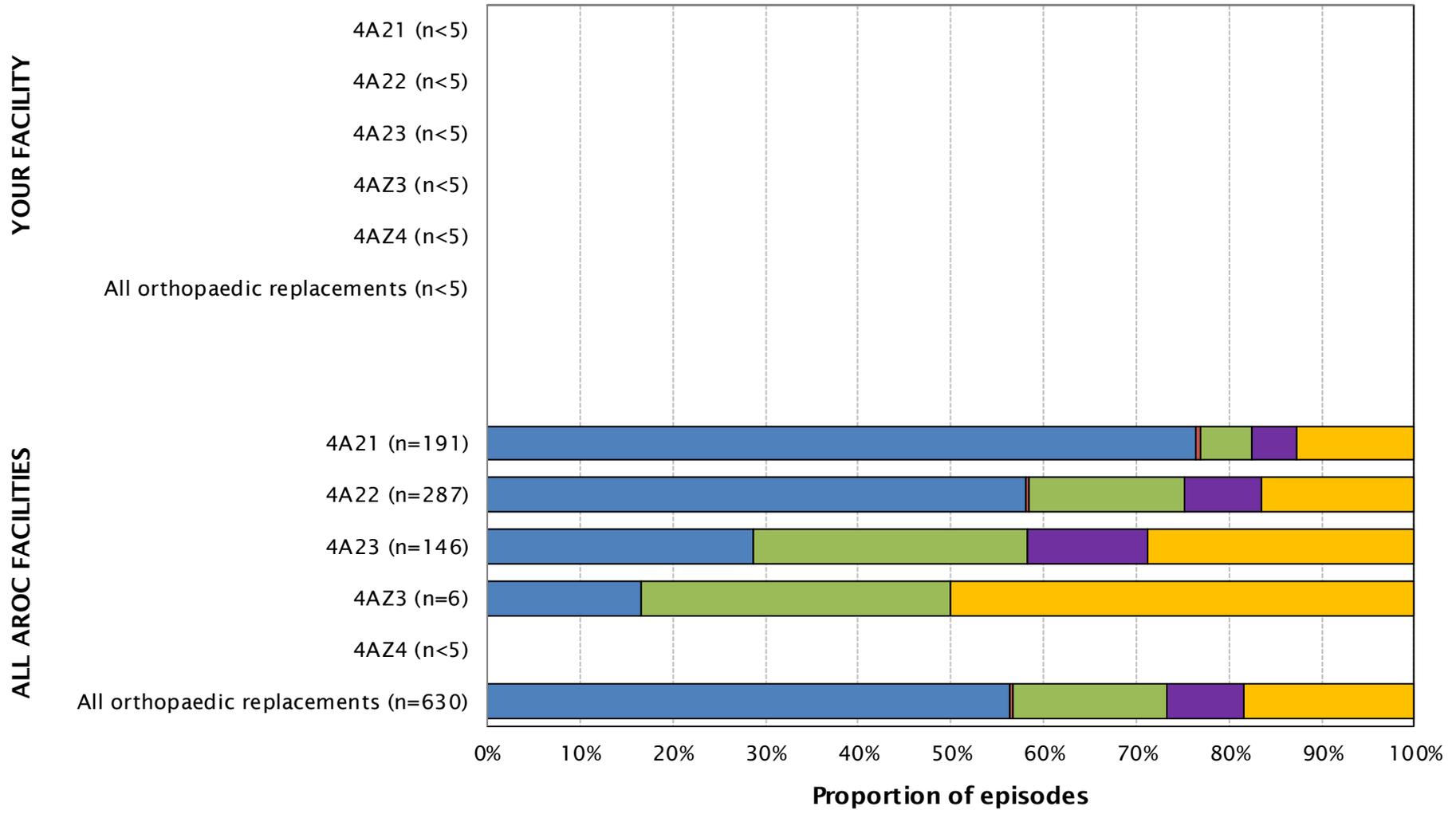
Discharge destination



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

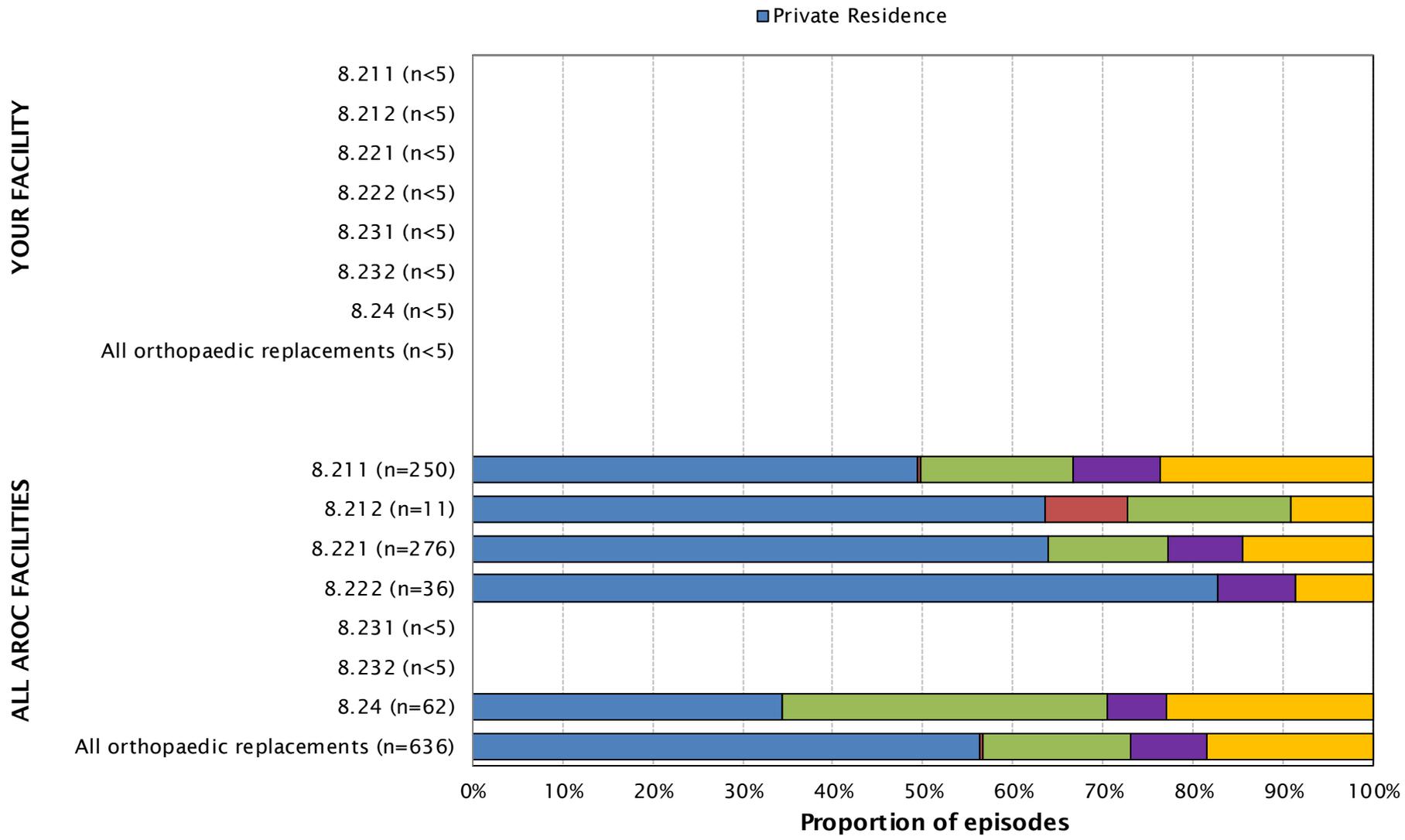


YOUR FACILITY — N (%)					
AN-SNAP class V4	Private residence	Residential Aged Care	Hospital	Other	All episodes**
4A21 (weighted motor 68-91)	0 —	0 —	0 —	0 —	0 —
4A22 (weighted motor 50-67)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
4A23 (weighted motor 19-49)	0 —	0 —	0 —	0 —	0 —
4AZ3 (weighted motor 13-18, Age ≥ 65)	0 —	0 —	0 —	0 —	0 —
4AZ4 (weighted motor 13-18, Age ≤ 64)	0 —	0 —	0 —	0 —	0 —
All Replacement AN-SNAP classes	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)

