

# AROC Impairment Specific Report

## Inpatient – Pathway 3

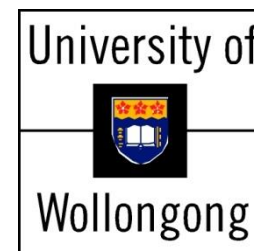
### BRAIN INJURY

Anywhere Hospital

January 2014 – December 2014



Australasian Faculty  
of Rehabilitation  
Medicine



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# Introducing the Impairment Specific Reports

This is the first AROC Impairment Specific Report for brain dysfunction which compares YOUR FACILITY's data to data from SPECIALIST brain injury services and data from NON SPECIALIST brain injury 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 follows with an explanatory data chapter at the end.

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.

# Data used in this report

- Data included in this report are all brain injury episodes ending during the calendar year 2014 (1 January 2014 to 31 December 2014 inclusive).
- Commencing with the 2013 Calendar Year benchmark reports AROC is implementing a new analysis practice called Data Concatenation (refer Appendix 1 for more details about this process)
- All tables and graphs present calendar year 2014 data unless otherwise indicated, and the number of episodes from YOUR FACILITY in 2014 are provided. Where there are less than five episodes within a subgroup, summary data are not provided.
- This report is based on the V4 data set - Pathway 3 (inpatient direct care).
- All case-mix analysis uses the version 3 AN-SNAP class (Appendix 3), introduced January 2012. Casemix adjustment is against all SPECIALIST units.
- Appendix 1 (Glossary) contains definitions of concepts referred to in this report. An understanding of these will help with interpretation of the data.
- Unit of counting is by episode, not by patient.

# Brain injury impairment codes

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

## **Traumatic**

- 2.21 – Brain Dysfunction, Open injury
- 2.22 – Brain Dysfunction, Closed injury
- 14.1 – Major Multiple Trauma, Brain + Brain injury
- 14.2 – Major Multiple Trauma, Brain + multi fracture/amputation

## **Non-Traumatic**

- 2.11 – Brain Dysfunction, Sub-arachnoid haemorrhage
- 2.12 – Brain Dysfunction, Anoxic brain damage
- 2.13 – Brain Dysfunction, Other non-traumatic brain dysfunction

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

# Brain injury AN-SNAP classes

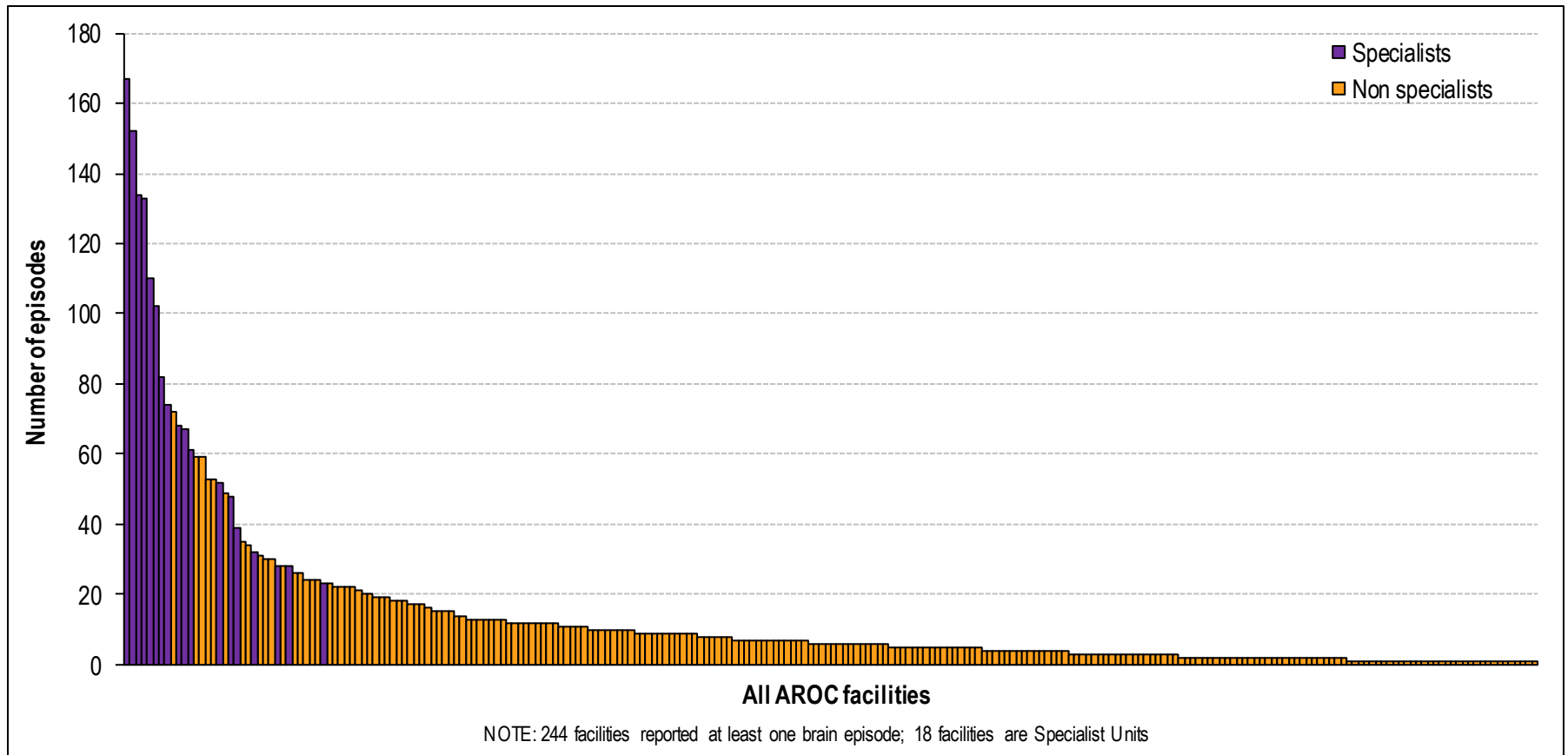
Levels of functioning for brain injury are categorised by the following version 3 AN-SNAP classes:

- 3-210 Brain Dysfunction, , FIM motor 56-91, FIM cognition 32-35
- 3-211 Brain Dysfunction, FIM motor 56-91, FIM cognition 24-31
- 3-212 Brain Dysfunction, FIM motor 56-91, FIM cognition 20-23
- 3-213 Brain Dysfunction, FIM motor 56-91, FIM cognition 5-19
- 3-214 Brain Dysfunction, FIM motor 24-55
- 3-215 Brain Dysfunction, FIM motor 14-23
- 3-238 Major Multiple Trauma, FIM Total 101-126
- 3-239 Major Multiple Trauma, FIM Total 74-100
- 3-240 Major Multiple Trauma, FIM Total 44-73
- 3-241 Major Multiple Trauma, FIM Total 19-43
- 3-202 Major Multiple Trauma & Brain Dysfunction, FIM Motor 13

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

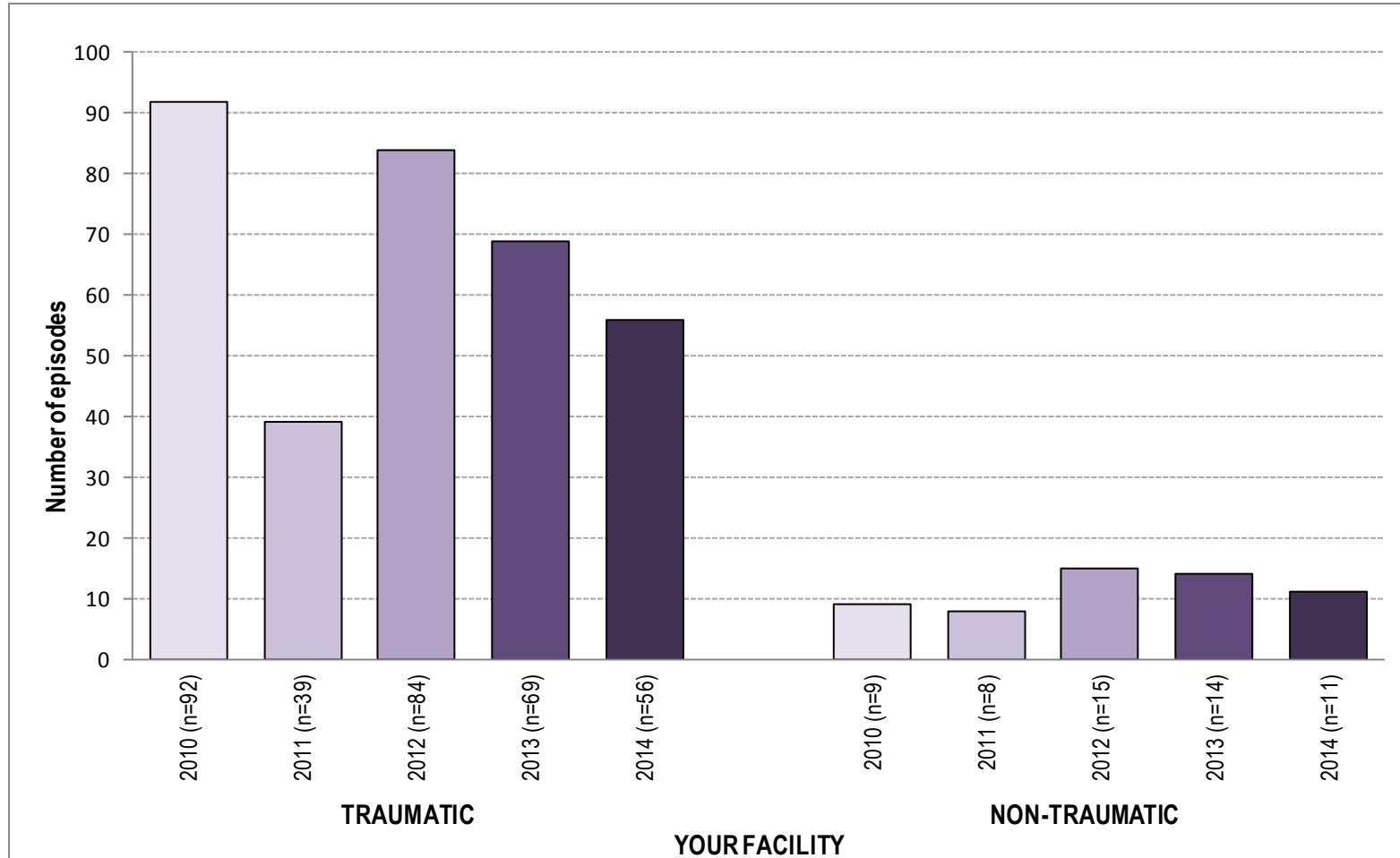
# The BIG picture

# Volume of episodes by facilities treating brain injury (2014)

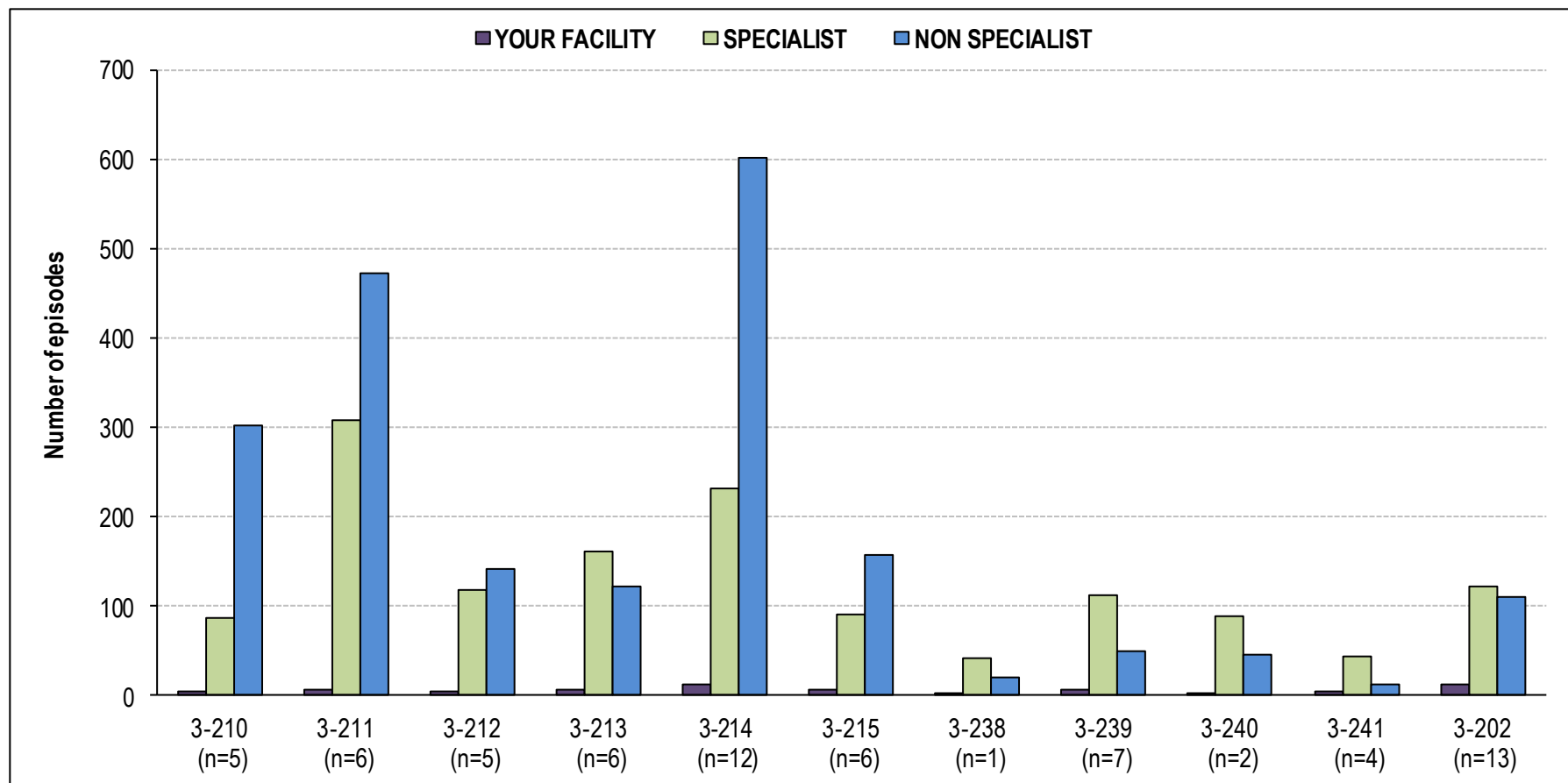




# Number of traumatic and non-traumatic episodes over time – YOUR FACILITY



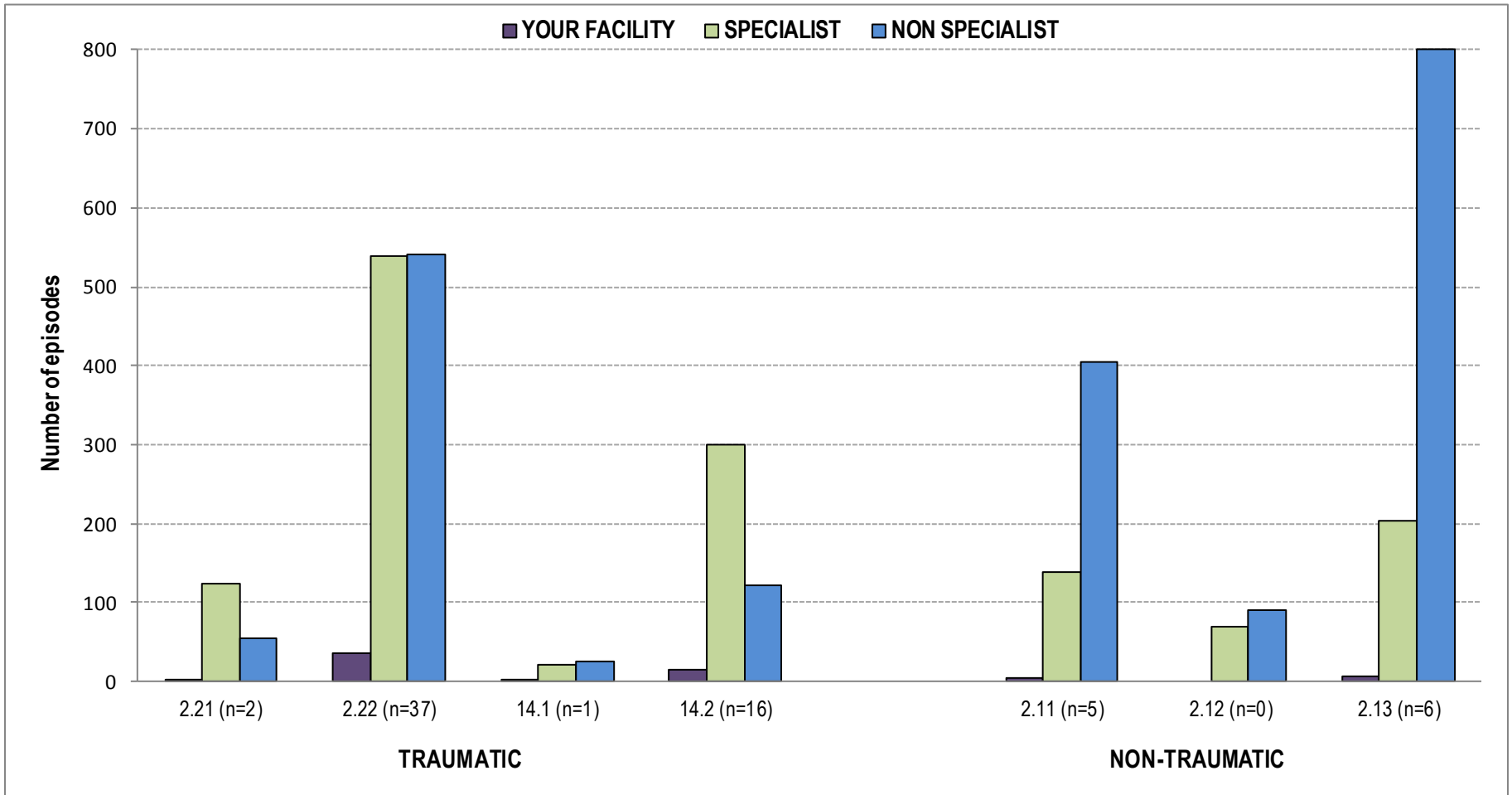
# Number of episodes by AN-SNAP class



# Number of episodes by AN-SNAP class

AN-SNAP Class	YOUR FACILITY		SPECIALIST		NON SPECIALIST	
	No.	%	No.	%	No.	%
3-210 (BI,FIM motor 56-91, FIM cognition 32-35)	5	7.5	86	6.1	301	14.8
3-211 (BI,FIM motor 56-91, FIM cognition 24-31)	6	9.0	307	21.9	473	23.2
3-212 (BI,FIM motor 56-91, FIM cognition 20-23)	5	7.5	118	8.4	142	7.0
3-213 (BI,FIM motor 56-91, FIM cognition 5-19)	6	9.0	160	11.4	121	5.9
3-214 (BI,FIM motor 24-55)	12	17.9	232	16.6	601	29.5
3-215 (BI,FIM motor 14-23)	6	9.0	90	6.4	157	7.7
3-238 (MMT, FIM total 101-126)	1	1.5	41	2.9	21	1.0
3-239 (MMT, FIM total 74-100)	7	10.4	112	8.0	50	2.5
3-240 (MMT, FIM total 44-73)	2	3.0	88	6.3	46	2.3
3-241 (MMT, FIM total 19-43)	4	6.0	44	3.1	13	0.6
3-202 (BI,MMT,FIM motor 13)	13	19.4	121	8.6	110	5.4
<b>Total</b>	<b>67</b>	<b>100.0</b>	<b>1,399</b>	<b>100.0</b>	<b>2,035</b>	<b>100.0</b>

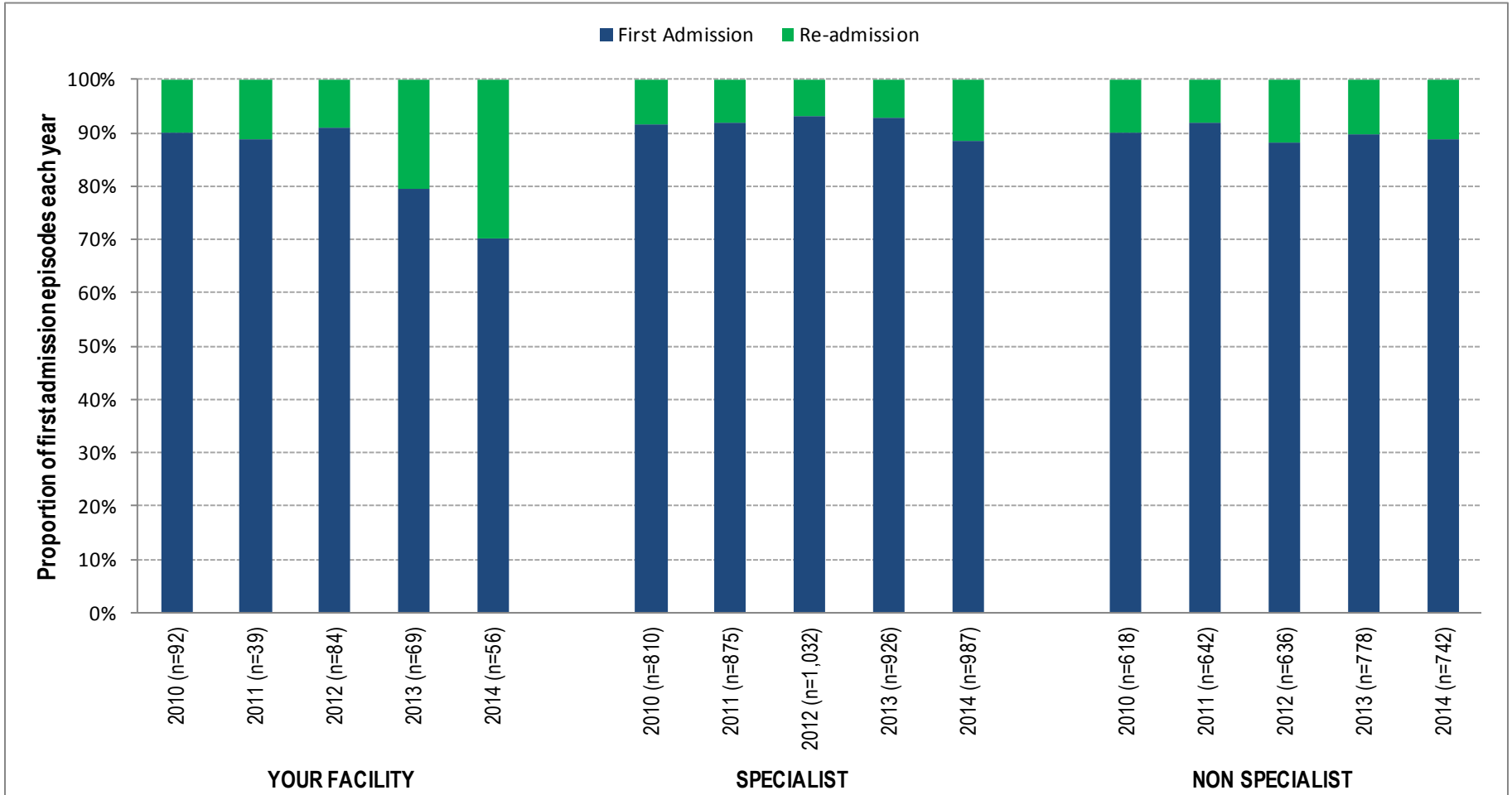
# Number of traumatic and non-traumatic episodes by impairment



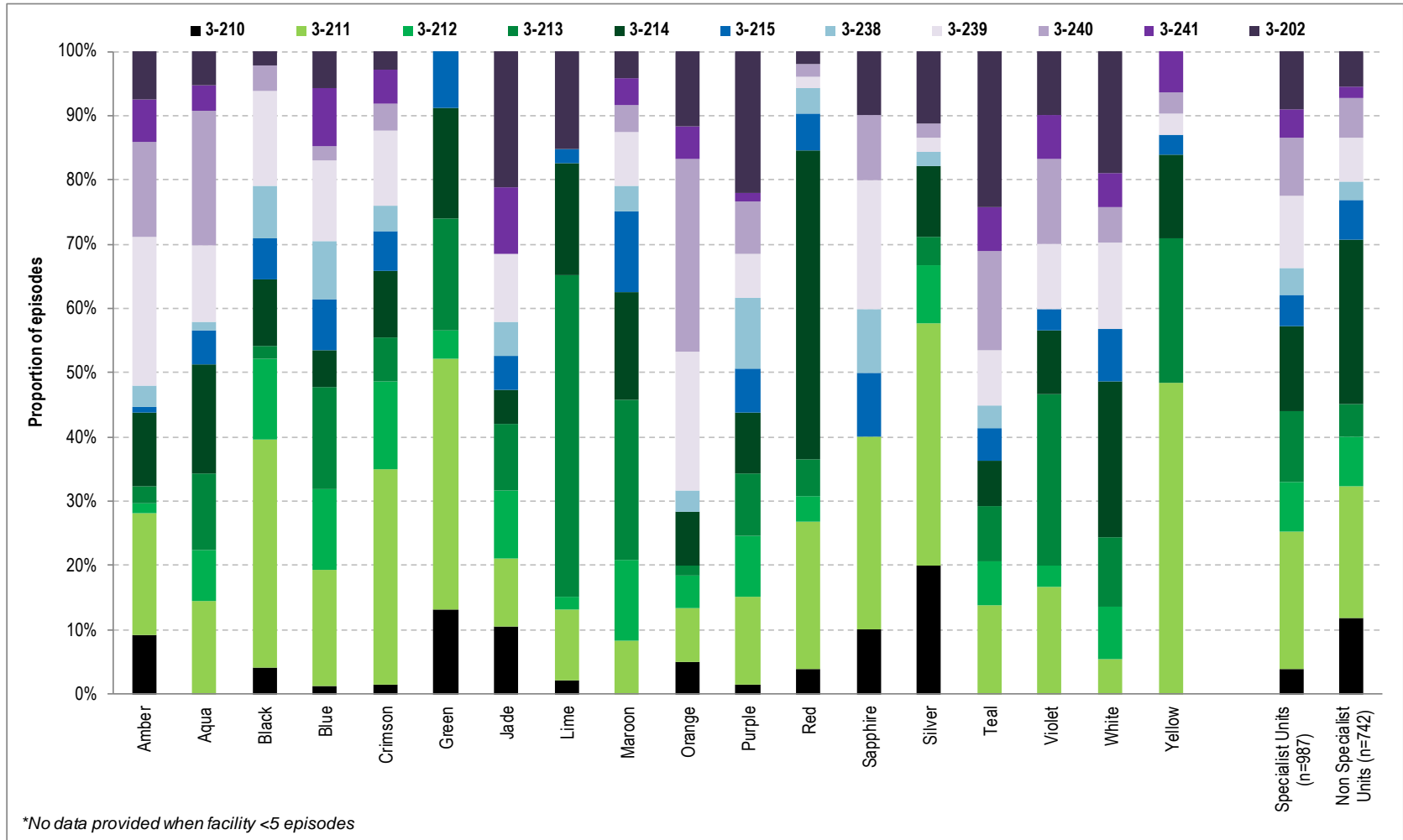
# Traumatic and non-traumatic episodes by impairment

	YOUR FACILITY		SPECIALIST		NON SPECIALIST	
	No.	%	No.	%	No.	%
<b><u>Traumatic impairments</u></b>						
2.21 Open injury	2	3.6	124	12.6	54	7.3
2.22 Closed injury	37	66.1	540	54.7	542	72.8
14.1 MMT: brain+Brain	1	1.8	22	2.2	26	3.5
14.2 MMT: brain+other	16	28.6	301	30.5	122	16.4
<b>Total TBI</b>	<b>56</b>	<b>100.0</b>	<b>987</b>	<b>100.0</b>	<b>744</b>	<b>100.0</b>
<b><u>Non-traumatic impairments</u></b>						
2.11 Sub-arachnoid haemorrhage	5	45.5	139	33.7	404	31.2
2.12 Anoxic brain damage	0	0.0	70	16.9	91	7.0
2.13 Other NTBI	6	54.5	204	49.4	800	61.8
<b>Total NTBI</b>	<b>11</b>	<b>100.0</b>	<b>413</b>	<b>100.0</b>	<b>1,295</b>	<b>100.0</b>
<b>GRAND TOTAL</b>	<b>67</b>		<b>1,400</b>		<b>2,039</b>	

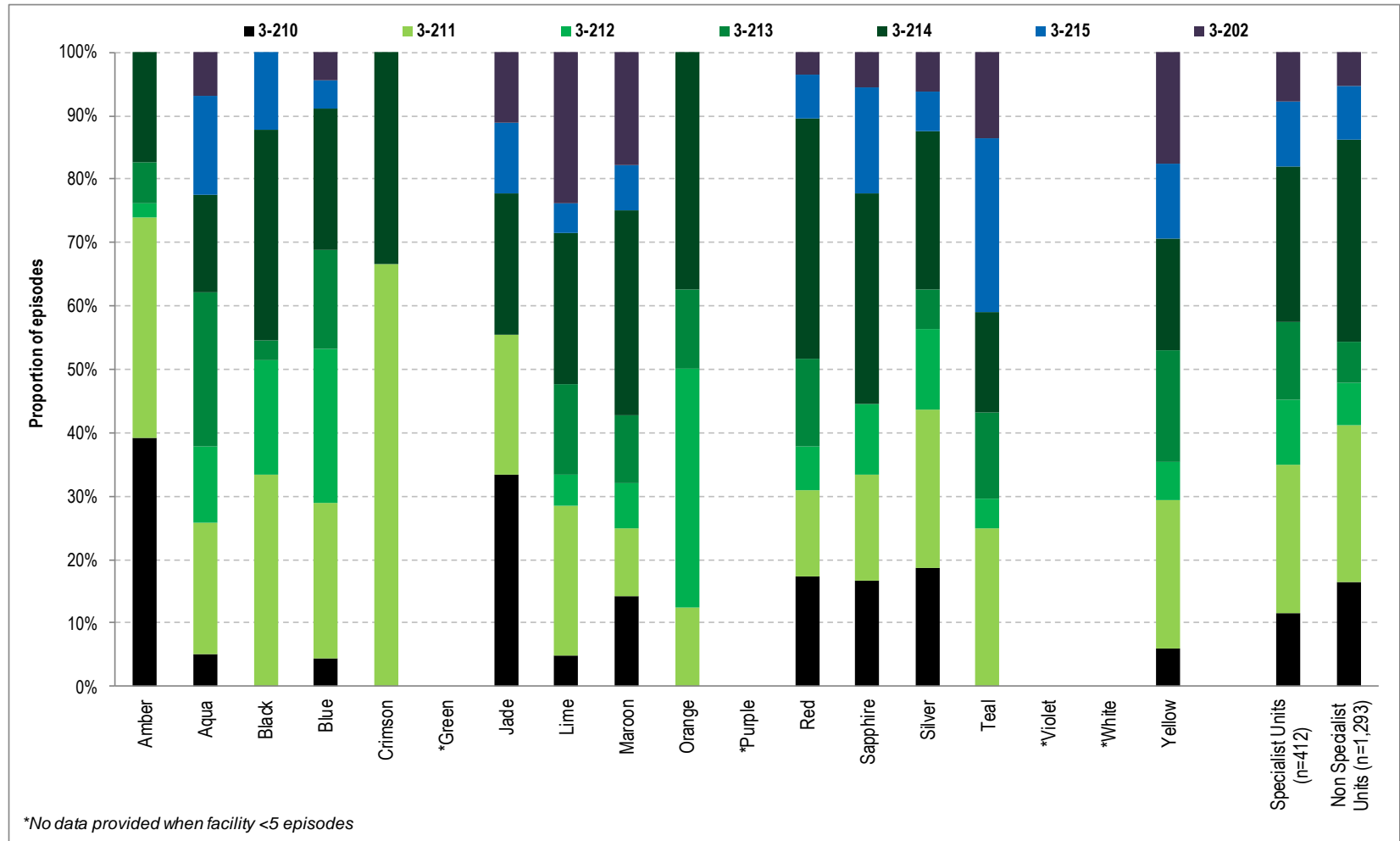
# Proportion of first admission episodes over time



