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AROC impairment specific report inpatient – pathway 3 spinal cord dysfunction Anywhere Hospital January 2015 – December 2015

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AROC impairment specific report inpatient – pathway 3 spinal cord dysfunction Anywhere Hospital January 2015 – December 2015

Abstract

This is the second AROC Impairment Specific Report for spinal cord dysfunction which compares YOUR FACILITY's data to data from SPECIALIST spinal cord dysfunction services and data from NON-SPECIALIST spinal cord dysfunction services (Australia and New Zealand). Each Impairment Specific Report is structured as a series of chapters. Each report will present an overall big picture chapter on the impairment followed by a chapter looking at FIM item scoring at YOUR FACILITY. An outcomes analysis chapter followed by an explanatory data chapter. At the end is analysis by impairment specific data items.

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AROC Impairment Specific Report Inpatient – Pathway 3 SPINAL CORD DYSFUNCTION

Anywhere Hospital

January 2015 — December 2015



Australasian Faculty

of Rehabilitation

Medicine

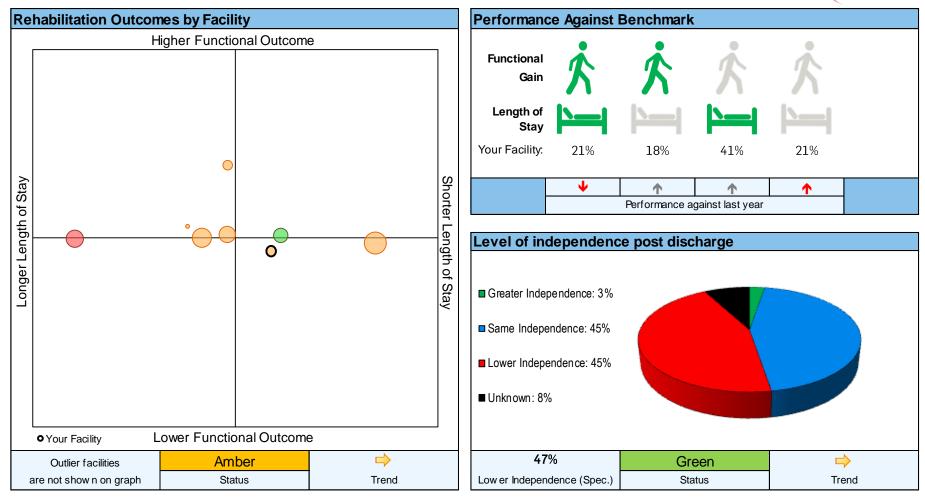


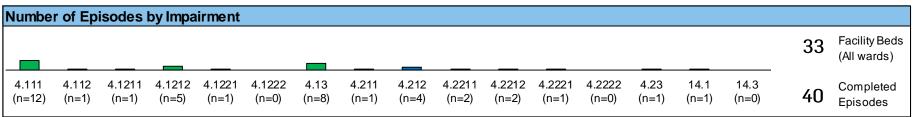


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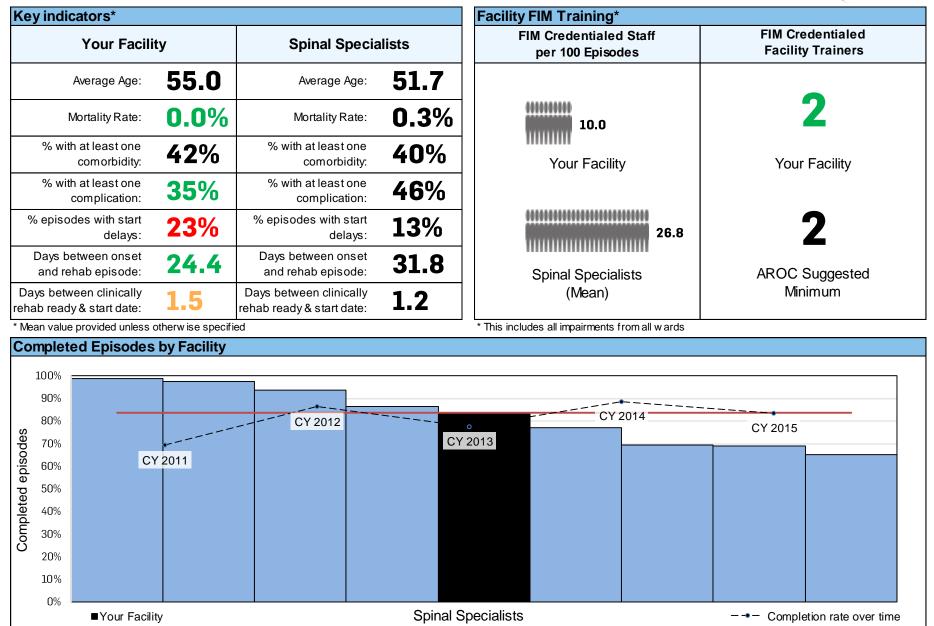
Spinal Injury Dashboard (CY 2015)





Spinal Injury Dashboard (CY 2015)

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Introducing the Impairment Specific Reports

This is the second AROC Impairment Specific Report for spinal cord dysfunction which compares YOUR FACILITY's data to data from SPECIALIST spinal cord dysfunction services and data from NON-SPECIALIST spinal cord dysfunction services (Australia and New Zealand). Each Impairment Specific Report is structured as a series of chapters. Each report will present an overall big picture chapter on the impairment followed by a chapter looking at FIM item scoring at YOUR FACILITY. An outcomes analysis chapter followed by an explanatory data chapter. At the end is analysis by impairment specific data items.

While SPECIALIST data includes all SPECIALIST facilities with data on this impairment and NON-SPECIALIST data includes all NON-SPECIALIST facilities with data on this impairment, facilities will only receive this report if they are considered a SPECIALIST facility.

AROC welcomes your feedback on this report.

NOTE: This report should be considered in conjunction with the Outcome Benchmarks Report for your facility.



Data used in this report

This report summarises Spinal Cord Dysfunction episodes in calendar year 2015 (1 January 2015 to 31 December 2015) collected in the V4 data set - Pathway 3 (inpatient direct care). Unit of counting is by concatenated* episode, not by patient.

All tables and graphs present calendar year 2015 data unless otherwise indicated, and the number of episodes from Anywhere Hospital in 2015 are provided. Where there are less than five episodes within a subgroup, summary data are not provided.

Casemix analysis uses the version 4 AN-SNAP classes (Appendix 3), introduced July 2016. Casemix adjustment is against all SPECIALIST units.

NOTE: Appendix 1 (Glossary) contains definitions of concepts referred to in this report. An understading of these will help with interpretation of the data.

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



Spinal cord dysfunction impairment codes

Spinal cord dysfunction episodes were identified as those with the following AROC impairment codes:

Non-Traumatic

- 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

- 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
- 14.1 Major Multiple Trauma, Brain + Spinal cord injury
- 14.3 Major Multiple Trauma, Spinal cord injury + multi fracture/amputation

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



Spinal cord dysfunction AN-SNAP classes

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

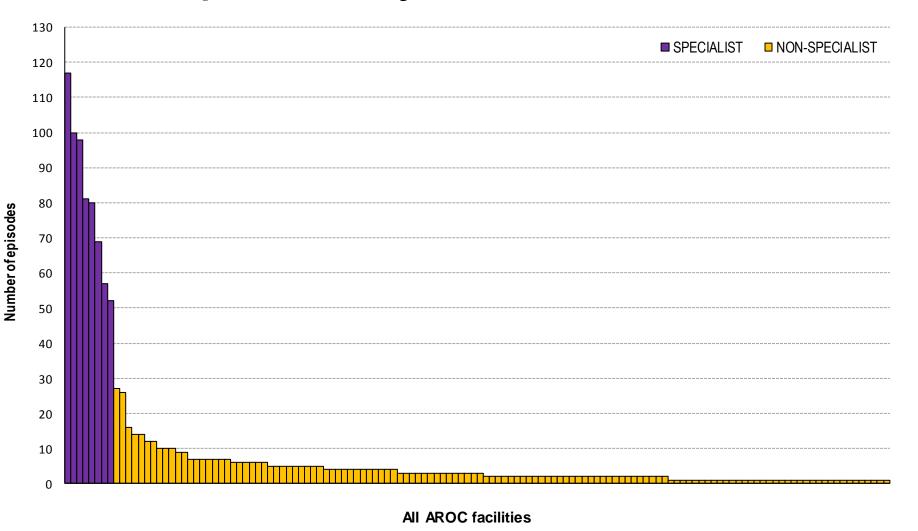
- 4AD1 Spinal cord dysfunction, Age \geq 50, weighted FIM motor 42-91
- 4AD2 Spinal cord dysfunction, Age \geq 50, weighted FIM motor 19-41
- 4AD3 Spinal cord dysfunction, Age \leq 49, weighted FIM motor 34-91
- 4AD4 Spinal cord dysfunction, Age \leq 49, weighted FIM motor 19-33
- 4AP1 Major Multiple Trauma, weighted FIM motor 19-91
- 4AZ1 Weighted FIM motor score 13-18, Spine, MMT, Age \geq 49
- 4AZ2 Weighted FIM motor score 13-18, Spine, MMT, Age \leq 48

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



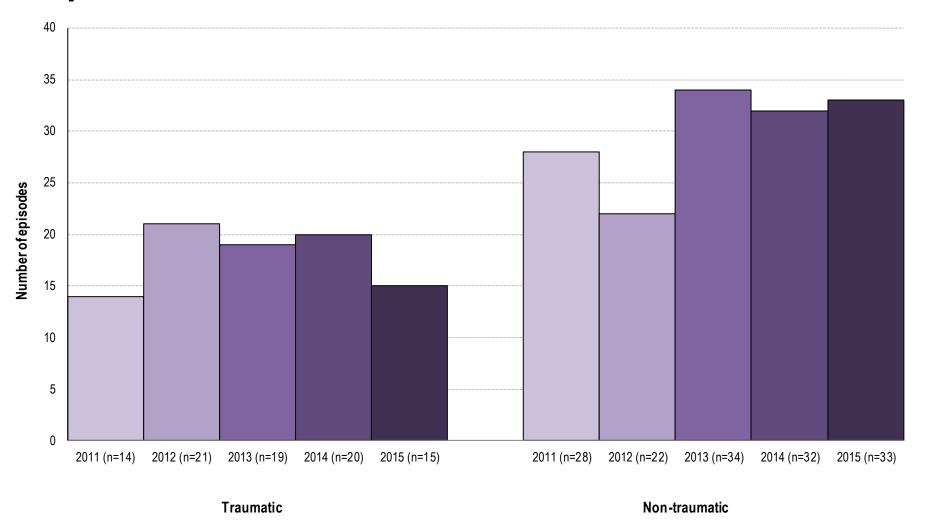
The BIG picture

Volume of episodes by facilities treating spinal cord dysfunction



AROC Impairment Specific Report on Spinal Impairments (Inpatient - pathway 3) — Anywhere Hospital — Jan-Dec 2015

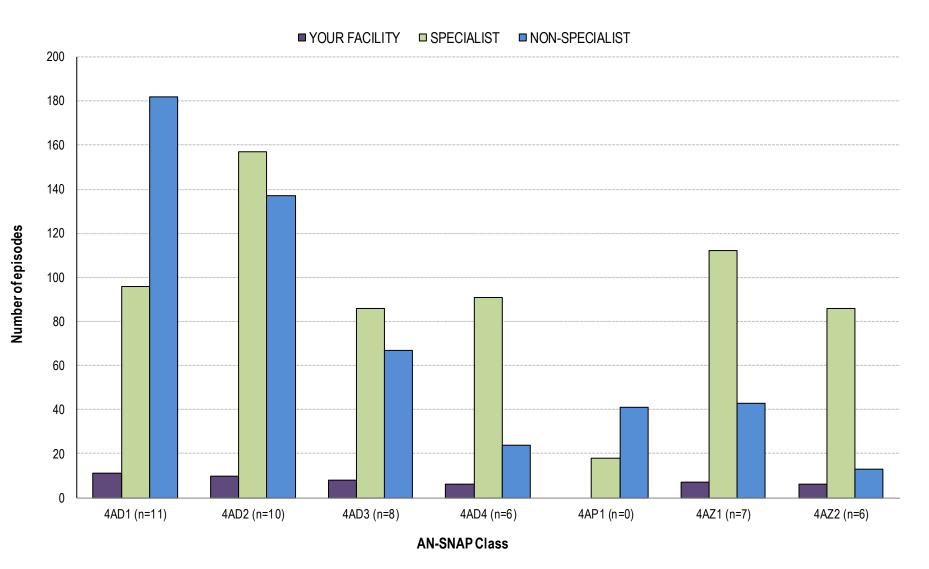
Number of traumatic and non-traumatic episodes over time – YOUR FACILITY



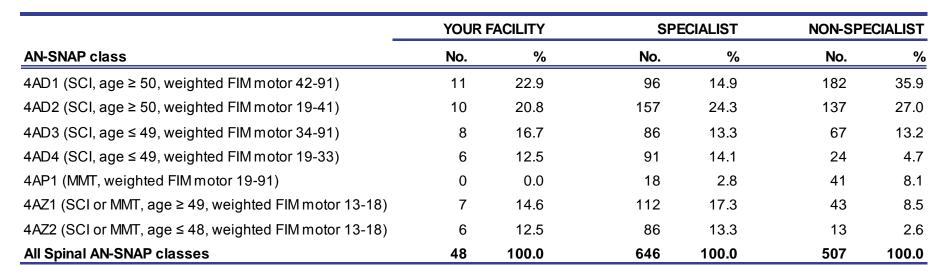
YOURFACILITY

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Number of episodes by AN-SNAP class



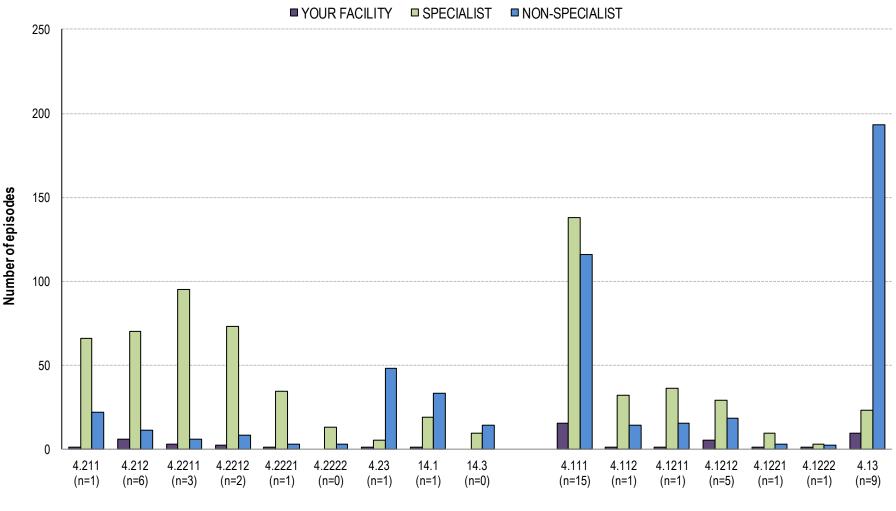
Number of episodes by AN-SNAP class



Note: 0 episode(s) at YOUR FACILITY, 8 episode(s) at SPECIALIST facilities and 2 episode(s) at NON-SPECIALIST facilities had an AN-SNAP class of 499A.



Number of traumatic and non-traumatic episodes by impairment



Impairment Code

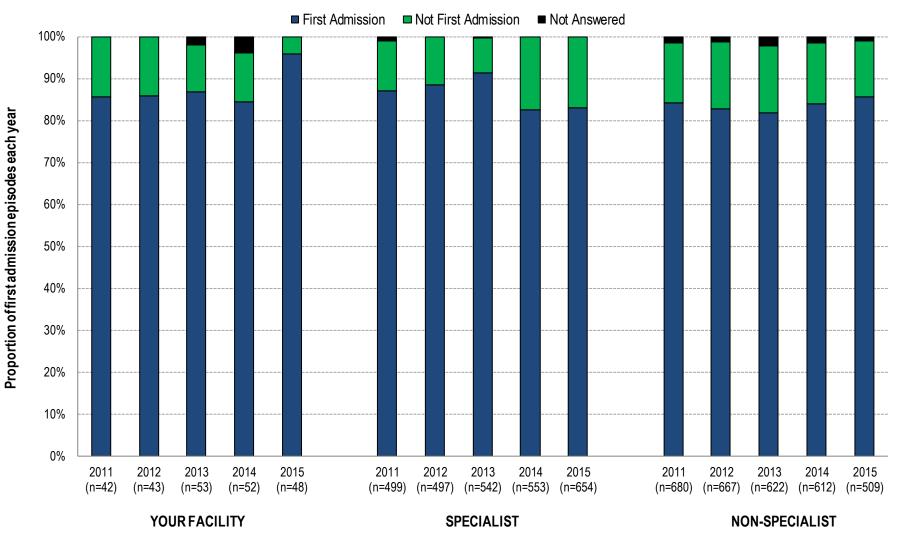
Traumatic and non-traumatic episodes by impairment



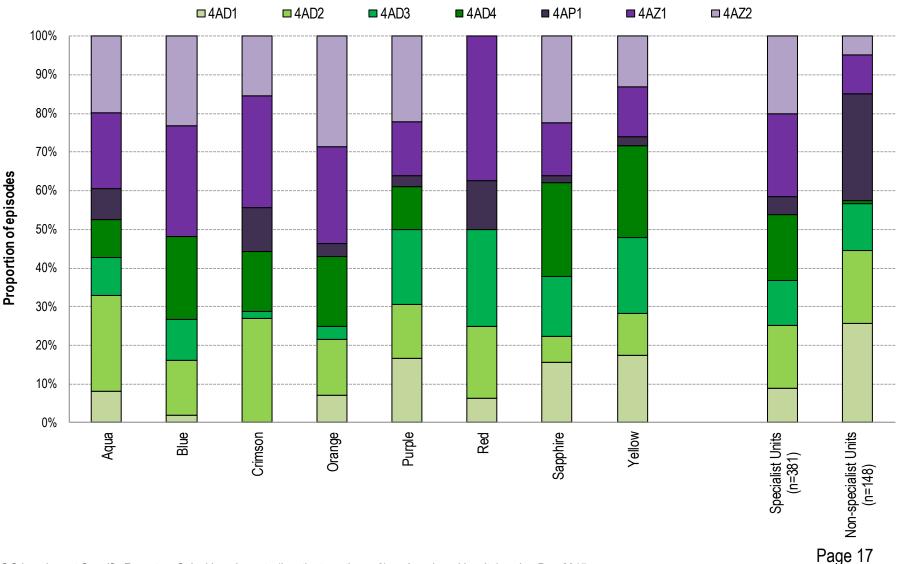
	YOUR	FACILITY	SP	ECIALIST	NON-SPECIALIST			
Impairment	No.	%	No.	%	No.	%		
Traumatic impairments								
4.211 Para-Inc	1	6.7	66	17.2	22	14.9		
4.212 Para-Comp	6	40.0	70	18.2	11	7.4		
4.2211 Quad-Inc C1-4	3	20.0	95	24.7	6	4.1		
4.2212 Quad-Inc C5-8	2	13.3	73	19.0	8	5.4		
4.2221 Quad-Comp C1-4	1	6.7	34	8.9	3	2.0		
4.2222 Quad-Comp C5-8	0	0.0	13	3.4	3	2.0		
4.23 Other TSCI	1	6.7	5	1.3	48	32.4		
14.1 MMT: brain+spine	1	6.7	19	4.9	33	22.3		
14.3 MMT: spine+other	0	0.0	9	2.3	14	9.5		
Total TSCI	15	100.0	384	100.0	148	100.0		
Non-traumatic impairments								
4.111 Para-Inc	15	45.5	138	51.1	116	32.1		
4.112 Para-Comp	1	3.0	32	11.9	14	3.9		
4.1211 Quad-Inc C1-4	1	3.0	36	13.3	15	4.2		
4.1212 Quad-Inc C5-8	5	15.2	29	10.7	18	5.0		
4.1221 Quad-Comp C1-4	1	3.0	9	3.3	3	0.8		
4.1222 Quad-Comp C5-8	1	3.0	3	1.1	2	0.6		
4.13 Other NTSCI	9	27.3	23	8.5	193	53.5		
Total NTSCI	33	100.0	270	100.0	361	100.0		
TOTAL SCI	48		654		509			