ALL AROC FACILITIES — N (%)						
AN-SNAP class V4	Private residence	Rest Home (NZ only)	Resi Aged Care (AU) / 24hr Nursing Care (NZ)	Hospital	Other	All episodes**
4A21 (weighted motor 68-91)	139 (72.8)	1 (0.5)	10 (5.2)	9 (4.7)	23 (12.0)	191 (100.0)
4A22 (weighted motor 50-67)	162 (56.4)	1 (0.3)	47 (16.4)	23 (8.0)	46 (16.0)	287 (100.0)
4A23 (weighted motor 19-49)	40 (27.4)	0 (0.0)	41 (28.1)	18 (12.3)	40 (27.4)	146 (100.0)
4AZ3 (weighted motor 13-18, Age ≥ 65)	1 (16.7)	0 (0.0)	2 (33.3)	0 (0.0)	3 (50.0)	6 (100.0)
4AZ4 (weighted motor 13-18, Age ≤ 64)	0 —	0 —	0 —	0 —	0 —	0 —
All Replacement AN-SNAP classes	342 (54.3)	2 (0.3)	100 (15.9)	50 (7.9)	112 (17.8)	630 (100.0)

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

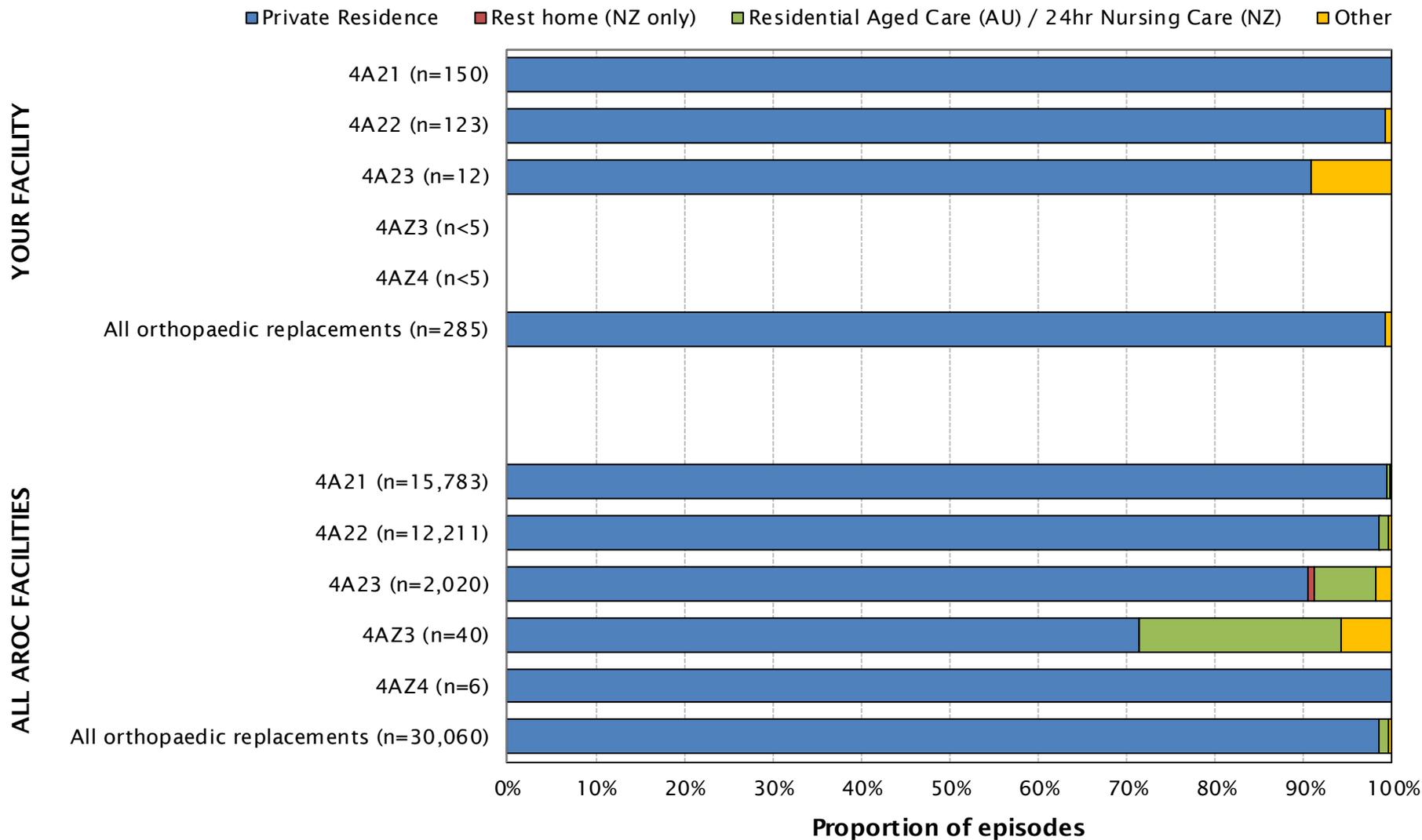


YOUR FACILITY — N (%)					
Impairment	Private residence	Residential Aged Care	Hospital	Other	All episodes**
8.211 Unilateral hip replacement	0 —	0 —	0 —	0 —	0 —
8.212 Bilateral hip replacement	0 —	0 —	0 —	0 —	0 —
8.221 Unilateral knee replacement	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
8.222 Bilateral knee replacement	0 —	0 —	0 —	0 —	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	0 —	0 —	0 —	0 —	0 —
All Orthopaedic Replacements	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)

ALL AROC FACILITIES — N (%)						
Impairment	Private residence	Rest Home (NZ only)	Resi Aged Care (AU) / 24hr Nursing Care (NZ)	Hospital	Other	All episodes**
8.211 Unilateral hip replacement	119 (47.6)	1 (0.4)	41 (16.4)	23 (9.2)	57 (22.8)	250 (100.0)
8.212 Bilateral hip replacement	7 (63.6)	1 (9.1)	2 (18.2)	0 (0.0)	1 (9.1)	11 (100.0)
8.221 Unilateral knee replacement	169 (61.2)	0 (0.0)	35 (12.7)	22 (8.0)	38 (13.8)	276 (100.0)
8.222 Bilateral knee replacement	29 (80.6)	0 (0.0)	0 (0.0)	3 (8.3)	3 (8.3)	36 (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)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
8.24 Shoulder replacement	21 (33.9)	0 (0.0)	22 (35.5)	4 (6.5)	14 (22.6)	62 (100.0)
All Orthopaedic Replacements	345 (54.2)	2 (0.3)	100 (15.7)	52 (8.2)	113 (17.8)	636 (100.0)