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

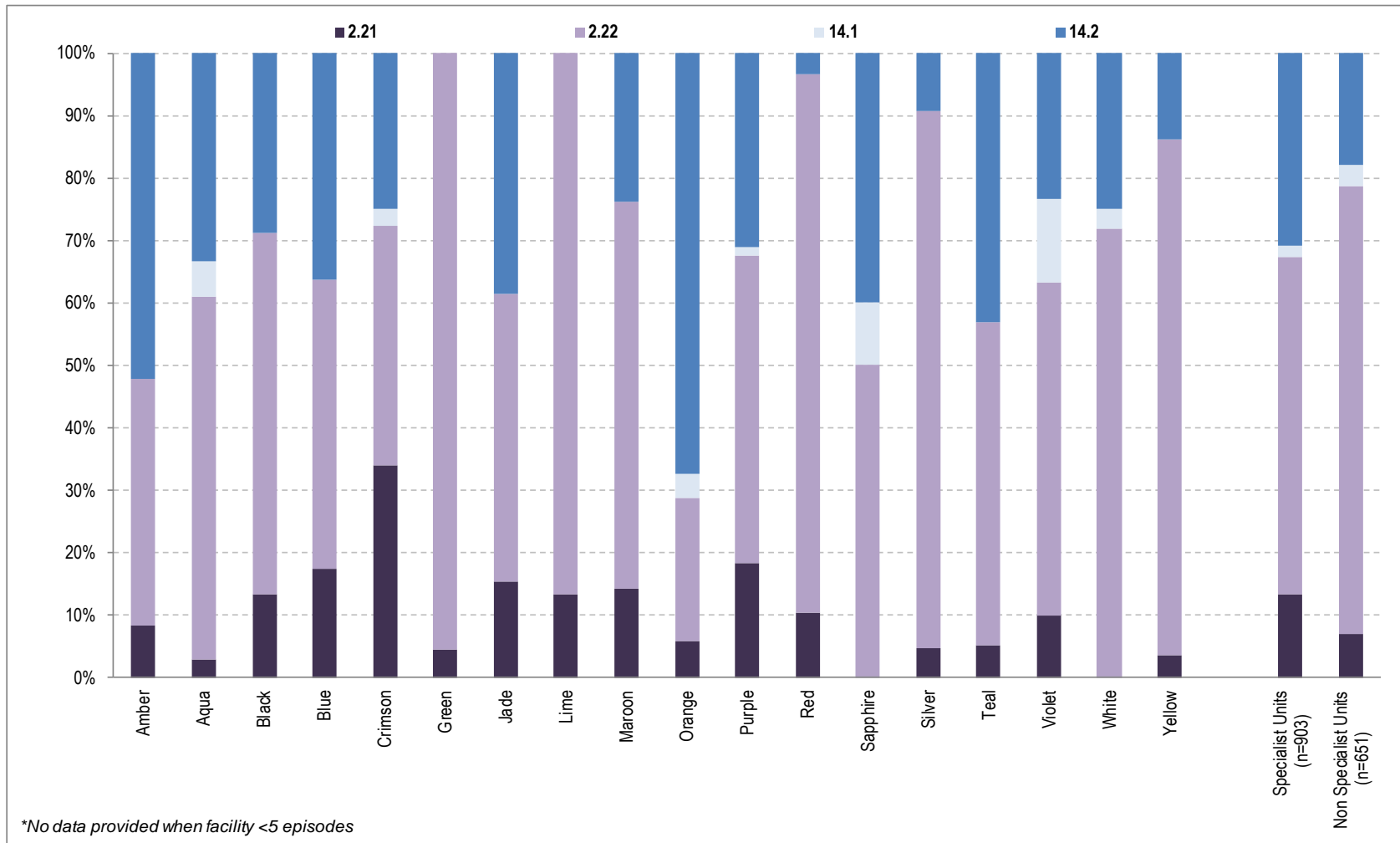


# Proportion of non-traumatic episodes by facility by AN-SNAP class

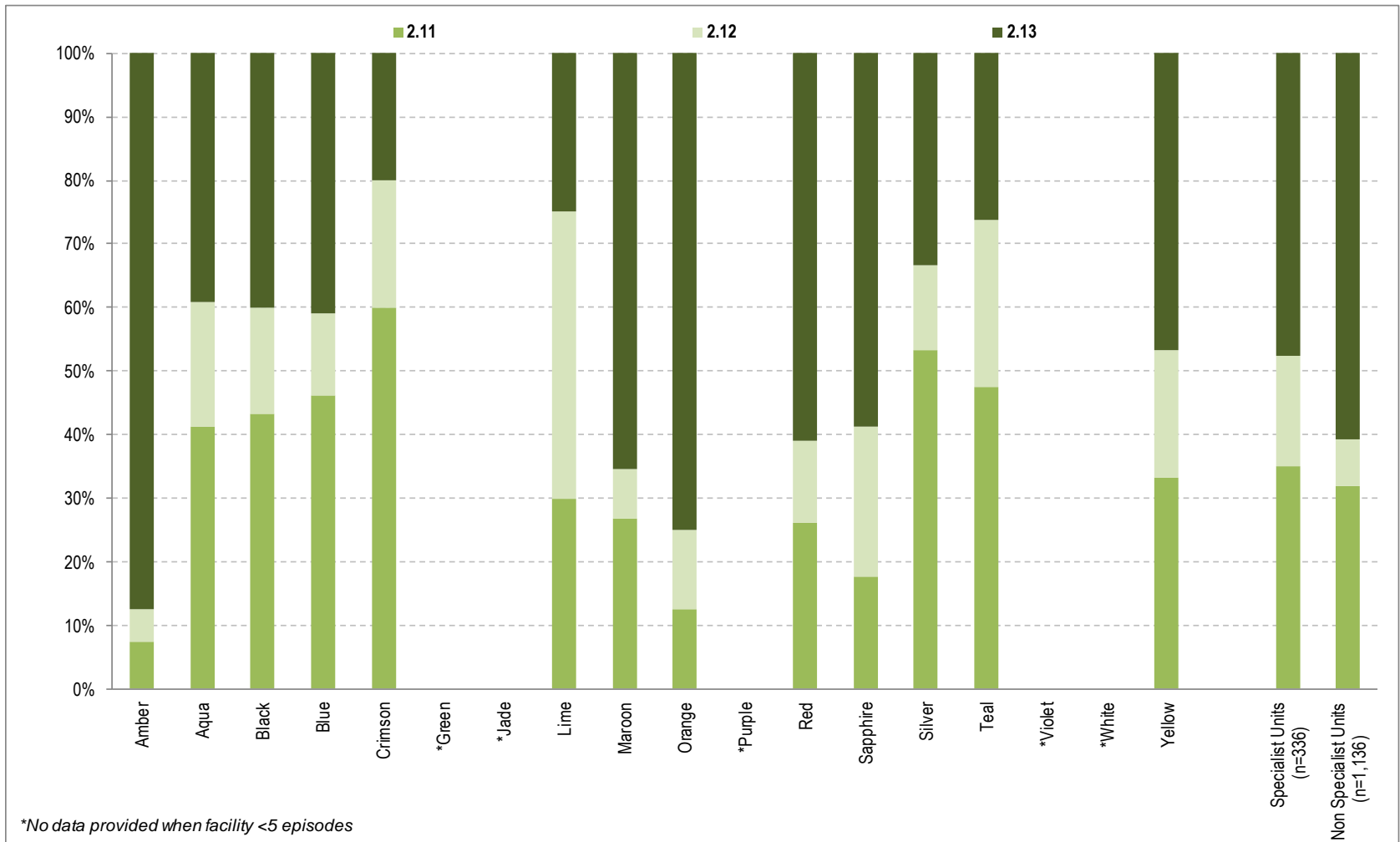




# Proportion of traumatic episodes by impairment by facility



# Proportion of non-traumatic episodes by impairment by facility

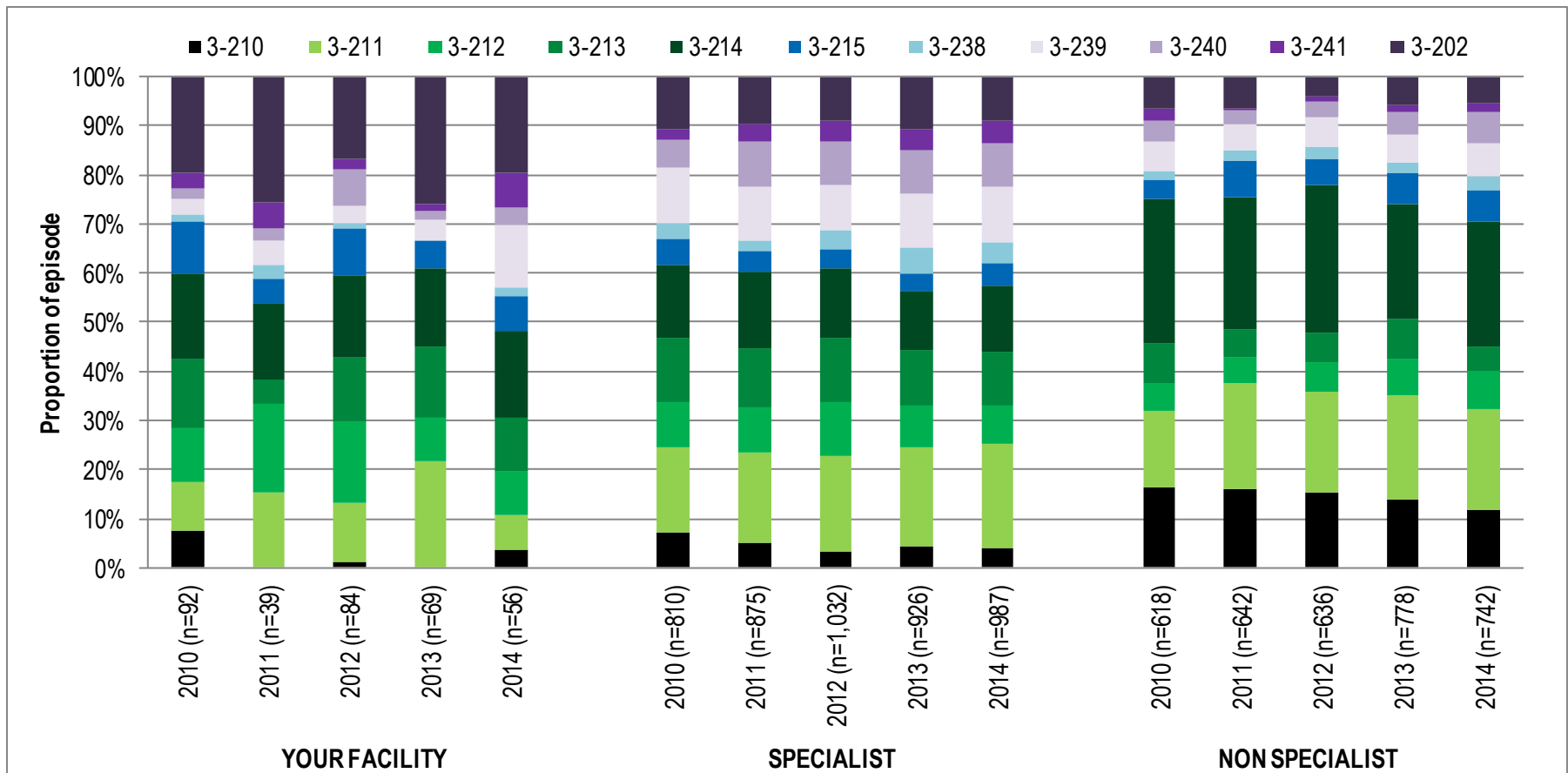


# Traumatic and non-traumatic episodes by impairment by AN-SNAP class

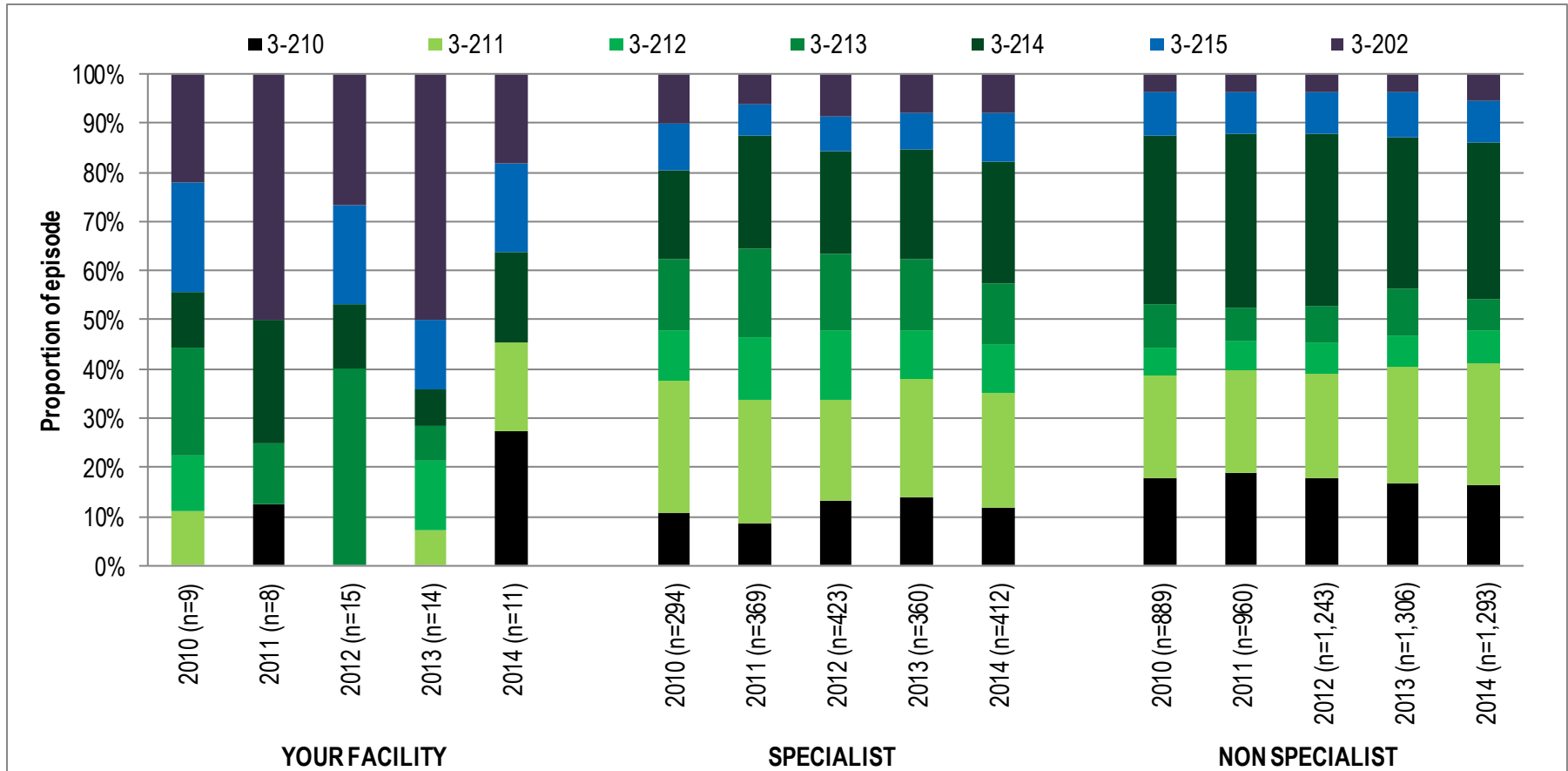
AN-SNAP class	YOUR FACILITY											Total	Specialists	Non specialists	
	3-210	3-211	3-212	3-213	3-214	3-215	3-238	3-239	3-240	3-241	3-202				
<b>Traumatic impairments</b>															
2.21 Open injury	0	0	0	2	0	0	0	0	0	0	0	0	2	124	54
2.22 Closed injury	2	4	5	4	10	4	0	0	0	0	0	8	37	540	540
14.1 MMT: brain+Brain	0	0	0	0	0	0	0	0	1	0	0	0	1	22	26
14.2 MMT: brain+other	0	0	0	0	0	0	1	7	1	4	3	16	301	122	
<b>All Traumatic Impairments</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>10</b>	<b>4</b>	<b>1</b>	<b>7</b>	<b>2</b>	<b>4</b>	<b>11</b>	<b>56</b>	<b>987</b>	<b>742</b>	
<b>Specialist</b>	<b>38</b>	<b>211</b>	<b>76</b>	<b>109</b>	<b>131</b>	<b>48</b>	<b>41</b>	<b>112</b>	<b>88</b>	<b>44</b>	<b>89</b>	<b>987</b>			
<b>Non Specialist</b>	<b>87</b>	<b>153</b>	<b>57</b>	<b>38</b>	<b>189</b>	<b>47</b>	<b>21</b>	<b>50</b>	<b>46</b>	<b>13</b>	<b>41</b>	<b>742</b>			

AN-SNAP class	YOUR FACILITY							Total	Specialists	Non specialists
	3-210	3-211	3-212	3-213	3-214	3-215	3-202			
<b>Non-traumatic impairments</b>										
2.11 Sub-arachnoid haemorrhage	0	1	0	0	1	1	2	5	126	376
2.12 Anoxic brain damage	0	0	0	0	0	0	0	0	63	81
2.13 Other NTBI	3	1	0	0	1	1	0	6	191	767
<b>All Non-Traumatic Impairments</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>11</b>	<b>380</b>	<b>1,224</b>
<b>Specialists</b>	<b>48</b>	<b>96</b>	<b>42</b>	<b>51</b>	<b>101</b>	<b>42</b>	<b>0</b>	<b>380</b>		
<b>Non Specialists</b>	<b>214</b>	<b>320</b>	<b>85</b>	<b>83</b>	<b>412</b>	<b>110</b>	<b>0</b>	<b>1,224</b>		

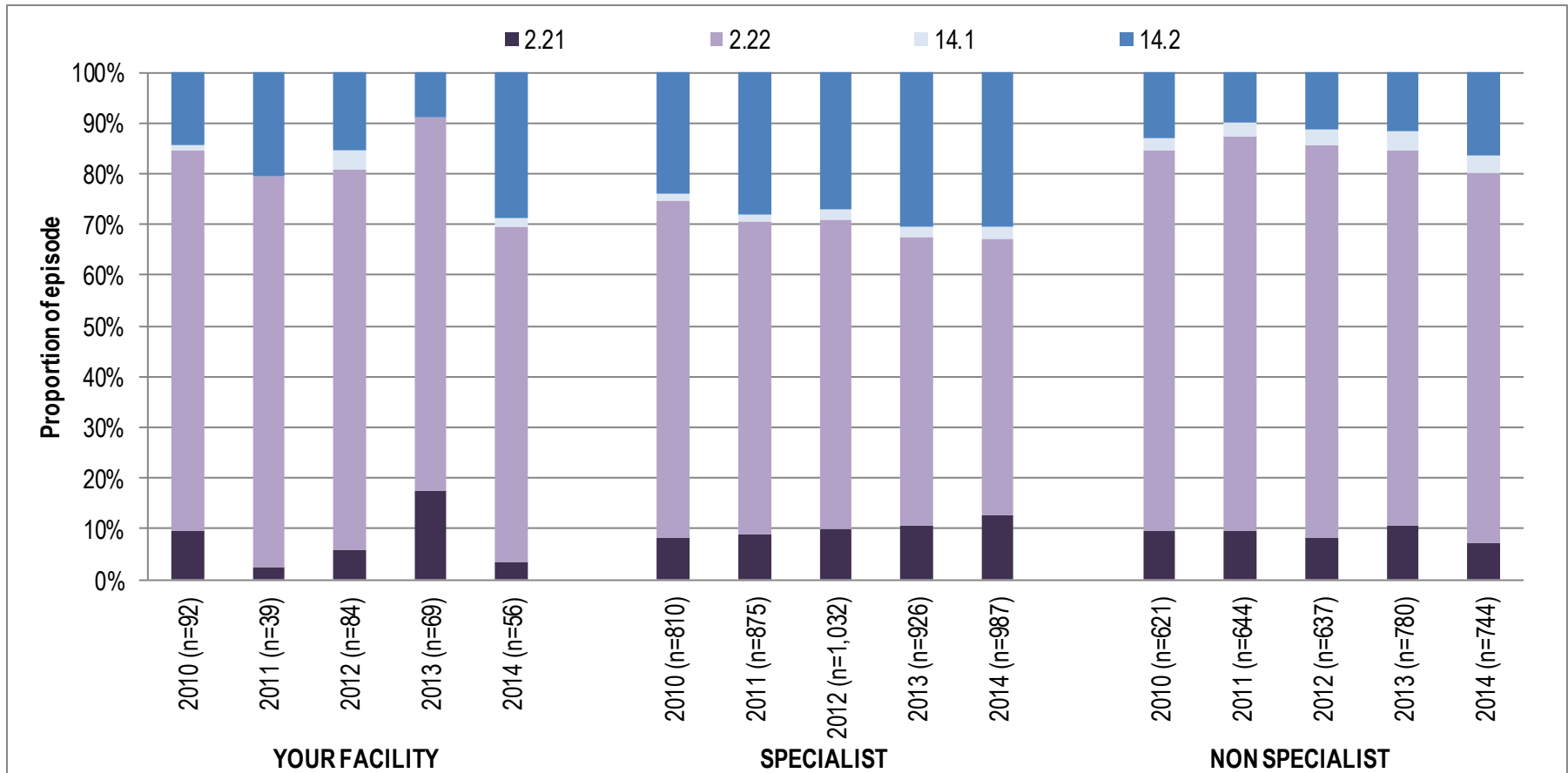
# Proportion of traumatic episodes by AN-SNAP class over time



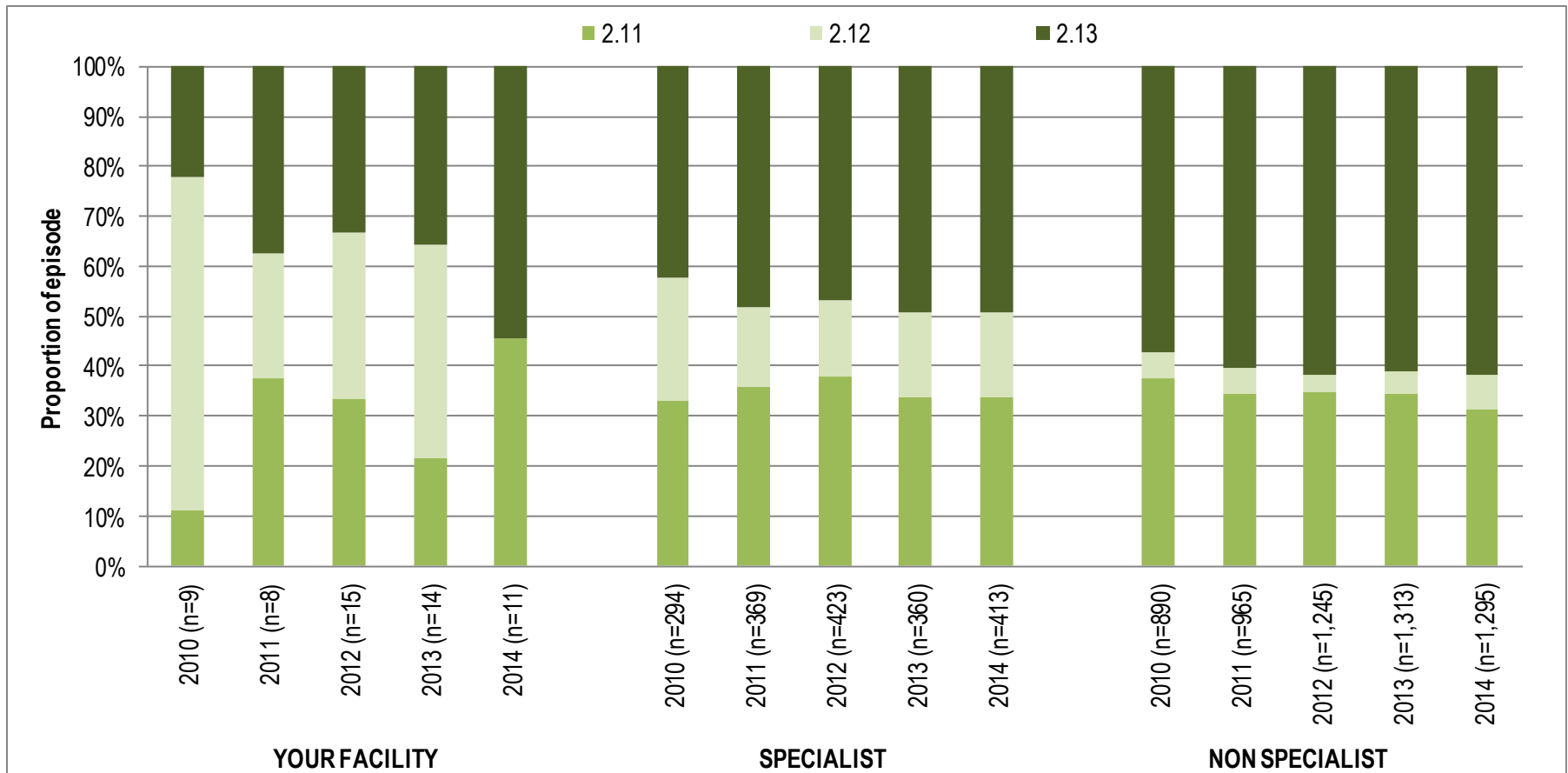
# Proportion of non-traumatic episodes by AN-SNAP class over time



# Proportion of traumatic episodes by impairment over time



# Proportion of non-traumatic episodes by impairment over time



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

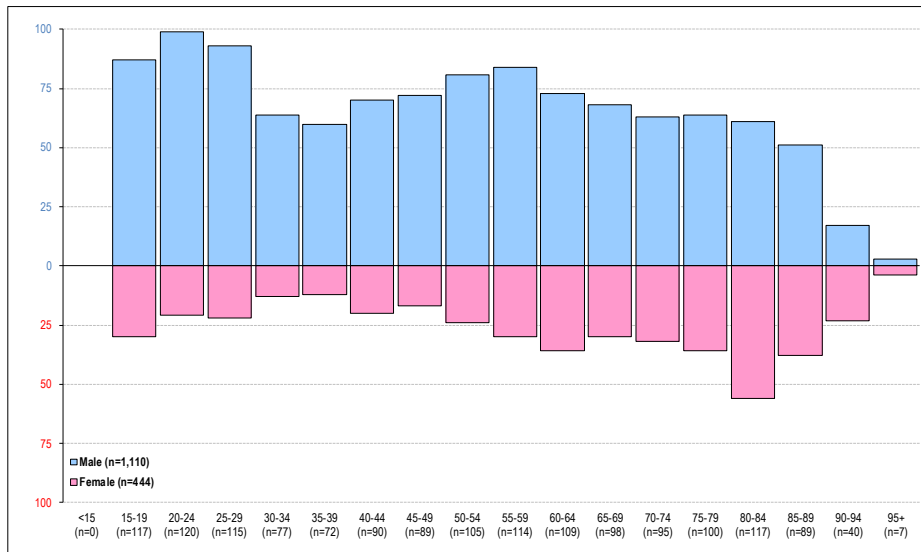
Traumatic AN-SNAP class	YOUR FACILITY					SPECIALIST					NON SPECIALIST				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
3-210 (BI,FIM motor 56-91, FIM cognition 32-35)	7	0	1	0	2	58	44	35	41	38	101	102	98	109	87
3-211 (BI,FIM motor 56-91, FIM cognition 24-31)	9	6	10	15	4	140	160	199	187	211	96	139	130	163	153
3-212 (BI,FIM motor 56-91, FIM cognition 20-23)	10	7	14	6	5	74	83	113	78	76	36	34	39	60	57
3-213 (BI,FIM motor 56-91, FIM cognition 5-19)	13	2	11	10	6	107	104	136	105	109	50	37	38	62	38
3-214 (BI,FIM motor 24-55)	16	6	14	11	10	120	135	147	111	131	182	173	190	183	189
3-215 (BI,FIM motor 14-23)	10	2	8	4	4	44	38	40	32	48	24	46	34	49	47
3-238 (MMT, FIM total 101-126)	1	1	1	0	1	25	19	38	51	41	10	14	16	16	21
3-239 (MMT, FIM total 74-100)	3	2	3	3	7	92	96	97	99	112	37	35	38	44	50
3-240 (MMT, FIM total 44-73)	2	1	6	1	2	45	79	89	84	88	27	18	21	37	46
3-241 (MMT, FIM total 19-43)	3	2	2	1	4	17	32	45	39	44	15	3	7	10	13
3-202 (BI,MMT,FIM motor 13)	18	10	14	18	11	88	85	93	99	89	40	41	25	45	41
<b>All Brain AN-SNAP classes</b>	<b>92</b>	<b>39</b>	<b>84</b>	<b>69</b>	<b>56</b>	<b>810</b>	<b>875</b>	<b>1,032</b>	<b>926</b>	<b>987</b>	<b>618</b>	<b>642</b>	<b>636</b>	<b>778</b>	<b>742</b>

Non-traumatic AN-SNAP class	YOUR FACILITY					SPECIALIST					NON SPECIALIST				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
3-210 (BI,FIM motor 56-91, FIM cognition 32-35)	0	1	0	0	3	31	32	56	50	48	157	181	223	217	214
3-211 (BI,FIM motor 56-91, FIM cognition 24-31)	1	0	0	1	2	80	93	87	86	96	187	200	263	310	320
3-212 (BI,FIM motor 56-91, FIM cognition 20-23)	1	0	0	2	0	30	47	60	36	42	50	57	80	85	85
3-213 (BI,FIM motor 56-91, FIM cognition 5-19)	2	1	6	1	0	42	66	66	52	51	78	65	91	123	83
3-214 (BI,FIM motor 24-55)	1	2	2	1	2	53	85	88	81	101	306	339	434	402	412
3-215 (BI,FIM motor 14-23)	2	0	3	2	2	28	23	30	26	42	77	82	105	122	110
3-202 (BI,MMT,FIM motor 13)	2	4	4	7	2	30	23	36	29	32	34	36	47	47	69
<b>All Brain AN-SNAP classes</b>	<b>9</b>	<b>8</b>	<b>15</b>	<b>14</b>	<b>11</b>	<b>294</b>	<b>369</b>	<b>423</b>	<b>360</b>	<b>412</b>	<b>889</b>	<b>960</b>	<b>1,243</b>	<b>1,306</b>	<b>1,293</b>

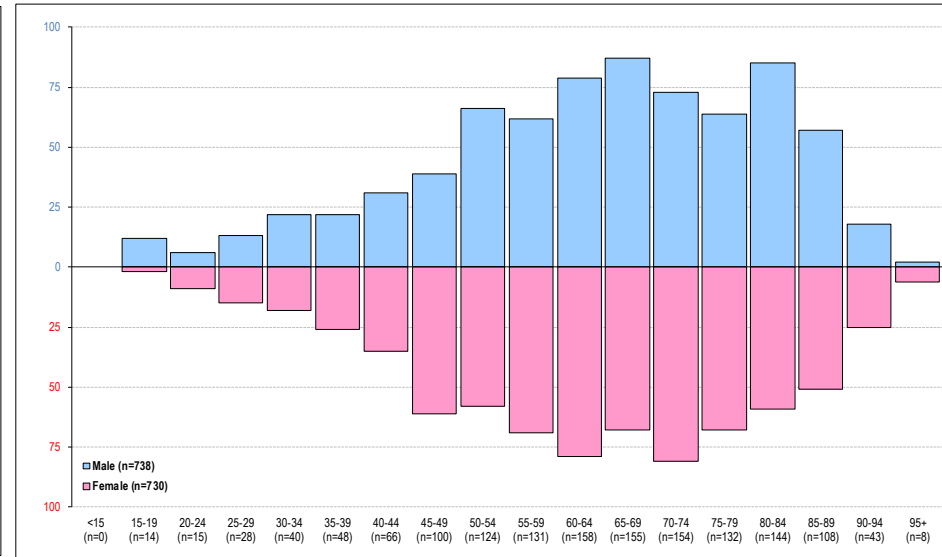
	YOUR FACILITY					SPECIALIST					NON SPECIALIST				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
<b>Traumatic impairments</b>															
2.21 Open injury	9	1	5	12	2	66	77	102	98	124	60	62	52	83	54
2.22 Closed injury	69	30	63	51	37	540	542	629	527	540	465	501	493	578	542
14.1 MMT: brain+Brain	1	0	3	0	1	11	10	21	18	22	15	18	20	28	26
14.2 MMT: brain+other	13	8	13	6	16	193	246	280	283	301	81	63	72	91	122
<b>Total TBI</b>	<b>92</b>	<b>39</b>	<b>84</b>	<b>69</b>	<b>56</b>	<b>810</b>	<b>875</b>	<b>1,032</b>	<b>926</b>	<b>987</b>	<b>621</b>	<b>644</b>	<b>637</b>	<b>780</b>	<b>744</b>
<b>Non-traumatic impairments</b>															
2.11 Sub-arachnoid haemorrhage	1	3	5	3	5	97	132	160	122	139	335	332	431	450	404
2.12 Anoxic brain damage	6	2	5	6	0	73	59	65	61	70	46	51	47	62	91
2.13 Other NTBI	2	3	5	5	6	124	178	198	177	204	509	582	767	801	800
<b>Total NTBI</b>	<b>9</b>	<b>8</b>	<b>15</b>	<b>14</b>	<b>11</b>	<b>294</b>	<b>369</b>	<b>423</b>	<b>360</b>	<b>413</b>	<b>890</b>	<b>965</b>	<b>1,245</b>	<b>1,313</b>	<b>1,295</b>
<b>GRAND TOTAL</b>	<b>101</b>	<b>47</b>	<b>99</b>	<b>83</b>	<b>67</b>	<b>1,104</b>	<b>1,244</b>	<b>1,455</b>	<b>1,286</b>	<b>1,400</b>	<b>1,511</b>	<b>1,609</b>	<b>1,882</b>	<b>2,093</b>	<b>2,039</b>



