

The AROC Annual Report:

The state of rehabilitation in New Zealand in 2015



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of Rehabilitation
Medicine**

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WOLLONGONG**



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Introduction

This is the fourth comprehensive annual report describing discharge episodes from subacute inpatient rehabilitation programs provided by New Zealand facilities that are members of the Australasian Rehabilitation Outcomes Centre (AROC).

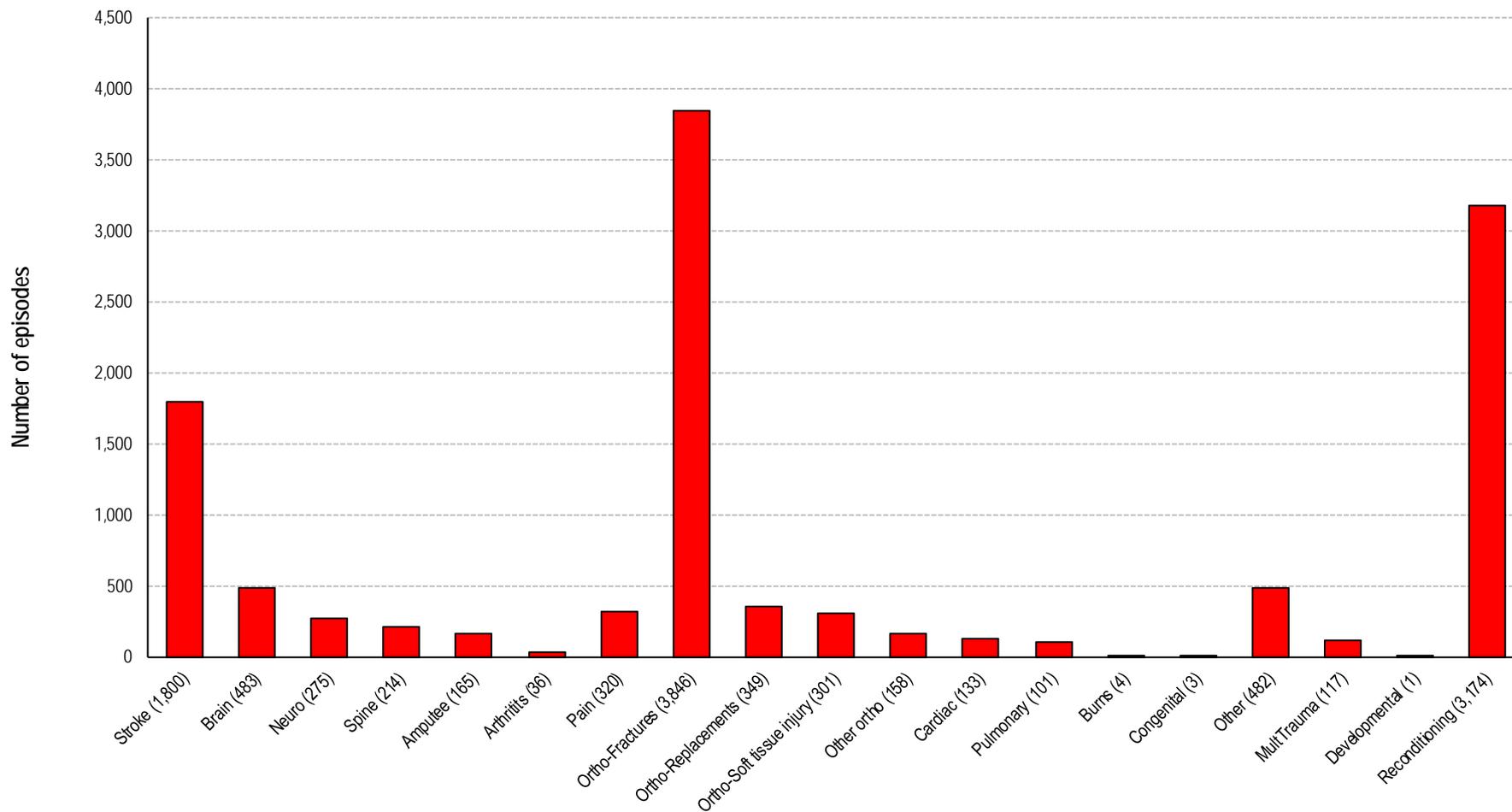
The inaugural report was published in 2013 and described the 2012 data; this fourth instalment describes the 2015 data.

This report is the first to use the version 4 AN-SNAP classification (to be implemented in Australia in July 2016). For more information about AN-SNAP classification please refer to the AROC website: <http://ahsri.uow.edu.au/aroc>

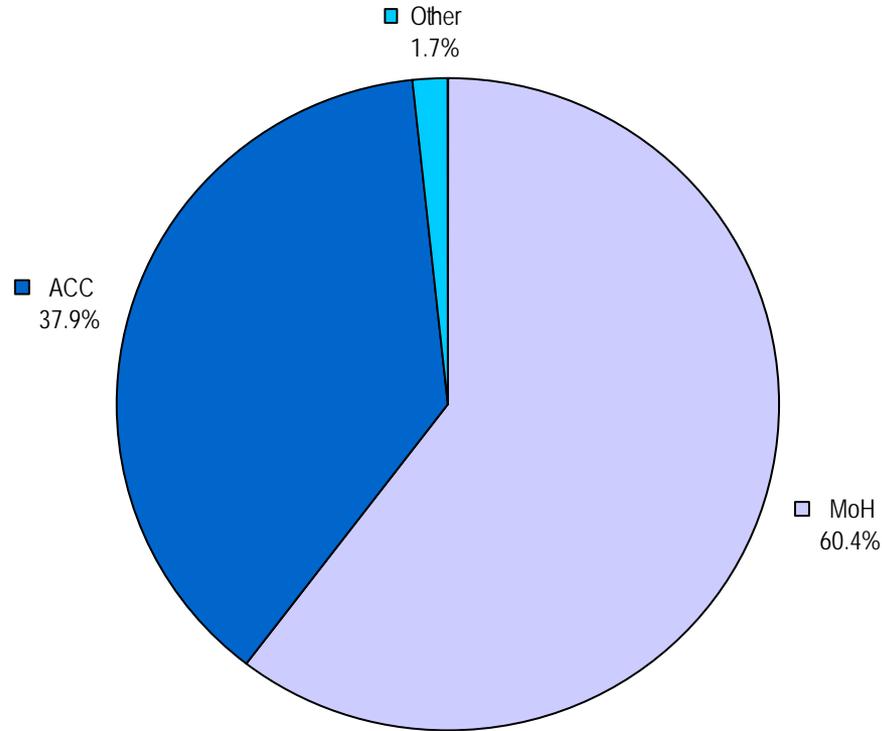
This report also introduces an extended times series analysis, looking at change in various rehabilitation measures over the most recent five years.

The provision of rehabilitation in New Zealand continues to grow in volume, with 2015 seeing a 1.4% real increase in inpatient episodes of rehabilitation provided. The majority of that volume growth is coming from the reconditioning and orthopaedic fractures impairment groups.

Number of episodes by impairment group, 2015



Funding source for rehabilitation in New Zealand, 2015

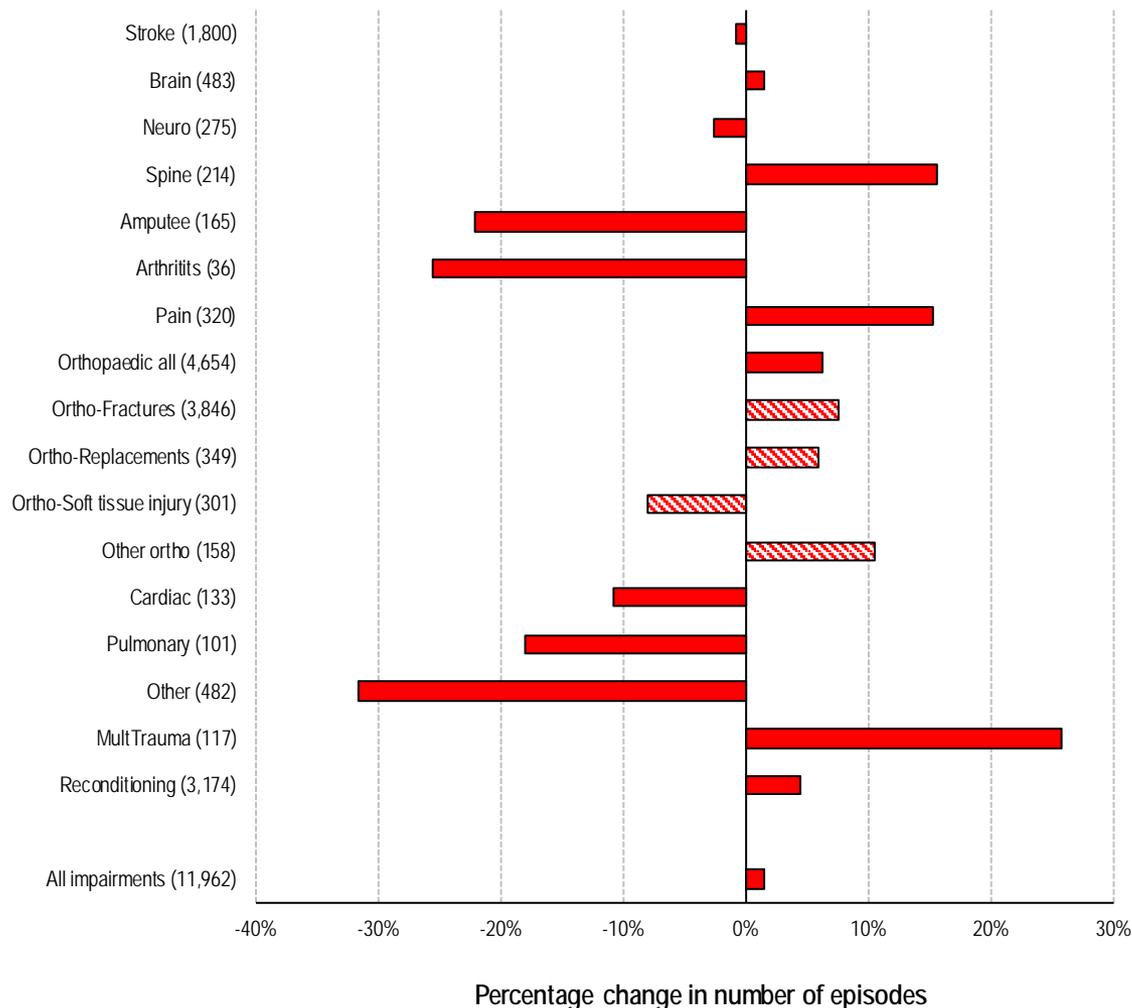


Changes in rehabilitation – compared to last year

The following figures look at changes in rehabilitation between last year and this year:

- The first figure considers the number of episodes within each impairment group and documents real changes in episode volume since last year.
- The second figure presents the key changes in rehabilitation outcome measures between last year and this year. The horizontal axis describes the difference between last year and this year averages, while last years actual values are presented on the left side of the graph.

Change in number of episodes by impairment group, 2014 to 2015

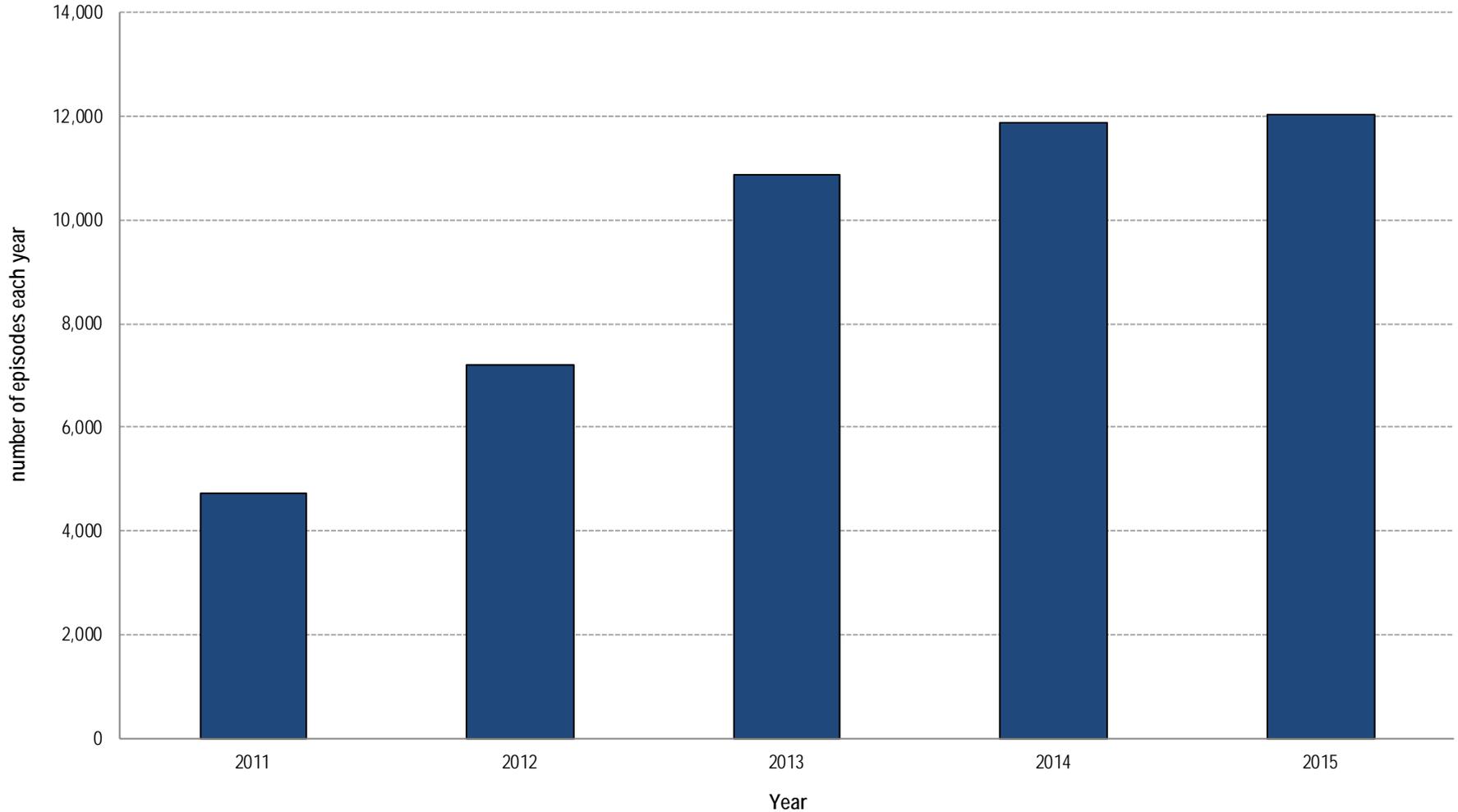


Changes in rehabilitation – compared to five years ago

The following figures look at changes in rehabilitation over the last 5 years:

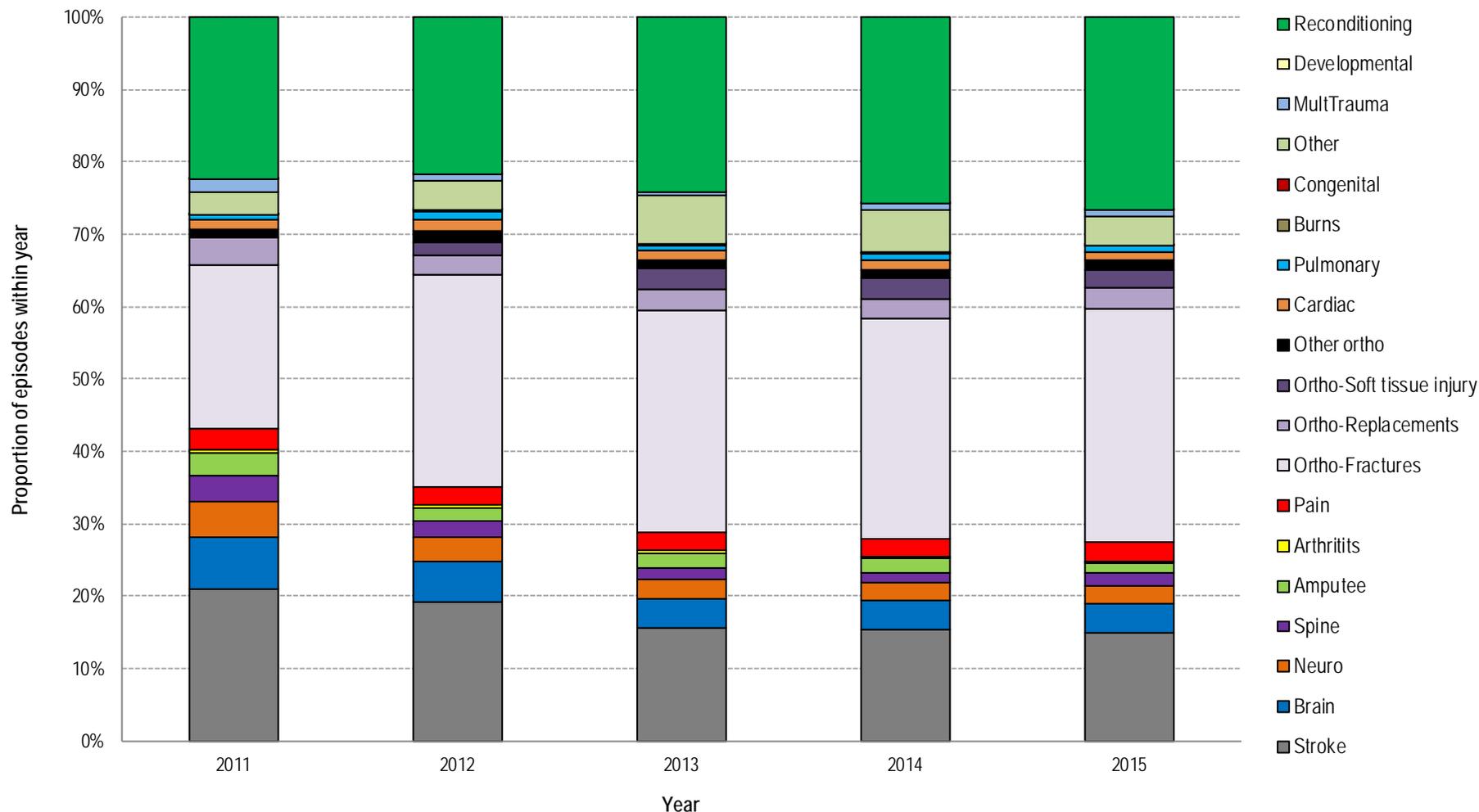
- The first figure shows the total number of episodes each year over the past 5 years.
- The second figure outlines the changing proportion of episodes within each impairment group over the past five years as a proportion of all episodes each year.
- The third figure presents the key changes in rehabilitation outcome measures between five years ago and this year. The horizontal axis describes the difference between five years ago and this year averages, while the actual values from five years ago are presented on the left side of the graph.
- The remaining figures provide a graphical representation of the change in various rehabilitation measures over the most recent five years. Each bar (one per year) represents the difference, positive or negative, of that year's value to the value from five years ago. The value for the bar from five years ago will always be zero.
 - Age at admission
 - Admission to rehabilitation within a week of injury or onset of symptoms
 - Length of stay
 - Proportion of FIM assessments within three days of rehabilitation commencing
 - Admission FIM score as a proportion of the total score possible
 - FIM change as a proportion of the total change possible
 - FIM efficiency

Number of episodes each year - 2011 to 2015

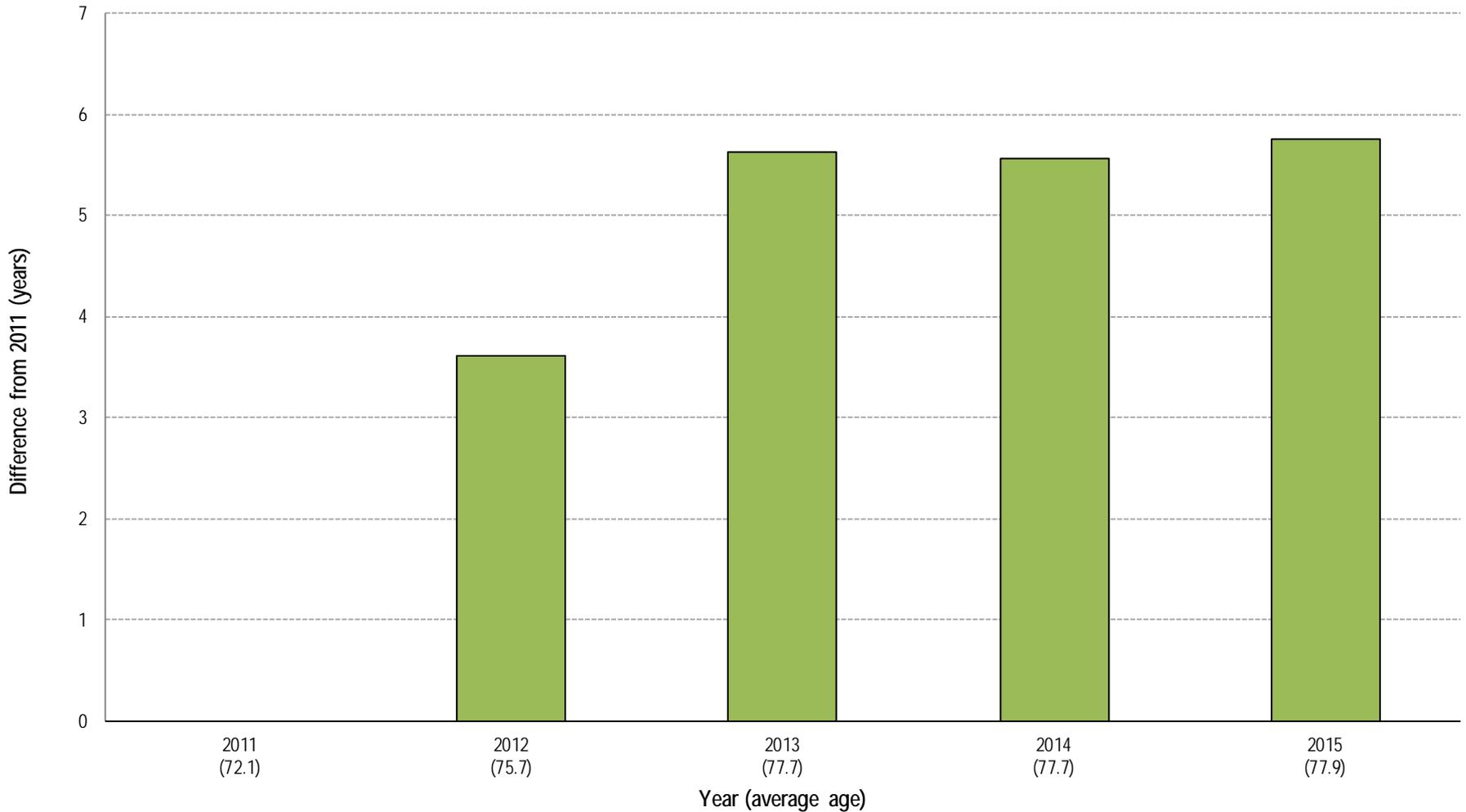


A large number of the New Zealand facilities joined AROC during the 2011-2012 period. This increase in data submitting facilities is responsible for most of the growth in number of episodes during 2011-2013.

Proportion of episodes by impairment group, 2011 to 2015

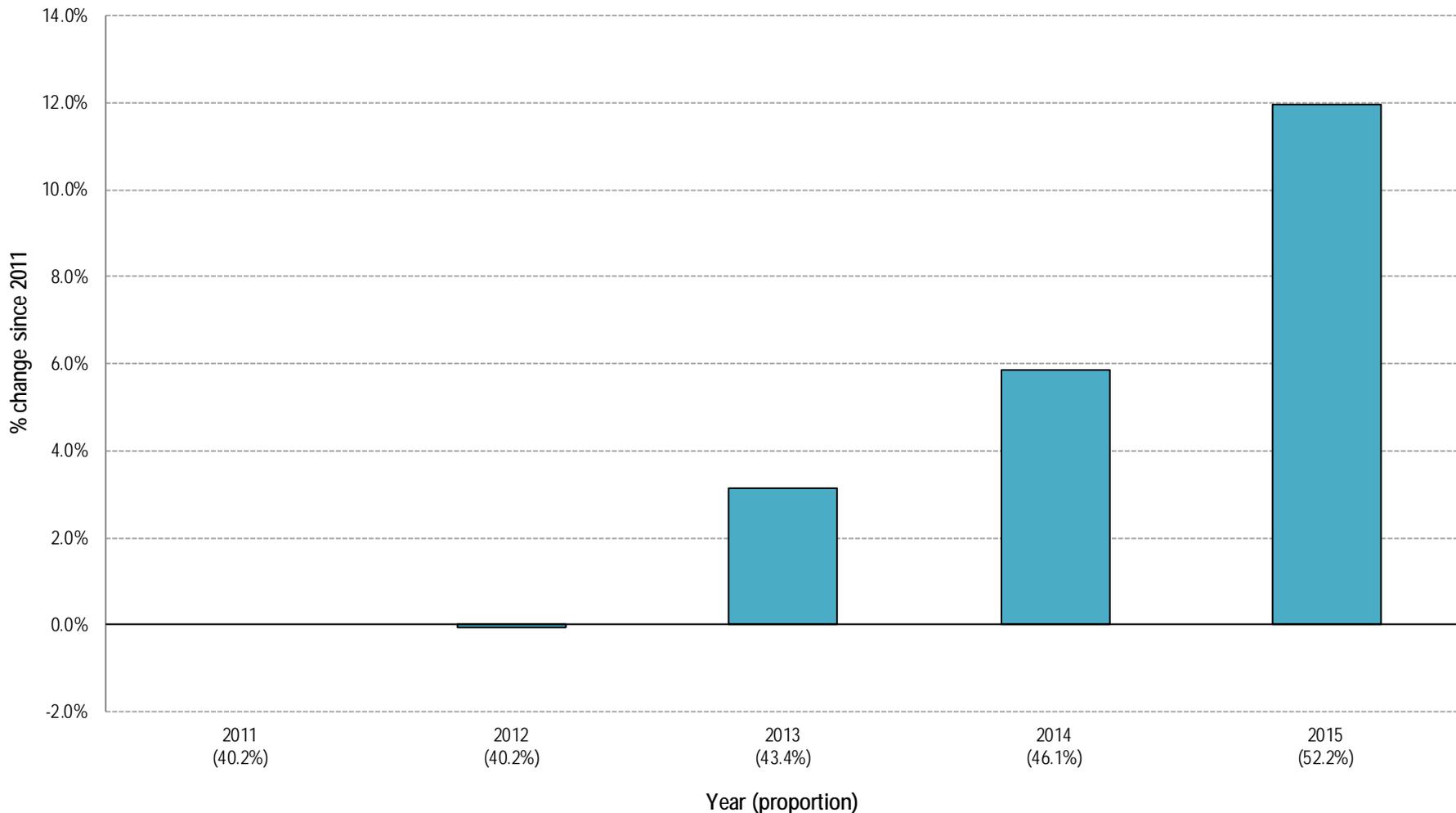


Average age compared to five years ago



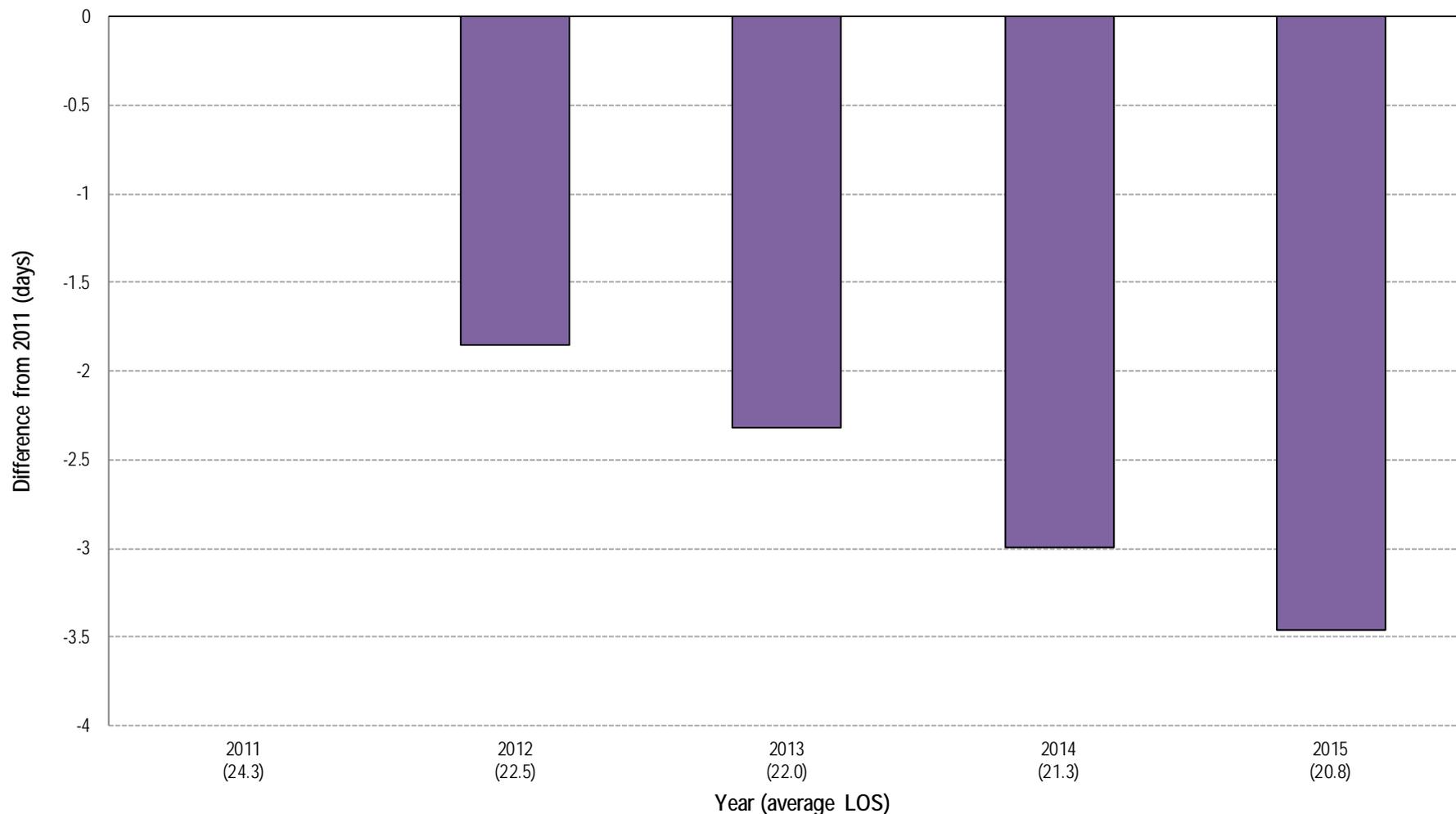
Over the last five years patients have been getting older; patients in 2015 were almost 6 years older than in 2011.