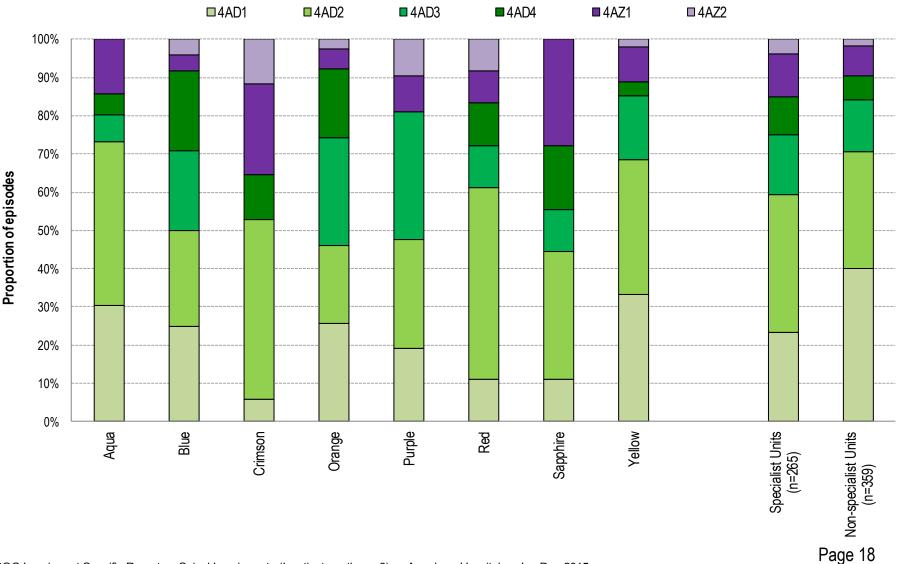
Proportion of first admission episodes over time



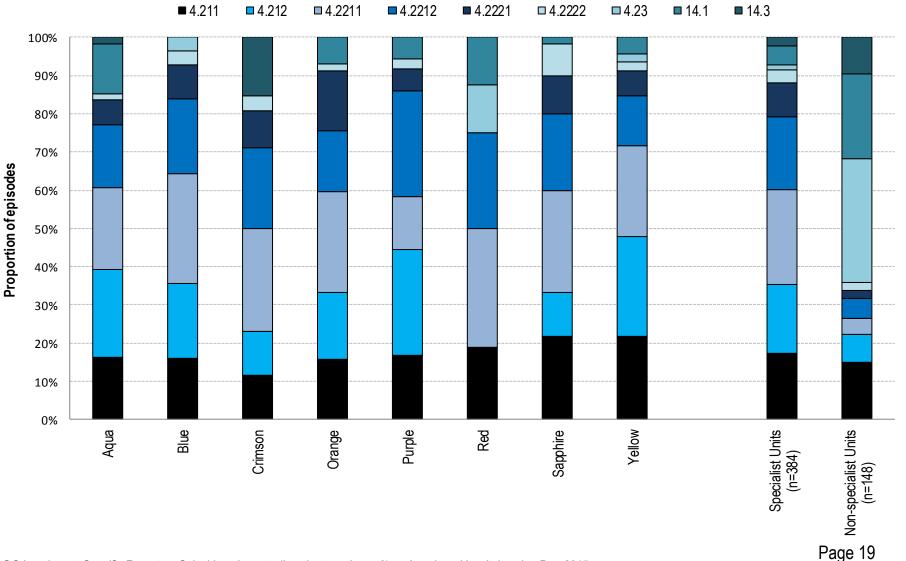
Proportion of traumatic episodes by facility by AN-SNAP class



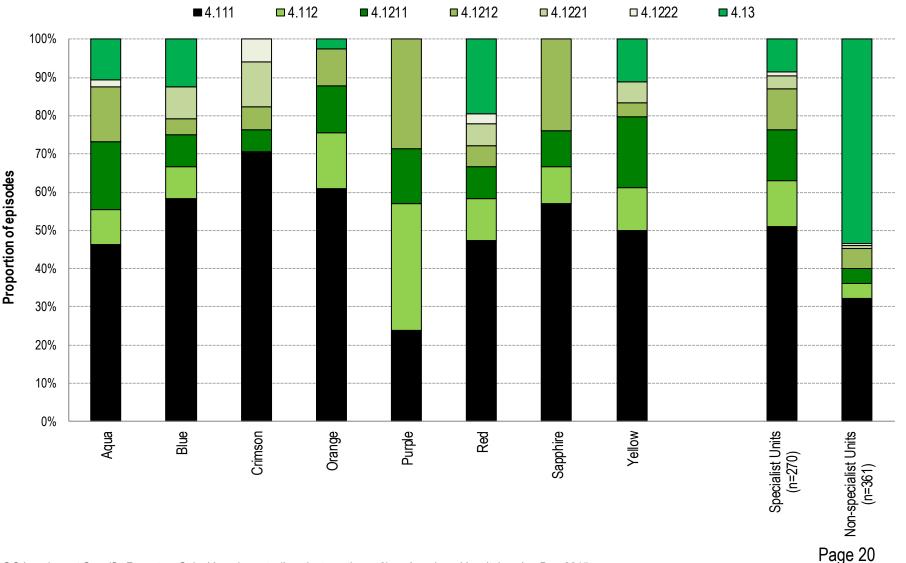
Proportion of non-traumatic episodes by facility by AN-SNAP class



Proportion of traumatic episodes by impairment by facility



Proportion of non-traumatic episodes by Impairment by facility



Traumatic and non-traumatic episodes by impairment by AN-SNAP class

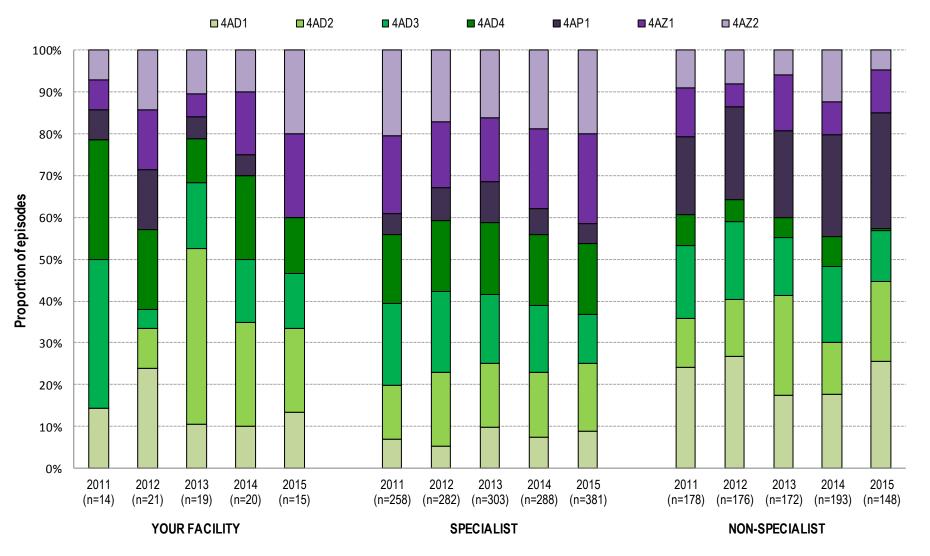
Traumatic				YOUR FA	CILITY				TOTAL	SPECIALIST	NON-
Impairment	4AD1	4AD2	4AD3	4AD4	4AP1	4AZ1	4AZ2		IOTAL		SPECIALIST
4.211 Para-Inc		1	0	0	0	0	0	0	1	65	22
4.212 Para-Comp		1	1	1	2	0	0	1	6	70	11
4.2211 Quad-Inc C1-4		0	1	1	0	0	0	1	3	95	6
4.2212 Quad-Inc C5-8		0	0	0	0	0	1	1	2	73	8
4.2221 Quad-Comp C1-4		0	0	0	0	0	1	0	1	33	3
4.2222 Quad-Comp C5-8		0	0	0	0	0	0	0	0	12	3
4.23 Other TSCI		0	1	0	0	0	0	0	1	5	48
14.1 MMT: brain+spine		0	0	0	0	0	1	0	1	19	33
14.3 MMT: spine+other		0	0	0	0	0	0	0	0	9	14
Total		2	3	2	2	0	3	3	15	381	148
SPECIALIST		34	62	44	65	18	82	76	381		
NON-SPECIALIST		38	28	18	1	41	15	7	148		

Non-traumatic		۱	OUR FACILITY	YOUR FACILITY									
Impairment	4AD1	4AD2	4AD3	4AD4		TOTAL	SPECIALIST	SPECIALIST					
4.111 Para-Inc		3	6	2	4	15	135	115					
4.112 Para-Comp		0	0	1	0	1	32	14					
4.1211 Quad-Inc C1-4		0	0	0	0	0	35	15					
4.1212 Quad-Inc C5-8		0	1	1	0	2	28	17					
4.1221 Quad-Comp C1-4		0	0	0	0	0	9	3					
4.1222 Quad-Comp C5-8		0	0	0	0	0	3	2					
4.13 Other NTSCI		6	0	2	0	8	23	193					
Total		9	7	6	4	26	265	359					
SPECIALIST		62	95	42	26	225							
NON-SPECIALIST		144	109	49	23	325							

Note: 0 episode(s) at YOUR FACILITY, 8 episode(s) at SPECIALIST facilities and 2 episode(s) at NON-SPECIALIST facilities had an AN-SNAP class of 499A.



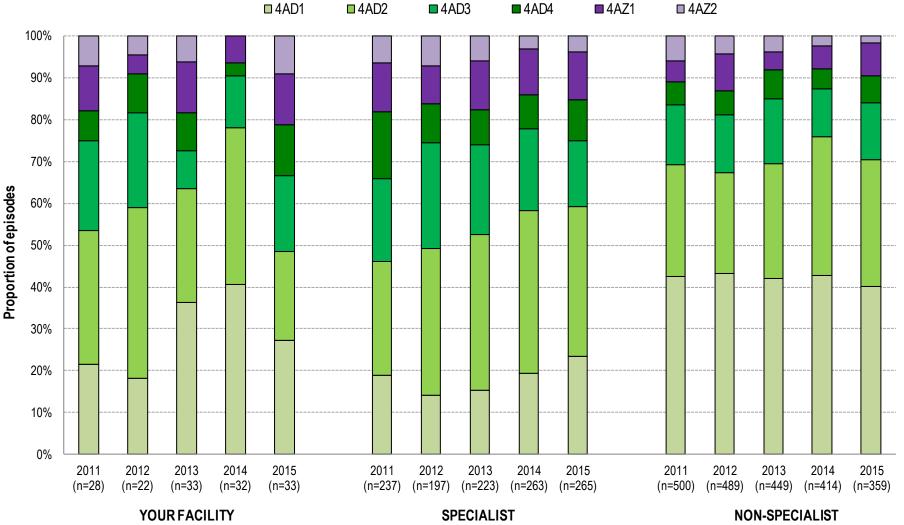
Proportion of traumatic episodes by AN-SNAP class over time



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Proportion of non-traumatic episodes by AN-SNAP class over time



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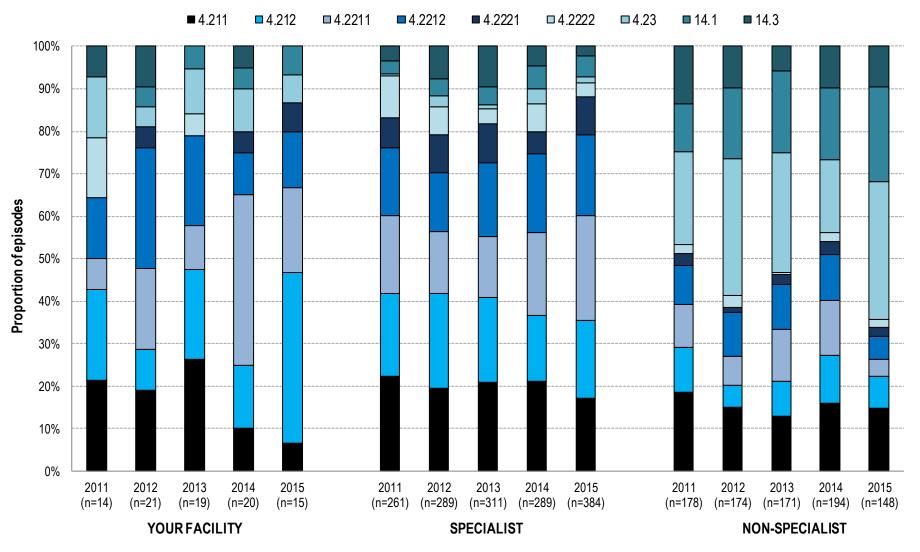


Traumatic and non-traumatic episodes by AN-SNAP class over time

Traumatic	YOUR FACILITY					SPECIALIST						NON-SPECIALIST				
AN-SNAP class	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	
4AD1 (SCI, age ≥ 50, weighted FIM motor 42-91)	2	5	2	2	2	18	15	30	21	34	43	47	30	34	38	
4AD2 (SCI, age \geq 50, weighted FIM motor 19-41)	0	2	8	5	3	33	50	46	45	62	21	24	41	24	28	
4AD3 (SCI, age \leq 49, weighted FIM motor 34-91)	5	1	3	3	2	51	54	50	46	44	31	33	24	35	18	
4AD4 (SCI, age \leq 49, weighted FIM motor 19-33)	4	4	2	4	2	42	48	52	49	65	13	9	8	14	1	
4AP1 (MMT, weighted FIM motor 19-91)	1	3	1	1	0	13	22	30	18	18	33	39	36	47	41	
4AZ1 (SCI or MMT, age ≥ 49, weighted FIM motor 13-18)	1	3	1	3	3	48	45	46	55	82	21	10	23	15	15	
4AZ2 (SCI or MMT, age ≤ 48, weighted FIM motor 13-18)	1	3	2	2	3	53	48	49	54	76	16	14	10	24	7	
All Spinal AN-SNAP classes	14	21	19	20	15	258	282	303	288	381	178	176	172	193	148	

Non-traumatic		YOU	IR FACILITY	(SPECIALIST						NON-SPECIALIST				
AN-SNAP class	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	
4AD1 (SCI, age ≥ 50, weighted FIM motor 42-91)	6	4	12	13	9	45	28	34	51	62	213	212	189	177	144	
4AD2 (SCI, age ≥ 50, weighted FIM motor 19-41)	9	9	9	12	7	64	69	83	102	95	134	118	123	138	109	
4AD3 (SCI, age ≤ 49, weighted FIM motor 34-91)	6	5	3	4	6	47	50	48	52	42	71	67	70	47	49	
4AD4 (SCI, age ≤ 49, weighted FIM motor 19-33)	2	2	3	1	4	38	18	19	21	26	27	28	31	20	23	
4AZ1 (SCI or MMT, age ≥ 49, weighted FIM motor 13-18)	3	1	4	2	4	28	18	26	29	30	26	44	19	23	28	
4AZ2 (SCI or MMT, age ≤ 48, weighted FIM motor 13-18)	2	1	2	0	3	15	14	13	8	10	29	20	17	9	6	
All Spinal AN-SNAP classes	28	22	33	32	33	237	197	223	263	265	500	489	449	414	359	

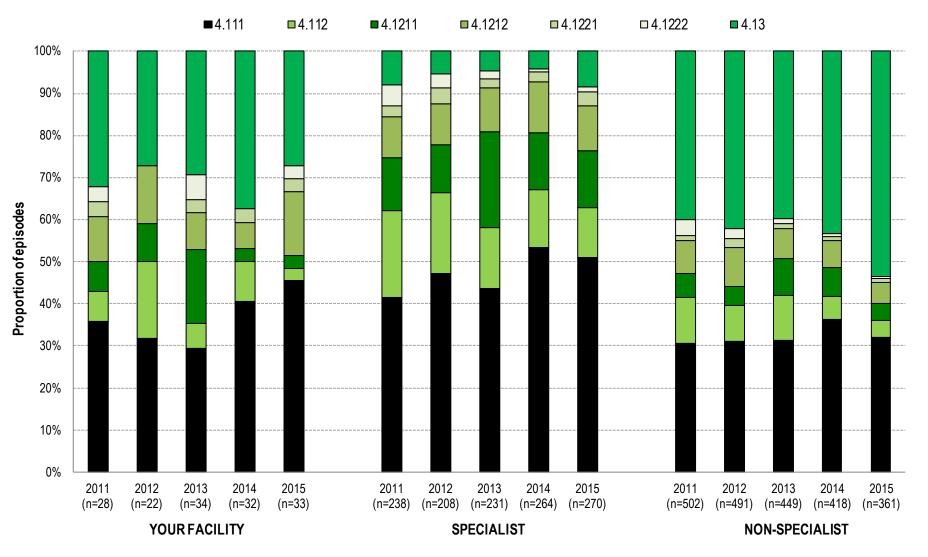
Proportion of traumatic episodes by impairment over time



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Proportion of non-traumatic episodes by impairment over time