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

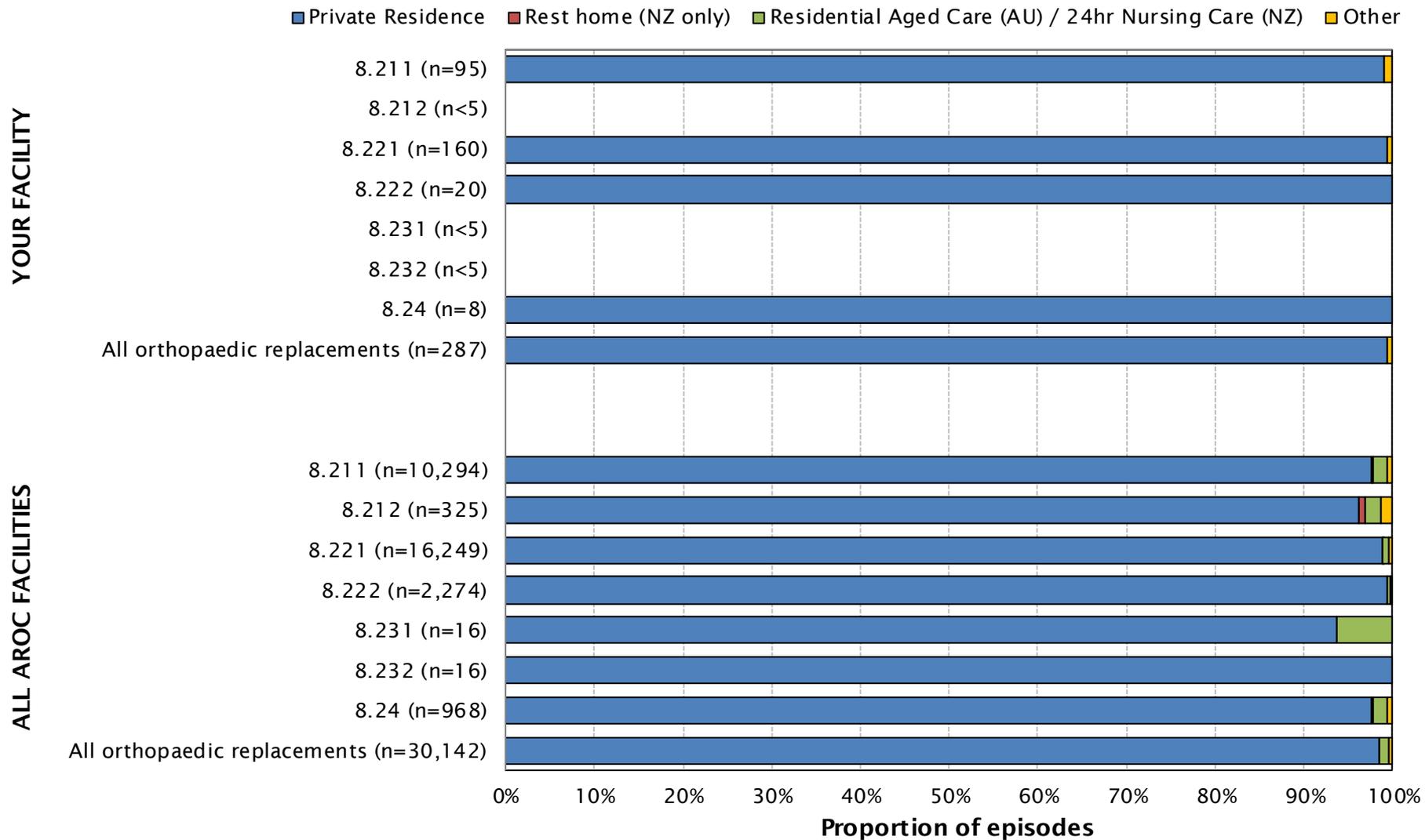


AN-SNAP class V4	YOUR FACILITY — N (%)					All episodes
	Private residence	Residential Aged Care	Other	Missing		
4A21 (weighted motor 68-91)	150 (100.0)	0 (0.0)	0 (0.0)	0	150 (100.0)	
4A22 (weighted motor 50-67)	122 (99.2)	0 (0.0)	1 (0.8)	0	123 (100.0)	
4A23 (weighted motor 19-49)	10 (83.3)	0 (0.0)	2 (16.7)	0	12 (100.0)	
4AZ3 (weighted motor 13-18, Age ≥ 65)	0 —	0 —	0 —	0	0 —	
4AZ4 (weighted motor 13-18, Age ≤ 64)	0 —	0 —	0 —	0	0 —	
All Replacement AN-SNAP classes	282 (98.9)	0 (0.0)	3 (1.1)	0	285 (100.0)	

AN-SNAP class V4	ALL AROC FACILITIES — N (%)					All episodes
	Private residence	Rest Home (NZ only)	Resi Aged Care (AU) / 24hr Nursing Care (NZ)	Other	Missing	
4A21 (weighted motor 68-91)	15,637 (99.1)	0 (0.0)	50 (0.3)	62 (0.4)	34	15,783 (100.0)
4A22 (weighted motor 50-67)	11,880 (97.3)	7 (0.1)	111 (0.9)	93 (0.8)	120	12,211 (100.0)
4A23 (weighted motor 19-49)	1,735 (85.9)	11 (0.5)	135 (6.7)	80 (4.0)	59	2,020 (100.0)
4AZ3 (weighted motor 13-18, Age ≥ 65)	25 (62.5)	0 (0.0)	8 (20.0)	6 (15.0)	1	40 (100.0)
4AZ4 (weighted motor 13-18, Age ≤ 64)	6 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0	6 (100.0)
All Replacement AN-SNAP classes	29,283 (97.4)	18 (0.1)	304 (1.0)	241 (0.8)	214	30,060 (100.0)

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

Final accommodation on 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

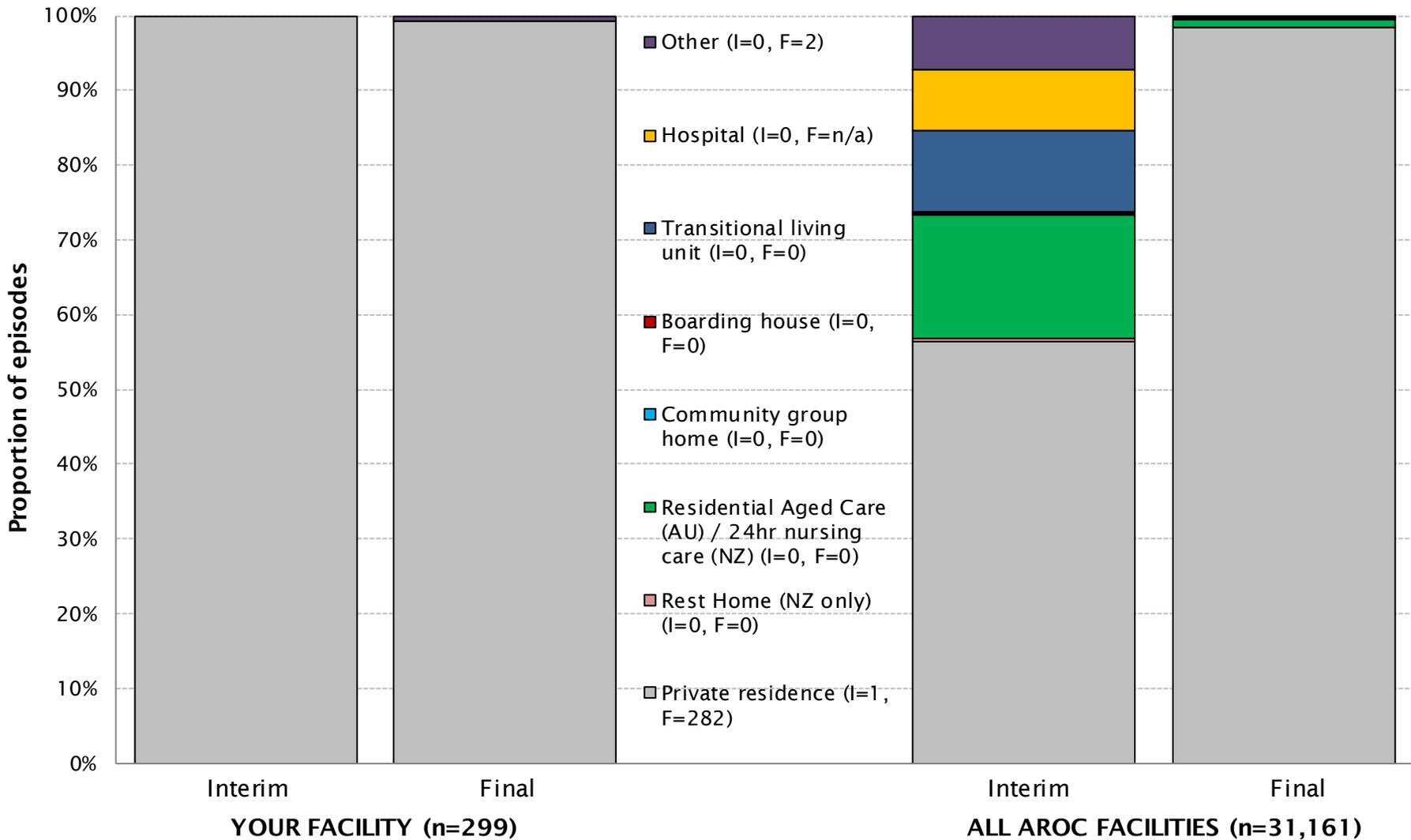


YOUR FACILITY — N (%)						
Impairment	Private residence	Residential Aged Care	Other	Missing	All episodes	
8.211 Unilateral hip replacement	94 (98.9)	0 (0.0)	1 (1.1)	0	95 (100.0)	
8.212 Bilateral hip replacement	4 (100.0)	0 (0.0)	0 (0.0)	0	4 (100.0)	
8.221 Unilateral knee replacement	159 (99.4)	0 (0.0)	1 (0.6)	0	160 (100.0)	
8.222 Bilateral knee replacement	20 (100.0)	0 (0.0)	0 (0.0)	0	20 (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	7 (87.5)	0 (0.0)	1 (12.5)	0	8 (100.0)	
All Orthopaedic Replacements	284 (99.0)	0 (0.0)	3 (1.0)	0	287 (100.0)	