Admission to rehabilitation within a week of injury or onset of symptoms compared to five years ago



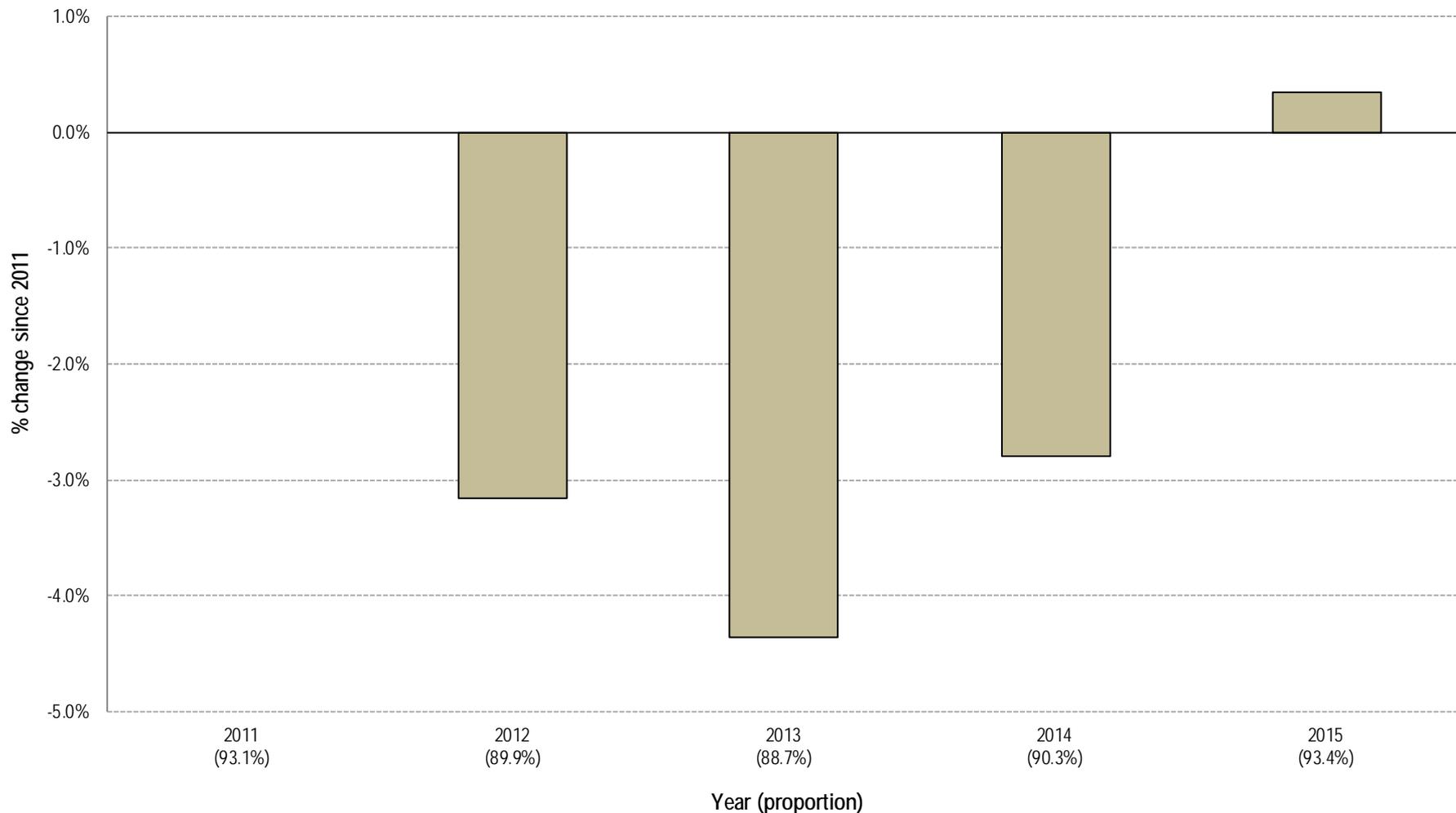
Over the last five years patients have been commencing rehabilitation sooner after their injury /onset of symptoms; in 2015 12% more patients were admitted to rehabilitation within a week of onset compared to in 2011.

Length of stay compared to five years ago



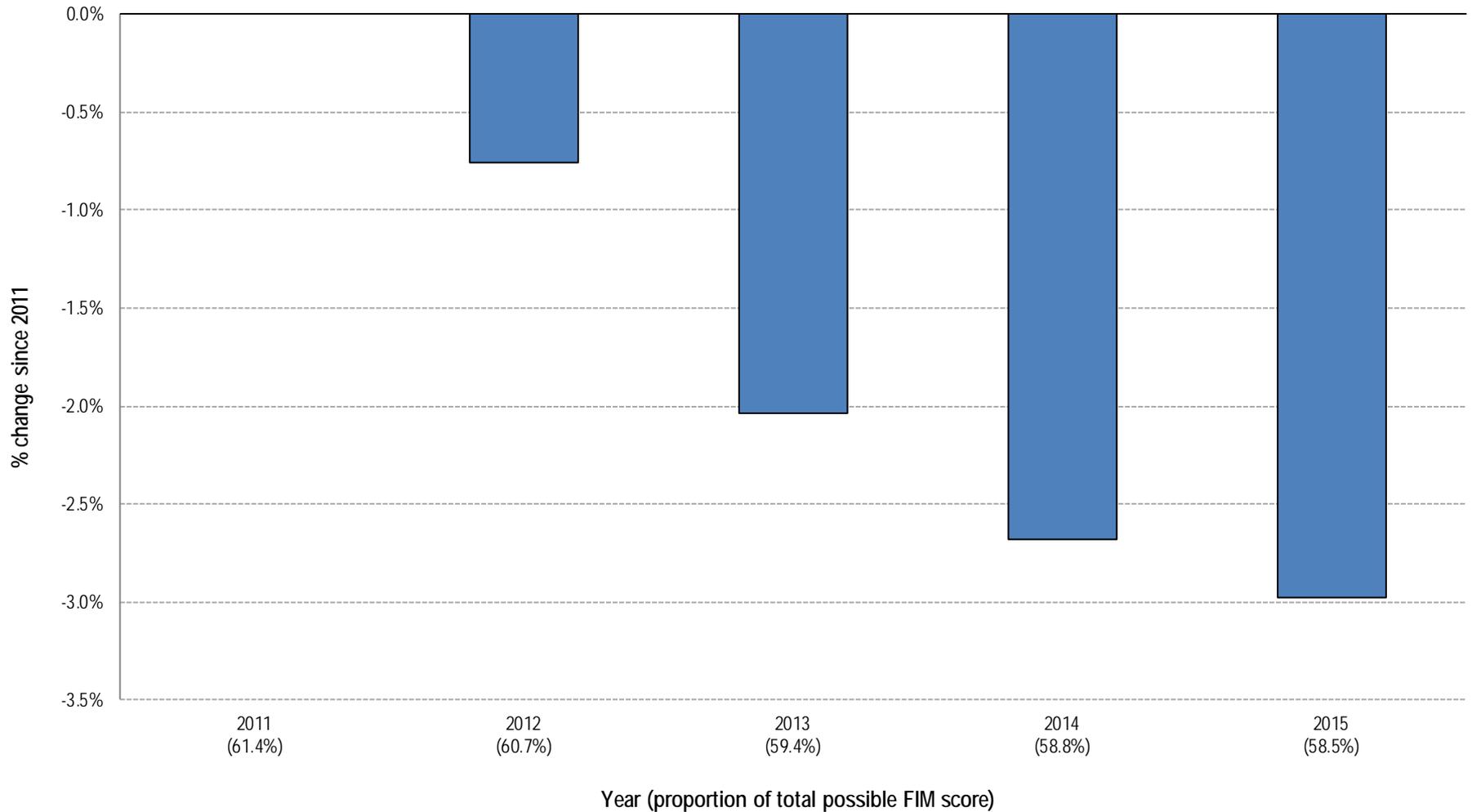
Over the last five years rehabilitation length of stay (LOS) has been declining; in 2015 patients stayed just under 3.5 days less than they did in 2011.

Timeliness of FIM assessment within 72 hours compared to five years ago



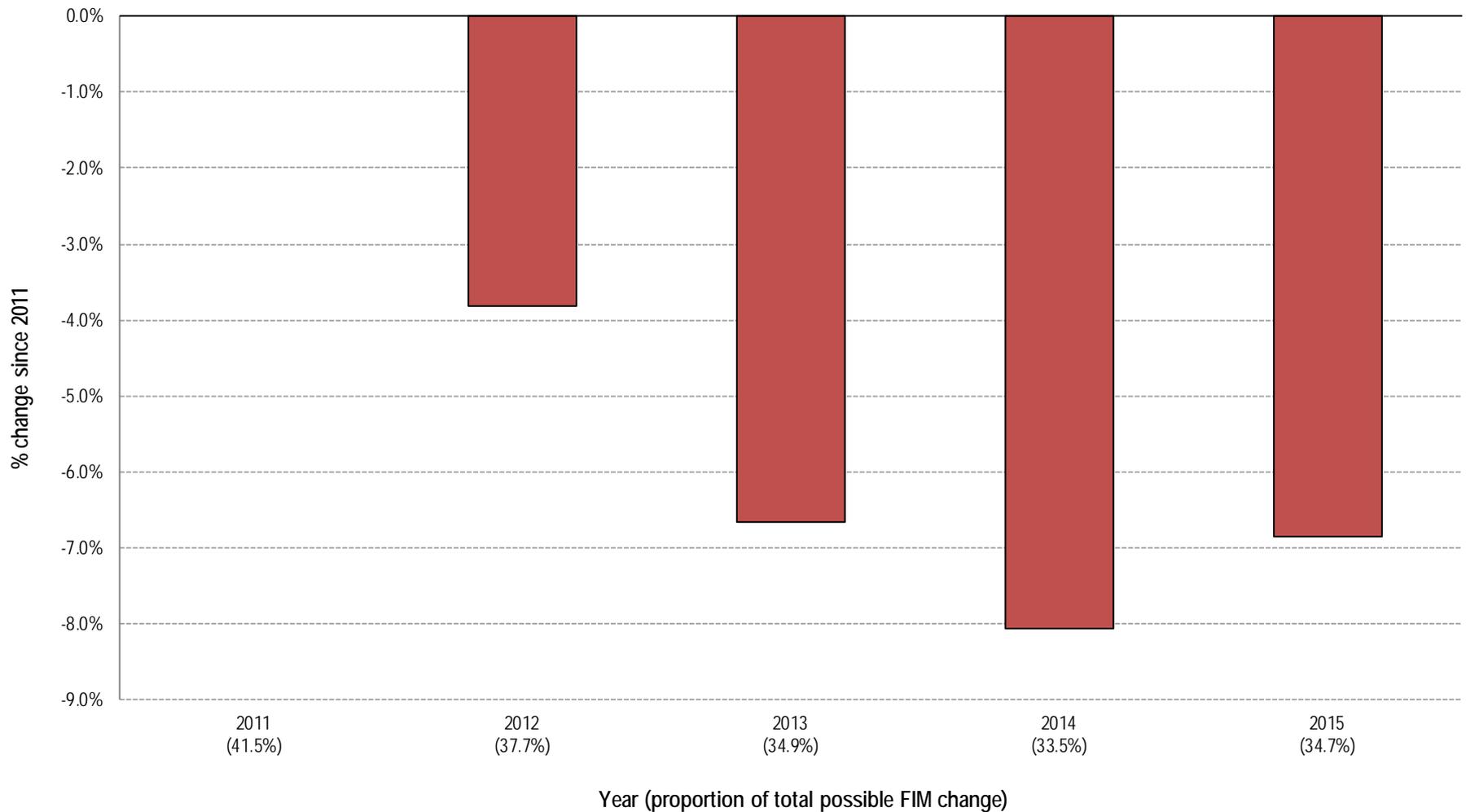
Over the last five years the number of patients assessed for their functional ability within three days of rehabilitation commencing has fluctuated. Since 2013 there has been a steady increase in the proportion of patients assessed for their functional ability within three days of rehabilitation.

FIM scores at admission as a proportion of total possible compared to five years ago



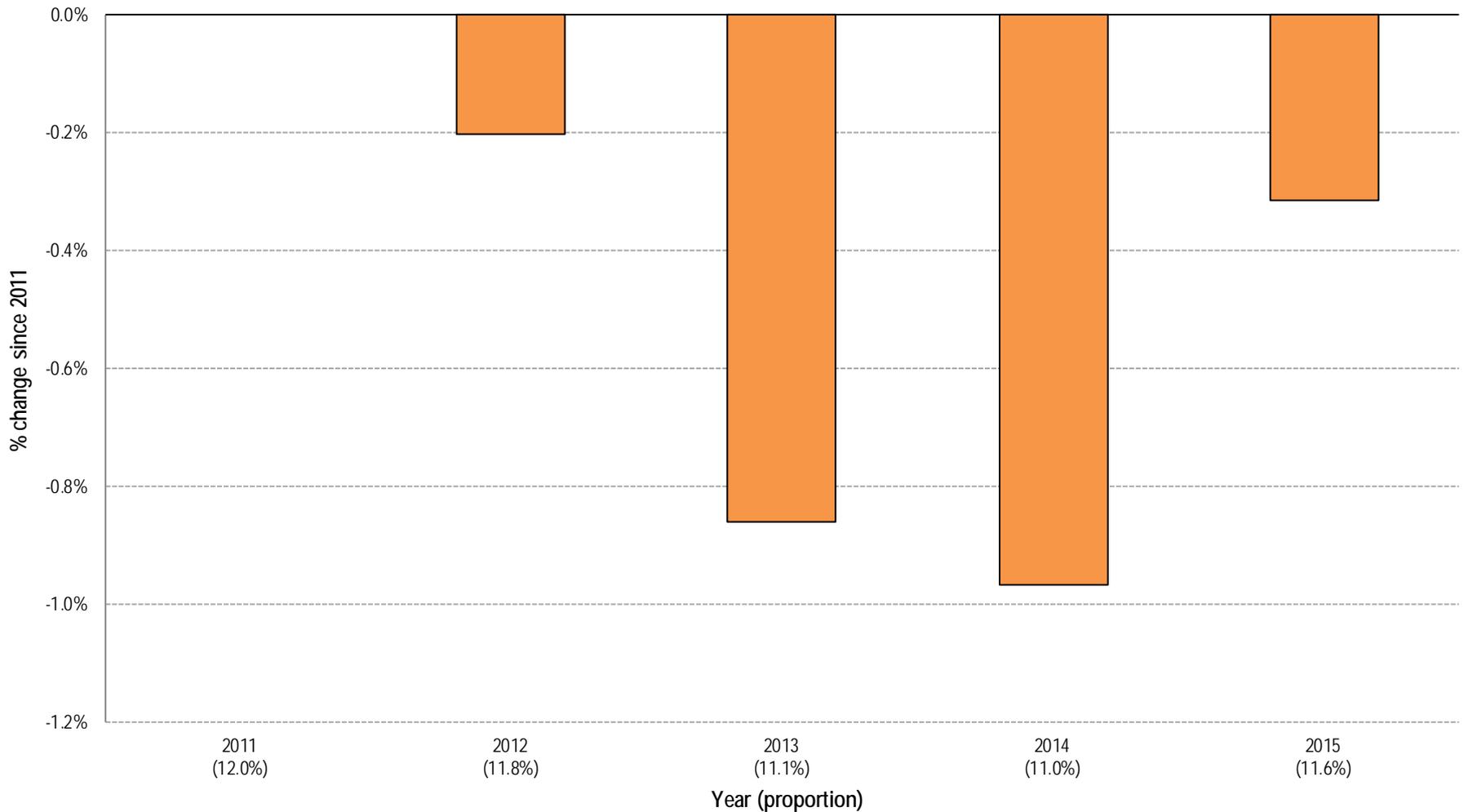
Over the last five years the FIM admission score has declined, 3% lower in 2015 compared to in 2011.

FIM change as a proportion of total possible compared to five years ago



Change in FIM score possible from admission to discharge has declined annually from 2011 to 2014. In 2015 35% of FIM gain possible was achieved, down from 42% in 2011.

FIM efficiency per week compared to five years ago



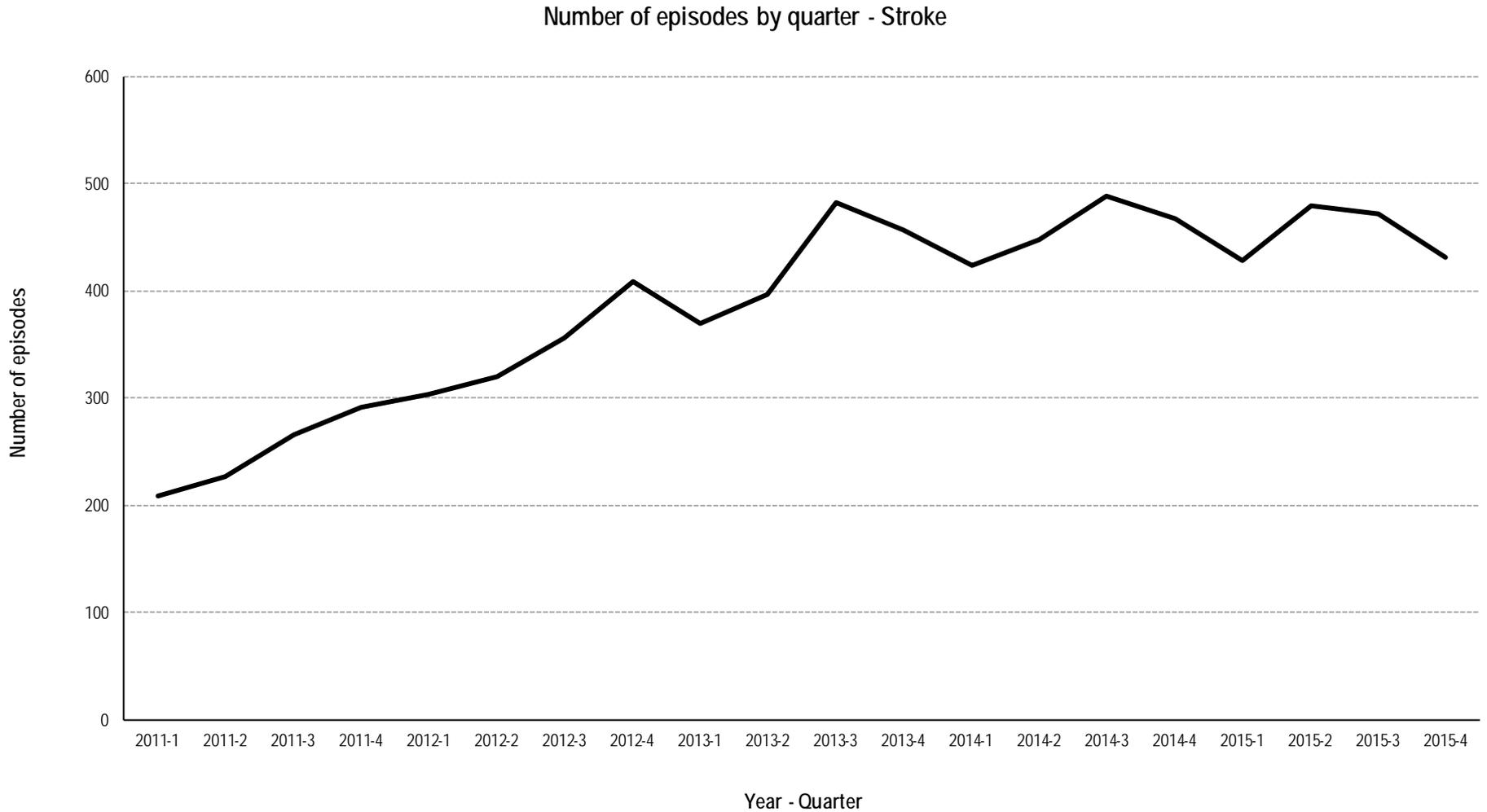
Over the last five years weekly FIM efficiency (change in FIM score possible from admission to discharge divided by length of stay x7) has not changed significantly; in 2015 it was marginally lower than it was in 2011.

Outcomes by impairment

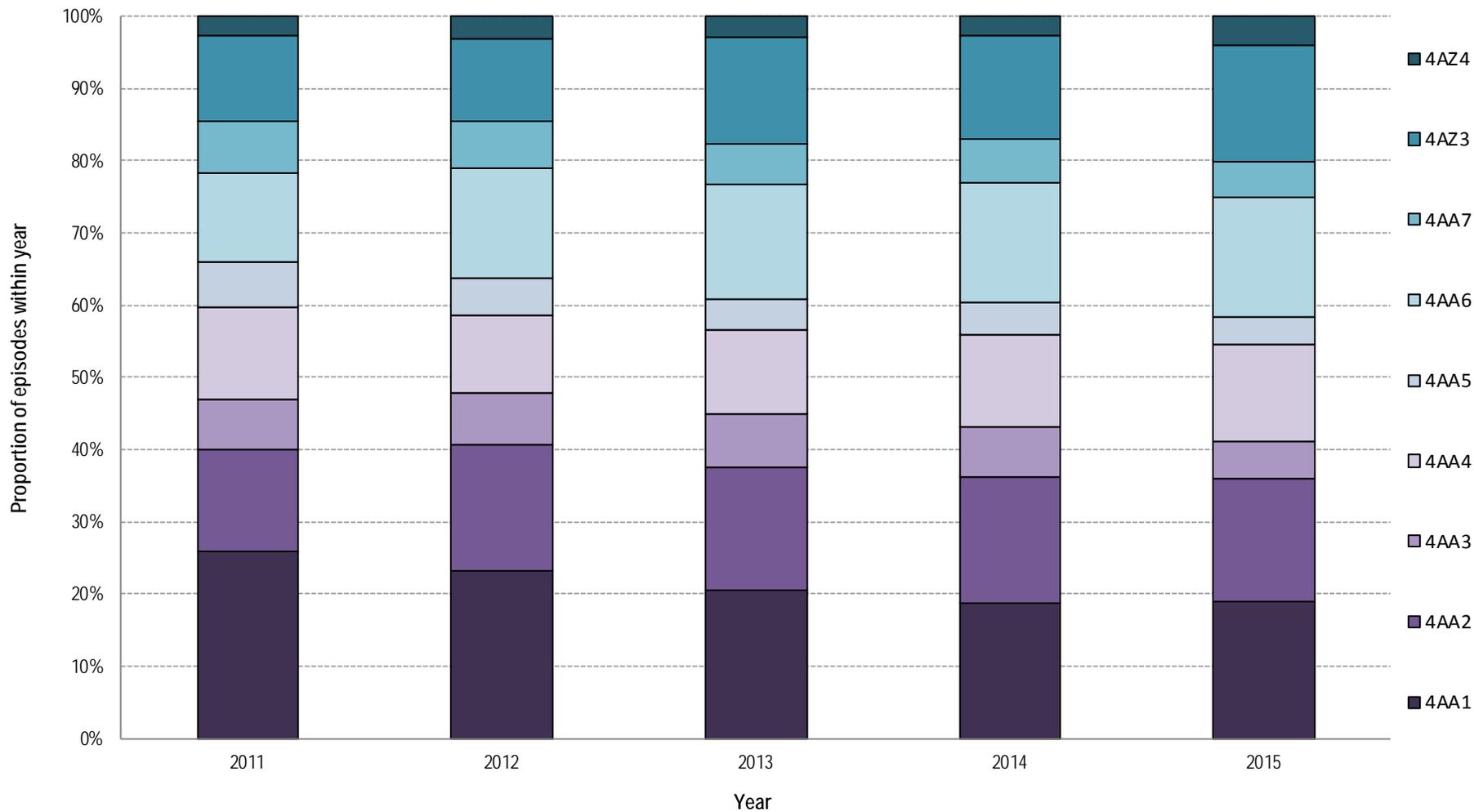
A series of figures and tables are provided for each impairment group; these outline the key descriptive data for this year, changes in episode volumes over the last 5 years, and changes in rehabilitation outcome measures between last year and this year:

- The first figure in each group outlines the number of episodes for each quarter over the past five years, and documents any changes in episode volume over time and/or seasonal trends.
- The second figure displays the proportion of episodes in each AN-SNAP class over the last 5 years.
- The third is a table outlining key data for the respective impairment group by AN-SNAP class.
- The fourth figure provides a summary of the discharge destination of all episodes by AN-SNAP class.
- The fifth figure provides a graphical representation of length of stay (LOS) and improvement in the FIM (Functional Independence Measure) by AN-SNAP class.
- Finally, the sixth figure presents the key changes in rehabilitation outcome measures between last year and this year. The horizontal axis describes the difference between last year and this year averages, while last year's actual values are presented on the left side of the graph.

Stroke episodes over time



Stroke casemix over time

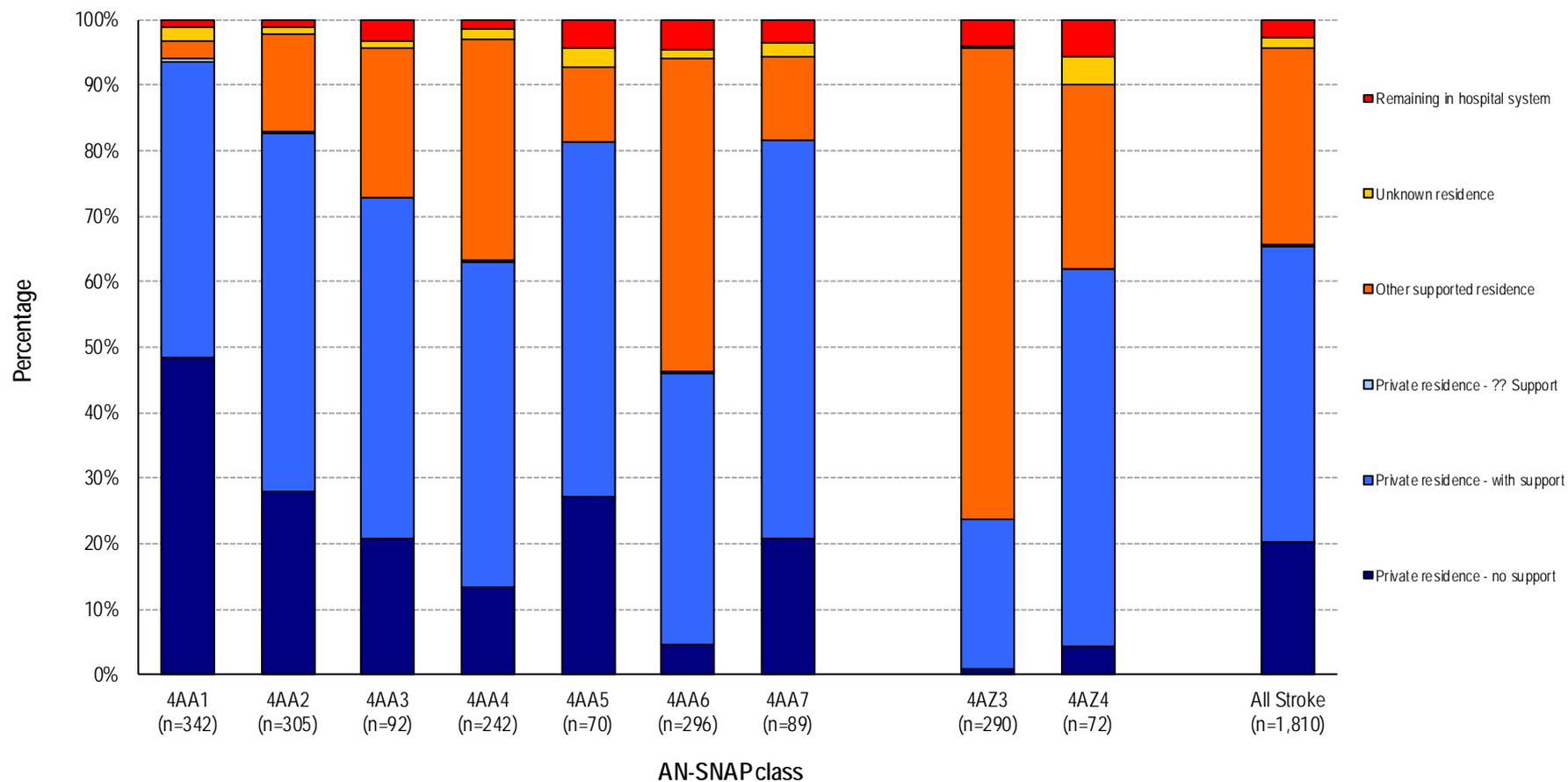


Stroke episodes in 2015

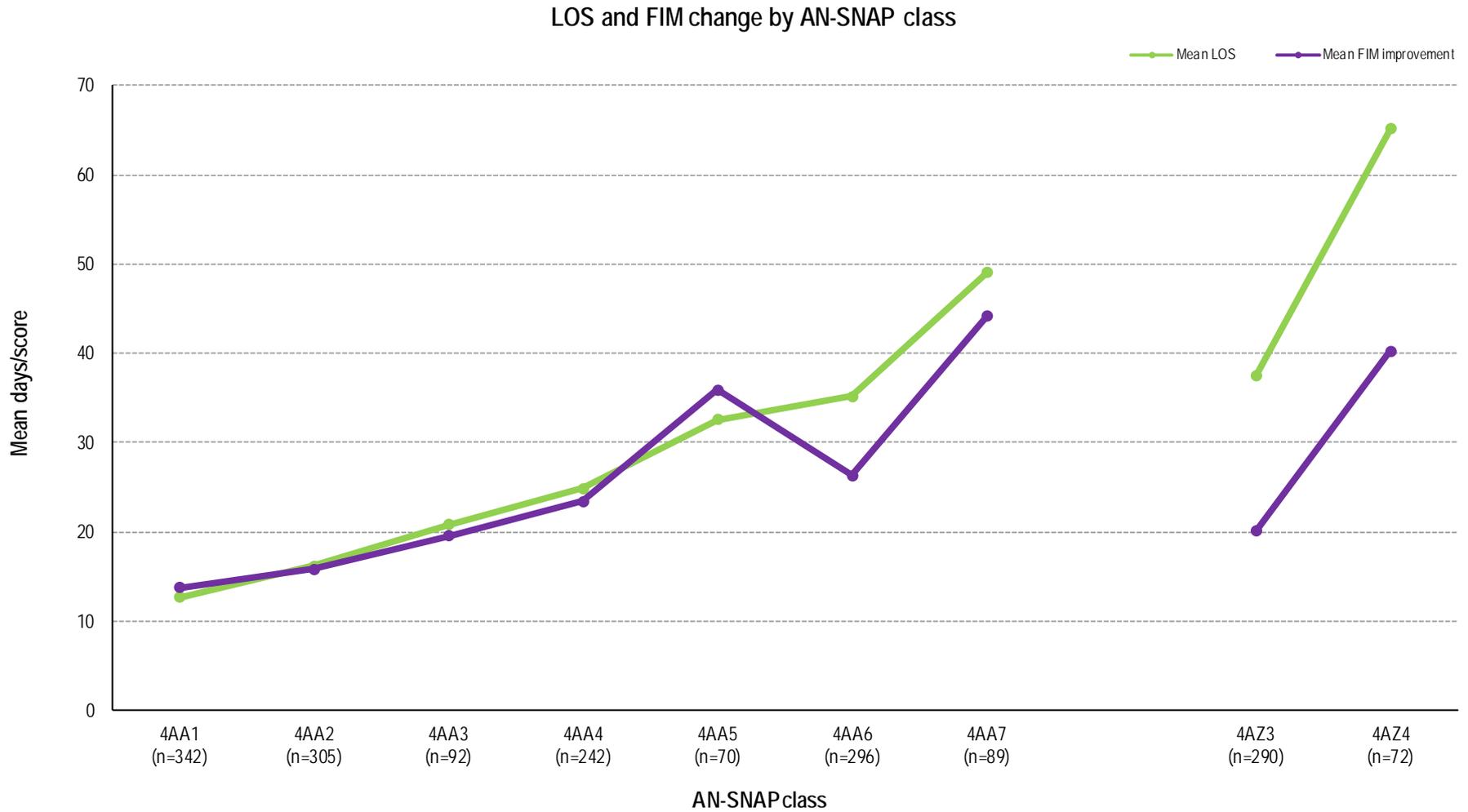
AN-SNAP class:	4AA1	4AA2	4AA3	4AA4	4AA5	4AA6	4AA7	4AZ3	4AZ4	All Stroke
Number of episodes	342	305	92	242	70	296	89	290	72	1,810
Proportion of episodes	18.9%	16.9%	5.1%	13.4%	3.9%	16.4%	4.9%	16.0%	4.0%	100.0%
Gender (%)										
<i>Female</i>	48.2%	48.2%	46.7%	52.1%	48.6%	50.3%	42.7%	53.4%	36.1%	49.2%
<i>Male</i>	51.8%	51.8%	53.3%	47.9%	51.4%	49.7%	57.3%	46.6%	63.9%	50.8%
Age group (%)										
<i>Under 65</i>	33.9%	22.0%	19.6%	0.0%	84.3%	0.0%	84.3%	0.0%	100.0%	22.6%
<i>Over 65</i>	65.5%	77.4%	80.4%	100.0%	15.7%	100.0%	15.7%	100.0%	0.0%	76.9%
Age (Mean+95%CI)	70.2 (68.7-71.8)	74.0 (72.5-75.6)	73.7 (70.8-76.6)	81.7 (80.8-82.6)	55.6 (53.6-57.6)	81.0 (80.2-81.8)	55.4 (53.2-57.7)	81.6 (80.8-82.5)	56.4 (54.8-58.0)	74.4 (73.7-75.0)
Admission FIM (Mean+95%CI)	101.0 (99.8-102.2)	88.8 (87.6-90.0)	75.7 (73.5-77.9)	66.1 (64.9-67.4)	67.3 (65.0-69.6)	46.8 (45.6-48.0)	47.7 (45.7-49.7)	28.3 (27.3-29.3)	29.6 (27.9-31.3)	66.6 (65.3-67.9)
LOS (Mean+95%CI)	12.6 (11.8-13.5)	16.2 (15.0-17.5)	20.8 (18.6-23.0)	24.9 (21.4-28.4)	32.6 (27.6-37.6)	35.2 (32.9-37.5)	49.0 (42.4-55.7)	37.5 (34.8-40.1)	65.1 (57.5-72.8)	27.3 (26.2-28.4)
Discharge destination (%)										
<i>Discharged to community</i>	98.8%	99.0%	96.7%	98.8%	95.7%	95.5%	96.6%	95.9%	94.4%	97.4%
<i>Remaining in hospital system</i>	1.2%	1.0%	3.3%	1.3%	4.3%	4.5%	3.4%	4.1%	5.6%	2.6%
FIM change (Mean+95%CI)	13.7 (12.6-14.9)	15.8 (14.5-17.2)	19.6 (16.9-22.2)	23.4 (21.3-25.5)	35.9 (32.6-39.1)	26.3 (23.8-28.8)	44.1 (39.7-48.6)	20.1 (17.3-22.9)	40.3 (34.4-46.1)	22.2 (21.3-23.1)
FIM efficiency (FIM change/LOS)	1.1	1.0	0.9	0.9	1.1	0.7	0.9	0.5	0.6	0.8