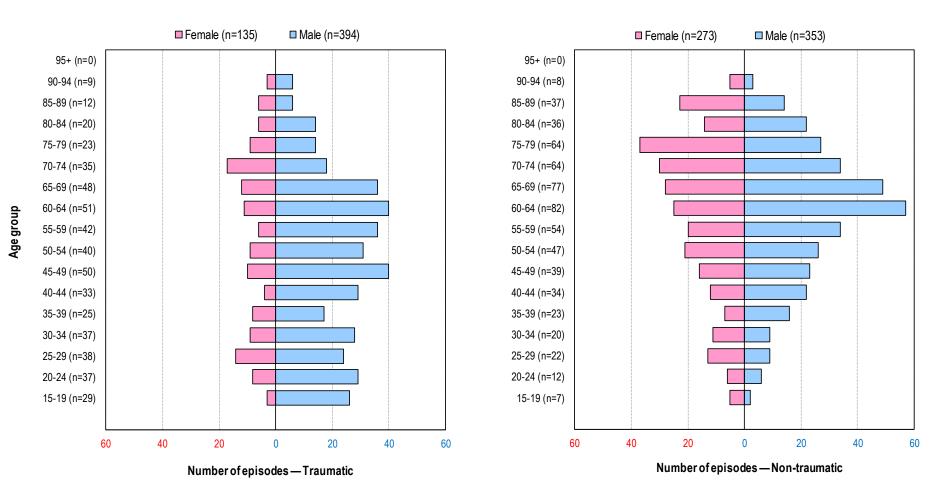




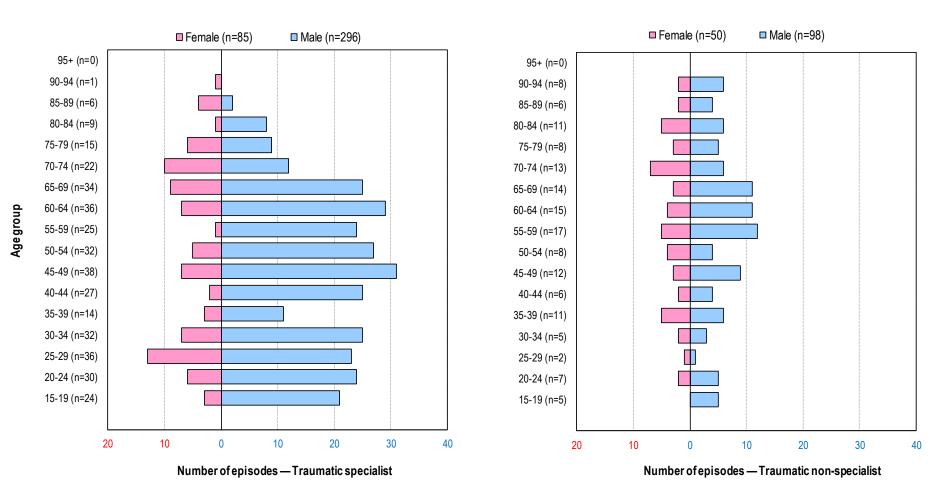
Traumatic and non-traumatic episodes by impairment over time

		YOU	R FACILITY	1			SP	ECIALIST				NON-	SPECIALIS	бт	
Impairment	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Traumatic impairments															
4.211 Para-Inc	3	4	5	2	1	58	56	65	61	66	33	26	22	31	22
4.212 Para-Comp	3	2	4	3	6	51	65	62	45	70	19	9	14	22	11
4.2211 Quad-Inc C1-4	1	4	2	8	3	48	42	45	56	95	18	12	21	25	6
4.2212 Quad-Inc C5-8	2	6	4	2	2	42	40	54	54	73	16	18	18	21	8
4.2221 Quad-Comp C1-4	0	1	0	1	1	18	26	28	15	34	5	2	4	6	3
4.2222 Quad-Comp C5-8	2	0	1	0	0	26	19	11	19	13	4	5	1	4	3
4.23 Other TSCI	2	1	2	2	1	1	7	3	10	5	39	56	48	33	48
14.1 MMT: brain+spine	0	1	1	1	1	8	12	13	16	19	20	29	33	33	33
14.3 MMT: spine+other	1	2	0	1	0	9	22	30	13	9	24	17	10	19	14
Total TSCI	14	21	19	20	15	261	289	311	289	384	178	174	171	194	148
Non-traumatic impairments															
4.111 Para-Inc	10	7	10	13	15	99	98	101	141	138	153	152	141	152	116
4.112 Para-Comp	2	4	2	3	1	49	40	33	36	32	55	42	48	22	14
4.1211 Quad-Inc C1-4	2	2	6	1	1	30	24	53	36	36	29	23	39	29	15
4.1212 Quad-Inc C5-8	3	3	3	2	5	23	20	24	32	29	39	45	32	27	18
4.1221 Quad-Comp C1-4	1	0	1	1	1	6	8	5	6	9	6	11	5	4	3
4.1222 Quad-Comp C5-8	1	0	2	0	1	12	7	4	2	3	19	11	6	3	2
4.13 Other NTSCI	9	6	10	12	9	19	11	11	11	23	201	207	178	181	193
Total NTSCI	28	22	34	32	33	238	208	231	264	270	502	491	449	418	361
TOTAL SCI	42	43	53	52	48	499	497	542	553	654	680	665	620	612	509

Number of traumatic and non-traumatic episodes by age group by sex

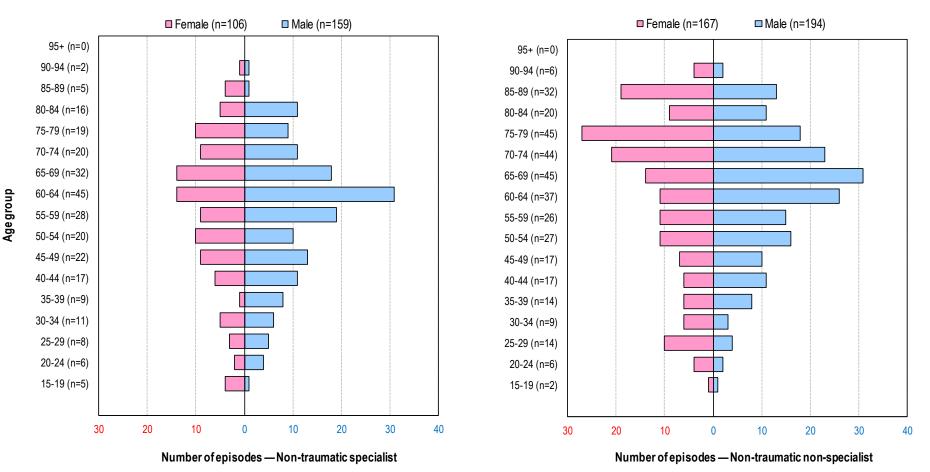


Number of traumatic specialist and non specialist episodes by age group by sex



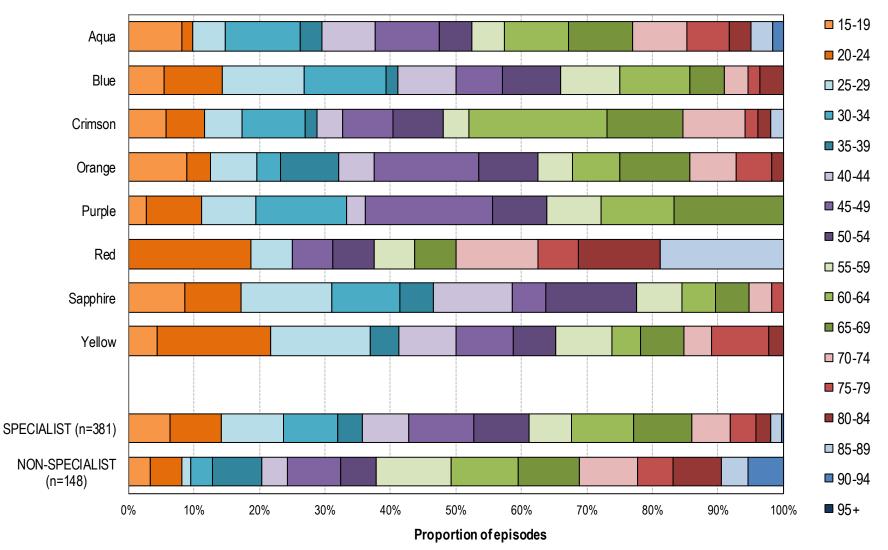


Number of non-traumatic specialist and non specialist episodes by age group by sex





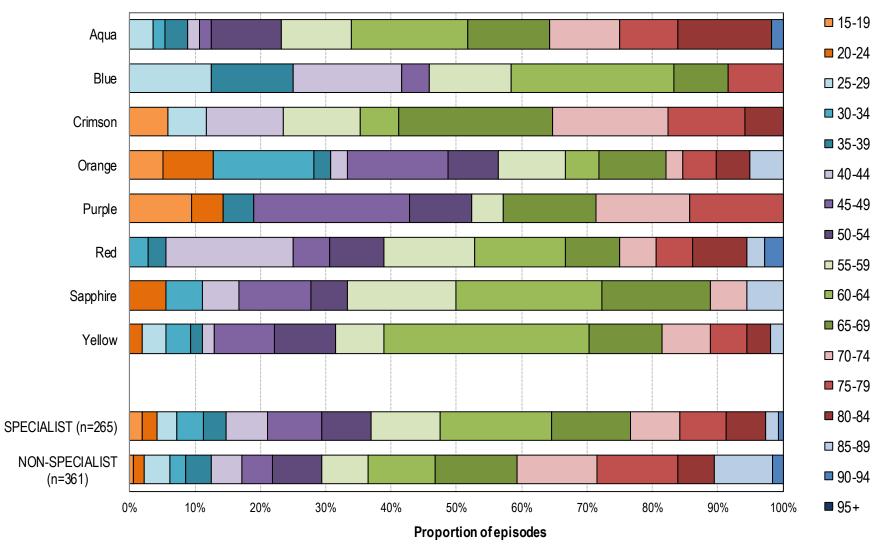
Number of traumatic episodes by facility by age group



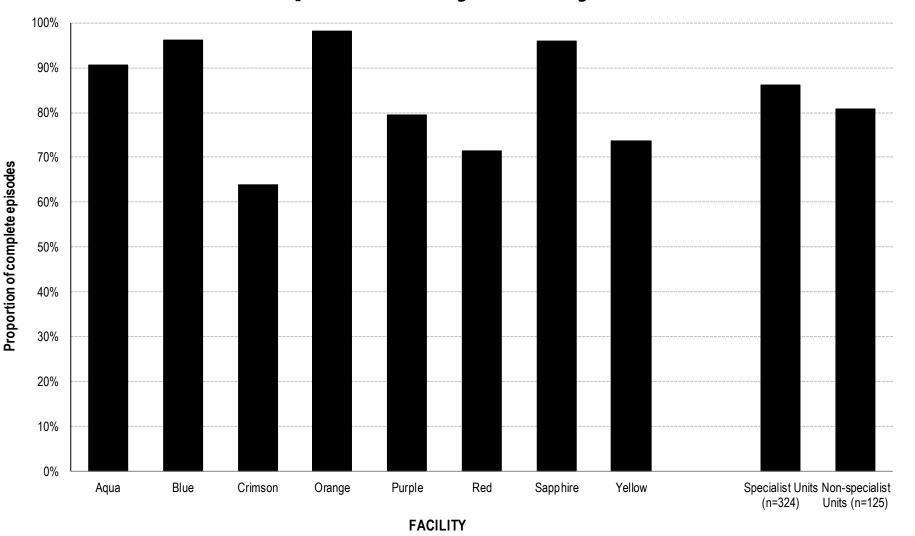
AROC Impairment Specific Report on Spinal Impairments (Inpatient - pathway 3) — Anywhere Hospital — Jan-Dec 2015



Number of non-traumatic episodes by facility by age group

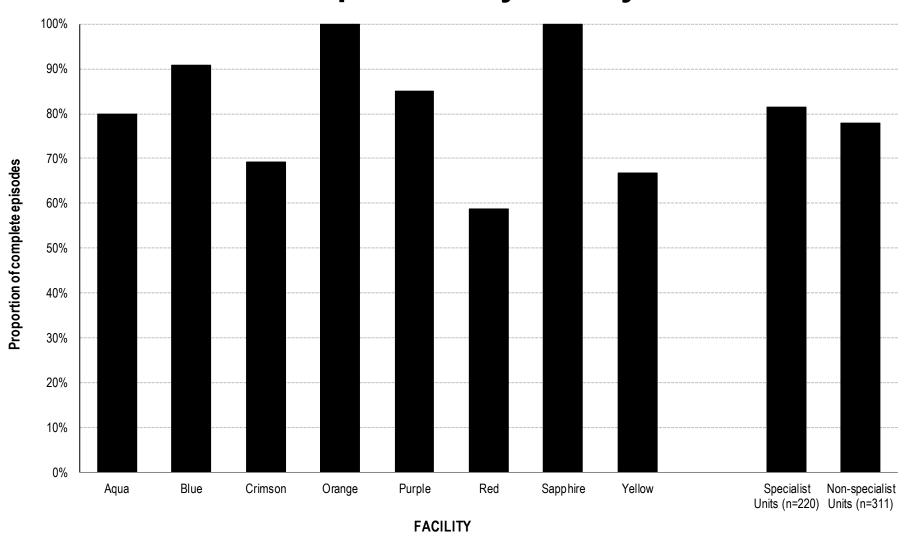


Proportion of complete* first admission traumatic episodes by facility



TOC

Proportion of complete* first admission non-traumatic episodes by facility





Traumatic and non-traumatic complete first **(aroc**) admission episodes by AN-SNAP class and impairment

		YOUR FACILITY			SPECIALIST			NON-SPECIALIST				
AN-SNAP class	All episodes	Completed episodes	%Complete	All episodes	Completed episodes	%Complete	All episodes	Completed episodes	%Complete			
4AD1 (SCI, age ≥ 50, weighted FIM motor 42-91)	10	8	80.0%	74	68	91.9%	156	130	83.3%			
4AD2 (SCI, age ≥ 50, weighted FIM motor 19-41)	10	8	80.0%	130	100	76.9%	116	79	68.1%			
4AD3 (SCI, age ≤ 49, weighted FIM motor 34-91)	8	8	100.0%	71	66	93.0%	57	55	96.5%			
4AD4 (SCI, age ≤ 49, weighted FIM motor 19-33)	6	3	50.0%	83	75	90.4%	21	14	66.7%			
4AP1 (MMT, weighted FIM motor 19-91)	0	0	—	13	11	84.6%	35	31	88.6%			
4AZ1 (SCI or MMT, age ≥ 49, weighted FIM motor 13-18)) 6	6	100.0%	92	71	77.2%	39	26	66.7%			
4AZ2 (SCI or MMT, age ≤ 48, weighted FIM motor 13-18)) 6	5	83.3%	76	62	81.6%	12	8	66.7%			
All Spinal AN-SNAP classes	46	38	82.6%	539	453	84.0%	436	343	78.7%			

*First Admission Only (excludes AN-SNAP class 499A)

		YOUR FACILITY			SPECIALIST			NON-SPECIALIST	
Impairment	All episodes	Completed episodes	%Complete	All episodes	Completed episodes	%Complete	All episodes	Completed episodes	%Complete
Traumatic impairments									
4.211 Para-Inc	1	1	100.0%	58	51	87.9%	19	16	84.2%
4.212 Para-Comp	6	4	66.7%	62	56	90.3%	8	5	62.5%
4.2211 Quad-Inc C1-4	3	2	66.7%	79	68	86.1%	5	5	100.0%
4.2212 Quad-Inc C5-8	2	2	100.0%	62	52	83.9%	7	5	71.4%
4.2221 Quad-Comp C1-4	1	1	100.0%	30	26	86.7%	2	0	0.0%
4.2222 Quad-Comp C5-8	0	0	_	9	6	66.7%	2	2	100.0%
4.23 Other TSCI	1	1	100.0%	3	3	100.0%	41	34	82.9%
14.1 MMT: brain+spine	0	0	_	14	12	85.7%	29	24	82.8%
14.3 MMT: spine+other	0	0	_	7	5	71.4%	12	10	83.3%
Total TSCI	14	11	78.6%	324	279	86.1%	125	101	80.8%
Non-traumatic impairments									
4.111 Para-Inc	15	12	80.0%	108	92	85.2%	98	66	67.3%
4.112 Para-Comp	1	1	100.0%	28	22	78.6%	11	8	72.7%
4.1211 Quad-Inc C1-4	1	1	100.0%	33	27	81.8%	13	10	76.9%
4.1212 Quad-Inc C5-8	5	5	100.0%	27	21	77.8%	11	11	100.0%
4.1221 Quad-Comp C1-4	1	1	100.0%	6	2	33.3%	3	2	66.7%
4.1222 Quad-Comp C5-8	1	0	0.0%	3	2	66.7%	2	1	50.0%
4.13 Other NTSCI	8	7	87.5%	15	13	86.7%	173	144	83.2%
Total NTSCI	32	27	84.4%	220	179	81.4%	311	242	77.8%
TOTAL SCI	46	38	82.6%	544	458	84.2%	436	343	78.7%

*First Admission Only



Review of FIM item scoring by AN-SNAP class



Interpreting your comparative FIM scoring charts



The FIM splat provides a graphic presentation of functional status in a radar chart. The 18 FIM items are arranged in order as 'spokes' of a wheel and the scoring levels from 1 (total dependence) to 7 (total independence) run from the centre outwards. The mean FIM item score for each item is indicated — a perfect score would be demonstrated as a large circle. The two FIM splats compare FIM scoring on admission (Figure A) and discharge (Figure B) between YOUR FACILITY and NATIONAL data — differences in the two shaded areas indicate differences in mean admission/discharge scoring. Graphs include completed episodes with valid FIM scoring.