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

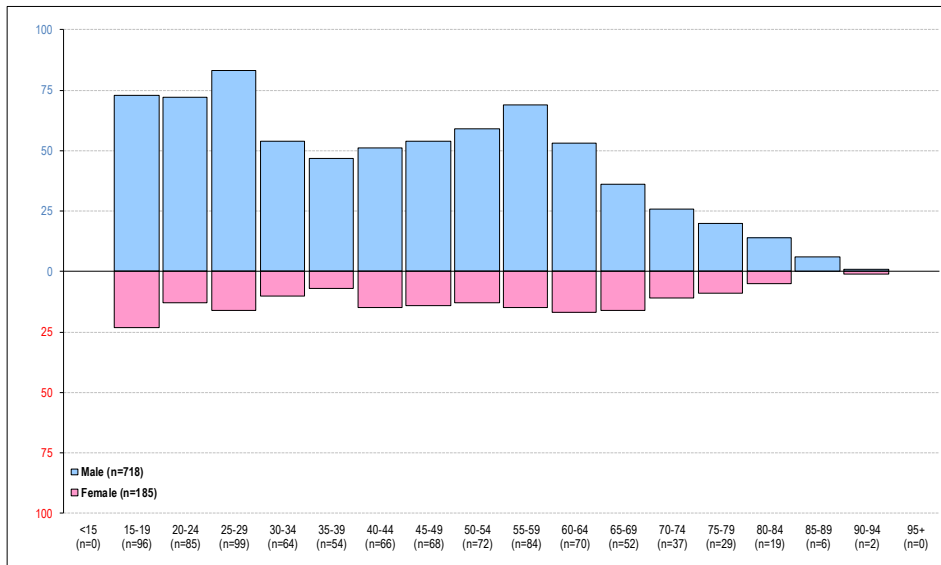


Traumatic

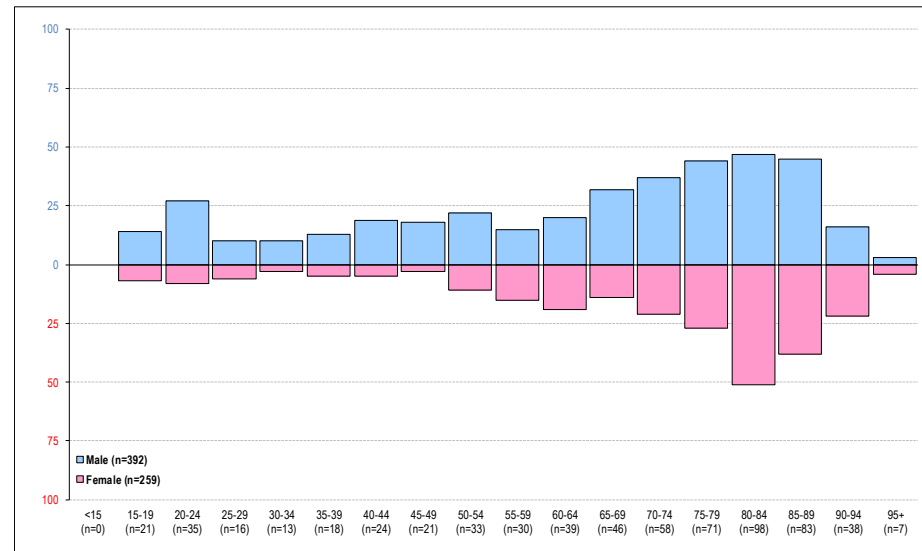


Non-traumatic

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

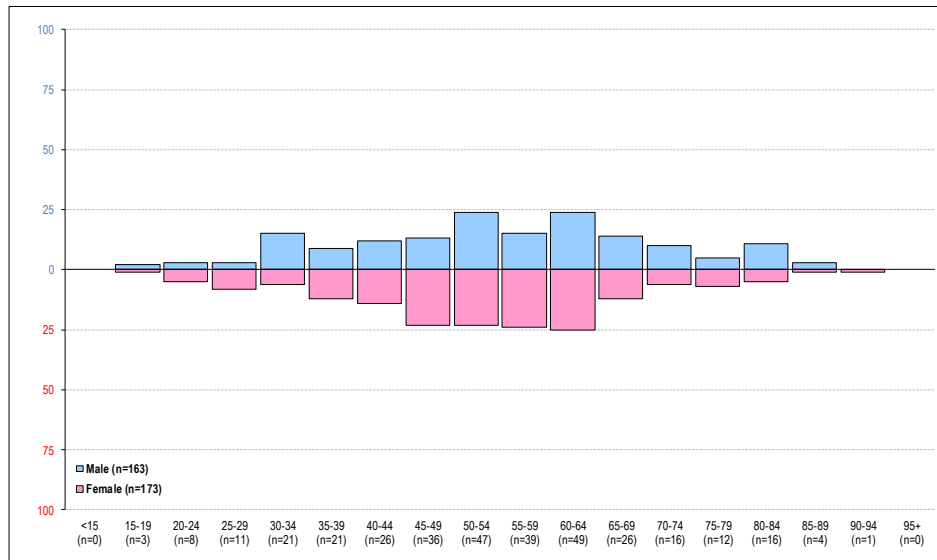


Traumatic specialist

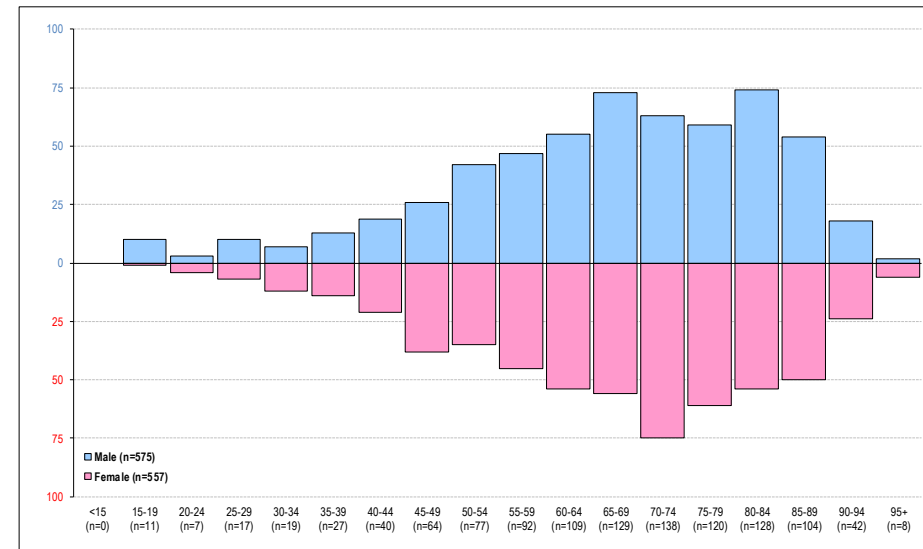


Traumatic non specialist

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

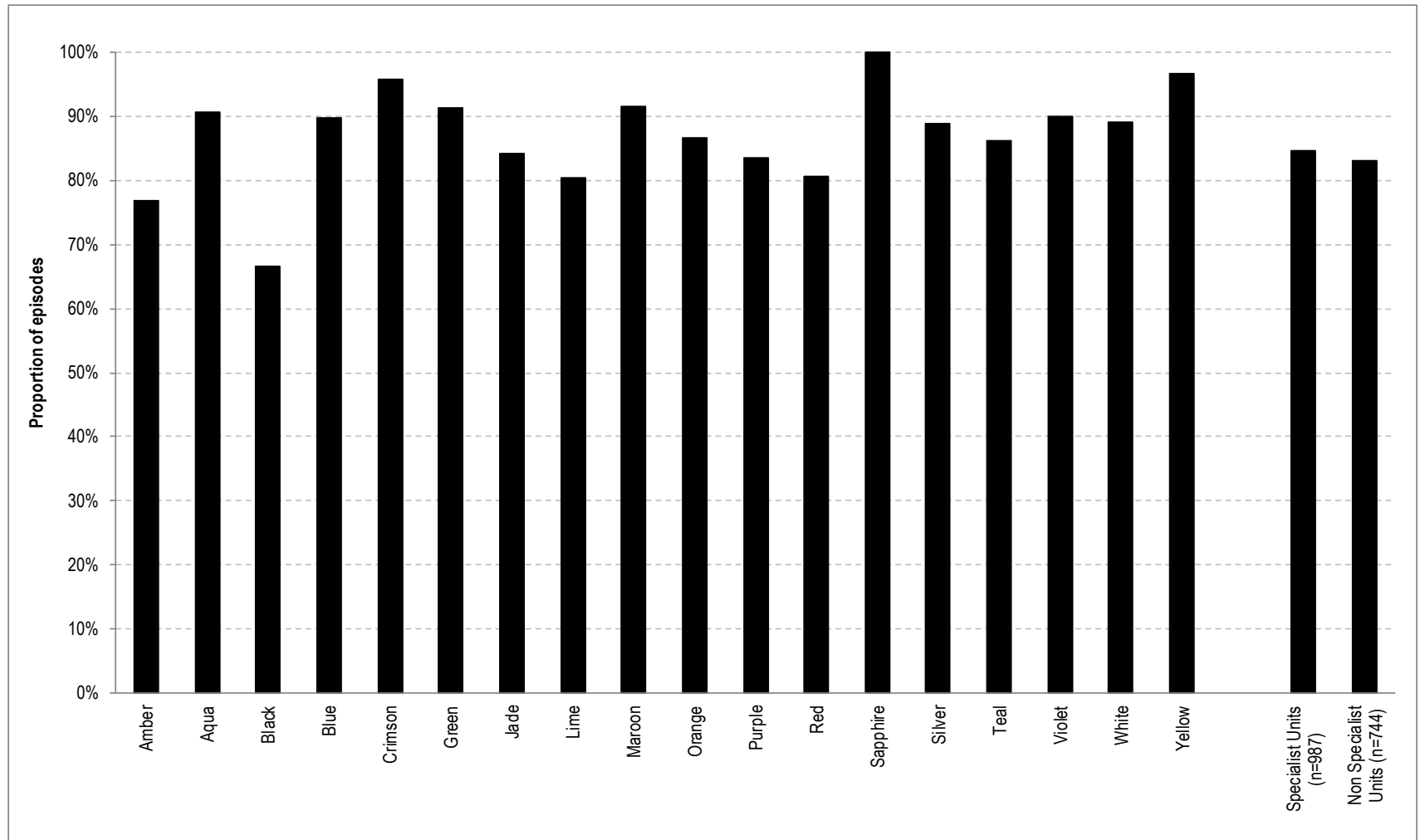


Non-traumatic specialist



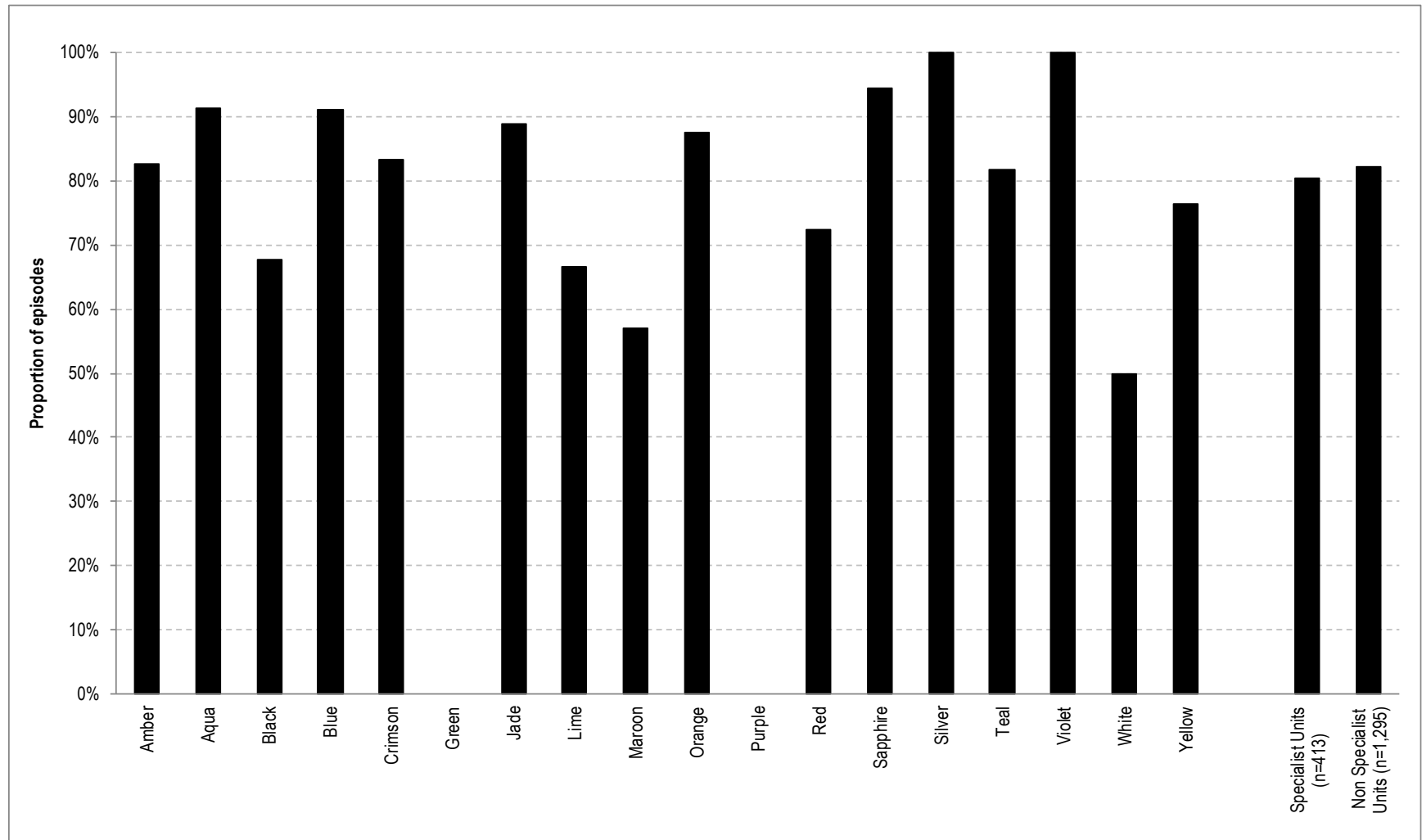
Non-traumatic non specialist

# Proportion of completed\* traumatic episodes by facility



\*See glossary for definition of 'completed' episode

# Proportion of completed\* non-traumatic episodes by facility



\*See glossary for definition of 'completed' episode

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

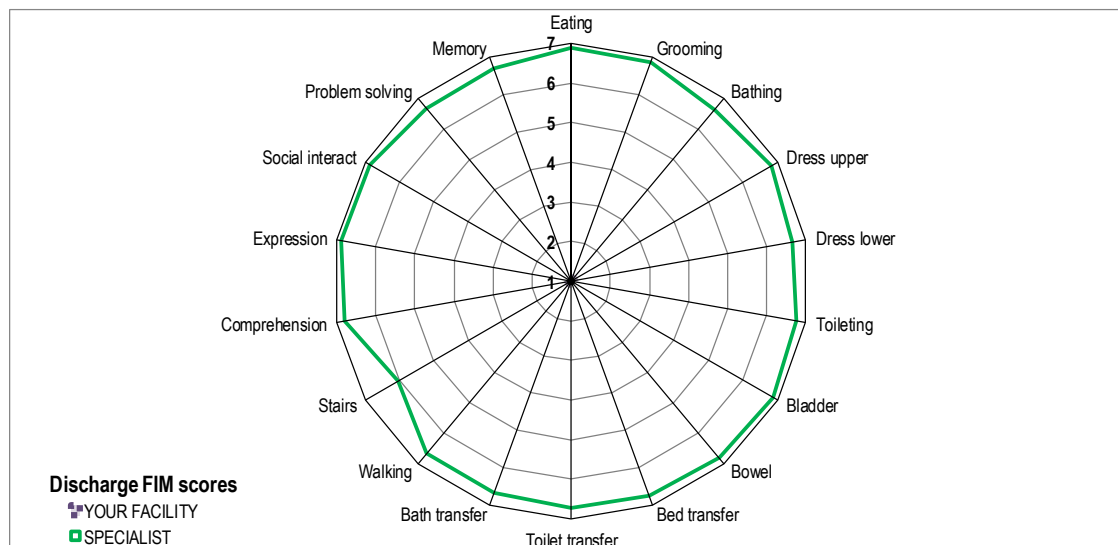
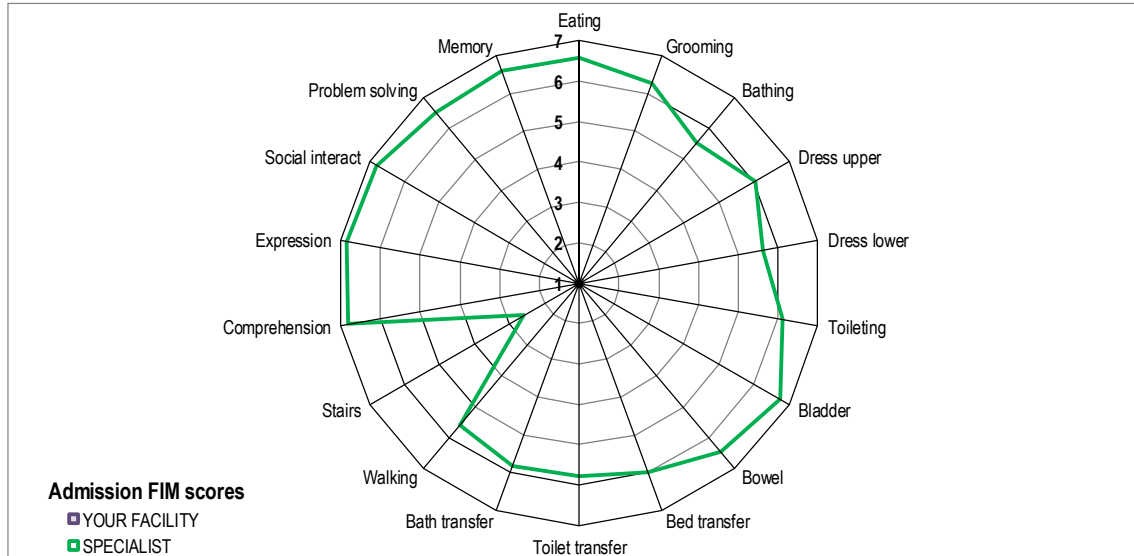
AN-SNAP class	YOUR FACILITY			SPECIALIST			NON SPECIALIST		
	All episodes	Completed episodes	%Complete	All episodes	Completed episodes	%Complete	All episodes	Completed episodes	%Complete
3-210 (BI,FIM motor 56-91, FIM cognition 32-35)	5	4	80.0%	86	79	91.9%	301	284	94.4%
3-211 (BI,FIM motor 56-91, FIM cognition 24-31)	6	6	100.0%	307	282	91.9%	473	415	87.7%
3-212 (BI,FIM motor 56-91, FIM cognition 20-23)	5	4	80.0%	118	107	90.7%	142	124	87.3%
3-213 (BI,FIM motor 56-91, FIM cognition 5-19)	6	5	83.3%	160	136	85.0%	121	101	83.5%
3-214 (BI,FIM motor 24-55)	12	11	91.7%	232	190	81.9%	601	474	78.9%
3-215 (BI,FIM motor 14-23)	6	4	66.7%	90	67	74.4%	157	117	74.5%
3-238 (MMT, FIM total 101-126)	1	1	100.0%	41	37	90.2%	21	21	100.0%
3-239 (MMT, FIM total 74-100)	7	7	100.0%	112	101	90.2%	50	45	90.0%
3-240 (MMT, FIM total 44-73)	2	1	50.0%	88	70	79.5%	46	38	82.6%
3-241 (MMT, FIM total 19-43)	4	3	75.0%	44	35	79.5%	13	9	69.2%
3-202 (BI,MMT,FIM motor 13)	13	2	15.4%	121	62	51.2%	110	52	47.3%
<b>All Brain AN-SNAP classes</b>	<b>67</b>	<b>48</b>	<b>71.6%</b>	<b>1,399</b>	<b>1,166</b>	<b>83.3%</b>	<b>2,035</b>	<b>1,680</b>	<b>82.6%</b>

	YOUR FACILITY			SPECIALIST			NON SPECIALIST		
	All episodes	Completed episodes	%Complete	All episodes	Completed episodes	%Complete	All episodes	Completed episodes	%Complete
<b><u>Traumatic impairments</u></b>									
2.21 Open injury	2	2	100.0%	124	111	89.5%	54	45	83.3%
2.22 Closed injury	37	25	67.6%	540	459	85.0%	542	448	82.7%
14.1 MMT: brain+Brain	1	1	100.0%	22	17	77.3%	26	21	80.8%
14.2 MMT: brain+other	16	11	68.8%	301	247	82.1%	122	103	84.4%
<b>Total TBI</b>	<b>56</b>	<b>39</b>	<b>69.6%</b>	<b>987</b>	<b>834</b>	<b>84.5%</b>	<b>744</b>	<b>617</b>	<b>82.9%</b>
<b><u>Non-traumatic impairments</u></b>									
2.11 Sub-arachnoid haemorrhage	5	4	80.0%	139	116	83.5%	404	348	86.1%
2.12 Anoxic brain damage	0	0	—	70	58	82.9%	91	75	82.4%
2.13 Other NTBI	6	5	83.3%	204	158	77.5%	800	641	80.1%
<b>Total NTBI</b>	<b>11</b>	<b>9</b>	<b>81.8%</b>	<b>413</b>	<b>332</b>	<b>80.4%</b>	<b>1,295</b>	<b>1,064</b>	<b>82.2%</b>
<b>GRAND TOTAL</b>	<b>67</b>	<b>48</b>	<b>71.6%</b>	<b>1,400</b>	<b>1,166</b>	<b>83.3%</b>	<b>2,039</b>	<b>1,681</b>	<b>82.4%</b>

# Review of FIM item scoring by AN-SNAP class

# Comparative FIM item scoring

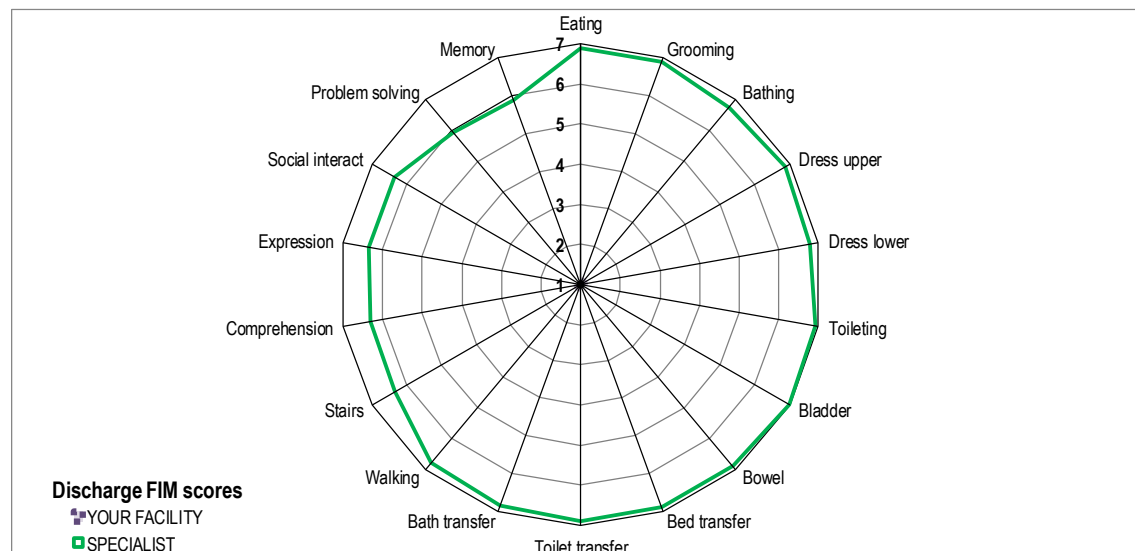
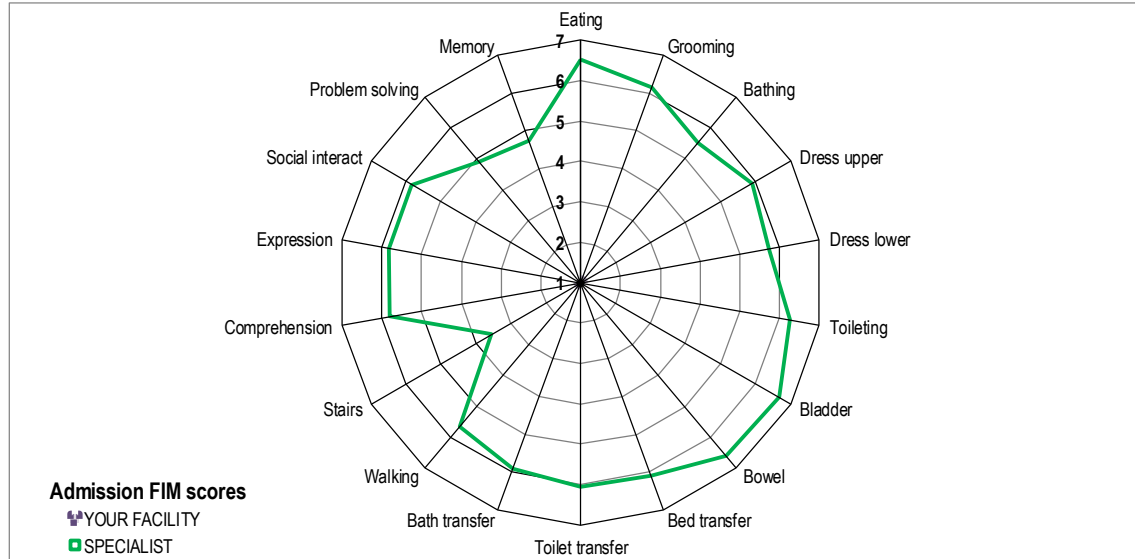
## AN-SNAP class 3-210





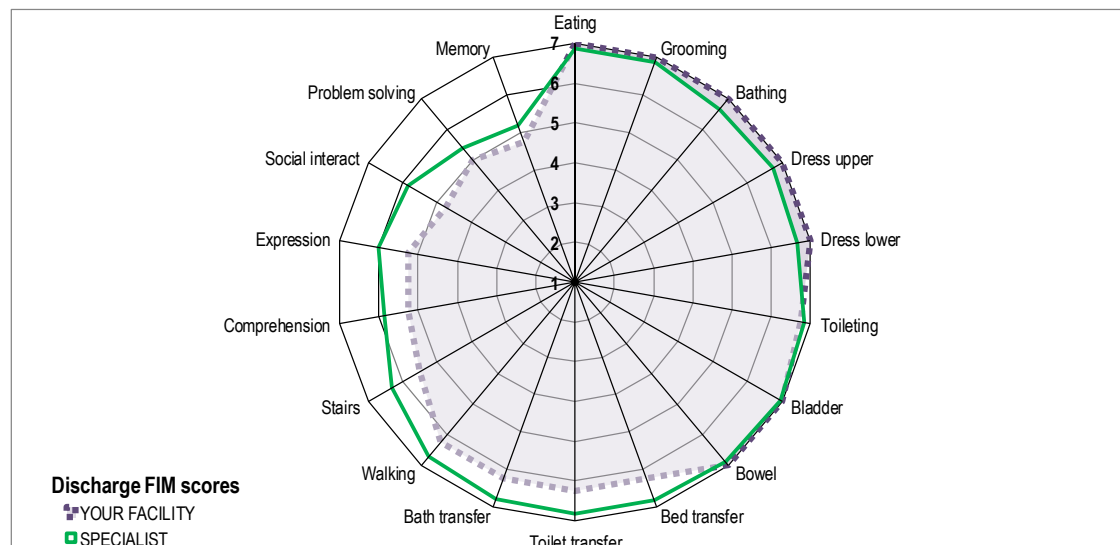
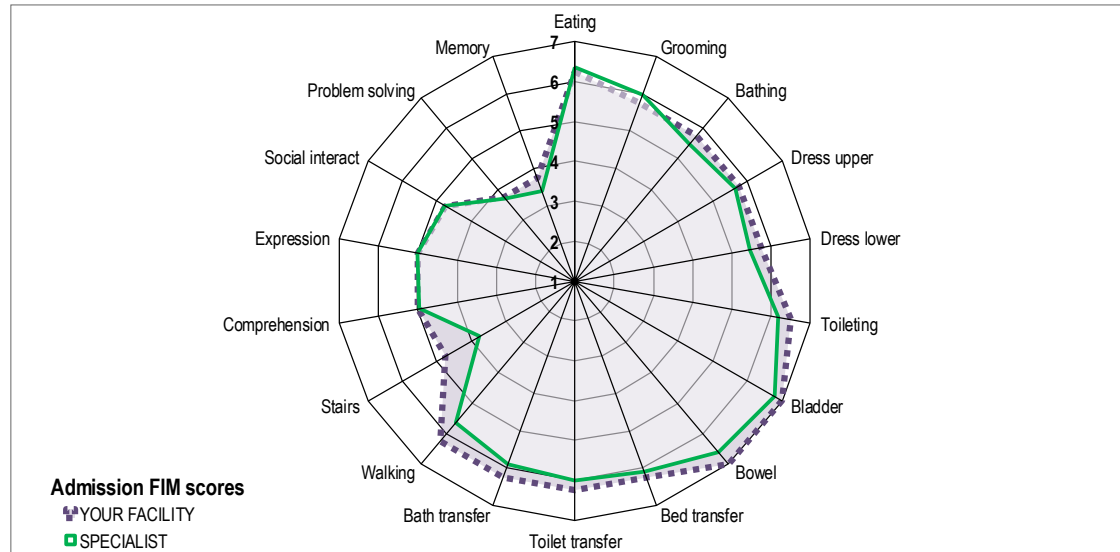
# Comparative FIM item scoring

## AN-SNAP class 3-211

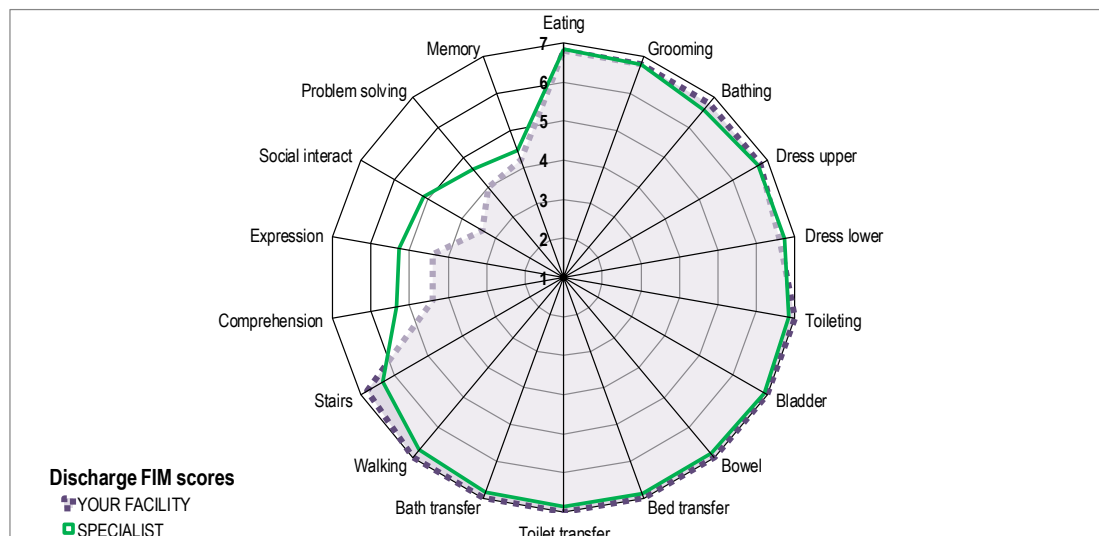
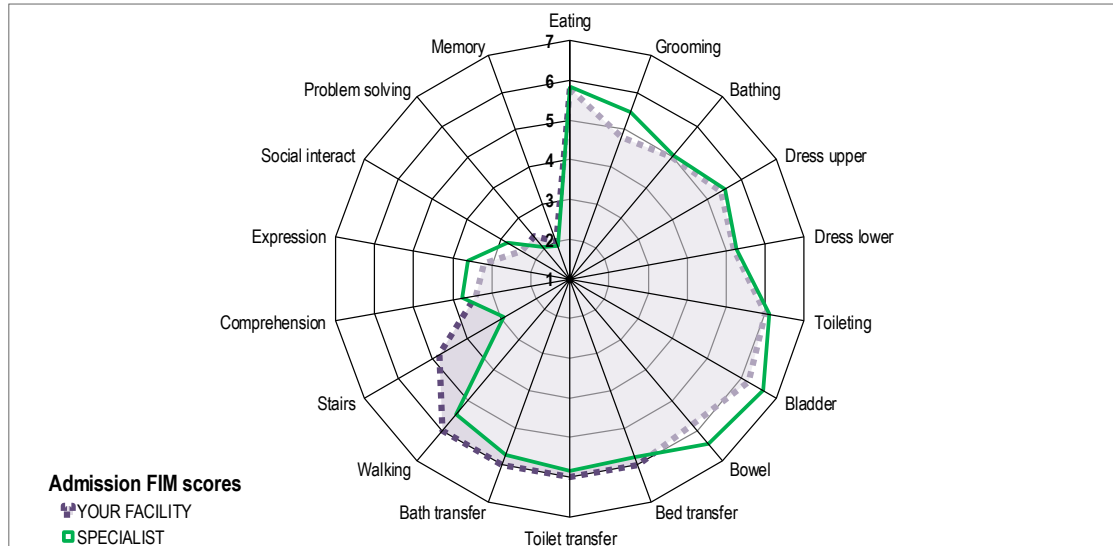


# Comparative FIM item scoring

## AN-SNAP class 3-212

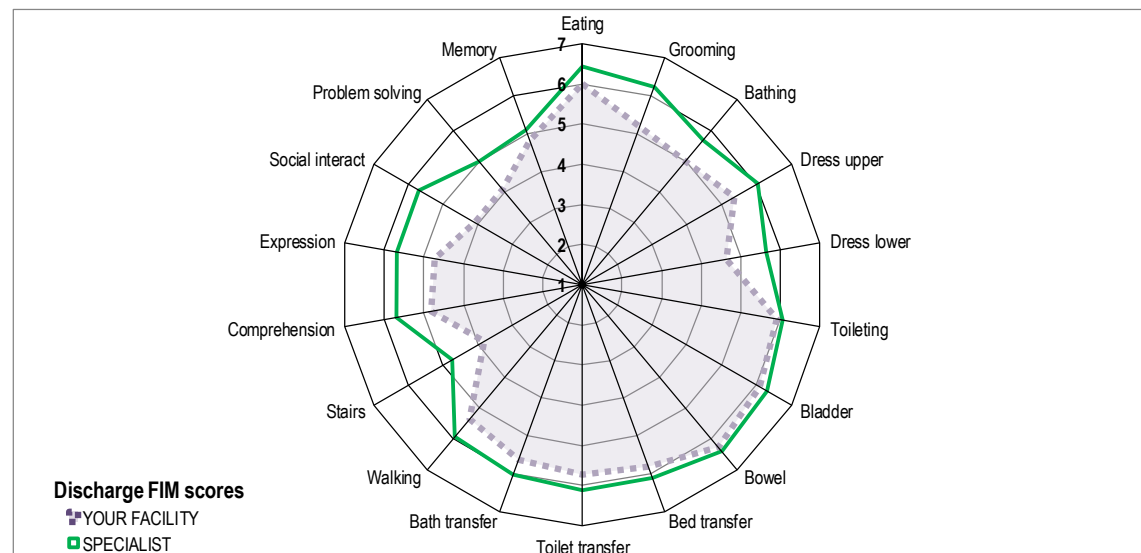
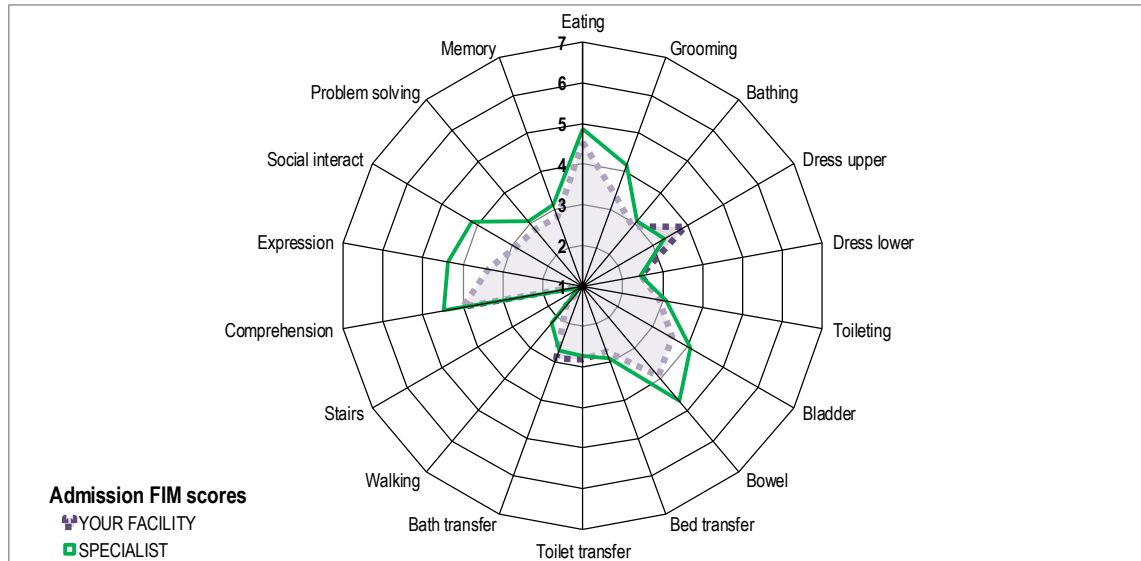


# Comparative FIM item scoring AN-SNAP class 3-213



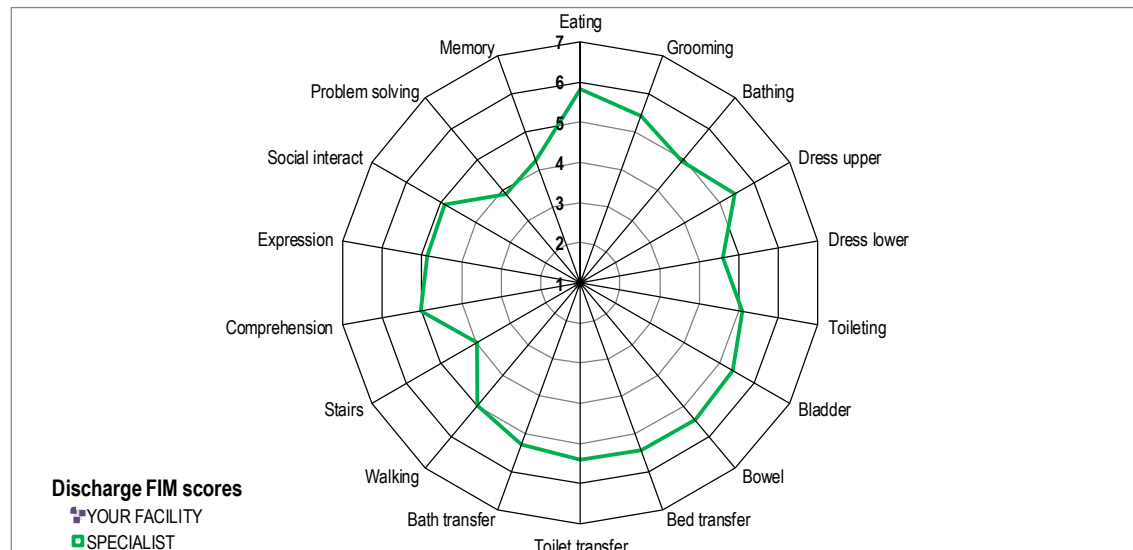
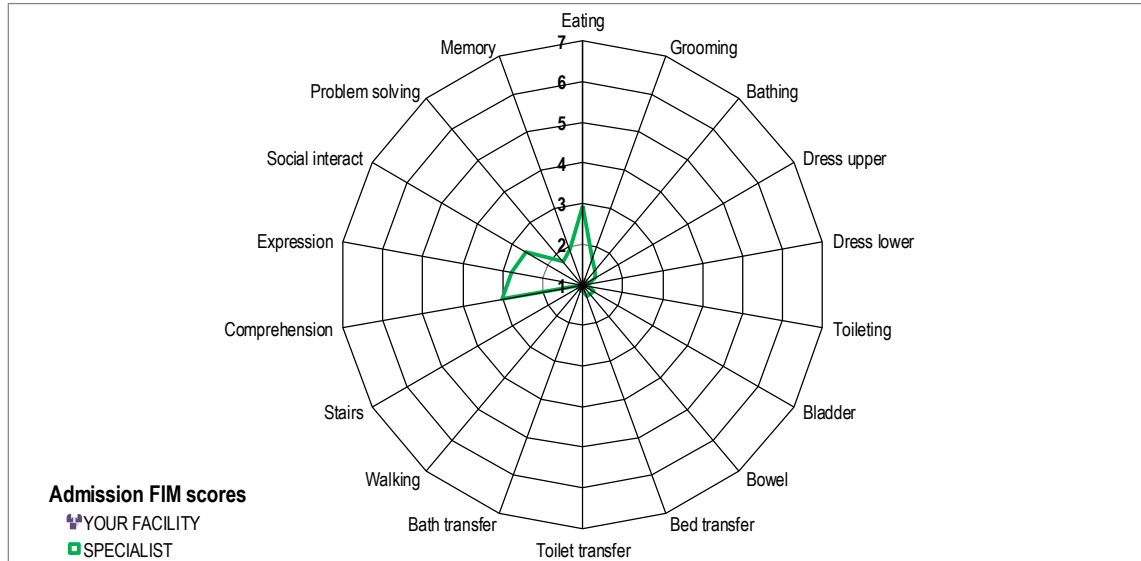
# Comparative FIM item scoring

## AN-SNAP class 3-214



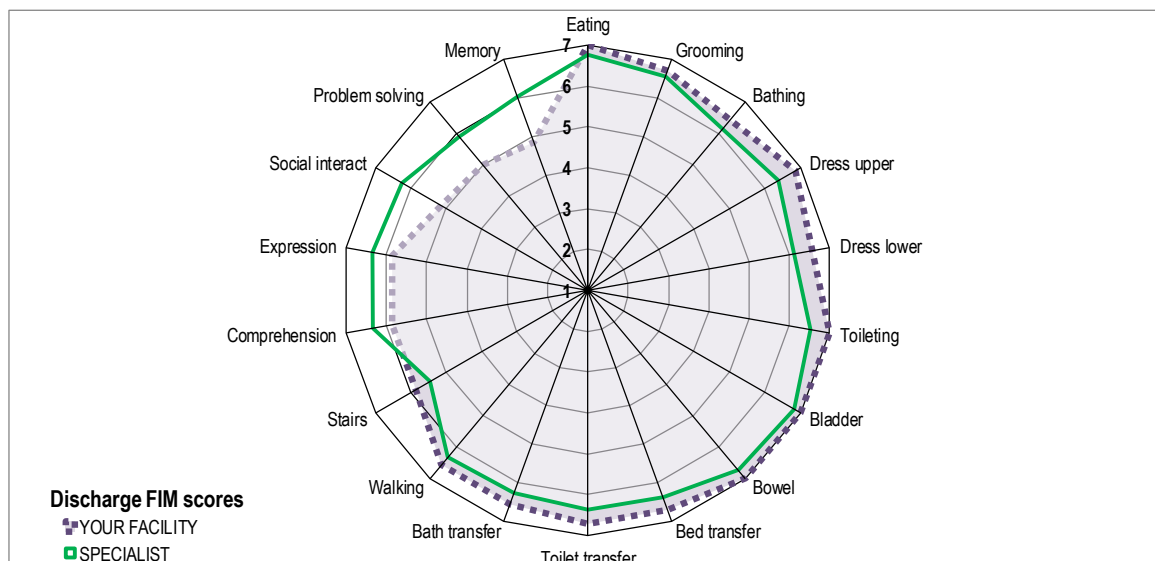
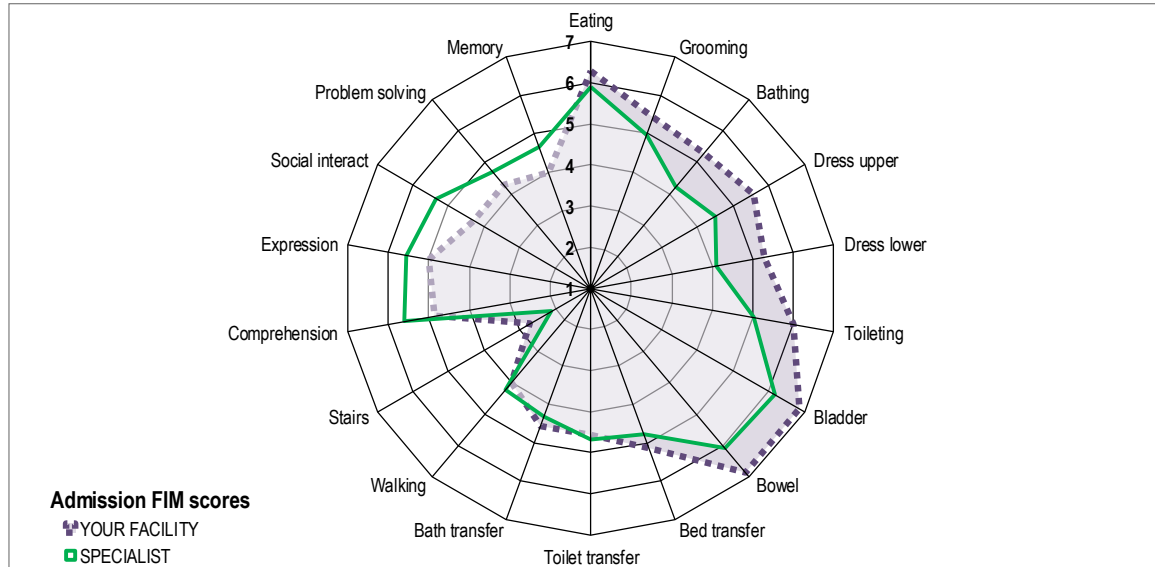
# Comparative FIM item scoring