Stroke discharge destination by AN-SNAP class

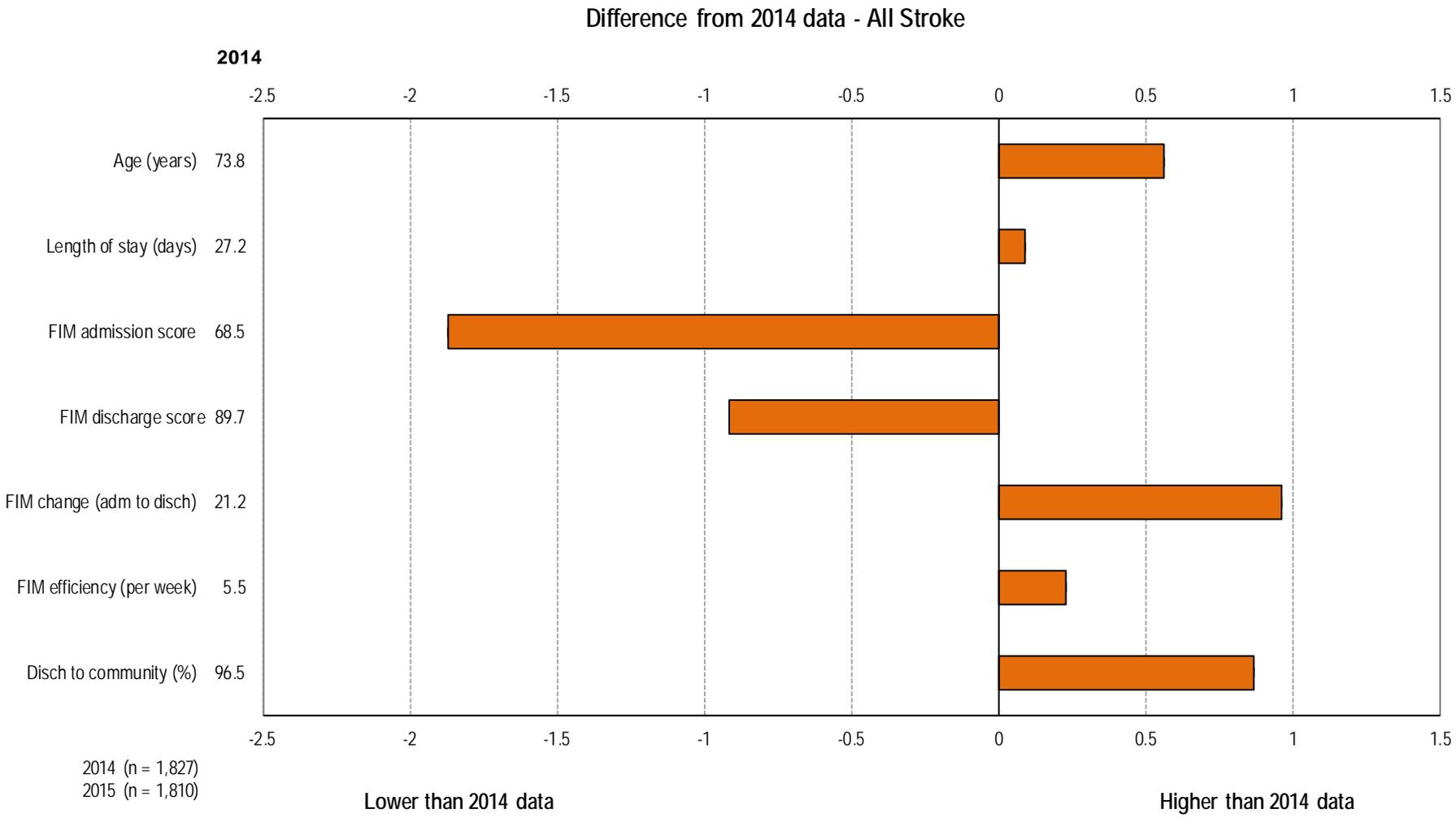
Discharge destination - Stroke



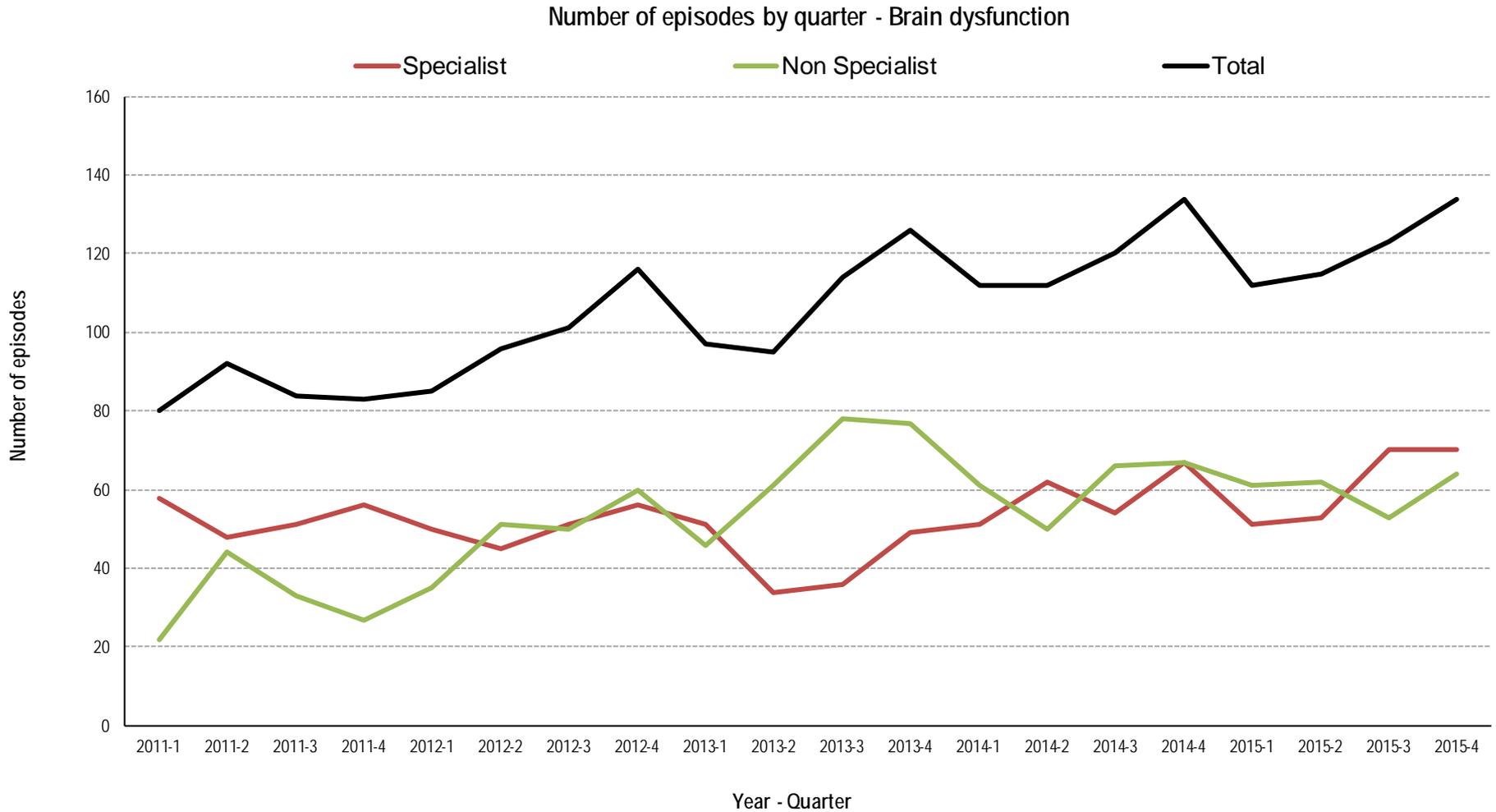
Stroke LOS and FIM change by AN-SNAP class



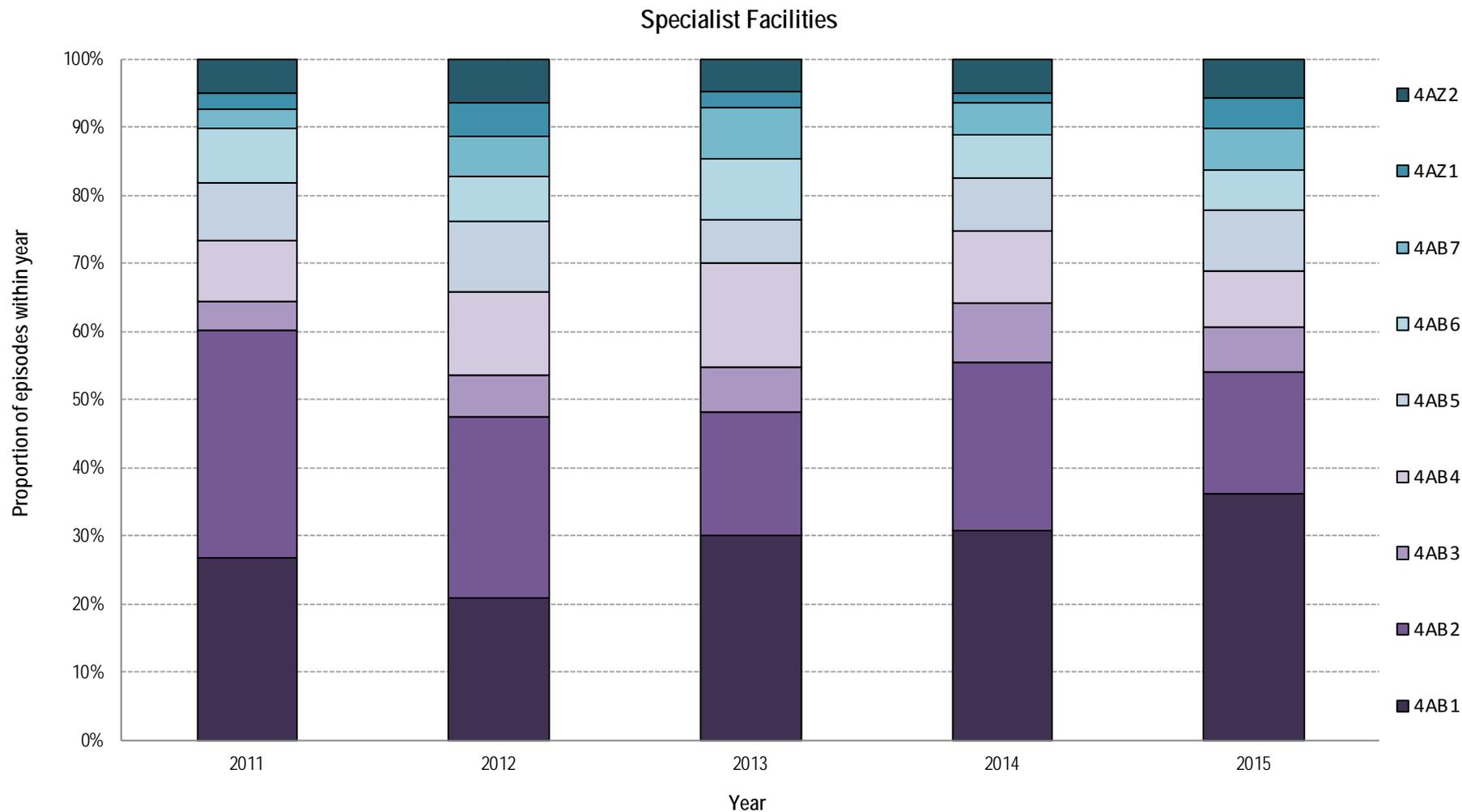
Change in outcome measures in stroke, 2014 to 2015



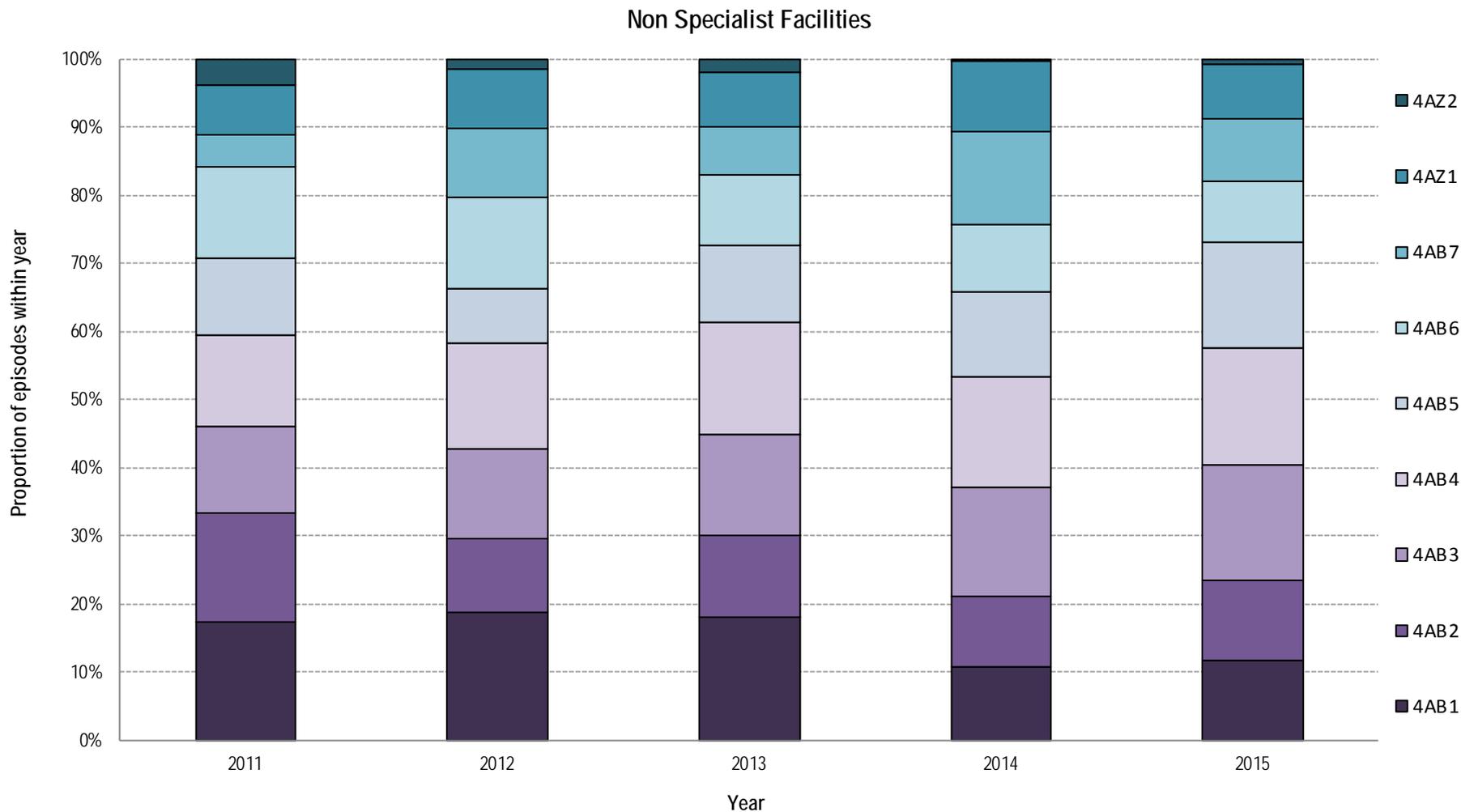
Brain dysfunction episodes over time



Brain dysfunction casemix over time – Specialist facilities



Brain dysfunction casemix over time – Non specialist facilities



Brain dysfunction episodes in 2015 - Specialist facilities

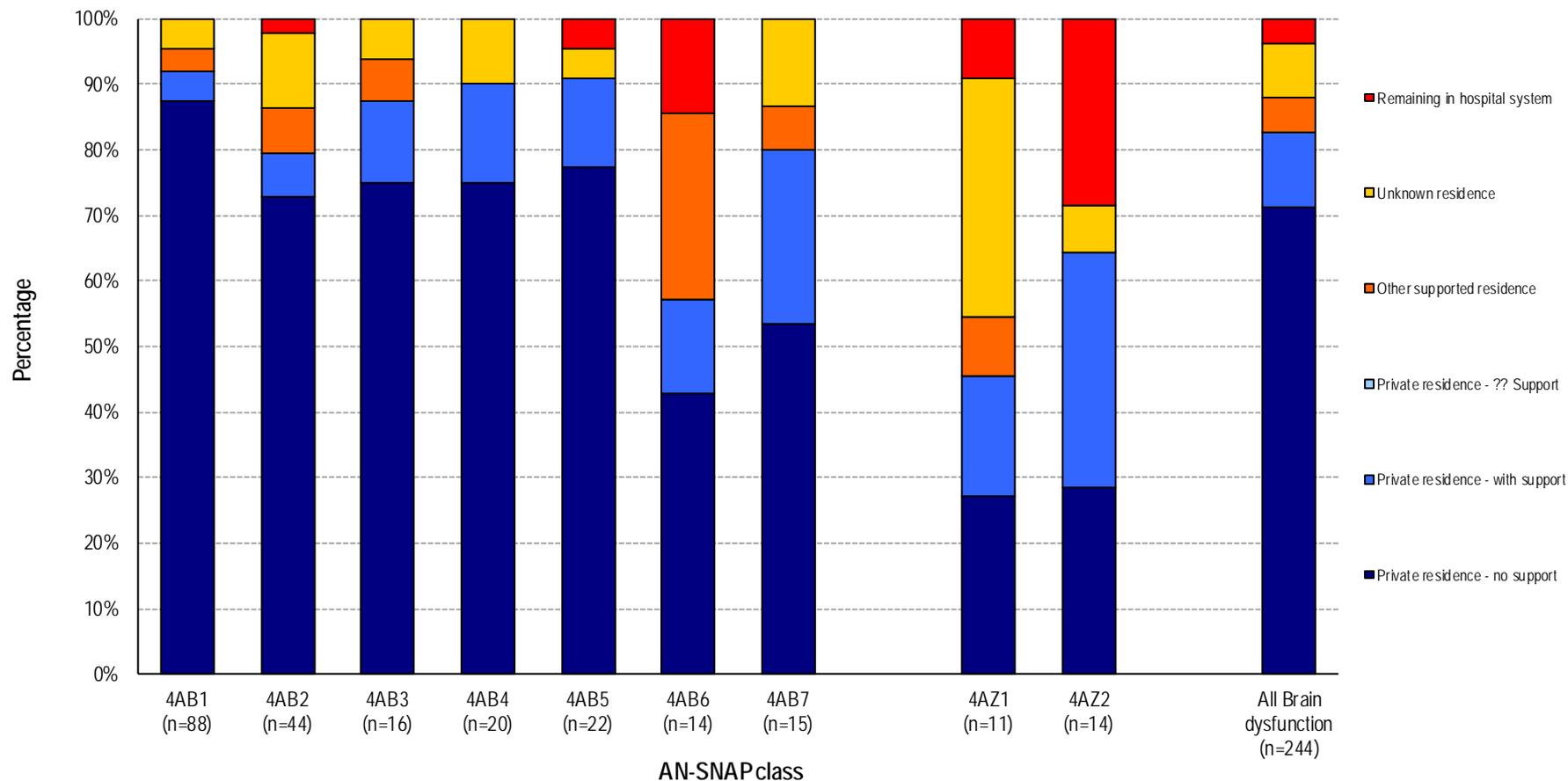
AN-SNAP class:	4AB1	4AB2	4AB3	4AB4	4AB5	4AB6	4AB7	4AZ1	4AZ2	All Brain dysfunction
Number of episodes	88	44	16	20	22	14	15	11	14	244
Proportion of episodes	36.1%	18.0%	6.6%	8.2%	9.0%	5.7%	6.1%	4.5%	5.7%	100.0%
Gender (%)										
<i>Female</i>	36.4%	25.0%	56.3%	25.0%	31.8%	28.6%	26.7%	36.4%	50.0%	34.0%
<i>Male</i>	63.6%	75.0%	43.8%	75.0%	68.2%	71.4%	73.3%	63.6%	50.0%	66.0%
Age group (%)										
<i>Under 65</i>	86.4%	75.0%	75.0%	85.0%	63.6%	42.9%	66.7%	54.5%	100.0%	77.0%
<i>Over 65</i>	13.6%	25.0%	25.0%	15.0%	36.4%	57.1%	33.3%	45.5%	0.0%	23.0%
Age (Mean+95%CI)	42.6 (38.5-46.7)	46.4 (40.8-52.0)	50.9 (43.1-58.8)	44.5 (35.8-53.1)	53.0 (44.6-61.3)	65.1 (59.0-71.2)	51.1 (40.9-61.3)	64.6 (58.0-71.3)	28.1 (24.0-32.2)	46.9 (44.4-49.4)
Admission FIM (Mean+95%CI)	110.4 (108.6-112.1)	00.4 (97.5-103.3)	86.7 (82.9-90.5)	76.7 (71.5-81.8)	66.3 (62.4-70.2)	47.8 (42.1-53.4)	35.7 (31.8-39.6)	20.8 (19.2-22.4)	22.3 (18.6-26.0)	84.2 (80.1-88.3)
LOS (Mean+95%CI)	13.5 (11.7-15.2)	27.1 (18.4-35.8)	20.9 (14.9-26.9)	25.5 (18.3-32.8)	29.6 (22.8-36.3)	60.0 (29.7-90.3)	59.9 (40.4-79.3)	78.8 (52.0-105.6)	05.3 (56.9-153.7)	31.2 (26.5-35.9)
Discharge destination (%)										
<i>Discharged to community</i>	100.0%	95.6%	94.1%	87.0%	80.8%	85.7%	100.0%	66.7%	71.4%	91.4%
<i>Remaining in hospital system</i>	0.0%	4.4%	5.9%	13.0%	19.2%	14.3%	0.0%	33.3%	28.6%	8.6%
FIM change (Mean+95%CI)	11.2 (9.6-12.7)	18.2 (14.7-21.6)	28.9 (23.4-34.5)	37.6 (30.9-44.3)	46.8 (41.7-51.9)	52.9 (40.1-65.8)	63.1 (48.9-77.4)	56.3 (32.1-80.5)	67.9 (45.7-90.1)	29.1 (25.8-32.4)
FIM efficiency (FIM change/LOS)	0.8	0.7	1.4	1.5	1.6	0.9	1.1	0.7	0.6	0.9

Brain dysfunction episodes in 2015 - Non specialist facilities

AN-SNAP class:	4AB1	4AB2	4AB3	4AB4	4AB5	4AB6	4AB7	4AZ1	4AZ2	All Brain dysfunction
Number of episodes	28	28	40	41	37	21	22	19	2	240
Proportion of episodes	11.7%	11.7%	16.7%	17.1%	15.4%	8.8%	9.2%	7.9%	n < 5	100.0%
Gender (%)										
<i>Female</i>	42.9%	46.4%	62.5%	43.9%	59.5%	57.1%	36.4%	68.4%	n < 5	51.3%
<i>Male</i>	57.1%	53.6%	37.5%	56.1%	40.5%	42.9%	63.6%	31.6%	n < 5	48.8%
Age group (%)										
<i>Under 65</i>	32.1%	60.7%	25.0%	29.3%	21.6%	33.3%	31.8%	36.8%	n < 5	33.3%
<i>Over 65</i>	67.9%	39.3%	72.5%	70.7%	78.4%	66.7%	68.2%	63.2%	n < 5	66.3%
Age (Mean+95%CI)	70.4 (65.7-75.1)	59.8 (53.0-66.5)	73.0 (68.0-78.0)	73.9 (69.2-78.5)	75.5 (71.1-79.8)	73.2 (65.6-80.8)	67.6 (61.7-73.4)	72.4 (66.5-78.4)	n < 5	70.9 (68.9-72.9)
Admission FIM (Mean+95%CI)	106.5 (103.9-109.1)	99.7 (96.1-103.4)	86.7 (84.2-89.2)	76.9 (73.9-79.8)	64.7 (61.4-67.9)	51.7 (48.0-55.4)	35.4 (31.6-39.1)	24.8 (21.7-27.9)	n < 5	73.2 (69.7-76.6)
LOS (Mean+95%CI)	10.1 (8.2-12.0)	18.2 (13.2-23.1)	19.8 (13.1-26.6)	20.7 (17.2-24.2)	23.7 (17.3-30.1)	25.5 (18.0-33.0)	38.1 (30.7-45.5)	31.9 (18.4-45.4)	n < 5	22.7 (20.2-25.1)
Discharge destination (%)										
<i>Discharged to community</i>	100.0%	93.1%	97.5%	92.7%	86.5%	91.3%	100.0%	72.2%	n < 5	91.1%
<i>Remaining in hospital system</i>	0.0%	6.9%	2.5%	7.3%	13.5%	8.7%	0.0%	27.8%	n < 5	8.9%
FIM change (Mean+95%CI)	8.7 (6.4-10.9)	9.7 (5.7-13.6)	20.0 (16.6-23.4)	19.5 (15.1-24.0)	20.4 (14.1-26.6)	25.5 (17.9-33.0)	34.4 (23.2-45.5)	26.0 (14.3-37.7)	n < 5	20.1 (17.7-22.4)
FIM efficiency (FIM change/LOS)	0.9	0.5	1.0	0.9	0.9	1.0	0.9	0.8	n < 5	0.9

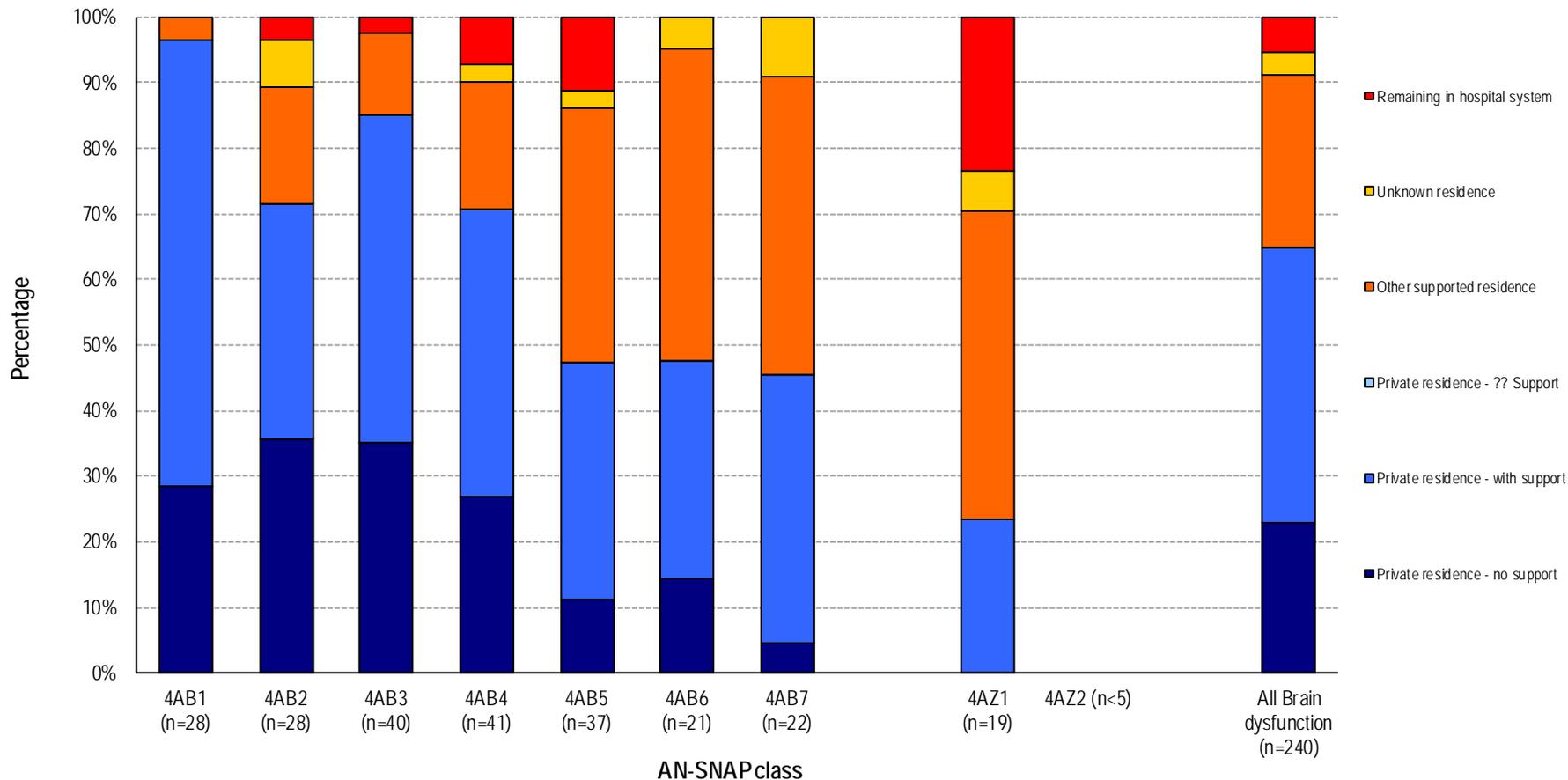
Brain dysfunction discharge destination by AN-SNAP Class – Specialist facilities