4AD1 Admission FIM scores

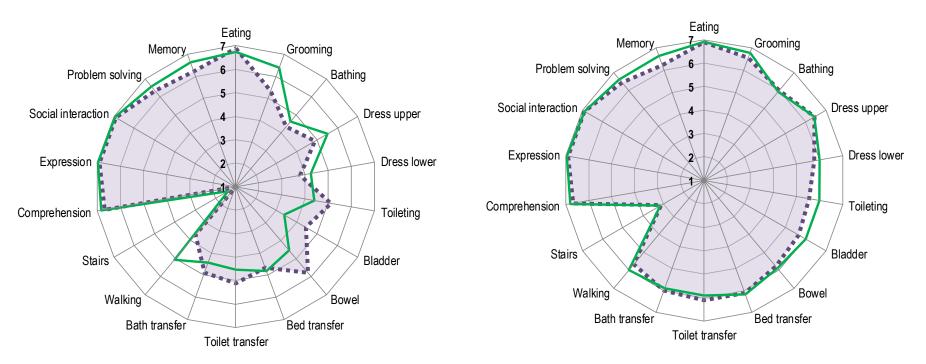
Your Facility (n=9)

Specialist (n=87)



Your Facility (n=9)

□Specialist (n=87)





4AD2 Admission FIM scores

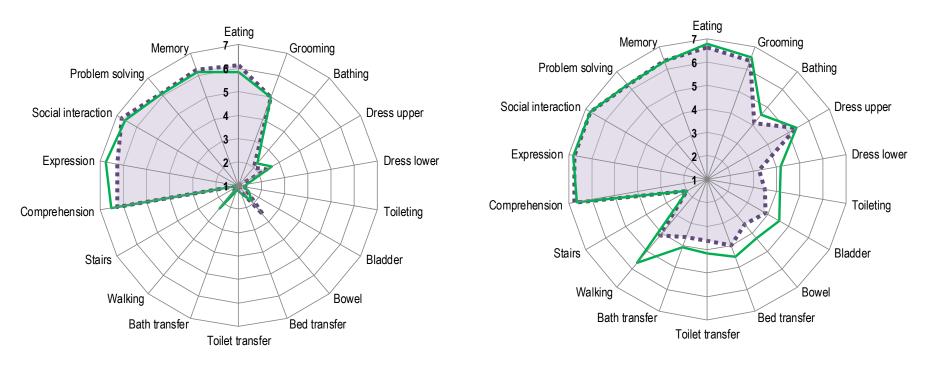
Your Facility (n=8)

□ Specialist (n=118)

4AD2 Discharge FIM scores

Your Facility (n=8)

Specialist (n=118)





4AD3 Admission FIM scores

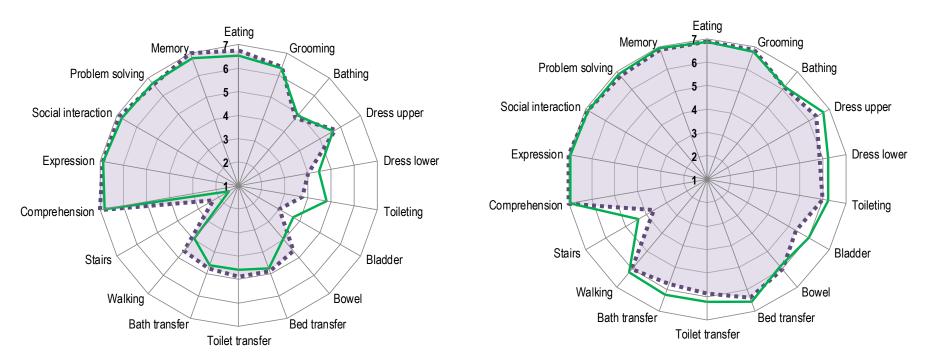
Your Facility (n=8)

Specialist (n=79)



Your Facility (n=8)

Specialist (n=79)

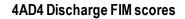




4AD4 Admission FIM scores

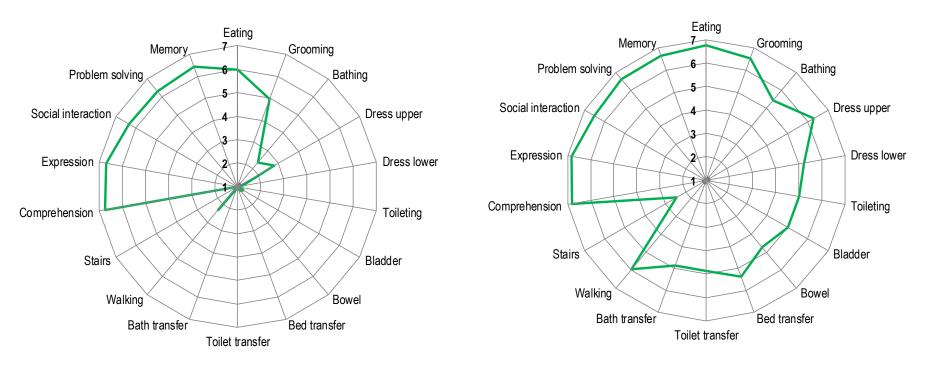
Your Facility (n<5)</p>

Specialist (n=83)



Your Facility (n<5)</p>

□ Specialist (n=83)

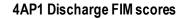




4AP1 Admission FIM scores

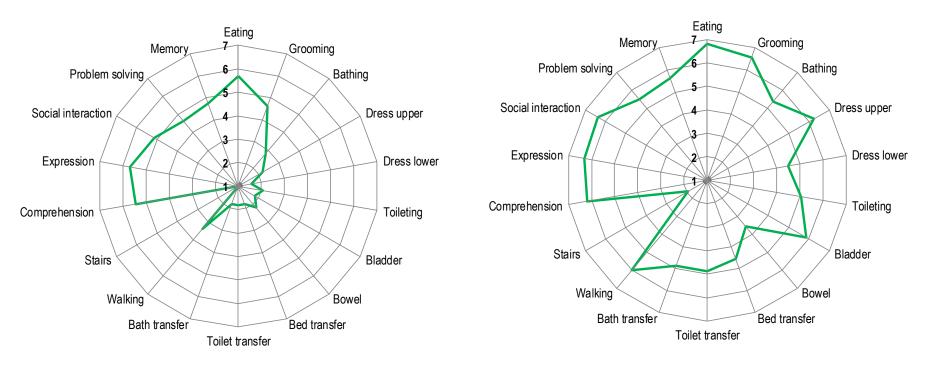
Your Facility (n<5)</p>

Specialist (n=16)



Your Facility (n<5)</p>

Specialist (n=16)



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4AZ1 Admission FIM scores

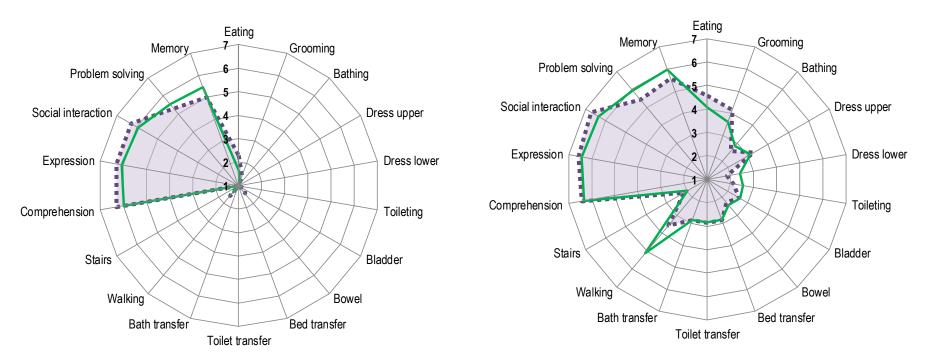
Your Facility (n=7)

Specialist (n=85)



Your Facility (n=7)

□ Specialist (n=85)

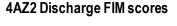


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4AZ2 Admission FIM scores

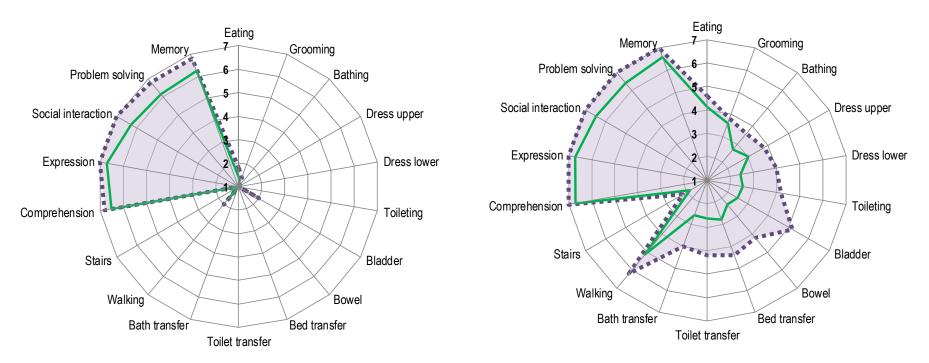
Your Facility (n=5)

Specialist (n=70)



Your Facility (n=5)

□ Specialist (n=70)



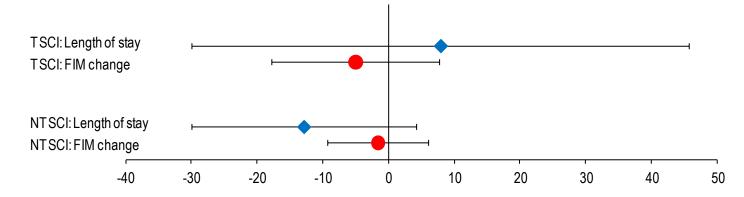




Outcomes Analysis



Casemix-adjusted* relative means



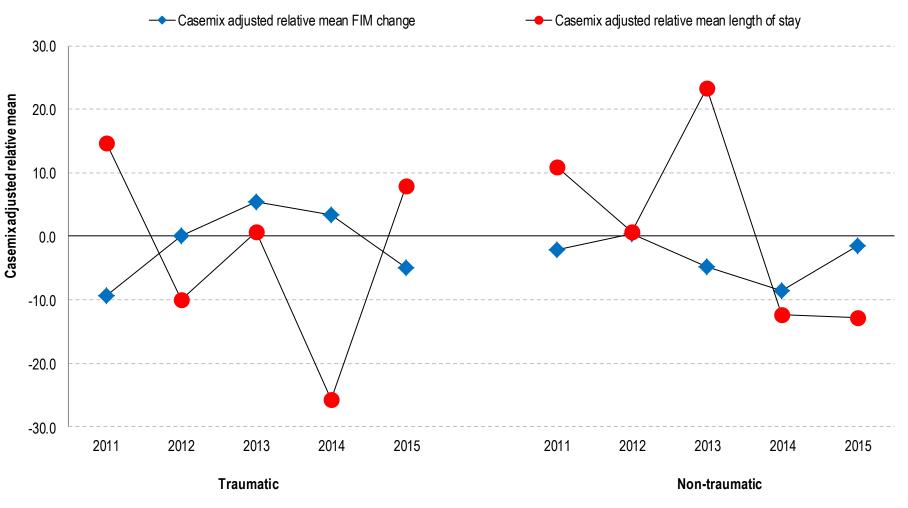
Casemix-adjusted relative means with 95% confidence intervals

	Traumatic		YOUR FACILITY	Non-traumatic	
Outcome measures	Casemix adjustment relative mean	95% Cl		Casemix adjustment relative mean	95% CI
Length of stay	-5.0	-17.8 to 7.8		-1.6	-9.2 to 6.1
FIM change	8.0	-29.9 to 45.8		-12.8	-29.9 to 4.3

*Casemix Adjustment is by CY2015 Specialist Units first admissions

Traumatic and non-traumatic casemixadjusted* relative means

(base year = 2015)



^{*}Casemix Adjustment is by CY2015 Specialist Units first admissions

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Average LOS by AN-SNAP class over time



Note: First admission, completed episodes

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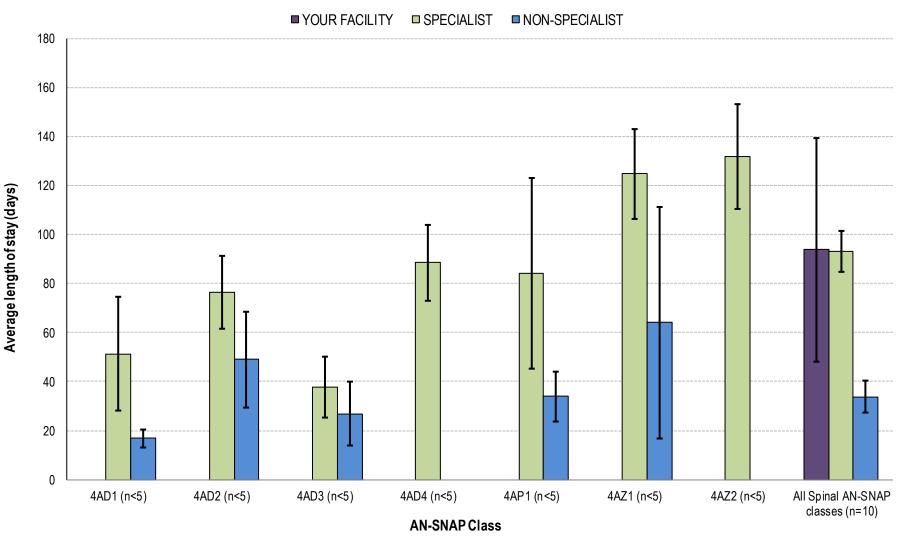
Average LOS by AN-SNAP class over time



		YOU	R FACILITY				SPECIALIST					NON-SPECIALIST					
AN-SNAP class	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015		
4AD1 (SCI, age ≥ 50, weighted FIM motor 42-91)	32.0	27.5	25.2	14.5	34.4	45.4	36.5	41.6	33.9	40.0	21.4	21.5	23.5	20.8	18.2		
4AD2 (SCI, age ≥ 50, weighted FIM motor 19-41)	80.2	62.5	86.6	62.2	59.0	89.2	91.3	96.8	87.7	82.7	59.2	59.1	53.3	58.1	46.1		
4AD3 (SCI, age ≤ 49, weighted FIM motor 34-91)	45.0	31.0	_	32.8	46.3	45.5	38.3	55.9	38.4	36.9	24.5	26.4	31.0	26.4	25.1		
4AD4 (SCI, age ≤ 49, weighted FIM motor 19-33)	_	72.2	128.8	_	_	99.7	83.7	91.1	92.9	87.5	85.1	96.8	87.8	76.1	70.7		
4AP1 (MMT, weighted FIM motor 19-91)	_	_	_	_	_	112.8	106.7	71.5	82.5	84.3	39.4	33.8	46.0	30.8	33.9		
4AZ1 (SCI or MMT, age ≥ 49, weighted FIM motor 13-18)	_	_	_	_	109.0	124.6	137.7	134.7	122.5	122.8	110.2	110.6	95.6	65.2	61.5		
4AZ2 (SCI or MMT, age ≤ 48, weighted FIM motor 13-18)	_	_	_	_	78.0	151.4	134.5	145.6	143.5	127.4	161.6	107.5	115.6	90.3	43.1		
All Spinal AN-SNAP classes	74.3	65.1	83.9	47.7	65.4	88.0	80.0	88.2	83.0	82.5	47.6	44.5	46.7	40.3	33.1		



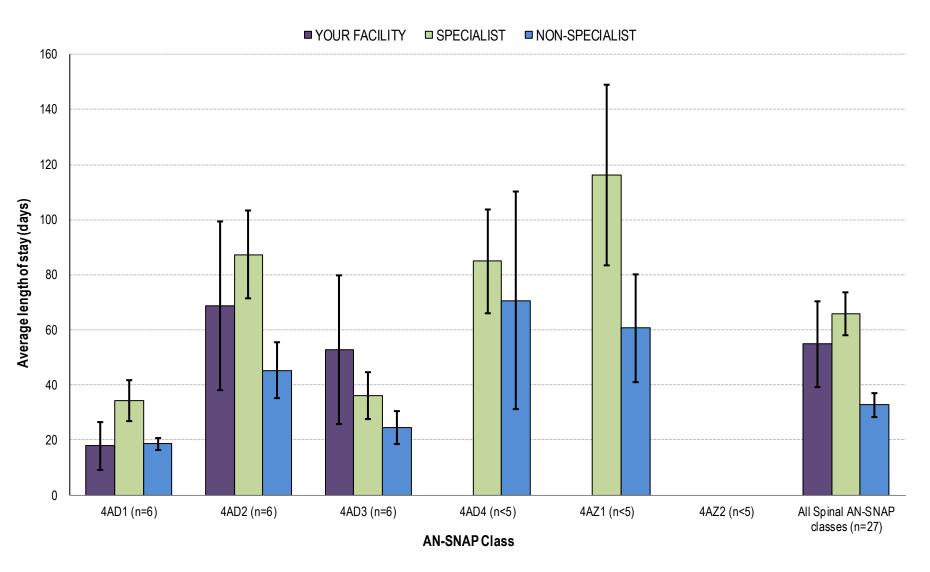
Traumatic ALOS by AN-SNAP class



Note: First admission, completed episodes

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Non-traumatic ALOS by AN-SNAP class



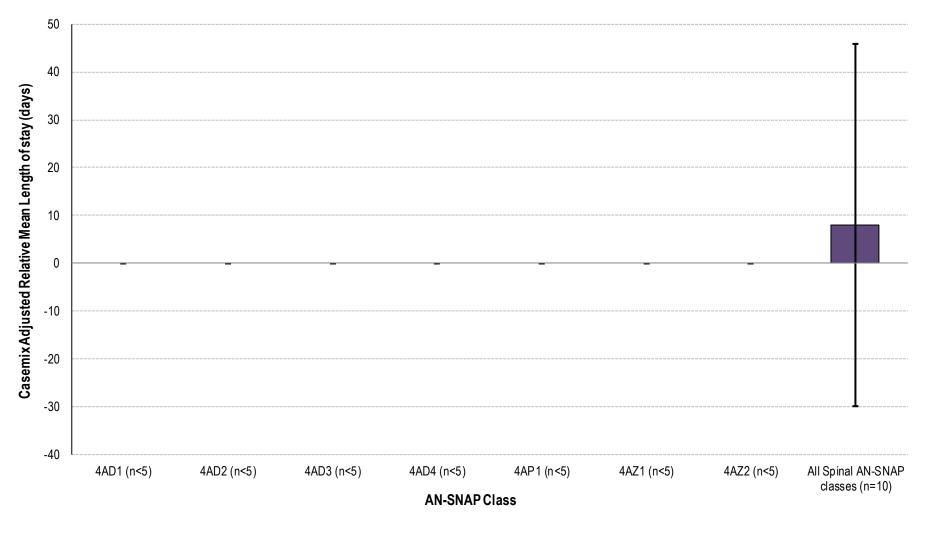
Note: First admission, completed episodes

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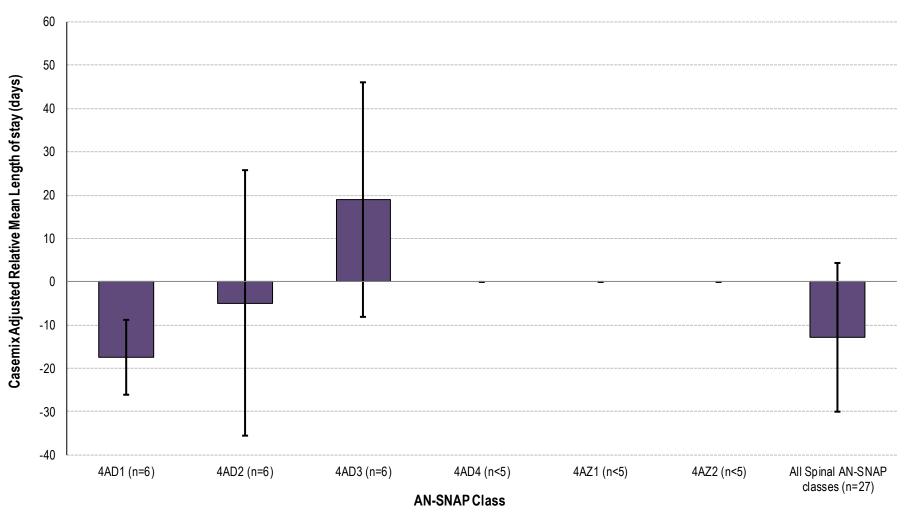
Traumatic casemix-adjusted* relative mean LOS by AN-SNAP class