ALL AROC FACILITIES — N (%)						
Impairment	Private residence	Rest Home (NZ only)	Resi Aged Care (AU) / 24hr Nursing Care (NZ)	Other	Missing	All episodes
8.211 Unilateral hip replacement	9,930 (96.5)	11 (0.1)	160 (1.6)	107 (1.0)	86	10,294 (100.0)
8.212 Bilateral hip replacement	309 (95.1)	2 (0.6)	6 (1.8)	5 (1.5)	3	325 (100.0)
8.221 Unilateral knee replacement	15,915 (97.9)	4 (0.0)	114 (0.7)	104 (0.6)	112	16,249 (100.0)
8.222 Bilateral knee replacement	2,252 (99.0)	0 (0.0)	9 (0.4)	5 (0.2)	8	2,274 (100.0)
8.231 Knee and hip replacement, same side	15 (93.8)	0 (0.0)	1 (6.3)	0 (0.0)	0	16 (100.0)
8.232 Knee and hip replacement, diff sides	15 (93.8)	0 (0.0)	0 (0.0)	0 (0.0)	1	16 (100.0)
8.24 Shoulder replacement	927 (95.8)	1 (0.1)	15 (1.5)	20 (2.1)	5	968 (100.0)
All Orthopaedic Replacements	29,363 (97.4)	18 (0.1)	305 (1.0)	241 (0.8)	215	30,142 (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

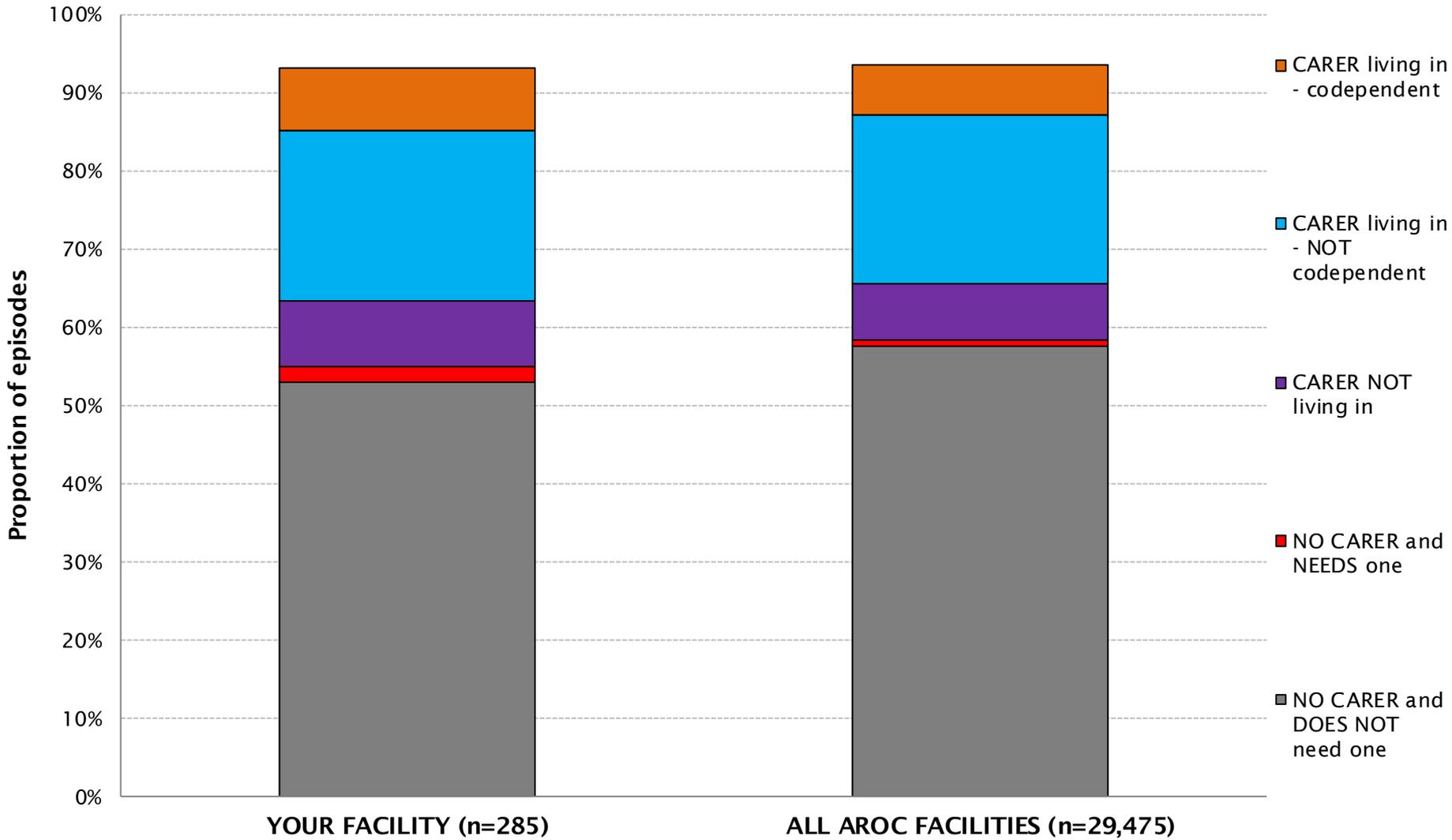
Interim and final accommodation post discharge



Accommodation	YOUR FACILITY				ALL AROC FACILITIES			
	Interim	(%)	Final	(%)	Interim	(%)	Final	(%)
Private residence	1	(100.0)	282	(99.3)	342	(56.4)	29,283	(98.4)
Rest Home (NZ only)					2	(0.3)	18	(0.1)
Resi Aged Care (AU) / 24hr Nursing Care (NZ)	0	(0.0)	0	(0.0)	100	(16.5)	304	(1.0)
Community group home	0	(0.0)	0	(0.0)	2	(0.3)	27	(0.1)
Boarding house	0	(0.0)	0	(0.0)	1	(0.2)	7	(0.0)
Transitional living unit	0	(0.0)	0	(0.0)	66	(10.9)	26	(0.1)
Hospital	0	(0.0)	n/a		50	(8.3)	n/a	
Other	0	(0.0)	2	(0.7)	43	(7.1)	83	(0.3)
Missing/Unknown	0		1		24		312	
All episodes	1	(100.0)	285	(100.0)	630	(100.0)	30,060	(100.0)

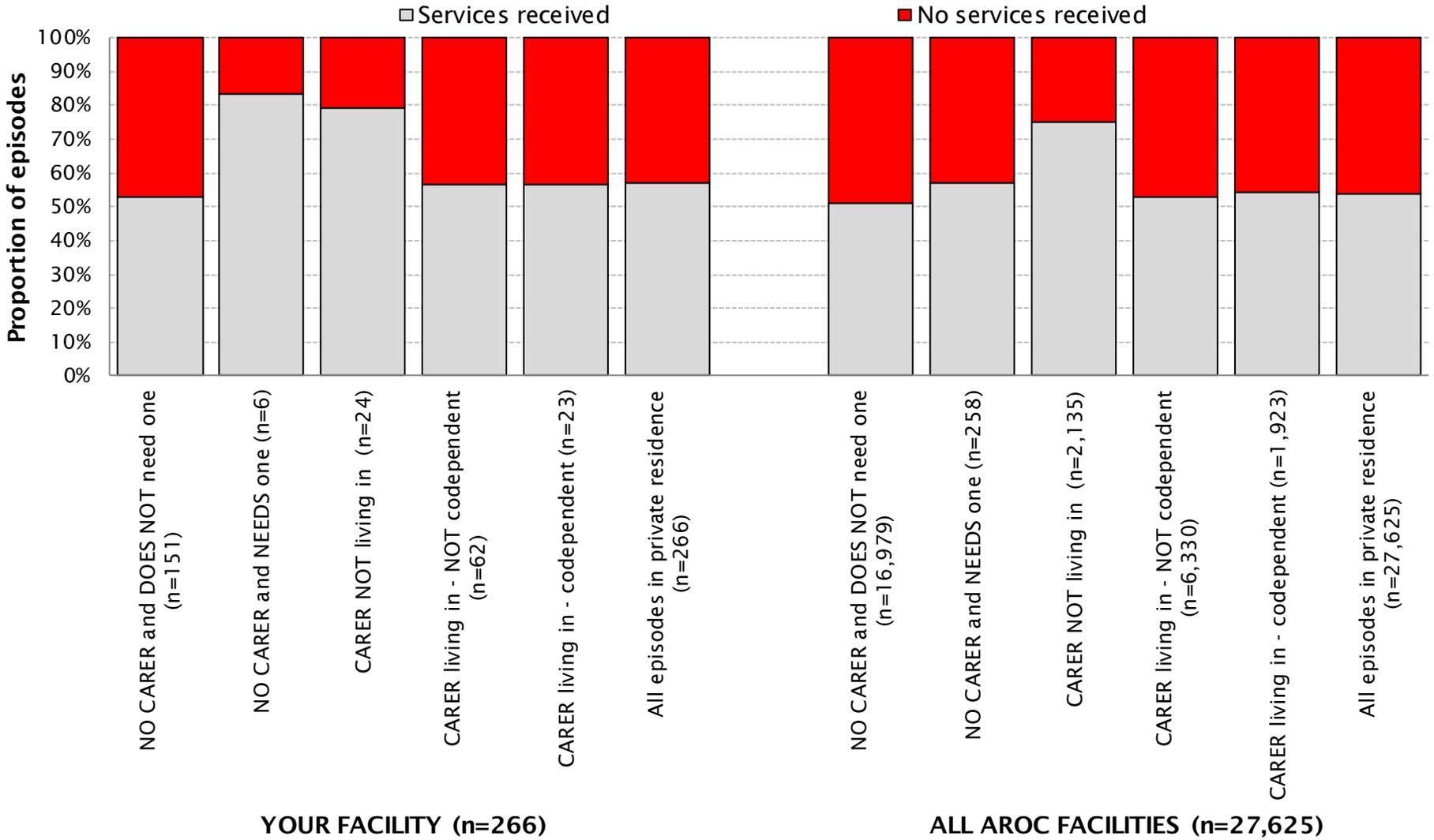
NOTE: Includes only those episodes with mode of episode end equal to either final or interim accommodation