Specialist - Discharge destination - Brain dysfunction



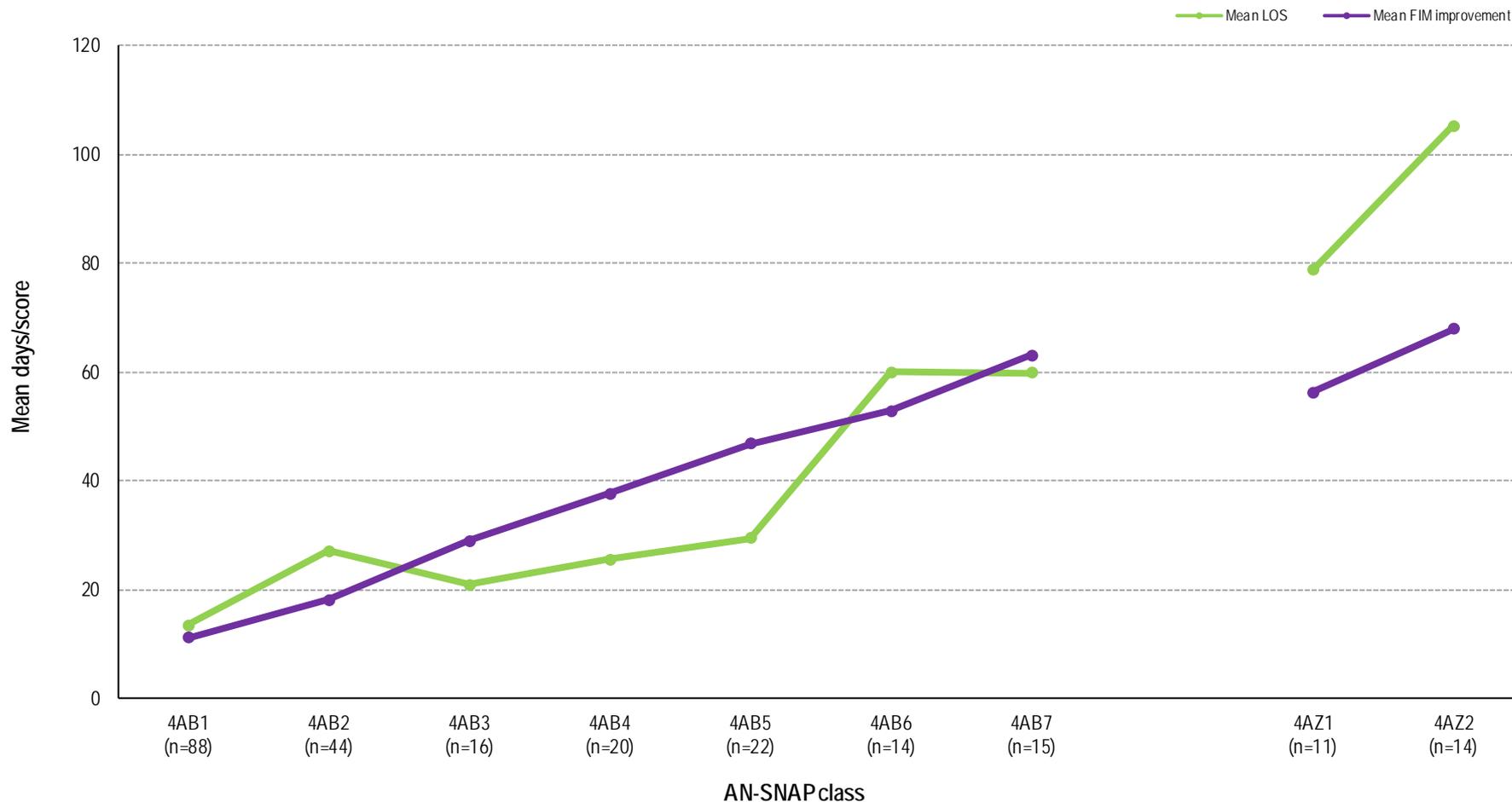
Brain dysfunction discharge destination by AN-SNAP Class – Non specialist facilities

Non specialist - Discharge destination - Brain dysfunction



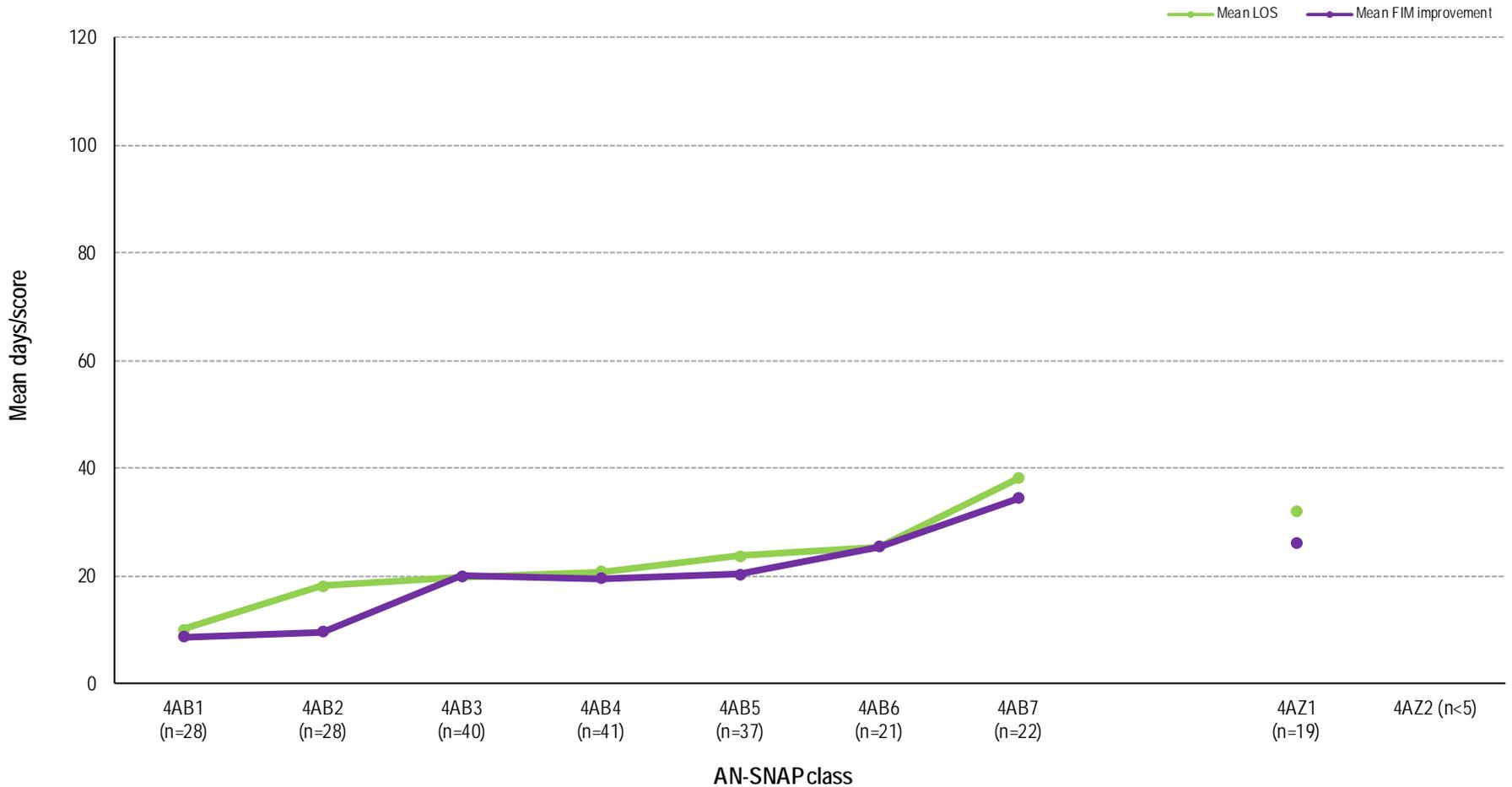
Brain dysfunction LOS and FIM change by AN-SNAP Class – Specialist facilities

Specialist - LOS and FIM change by AN-SNAP class



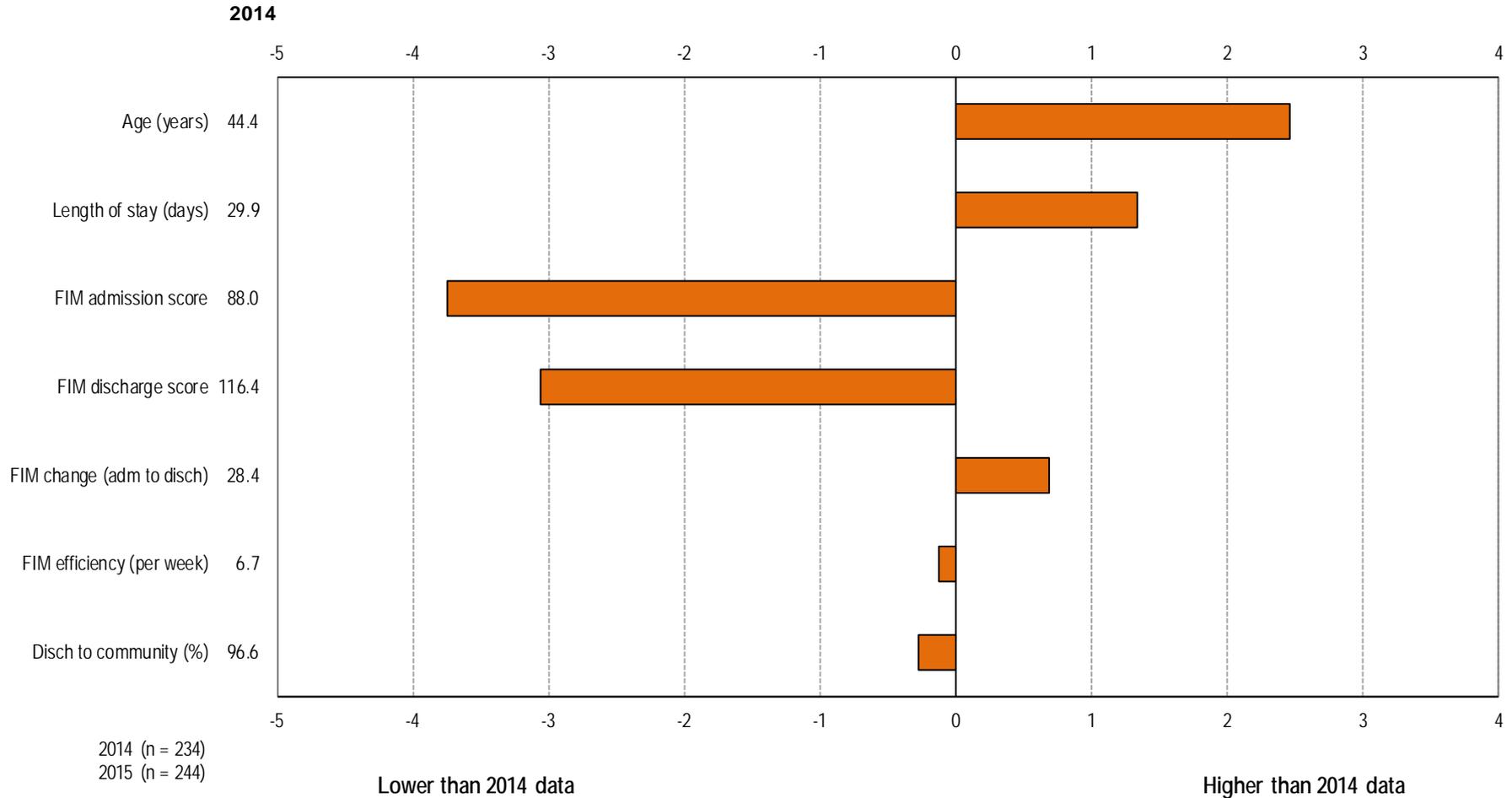
Brain dysfunction LOS and FIM change by AN-SNAP Class – Non specialist facilities

Non specialist - LOS and FIM change by AN-SNAP class



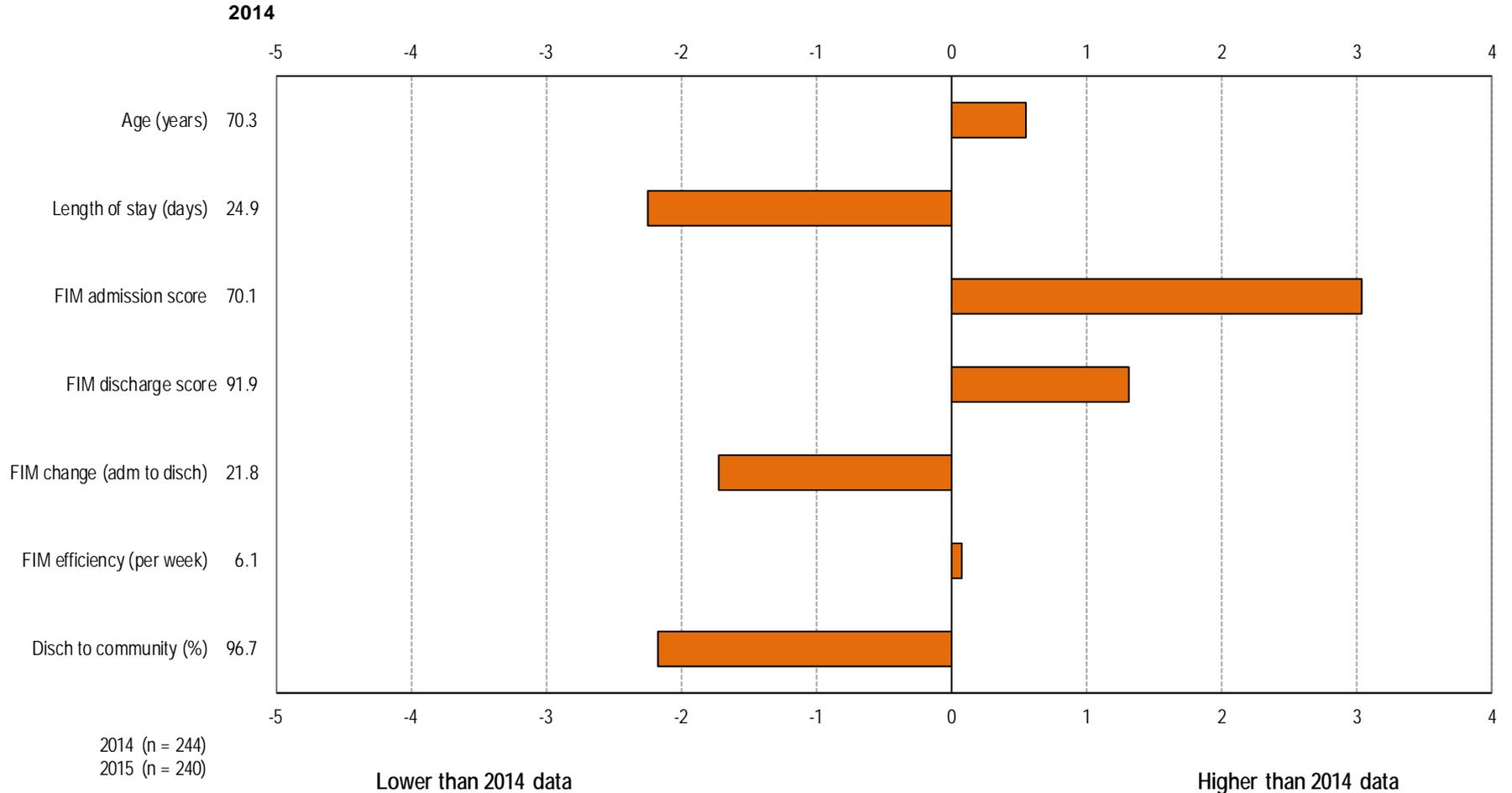
Change in outcome measures in brain dysfunction, 2014 to 2015 - Specialist facilities

Specialist - Difference from 2014 data - All Brain dysfunction



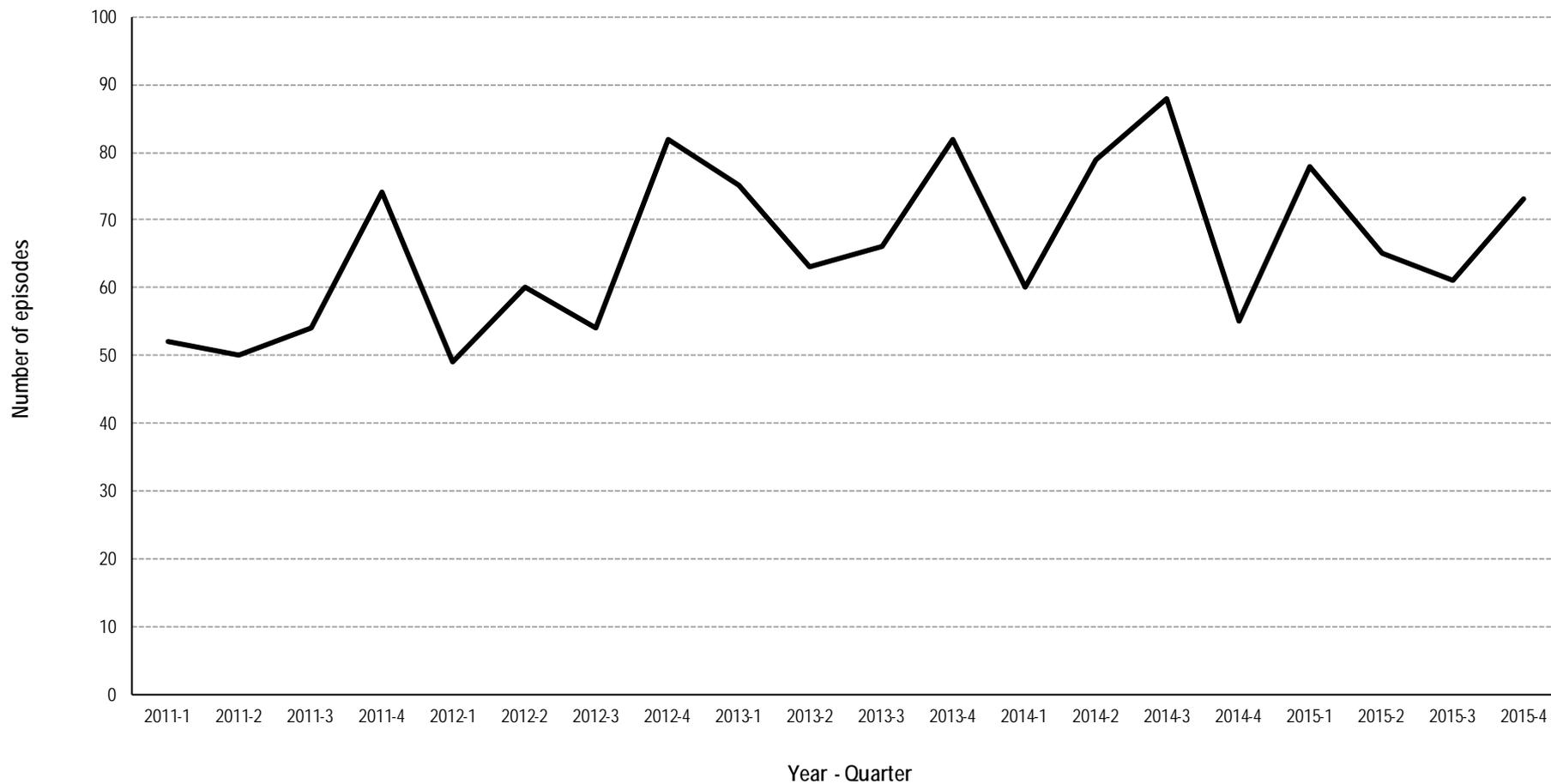
Change in outcome measures in brain dysfunction, 2014 to 2015 - Non specialist facilities

Non specialist - Difference from 2014 data - All Brain dysfunction

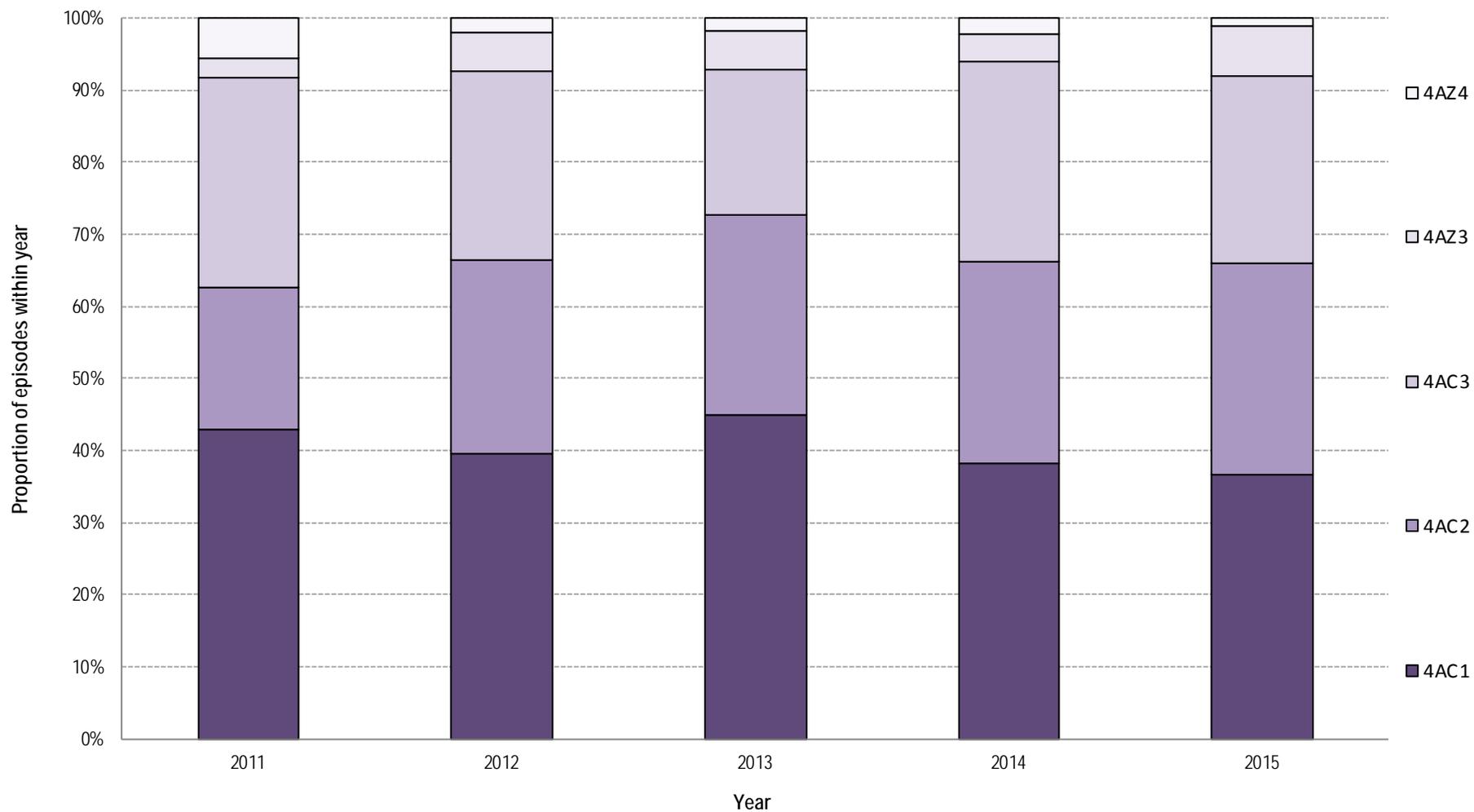


Neurological conditions episodes over time

Number of episodes by quarter - Neurological conditions



Neurological conditions casemix over time



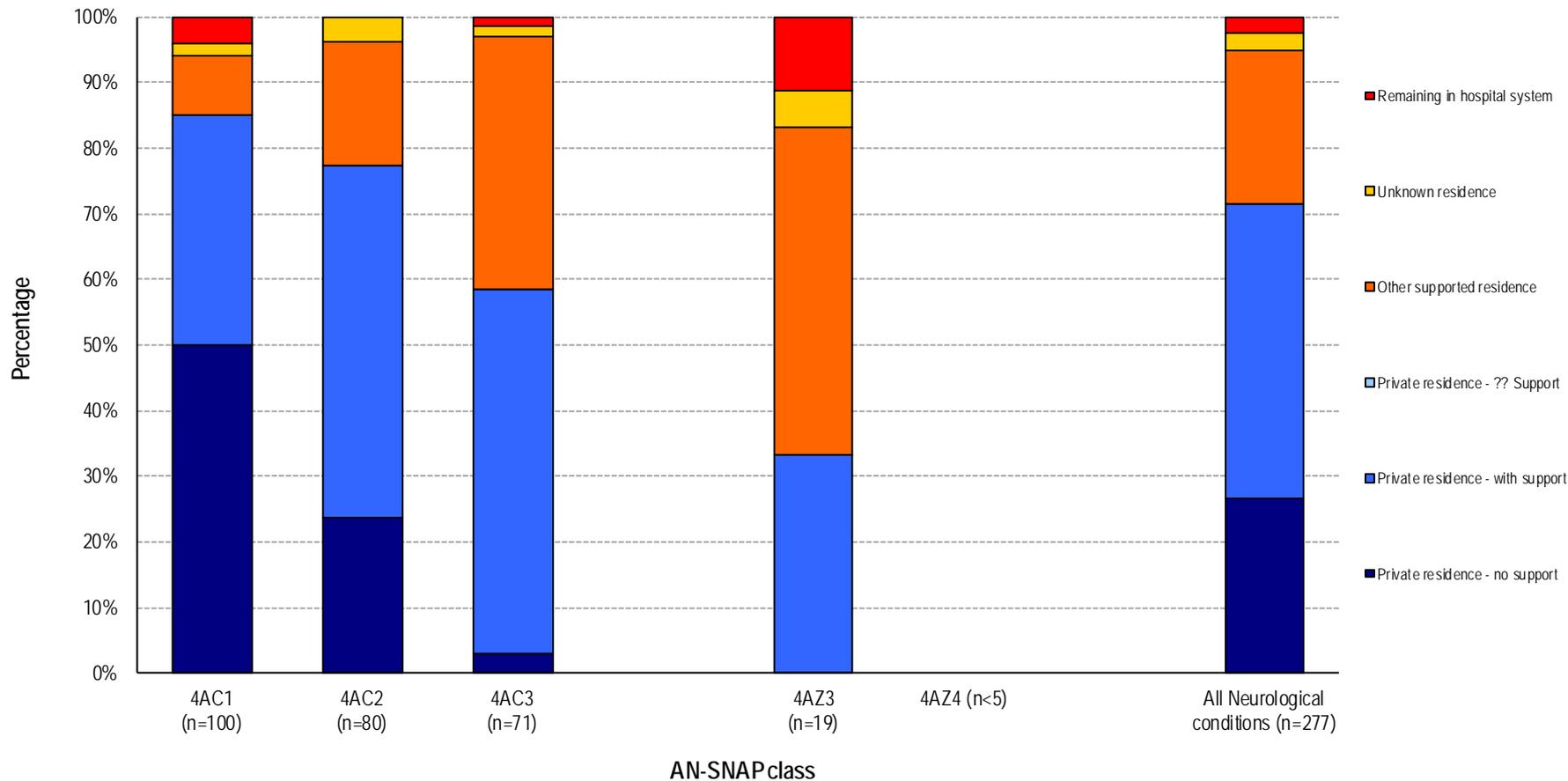
Neurological conditions episodes in 2015



AN-SNAP class:	4AC1	4AC2	4AC3	4AZ3	4AZ4	All Neurological conditions
Number of episodes	100	80	71	19	3	277
Proportion of episodes	36.1%	28.9%	25.6%	6.9%	n < 5	100.0%
Gender (%)						
<i>Female</i>	43.0%	42.5%	47.9%	42.1%	n < 5	44.4%
<i>Male</i>	57.0%	57.5%	52.1%	57.9%	n < 5	55.6%
Age group (%)						
<i>Under 65</i>	42.0%	22.5%	31.0%	0.0%	n < 5	31.0%
<i>Over 65</i>	58.0%	76.3%	69.0%	100.0%	n < 5	68.2%
Age (Mean+95%CI)	63.0 (59.5-66.6)	69.6 (66.3-72.9)	70.6 (67.4-73.7)	79.6 (76.4-82.9)	n < 5	68.0 (66.1-69.9)
Admission FIM (Mean+95%CI)	101.4 (99.1-103.7)	76.9 (74.7-79.2)	55.5 (52.6-58.3)	30.4 (25.4-35.4)	n < 5	77.0 (74.0-80.0)
LOS (Mean+95%CI)	14.9 (12.6-17.2)	20.3 (16.9-23.6)	29.9 (25.2-34.6)	32.1 (17.1-47.2)	n < 5	21.7 (19.5-23.8)
Discharge destination (%)						
<i>Discharged to community</i>	96.0%	100.0%	98.6%	88.9%	n < 5	97.5%
<i>Remaining in hospital system</i>	4.0%	0.0%	1.4%	11.1%	n < 5	2.5%
FIM change (Mean+95%CI)	9.0 (6.6-11.3)	14.1 (10.9-17.4)	21.9 (16.7-27.0)	22.9 (11.5-34.2)	n < 5	14.6 (12.5-16.7)
FIM efficiency (FIM change/LOS)	0.6	0.7	0.7	0.7	n < 5	0.7