VOUR FACILITY

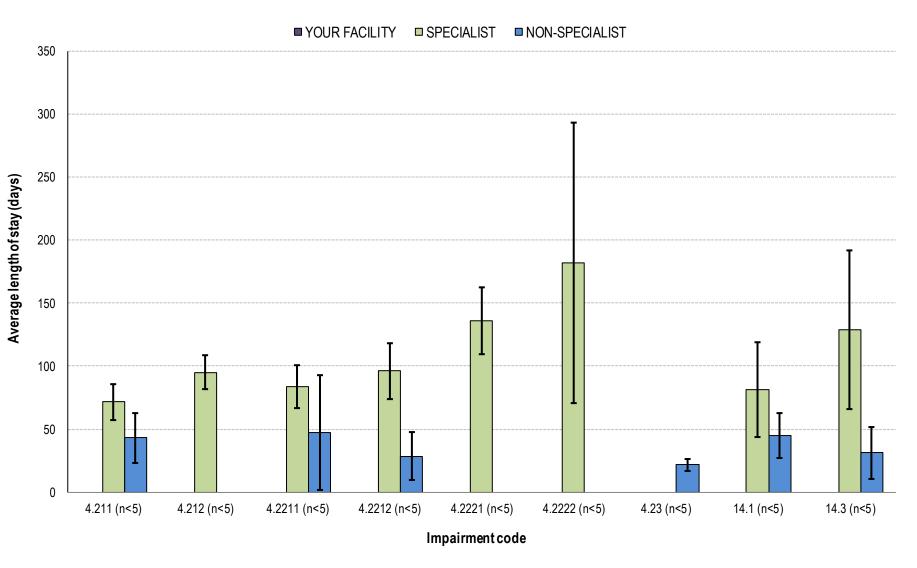


Non-traumatic casemix-adjusted* relative mean *(aroc*) LOS by AN-SNAP class

■ YOUR FACILITY



Traumatic ALOS by impairment

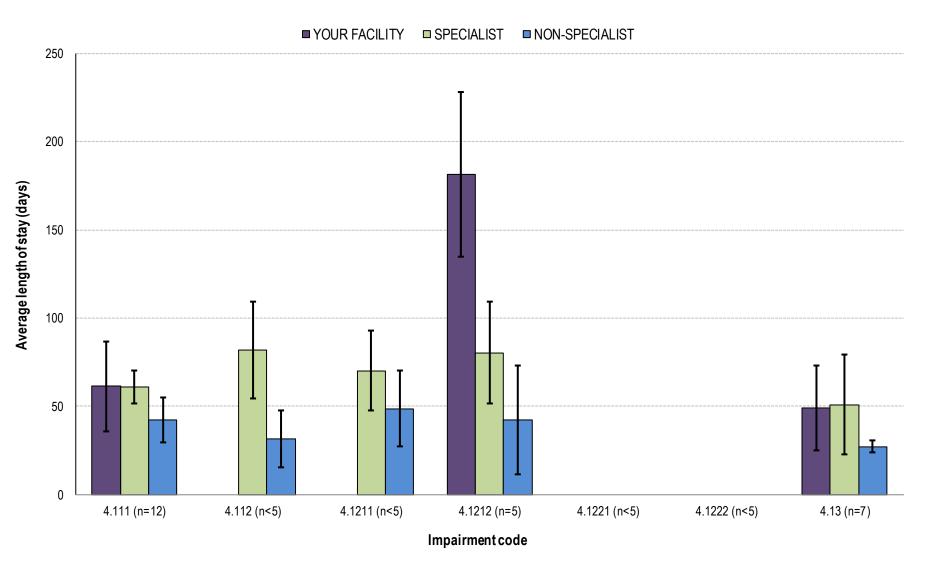


Note: First admission, completed episodes





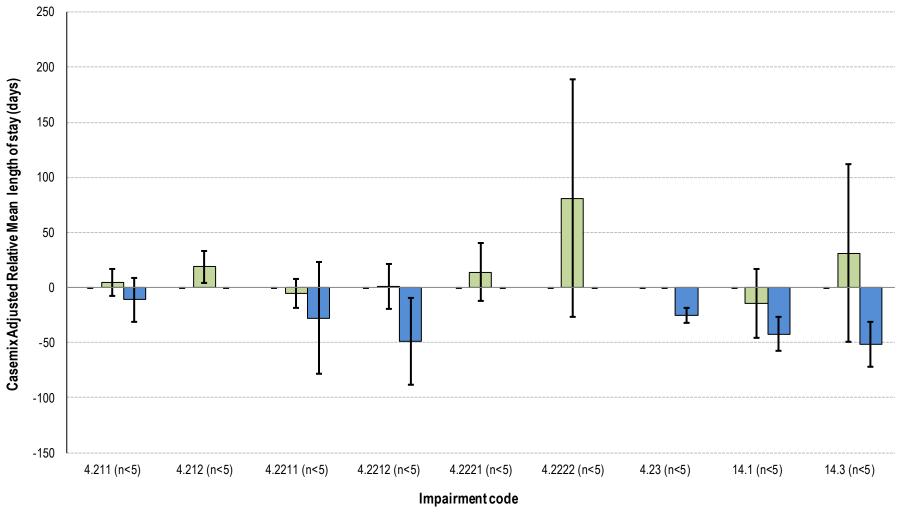
Non-traumatic ALOS by impairment



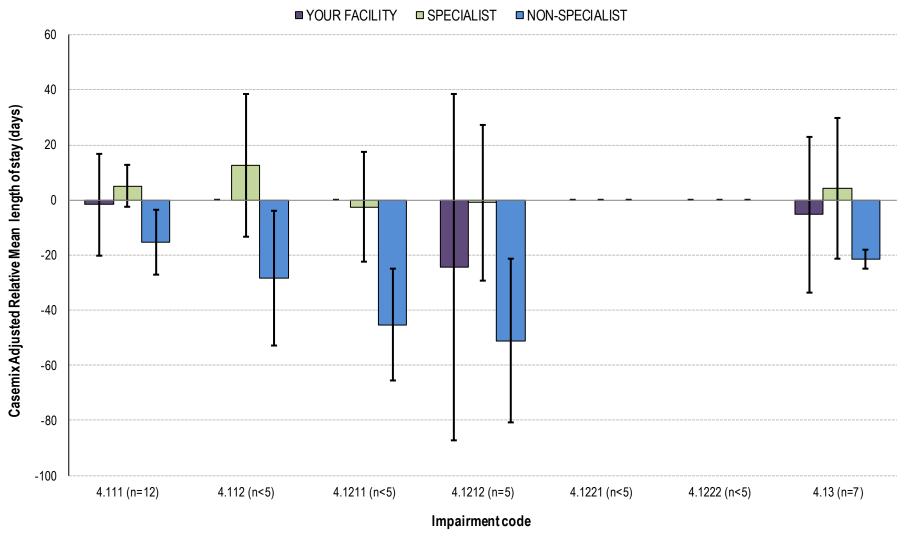
Traumatic casemix-adjusted* relative mean LOS by impairment







Non-traumatic casemix-adjusted* relative mean LOS by impairment



*Casemix Adjustment is by CY2015 Specialist Units first admissions

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Average FIM change by AN-SNAP class over time



Note: First admission, completed episodes

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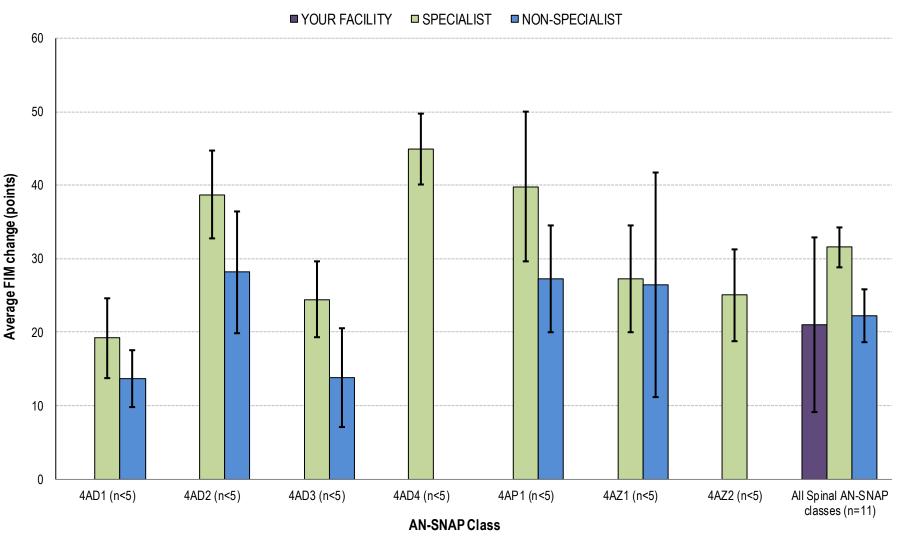
Average FIM change by AN-SNAP class over time



		YOU	R FACILITY				SPECIALIST						NON-SPECIALIST				
AN-SNAP class	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015		
4AD1 (SCI, age ≥ 50, weighted FIM motor 42-91)	18.0	19.5	21.0	14.3	17.4	19.4	16.8	19.3	19.5	17.7	17.2	18.2	18.0	17.2	16.5		
4AD2 (SCI, age ≥ 50, weighted FIM motor 19-41)	34.6	28.8	27.4	27.0	27.8	33.1	33.0	36.3	34.6	35.2	27.1	29.0	25.9	26.8	24.7		
4AD3 (SCI, age ≤ 49, weighted FIM motor 34-91)	18.6	16.8	_	24.6	16.9	21.5	22.5	20.6	20.3	21.7	15.8	17.2	20.2	20.2	17.9		
4AD4 (SCI, age ≤ 49, weighted FIM motor 19-33)	_	47.8	34.6	_	—	35.0	41.1	43.2	41.4	43.3	38.4	45.8	47.6	34.9	29.5		
4AP1 (MMT, weighted FIM motor 19-91)	_	_	_	_	_	38.6	38.4	37.9	24.1	39.8	22.6	25.1	27.3	27.8	27.2		
4AZ1 (SCI or MMT, age ≥ 49, weighted FIM motor 13-18)	_	—	—	_	24.0	34.1	31.9	27.9	24.9	29.8	31.5	23.9	28.6	38.0	21.4		
4AZ2 (SCI or MMT, age ≤ 48, weighted FIM motor 13-18)	_	—	—	_	38.8	30.0	28.0	25.7	28.3	25.9	31.9	42.1	28.0	19.2	27.8		
All Spinal AN-SNAP classes	22.1	30.6	26.7	25.2	24.6	28.8	29.4	29.2	28.2	30.0	22.3	23.6	24.0	23.3	20.8		

Note: First admission, completed episodes

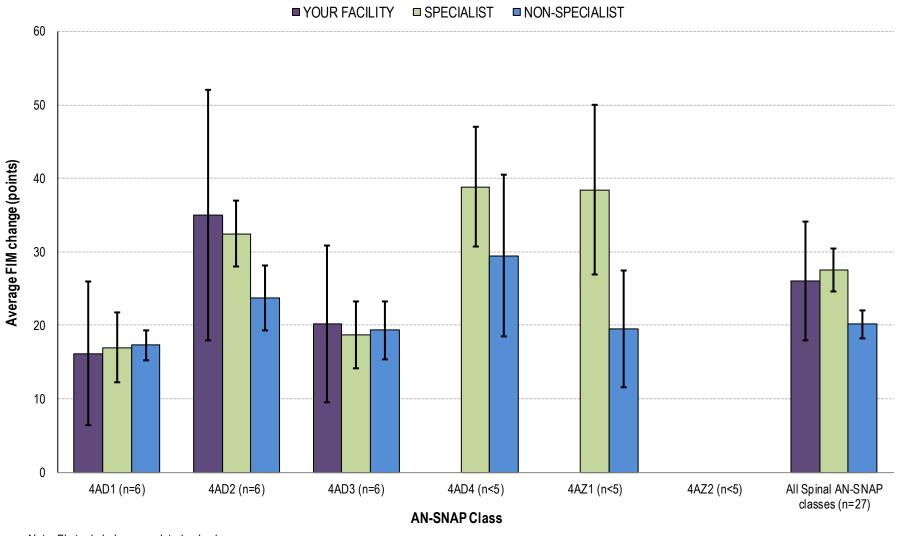
Traumatic average FIM change by AN-SNAP class



Note: First admission, completed episodes

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Non-traumatic average FIM change by AN-SNAP class

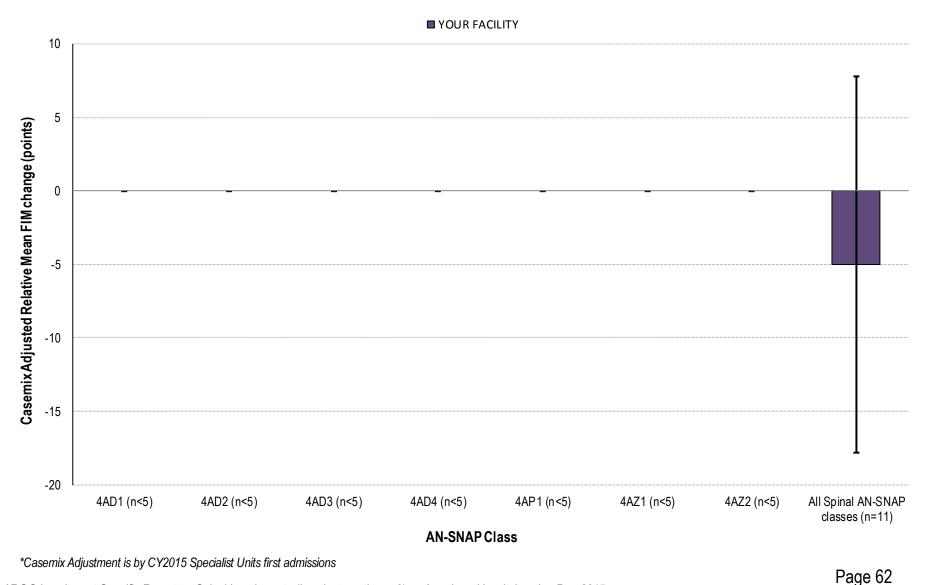


Note: First admission, completed episodes

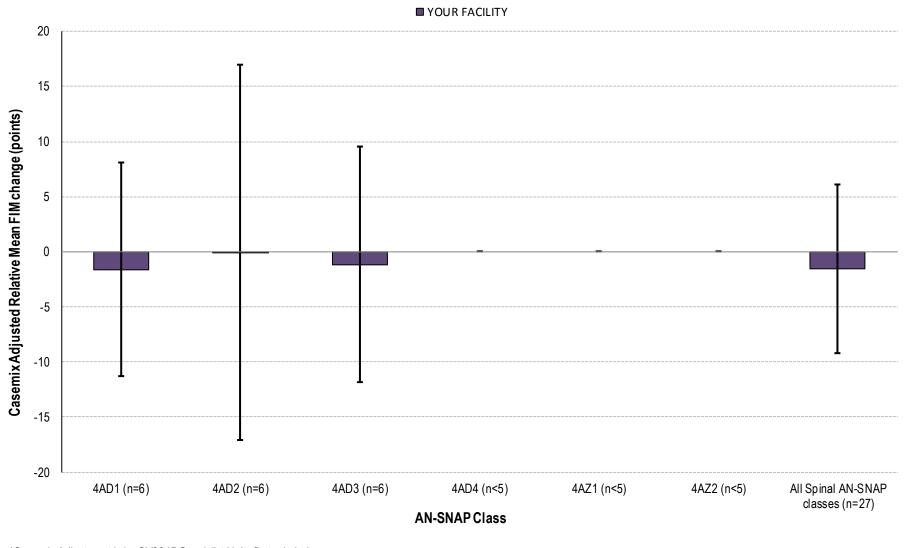
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TOC

Traumatic casemix-adjusted* relative mean FIM change by AN-SNAP class



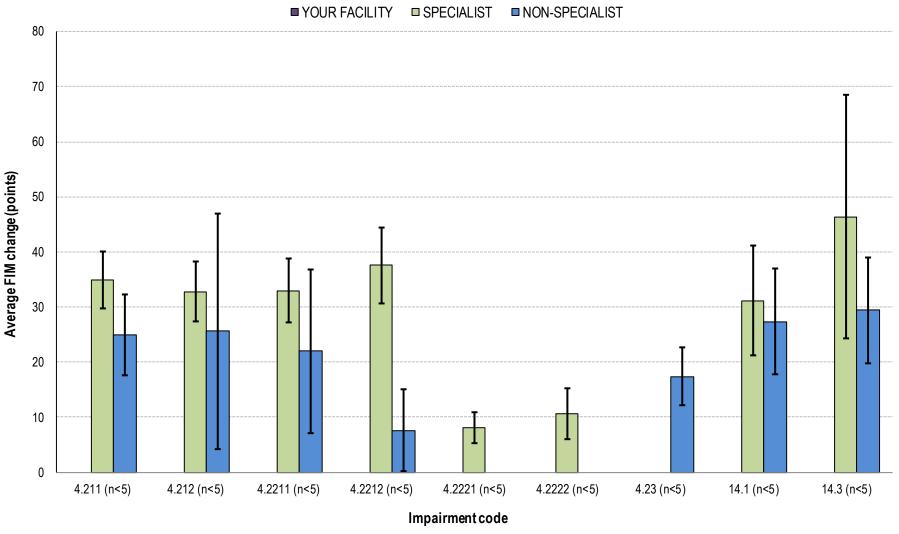
Non-traumatic casemix-adjusted* relative mean (aroc FIM change by AN-SNAP class