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

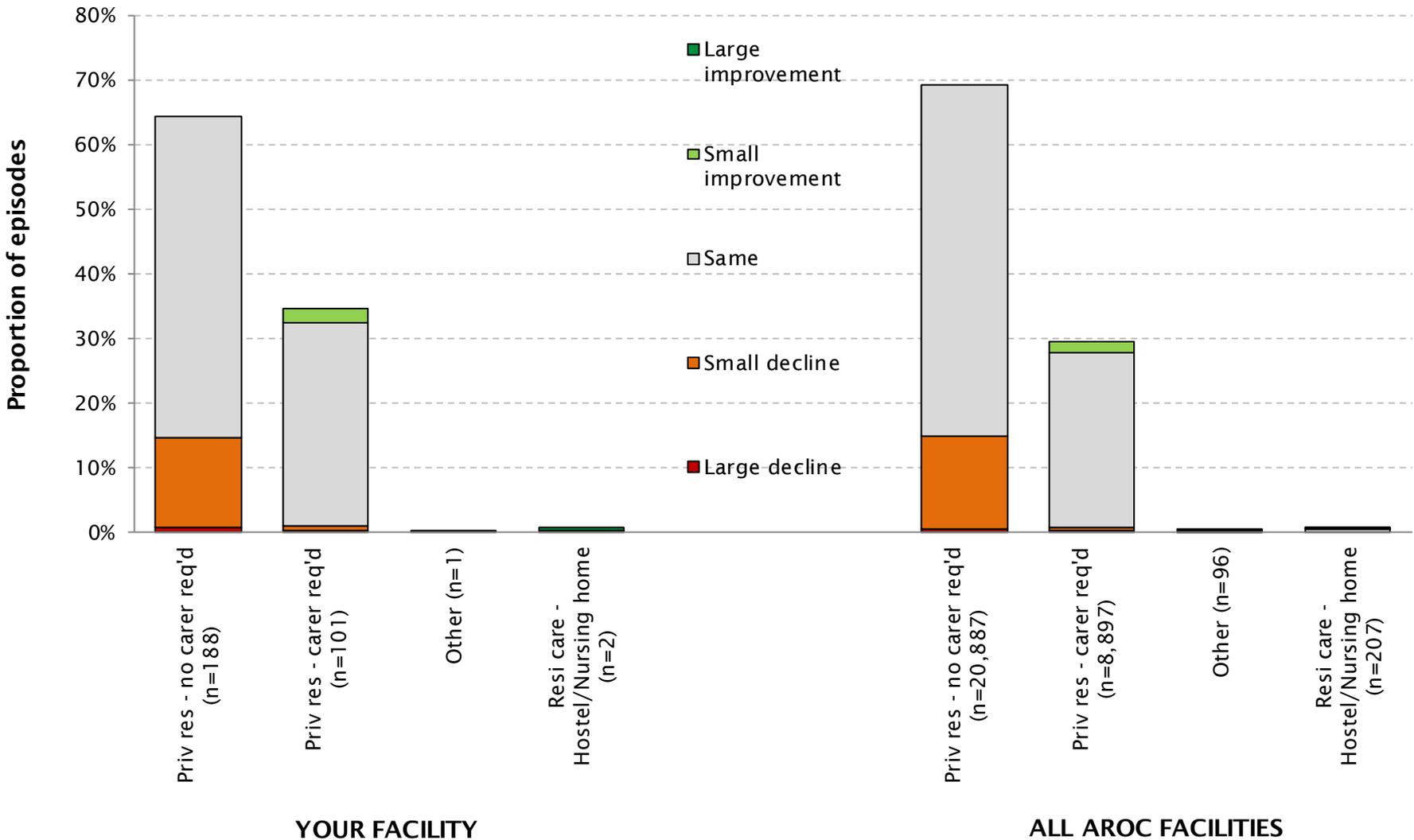


Carer status after this impairment	YOUR FACILITY		ALL AROC FACILITIES	
	No.	%	No.	%
NO CARER and DOES NOT need one	151	56.8	16,982	61.5
NO CARER and NEEDS one	6	2.3	258	0.9
CARER NOT living in	24	9.0	2,135	7.7
CARER living in - NOT codependent	62	23.3	6,332	22.9
CARER living in - codependent	23	8.6	1,924	7.0
Missing	19		1,844	
All episodes in private residence	285	100.0	29,475	100.0

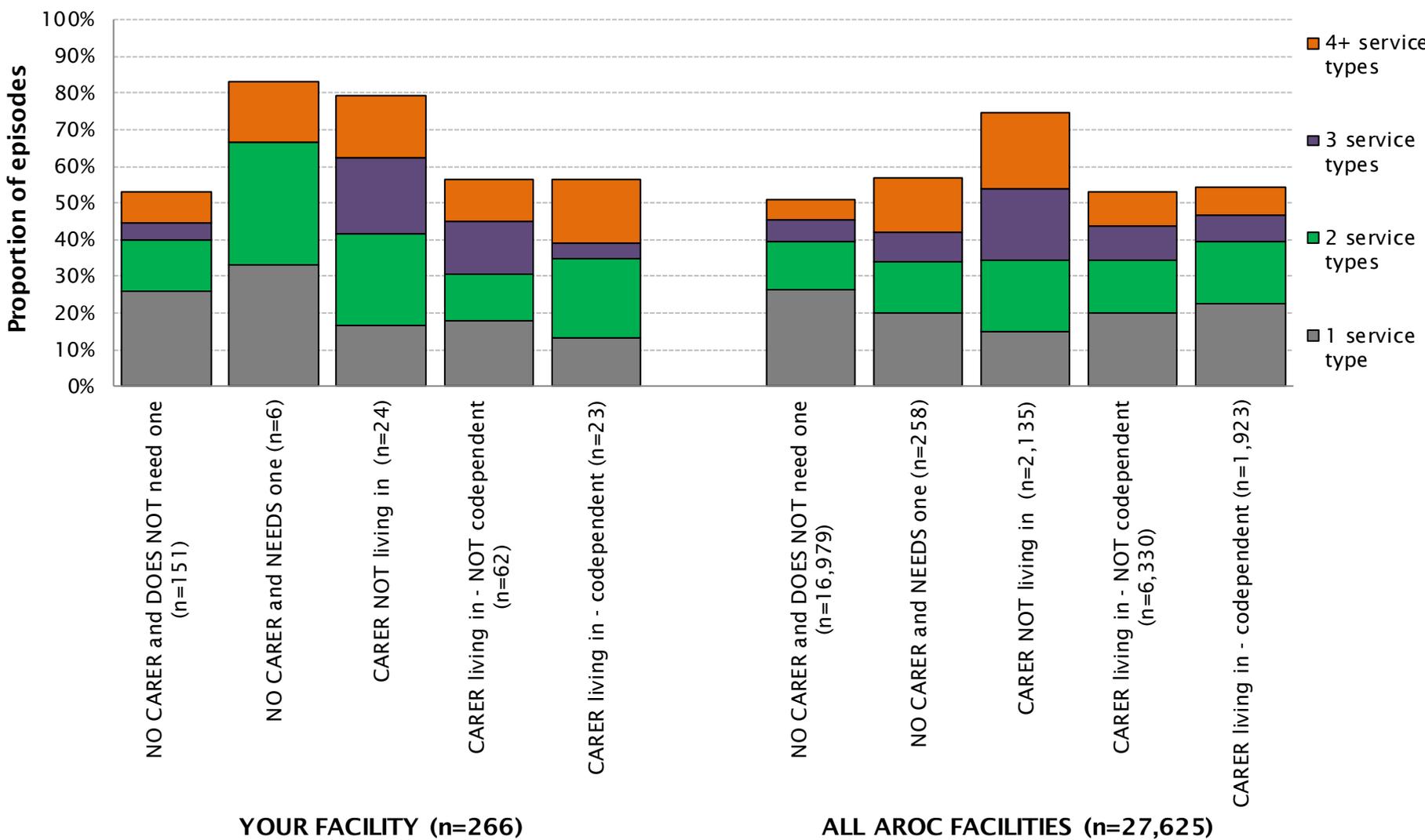
Any services received after this impairment?				
Carer status after this impairment	YOUR FACILITY		ALL AROC FACILITIES	
	Yes (%)	No (%)	Yes (%)	No (%)
NO CARER and DOES NOT need one	53.0	47.0	51.2	48.8
NO CARER and NEEDS one	83.3	16.7	57.0	43.0
CARER NOT living in	79.2	20.8	74.8	25.2
CARER living in - NOT codependent	56.5	43.5	53.1	46.9
CARER living in - codependent	56.5	43.5	54.2	45.8
All episodes in private residence	57.1	42.9	53.7	46.3