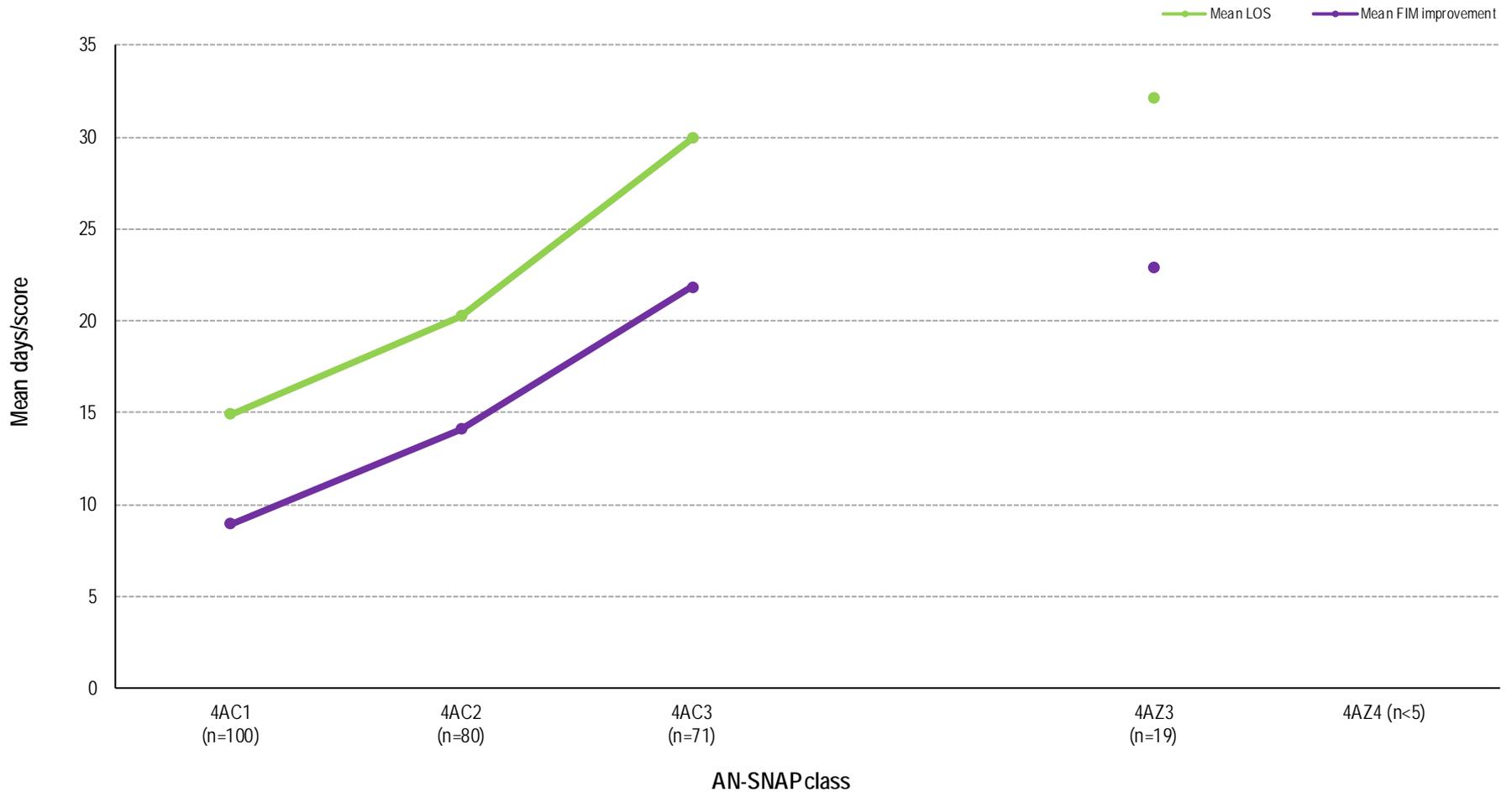
Neurological conditions discharge destination by AN-SNAP class

Discharge destination - Neurological conditions

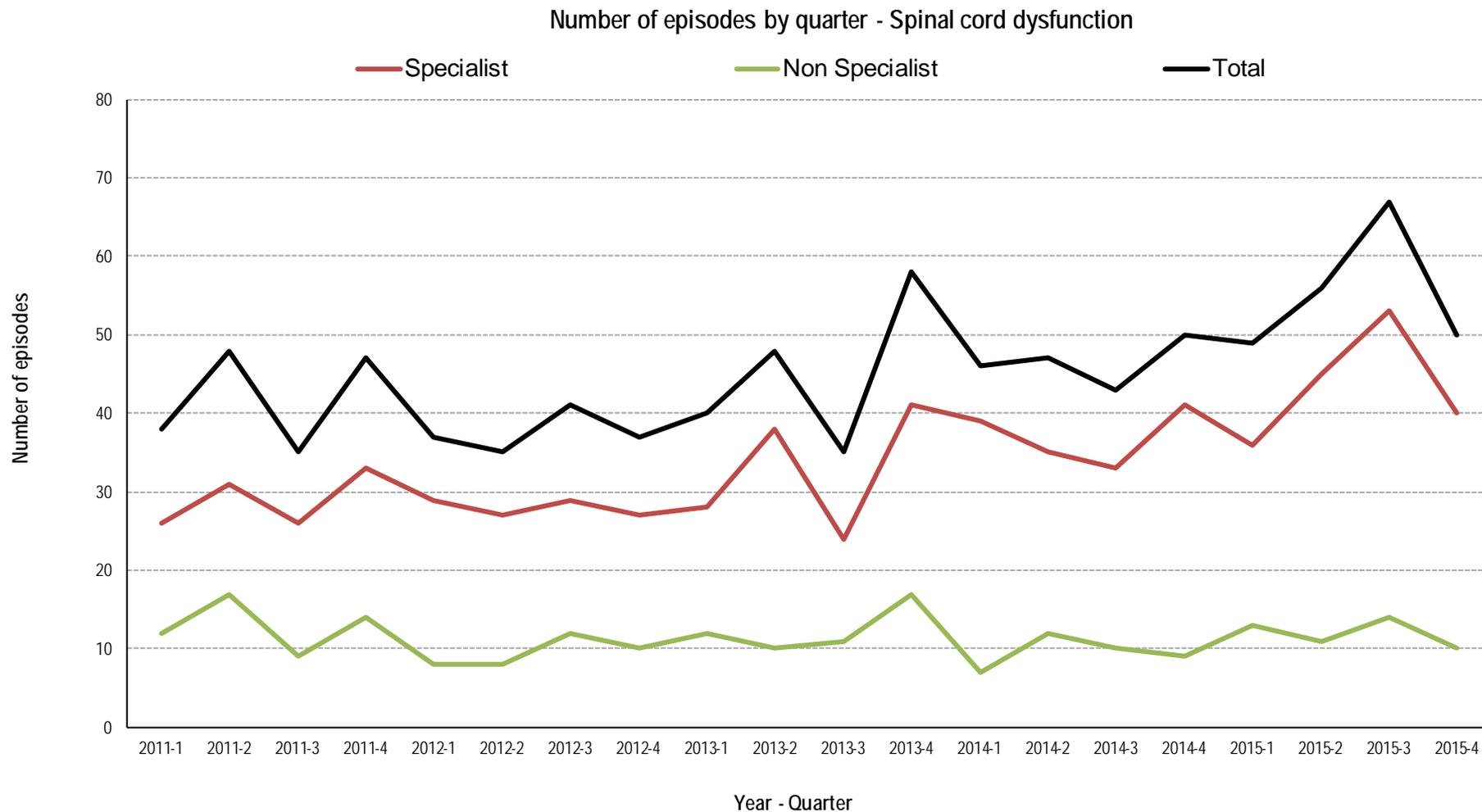


Neurological conditions LOS and FIM change by AN-SNAP class

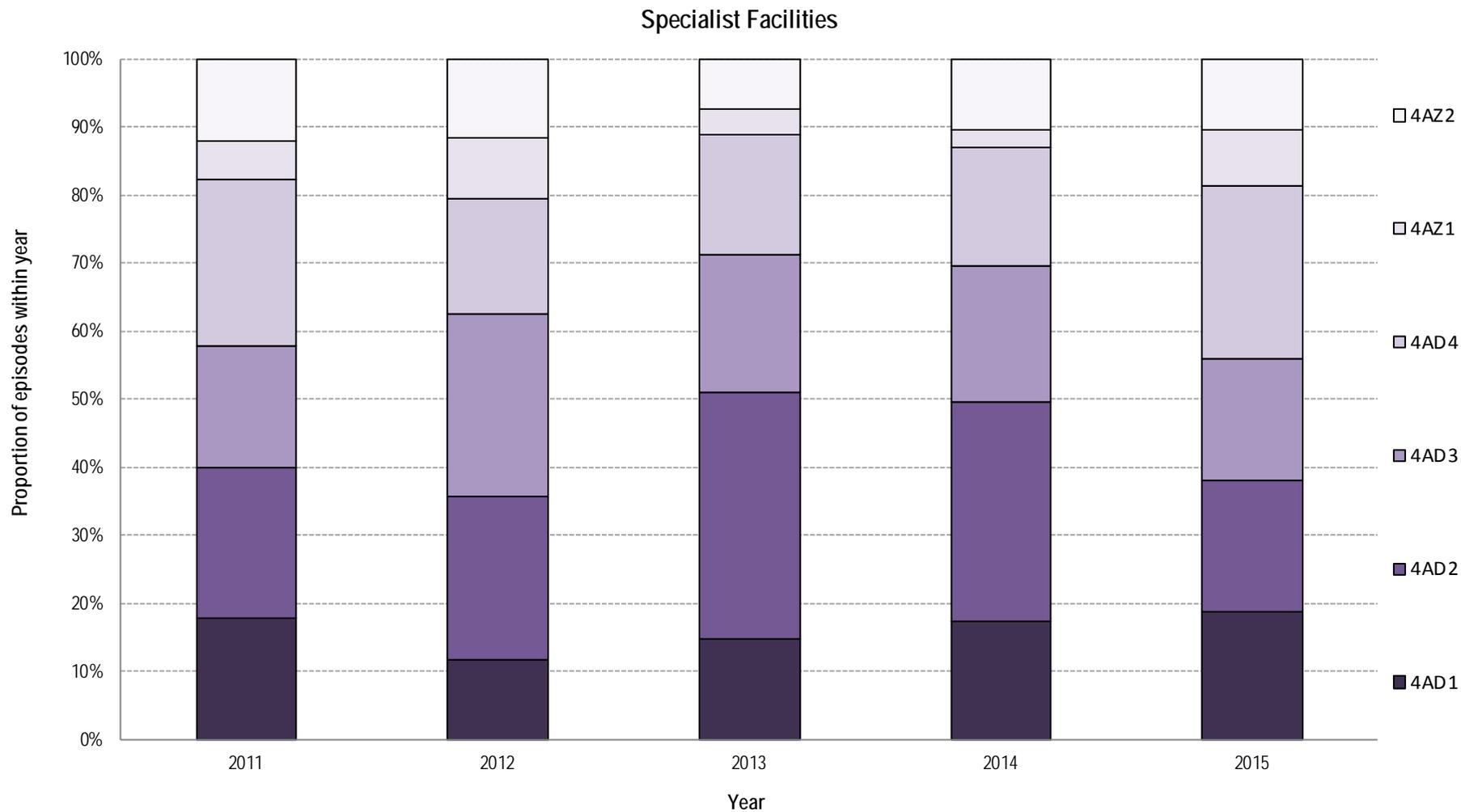
LOS and FIM change by AN-SNAP class



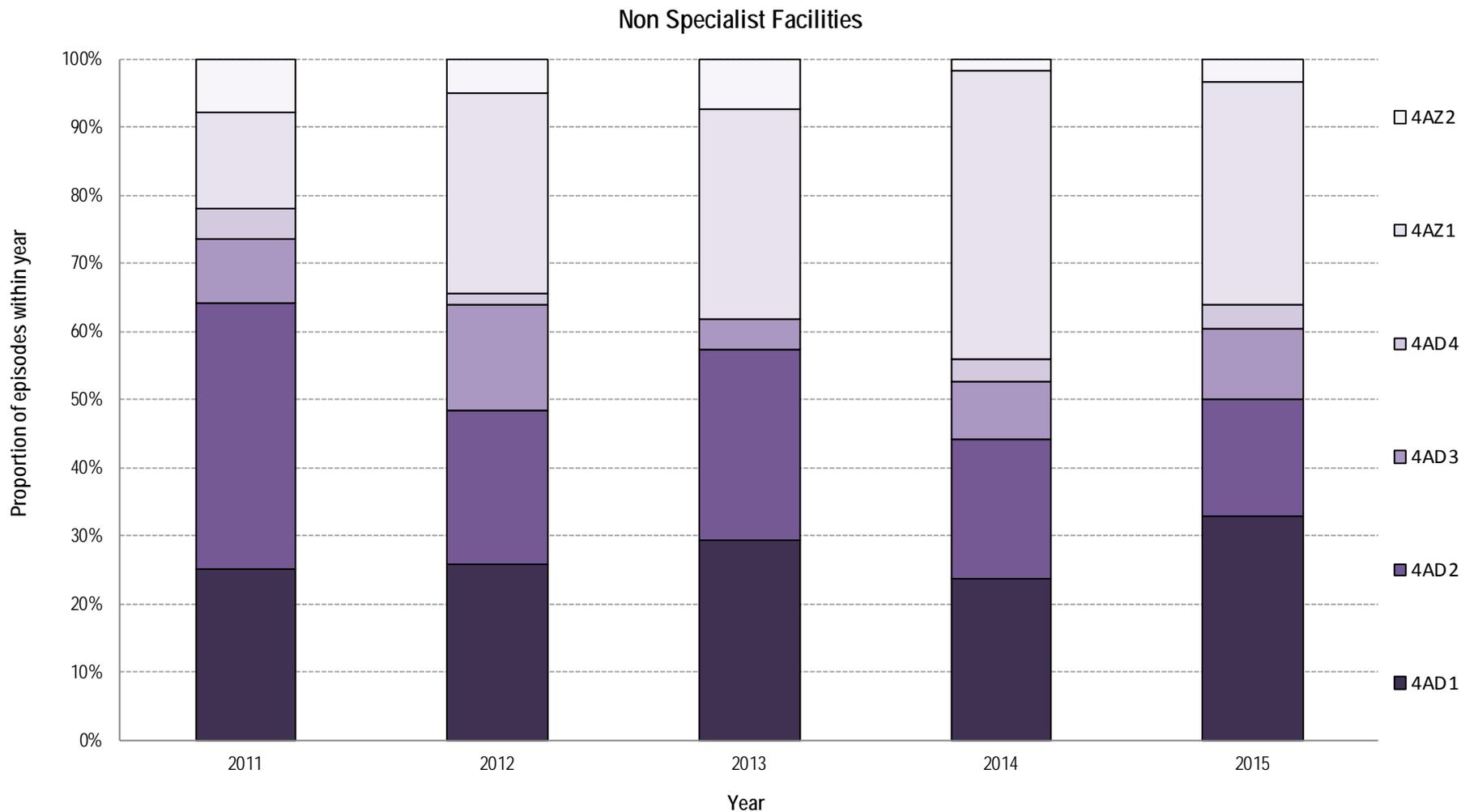
Spinal cord dysfunction episodes over time



Spinal cord dysfunction casemix over time – Specialist facilities



Spinal cord dysfunction episodes over time – Non specialist facilities



Spinal cord dysfunction episodes in 2015 - Specialist facilities



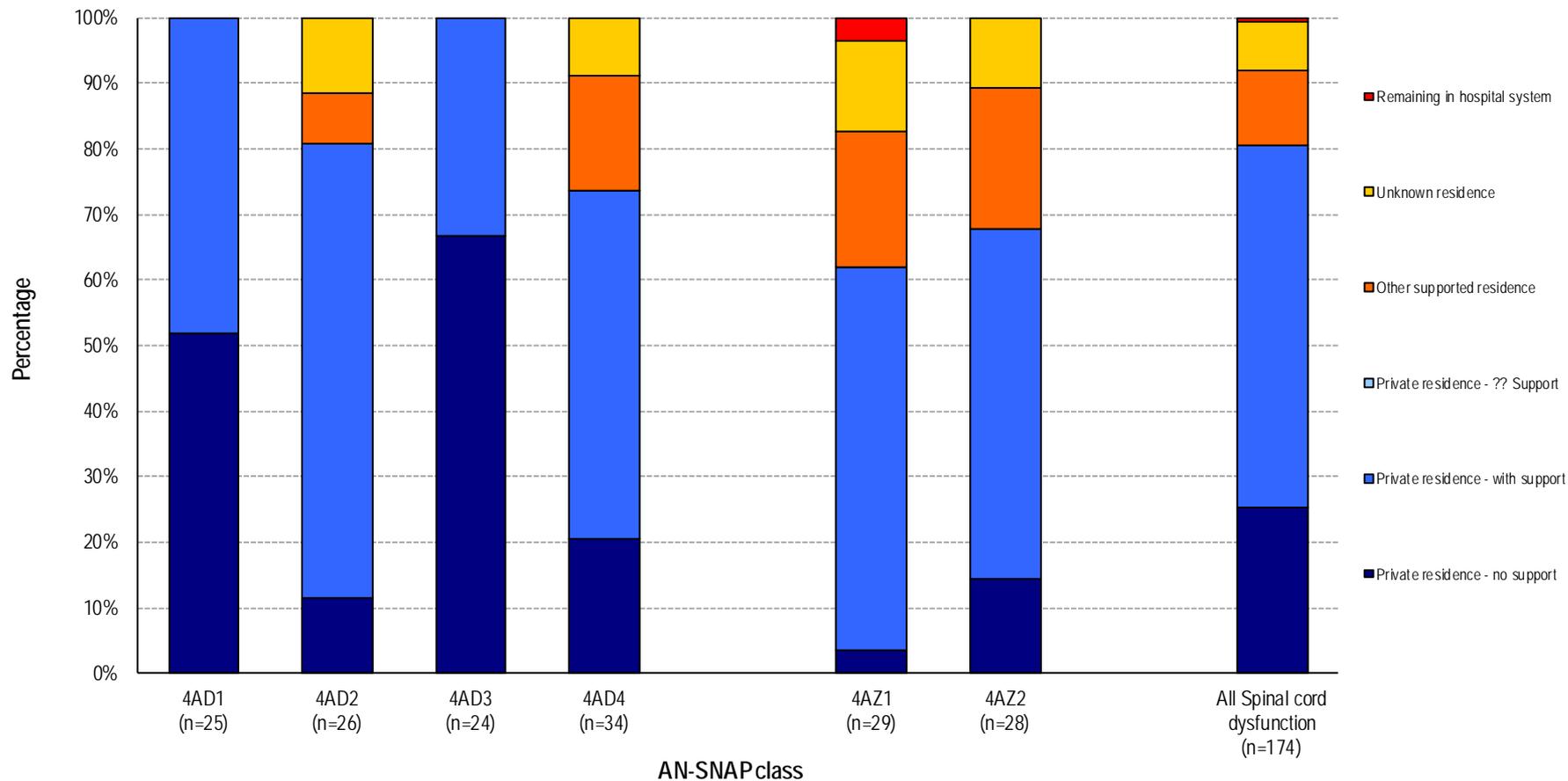
AN-SNAP class:	4AD1	4AD2	4AD3	4AD4	4AZ1	4AZ2	All Spinal cord dysfunction
Number of episodes	25	26	24	34	29	28	174
Proportion of episodes	14.4%	14.9%	13.8%	19.5%	16.7%	16.1%	100.0%
Gender (%)							
<i>Female</i>	20.0%	42.3%	41.7%	41.2%	17.2%	14.3%	28.2%
<i>Male</i>	80.0%	57.7%	58.3%	58.8%	82.8%	85.7%	71.8%
Age group (%)							
<i>Under 65</i>	64.0%	50.0%	100.0%	100.0%	51.7%	100.0%	74.7%
<i>Over 65</i>	36.0%	50.0%	0.0%	0.0%	48.3%	0.0%	20.7%
Age (Mean+95%CI)	60.7 (57.4-63.9)	65.5 (61.6-69.4)	31.8 (27.9-35.8)	33.9 (30.6-37.3)	64.3 (60.6-68.1)	34.3 (30.0-38.6)	48.0 (45.2-50.7)
Admission FIM (Mean+95%CI)	94.5 (88.8-100.3)	60.4 (57.6-63.1)	89.7 (84.0-95.4)	58.1 (56.0-60.3)	42.4 (39.3-45.4)	43.0 (40.1-45.8)	63.1 (59.8-66.4)
LOS (Mean+95%CI)	27.5 (20.0-35.0)	41.7 (36.1-47.3)	29.2 (21.2-37.1)	74.1 (60.9-87.3)	91.8 (75.2-108.4)	103.4 (82.6-124.1)	63.6 (56.6-70.6)
Discharge destination (%)							
<i>Discharged to community</i>	100.0%	96.3%	100.0%	97.1%	93.3%	100.0%	97.7%
<i>Remaining in hospital system</i>	0.0%	3.7%	0.0%	2.9%	6.7%	0.0%	2.3%
FIM change (Mean+95%CI)	16.1 (10.7-21.5)	30.2 (23.0-37.4)	27.2 (21.7-32.6)	41.1 (35.1-47.0)	24.3 (15.3-33.2)	22.9 (13.7-32.0)	27.4 (24.3-30.5)
FIM efficiency (FIM change/LOS)	0.6	0.7	0.9	0.6	0.3	0.2	0.4

Spinal cord dysfunction episodes in 2015 - Non specialist facilities

AN-SNAP class:	4AD1	4AD2	4AD3	4AD4	4AZ1	4AZ2	All Spinal cord dysfunction
Number of episodes	19	10	6	2	9	2	48
Proportion of episodes	39.6%	20.8%	12.5%	n < 5	18.8%	n < 5	100.0%
Gender (%)							
<i>Female</i>	31.6%	40.0%	50.0%	n < 5	44.4%	n < 5	39.6%
<i>Male</i>	68.4%	60.0%	50.0%	n < 5	55.6%	n < 5	60.4%
Age group (%)							
<i>Under 65</i>	47.4%	60.0%	100.0%	n < 5	11.1%	n < 5	54.2%
<i>Over 65</i>	52.6%	40.0%	0.0%	n < 5	88.9%	n < 5	45.8%
Age (Mean+95%CI)	65.6 (60.9-70.3)	67.3 (60.9-73.7)	37.7 (32.4-43.0)	n < 5	74.1 (66.3-81.9)	n < 5	61.2 (56.3-66.0)
Admission FIM (Mean+95%CI)	92.2 (85.1-99.2)	59.8 (51.1-68.5)	94.8 (82.4-107.3)	n < 5	42.5 (35.5-49.5)	n < 5	74.3 (67.0-81.5)
LOS (Mean+95%CI)	15.4 (9.9-21.0)	41.0 (23.8-58.2)	24.7 (16.0-33.3)	n < 5	41.1 (25.5-56.7)	n < 5	28.2 (21.6-34.8)
Discharge destination (%)							
<i>Discharged to community</i>	100.0%	90.0%	100.0%	n < 5	80.0%	n < 5	91.8%
<i>Remaining in hospital system</i>	0.0%	10.0%	0.0%	n < 5	20.0%	n < 5	8.2%
FIM change (Mean+95%CI)	14.7 (10.3-19.1)	30.7 (16.7-44.6)	22.2 (10.0-34.3)	n < 5	23.9 (9.6-38.2)	n < 5	20.3 (15.6-25.0)
FIM efficiency (FIM change/LOS)	1.0	0.7	0.9	n < 5	0.6	n < 5	0.7

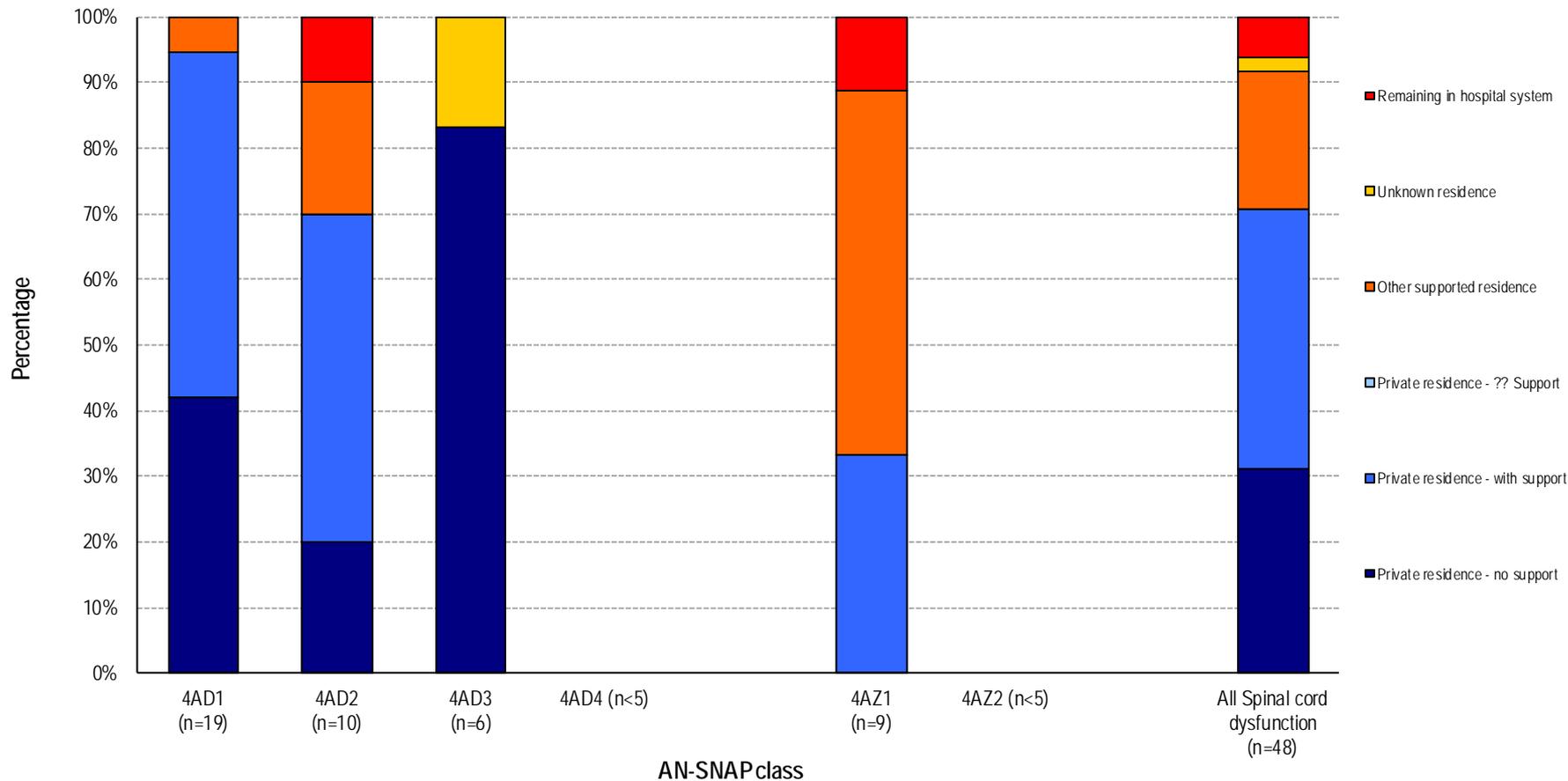
Spinal cord dysfunction discharge destination by AN-SNAP class – Specialist facilities

Specialist - Discharge destination - Spinal cord dysfunction



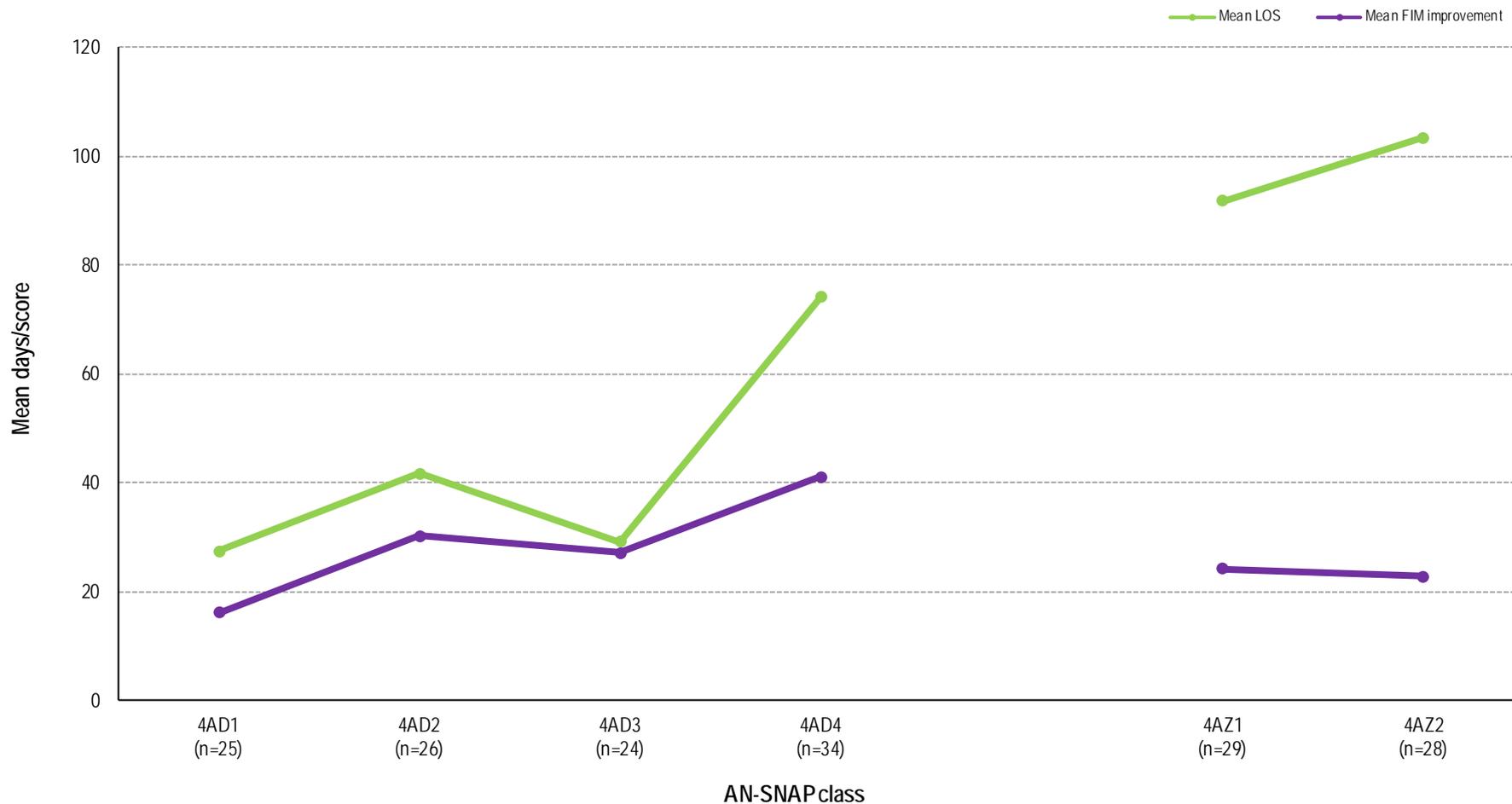
Spinal cord dysfunction discharge destination by AN-SNAP class – Non specialist facilities