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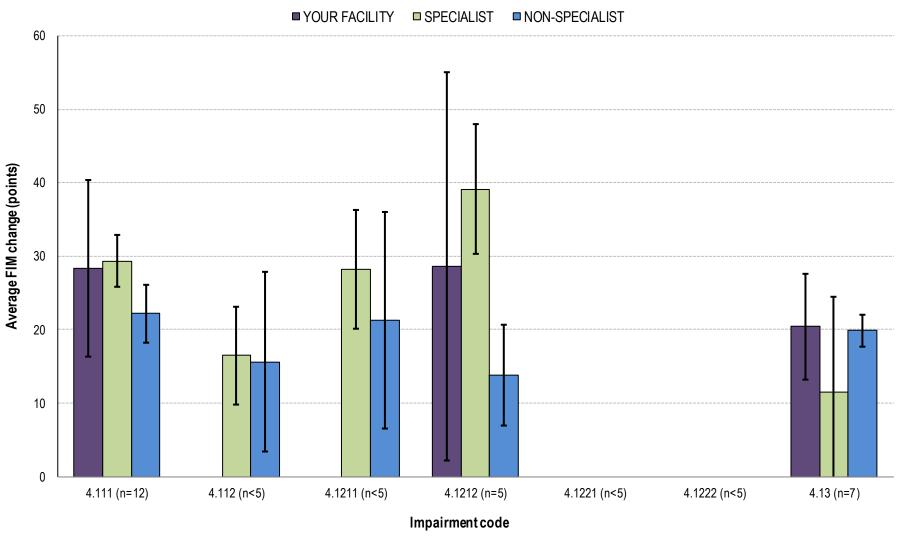
*Casemix Adjustment is by CY2015 Specialist Units first admissions

Traumatic average FIM change by impairment (aroc



Note: First admission, completed episodes

Non-traumatic average FIM change by impairment

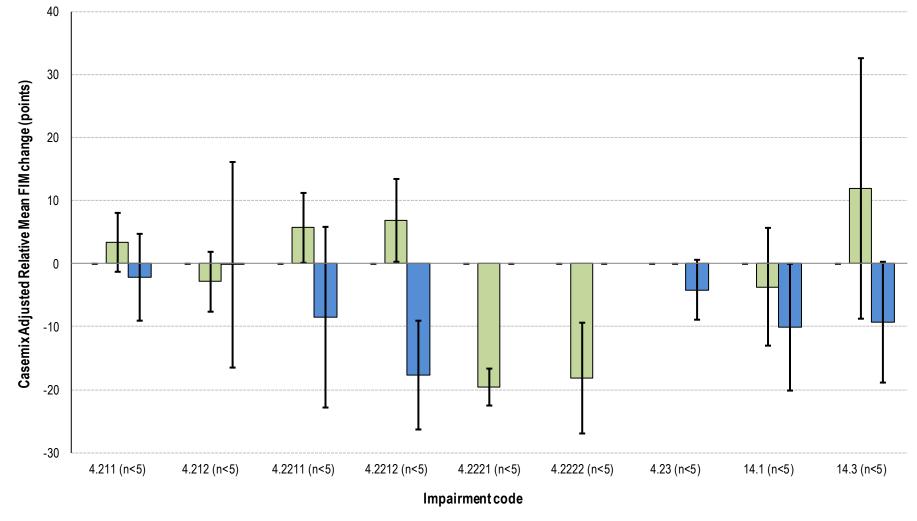


Note: First admission, completed episodes

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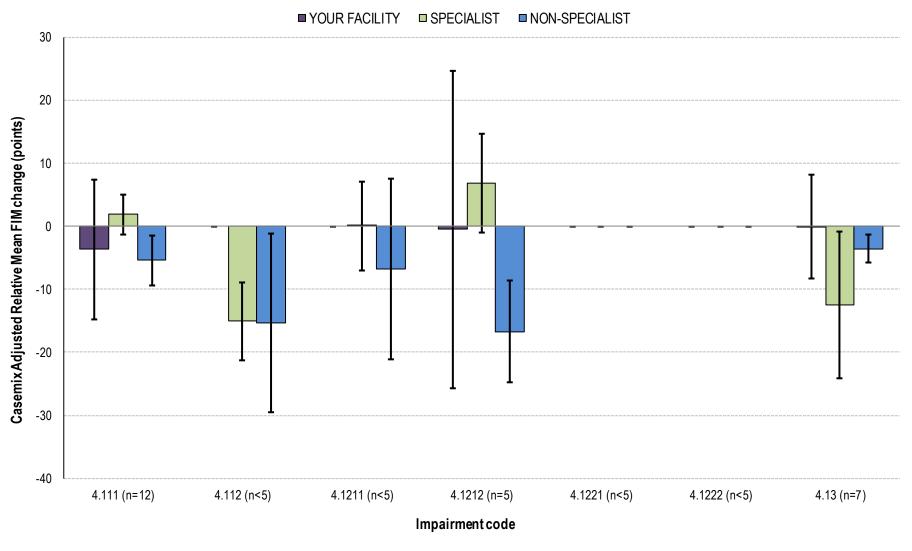
Traumatic casemix-adjusted* relative mean FIM change by impairment

■ YOUR FACILITY ■ SPECIALIST ■ NON-SPECIALIST





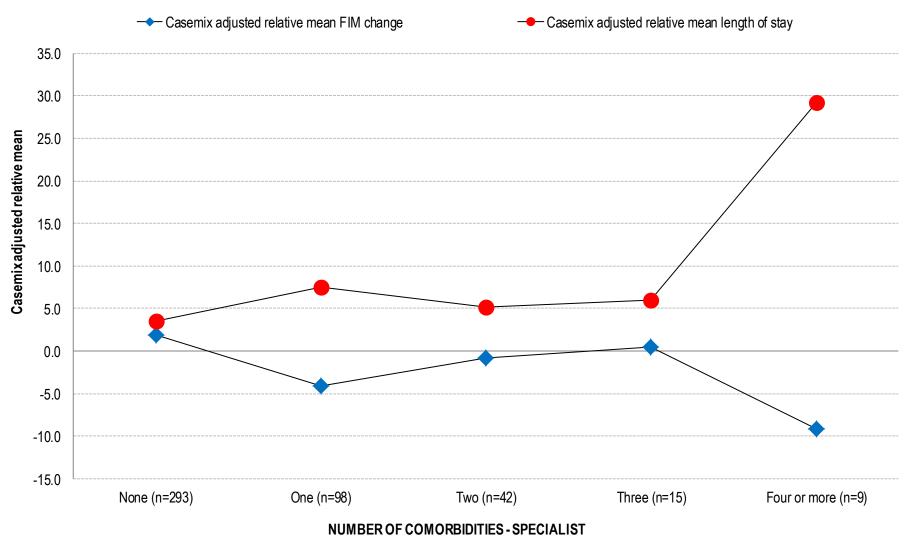
Non-traumatic casemix-adjusted* relative mean FIM change by impairment



*Casemix Adjustment is by CY2015 Specialist Units first admissions



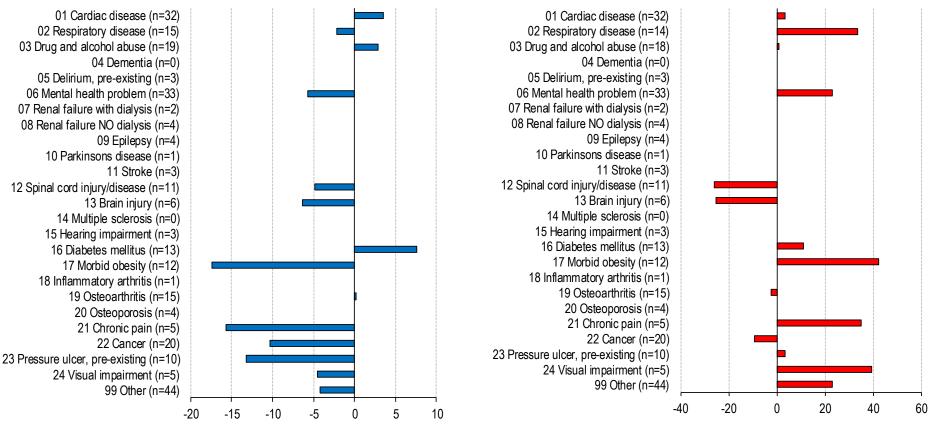
Casemix-adjusted* relative mean LOS and FIM change by number of comorbidities



*Casemix Adjustment is by CY2015 Specialist Units first admissions



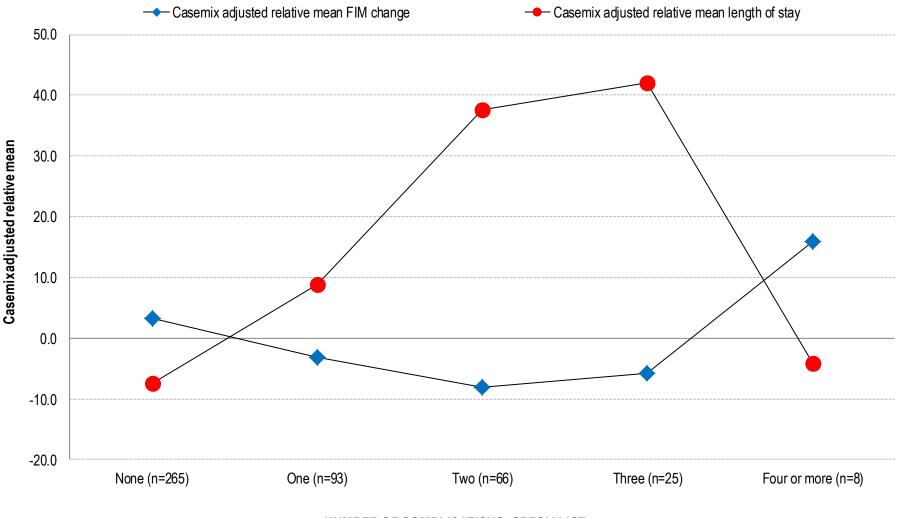
Casemix-adjusted* relative mean LOS and FIM change by type of comorbidity



Casemix adjusted relative mean FIM change - SPECIALIST

Casemix adjusted relative mean LOS - SPECIALIST

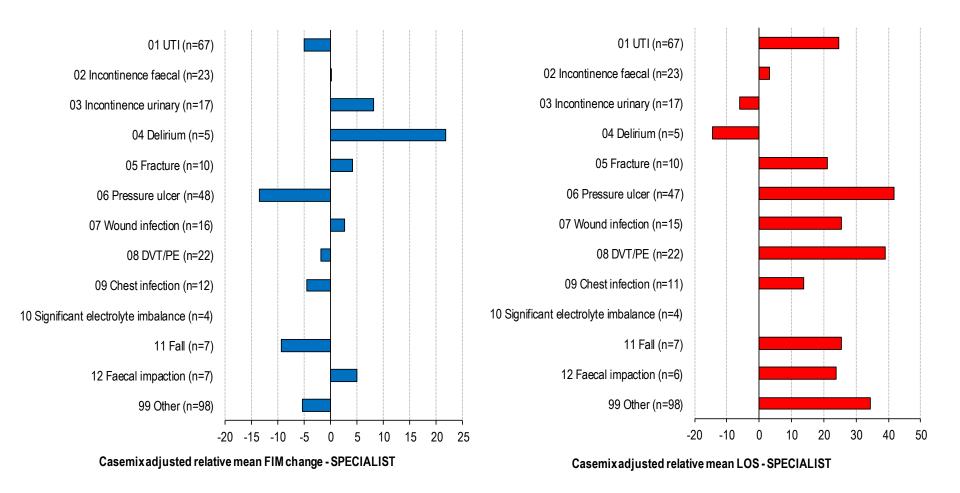
Casemix-adjusted* relative mean LOS and FIM change by number of complications



NUMBER OF COMPLICATIONS - SPECIALIST

*Casemix Adjustment is by CY2015 Specialist Units first admissions

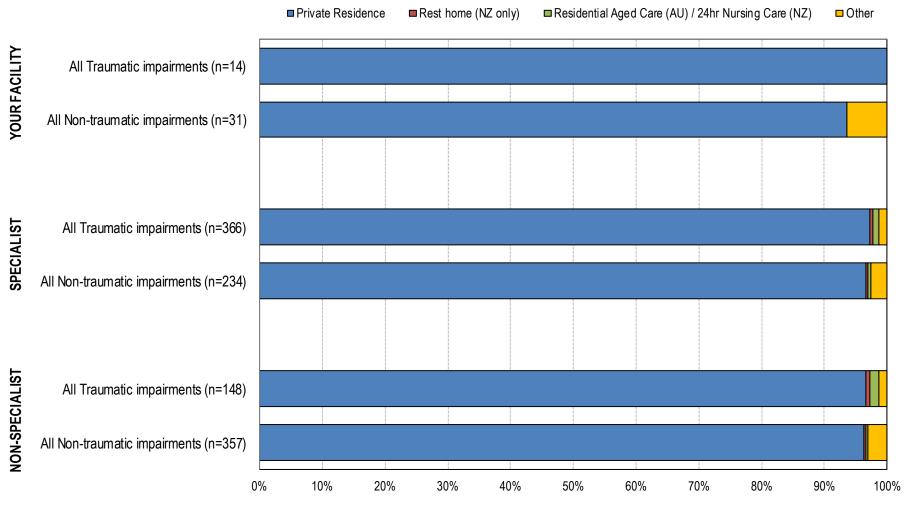
Casemix-adjusted* relative mean LOS and **(** FIM change by type of complication





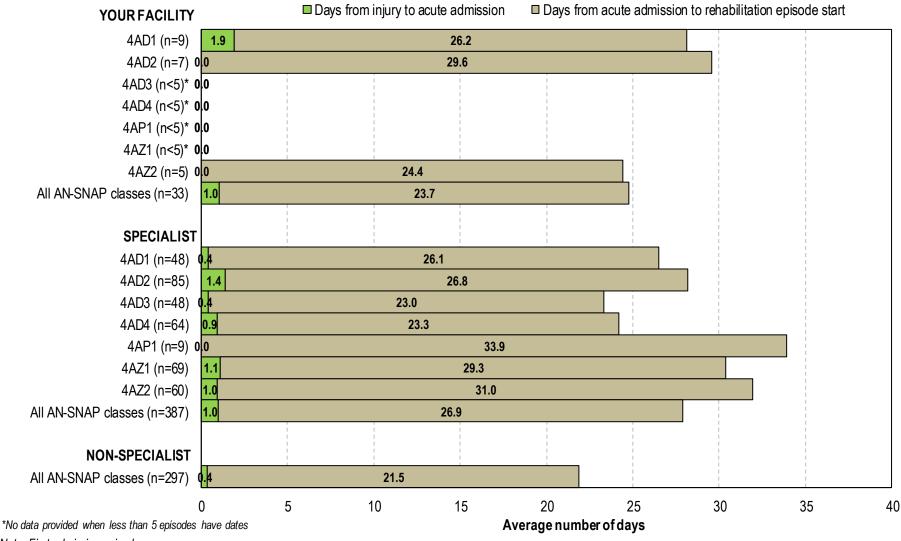
Explanatory Data

Type of accommodation prior to impairment



Proportion of episodes

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

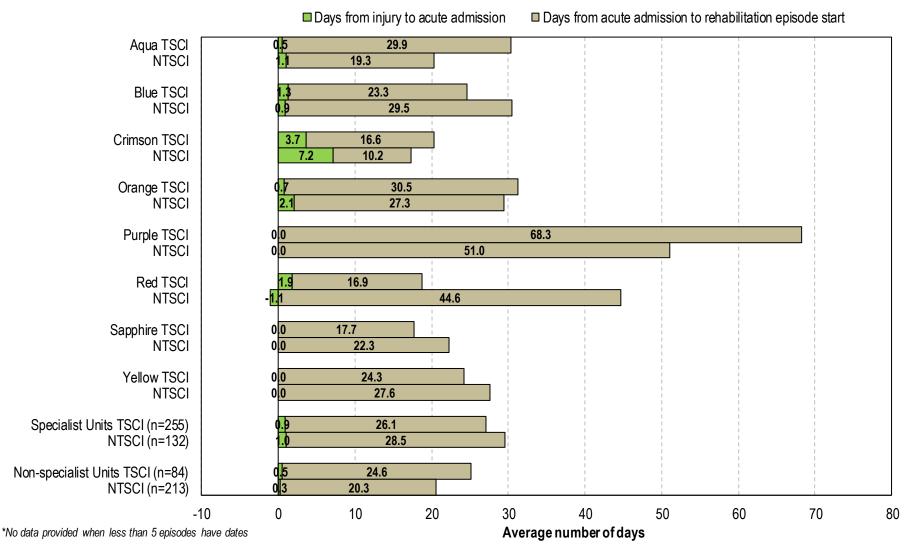


Note: First admission episodes

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Days from injury to episode start with an acute admission by facility

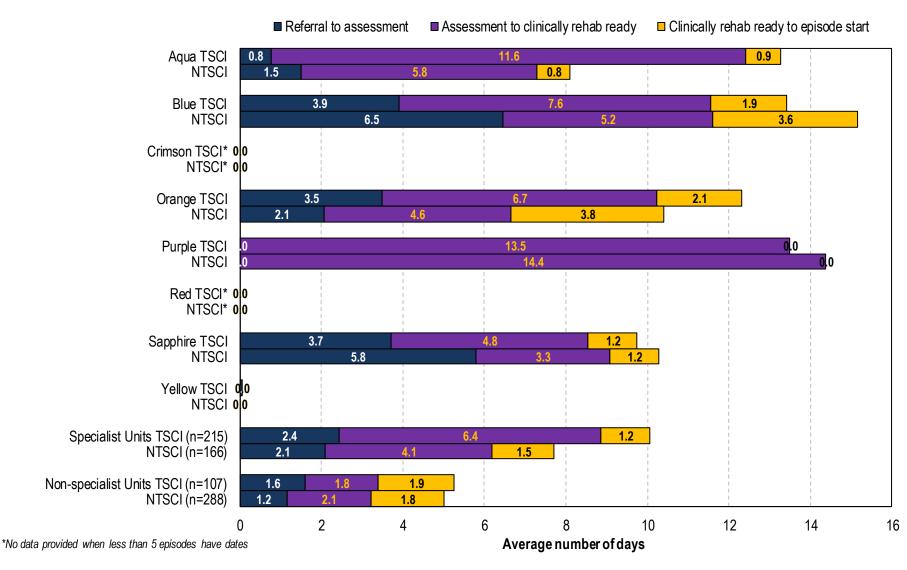


Note: First admission episodes

AROC Impairment Specific Report on Spinal Impairments (Inpatient - pathway 3) — Anywhere Hospital — Jan-Dec 2015