## AN-SNAP class 3-215



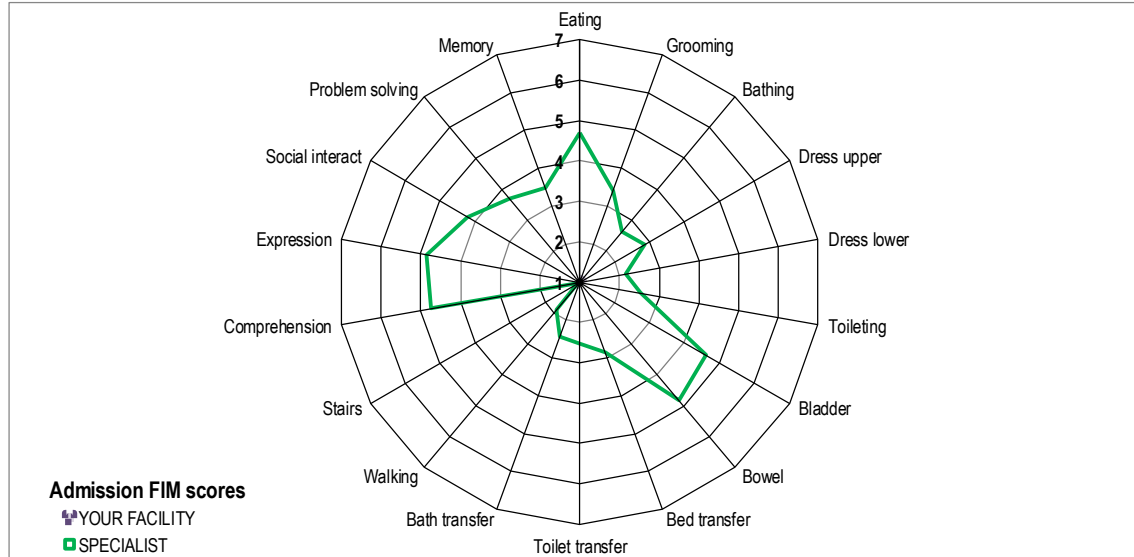
# Comparative FIM item scoring

## AN-SNAP class 3-239



# Comparative FIM item scoring

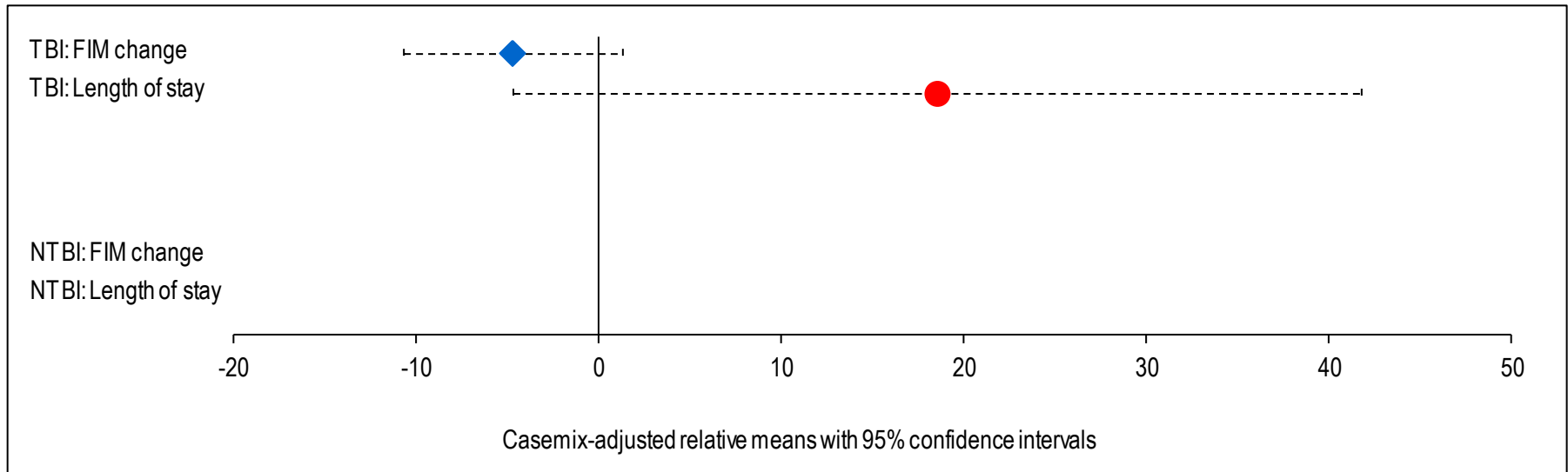
## AN-SNAP class 3-240



# Outcomes Analysis



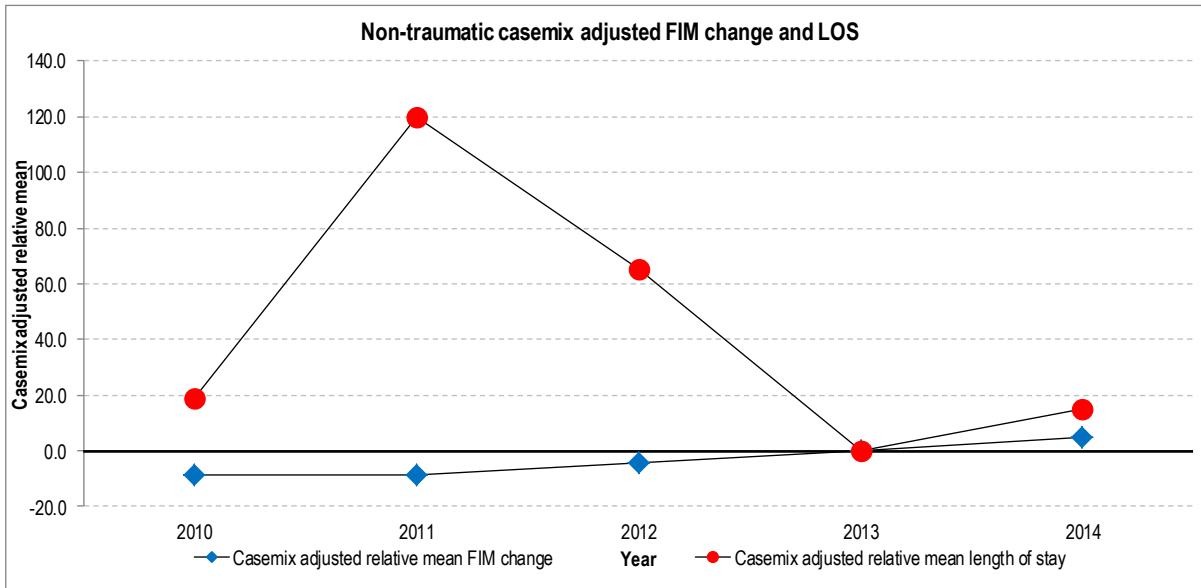
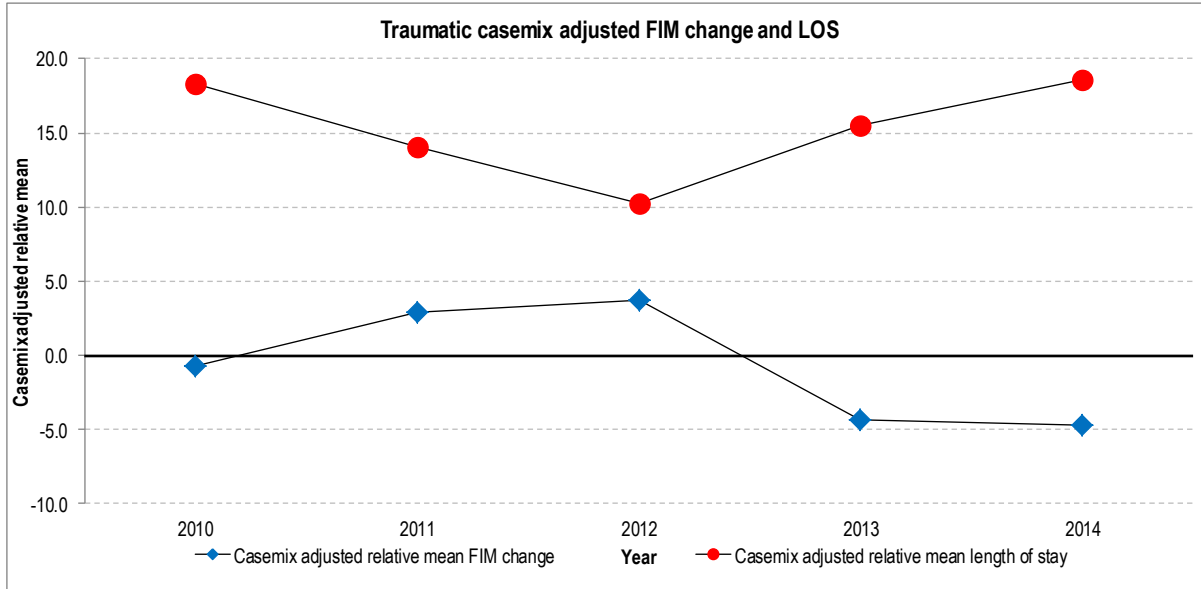
# Casemix-adjusted\* relative means



Outcome measures	TBI		YOUR FACILITY		NTBI	
	Casemix adjustment relative mean	95% CI	Casemix adjustment relative mean	95% CI	Casemix adjustment relative mean	95% CI
Length of stay	18.6	-4.7 to 41.8	—	—	—	—
FIM change	-4.7	-10.7 to 1.2	—	—	—	—

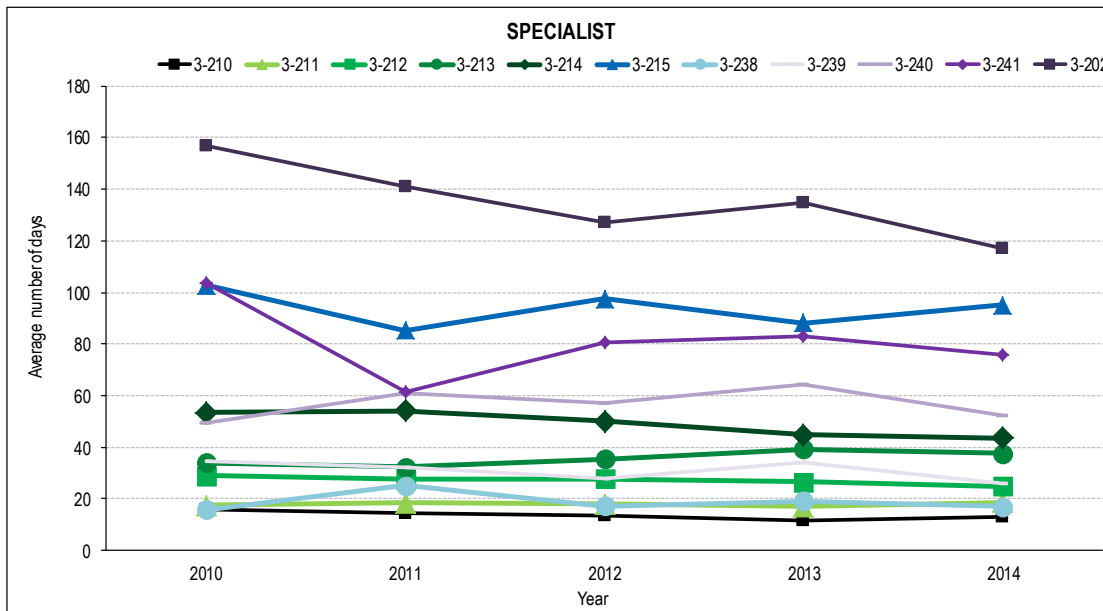
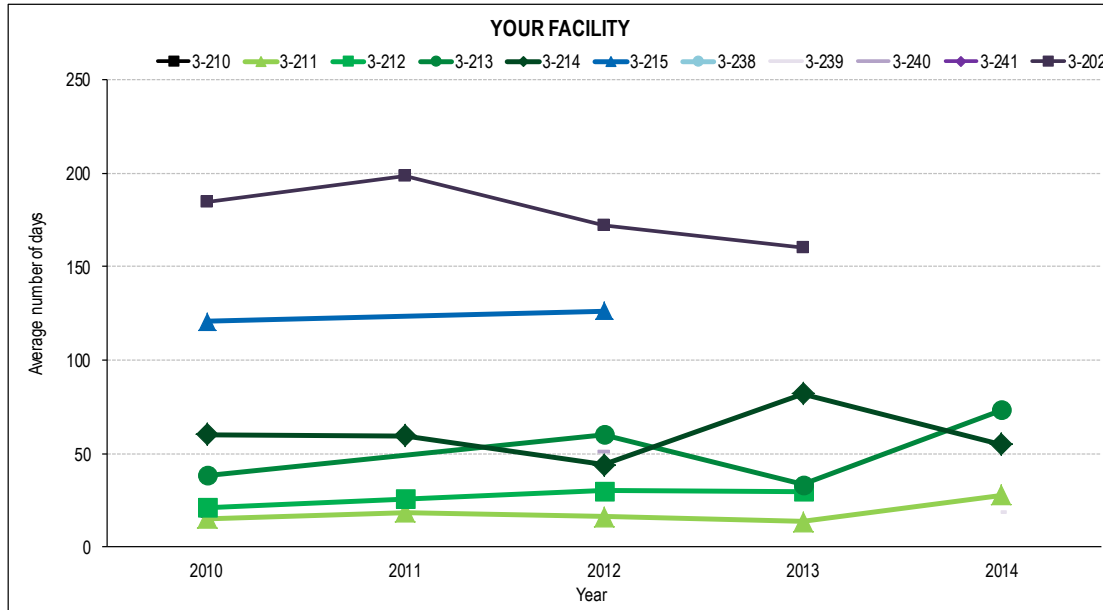
\*Casemix-adjustment is by 2014 Specialist Units

# Traumatic and non-traumatic casemix-adjusted\* relative means



\*Casemix-adjustment is by 2014 Specialist Units

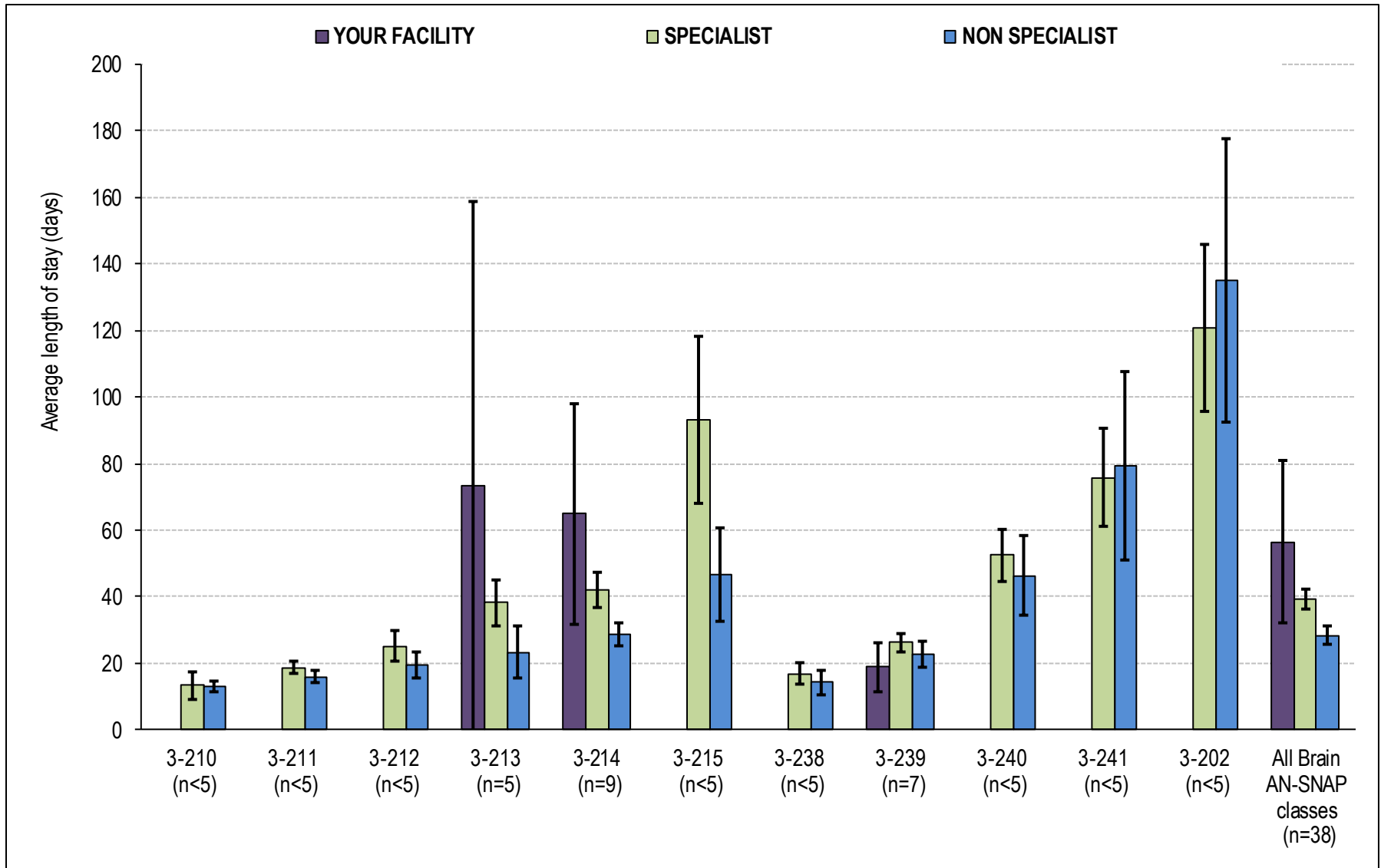
# Average LOS by AN-SNAP class over time



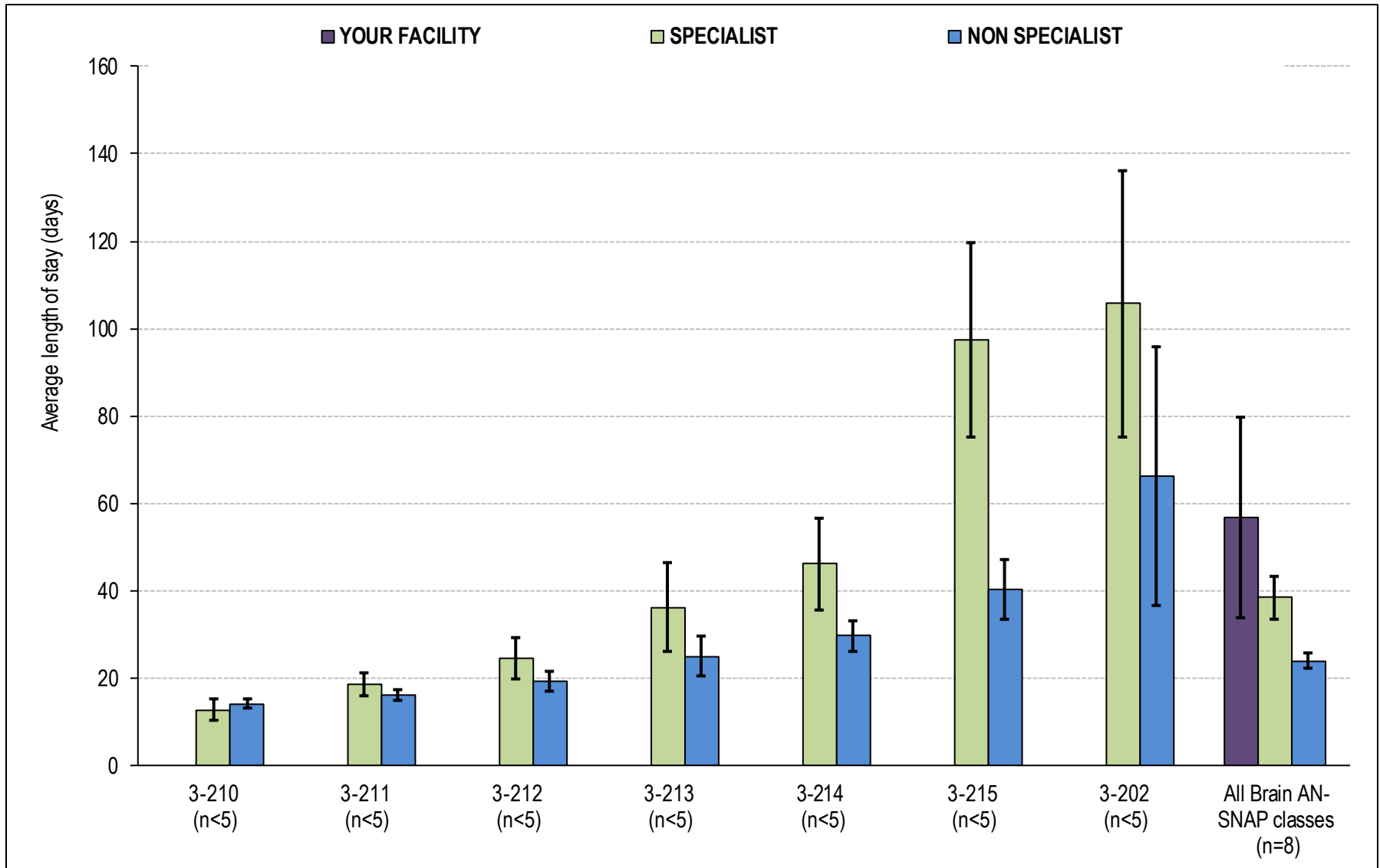
# Average LOS by AN-SNAP class over time

AN-SNAP class	YOUR FACILITY					SPECIALIST					NON SPECIALIST				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
3-210 (BI,FIM motor 56-91, FIM cognition 32-35)	18.9	—	—	—	—	15.7	14.7	13.8	11.5	13.0	14.4	13.2	14.2	15.2	13.7
3-211 (BI,FIM motor 56-91, FIM cognition 24-31)	15.2	18.5	16.0	13.5	27.8	17.4	18.4	18.1	17.0	18.6	16.5	17.2	16.0	16.9	16.0
3-212 (BI,FIM motor 56-91, FIM cognition 20-23)	21.1	25.9	30.0	29.6	—	28.9	27.5	27.9	26.5	24.9	19.7	20.2	18.8	20.0	19.4
3-213 (BI,FIM motor 56-91, FIM cognition 5-19)	38.4	—	60.2	33.5	73.2	34.1	32.4	35.4	39.2	37.5	23.7	22.5	27.6	24.9	24.4
3-214 (BI,FIM motor 24-55)	60.0	59.6	43.8	82.1	54.9	53.3	54.3	50.2	44.8	43.6	30.8	30.4	30.5	30.5	29.4
3-215 (BI,FIM motor 14-23)	120.6	—	126.1	—	—	102.8	85.2	97.5	88.2	95.1	47.7	53.3	47.2	50.9	42.2
3-238 (MMT, FIM total 101-126)	—	—	—	—	—	15.8	25.2	17.1	19.1	16.9	16.3	11.6	15.0	11.1	14.2
3-239 (MMT, FIM total 74-100)	—	—	—	—	18.9	34.8	32.4	27.9	34.1	26.2	33.8	33.8	23.7	26.2	22.6
3-240 (MMT, FIM total 44-73)	—	—	51.2	—	—	49.6	60.8	57.3	64.6	52.4	48.5	70.4	59.9	48.9	46.4
3-241 (MMT, FIM total 19-43)	—	—	—	—	—	103.4	61.7	80.6	83.0	75.7	87.5	—	85.0	111.5	79.4
3-202 (BI,MMT,FIM motor 13)	184.8	198.4	172.1	160.4	—	156.6	140.8	126.9	134.7	117.0	81.2	79.0	72.2	89.8	95.7
<b>All Brain AN-SNAP classes</b>	<b>66.6</b>	<b>78.4</b>	<b>71.1</b>	<b>68.4</b>	<b>56.5</b>	<b>44.5</b>	<b>42.8</b>	<b>40.8</b>	<b>42.2</b>	<b>39.0</b>	<b>26.5</b>	<b>26.1</b>	<b>25.2</b>	<b>26.5</b>	<b>25.5</b>

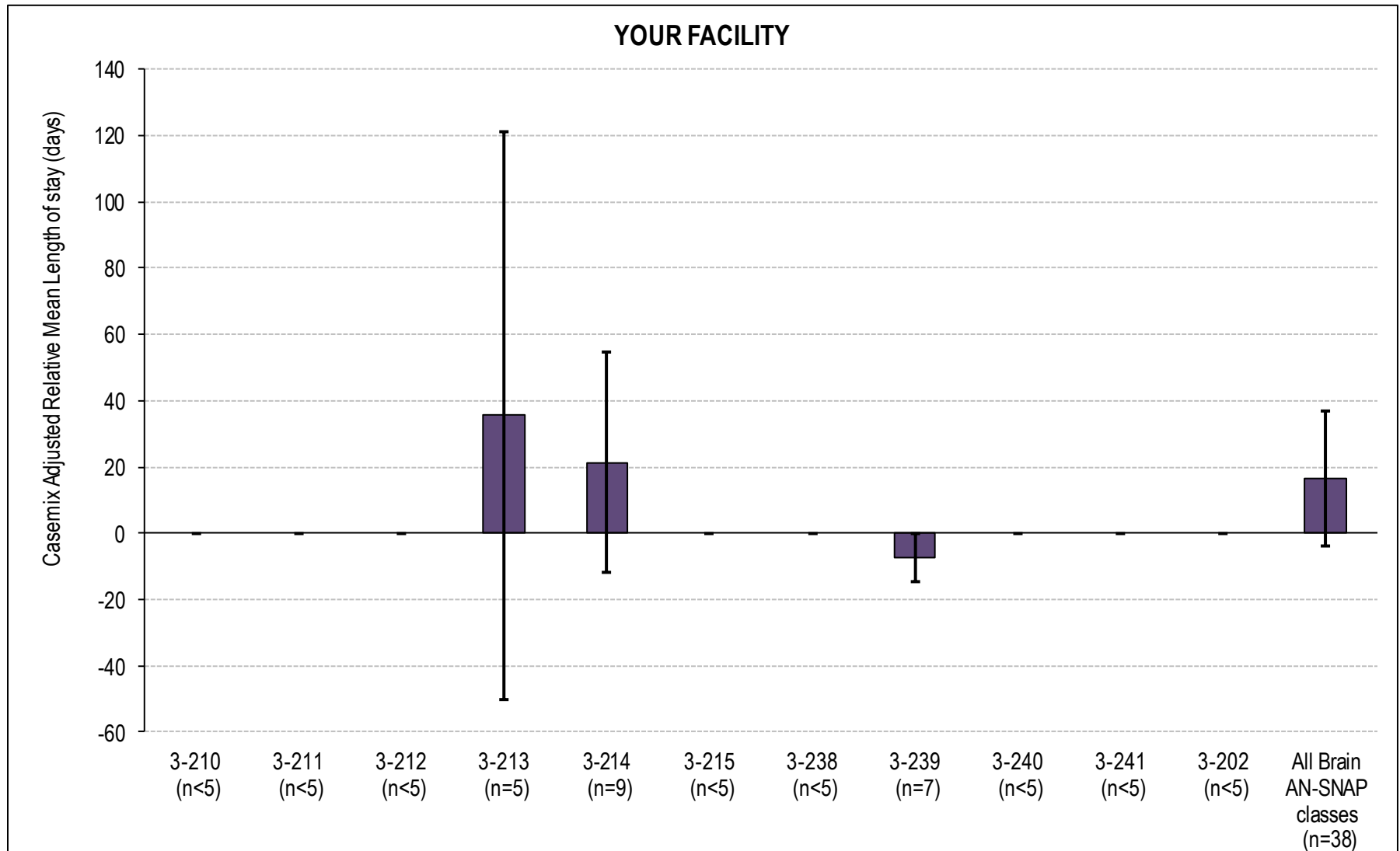
# Traumatic ALOS by AN-SNAP class



# Non-traumatic ALOS by AN-SNAP class

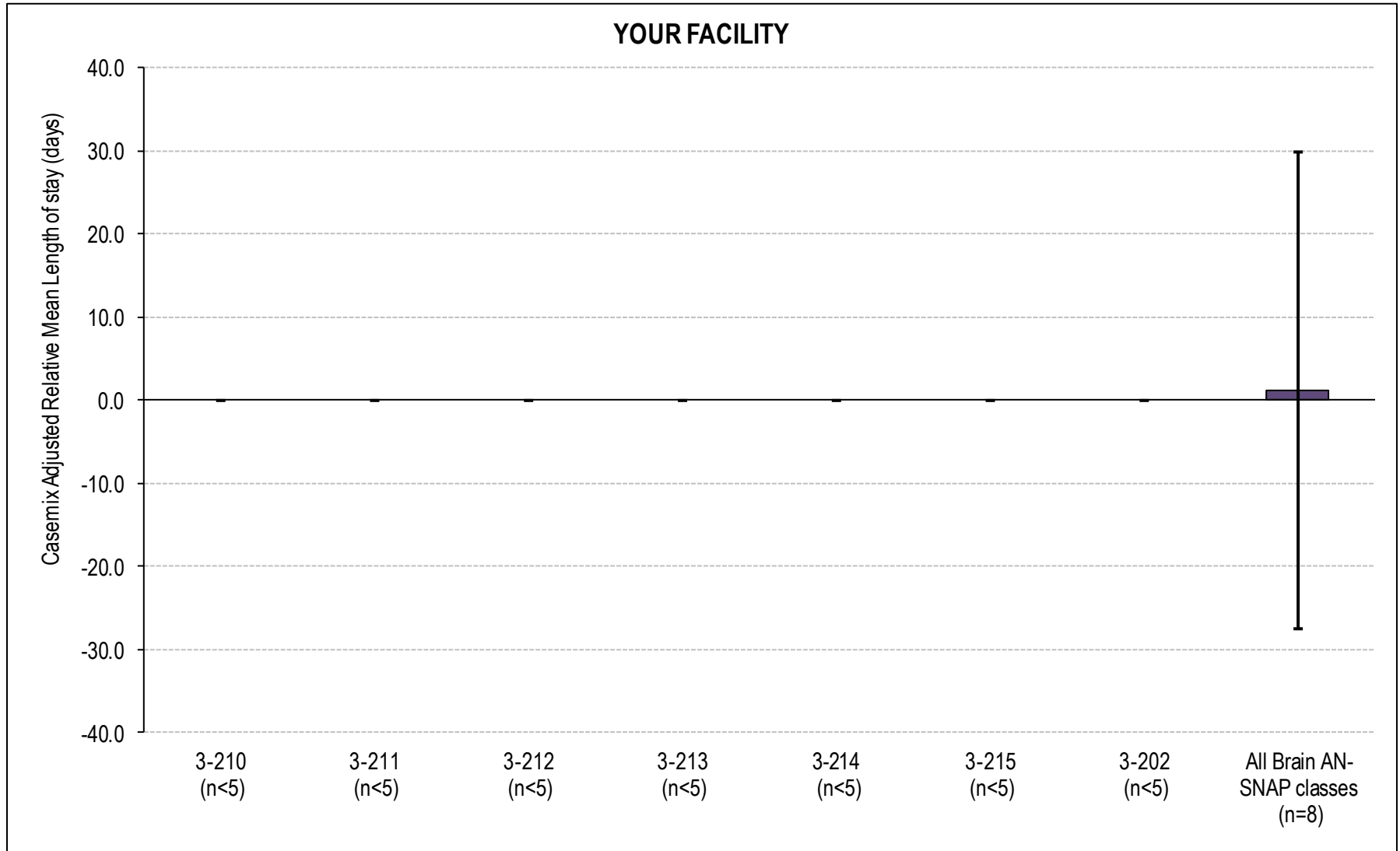


# Traumatic casemix-adjusted\* relative mean LOS by AN-SNAP class



\*Casemix-adjustment is by 2014 Specialist Units

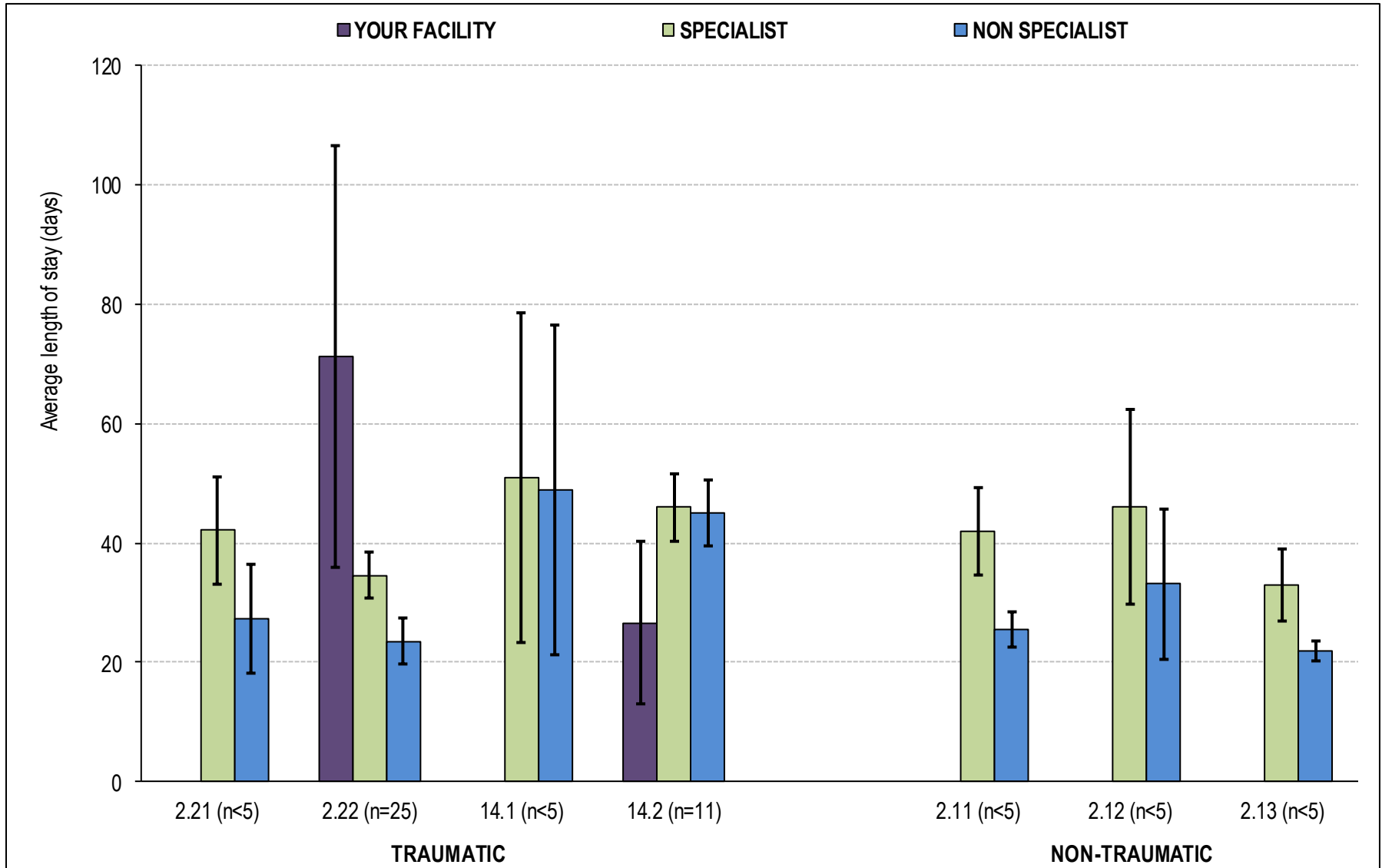
# Non-traumatic casemix-adjusted\* relative mean LOS by AN-SNAP class