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

Change in prior accommodation on post discharge

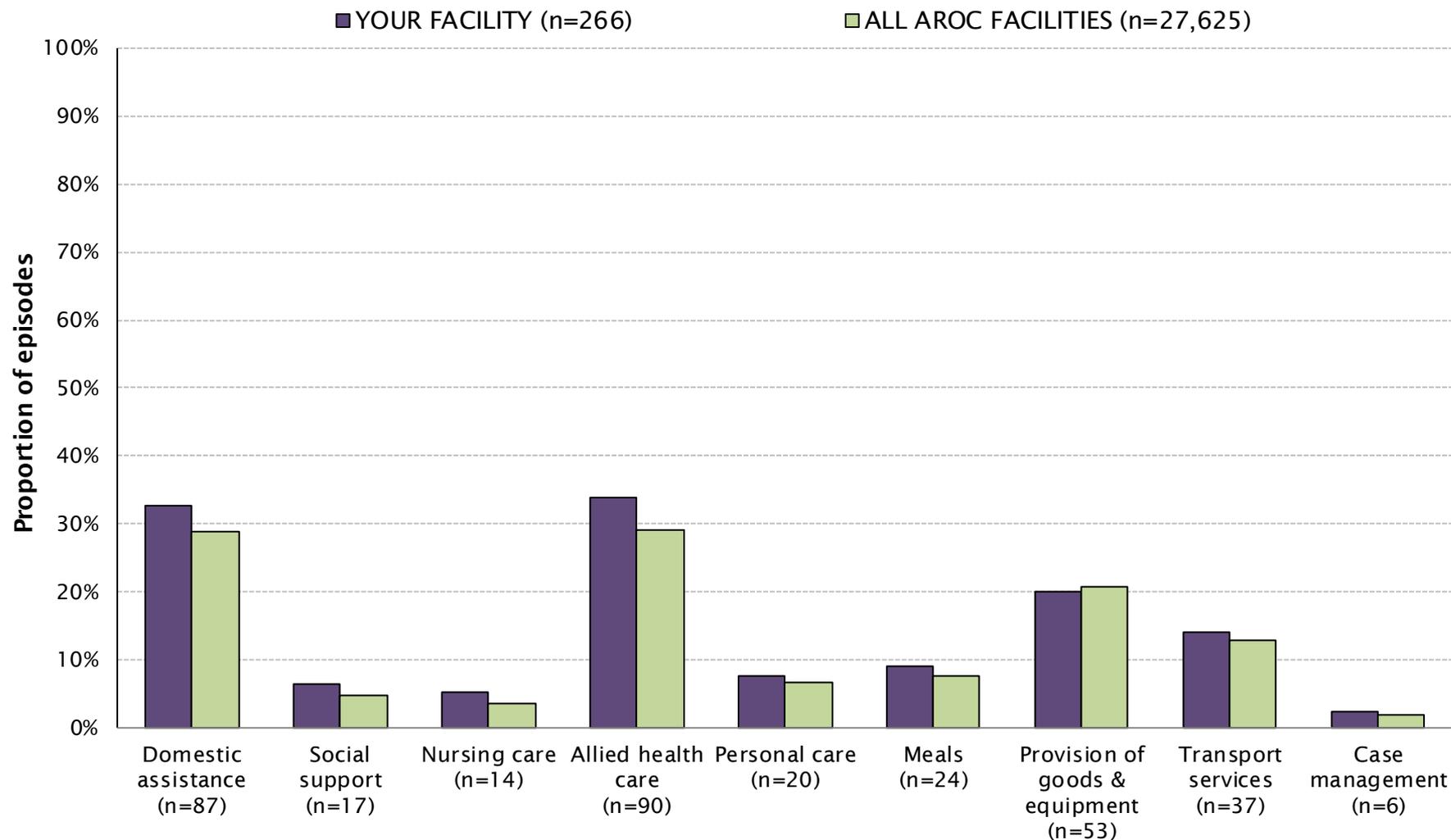


Number of services received post discharge by carer status



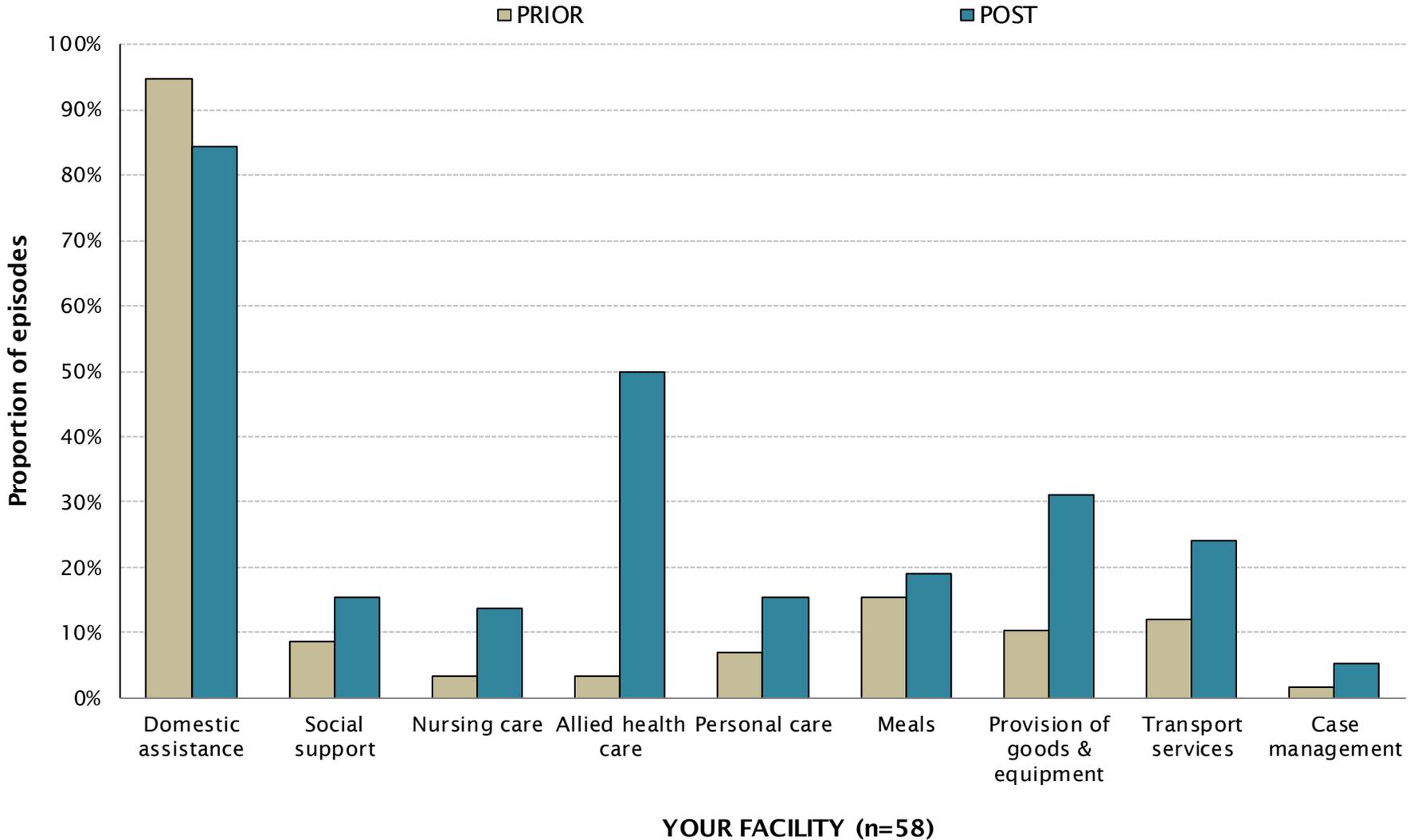
NOTE: Includes only those episodes whose final accommodation is private residence and with known carer status and known services status