Days from referral to episode start by facility

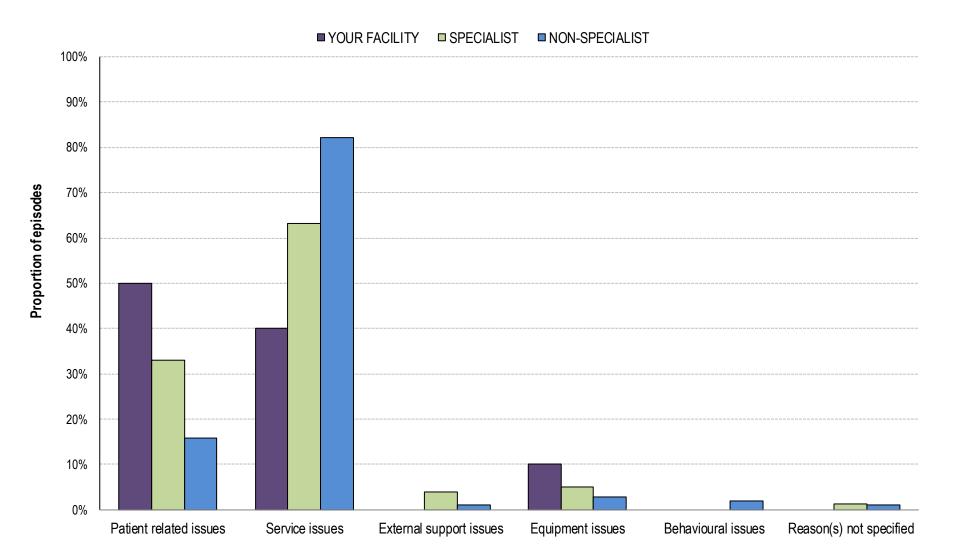


Note: First admission episodes

AROC Impairment Specific Report on Spinal Impairments (Inpatient - pathway 3) — Anywhere Hospital — Jan-Dec 2015

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Reason for delay in episode start





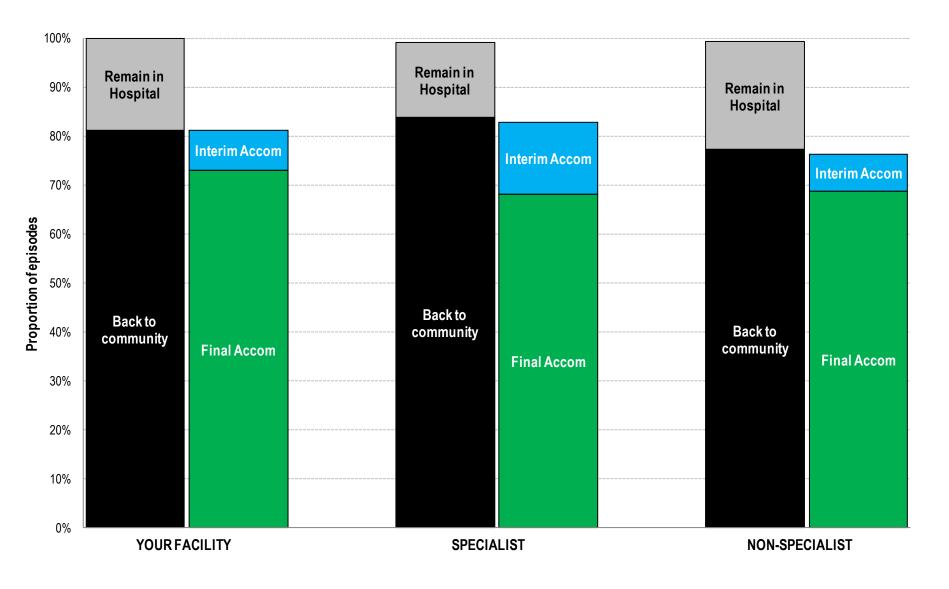
Delays in episode start



	YOUR FAC	CILITY	SPECIALIST		
Delay in episode start	No.	%	No.	%	
No delay	34	70.8	523	80.0	
Delay in episode start	10	20.8	79	12.1	
Missing	4		52		
All episodes in private residence	48	100.0	654	100.0	

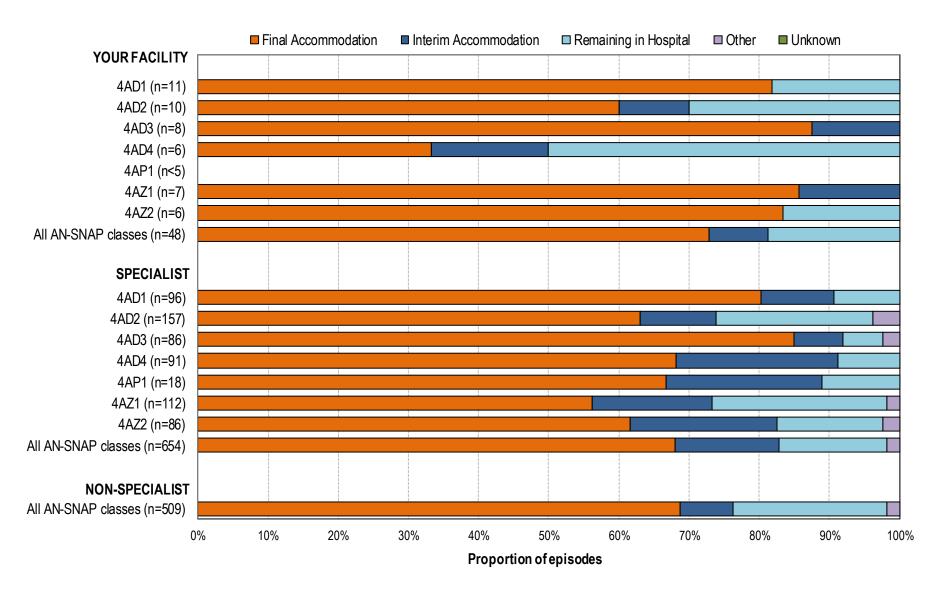
	YOUR FA	YOUR FACILITY		SPECIALIST		
Delay in episode start	No.	%	No.	%		
Patient related issues	5	50.0	26	32.9		
Service issues	4	40.0	50	63.3		
External support issues	0	0.0	3	3.8		
Equipmentissues	1	10.0	4	5.1		
Behavioural issues	0	0.0	0	0.0		
Reason(s) not specified	0	0.0	1	1.3		

Discharge destination





Mode of episode end by AN-SNAP class



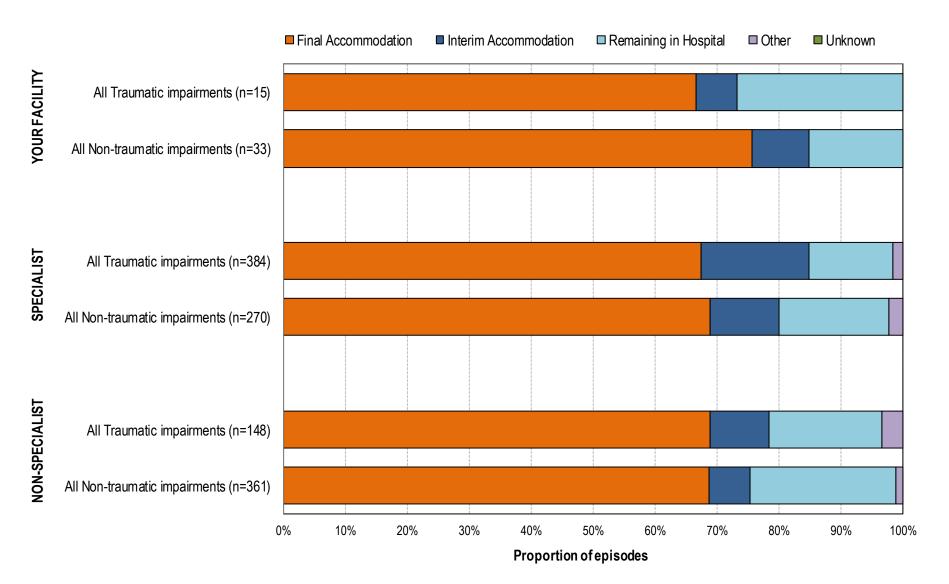


Discharge destination by AN-SNAP class

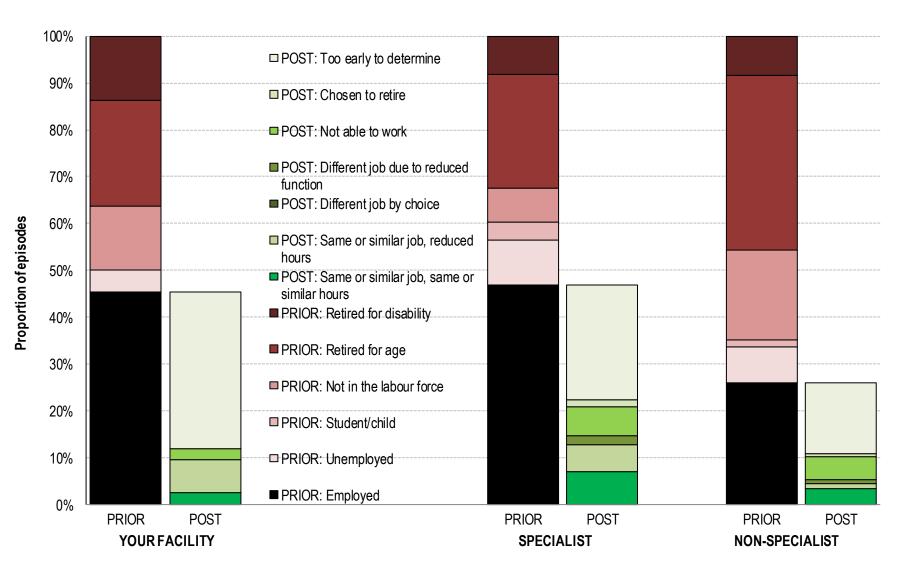
		Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown	Final Accom	Interim Accom	Remaining in Hospital	Other	Unknown
AN-SNAP class	5			No.					%		
Your Facility	4AD1	9	0	2	0	0	81.8	0.0	18.2	0.0	0.0
	4AD2	6	1	3	0	0	60.0	10.0	30.0	0.0	0.0
	4AD3	7	1	0	0	0	87.5	12.5	0.0	0.0	0.0
	4AD4	2	1	3	0	0	33.3	16.7	50.0	0.0	0.0
	4AP1	0	0	0	0	0	—	—	—		—
	4AZ1	6	1	0	0	0	85.7	14.3	0.0	0.0	0.0
	4AZ2	5	0	1	0	0	83.3	0.0	16.7	0.0	0.0
All AN-SNAP cl	asses	35	4	9	0	0	72.9	8.3	18.8	0.0	0.0
SPECIALIST Ur	nits	445	97	100	12	0	68.0	14.8	15.3	1.8	0.0
NON-SPECIALI	ST Units	350	38	112	9	0	68.8	7.5	22.0	1.8	0.0



Traumatic and non-traumatic mode of episode end



Employment status prior and post impairment





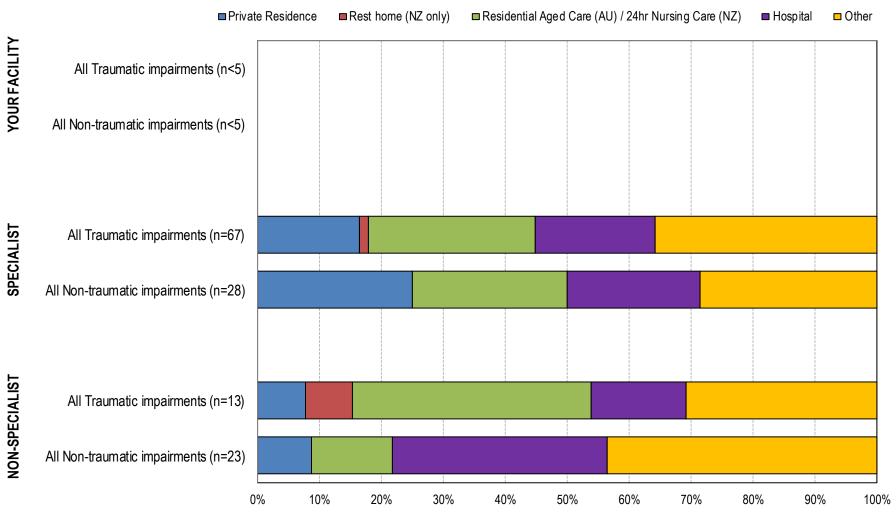
Employment status prior and post impairment



	YOUR	FACILITY	SP	ECIALIST	NON-SPECIALIST	
Employment status	No.	%	No.	%	No.	%
Prior to this impairment:						
Employed	20	45.5	281	46.8	129	25.9
Unemployed	2	4.5	58	9.7	38	7.6
Student/child	0	0.0	23	3.8	8	1.6
Not in the labour force	6	13.6	43	7.2	95	19.1
Retired for age	10	22.7	146	24.3	186	37.3
Retired for disability	6	13.6	49	8.2	42	8.4
Notanswered	4		54		11	
Total	48	100.0	654	100.0	509	100.0
After discharge (if previously employed):						
Same or similar job, same or similar hours	1	5.3	40	14.7	14	12.5
Same or similar job, reduced hours	3	15.8	34	12.5	5	4.5
Different job by choice	0	0.0	0	0.0	0	0.0
Different job due to reduced function	0	0.0	11	4.0	4	3.6
Not able to work	1	5.3	36	13.2	21	18.8
Chosen to retire	0	0.0	9	3.3	3	2.7
Too early to determine	14	73.7	142	52.2	65	58.0
Notanswered	1		9		17	
Total employed prior	20	100.0	281	100.0	129	100.0

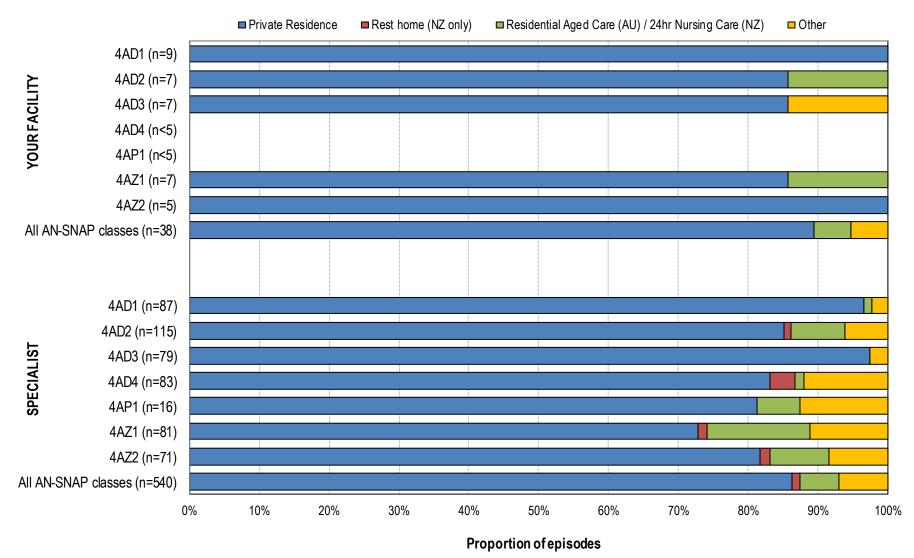
Traumatic and non-traumatic Interim accommodation post discharge





Proportion of episodes

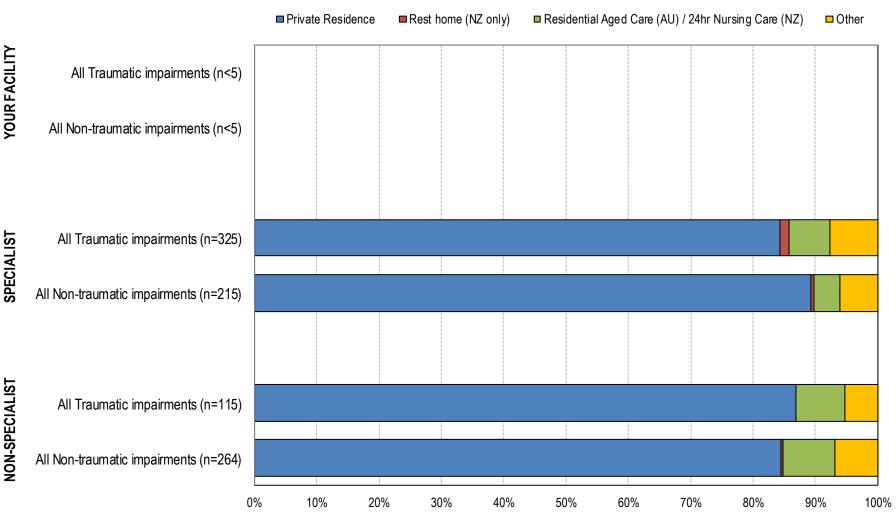
Final accommodation post discharge by AN-SNAP class



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Traumatic and non-traumatic final accommodation post discharge

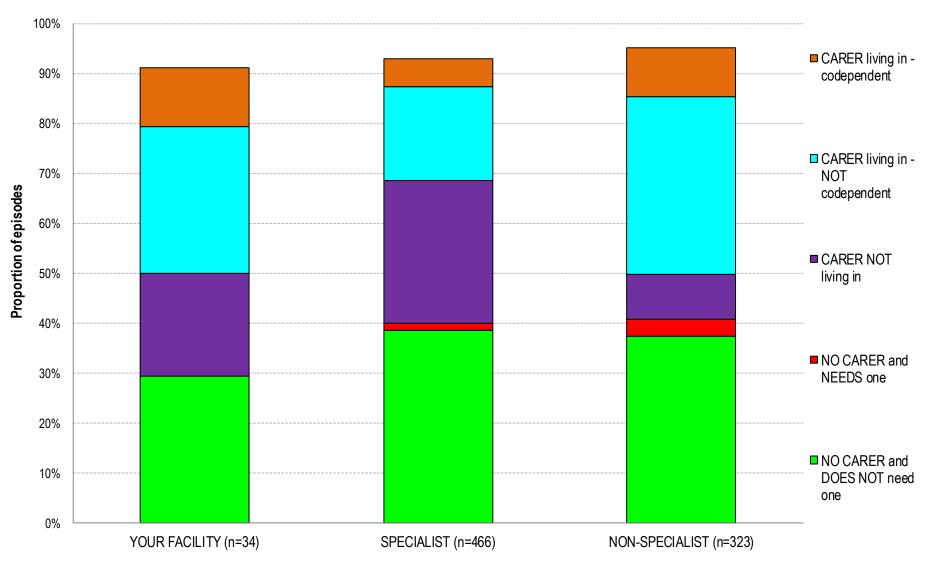


Proportion of episodes

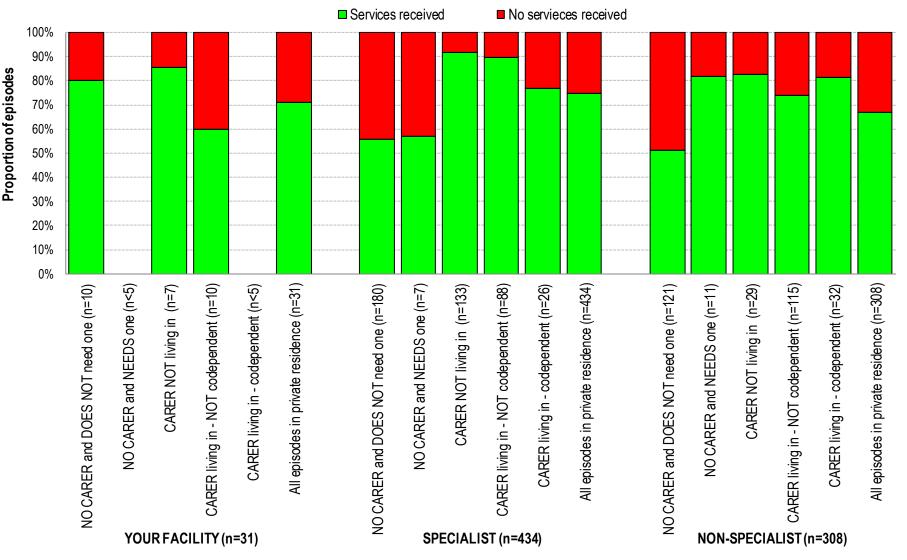


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Carer status post discharge



Any services received post discharge by carer status



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Carer status and any services received post discharge