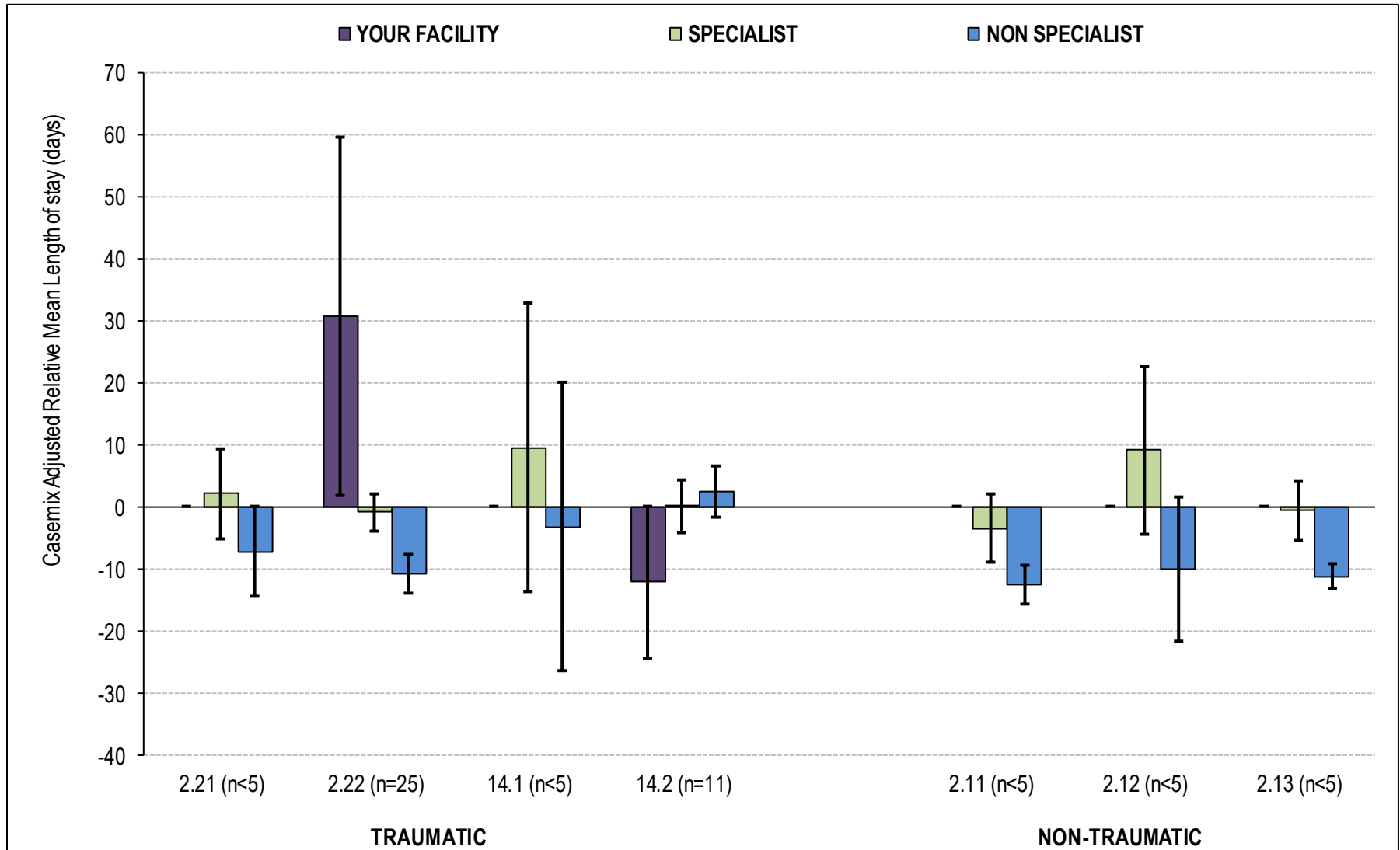
\*Casemix-adjustment is by 2014 Specialist Units



# Traumatic and non-traumatic ALOS by impairment

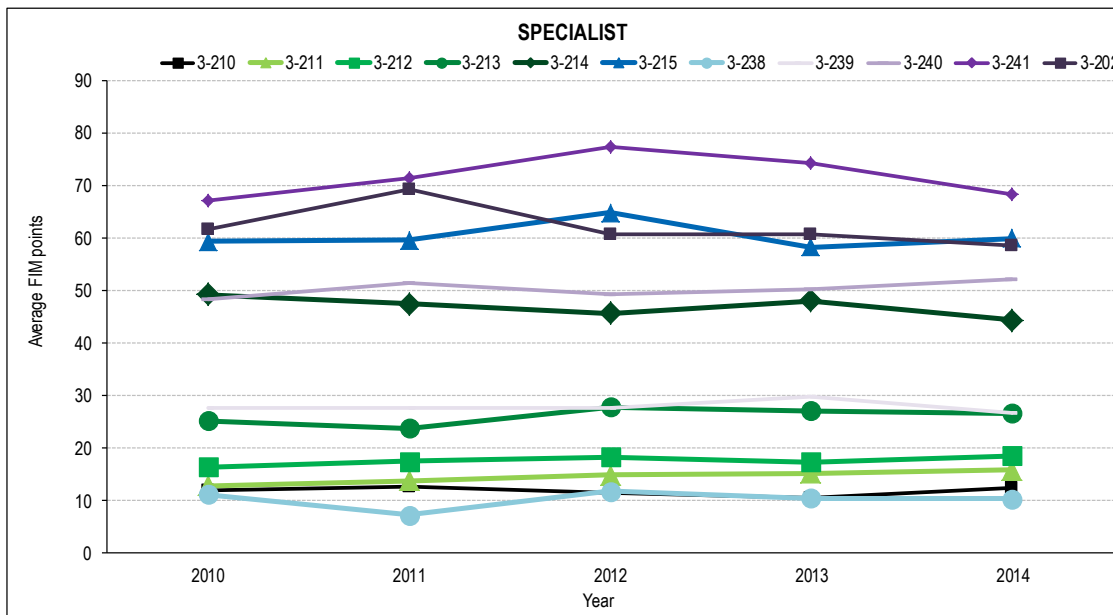
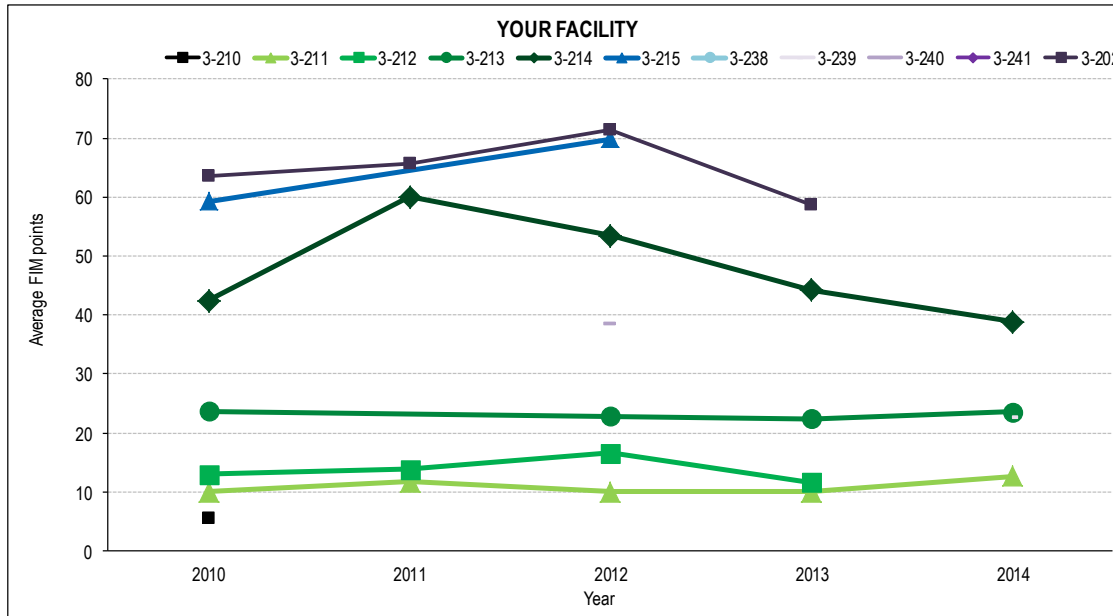


# Traumatic and non-traumatic casemix-adjusted\* relative mean LOS by impairment



\*Casemix-adjustment is by 2014 Specialist Units

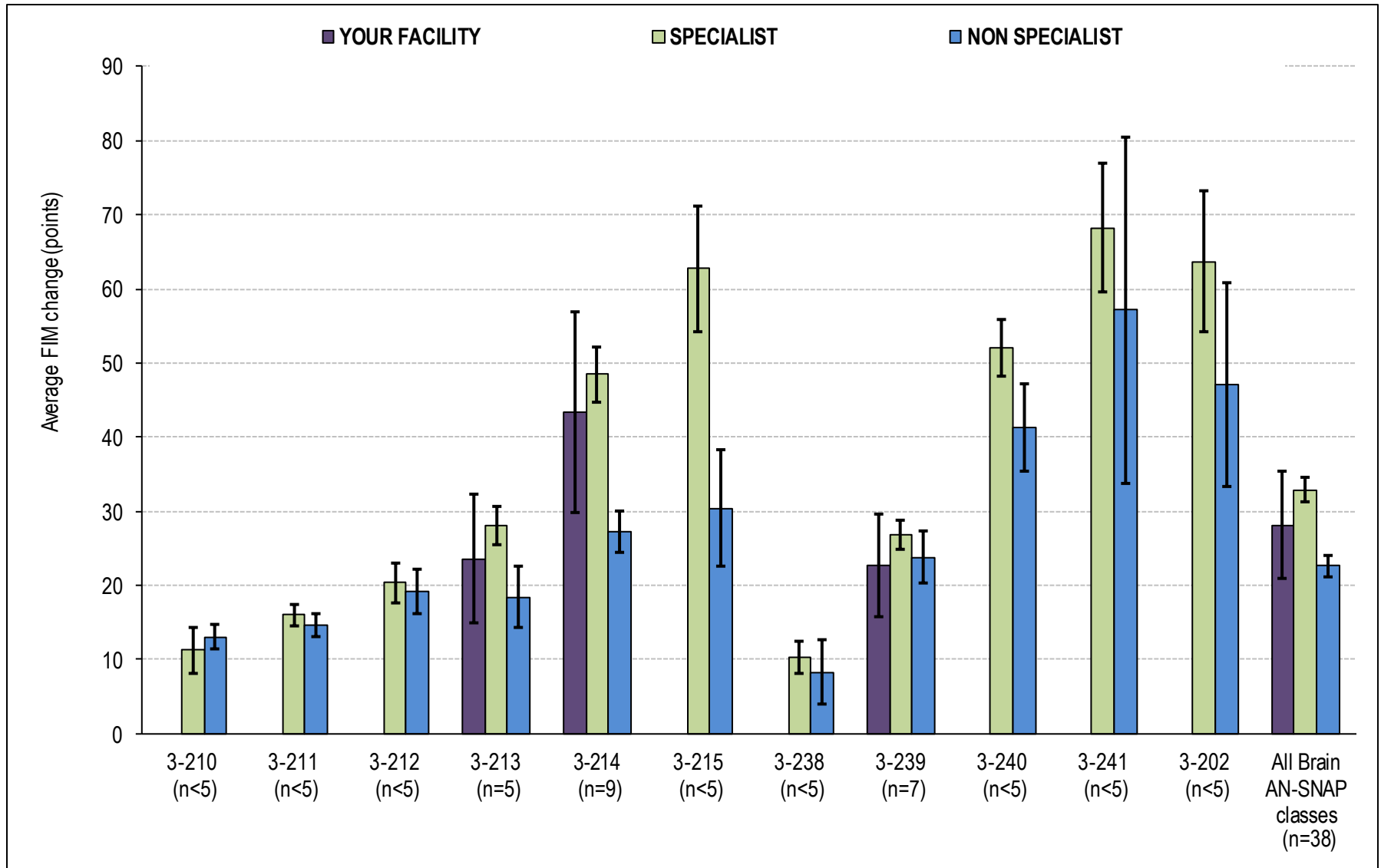
# Average FIM change by AN-SNAP class over time



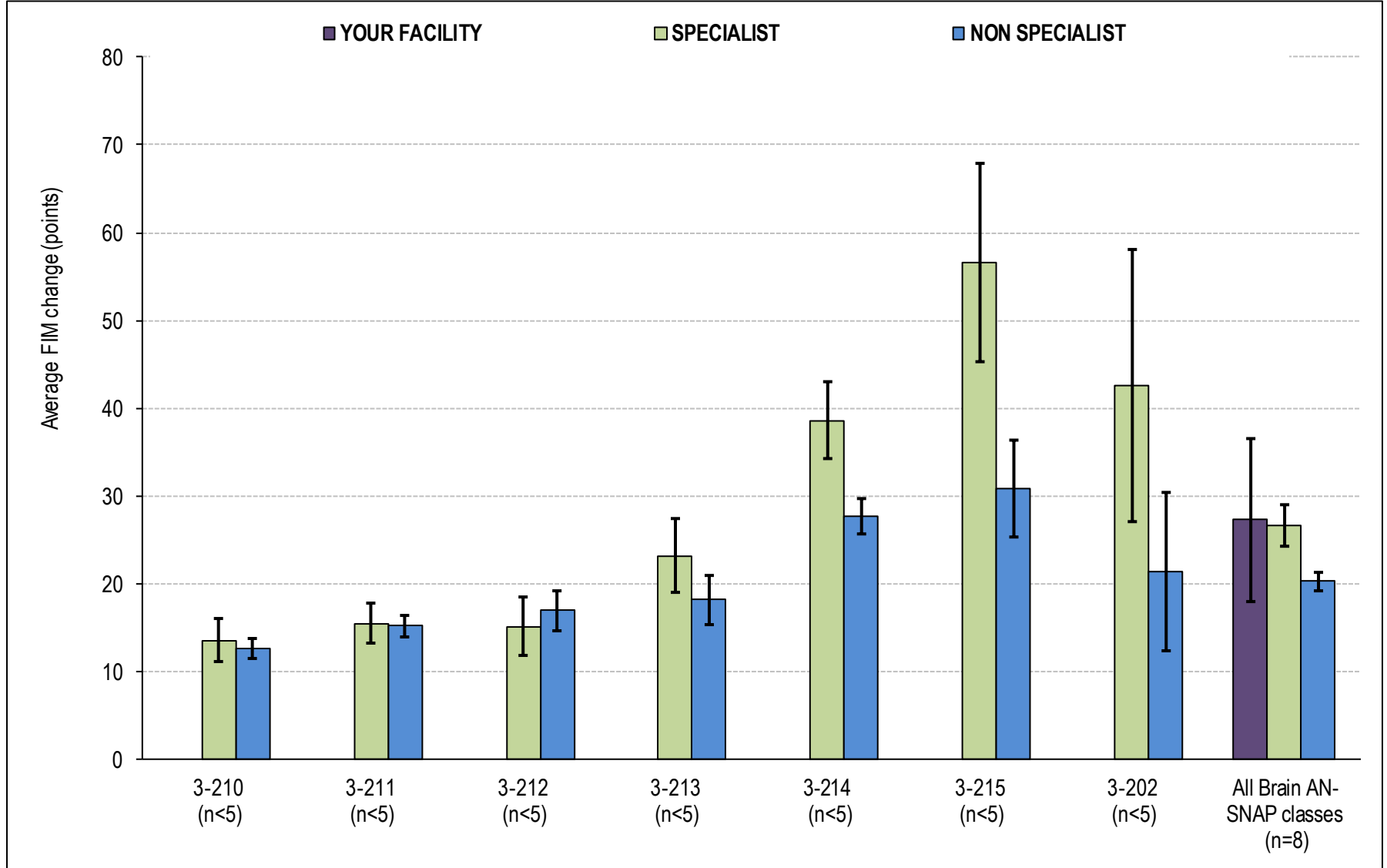
# Average FIM change by AN-SNAP class over time

AN-SNAP class	YOUR FACILITY					SPECIALIST					NON SPECIALIST				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
3-210 (BI,FIM motor 56-91, FIM cognition 32-35)	5.6	—	—	—	—	12.0	12.6	11.5	10.4	12.5	13.4	12.4	12.2	11.8	12.7
3-211 (BI,FIM motor 56-91, FIM cognition 24-31)	10.0	11.7	10.0	10.0	12.7	12.8	13.7	14.8	15.2	15.9	15.6	15.9	15.6	15.3	15.0
3-212 (BI,FIM motor 56-91, FIM cognition 20-23)	13.0	13.9	16.5	11.6	—	16.4	17.5	18.3	17.3	18.5	17.3	17.8	17.4	16.3	17.8
3-213 (BI,FIM motor 56-91, FIM cognition 5-19)	23.6	—	22.8	22.5	23.6	25.2	23.8	27.8	27.1	26.6	21.0	18.9	20.2	19.6	18.2
3-214 (BI,FIM motor 24-55)	42.4	60.0	53.5	44.2	38.8	49.2	47.5	45.7	48.0	44.3	29.7	31.9	28.0	28.8	27.6
3-215 (BI,FIM motor 14-23)	59.3	—	69.9	—	—	59.3	59.6	64.8	58.3	60.0	33.1	35.3	34.9	33.0	30.7
3-238 (MMT, FIM total 101-126)	—	—	—	—	—	11.2	7.3	11.7	10.4	10.4	8.4	6.6	10.8	8.0	8.3
3-239 (MMT, FIM total 74-100)	—	—	—	—	22.7	27.5	27.7	27.6	29.8	26.8	26.9	25.4	24.7	23.1	23.8
3-240 (MMT, FIM total 44-73)	—	—	38.6	—	—	48.3	51.5	49.3	50.3	52.1	42.1	42.8	51.1	44.5	41.4
3-241 (MMT, FIM total 19-43)	—	—	—	—	—	67.3	71.5	77.3	74.4	68.3	43.7	—	66.1	47.2	57.1
3-202 (BI,MMT,FIM motor 13)	63.5	65.8	71.5	58.8	—	61.6	69.3	60.8	60.8	58.5	33.1	40.1	47.6	35.6	32.4
<b>All Brain AN-SNAP classes</b>	<b>33.1</b>	<b>39.7</b>	<b>39.0</b>	<b>31.7</b>	<b>28.0</b>	<b>29.4</b>	<b>31.5</b>	<b>31.1</b>	<b>31.2</b>	<b>31.1</b>	<b>22.6</b>	<b>22.9</b>	<b>21.8</b>	<b>21.2</b>	<b>21.1</b>

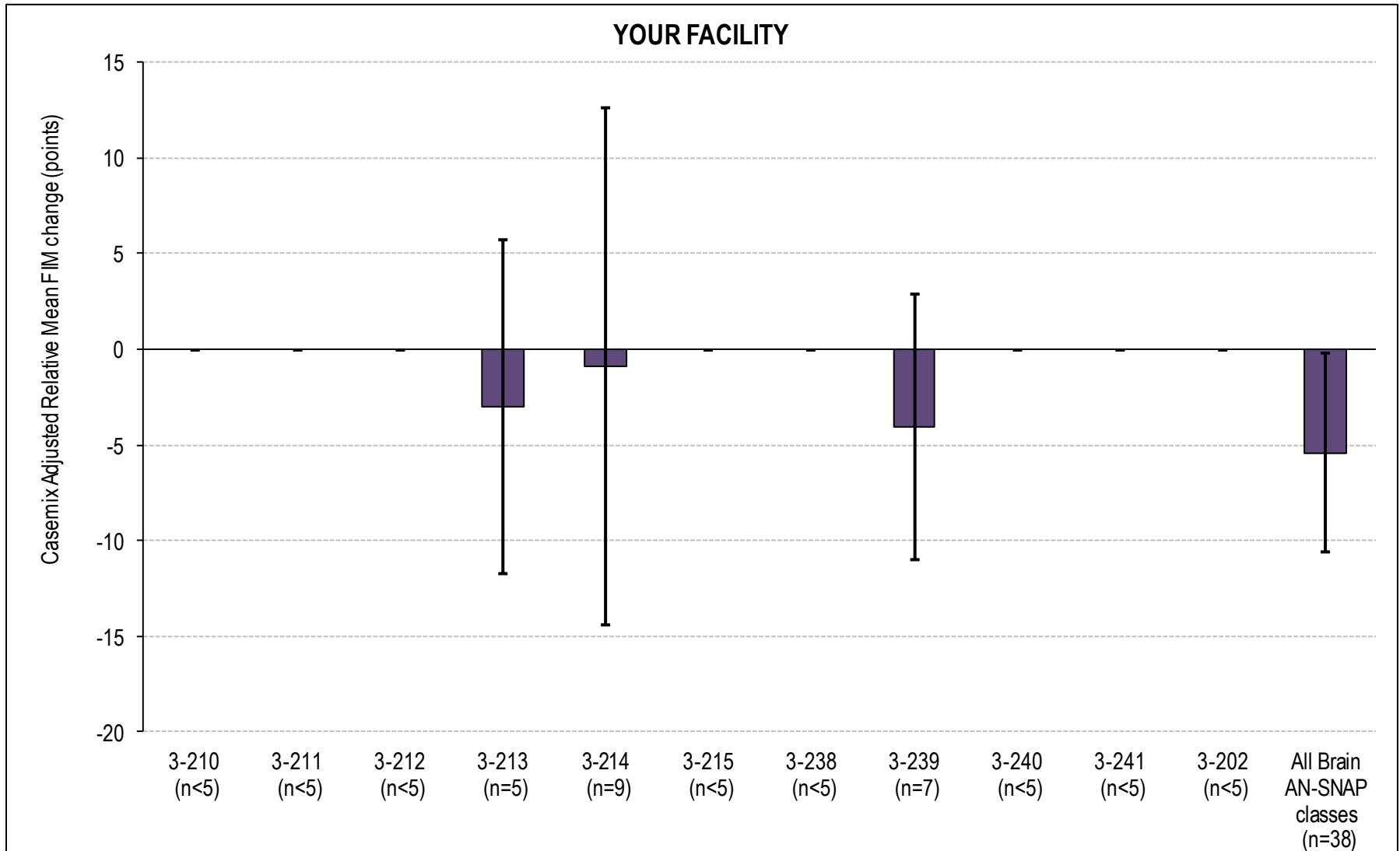
# Traumatic average FIM change by AN-SNAP class



# Non-traumatic average FIM change by AN-SNAP class

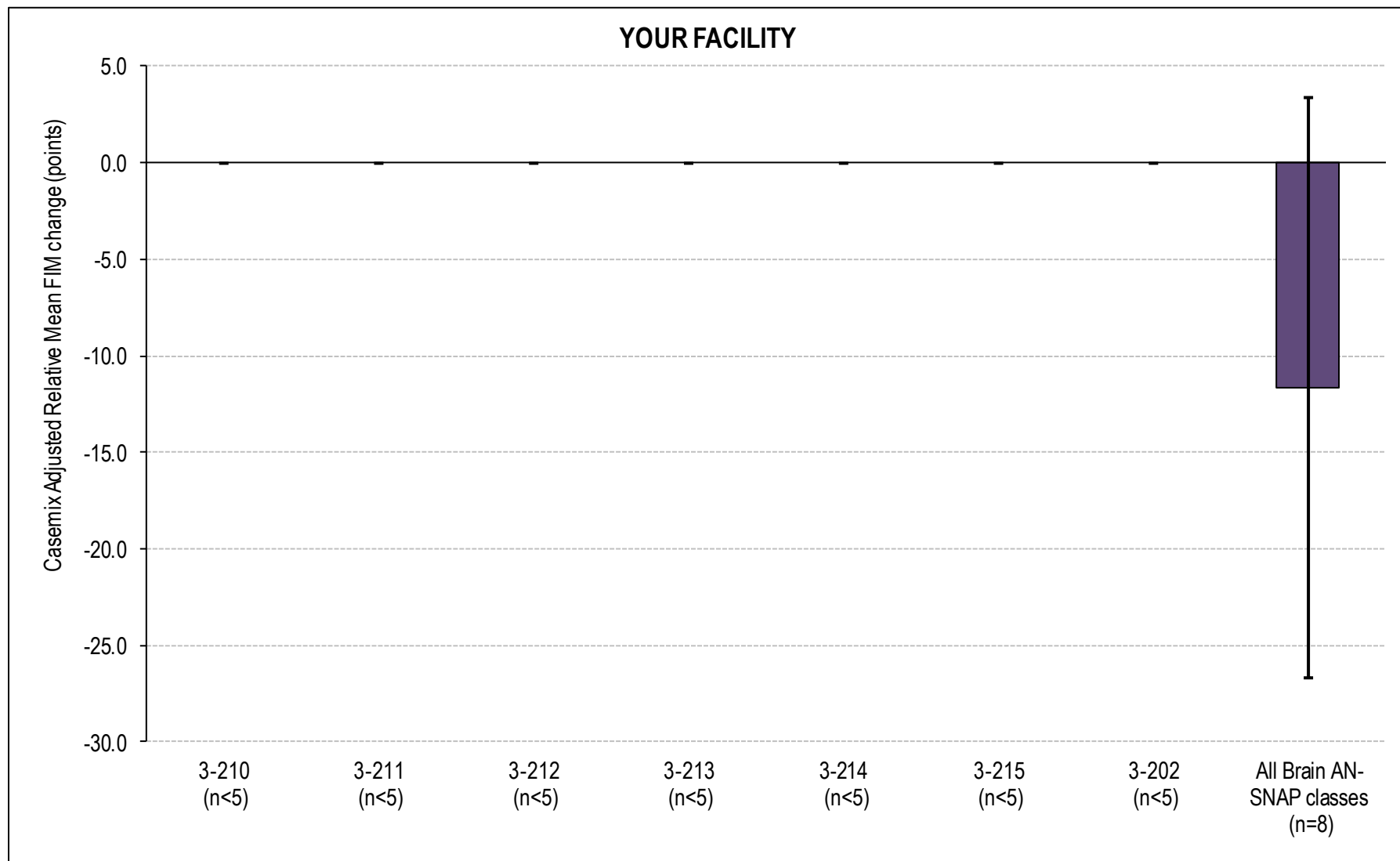


# Traumatic casemix-adjusted\* relative mean FIM change by AN-SNAP class



\*Casemix-adjustment is by 2014 Specialist Units

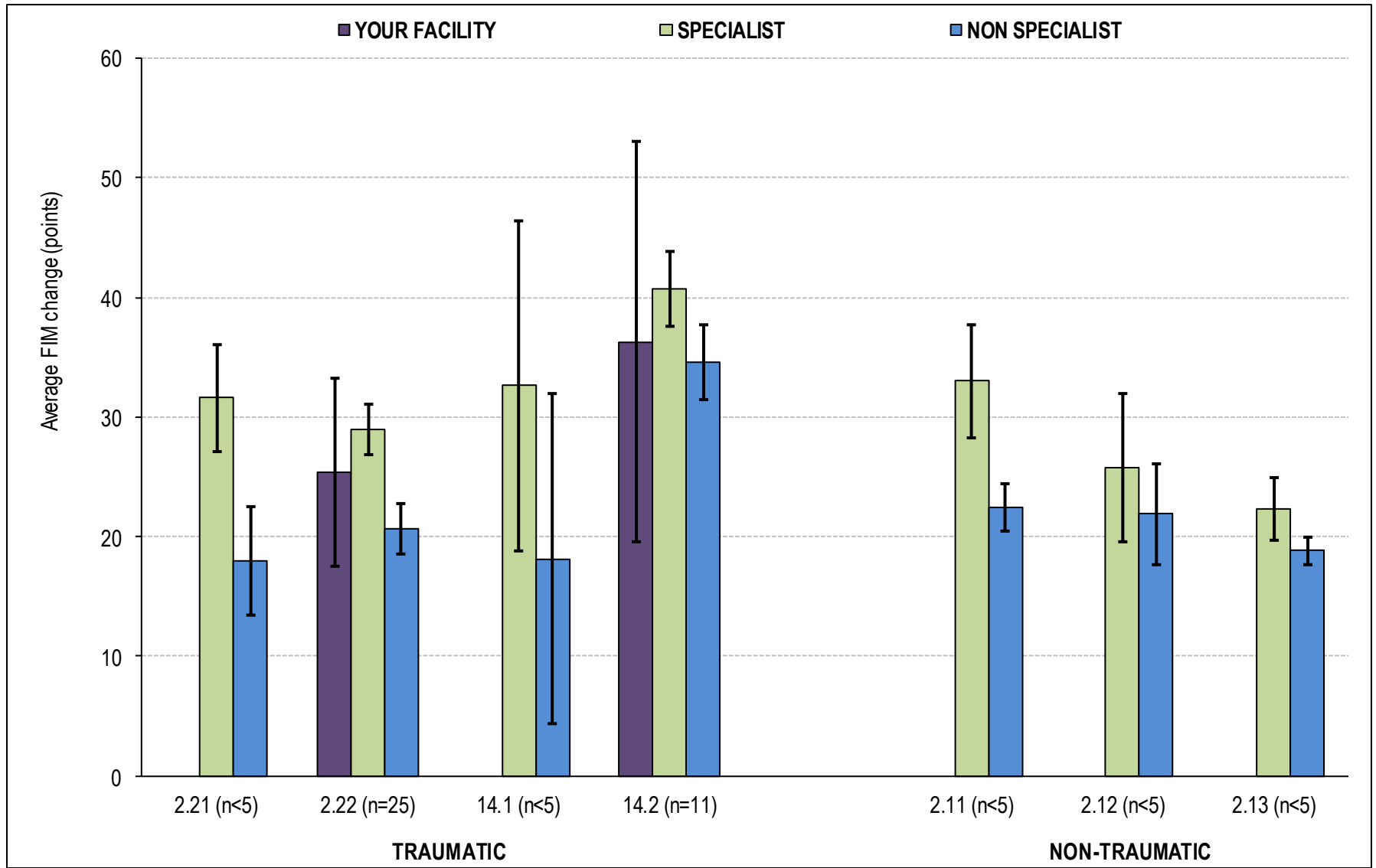
# Non-traumatic casemix-adjusted\* relative mean FIM change by AN-SNAP class



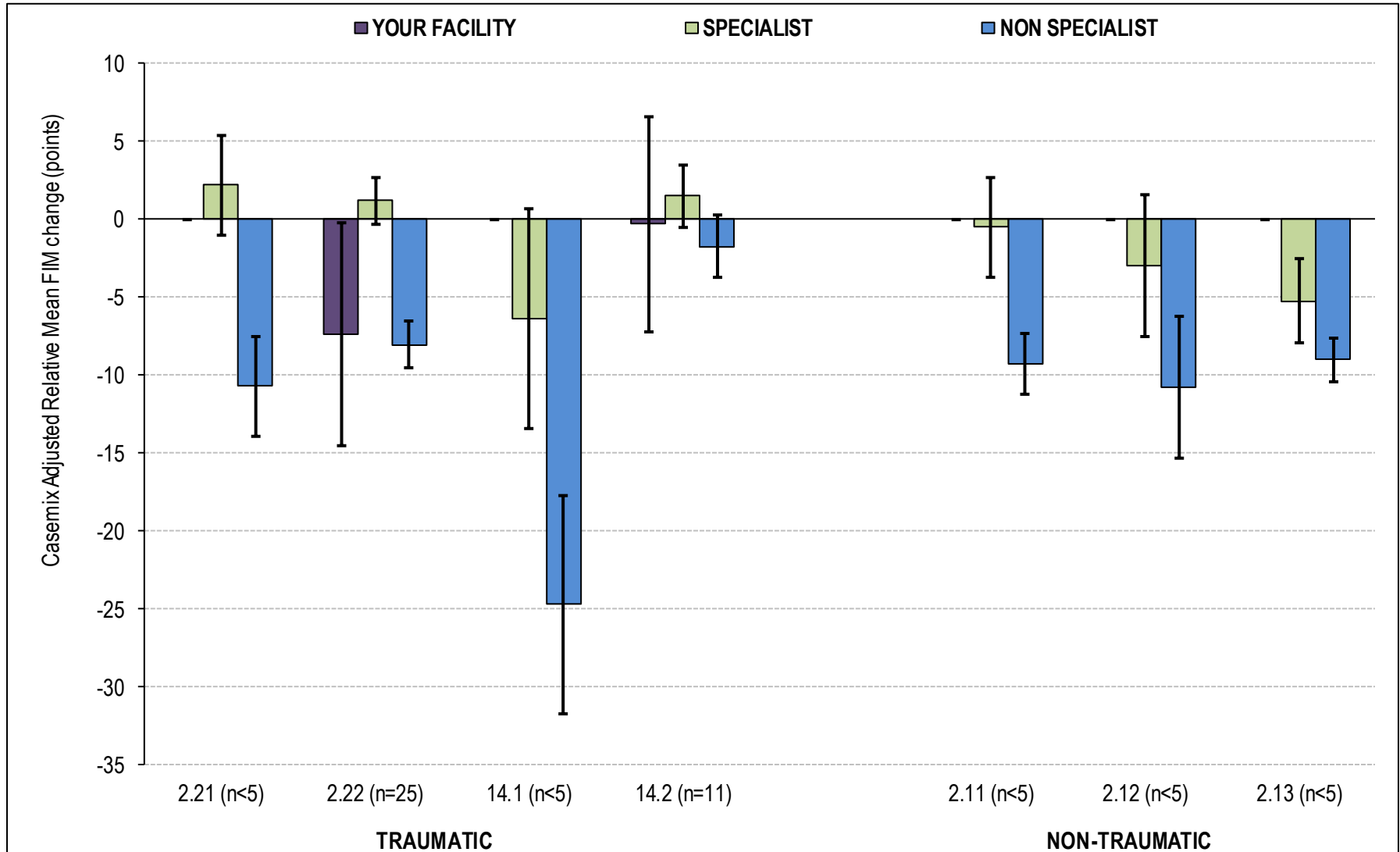
\*Casemix-adjustment is by 2014 Specialist Units