Non specialist - Discharge destination - Spinal cord dysfunction



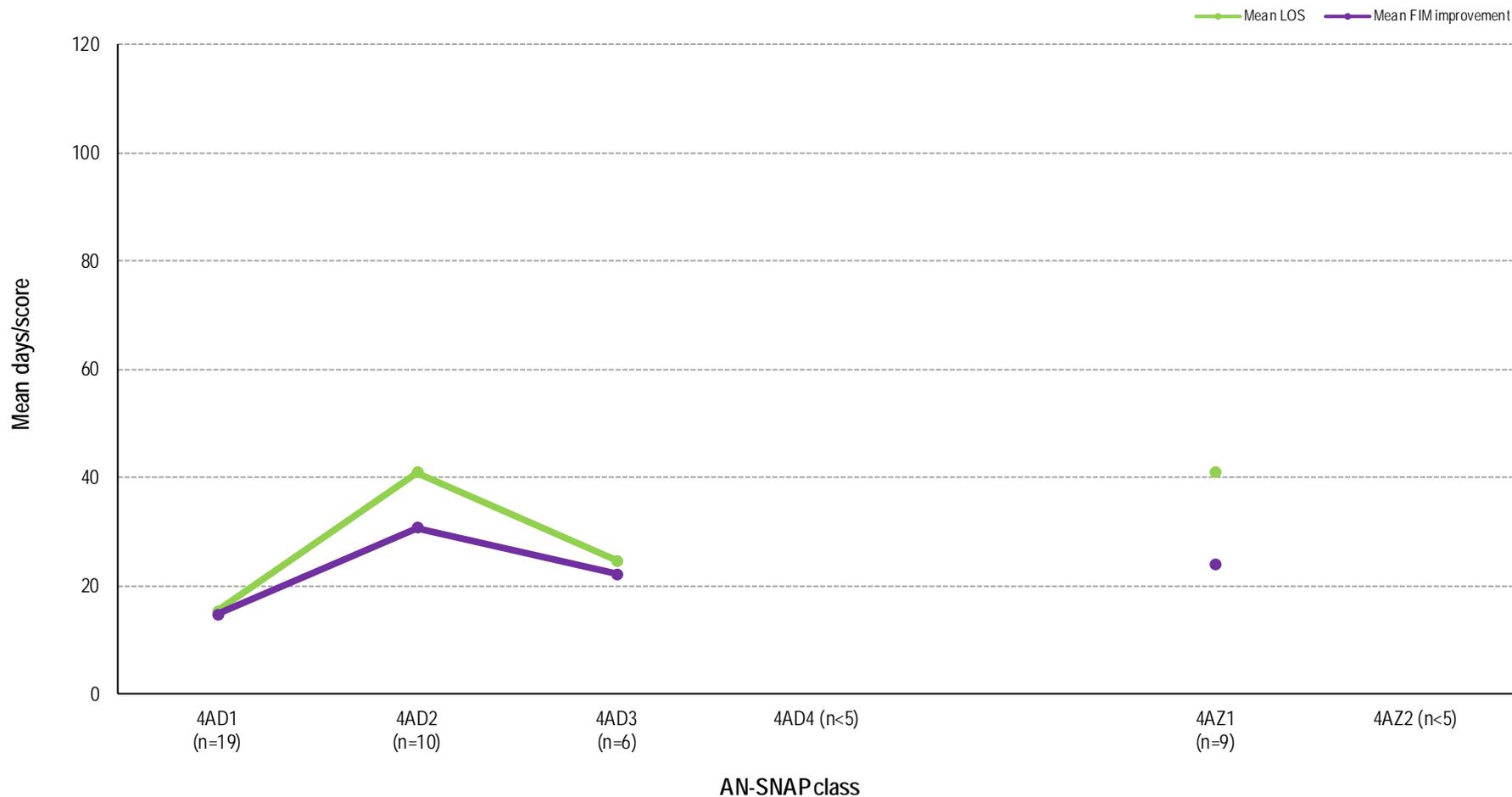
Spinal cord dysfunction LOS and FIM change by AN-SNAP class – Specialist facilities

Specialist - LOS and FIM change by AN-SNAP class



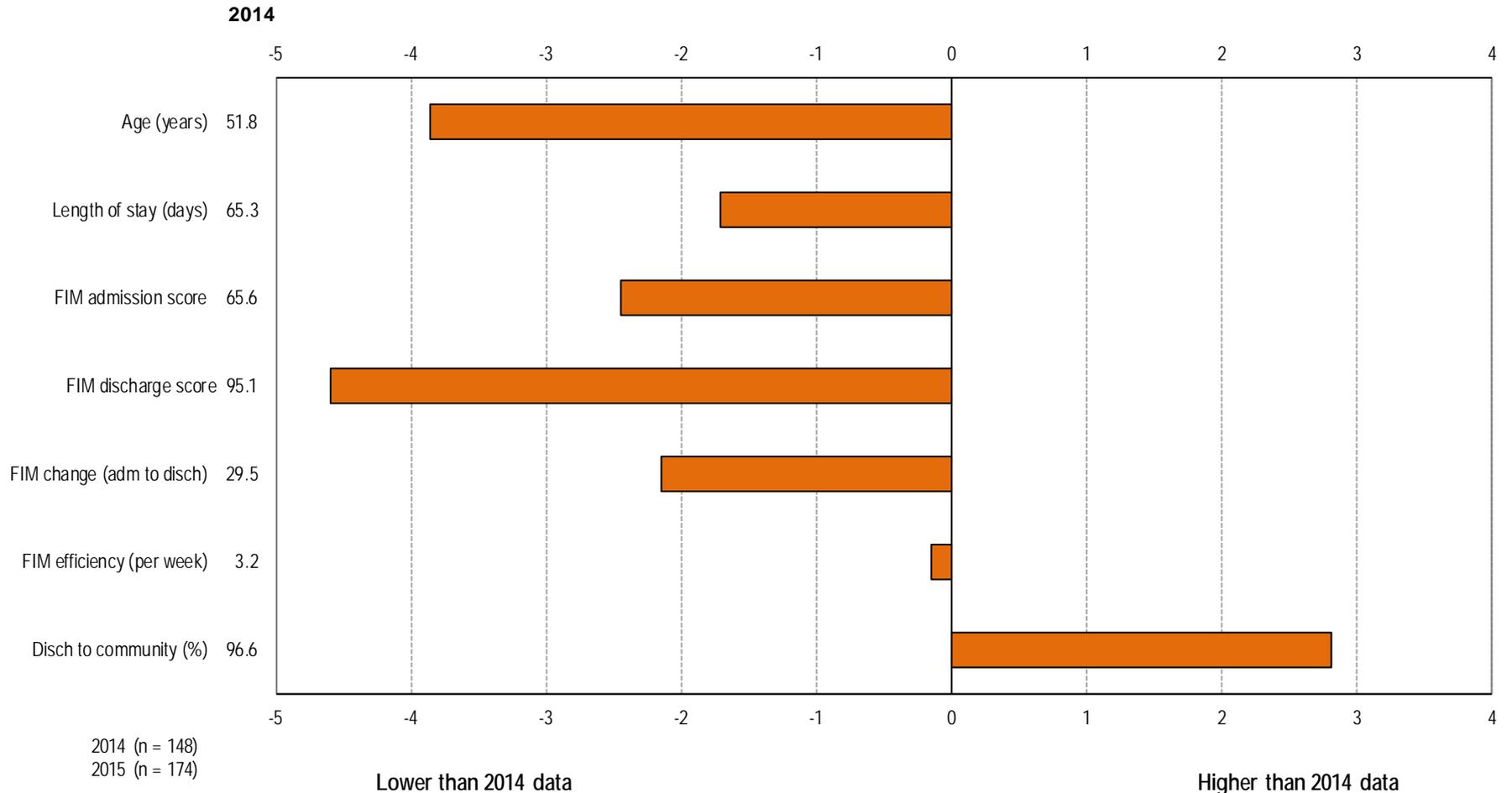
Spinal cord dysfunction LOS and FIM change by AN-SNAP class – Non specialist facilities

Non specialist - LOS and FIM change by AN-SNAP class

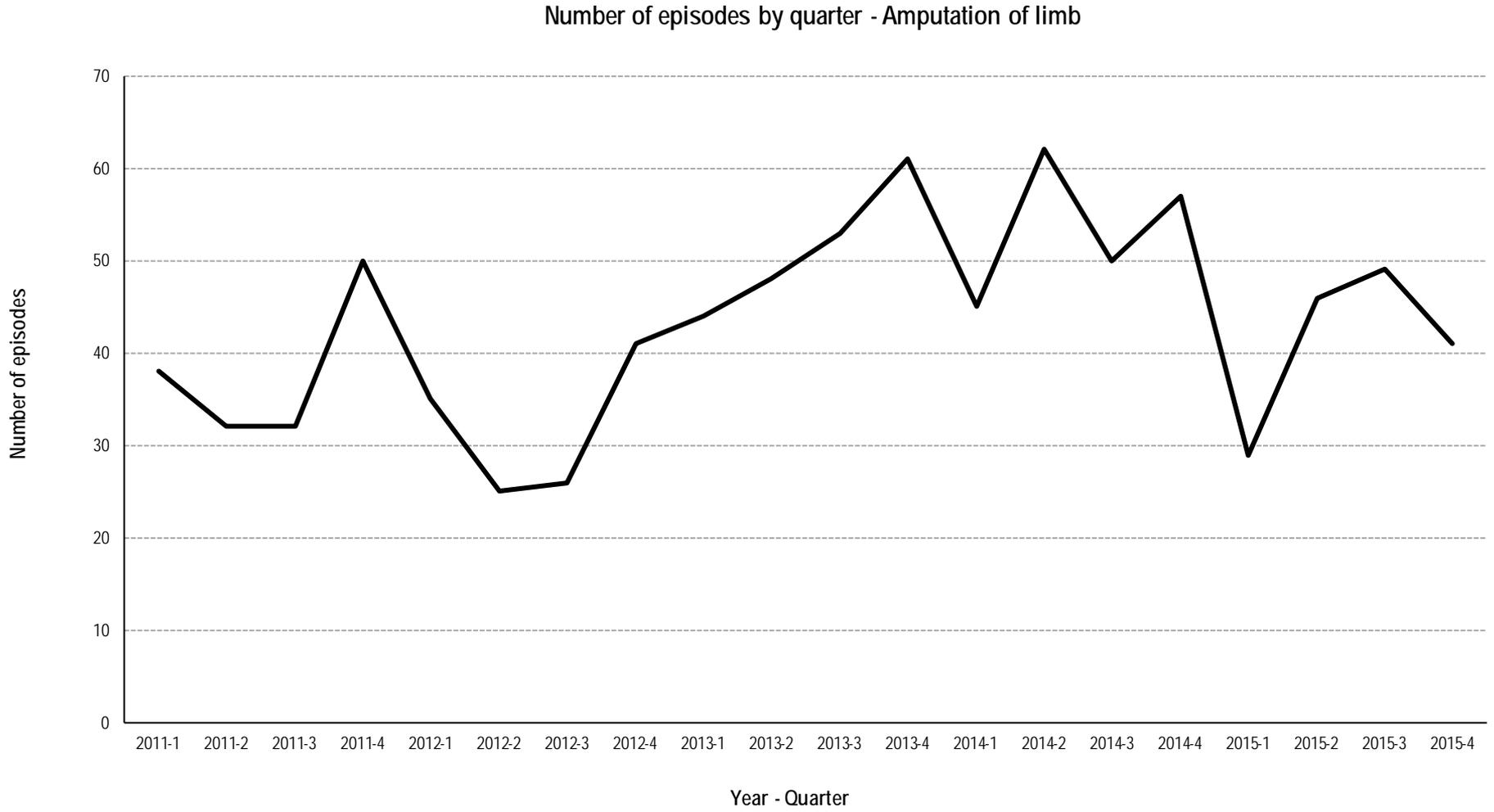


Change in outcome measures in spinal cord dysfunction, 2014 to 2015 - Specialist facilities

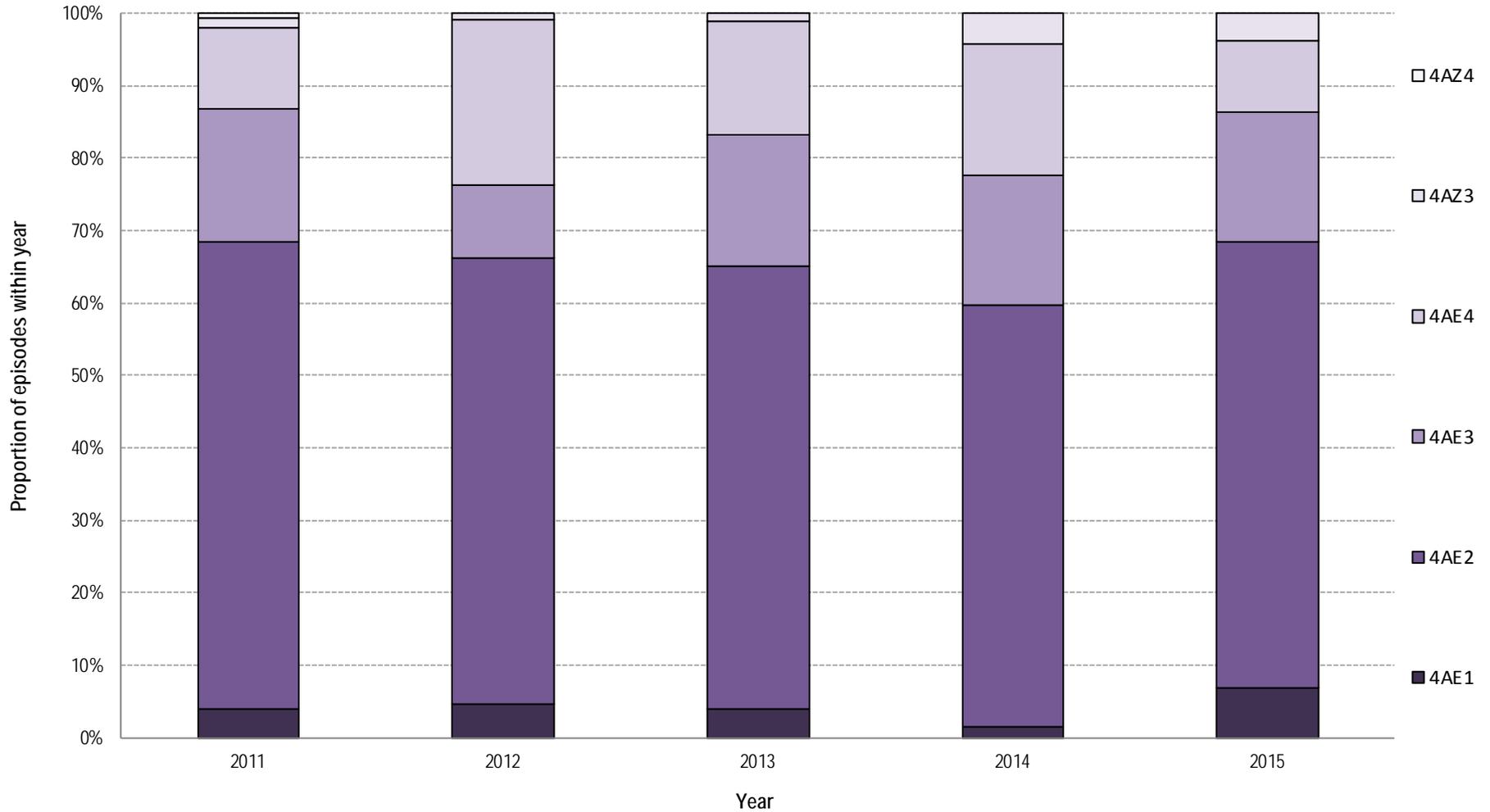
Specialist - Difference from 2014 data - All Spinal cord dysfunction



Amputation episodes over time



Amputation casemix over time



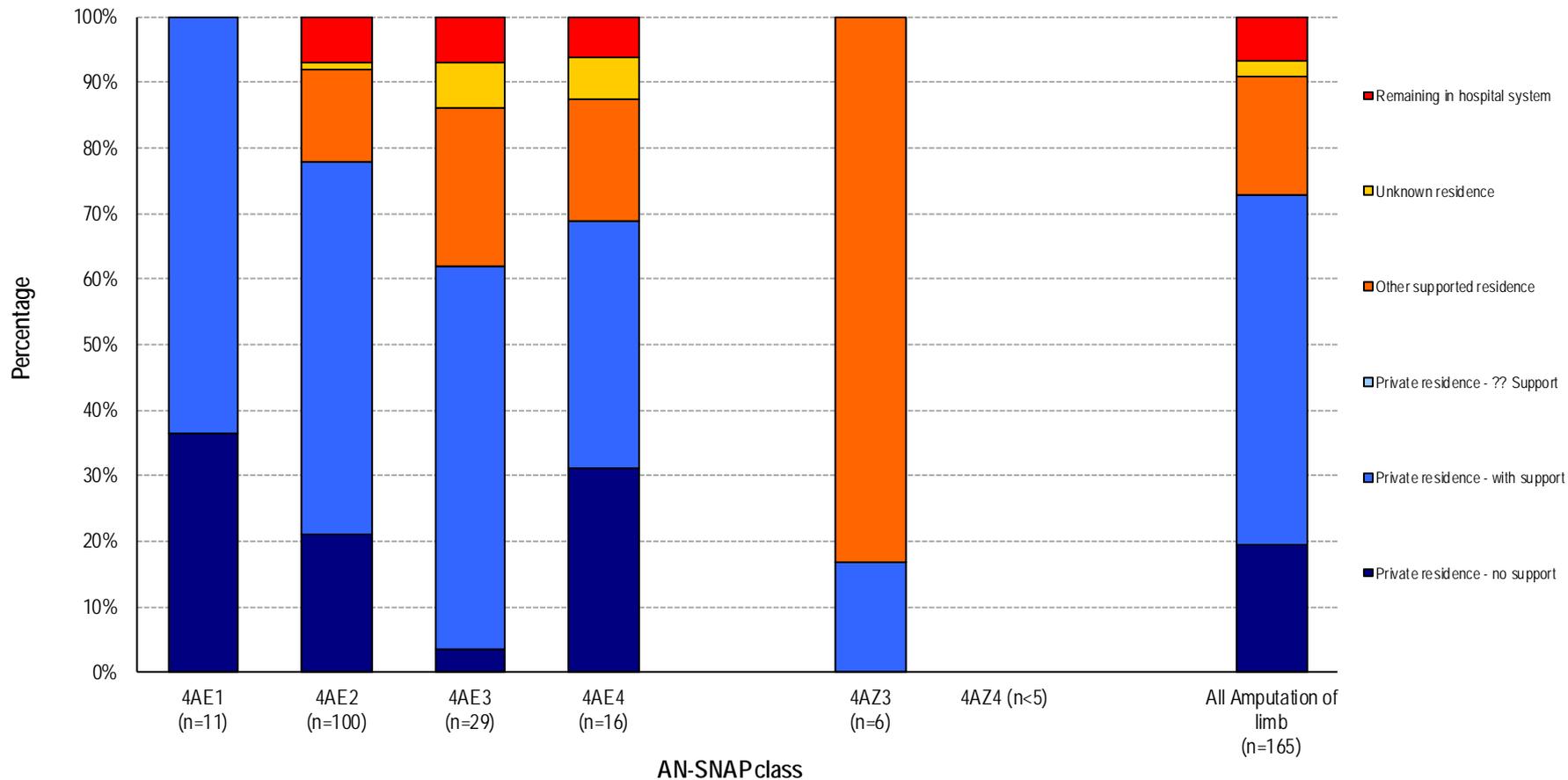
Amputation episodes in 2015



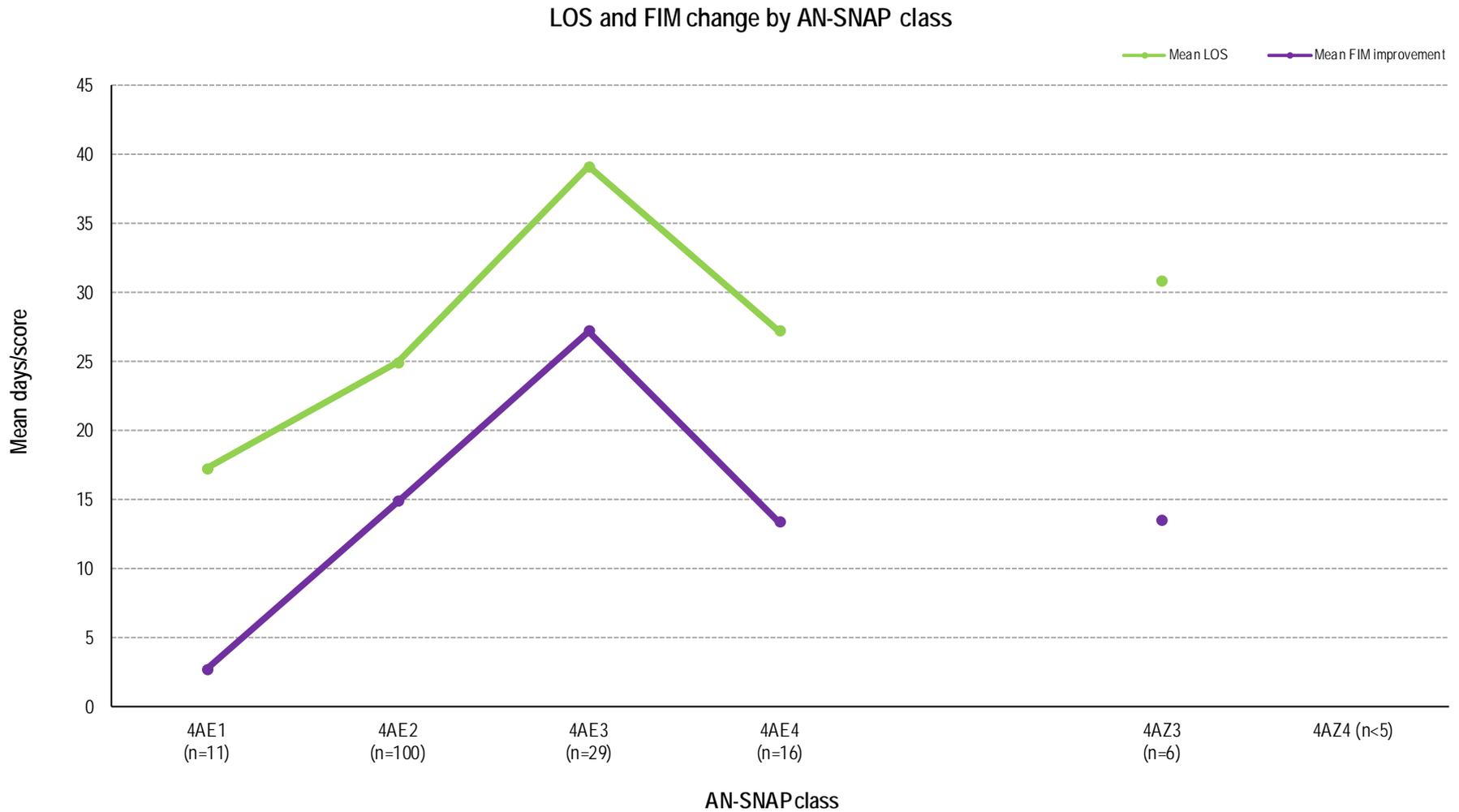
AN-SNAP class:	4AE1	4AE2	4AE3	4AE4	4AZ3	4AZ4	All Amputation of limb
Number of episodes	11	100	29	16	6	0	165
Proportion of episodes	6.7%	60.6%	17.6%	9.7%	3.6%	n < 5	100.0%
Gender (%)							
<i>Female</i>	9.1%	46.0%	24.1%	25.0%	50.0%	n < 5	37.6%
<i>Male</i>	90.9%	54.0%	75.9%	75.0%	50.0%	n < 5	62.4%
Age group (%)							
<i>Under 65</i>	45.5%	24.0%	6.9%	100.0%	0.0%	n < 5	29.7%
<i>Over 65</i>	54.5%	76.0%	93.1%	0.0%	100.0%	n < 5	70.3%
Age (Mean+95%CI)	66.5 (60.8-72.1)	72.8 (70.7-74.8)	76.0 (73.2-78.7)	43.7 (40.6-46.7)	80.7 (75.8-85.5)	n < 5	70.1 (68.1-72.1)
Admission FIM (Mean+95%CI)	113.2 (110.3-116.1)	85.9 (82.8-89.1)	52.8 (49.3-56.2)	88.7 (78.5-99.0)	37.3 (31.4-43.3)	n < 5	80.3 (76.7-84.0)
LOS (Mean+95%CI)	17.3 (9.9-24.6)	24.9 (21.7-28.2)	39.1 (32.0-46.2)	27.2 (14.8-39.6)	30.8 (27.4-34.2)	n < 5	27.3 (24.5-30.2)
Discharge destination (%)							
<i>Discharged to community</i>	100.0%	93.0%	93.1%	93.8%	100.0%	n < 5	93.3%
<i>Remaining in hospital system</i>	0.0%	7.0%	6.9%	6.3%	0.0%	n < 5	6.7%
FIM change (Mean+95%CI)	2.7 (0.1-5.3)	14.9 (12.8-17.0)	27.2 (21.4-32.9)	13.4 (5.7-21.0)	13.5 (3.4-23.6)	n < 5	16.0 (14.0-18.1)
FIM efficiency (FIM change/LOS)	0.2	0.6	0.7	0.5	0.4	n < 5	0.6

Amputation discharge destination by AN-SNAP class

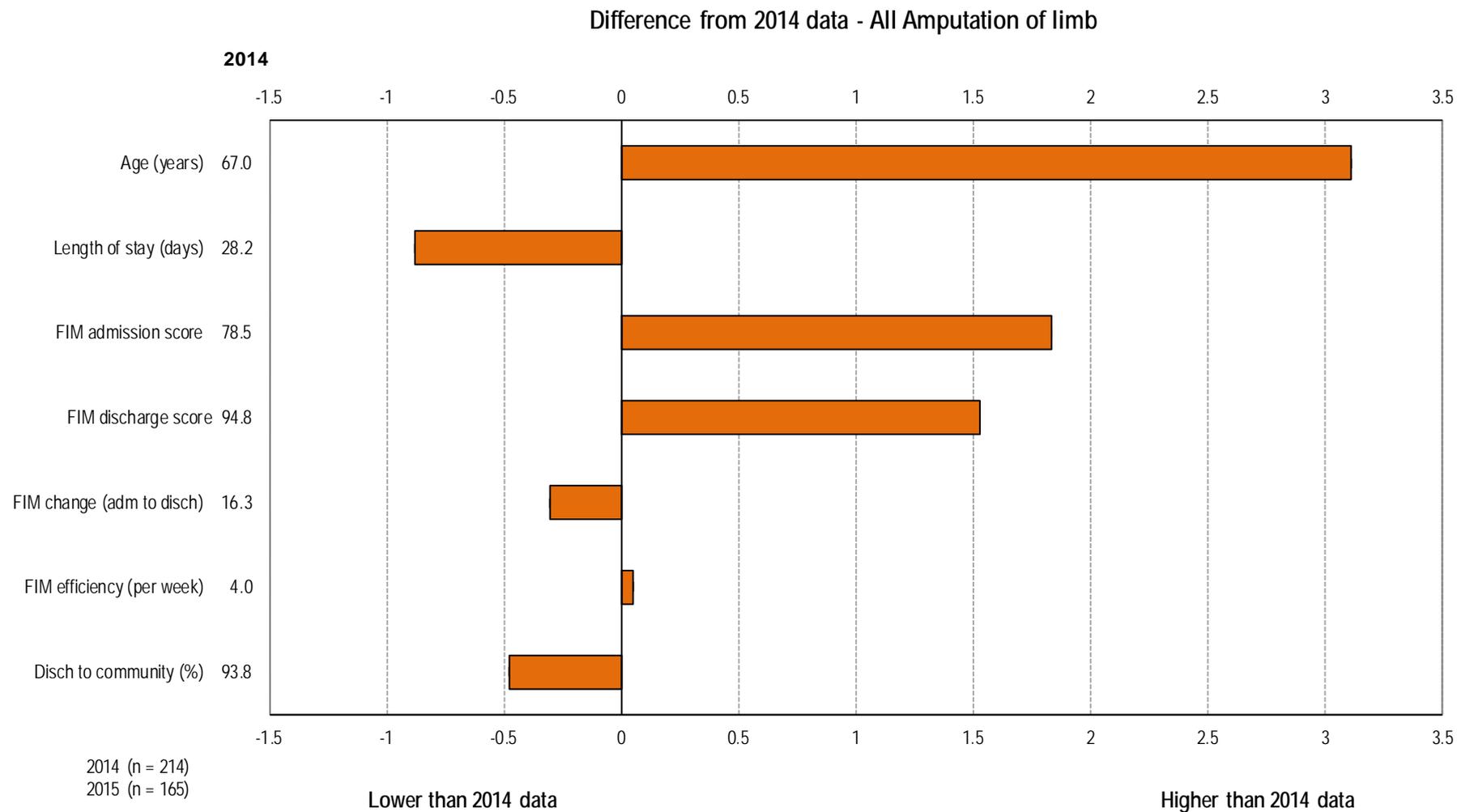
Discharge destination - Amputation of limb



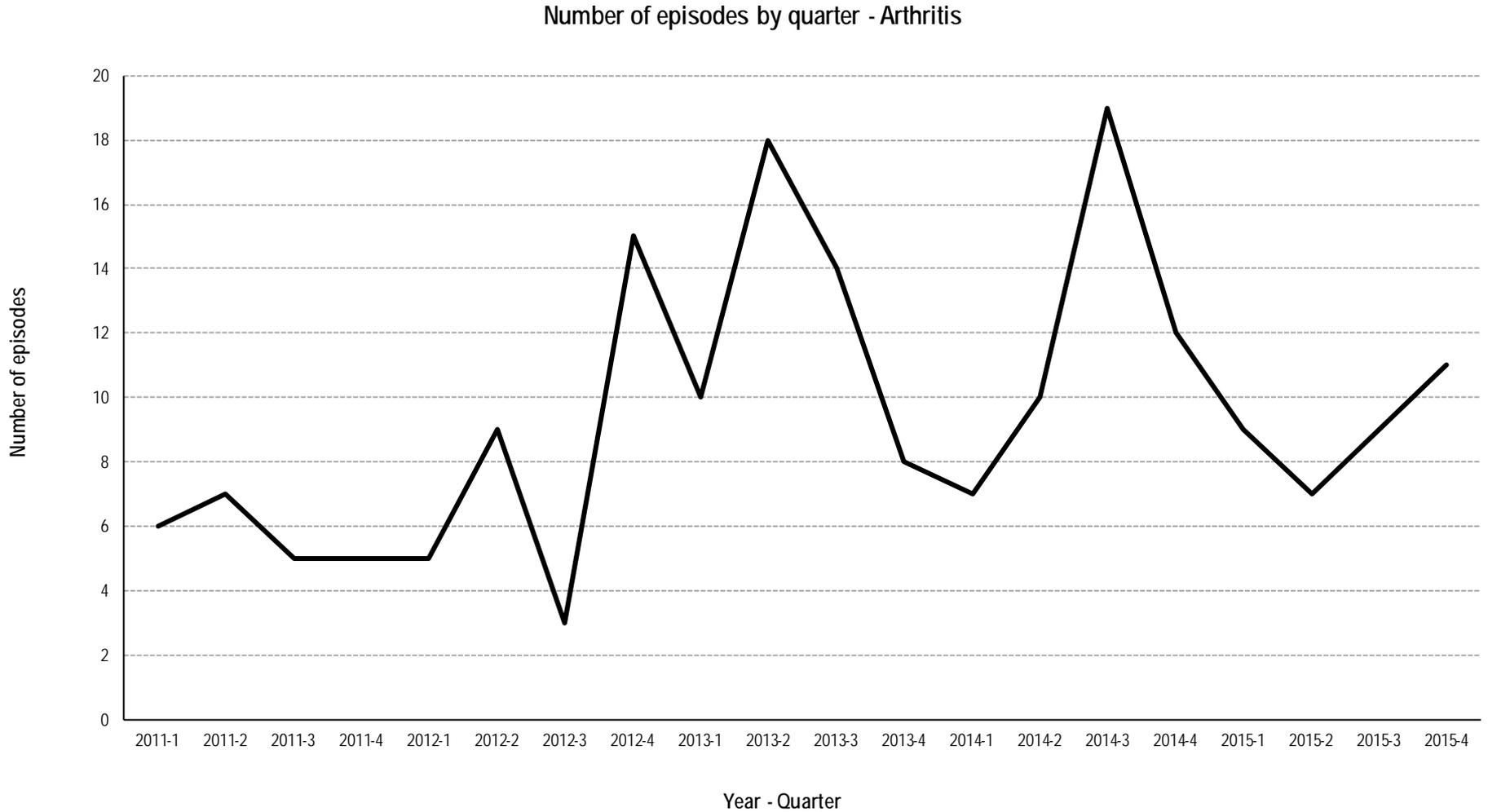
Amputation LOS and FIM change by AN-SNAP class