Type of services received post discharge



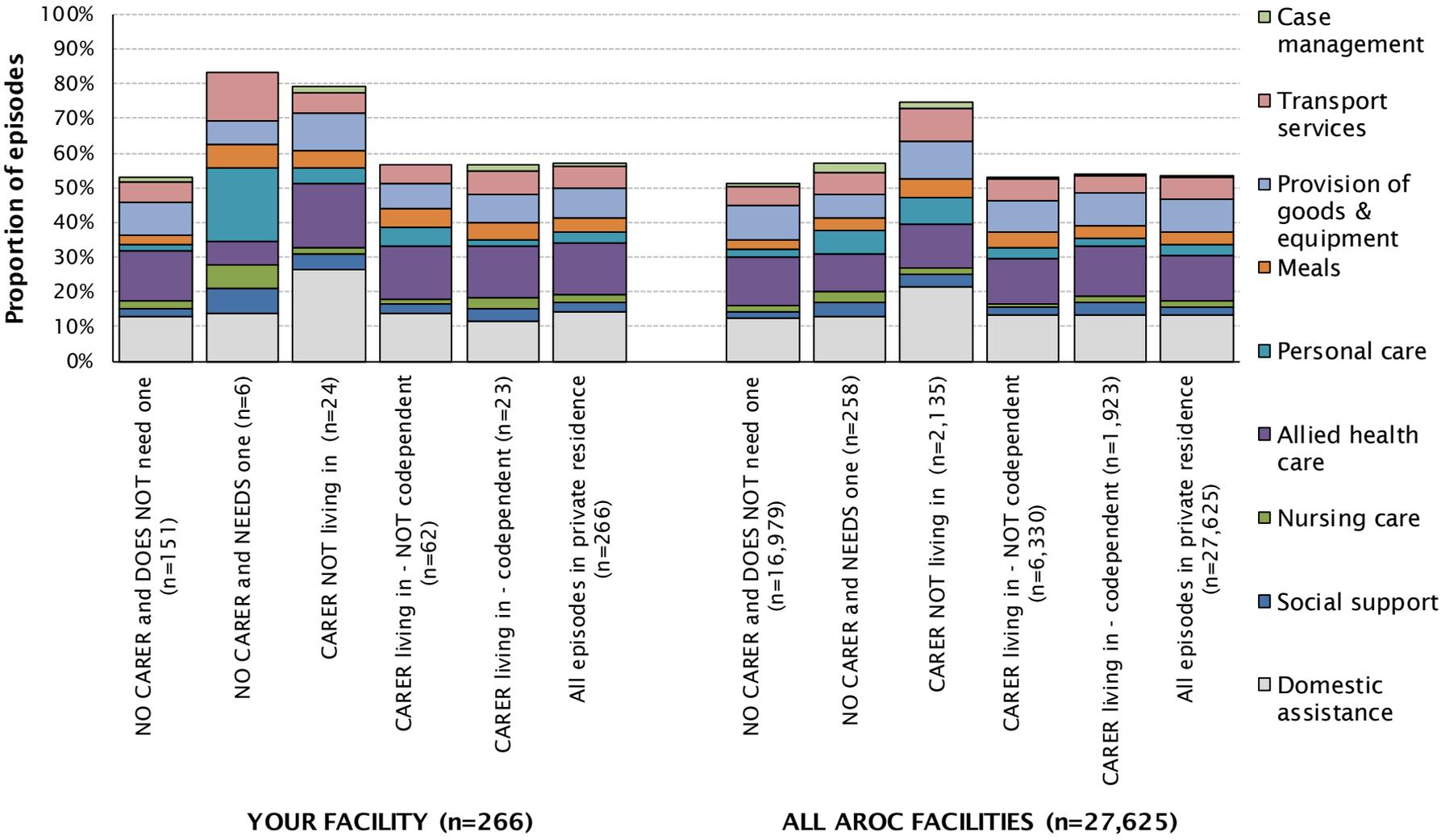
NOTE: Includes only those episodes whose final accommodation is private residence and with known carer status and known services status

Type of services received pre and post rehabilitation



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



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



Carer status post discharge - YOUR FACILITY						
Services received after 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	151	6	24	62	23	266
Percent of episodes receiving:						
No services	47.0	16.7	20.8	43.5	43.5	42.9
1 service type	25.8	33.3	16.7	17.7	13.0	22.2
2 service types	13.9	33.3	25.0	12.9	21.7	15.8
3 service types	4.6	0.0	20.8	14.5	4.3	8.3
4 or more service types	8.6	16.7	16.7	11.3	17.4	10.9
Service Type received						
Domestic assistance	26.5	33.3	70.8	33.9	30.4	32.7
Social support	4.6	16.7	12.5	6.5	8.7	6.4
Nursing care	5.3	16.7	4.2	3.2	8.7	5.3
Allied health care	29.8	16.7	50.0	37.1	39.1	33.8
Personal care	3.3	50.0	12.5	12.9	4.3	7.5
Meals	6.0	16.7	12.5	12.9	13.0	9.0
Provision of goods & equipment	19.2	16.7	29.2	17.7	21.7	19.9
Transport services	12.6	33.3	16.7	12.9	17.4	13.9
Case management	2.6	0.0	4.2	0.0	4.3	2.3

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 – National



Carer status post discharge - ALL AROC FACILITIES

Services received after 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	16,979	258	2,135	6,330	1,923	27,625
Percent of episodes receiving:						
No services	48.8	43.0	25.2	46.9	45.8	46.3
1 service type	26.2	20.2	15.0	20.0	22.5	23.6
2 service types	13.1	14.0	19.4	14.3	17.0	14.1
3 service types	5.9	7.8	19.6	9.3	7.1	7.8
4 or more service types	5.9	15.1	20.8	9.5	7.6	8.1
Service Type received						
Domestic assistance	24.0	36.4	61.6	31.0	27.4	28.9
Social support	3.8	10.9	10.1	4.2	8.2	4.8
Nursing care	3.3	8.1	6.3	3.0	3.0	3.5
Allied health care	27.7	31.0	36.2	29.7	30.1	29.0
Personal care	4.7	18.2	22.2	6.8	5.4	6.7
Meals	5.5	10.5	15.5	10.0	7.5	7.5
Provision of goods & equipment	19.7	18.6	30.3	20.7	19.2	20.7
Transport services	10.5	18.2	27.4	14.6	10.5	12.8
Case management	1.4	6.6	6.0	1.4	1.6	1.8

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 4, introduced in July 2016 and used in these reports, uses the episode's impairment, age, weighted FIM motor admission score and FIM cognition score to determine which of 50 inpatient (admitted overnight adult) rehabilitation classes the episode should be assigned to.

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

AROC

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

Benchmark group

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

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:

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.

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

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

Interquartile range (IQR)

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

Length of stay (LOS)

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

Mean

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

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.