# Traumatic and non-traumatic average FIM change by impairment

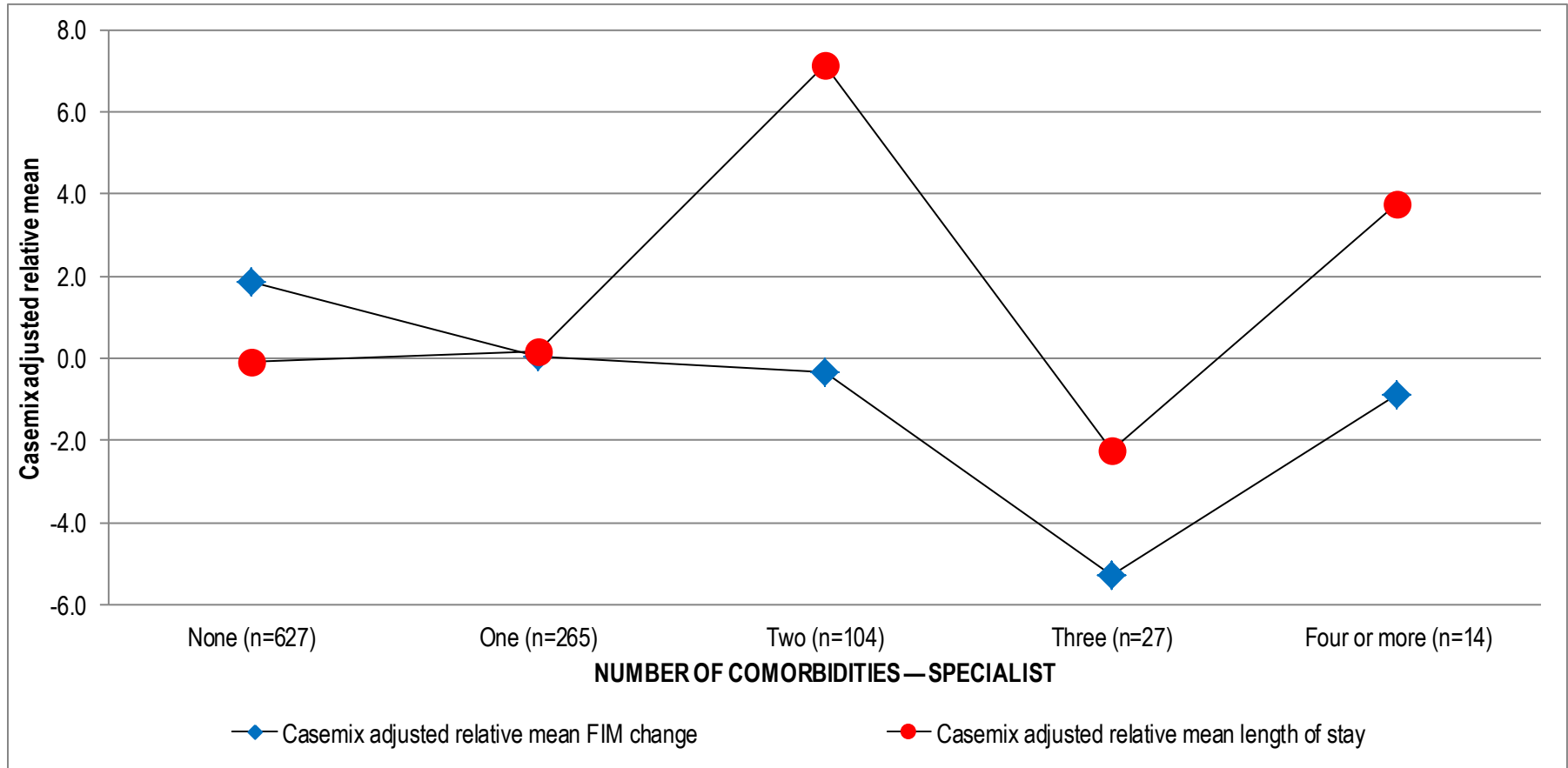


# Traumatic and non-traumatic casemix-adjusted\* relative mean FIM change by impairment



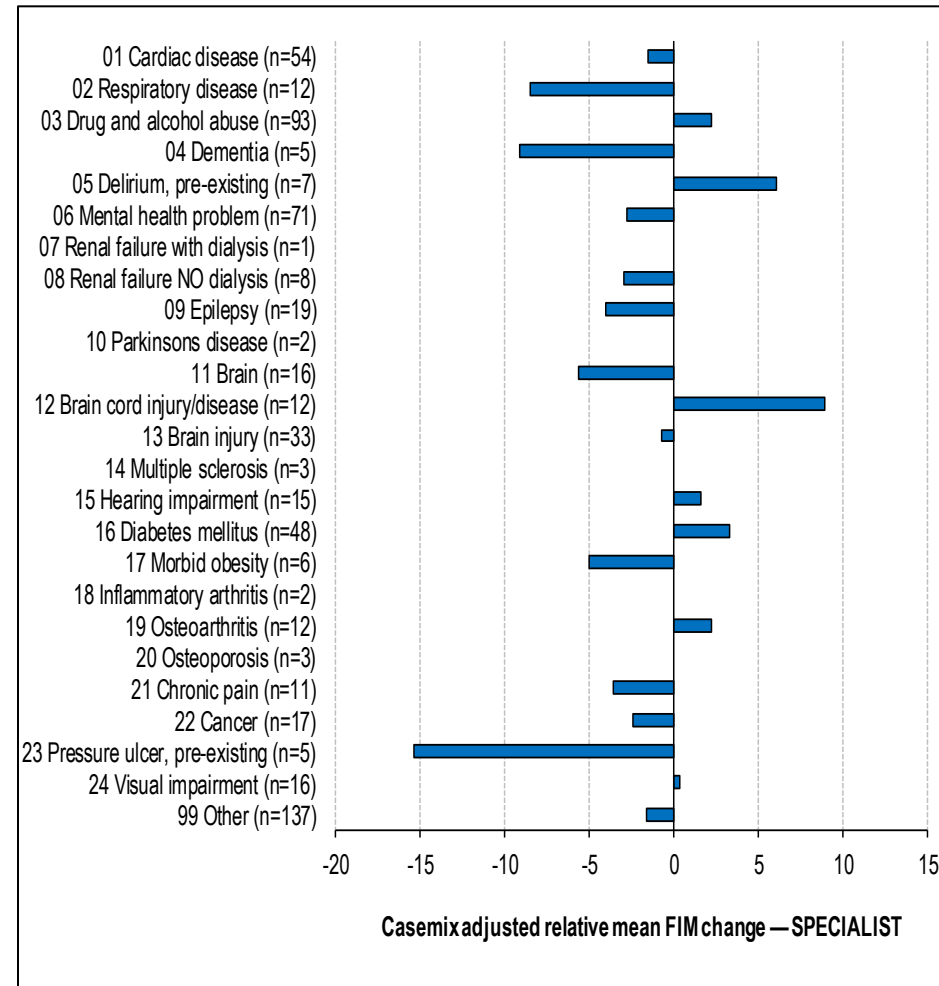
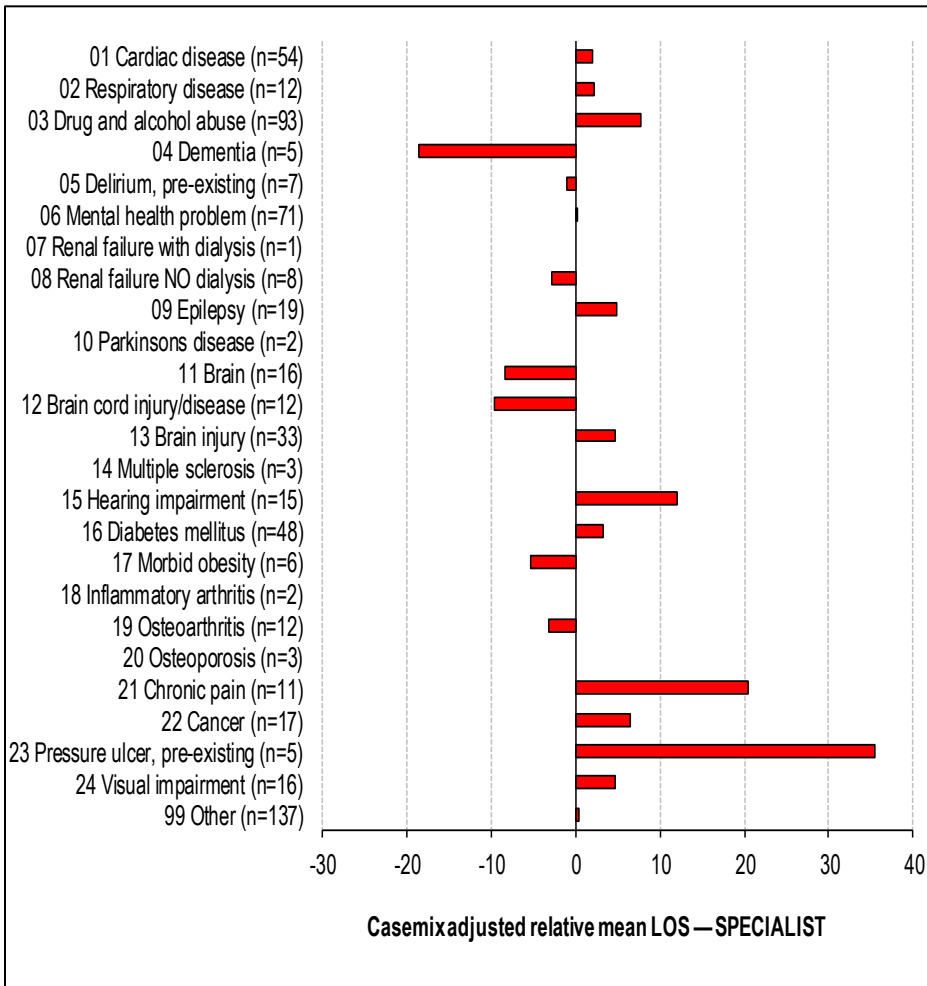
\*Casemix-adjustment is by 2014 Specialist Units

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



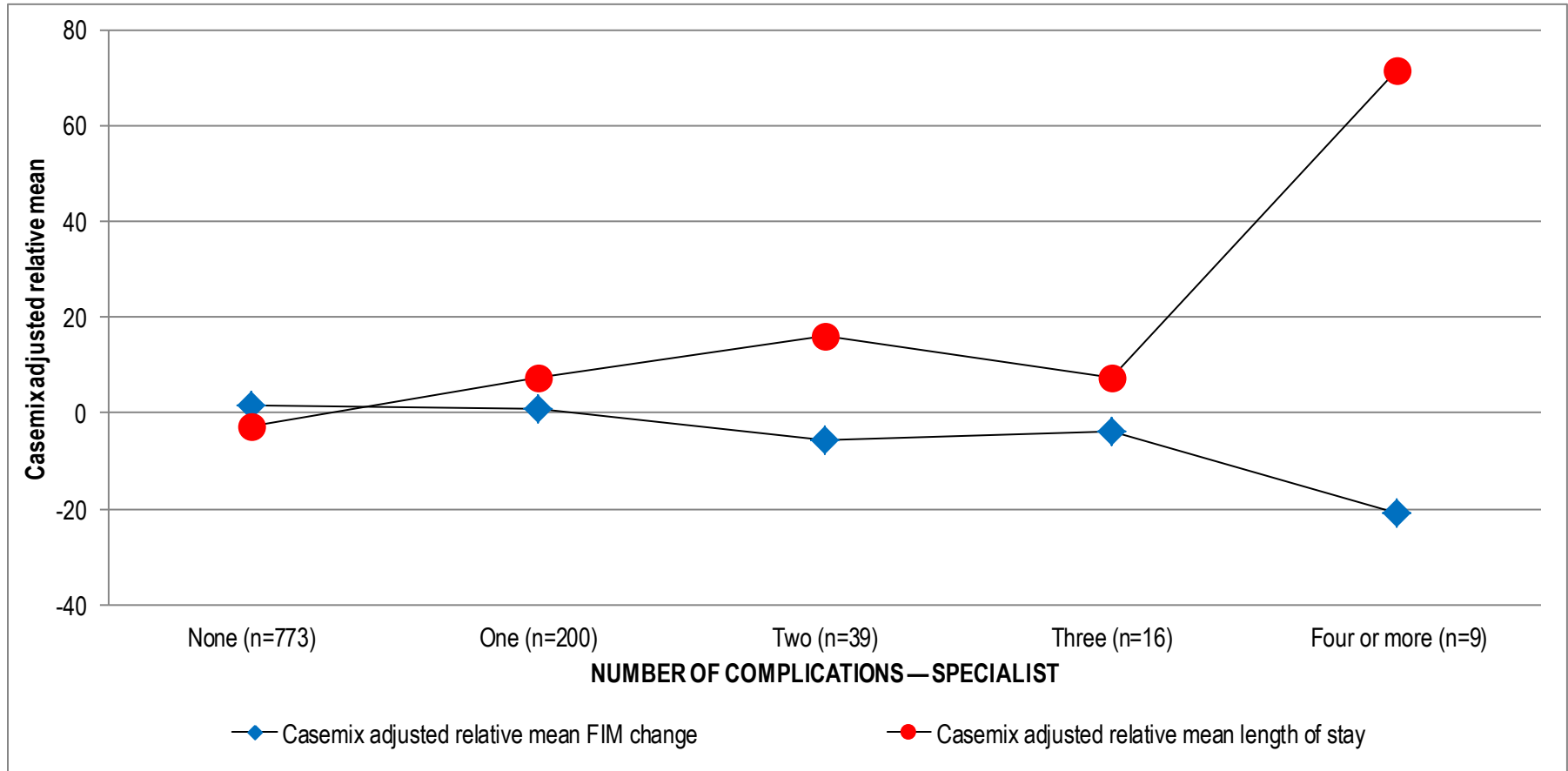
\*Casemix-adjustment is by 2014 Specialist Units

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



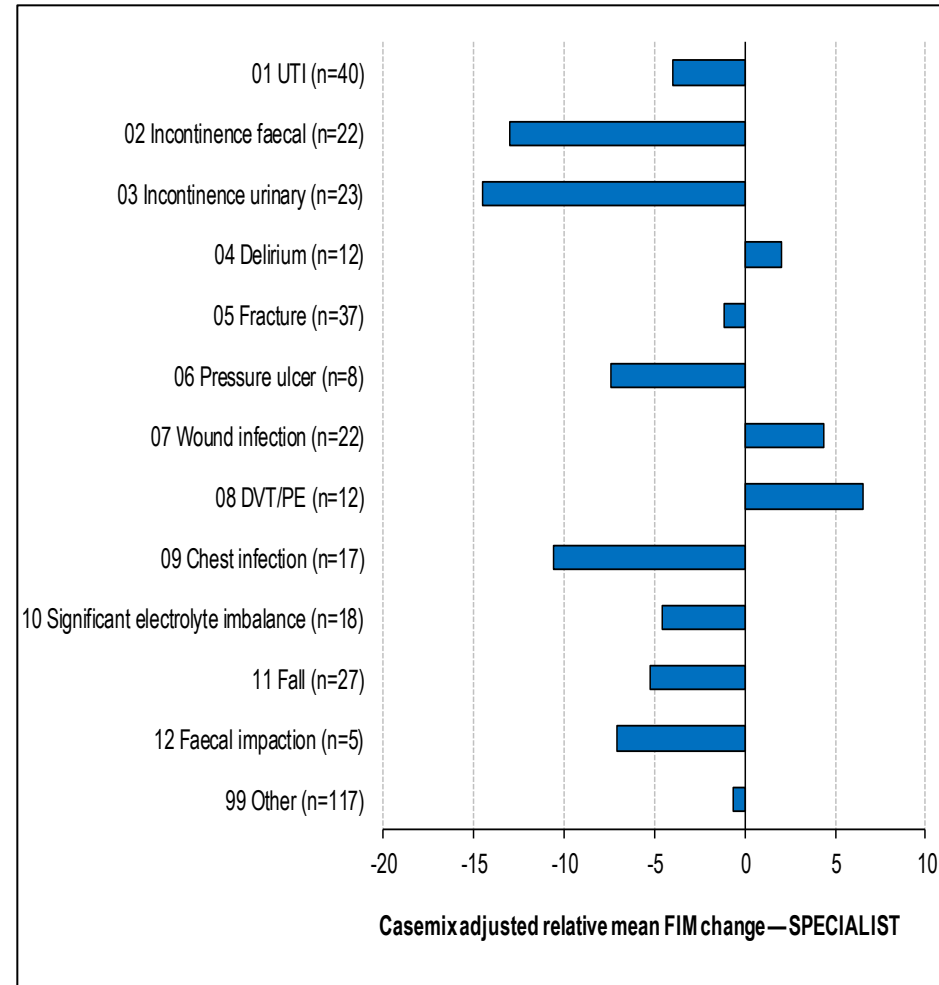
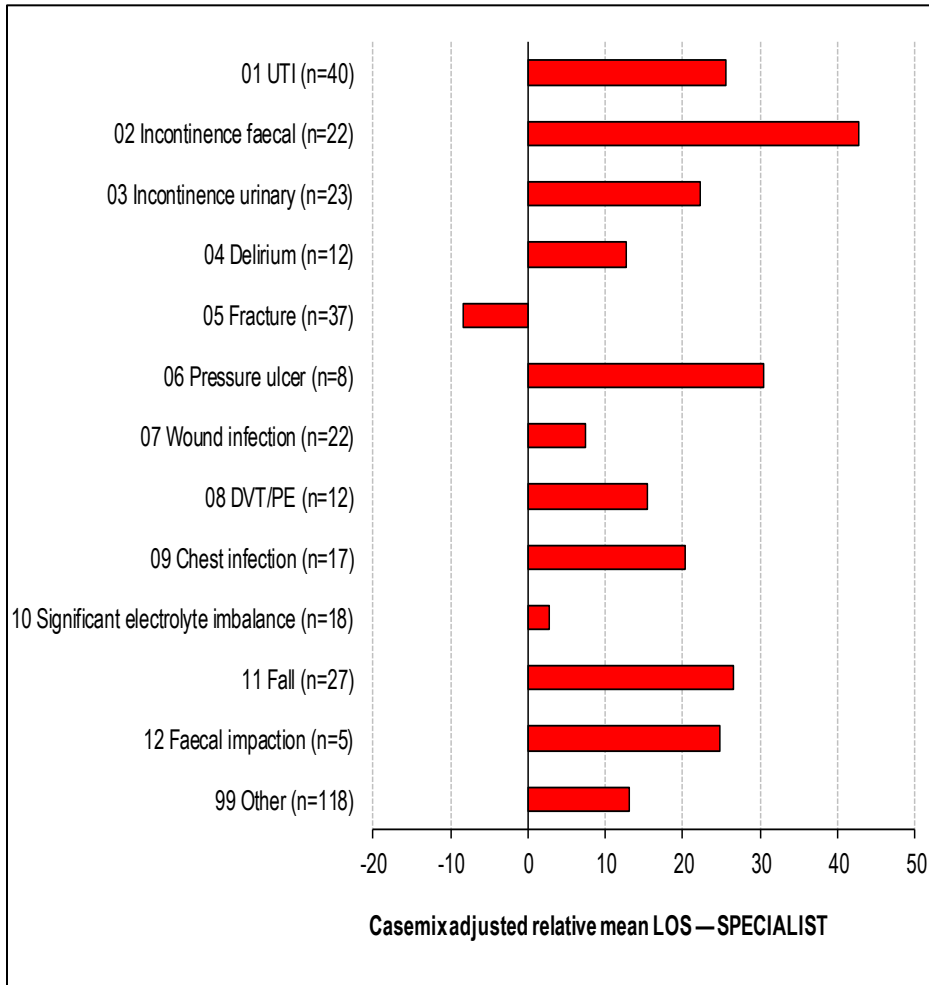
\*Casemix-adjustment is by 2014 Specialist Units

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



\*Casemix-adjustment is by 2014 Specialist Units

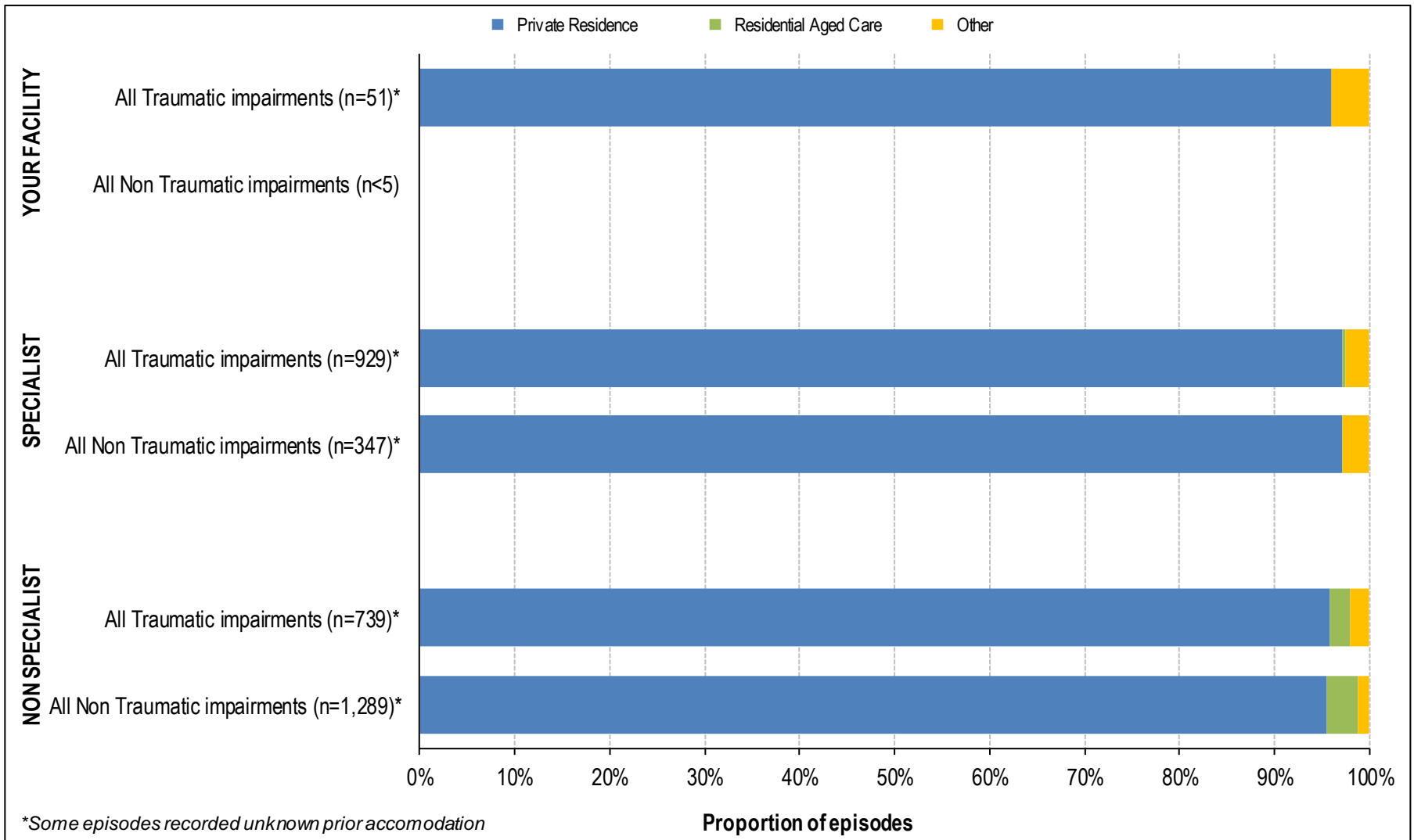
# Casemix-adjusted\* relative mean LOS and FIM change by type of complication



\*Casemix-adjustment is by 2014 Specialist Units

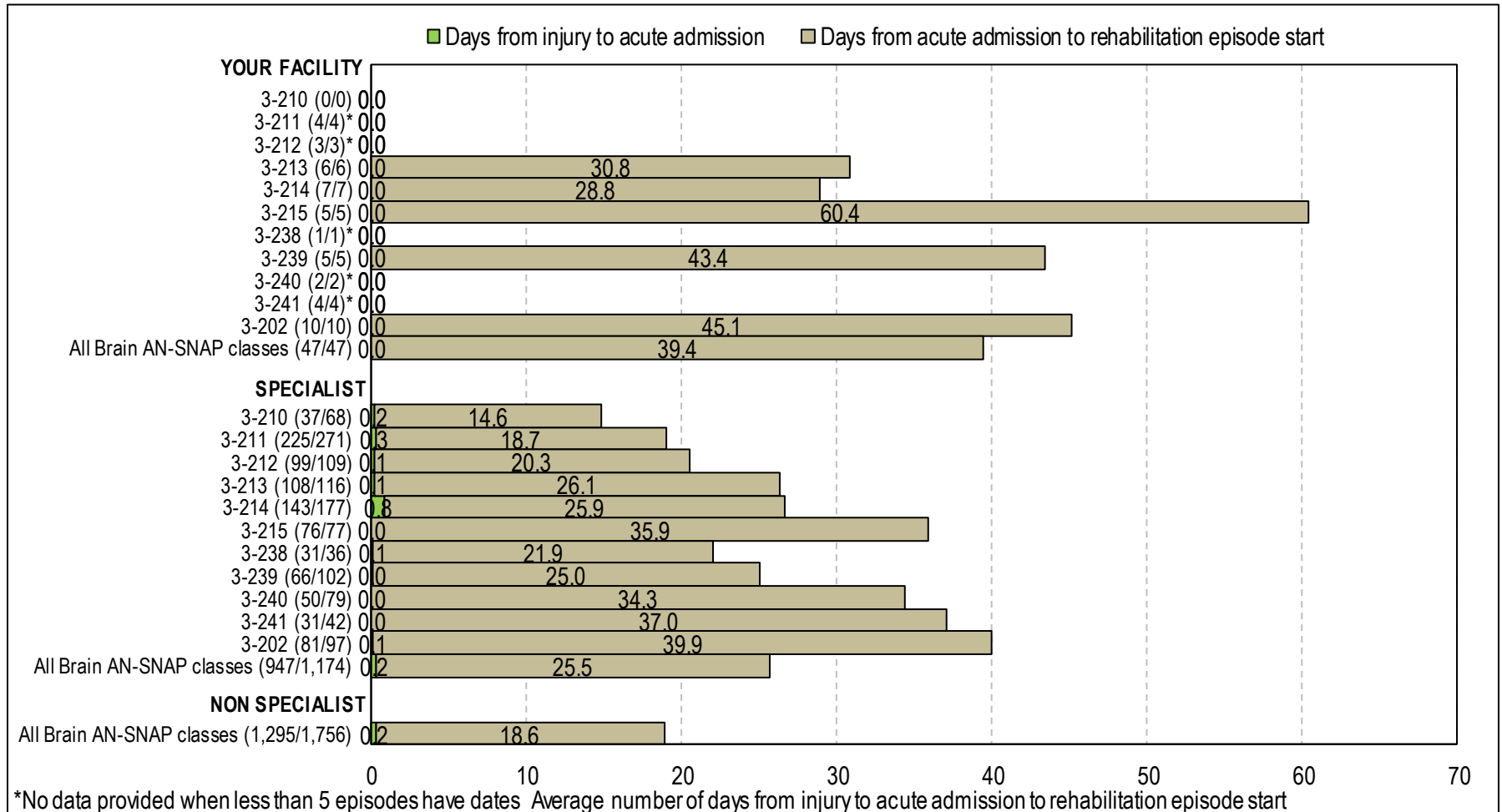
# Explanatory Data

# Type of accommodation prior to impairment

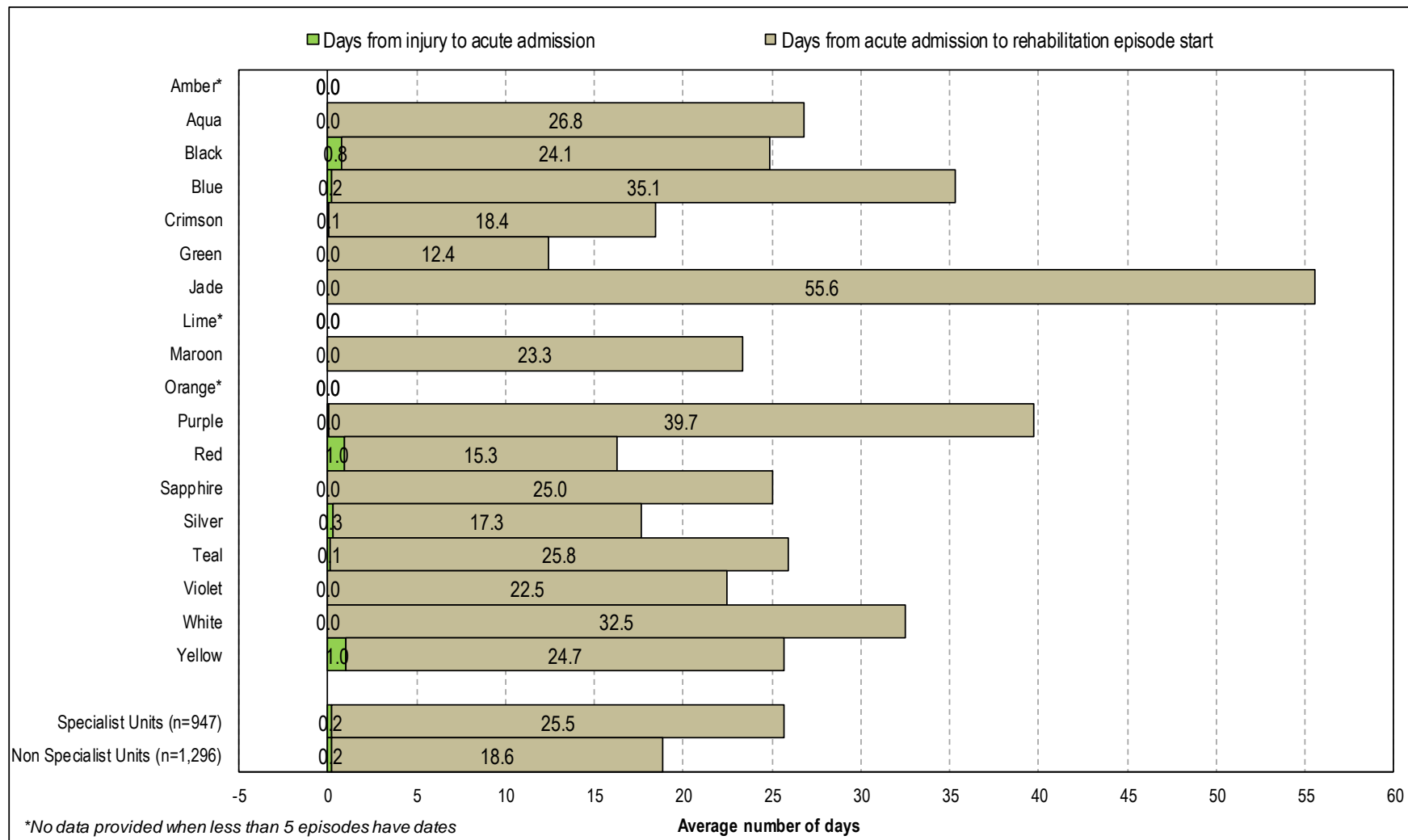




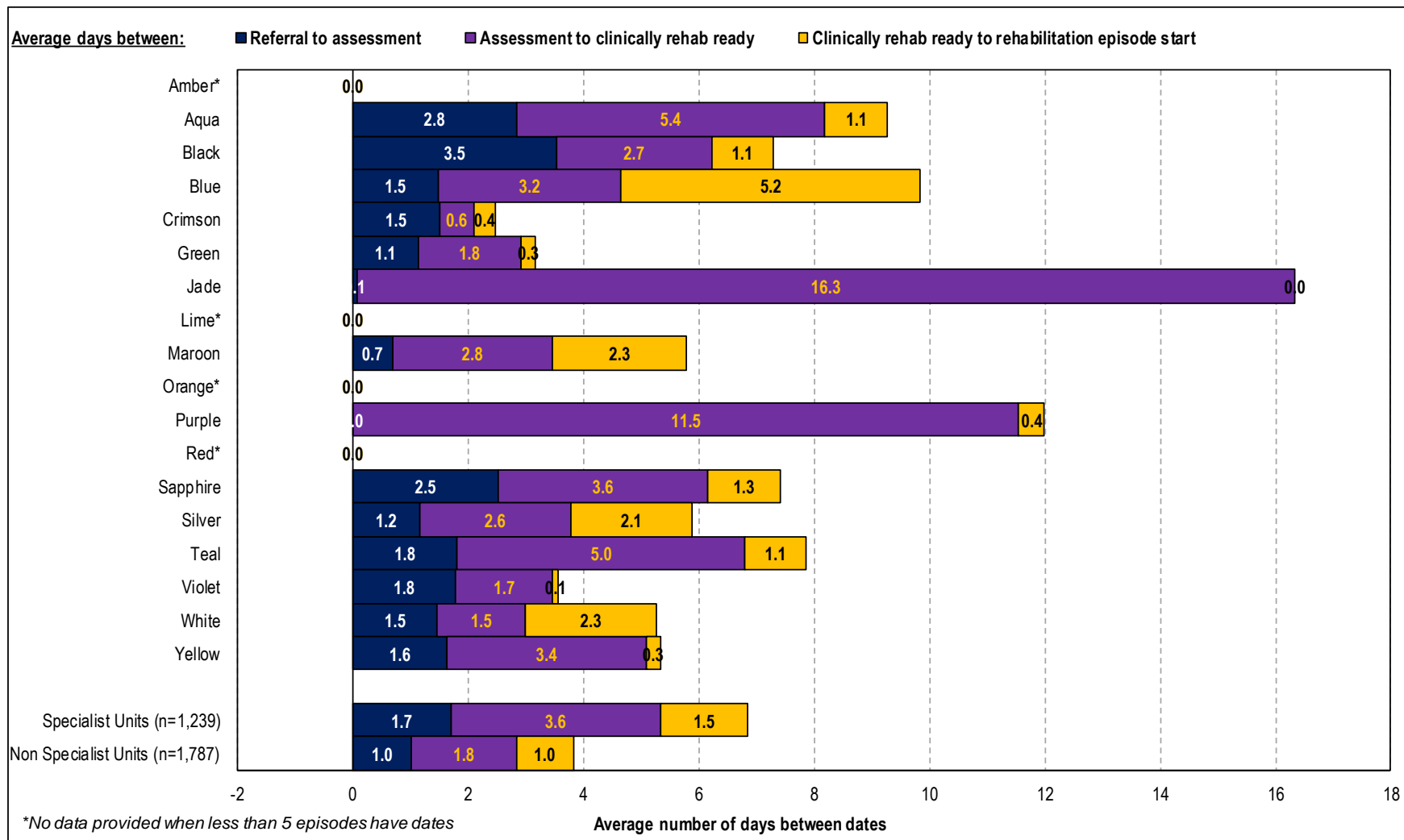
# Days from injury to episode start with an acute admission by AN-SNAP class



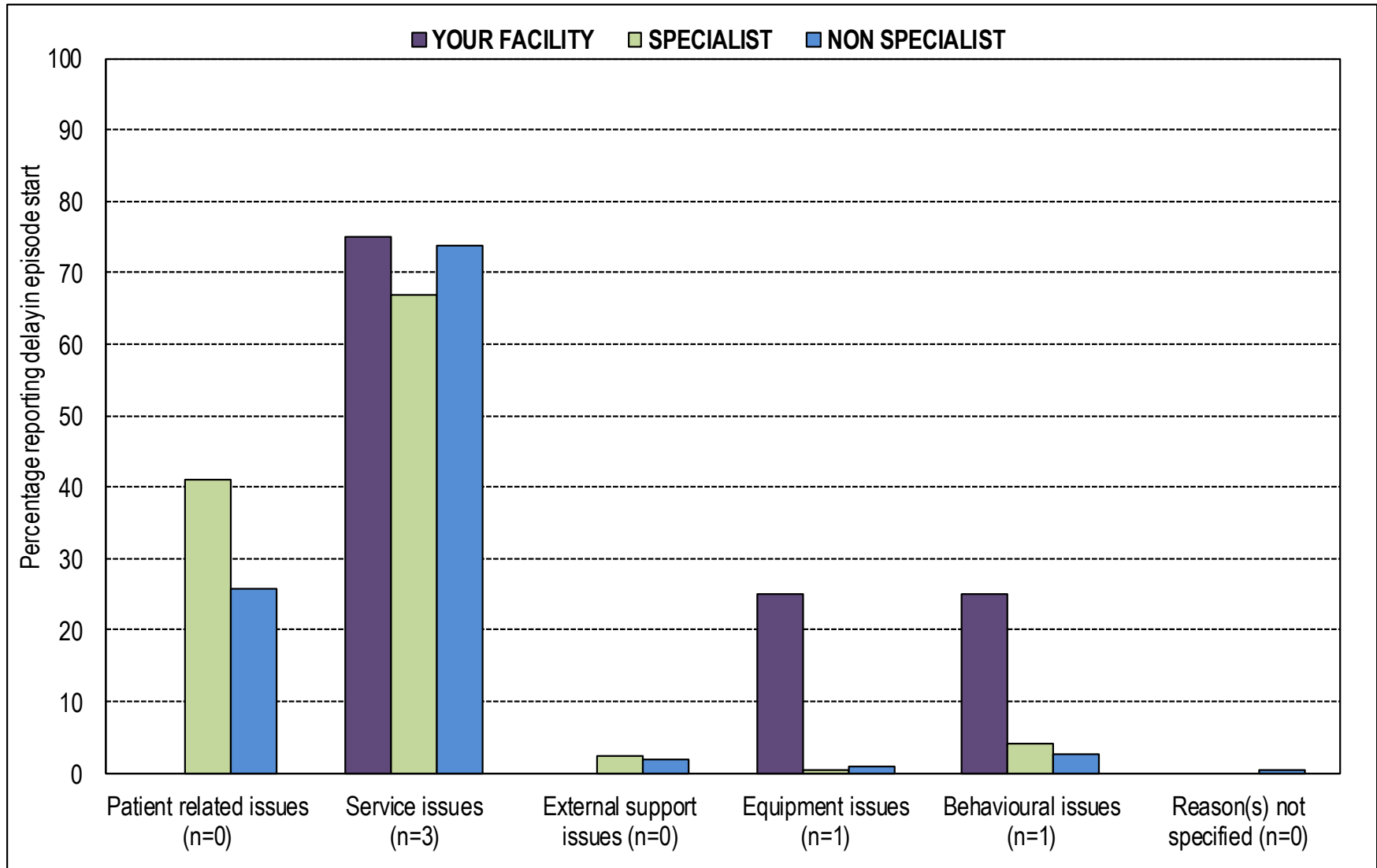
# Days from injury to episode start with an acute admission by facility