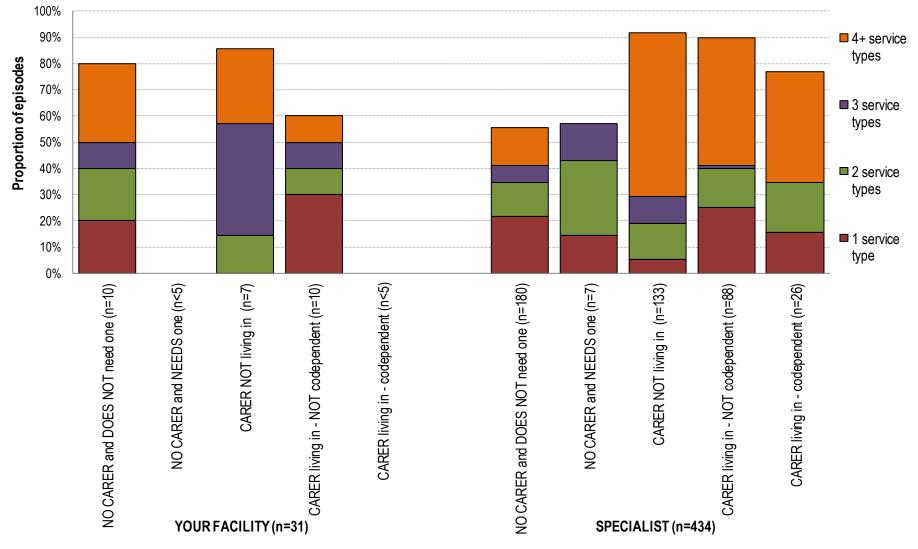
	YOUR FACILITY		SPI	SPECIALIST		NON-SPECIALIST	
Carer status post discharge	No.	%	No.	%	No.	%	
NO CARER and DOES NOT need one	10	32.3	180	41.5	121	39.3	
NO CARER and NEEDS one	0	0.0	7	1.6	11	3.6	
CARER NOT living in	7	22.6	133	30.6	29	9.4	
CARER living in - NOT codependent	10	32.3	88	20.3	115	37.3	
CARER living in - codependent	4	12.9	26	6.0	32	10.4	
Missing	3		32		15		
All episodes in private residence	34	100.0	466	100.0	323	100.0	

	Any services received post discharge?							
	YOUR	FACILITY	SPI	ECIALIST	NON-SPI	NON-SPECIALIST		
Carer status post discharge	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)		
NO CARER and DOES NOT need one	80.0	20.0	55.6	44.4	51.2	48.76		
NO CARER and NEEDS one	0.0	0.0	57.1	42.9	81.8	18.18		
CARER NOT living in	85.7	14.3	91.7	8.3	82.8	17.24		
CARER living in - NOT codependent	60.0	40.0	89.8	10.2	73.9	26.09		
CARER living in - codependent	50.0	50.0	76.9	23.1	81.3	18.75		
All episodes in private residence	71.0	29.0	74.9	25.1	66.9	33.1		

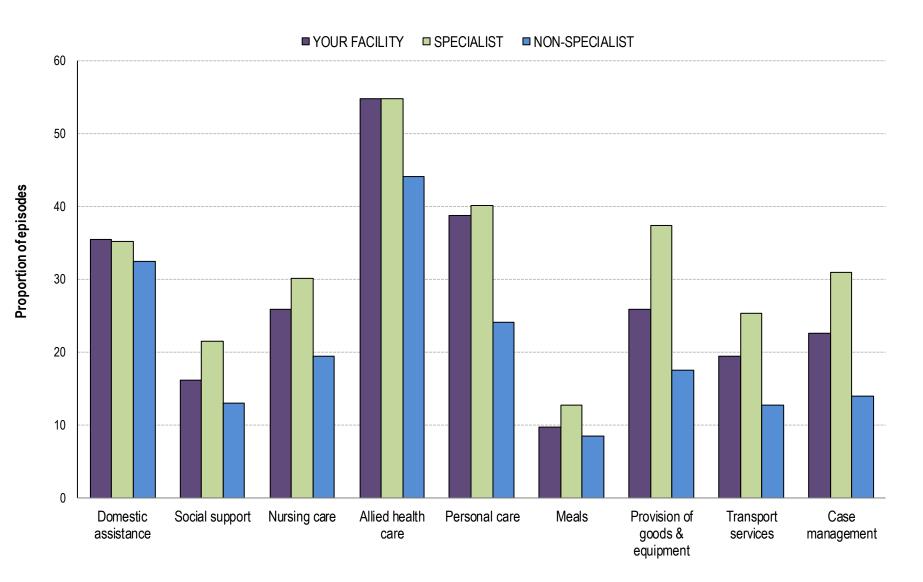


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Number of services received post discharge by carer status

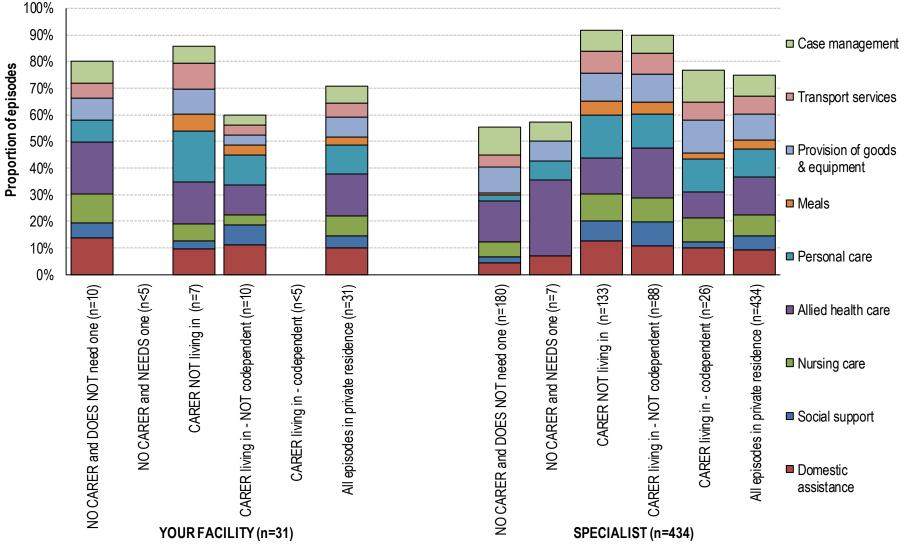


Type of services received post discharge



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Type of services received post discharge by carer status



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Number and type of services received post Discharge by carer status – YOUR FACILITY

Services received post discharge	Carer status post discharge - YOUR FACILITY									
(NOTE: Discharge to 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	All episodes in private residence				
Number of episodes in private residence	10	0	7	10	4					
Percent of episodes receiving:										
No services	20.0		14.3	40.0	50.0	29.0				
1 service type	20.0		0.0	30.0	25.0	19.4				
2 service types	20.0		14.3	10.0	0.0	12.9				
3 service types	10.0		42.9	10.0	0.0	16.1				
4 or more service types	30.0	_	28.6	10.0	25.0	22.6				
Service Type received										
Domestic assistance	50.0		42.9	30.0	0.0	35.5				
Social support	20.0		14.3	20.0	0.0	16.1				
Nursing care	40.0		28.6	10.0	25.0	25.8				
Allied health care	70.0		71.4	30.0	50.0	54.8				
Personal care	30.0	_	85.7	30.0	0.0	38.7				
Meals	0.0	_	28.6	10.0	0.0	9.7				
Provision of goods & equipment	30.0		42.9	10.0	25.0	25.8				
Transportservices	20.0	_	42.9	10.0	0.0	19.4				
Case management	30.0	_	28.6	10.0	25.0	22.6				



Number and type of services received post Discharge by carer status – SPECIALIST

Services received post discharge	Carer status post discharge - SPECIALIST									
(NOTE: Discharge to 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	All episodes in private residence				
Number of episodes in private residence	180	7	133	88	26					
Percent of episodes receiving:										
No services	44.4	42.9	8.3	10.2	23.1	25.1				
1 service type	21.7	14.3	5.3	25.0	15.4	16.8				
2 service types	12.8	28.6	13.5	14.8	19.2	14.1				
3 service types	6.7	14.3	10.5	1.1	0.0	6.5				
4 or more service types	14.4	0.0	62.4	48.9	42.3	37.6				
Service Type received										
Domestic assistance	11.1	14.3	63.2	44.3	34.6	35.3				
Social support	5.6	0.0	36.8	36.4	7.7	21.4				
Nursing care	13.3	0.0	50.4	36.4	30.8	30.2				
Allied health care	37.2	57.1	67.7	77.3	34.6	54.8				
Personal care	6.1	14.3	79.7	51.1	42.3	40.1				
Meals	1.1	0.0	26.3	18.2	7.7	12.7				
Provision of goods & equipment	23.9	14.3	51.9	43.2	42.3	37.3				
Transportservices	11.7	0.0	41.4	31.8	23.1	25.3				
Case management	25.6	14.3	39.1	27.3	42.3	30.9				

Number and type of services received post Discharge by carer status – NON-SPECIALIST

Services received post discharge	Carer status post discharge - NON-SPECIALIST									
(NOTE: Discharge to 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	All episodes in private residence				
Number of episodes in private residence	121	11	29	115	32					
Percent of episodes receiving:										
No services	48.8	18.2	17.2	26.1	18.8	33.1				
1 service type	22.3	27.3	3.4	23.5	0.0	18.8				
2 service types	16.5	18.2	10.3	14.8	0.0	13.6				
3 service types	7.4	27.3	31.0	12.2	0.0	11.4				
4 or more service types	5.0	9.1	37.9	23.5	0.0	14.6				
Service Type received										
Domestic assistance	19.8	45.5	58.6	34.8	40.6	32.5				
Social support	3.3	9.1	20.7	19.1	21.9	13.0				
Nursing care	8.3	27.3	37.9	26.1	18.8	19.5				
Allied health care	36.4	27.3	55.2	47.8	56.3	44.2				
Personal care	4.1	54.5	58.6	30.4	28.1	24.0				
Meals	1.7	18.2	24.1	10.4	9.4	8.4				
Provision of goods & equipment	8.3	18.2	31.0	20.9	28.1	17.5				
Transportservices	7.4	9.1	31.0	13.9	12.5	12.7				
Case management	10.7	0.0	24.1	14.8	18.8	14.0				



Spinal Cord Dysfunction Specific Data



AIS grade at admission and discharge at SPECIALIST units – Traumatic

Begin	gin Primary admission		Subsequent ad	mission	All admissions	
AIS grade	Episodes	%	Episodes	%	Episodes	%
A	101	34.1	22	50.0	123	36.2
В	34	11.5	7	15.9	41	12.1
С	53	17.9	5	11.4	58	17.1
D	108	36.5	10	22.7	118	34.7

End	Primary admi	Primary admission		nission	All admissions		
AIS grade	Episodes	%	Episodes	%	Episodes	%	
A	89	30.4	21	47.7	110	32.6	
В	26	8.9	8	18.2	34	10.1	
С	43	14.7	3	6.8	46	13.6	
D	135	46.1	12	27.3	147	43.6	

Note 1: 0 episode(s) did not record admission status.

Note 2: 45 episode(s) did not record AIS scores.



AIS grade at admission and discharge at NON-SPECIALIST units – Traumatic

Begin Primary admission		Subsequent ad	mission	All admissions		
AIS grade	Episodes	%	Episodes	%	Episodes	%
A	12	23.5	4	33.3	16	25.4
В	4	7.8	1	8.3	5	7.9
С	15	29.4	3	25.0	18	28.6
D	20	39.2	4	33.3	24	38.1

End	Primary admi	ssion	Subsequent ad	nission	All admissions				
AIS grade	Episodes	%	Episodes	%	Episodes	%			
A	12	23.5	4	33.3	16	25.4			
В	4	7.8	1	8.3	5	7.9			
С	13	25.5	3	25.0	16	25.4			
D	22	43.1	4	33.3	26	41.3			

Note 1: 0 episode(s) did not record admission status.

Note 2:83 episode(s) did not record AIS scores.



Change in AIS grade from admission to discharge – Traumatic

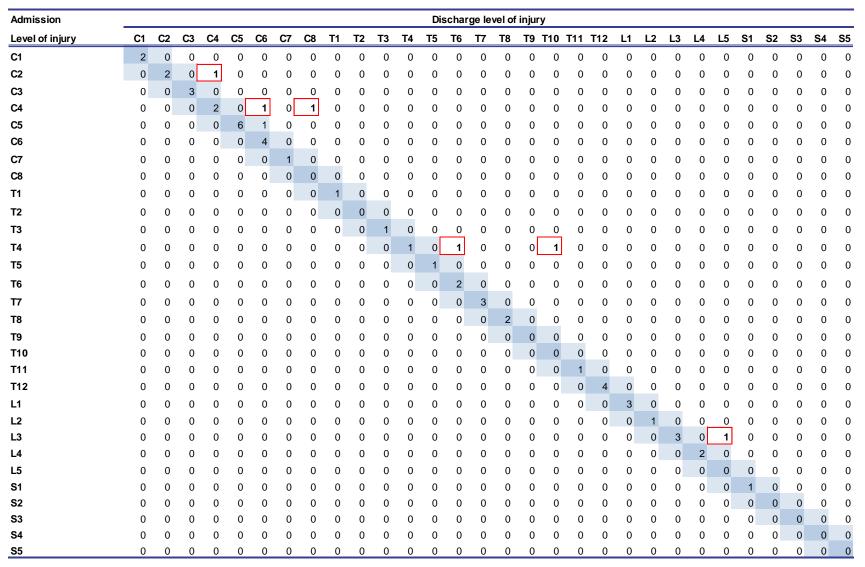
Admission -	Disc	harge AIS SPECIAL	-			Discharge AIS grade - NON-SPECIALIST								
Admission =	А	В	С	D	A	В	С	D						
Α	109	8	3	3	16	0	0	0						
В	1	26	9	5	0	5	0	0						
С	0	0	34	24	0	0	16	2						
D	0	0	0	115	0	0	0	24						

Note: 45 SPECIALIST and 83 NON-SPECIALIST episode(s) did not record AIS scores.

Change in level of TSCI from admission to discharge - SPECIALIST

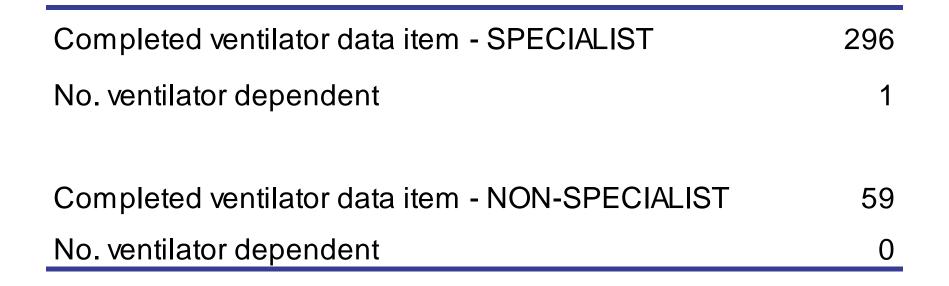
Admission	Discharge level of injury											_																		
Level of injury	C1	C2	C3	C4	C5	C6	C7	C8	T1	T2	Т3	T4	T5	Т6	T7	Т8	Т9	T10	T11 ⁻	T12	L1	L2	L3	L4	L5	S1	S2	S3	S4	S 5
C1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
C2	0	7	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
C3	0	1	19	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C4	0	2	3	60	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C5	1	2	2	2	26	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C6	0	0	0	1	1	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C7	0	0	1	0	0	0	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C8	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T1	0	0	0	0	0	0	0	0	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T2	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ТЗ	0	0	0	0	0	0	0	0	0	0	7	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Т4	0	0	1	0	0	0	0	0	0	0	1	6	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Т5	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Т6	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Т8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Т9	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	5	0	0	1	2	0	0	0	0	0	0	0	0	0
T10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	9	0	0	0	0	0	1	0	0	0	0	0	0
T11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0
T12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	10	1	0	0	0	0	0	0	0	0	0
L1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	12	0	1	0	0	0	0	0	0	0
L2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0
L3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0
L4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
S4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Change in level of TSCI from admission to discharge – NON-SPECIALIST



aroc

Ventilator dependent – Traumatic







Appendix 1: Glossary

AN-SNAP class

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

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

AROC

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

Benchmark group

In Calendar Year 2015 new benchmark groups have been 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. The benchmark data set is all episodes during the reporting period in the AROC database.



Casemix-adjusted relative mean

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

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

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

For each episode calculate:

LOSdiff = episode's LOS – mean LOS appropriate AN-SNAP class.

Casemix-adjusted relative mean = Sum of LOSdiff for all episodes divided by Number of episodes

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

Complete/incomplete episode

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



Confidence interval for a mean

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

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 dysfunction & 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 <u>cost</u> 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.

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

<u>Haemorrhagic</u>

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

<u>Ischaemic</u>

- 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

<u>Traumatic</u>

- 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)



AROC impairment codes...continued

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 (pathway 3)



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 \ge 65
4AZ4	Weighted FIM motor score 13-18, All other impairments, Age \leq 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 \geq 68
4AA5	Stroke, weighted FIM motor 36-50, Age \leq 67
4AA6	Stroke, weighted FIM motor 19-35, Age ≥ 68
4AA7	Stroke, weighted FIM motor 19-35, Age \leq 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 \geq 50, weighted FIM motor 42-91
4AD2	Spinal cord dysfunction, Age \geq 50, weighted FIM motor 19-41
4AD3	Spinal cord dysfunction, Age \leq 49, weighted FIM motor 34-91
4AD4	Spinal cord dysfunction, Age \leq 49, weighted FIM motor 19-33

Class **Description of AN-SNAP class** 4AE1 Amputation of limb, Age \geq 54, weighted FIM motor 68-91 4AE2 Amputation of limb, Age \geq 54, weighted FIM motor 31-67 4AE3 Amputation of limb, Age \geq 54, weighted FIM motor 19-30 4AE4 Amputation of limb, Age \leq 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



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