Valid LOS

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

Version 4 data set

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

Appendix 2: AROC Impairment Codes

STROKE

Haemorrhagic

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

Ischaemic

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

BRAIN DYSFUNCTION

Non-traumatic

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

Traumatic

- 2.21 Open injury
- 2.22 Closed injury

NEUROLOGICAL CONDITIONS

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

SPINAL CORD DYSFUNCTION

Non traumatic spinal cord dysfunction

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

Traumatic spinal cord dysfunction

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

AMPUTATION OF LIMB

Not resulting from trauma

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

AMPUTATION OF LIMB

Resulting from trauma

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

ARTHRITIS

- 6.1 Rheumatoid arthritis
- 6.2 Osteoarthritis
- 6.9 Other arthritis

PAIN SYNDROMES

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

Appendix 2: AROC Impairment Codes

ORTHOPAEDIC CONDITIONS

Fractures (includes dislocation)

- 8.111 Fracture of hip, unilateral (incl. #NOF)
- 8.112 Fracture of hip, bilateral (incl. #NOF)
- 8.12 Fracture of shaft of femur
- 8.13 Fracture of pelvis
- 8.141 Fracture of knee
- 8.142 Fracture of lower leg, ankle, foot
- 8.15 Fracture of upper limb
- 8.16 Fracture of spine
- 8.17 Fracture of multiple sites
- 8.19 Other orthopaedic fracture

Post Orthopaedic Surgery

- 8.211 Unilateral hip replacement
- 8.212 Bilateral hip replacement
- 8.221 Unilateral knee replacement
- 8.222 Bilateral knee replacement
- 8.231 Knee and hip replacement, same side
- 8.232 Knee and hip replacement, diff sides
- 8.24 Shoulder replacement
- 8.25 Post spinal surgery
- 8.26 Other orthopaedic surgery

Soft tissue injury

- 8.3 Soft tissue injury

CARDIAC

- 9.1 Following recent onset of new cardiac impairment
- 9.2 Chronic cardiac insufficiency
- 9.3 Heart and heart/lung transplant

PULMONARY

- 10.1 Chronic obstructive pulmonary disease
- 10.2 Lung transplant
- 10.9 Other pulmonary

BURNS

- 11 Burns

CONGENITAL DEFORMITIES

- 12.1 Spina bifida
- 12.9 Other congenital deformity

OTHER DISABLING IMPAIRMENTS

- 13.1 Lymphoedema
- 13.3 Conversion disorder
- 13.9 Other disabling impairments that cannot be classified into a specific group

MAJOR MULTIPLE TRAUMA

- 14.1 Brain + spinal cord injury
- 14.2 Brain + multiple fracture/amputation
- 14.3 Spinal cord + multi fracture/amputation
- 14.9 Other multiple trauma

DEVELOPMENTAL DISABILITIES

- 15.1 Developmental disabilities (excludes cerebral palsy)

RE-CONDITIONING/RESTORATIVE

- 16.1 Re-conditioning following surgery
- 16.2 Reconditioning following medical illness
- 16.3 Cancer rehabilitation

Appendix 3: AN-SNAP V4 Overnight Rehabilitation Classes



Class Description of AN- SNAP class

4AZ1	Weighted FIM motor score 13- 18, Brain, Spine, MMT, Age ≥ 49
4AZ2	Weighted FIM motor score 13- 18, Brain, Spine, MMT, Age ≤ 48
4AZ3	Weighted FIM motor score 13- 18, All other impairments, Age ≥ 65
4AZ4	Weighted FIM motor score 13- 18, All other impairments, Age ≤ 64
4AA1	Stroke, weighted FIM motor 51- 91, FIM cognition 29- 35
4AA2	Stroke, weighted FIM motor 51- 91, FIM cognition 19- 28
4AA3	Stroke, weighted FIM motor 51- 91, FIM cognition 5- 18
4AA4	Stroke, weighted FIM motor 36- 50, Age ≥ 68
4AA5	Stroke, weighted FIM motor 36- 50, Age ≤ 67
4AA6	Stroke, weighted FIM motor 19- 35, Age ≥ 68
4AA7	Stroke, weighted FIM motor 19- 35, Age ≤ 67
4AB1	Brain dysfunction, weighted FIM motor 71- 91, FIM cognition 26- 35
4AB2	Brain dysfunction, weighted FIM motor 71- 91, FIM cognition 5- 25
4AB3	Brain dysfunction, weighted FIM motor 41- 70, FIM cognition 26- 35
4AB4	Brain dysfunction, weighted FIM motor 41- 70, FIM cognition 17- 25
4AB5	Brain dysfunction, weighted FIM motor 41- 70, FIM cognition 5- 16
4AB6	Brain dysfunction, weighted FIM motor 29- 40
4AB7	Brain dysfunction, weighted FIM motor 19- 28
4AC1	Neurological conditions, weighted FIM motor 62- 91
4AC2	Neurological conditions, weighted FIM motor 43- 61
4AC3	Neurological conditions, weighted FIM motor 19- 42
4AD1	Spinal cord dysfunction, Age ≥ 50, weighted FIM motor 42- 91
4AD2	Spinal cord dysfunction, Age ≥ 50, weighted FIM motor 19- 41
4AD3	Spinal cord dysfunction, Age ≤ 49, weighted FIM motor 34- 91
4AD4	Spinal cord dysfunction, Age ≤ 49, weighted FIM motor 19- 33

Class Description of AN- SNAP class

4AE1	Amputation of limb, Age ≥ 54, weighted FIM motor 68- 91
4AE2	Amputation of limb, Age ≥ 54, weighted FIM motor 31- 67
4AE3	Amputation of limb, Age ≥ 54, weighted FIM motor 19- 30
4AE4	Amputation of limb, Age ≤ 53, weighted FIM motor 19- 91
4AH1	Orthopaedic conditions, fractures, weighted FIM motor 49- 91, FIM cognition 33- 35
4AH2	Orthopaedic conditions, fractures, weighted FIM motor 49- 91, FIM cognition 5- 32
4AH3	Orthopaedic conditions, fractures, weighted FIM motor 38- 48
4AH4	Orthopaedic conditions, fractures, weighted FIM motor 19- 37
4A21	Orthopaedic conditions, all other, weighted FIM motor 68- 91
4A22	Orthopaedic conditions, all other, weighted FIM motor 50- 67
4A23	Orthopaedic conditions, all other, weighted FIM motor 19- 49
4A31	Cardiac, Pain syndromes, Pulmonary, weighted FIM motor 72- 91
4A32	Cardiac, Pain syndromes, Pulmonary, weighted FIM motor 55- 71
4A33	Cardiac, Pain syndromes, Pulmonary, weighted FIM motor 34- 54
4A34	Cardiac, Pain syndromes, Pulmonary, weighted FIM motor 19- 33
4AP1	Major Multiple Trauma, weighted FIM motor 19- 91
4AR1	Reconditioning, weighted FIM motor 67- 91
4AR2	Reconditioning, weighted FIM motor 50- 66, FIM cognition 26- 35
4AR3	Reconditioning, weighted FIM motor 50- 66, FIM cognition 5- 25
4AR4	Reconditioning, weighted FIM motor 34- 49, FIM cognition 31- 35
4AR5	Reconditioning, weighted FIM motor 34- 49, FIM cognition 5- 30
4AR6	Reconditioning, weighted FIM motor 19- 33
4A91	All other impairments, weighted FIM motor 55- 91
4A92	All other impairments, weighted FIM motor 33- 54
4A93	All other impairments, weighted FIM motor 19- 32
499A	Adult Overnight Rehabilitation - Ungroupable

- **AROC wish to acknowledge the valuable contributions made by:**
 - Members of the Management Advisory Group of the Australasian Rehabilitation Outcomes Centre
 - Members of the Scientific and Clinical Advisory Committee of the Australasian Rehabilitation Outcomes Centre
 - The many staff from the rehabilitation facilities who have spent a great deal of time and care to collect, collate and correct the data, without whose considerable effort these reports would not be possible.
- **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.
- **Copyright**

This work is copyright. It may be produced in whole or in part for study or training purposes subject to the inclusion of an acknowledgment of the source and no commercial usage or sale. Reproduction for purposes other than those above requires the written permission of AROC.
- **Suggested acknowledgement**

Anywhere Hospital AROC Impairment Specific Report on Orthopaedic Replacements (Inpatient - pathway 3), July 2017 – June 2018. Australasian Rehabilitation Outcomes Centre (2018).

Australasian **R**ehabilitation **O**utcomes **C**entre
Australian Health Services Research Institute
iC Enterprise 1, Innovation Campus
University of Wollongong NSW 2522
Phone: +61 2 4221 4411
Email: aroc@uow.edu.au
Web: aroc.org.au