# Days from referral to episode start by facility



# Reason for delay in episode start

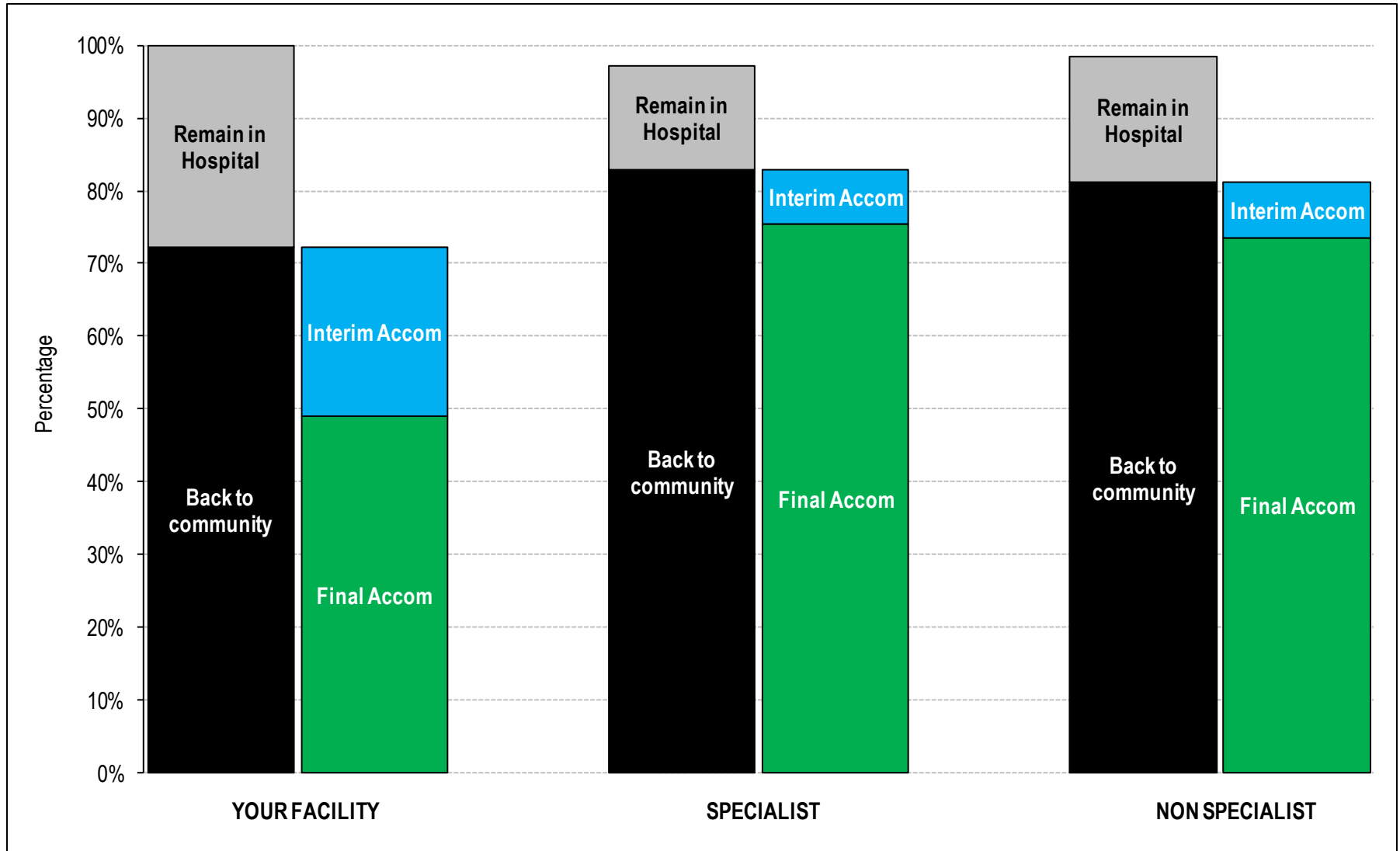


# Delays in episode start

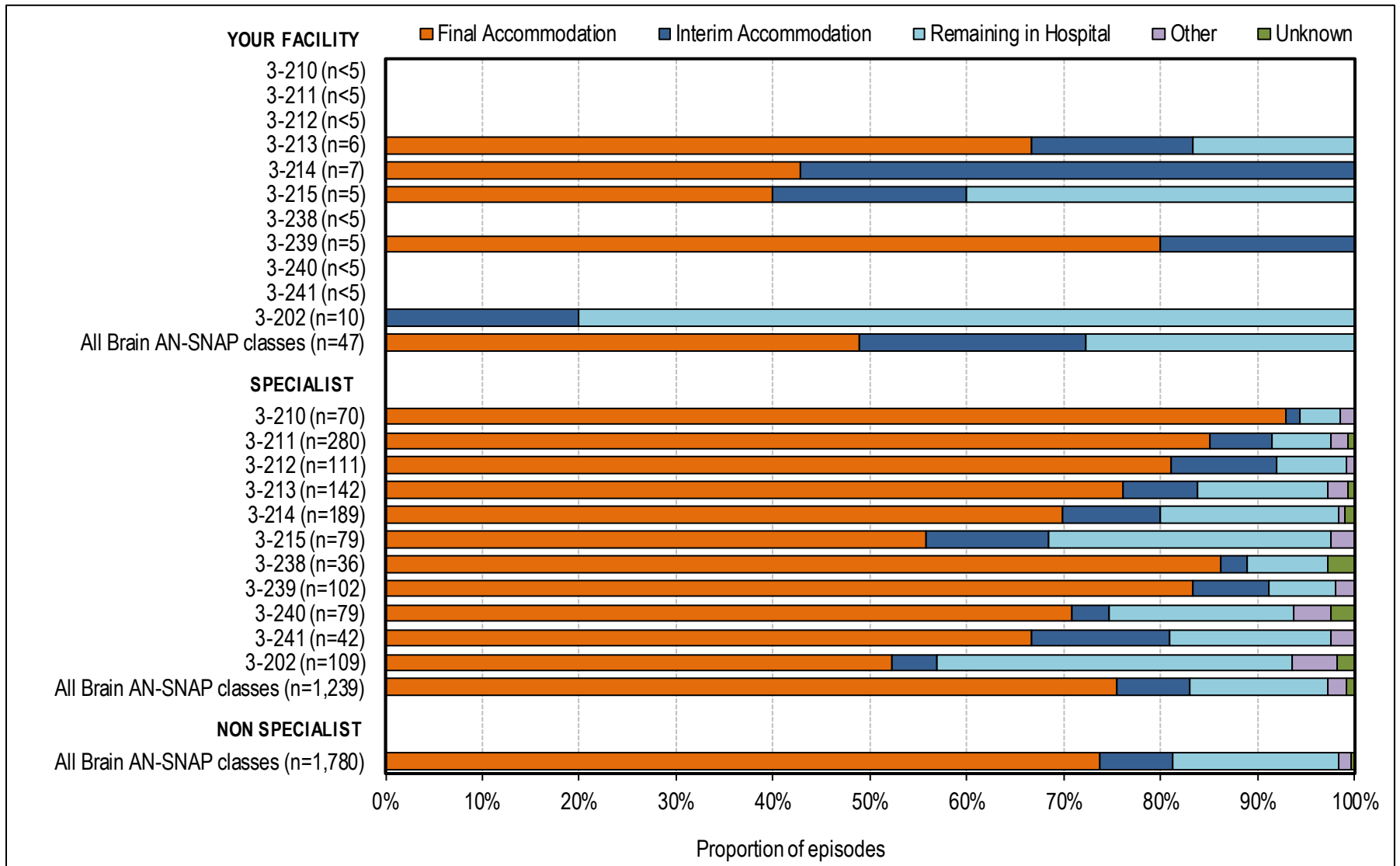
Delay in episode start	YOUR FACILITY		SPECIALIST		NON SPECIALIST	
	No.	%	No.	%	No.	%
No delay	63	94.0	772	78.2	1,611	81.2
Delay in episode start	4	6.0	215	21.8	372	18.8
Missing	0		346		24	
<b>All episodes in private residence</b>	<b>67</b>	<b>100.0</b>	<b>1,333</b>	<b>100.0</b>	<b>2,007</b>	<b>100.0</b>

Reasons for delay in episode start	YOUR FACILITY		SPECIALIST		NON SPECIALIST	
	No.	%	No.	%	No.	%
Patient related issues	0	0.0	88	40.9	96	25.8
Service issues	3	75.0	144	67.0	275	73.9
External support issues	0	0.0	5	2.3	7	1.9
Equipment issues	1	25.0	1	0.5	3	0.8
Behavioural issues	1	25.0	9	4.2	10	2.7
Reason(s) not specified	0	0.0	0	0.0	1	0.3

# Discharge destination



# Mode of episode end by AN-SNAP class

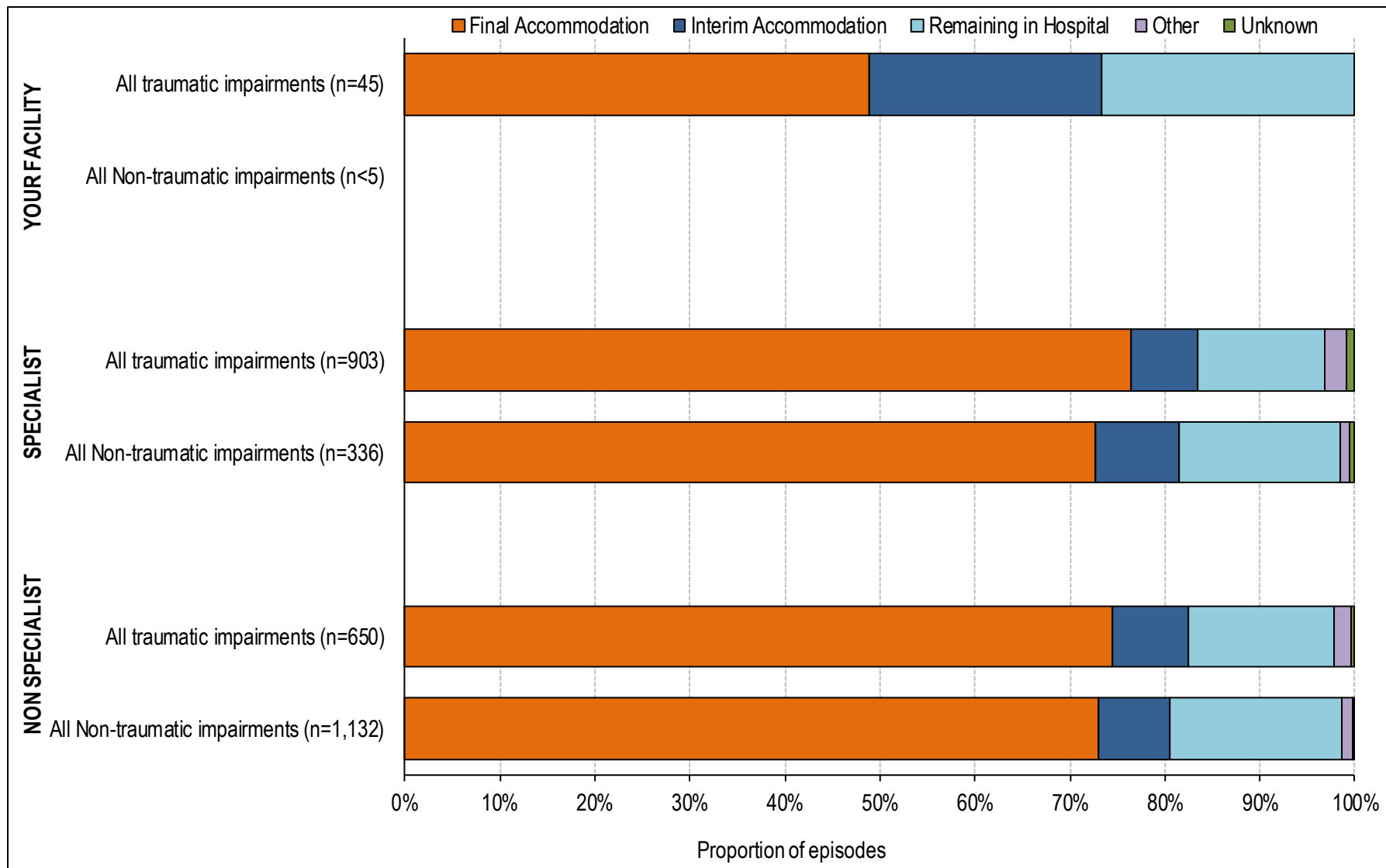


# Discharge destination by AN-SNAP class

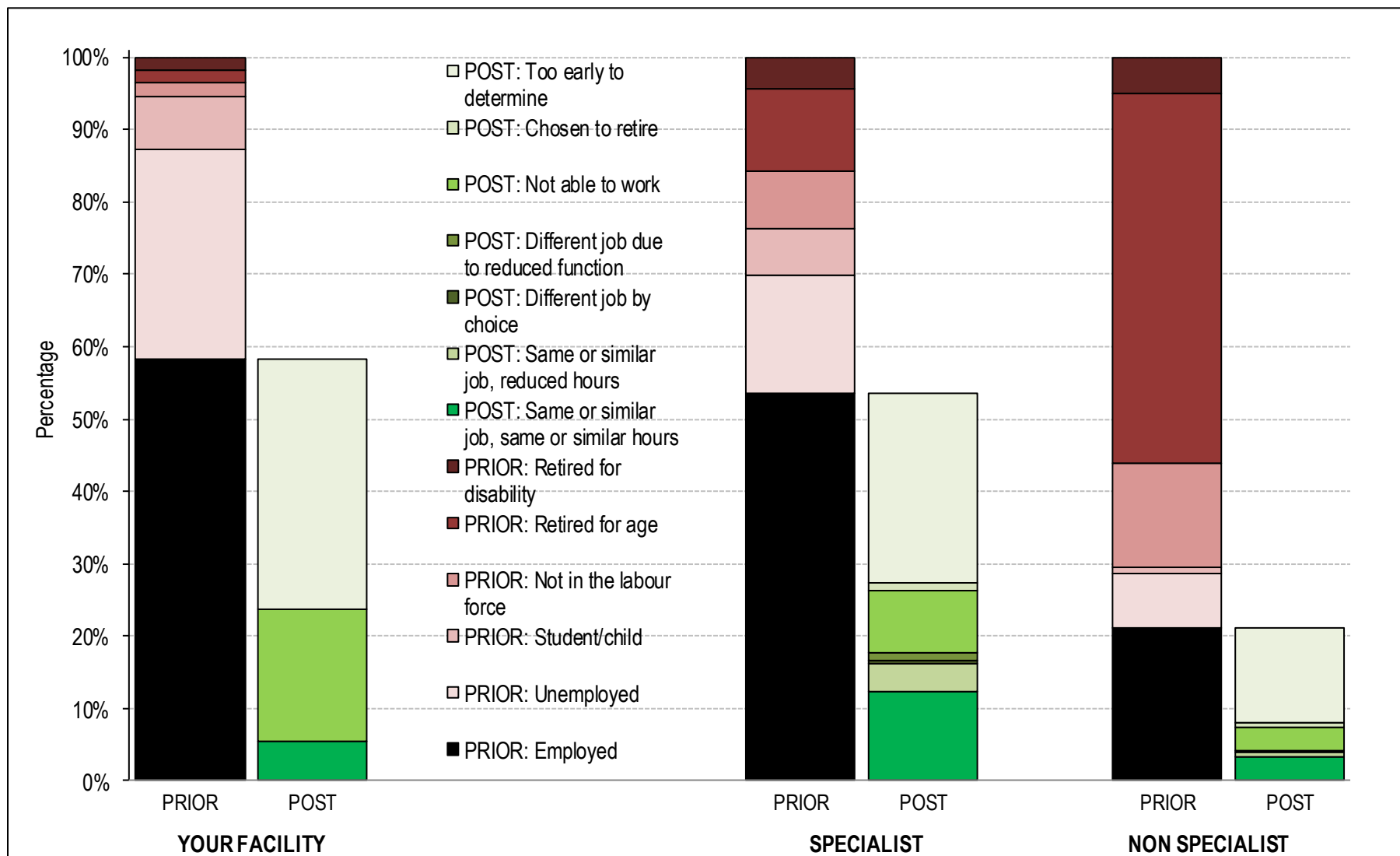
AN-SNAP class		Final	Interim	Remaining	Other	Unknown	Final	Interim	Remaining	Other	Unknown
		Accom	Accom	in Hospital			Accom	Accom	in Hospital		
		No.					%				
<b>Your Facility</b>	<b>3-210</b>	0	0	0	0	0	—	—	—	—	—
	<b>3-211</b>	4	0	0	0	0	100.0	0.0	0.0	0.0	0.0
	<b>3-212</b>	3	0	0	0	0	100.0	0.0	0.0	0.0	0.0
	<b>3-213</b>	4	1	1	0	0	66.7	16.7	16.7	0.0	0.0
	<b>3-214</b>	3	4	0	0	0	42.9	57.1	0.0	0.0	0.0
	<b>3-215</b>	2	1	2	0	0	40.0	20.0	40.0	0.0	0.0
	<b>3-238</b>	1	0	0	0	0	100.0	0.0	0.0	0.0	0.0
	<b>3-239</b>	4	1	0	0	0	80.0	20.0	0.0	0.0	0.0
	<b>3-240</b>	0	1	1	0	0	0.0	50.0	50.0	0.0	0.0
	<b>3-241</b>	2	1	1	0	0	50.0	25.0	25.0	0.0	0.0
	<b>3-202</b>	0	2	8	0	0	0.0	20.0	80.0	0.0	0.0
<b>All Brain AN-SNAP classes</b>		<b>23</b>	<b>11</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>48.9</b>	<b>23.4</b>	<b>27.7</b>	<b>0.0</b>	<b>0.0</b>
<b>Specialist Units</b>		<b>934</b>	<b>94</b>	<b>177</b>	<b>24</b>	<b>10</b>	<b>75.4</b>	<b>7.6</b>	<b>14.3</b>	<b>1.9</b>	<b>0.8</b>
<b>Non Specialist Units</b>		<b>1,311</b>	<b>134</b>	<b>306</b>	<b>23</b>	<b>6</b>	<b>73.7</b>	<b>7.5</b>	<b>17.2</b>	<b>1.3</b>	<b>0.3</b>



# Traumatic and non-traumatic discharge destination



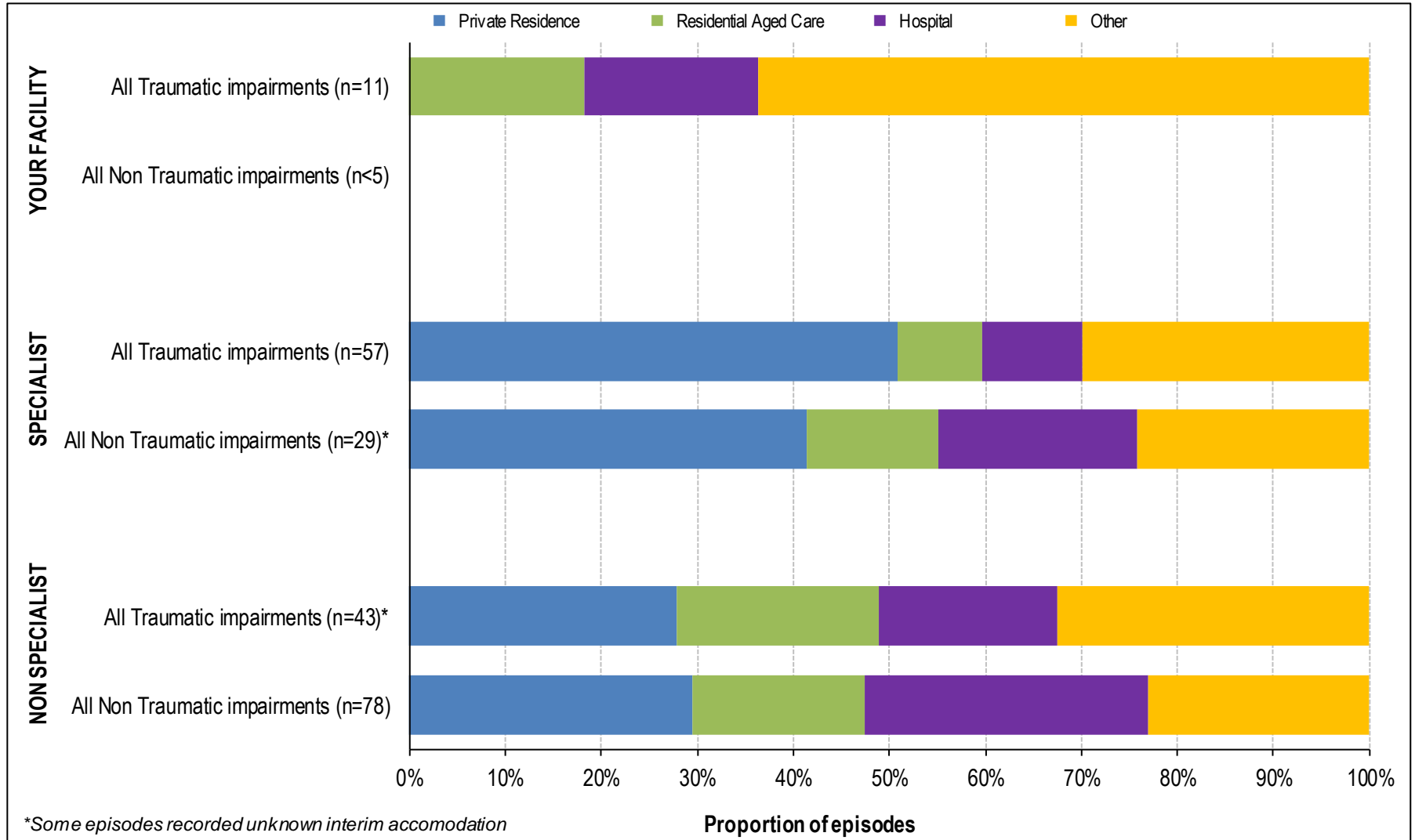
# Employment status prior and post impairment



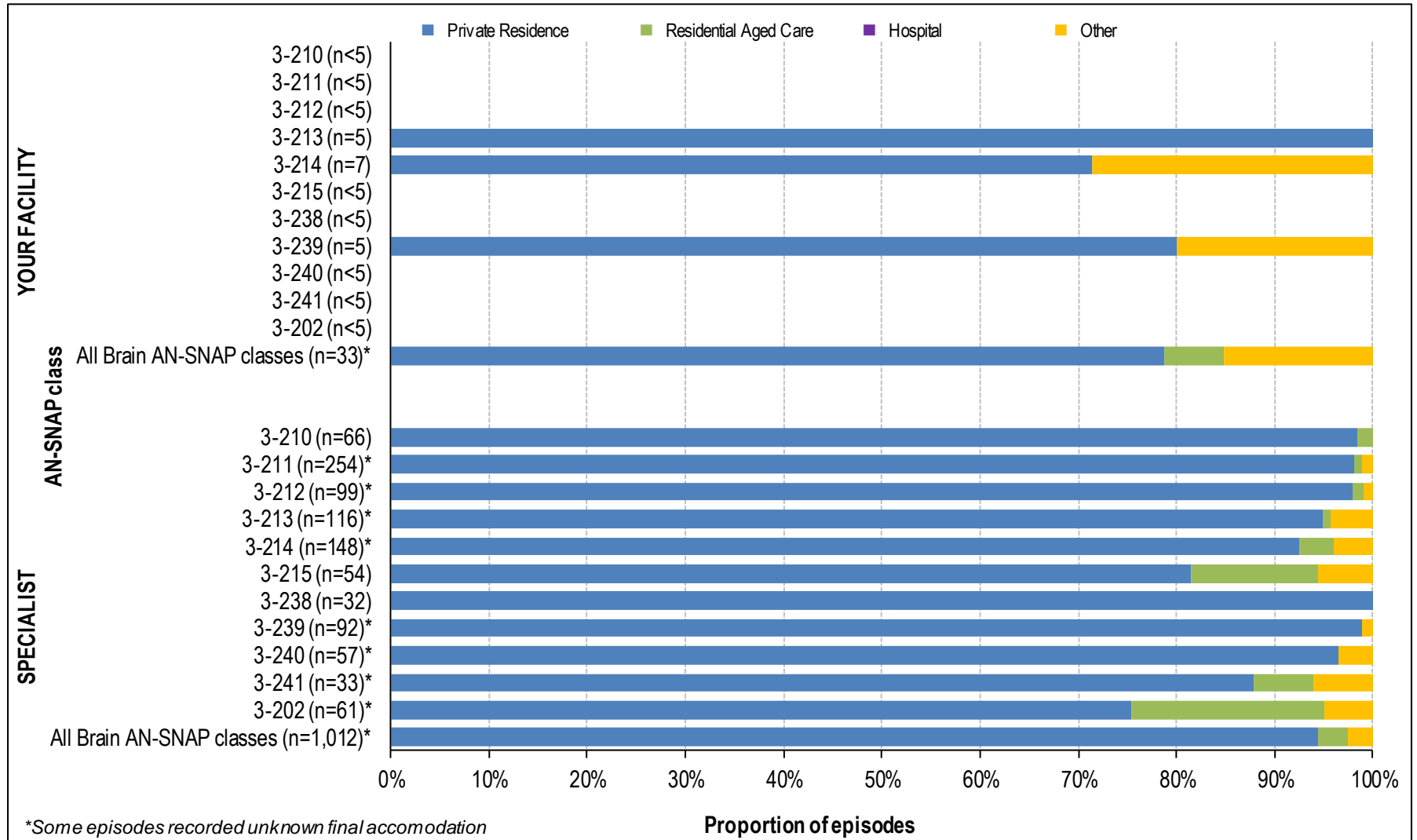
# Employment status prior and post impairment

Employment status	YOUR FACILITY		SPECIALIST		NON SPECIALIST	
	No.	%	No.	%	No.	%
<u>Prior to this impairment:</u>						
Employed	32	58.2	678	53.6	422	21.1
Unemployed	16	29.1	205	16.2	150	7.5
Student/child	4	7.3	82	6.5	19	1.0
Not in the labour force	1	1.8	102	8.1	285	14.3
Retired for age	1	1.8	143	11.3	1,019	51.1
Retired for disability	1	1.8	56	4.4	101	5.1
Not answered	12		134		43	
<b>Total</b>	<b>67</b>	<b>100</b>	<b>1,400</b>	<b>100</b>	<b>2,039</b>	<b>100</b>
<u>After discharge (if previously employed):</u>						
<i>Same or similar job, same or similar hours</i>	3	9.4	121	22.9	59	15.5
<i>Same or similar job, reduced hours</i>	0	0.0	39	7.4	14	3.7
<i>Different job by choice</i>	0	0.0	4	0.8	0	0.0
<i>Different job due to reduced function</i>	0	0.0	10	1.9	2	0.5
<i>Not able to work</i>	10	31.3	86	16.3	59	15.5
<i>Chosen to retire</i>	0	0.0	9	1.7	10	2.6
<i>Too early to determine</i>	19	59.4	259	49.1	236	62.1
<i>Not answered</i>	0		150		42	
<b>Total employed prior</b>	<b>32</b>	<b>100</b>	<b>678</b>	<b>100</b>	<b>422</b>	<b>100</b>

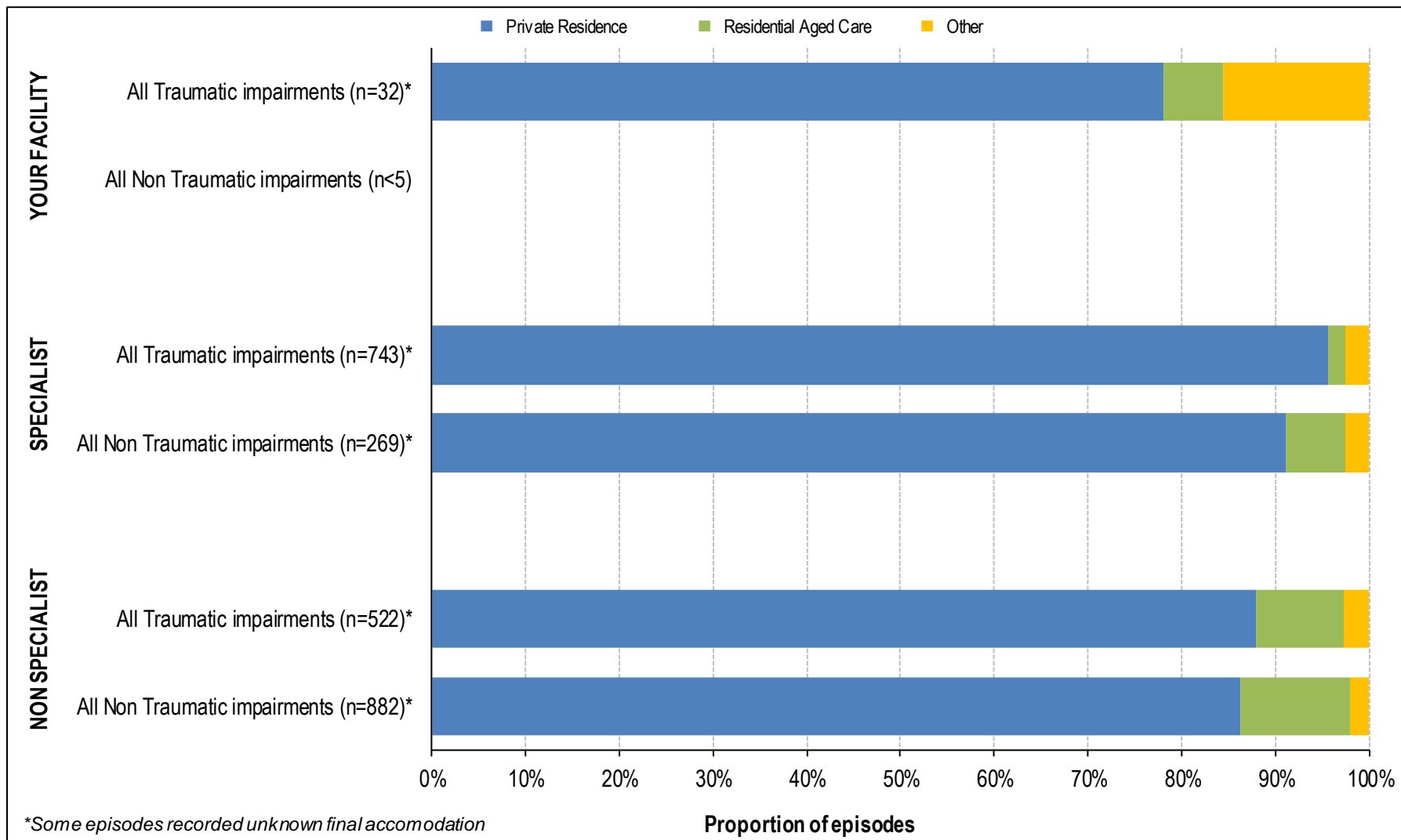
# Traumatic and non-traumatic interim accommodation post discharge



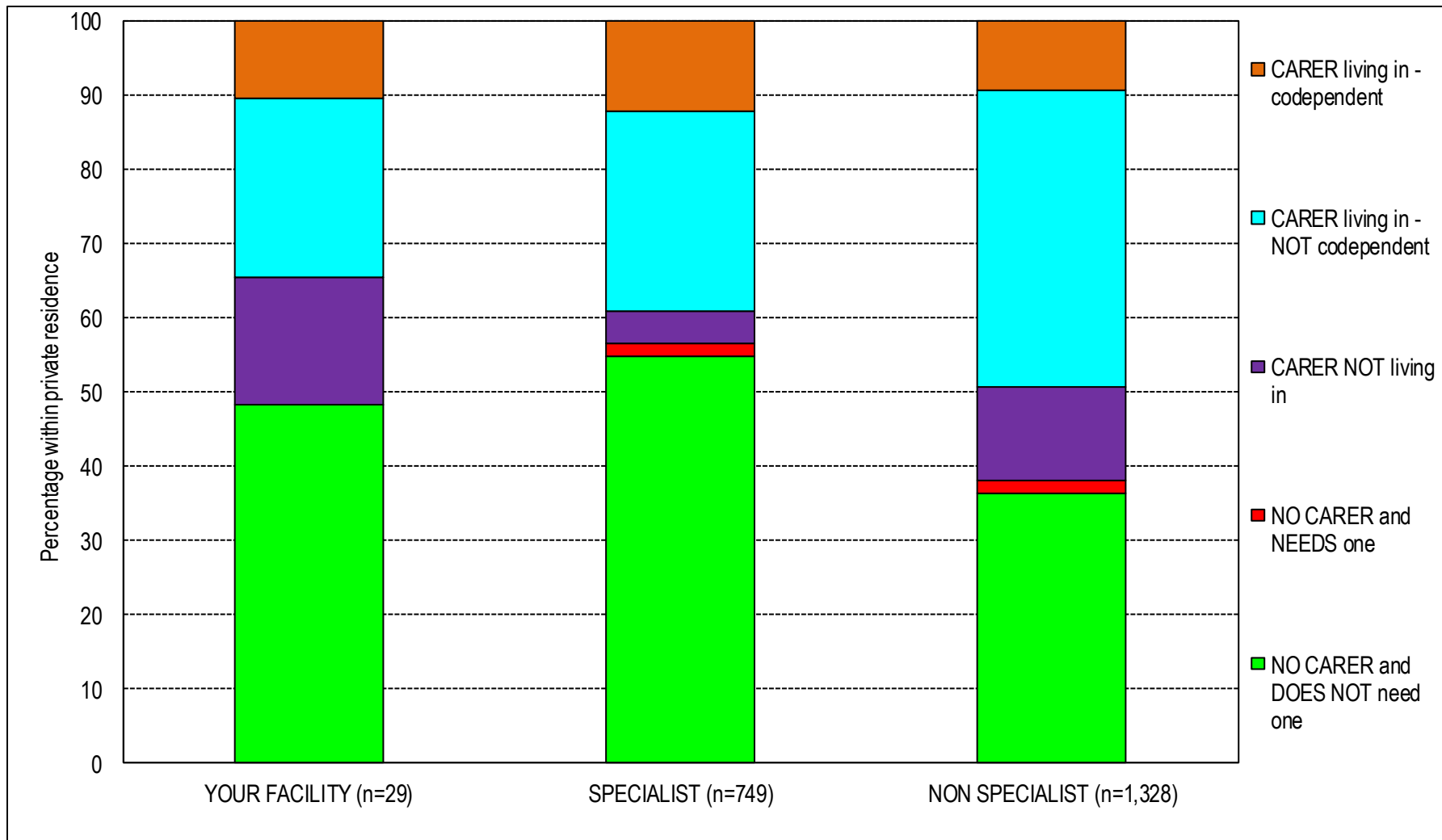
# Final accommodation post discharge by AN-SNAP class



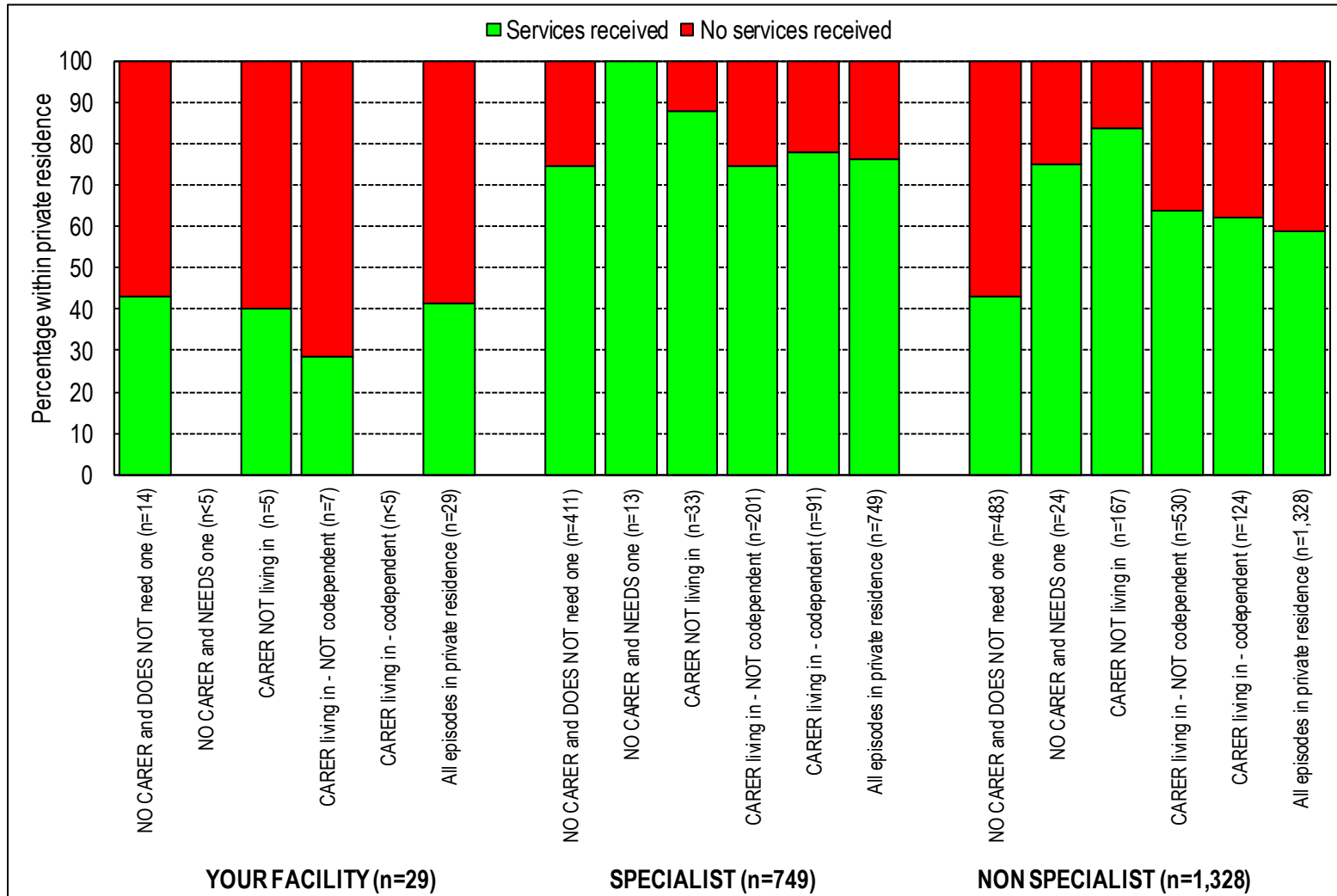
# Traumatic and non-traumatic final accommodation post discharge