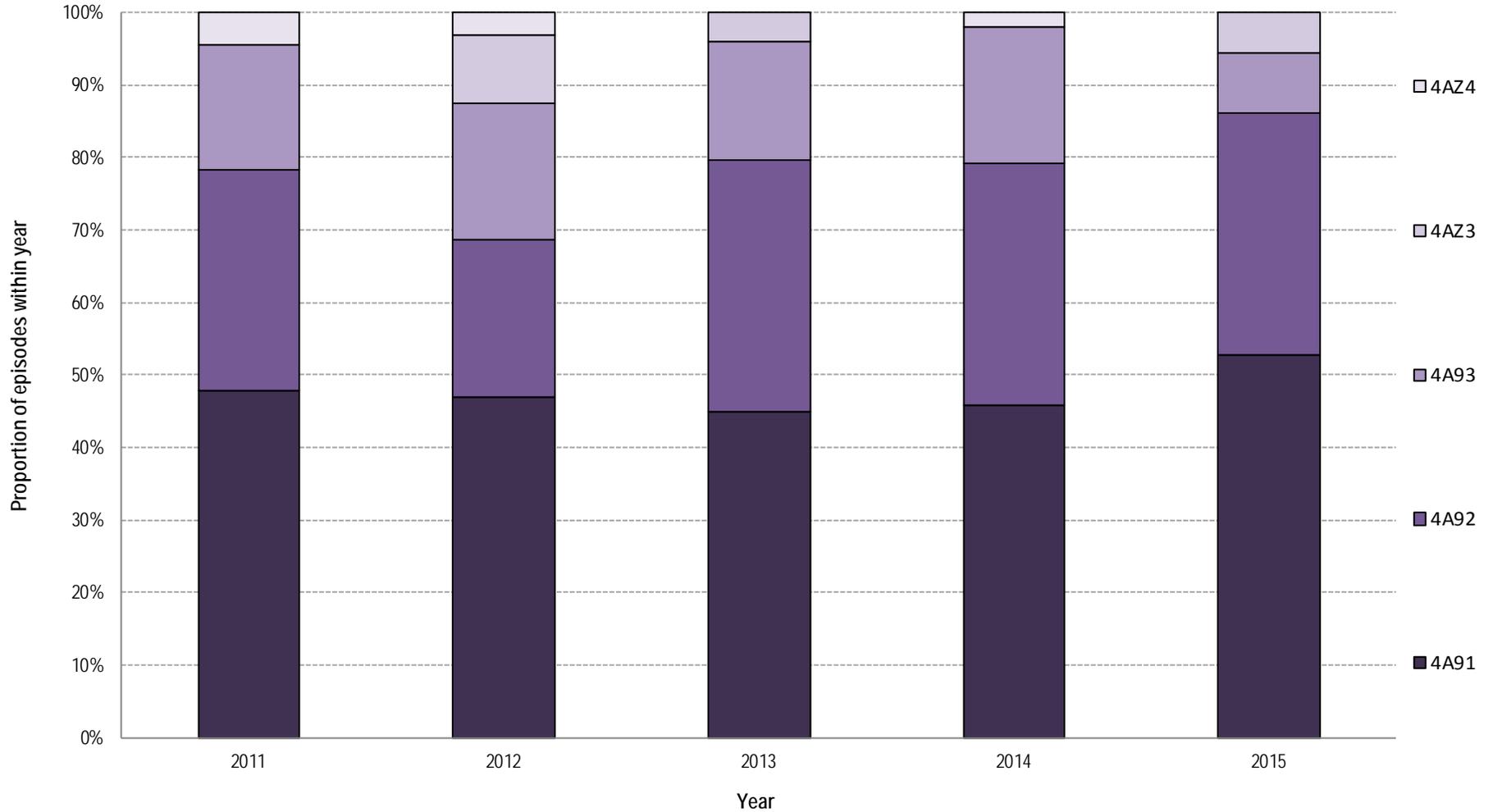
Change in outcome measures in amputation, 2014 to 2015



Arthritis episodes over time



Arthritis casemix over time



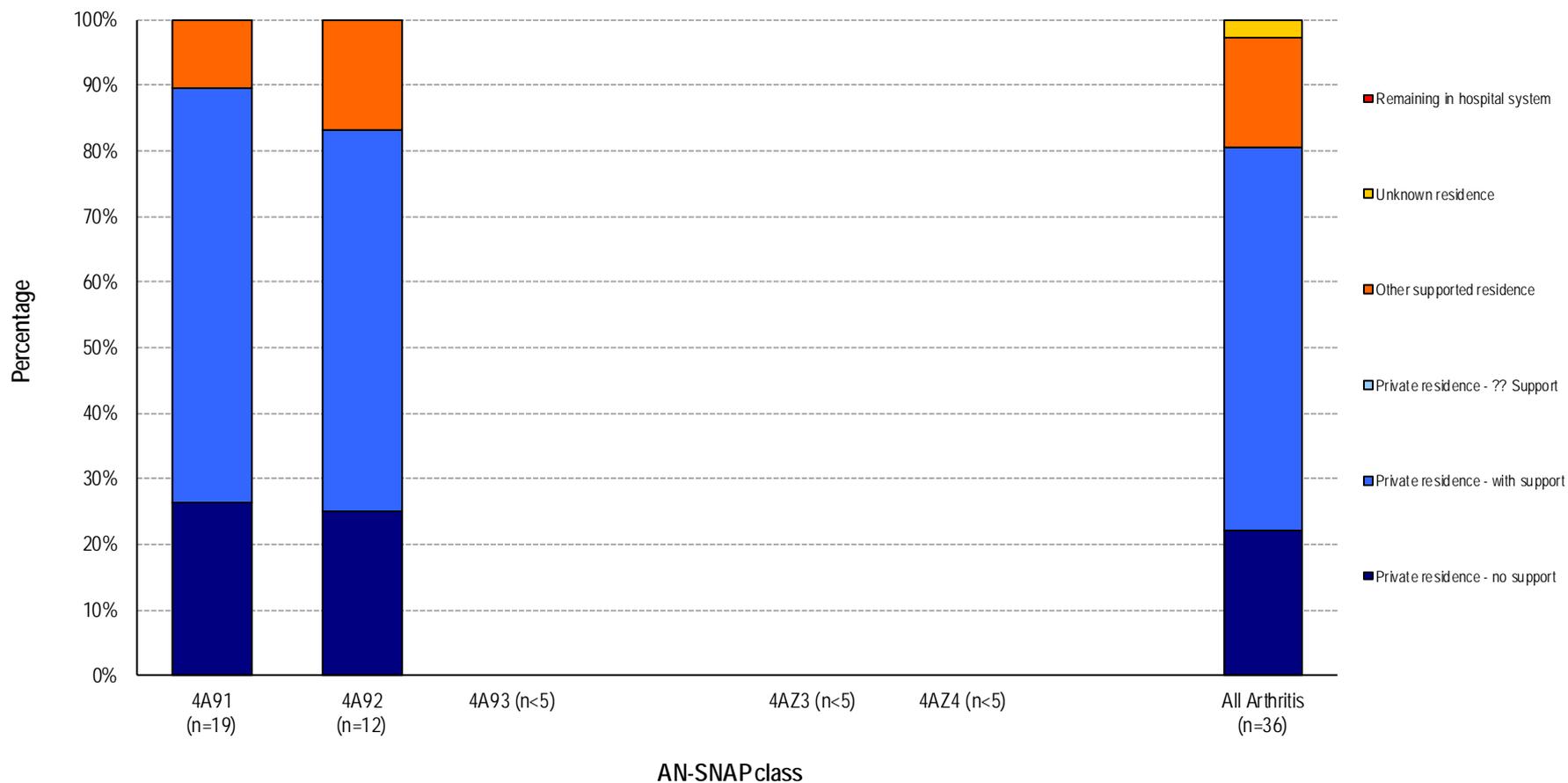
Arthritis episodes in 2015



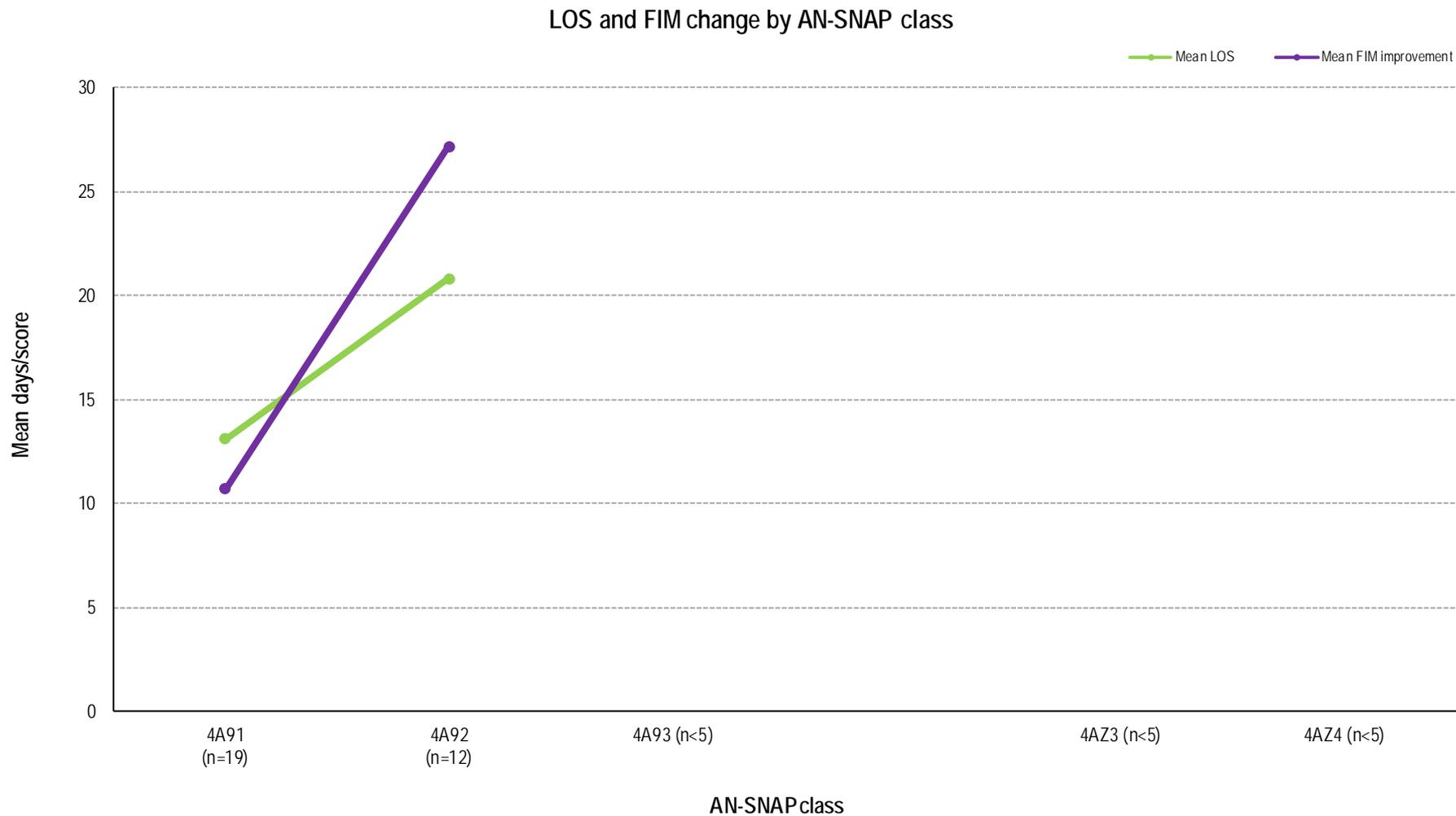
AN-SNAP class:	4A91	4A92	4A93	4AZ3	4AZ4	All Arthritis
Number of episodes	19	12	3	2	0	36
Proportion of episodes	52.8%	33.3%	n < 5	n < 5	n < 5	100.0%
Gender (%)						
<i>Female</i>	57.9%	75.0%	n < 5	n < 5	n < 5	69.4%
<i>Male</i>	42.1%	25.0%	n < 5	n < 5	n < 5	30.6%
Age group (%)						
<i>Under 65</i>	10.5%	8.3%	n < 5	n < 5	n < 5	8.3%
<i>Over 65</i>	89.5%	91.7%	n < 5	n < 5	n < 5	91.7%
Age (Mean+95%CI)	76.4 (71.7-81.0)	75.8 (69.8-81.7)	n < 5	n < 5	n < 5	78.3 (74.7-82.0)
Admission FIM (Mean+95%CI)	98.8 (93.4-104.3)	73.9 (68.1-79.8)	n < 5	n < 5	n < 5	82.9 (75.5-90.4)
LOS (Mean+95%CI)	13.1 (9.8-16.4)	20.8 (15.2-26.4)	n < 5	n < 5	n < 5	16.5 (13.6-19.4)
Discharge destination (%)						
<i>Discharged to community</i>	100.0%	100.0%	n < 5	n < 5	n < 5	100.0%
<i>Remaining in hospital system</i>	0.0%	0.0%	n < 5	n < 5	n < 5	0.0%
FIM change (Mean+95%CI)	10.7 (7.8-13.5)	27.2 (21.0-33.4)	n < 5	n < 5	n < 5	16.1 (11.9-20.3)
FIM efficiency (FIM change/LOS)	0.8	1.3	n < 5	n < 5	n < 5	1.0

Arthritis discharge destination by AN-SNAP class

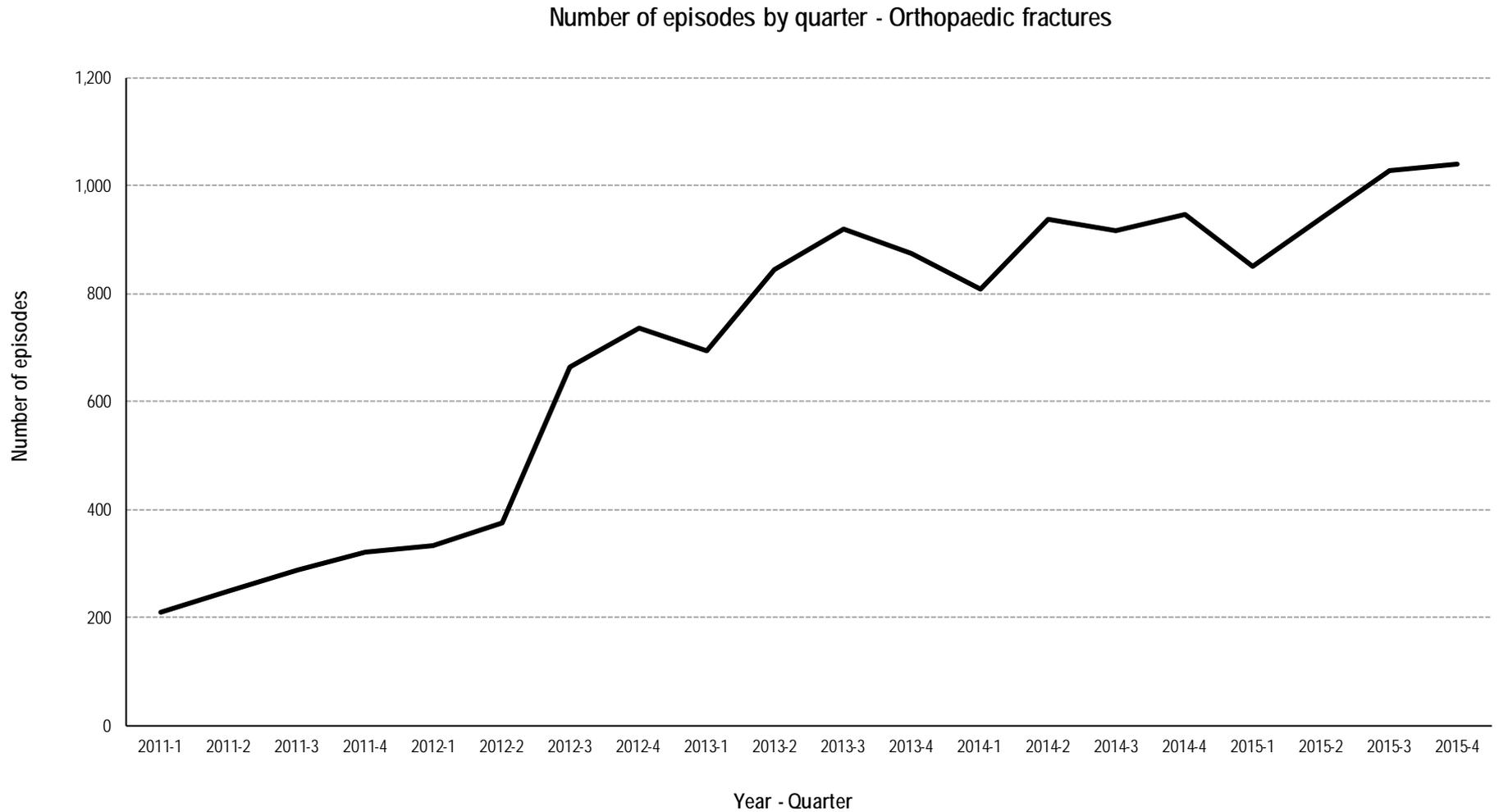
Discharge destination - Arthritis



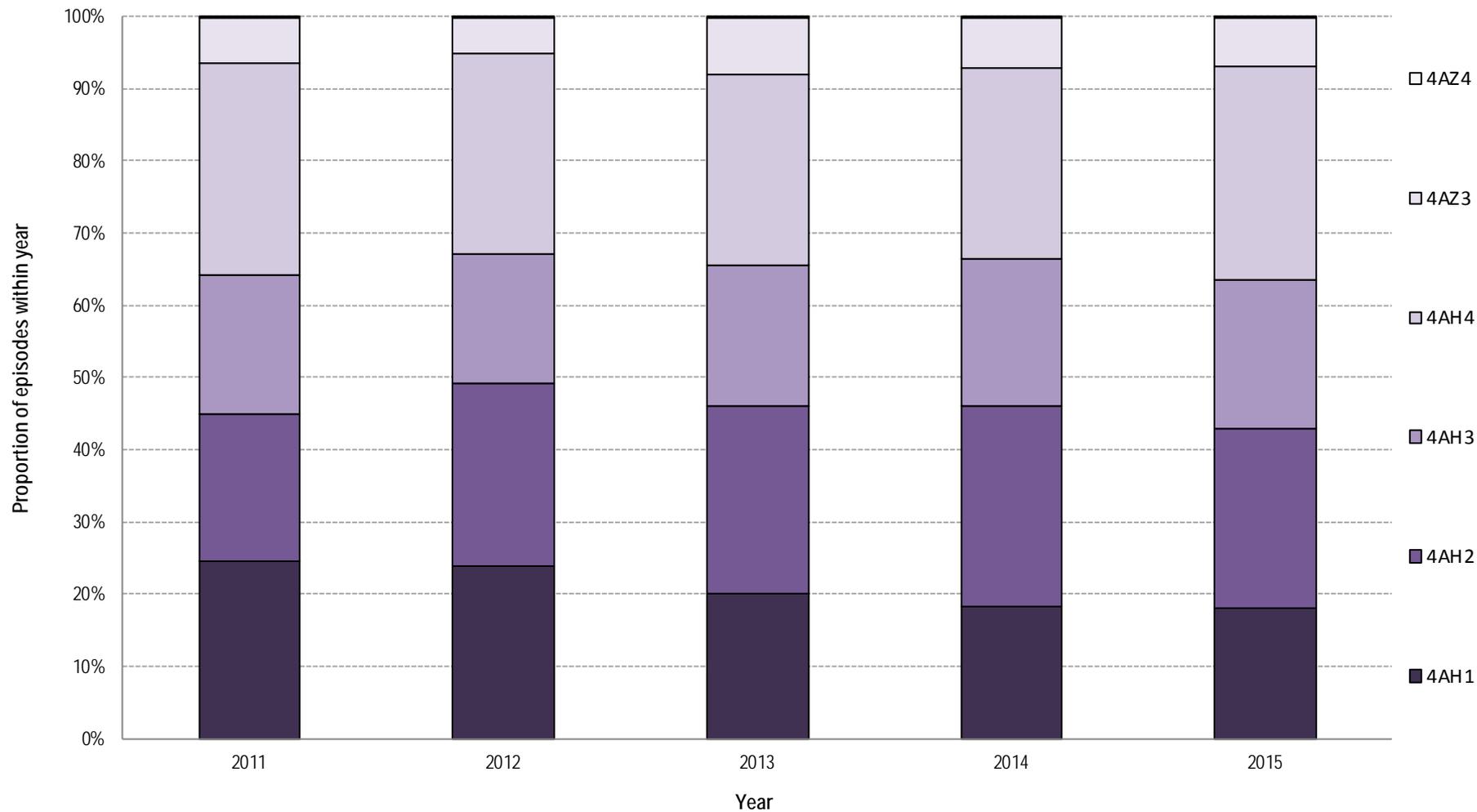
Arthritis LOS and FIM change by AN-SNAP class



Orthopaedic fracture episodes over time



Orthopaedic fracture casemix over time



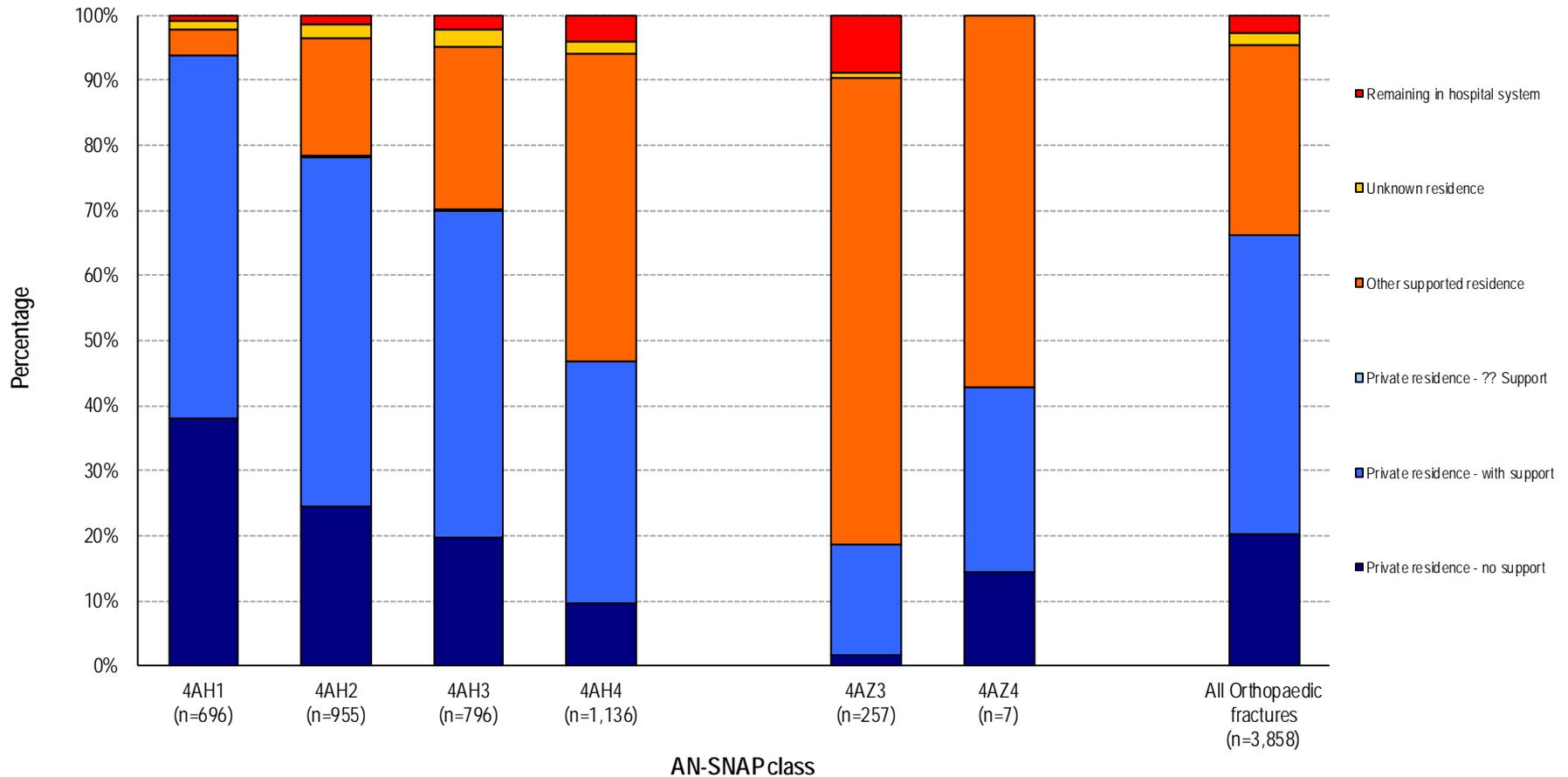
Orthopaedic fracture episodes in 2015



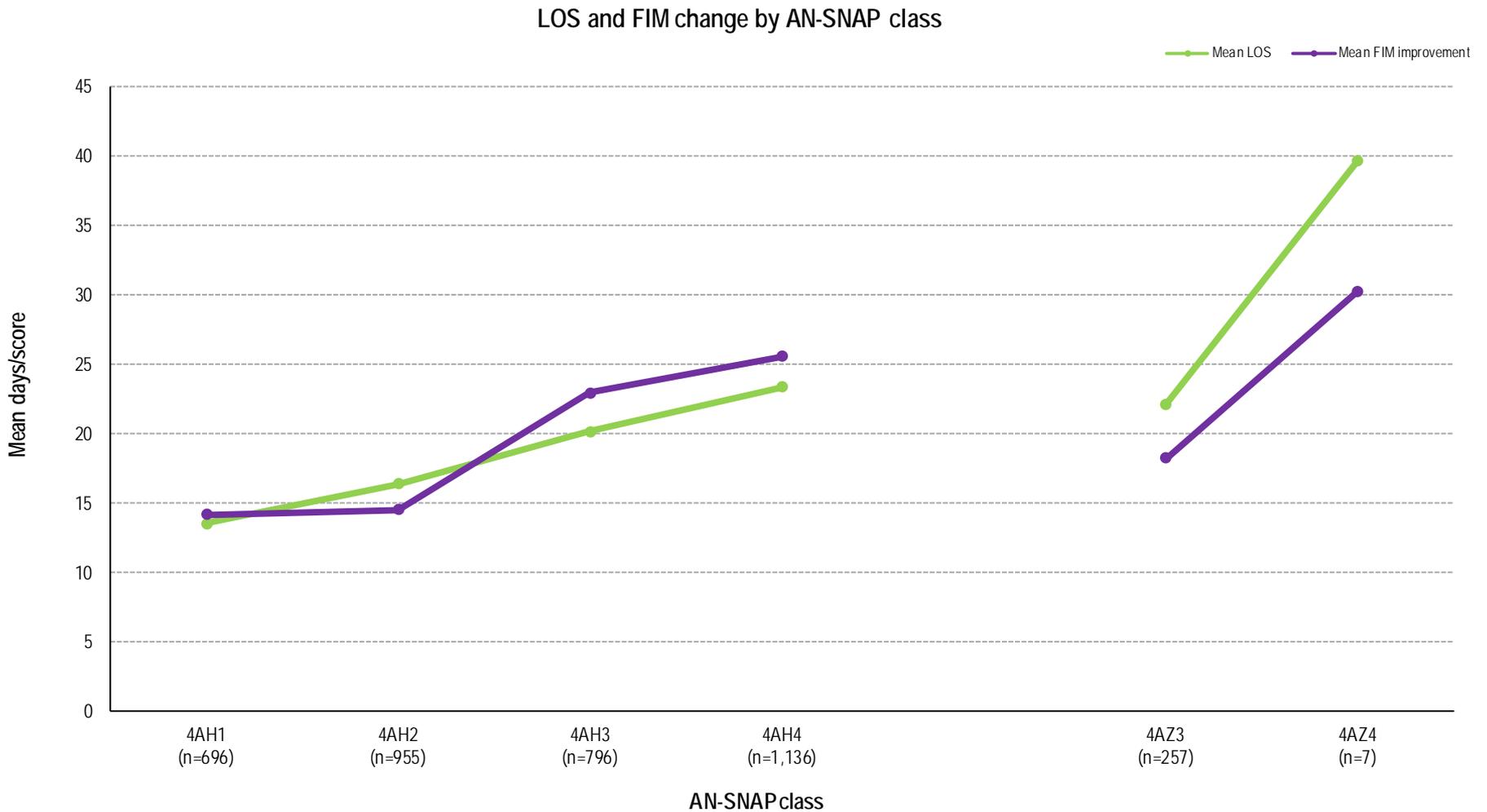
AN-SNAP class:	4AH1	4AH2	4AH3	4AH4	4AZ3	4AZ4	All Orthopaedic fractures
Number of episodes	696	955	796	1,136	257	7	3,858
Proportion of episodes	18.0%	24.8%	20.6%	29.4%	6.7%	0.2%	100.0%
Gender (%)							
<i>Female</i>	76.6%	74.2%	72.9%	71.9%	73.5%	71.4%	73.7%
<i>Male</i>	23.3%	25.8%	27.1%	28.1%	26.5%	28.6%	26.3%
Age group (%)							
<i>Under 65</i>	7.8%	5.0%	2.1%	2.6%	0.0%	100.0%	4.1%
<i>Over 65</i>	91.8%	94.9%	97.5%	96.9%	100.0%	0.0%	95.6%
Age (Mean+95%CI)	78.9 (78.1-79.7)	82.2 (81.6-82.7)	83.5 (82.9-84.1)	84.3 (83.8-84.8)	86.2 (85.3-87.0)	60.6 (57.3-63.9)	82.7 (82.4-83.0)
Admission FIM (Mean+95%CI)	96.2 (95.5-96.8)	84.2 (83.6-84.9)	69.4 (68.8-70.0)	51.3 (50.6-51.9)	29.3 (28.2-30.4)	29.0 (21.6-36.4)	70.5 (69.8-71.2)
LOS (Mean+95%CI)	13.6 (12.8-14.3)	16.4 (15.3-17.4)	20.2 (19.3-21.1)	23.3 (22.5-24.2)	22.1 (20.5-23.8)	39.7 (20.2-59.2)	19.1 (18.6-19.5)
Discharge destination (%)							
<i>Discharged to community</i>	99.1%	98.5%	97.8%	96.0%	91.1%	100.0%	97.3%
<i>Remaining in hospital system</i>	0.9%	1.5%	2.2%	4.0%	8.9%	0.0%	2.7%
FIM change (Mean+95%CI)	14.2 (13.6-14.8)	14.6 (13.9-15.2)	23.0 (22.1-23.8)	25.6 (24.6-26.6)	18.3 (15.6-21.0)	30.3 (11.2-49.4)	19.7 (19.2-20.2)
FIM efficiency (FIM change/LOS)	1.0	0.9	1.1	1.1	0.8	0.8	1.0