# Carer status post discharge



# Any services received post discharge by carer status



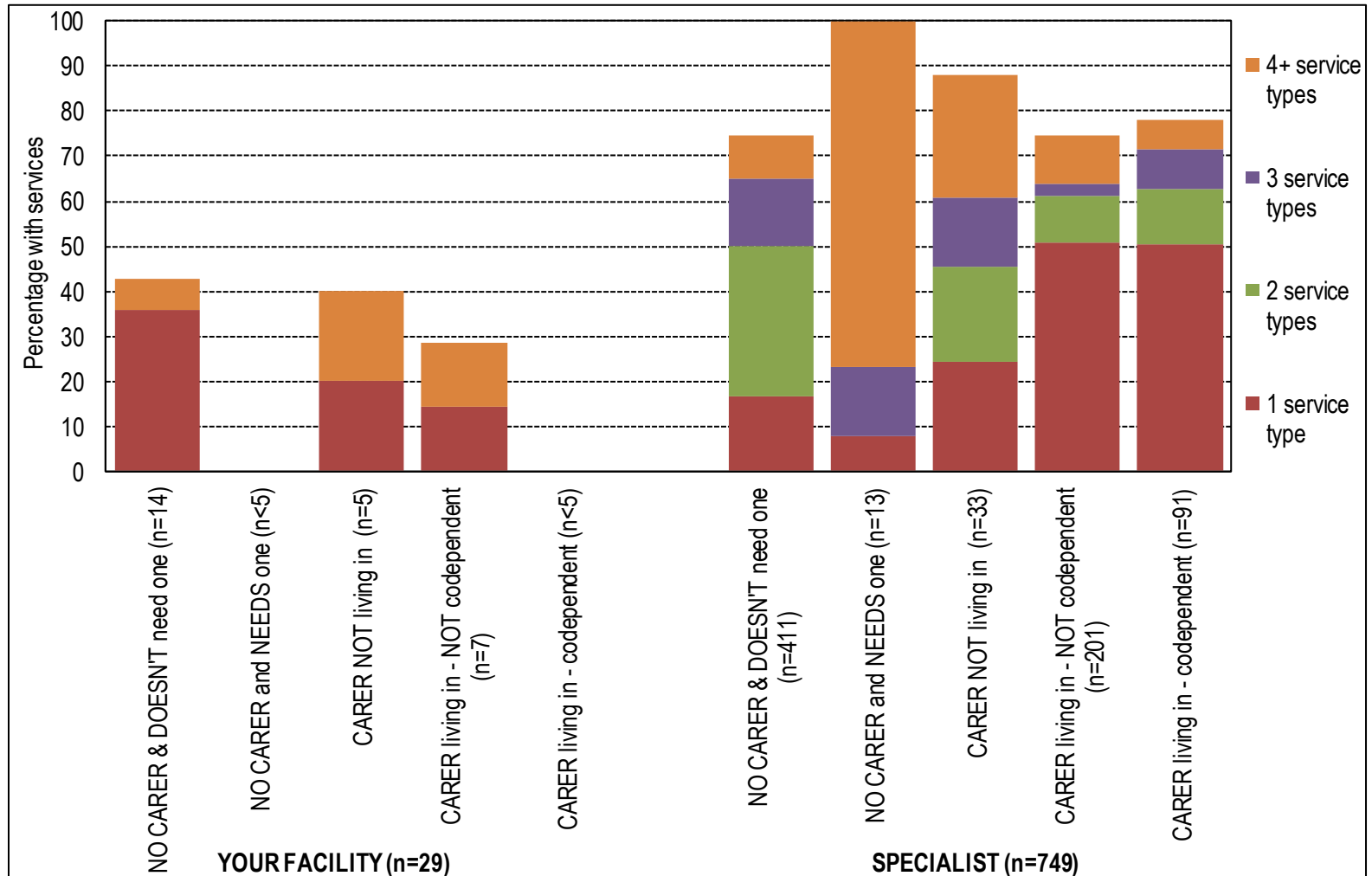


# Carer status and any services received post discharge

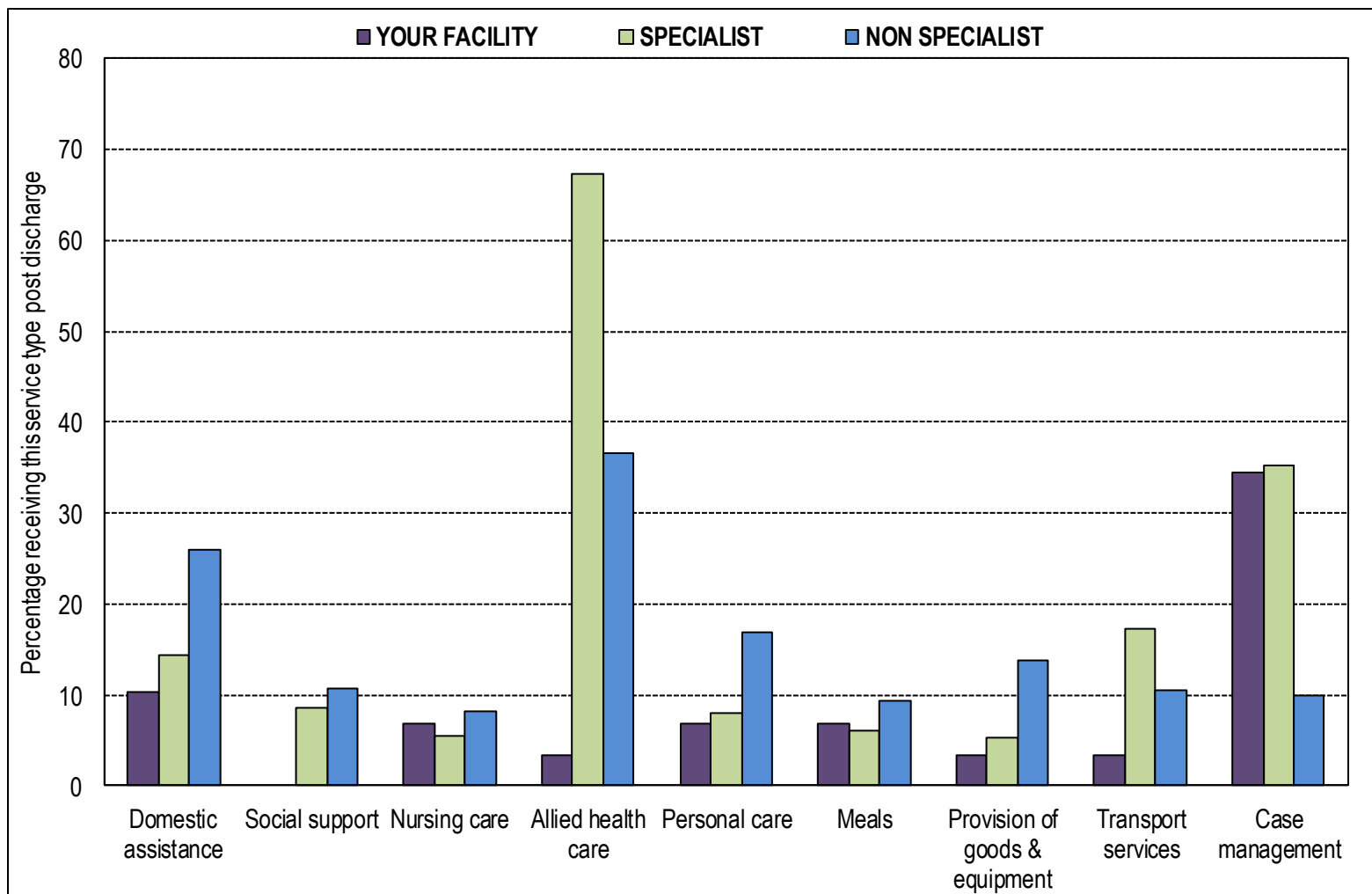
Carer status post discharge	YOUR FACILITY		SPECIALIST		NON SPECIALIST	
	No.	%	No.	%	No.	%
NO CARER and DOES NOT need one	14	48.3	411	54.9	483	36.4
NO CARER and NEEDS one	0	—	13	1.7	24	1.8
CARER NOT living in	5	17.2	33	4.4	167	12.6
CARER living in - NOT codependent	7	24.1	201	26.8	530	39.9
CARER living in - codependent	3	10.3	91	12.1	124	9.3
Missing	0		0		0	
<b>All episodes in private residence</b>	<b>29</b>	<b>100.0</b>	<b>749</b>	<b>100.0</b>	<b>1,328</b>	<b>100.0</b>

Carer status post discharge	Any services received post discharge?					
	YOUR FACILITY		SPECIALIST		NON SPECIALIST	
	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)
NO CARER and DOES NOT need one	42.9	57.1	74.7	25.3	43.1	56.9
NO CARER and NEEDS one	—	—	100.0	0.0	75.0	25.0
CARER NOT living in	40.0	60.0	87.9	12.1	83.8	16.2
CARER living in - NOT codependent	28.6	71.4	74.6	25.4	64.0	36.0
CARER living in - codependent	66.7	33.3	78.0	22.0	62.1	37.9
<b>All episodes in private residence</b>	<b>41.4</b>	<b>58.6</b>	<b>76.1</b>	<b>23.9</b>	<b>58.9</b>	<b>41.1</b>

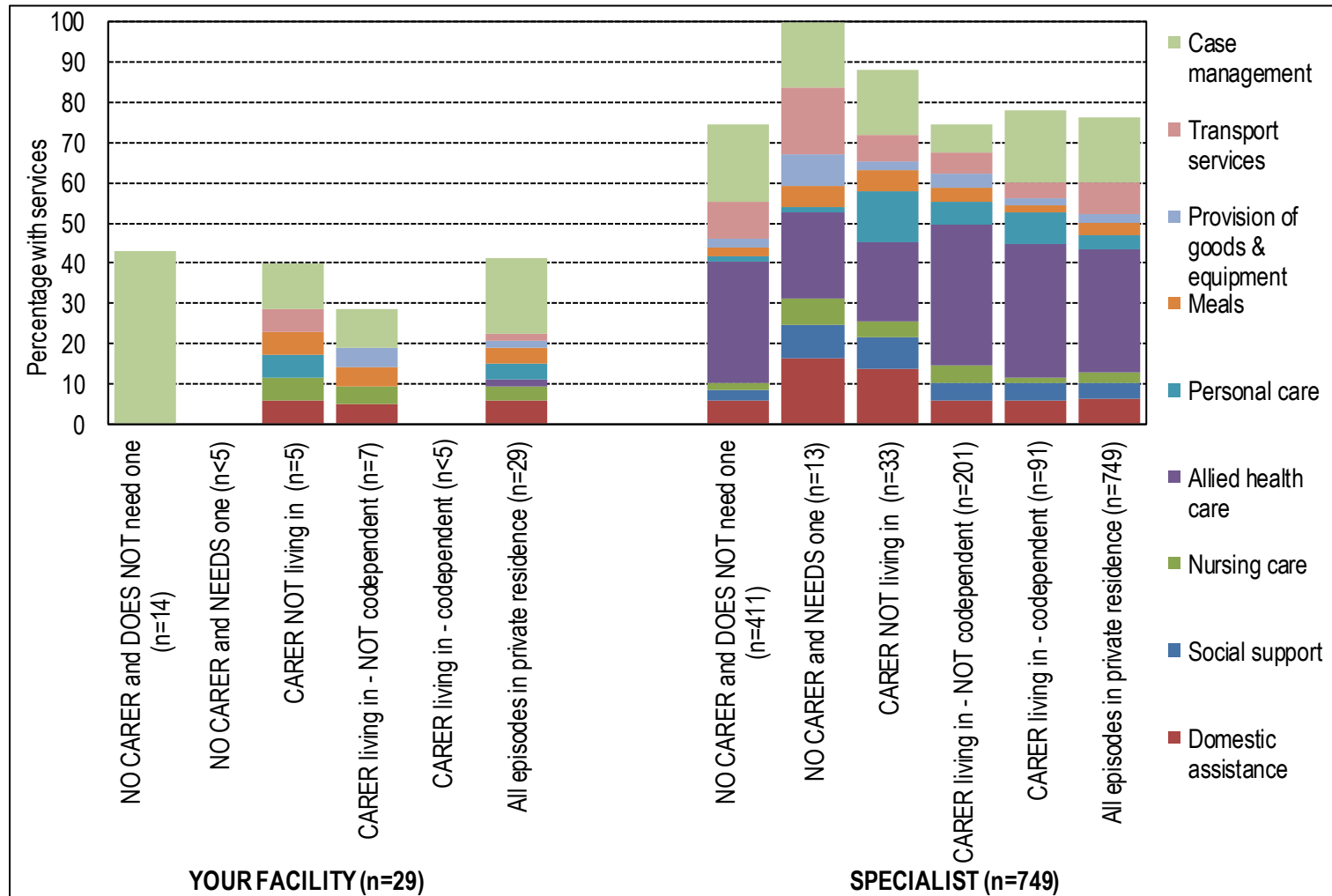
# Number of services received post discharge by carer status



# Type of services received post discharge



# Type of services received post discharge by carer status



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

Services received post discharge  (NOTE: Discharge to private residence)	Carer status post discharge - YOUR FACILITY					
	NO CARER & DOESN'T 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	14	0	5	7	3	
<b>Percent of episodes receiving:</b>						
No services	57.1	—	60.0	71.4	33.3	<b>58.6</b>
1 service type	35.7	—	20.0	14.3	33.3	<b>27.6</b>
2 service types	0.0	—	0.0	0.0	0.0	<b>0.0</b>
3 service types	0.0	—	0.0	0.0	33.3	<b>3.4</b>
4 or more service types	7.1	—	20.0	14.3	0.0	<b>10.3</b>
<b>Service Type received</b>						
Domestic assistance	0.0	—	20.0	14.3	33.3	<b>10.3</b>
Social support	0.0	—	0.0	0.0	0.0	<b>0.0</b>
Nursing care	0.0	—	20.0	14.3	0.0	<b>6.9</b>
Allied health care	0.0	—	0.0	0.0	33.3	<b>3.4</b>
Personal care	0.0	—	20.0	0.0	33.3	<b>6.9</b>
Meals	0.0	—	20.0	14.3	0.0	<b>6.9</b>
Provision of goods & equipment	0.0	—	0.0	14.3	0.0	<b>3.4</b>
Transport services	0.0	—	20.0	0.0	0.0	<b>3.4</b>
Case management	35.7	—	40.0	28.6	33.3	<b>34.5</b>

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

Services received post discharge  (NOTE: Discharge to private residence)	Carer status post discharge - SPECIALIST					
	NO CARER & DOESN'T 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	411	13	33	201	91	
<b>Percent of episodes receiving:</b>						
No services	25.3	0.0	12.1	25.4	22.0	<b>23.9</b>
1 service type	16.5	7.7	24.2	50.7	50.5	<b>30.2</b>
2 service types	33.6	0.0	21.2	10.4	12.1	<b>23.6</b>
3 service types	14.8	15.4	15.2	2.5	8.8	<b>10.8</b>
4 or more service types	9.7	76.9	27.3	10.9	6.6	<b>11.5</b>
<b>Service Type received</b>						
Domestic assistance	12.9	76.9	39.4	10.9	9.9	<b>14.3</b>
Social support	6.6	38.5	21.2	9.0	7.7	<b>8.5</b>
Nursing care	3.4	30.8	12.1	8.5	2.2	<b>5.5</b>
Allied health care	69.6	100.0	54.5	67.2	57.1	<b>67.3</b>
Personal care	2.9	7.7	36.4	11.4	13.2	<b>8.0</b>
Meals	5.1	23.1	15.2	7.0	3.3	<b>6.1</b>
Provision of goods & equipment	4.1	38.5	6.1	6.5	3.3	<b>5.3</b>
Transport services	21.2	76.9	18.2	10.0	6.6	<b>17.2</b>
Case management	44.5	76.9	45.5	13.9	30.8	<b>35.2</b>

# Number and type of services received post discharge by carer status – NON SPECIALIST

Services received post discharge  (NOTE: Discharge to private residence)	Carer status post discharge - NON SPECIALIST					
	NO CARER & DOESN'T 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	483	24	167	530	124	
<b>Percent of episodes receiving:</b>						
No services	56.9	25.0	16.2	36.0	37.9	<b>41.1</b>
2 service type	19.3	29.2	13.8	24.7	26.6	<b>21.7</b>
2 service types	11.2	8.3	21.6	15.1	17.7	<b>14.6</b>
3 service types	7.0	20.8	20.4	10.0	8.1	<b>10.3</b>
5 or more service types	5.6	16.7	28.1	14.2	9.7	<b>12.3</b>
<b>Service Type received</b>						
Domestic assistance	18.6	37.5	53.9	23.6	24.2	<b>25.9</b>
Social support	4.6	25.0	22.2	13.2	6.5	<b>10.8</b>
Nursing care	3.7	8.3	13.2	10.0	10.5	<b>8.1</b>
Allied health care	26.1	37.5	43.1	43.2	41.1	<b>36.7</b>
Personal care	7.2	29.2	46.1	16.6	12.9	<b>16.8</b>
Meals	7.0	16.7	22.2	8.3	4.8	<b>9.4</b>
Provision of goods & equipment	9.1	12.5	25.1	15.3	10.5	<b>13.8</b>
Transport services	5.8	20.8	15.0	12.5	12.9	<b>10.5</b>
Case management	6.2	16.7	13.8	11.5	10.5	<b>9.9</b>

# Brain injury specific data - PTA





# ALOS by AN-SNAP class and time since PTA

YOUR FACILITY								
AN-SNAP class	No PTA	1 day	2-7 days	8-28 days	29-90 days	91-182 days	Chronic amnesic	Still in PTA
3-210 (BI,FIM motor 56-91, FIM cognition 32-35)	—	—	—	—	—	—	—	—
3-211 (BI,FIM motor 56-91, FIM cognition 24-31)	—	—	—	—	—	—	—	—
3-212 (BI,FIM motor 56-91, FIM cognition 20-23)	—	—	—	—	—	—	—	—
3-213 (BI,FIM motor 56-91, FIM cognition 5-19)	—	—	—	—	—	—	—	—
3-214 (BI,FIM motor 24-55)	—	—	—	—	—	—	—	—
3-215 (BI,FIM motor 14-23)	—	—	—	—	—	—	—	—
3-238 (MMT, FIM total 101-126)	—	—	—	—	—	—	—	—
3-239 (MMT, FIM total 74-100)	—	—	—	—	—	—	—	—
3-240 (MMT, FIM total 44-73)	—	—	—	—	—	—	—	—
3-241 (MMT, FIM total 19-43)	—	—	—	—	—	—	—	—
3-202 (BI,MMT,FIM motor 13)	—	—	—	—	—	—	—	—
<b>All Brain AN-SNAP classes</b>	<b>129.0</b>	<b>—</b>	<b>—</b>	<b>30.0</b>	<b>33.3</b>	<b>253.0</b>	<b>175.3</b>	<b>17.5</b>

SPECIALIST								
AN-SNAP class	No PTA	1 day	2-7 days	8-28 days	29-90 days	91-182 days	Chronic amnesic	Still in PTA
3-210 (BI,FIM motor 56-91, FIM cognition 32-35)	—	—	6.4	14.8	—	—	—	—
3-211 (BI,FIM motor 56-91, FIM cognition 24-31)	22.4	22.5	14.3	15.7	33.2	—	—	19.8
3-212 (BI,FIM motor 56-91, FIM cognition 20-23)	—	—	—	20.5	36.5	—	—	—
3-213 (BI,FIM motor 56-91, FIM cognition 5-19)	—	44.8	—	28.4	34.1	—	—	44.7
3-214 (BI,FIM motor 24-55)	54.7	—	—	27.9	50.8	—	—	—
3-215 (BI,FIM motor 14-23)	—	—	—	55.8	57.9	149.8	—	63.4
3-238 (MMT, FIM total 101-126)	—	—	—	—	—	—	—	—
3-239 (MMT, FIM total 74-100)	—	—	—	21.3	37.4	—	—	—
3-240 (MMT, FIM total 44-73)	—	—	—	—	52.8	—	—	—
3-241 (MMT, FIM total 19-43)	—	—	—	—	—	—	—	—
3-202 (BI,MMT,FIM motor 13)	101.3	—	—	—	92.9	—	184.6	—
<b>All Brain AN-SNAP classes</b>	<b>55.4</b>	<b>29.6</b>	<b>16.0</b>	<b>20.5</b>	<b>47.1</b>	<b>150.5</b>	<b>142.2</b>	<b>45.6</b>

NON SPECIALIST								
AN-SNAP class	No PTA	1 day	2-7 days	8-28 days	29-90 days	91-182 days	Chronic amnesic	Still in PTA
3-210 (BI,FIM motor 56-91, FIM cognition 32-35)	12.2	21.0	11.7	13.0	—	—	—	—
3-211 (BI,FIM motor 56-91, FIM cognition 24-31)	10.8	14.0	9.8	19.1	26.7	—	—	—
3-212 (BI,FIM motor 56-91, FIM cognition 20-23)	15.7	21.0	12.4	—	—	—	—	—
3-213 (BI,FIM motor 56-91, FIM cognition 5-19)	13.8	—	—	15.0	—	—	—	—
3-214 (BI,FIM motor 24-55)	21.4	19.3	16.6	27.6	32.7	—	—	—
3-215 (BI,FIM motor 14-23)	44.1	52.0	—	—	—	—	—	—
3-238 (MMT, FIM total 101-126)	—	—	—	—	—	—	—	—
3-239 (MMT, FIM total 74-100)	—	32.1	—	—	—	—	—	—
3-240 (MMT, FIM total 44-73)	—	63.2	—	—	—	—	—	—
3-241 (MMT, FIM total 19-43)	—	—	—	—	—	—	—	—
3-202 (BI,MMT,FIM motor 13)	—	—	—	—	—	—	—	—
<b>All Brain AN-SNAP classes</b>	<b>17.9</b>	<b>29.2</b>	<b>12.8</b>	<b>20.8</b>	<b>25.3</b>	<b>28.8</b>	<b>115.3</b>	<b>19.8</b>

# Average FIM admission by AN-SNAP class and time since PTA

YOUR FACILITY								
AN-SNAP class	No PTA	1 day	2-7 days	8-28 days	29-90 days	91-182 days	Chronic amnesic	Still in PTA
3-210 (BI,FIM motor 56-91, FIM cognition 32-35)	—	—	—	—	—	—	—	—
3-211 (BI,FIM motor 56-91, FIM cognition 24-31)	—	—	—	—	—	—	—	—
3-212 (BI,FIM motor 56-91, FIM cognition 20-23)	—	—	—	—	—	—	—	—
3-213 (BI,FIM motor 56-91, FIM cognition 5-19)	—	—	—	—	—	—	—	—
3-214 (BI,FIM motor 24-55)	—	—	—	—	—	—	—	—
3-215 (BI,FIM motor 14-23)	—	—	—	—	—	—	—	—
3-238 (MMT, FIM total 101-126)	—	—	—	—	—	—	—	—
3-239 (MMT, FIM total 74-100)	—	—	—	—	—	—	—	—
3-240 (MMT, FIM total 44-73)	—	—	—	—	—	—	—	—
3-241 (MMT, FIM total 19-43)	—	—	—	—	—	—	—	—
3-202 (BI,MMT,FIM motor 13)	—	—	—	—	—	—	—	—
<b>All Brain AN-SNAP classes</b>	<b>18.0</b>	<b>—</b>	<b>—</b>	<b>79.0</b>	<b>78.5</b>	<b>18.0</b>	<b>45.3</b>	<b>91.0</b>

SPECIALIST								
AN-SNAP class	No PTA	1 day	2-7 days	8-28 days	29-90 days	91-182 days	Chronic amnesic	Still in PTA
3-210 (BI,FIM motor 56-91, FIM cognition 32-35)	—	—	118.8	117.2	—	—	—	—
3-211 (BI,FIM motor 56-91, FIM cognition 24-31)	106.0	105.5	105.5	107.3	101.1	—	—	101.0
3-212 (BI,FIM motor 56-91, FIM cognition 20-23)	—	—	—	98.1	96.6	—	—	—
3-213 (BI,FIM motor 56-91, FIM cognition 5-19)	—	96.0	—	89.0	86.9	—	—	82.0
3-214 (BI,FIM motor 24-55)	45.4	—	—	62.1	52.0	—	—	—
3-215 (BI,FIM motor 14-23)	—	—	—	33.4	29.7	27.3	—	30.4
3-238 (MMT, FIM total 101-126)	—	—	—	—	—	—	—	—
3-239 (MMT, FIM total 74-100)	—	—	—	89.3	87.0	—	—	—
3-240 (MMT, FIM total 44-73)	—	—	—	—	54.8	—	—	—
3-241 (MMT, FIM total 19-43)	—	—	—	—	—	—	—	—
3-202 (BI,MMT,FIM motor 13)	18.6	—	—	—	19.1	—	19.1	—
<b>All Brain AN-SNAP classes</b>	<b>63.5</b>	<b>95.2</b>	<b>103.7</b>	<b>96.2</b>	<b>69.5</b>	<b>31.3</b>	<b>40.8</b>	<b>70.1</b>

NON SPECIALIST								
AN-SNAP class	No PTA	1 day	2-7 days	8-28 days	29-90 days	91-182 days	Chronic amnesic	Still in PTA
3-210 (BI,FIM motor 56-91, FIM cognition 32-35)	106.0	103.6	107.8	108.6	—	—	—	—
3-211 (BI,FIM motor 56-91, FIM cognition 24-31)	97.0	98.9	100.2	103.1	95.7	—	—	—
3-212 (BI,FIM motor 56-91, FIM cognition 20-23)	90.3	84.8	88.4	—	—	—	—	—
3-213 (BI,FIM motor 56-91, FIM cognition 5-19)	78.2	—	—	86.2	—	—	—	—
3-214 (BI,FIM motor 24-55)	63.4	68.8	65.0	64.1	61.7	—	—	—
3-215 (BI,FIM motor 14-23)	38.3	28.6	—	—	—	—	—	—
3-238 (MMT, FIM total 101-126)	—	—	—	—	—	—	—	—
3-239 (MMT, FIM total 74-100)	—	82.4	—	—	—	—	—	—
3-240 (MMT, FIM total 44-73)	—	58.2	—	—	—	—	—	—
3-241 (MMT, FIM total 19-43)	—	—	—	—	—	—	—	—
3-202 (BI,MMT,FIM motor 13)	—	—	—	—	—	—	—	—
<b>All Brain AN-SNAP classes</b>	<b>78.9</b>	<b>76.3</b>	<b>91.0</b>	<b>85.7</b>	<b>82.6</b>	<b>71.0</b>	<b>69.3</b>	<b>83.9</b>

# Average FIM change by AN-SNAP class and time since PTA

YOUR FACILITY								
AN-SNAP class	No PTA	1 day	2-7 days	8-28 days	29-90 days	91-182 days	Chronic amnesic	Still in PTA
3-210 (BI,FIM motor 56-91, FIM cognition 32-35)	—	—	—	—	—	—	—	—
3-211 (BI,FIM motor 56-91, FIM cognition 24-31)	—	—	—	—	—	—	—	—
3-212 (BI,FIM motor 56-91, FIM cognition 20-23)	—	—	—	—	—	—	—	—
3-213 (BI,FIM motor 56-91, FIM cognition 5-19)	—	—	—	—	—	—	—	—
3-214 (BI,FIM motor 24-55)	—	—	—	—	—	—	—	—
3-215 (BI,FIM motor 14-23)	—	—	—	—	—	—	—	—
3-238 (MMT, FIM total 101-126)	—	—	—	—	—	—	—	—
3-239 (MMT, FIM total 74-100)	—	—	—	—	—	—	—	—
3-240 (MMT, FIM total 44-73)	—	—	—	—	—	—	—	—
3-241 (MMT, FIM total 19-43)	—	—	—	—	—	—	—	—
3-202 (BI,MMT,FIM motor 13)	—	—	—	—	—	—	—	—
<b>All Brain AN-SNAP classes</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>32.0</b>	<b>30.2</b>	<b>11.0</b>	<b>33.3</b>	<b>22.5</b>

SPECIALIST								
AN-SNAP class	No PTA	1 day	2-7 days	8-28 days	29-90 days	91-182 days	Chronic amnesic	Still in PTA
3-210 (BI,FIM motor 56-91, FIM cognition 32-35)	—	—	5.9	4.4	—	—	—	—
3-211 (BI,FIM motor 56-91, FIM cognition 24-31)	10.6	16.3	16.4	14.0	17.5	—	—	10.4
3-212 (BI,FIM motor 56-91, FIM cognition 20-23)	—	—	—	20.9	21.0	—	—	—
3-213 (BI,FIM motor 56-91, FIM cognition 5-19)	—	5.6	—	30.4	28.1	—	—	29.2
3-214 (BI,FIM motor 24-55)	48.1	—	—	53.7	56.9	—	—	—
3-215 (BI,FIM motor 14-23)	—	—	—	52.0	82.8	57.5	—	68.8
3-238 (MMT, FIM total 101-126)	—	—	—	—	—	—	—	—
3-239 (MMT, FIM total 74-100)	—	—	—	25.0	27.7	—	—	—
3-240 (MMT, FIM total 44-73)	—	—	—	—	64.8	—	—	—
3-241 (MMT, FIM total 19-43)	—	—	—	—	—	—	—	—
3-202 (BI,MMT,FIM motor 13)	11.7	—	—	—	86.0	—	9.4	—
<b>All Brain AN-SNAP classes</b>	<b>28.2</b>	<b>11.6</b>	<b>17.7</b>	<b>22.6</b>	<b>44.2</b>	<b>54.7</b>	<b>27.5</b>	<b>33.2</b>

NON SPECIALIST								
AN-SNAP class	No PTA	1 day	2-7 days	8-28 days	29-90 days	91-182 days	Chronic amnesic	Still in PTA
3-210 (BI,FIM motor 56-91, FIM cognition 32-35)	12.0	14.4	11.8	11.9	—	—	—	—
3-211 (BI,FIM motor 56-91, FIM cognition 24-31)	11.4	15.9	14.9	11.8	15.7	—	—	—
3-212 (BI,FIM motor 56-91, FIM cognition 20-23)	15.0	-8.8	22.6	—	—	—	—	—
3-213 (BI,FIM motor 56-91, FIM cognition 5-19)	15.4	—	—	25.3	—	—	—	—
3-214 (BI,FIM motor 24-55)	19.1	21.0	31.0	21.0	38.3	—	—	—
3-215 (BI,FIM motor 14-23)	35.4	24.6	—	—	—	—	—	—
3-238 (MMT, FIM total 101-126)	—	—	—	—	—	—	—	—
3-239 (MMT, FIM total 74-100)	—	32.8	—	—	—	—	—	—
3-240 (MMT, FIM total 44-73)	—	50.4	—	—	—	—	—	—
3-241 (MMT, FIM total 19-43)	—	—	—	—	—	—	—	—
3-202 (BI,MMT,FIM motor 13)	—	—	—	—	—	—	—	—
<b>All Brain AN-SNAP classes</b>	<b>16.5</b>	<b>23.4</b>	<b>19.4</b>	<b>19.0</b>	<b>24.6</b>	<b>26.0</b>	<b>13.3</b>	<b>17.8</b>

# Appendix 1: Glossary

## ***AN-SNAP***

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 3, introduced in January 2012, is used in these reports; refer Appendix 3 for the full list of classes.

## ***Change in FIM score***

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 of the client during the episode. A negative value for the change in FIM score indicates a decline in functional independence during the episode.

## ***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.

# Glossary ... continued

## **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').

Reported 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*

# Glossary ... continued

## **FIM**

The Functional Independence Measure (FIM) is used as a tool to assess the functional independence of patients at episode start and end. Details of the specific FIM instrument used in these reports can be found in “UDSmr Adult FIM Workshop – Participant Manual, Version 5.1 (Australia). Buffalo, NY 14214: State University of New York at Buffalo; 2008.”

## **Interquartile range (IQR)**

*The middle 50% of facilities, 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.

## **Valid FIM score**

*Each of the 18 items on admission and discharge were answered with a valid response of 1-7.*

## **Valid LOS**

*Completed episode with a length of stay ranging between 1 and 500 days.*

## **Version 4 data set**

Version 4 (V4) of the 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 Stroke

### Ischaemic

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

## BRAIN DYSFUNCTION

### Non-traumatic

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

### Traumatic

- 2.21 Open injury
- 2.22 Closed injury

## NEUROLOGICAL CONDITIONS

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

## SPINAL CORD DYSFUNCTION

### Non traumatic spinal cord dysfunction

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

### Traumatic spinal cord dysfunction

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

## AMPUTATION OF LIMB

### Not resulting from trauma

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

## AMPUTATION OF LIMB

### Resulting from trauma

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

## ARTHRITIS

- 6.1 Rheumatoid arthritis
- 6.2 Osteoarthritis
- 6.9 Other arthritis

## PAIN SYNDROMES

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



# 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 Spinal 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 V3 overnight rehabilitation classes

Class	Description of AN-SNAP class
3-201	Rehabilitation, admit for assessment only
3-202	Brain, Neurological, Spinal & Major Multiple Trauma, FIM 13
3-203	All other impairments, FIM 13
3-204	Stroke , FIM motor 63-91, FIM cognition 20-35
3-205	Stroke , FIM motor 63-91, FIM cognition 5-19
3-206	Stroke, FIM motor 47-62, FIM cognition 16-35
3-207	Stroke, FIM motor 47-62, FIM cognition 5-15
3-208	Stroke, FIM motor 14-46, age>=75
3-209	Stroke, FIM motor 14-46, age<=74
3-210	Brain Dysfunction, FIM motor 56-91, FIM cognition 32-35
3-211	Brain Dysfunction, FIM motor 56-91, FIM cognition 24-31
3-212	Brain Dysfunction, FIM motor 56-91, FIM cognition 20-23
3-213	Brain Dysfunction, FIM motor 56-91, FIM cognition 5-19
3-214	Brain Dysfunction, FIM motor 24-55
3-215	Brain Dysfunction, FIM motor 14-23
3-216	Neurological, FIM motor 63-91
3-217	Neurological, FIM motor 49-62
3-218	Neurological, FIM motor 18-48
3-219	Neurological, FIM motor 14-17
3-220	Spinal Cord Dysfunction, FIM motor 81-91
3-221	Spinal Cord Dysfunction, FIM motor 47-80
3-222	Spinal Cord Dysfunction, FIM motor 14-46, age>=33
3-223	Spinal Cord Dysfunction, FIM motor 14-46, age<=32

Class	Description of AN-SNAP Classes
3-224	Amputation of limb, FIM motor 72-91
3-225	Amputation of limb, FIM motor 14-71
3-226	Pain Syndromes
3-227	Orthopaedic conditions, fractures, FIM motor 58-91
3-228	Orthopaedic conditions, fractures, FIM motor 48-57
3-229	Orthopaedic conditions, fractures, FIM motor 14-47, FIM cognition 19-35
3-230	Orthopaedic conditions, fractures, FIM motor 14-47, FIM cognition 5-18
3-231	Orthopaedic conditions, replacement, FIM motor 72-91
3-232	Orthopaedic conditions, replacement, FIM motor 49-71
3-233	Orthopaedic conditions, replacement, FIM motor 14-48
3-234	Orthopaedic conditions, all other, FIM motor 68-91
3-235	Orthopaedic conditions, all other, FIM motor 53-67
3-236	Orthopaedic conditions, all other, FIM motor 14-52
3-237	Cardiac
3-238	Major Multiple Trauma, FIM total 101-126
3-239	Major Multiple Trauma, FIM total 74-100 or Burns
3-240	Major Multiple Trauma, FIM total 44-73
3-241	Major Multiple Trauma, FIM total 19-43
3-242	All other impairments, FIM motor 67-91
3-243	All other impairments, FIM motor 53-66
3-244	All other impairments, FIM motor 25-52
3-245	All other impairments, FIM motor 14-24

**NOTE:** AN-SNAP classes for inpatient rehabilitation have not changed between V2 and V3.

# Acknowledgements

- **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.
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Anywhere Hospital AROC Impairment Specific Report on Brain Injury (Inpatient - Pathway 3), January 2014 to December 2014. Australasian Rehabilitation Outcomes Centre (2014).

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