Orthopaedic fracture discharge destination by AN-SNAP class

Discharge destination - Orthopaedic fractures



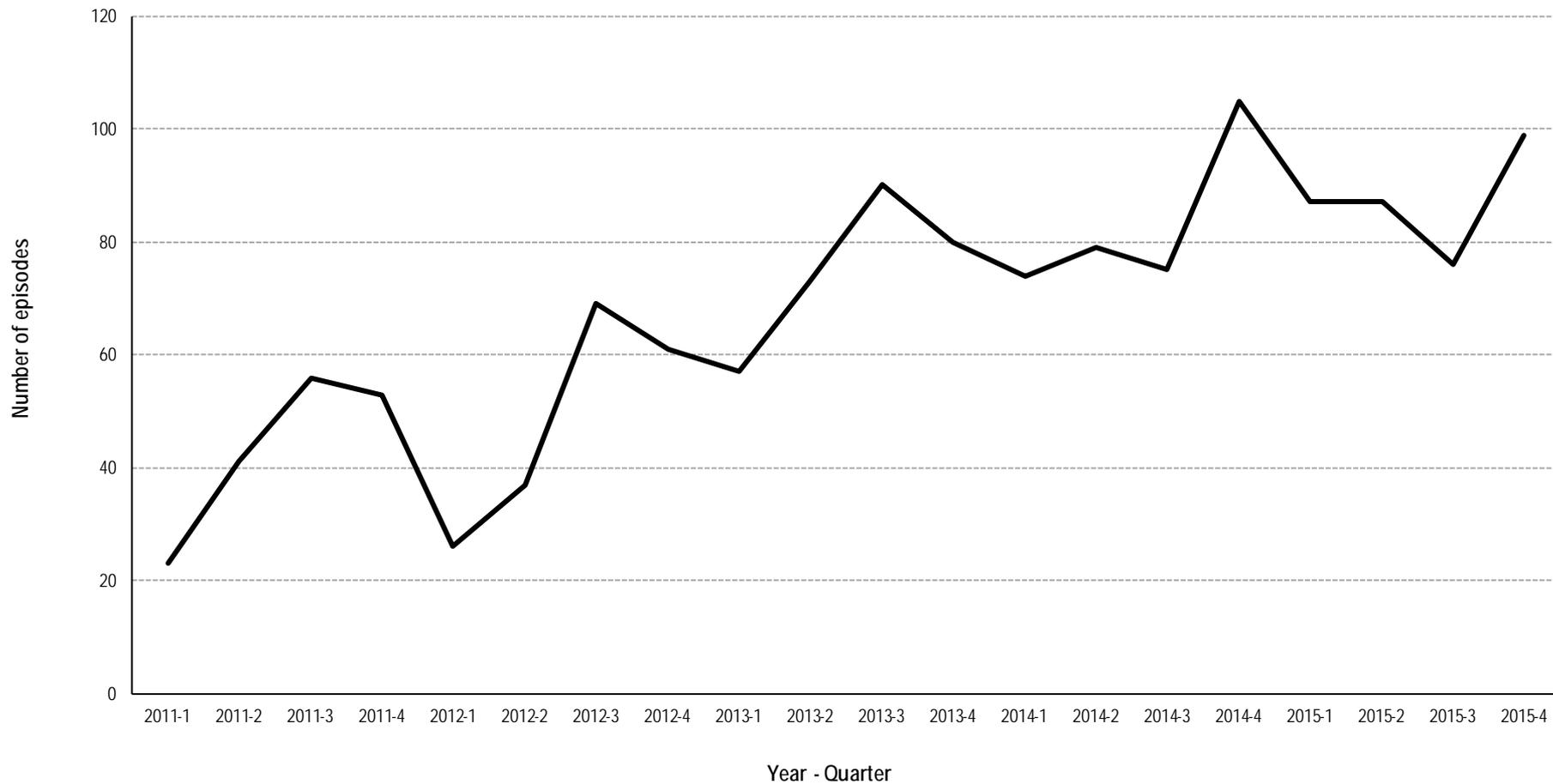
Orthopaedic fracture LOS and FIM change by AN-SNAP class



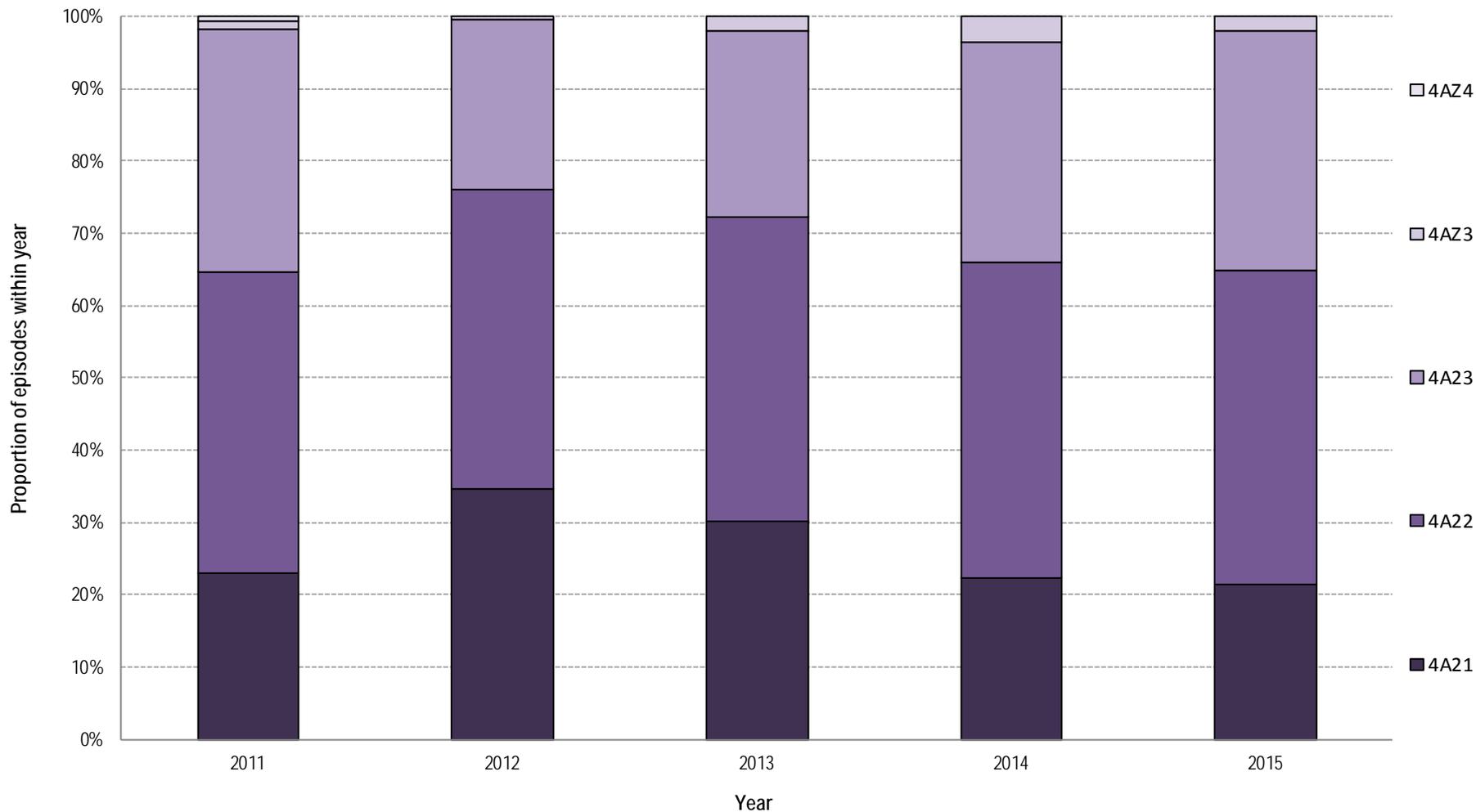
Orthopaedic replacement episodes over time



Number of episodes by quarter - Orthopaedic replacements



Orthopaedic replacement casemix over time



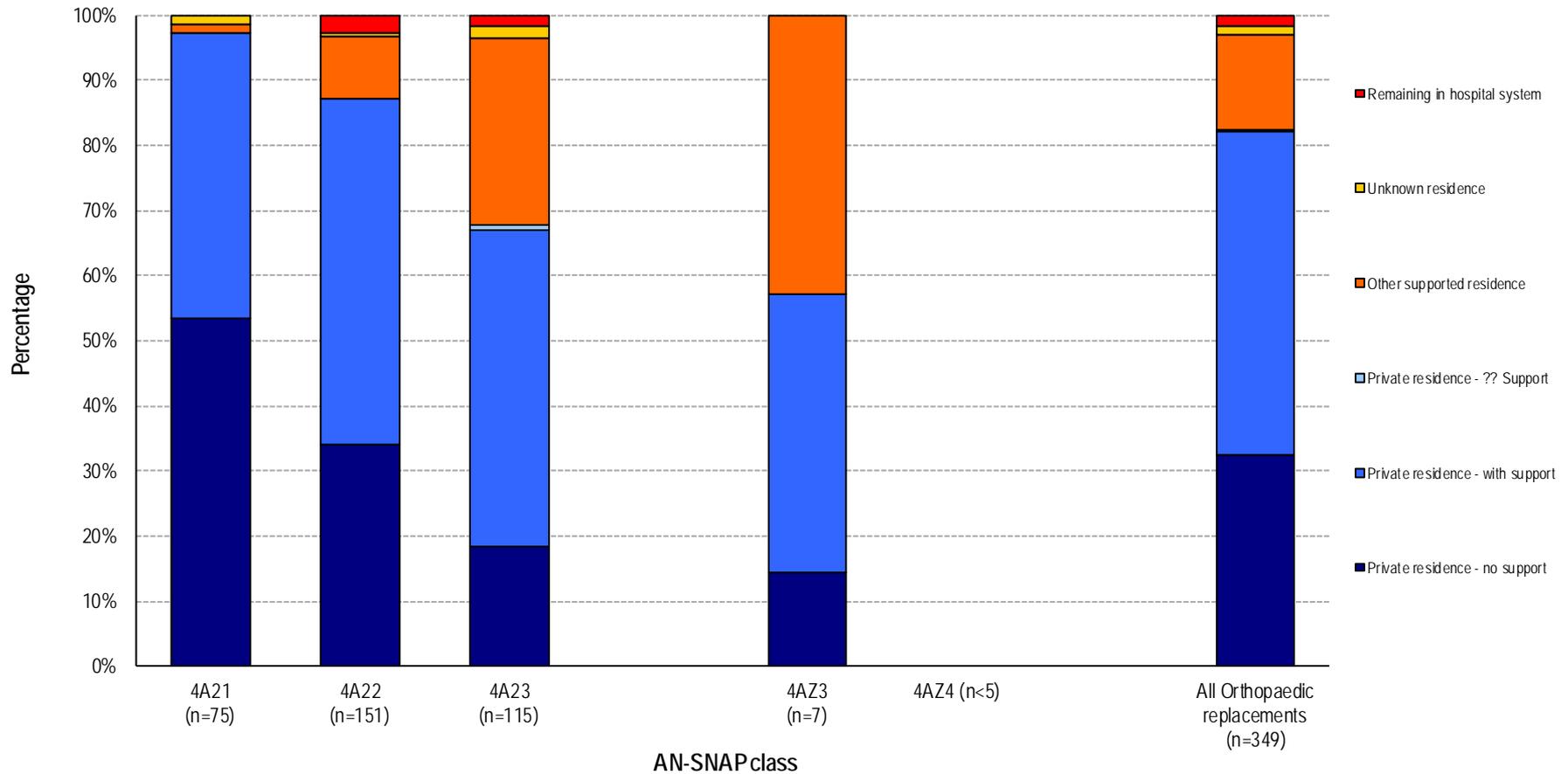
Orthopaedic replacement episodes in 2015



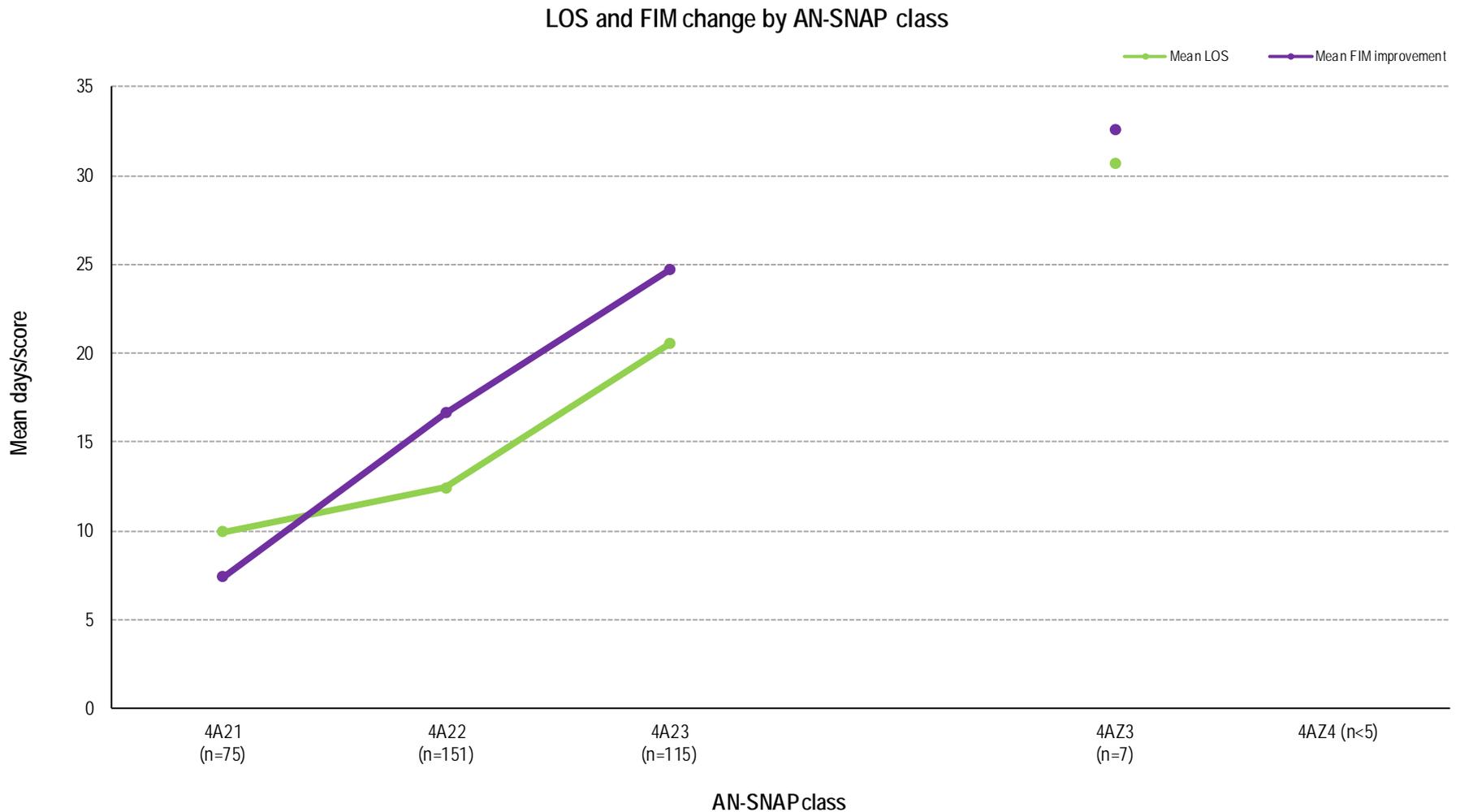
AN-SNAP class:	4A21	4A22	4A23	4AZ3	4AZ4	All Orthopaedic replacements
Number of episodes	75	151	115	7	0	349
Proportion of episodes	21.5%	43.3%	33.0%	2.0%	n < 5	100.0%
Gender (%)						
<i>Female</i>	68.0%	62.3%	69.6%	71.4%	n < 5	66.2%
<i>Male</i>	32.0%	37.7%	30.4%	28.6%	n < 5	33.8%
Age group (%)						
<i>Under 65</i>	5.3%	5.3%	7.0%	0.0%	n < 5	5.7%
<i>Over 65</i>	94.7%	94.7%	93.0%	100.0%	n < 5	94.3%
Age (Mean+95%CI)	79.1 (77.4-80.9)	79.3 (78.0-80.6)	79.1 (77.3-80.9)	81.9 (74.8-88.9)	n < 5	79.3 (78.4-80.2)
Admission FIM (Mean+95%CI)	104.4 (103.0-105.8)	87.0 (85.7-88.3)	62.6 (60.1-65.1)	37.0 (32.1-41.9)	n < 5	81.7 (79.6-83.8)
LOS (Mean+95%CI)	9.9 (8.8-11.1)	12.4 (11.4-13.5)	20.5 (18.3-22.8)	30.7 (15.0-46.5)	n < 5	14.9 (13.9-16.0)
Discharge destination (%)						
<i>Discharged to community</i>	100.0%	97.3%	98.3%	100.0%	n < 5	98.3%
<i>Remaining in hospital system</i>	0.0%	2.7%	1.7%	0.0%	n < 5	1.7%
FIM change (Mean+95%CI)	7.4 (6.3-8.5)	16.7 (15.3-18.0)	24.7 (22.2-27.1)	32.6 (8.7-56.4)	n < 5	17.6 (16.3-18.9)
FIM efficiency (FIM change/LOS)	0.7	1.3	1.2	1.1	n < 5	1.2

Orthopaedic replacement discharge destination by AN-SNAP class

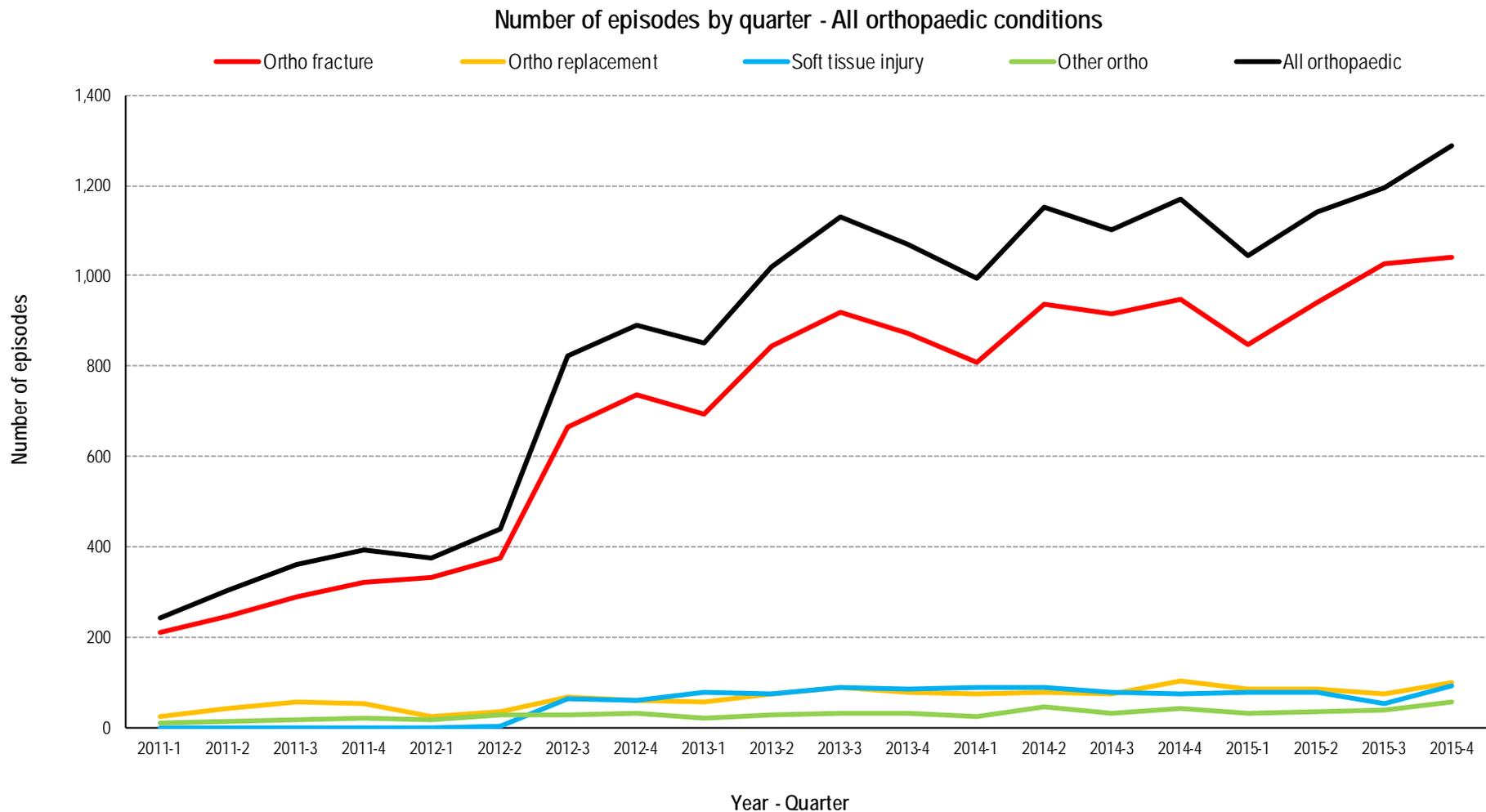
Discharge destination - Orthopaedic replacements



Orthopaedic replacement LOS and FIM change by AN-SNAP class



All orthopaedic episodes over time

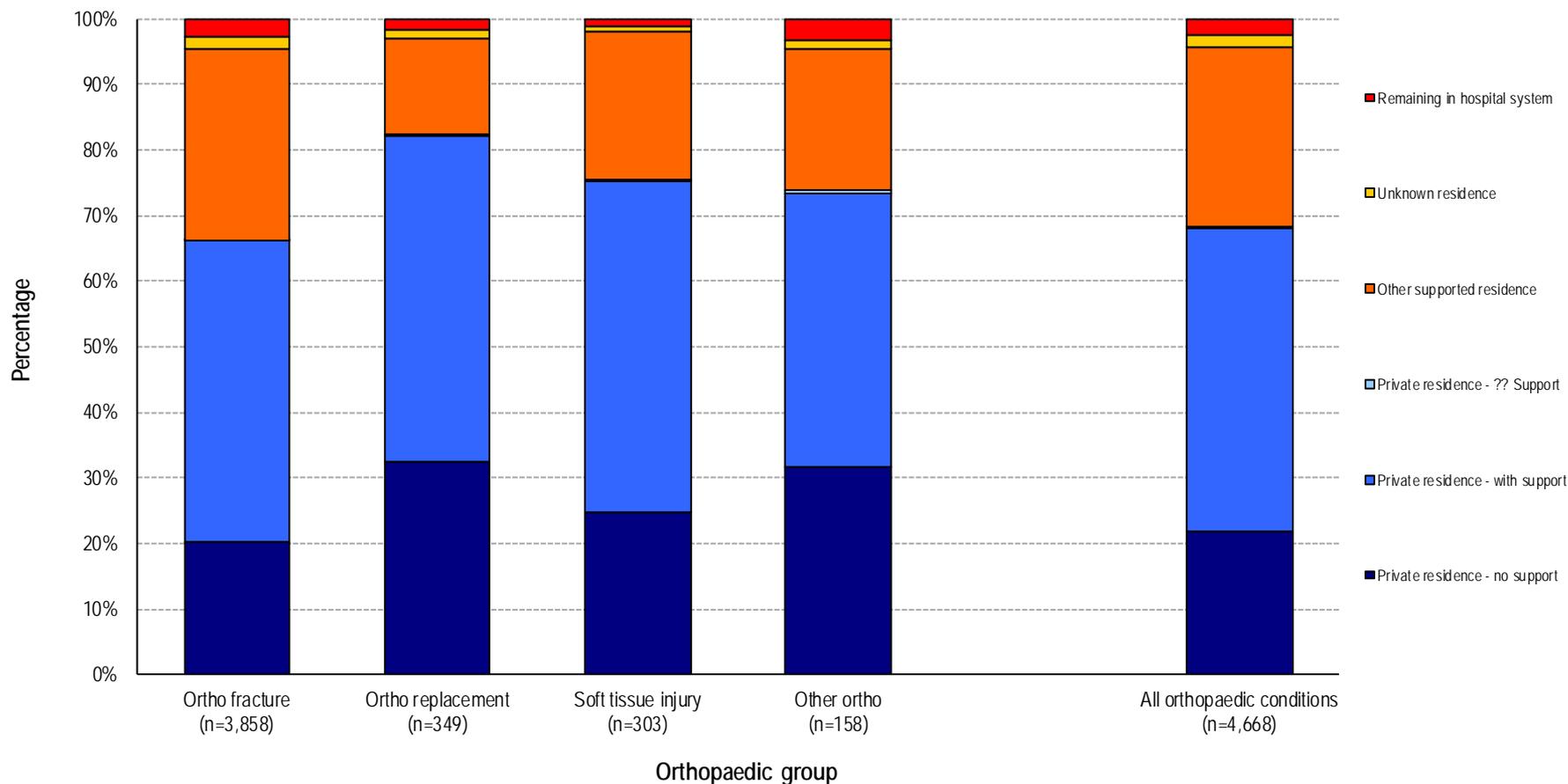


All orthopaedic episodes in 2015

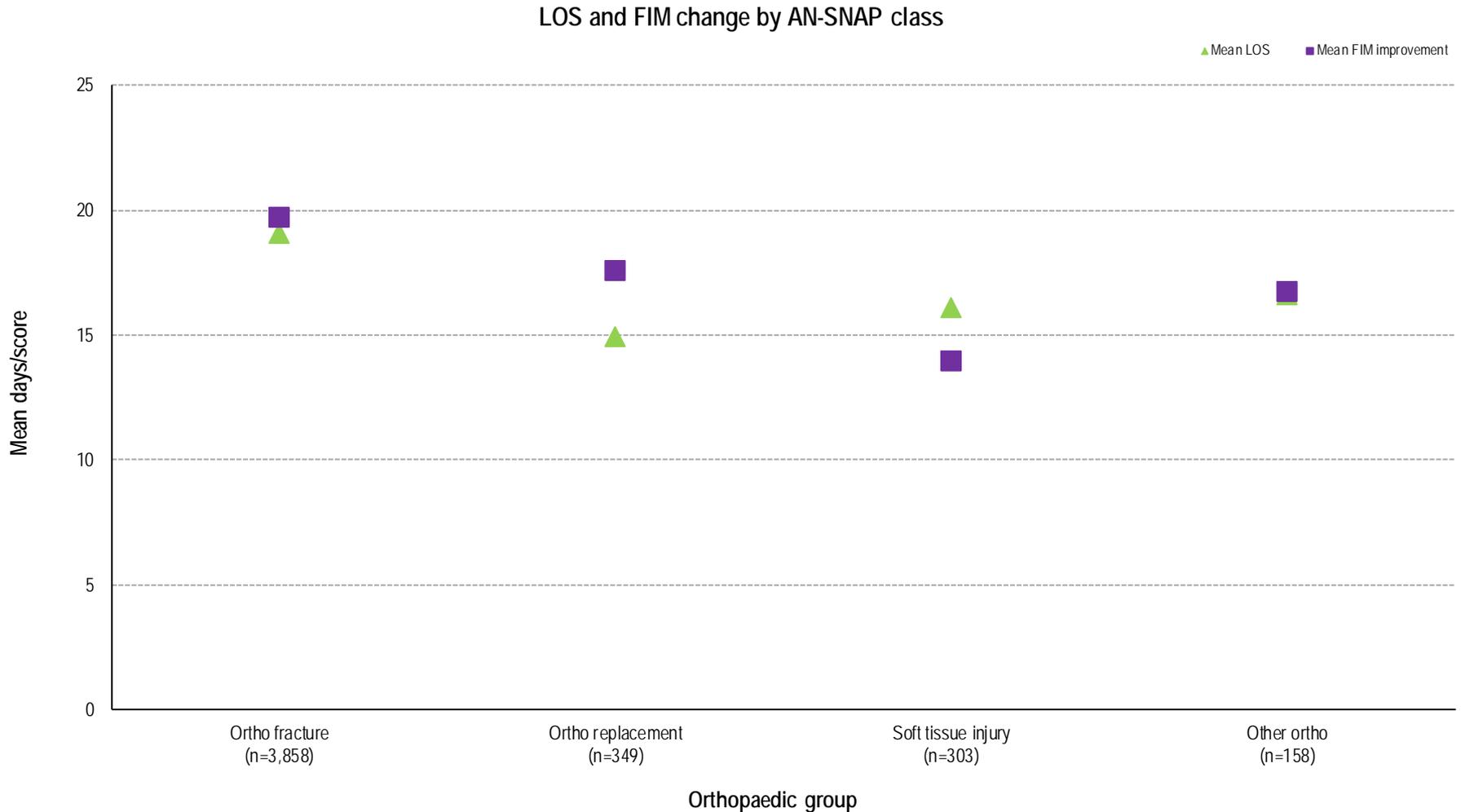
AN-SNAP class:	Ortho fracture	Ortho replacement	Soft tissue injury	Other ortho	All orthopaedic conditions
Number of episodes	3,858	349	303	158	4,668
Proportion of episodes	82.6%	7.5%	6.5%	3.4%	100.0%
Gender (%)					
<i>Female</i>	73.7%	66.2%	64.0%	51.9%	71.7%
<i>Male</i>	26.3%	33.8%	36.0%	48.1%	28.2%
Age group (%)					
<i>Under 65</i>	4.1%	5.7%	5.0%	22.2%	4.9%
<i>Over 65</i>	95.6%	94.3%	94.4%	77.8%	94.8%
Age (Mean+95%CI)	82.7 (82.4-83.0)	79.3 (78.4-80.2)	82.1 (81.0-83.3)	74.2 (72.0-76.3)	82.1 (81.8-82.4)
Admission FIM (Mean+95%CI)	70.5 (69.8-71.2)	81.7 (79.6-83.8)	79.9 (77.5-82.3)	81.8 (78.3-85.3)	72.4 (71.7-73.0)
LOS (Mean+95%CI)	19.1 (18.6-19.5)	14.9 (13.9-16.0)	16.1 (13.1-19.1)	16.6 (14.8-18.4)	18.5 (18.0-18.9)
Discharge destination (%)					
<i>Discharged to community</i>	97.3%	98.3%	99.0%	96.8%	97.5%
<i>Remaining in hospital system</i>	2.7%	1.7%	1.0%	3.2%	2.5%
FIM change (Mean+95%CI)	19.7 (19.2-20.2)	17.6 (16.3-18.9)	14.0 (12.6-15.4)	16.7 (14.5-18.9)	19.1 (18.6-19.5)
FIM efficiency (FIM change/LOS)	1.0	1.2	0.9	1.0	1.0

All Orthopaedic episodes discharge destination by orthopaedic group

Discharge destination - All orthopaedic conditions

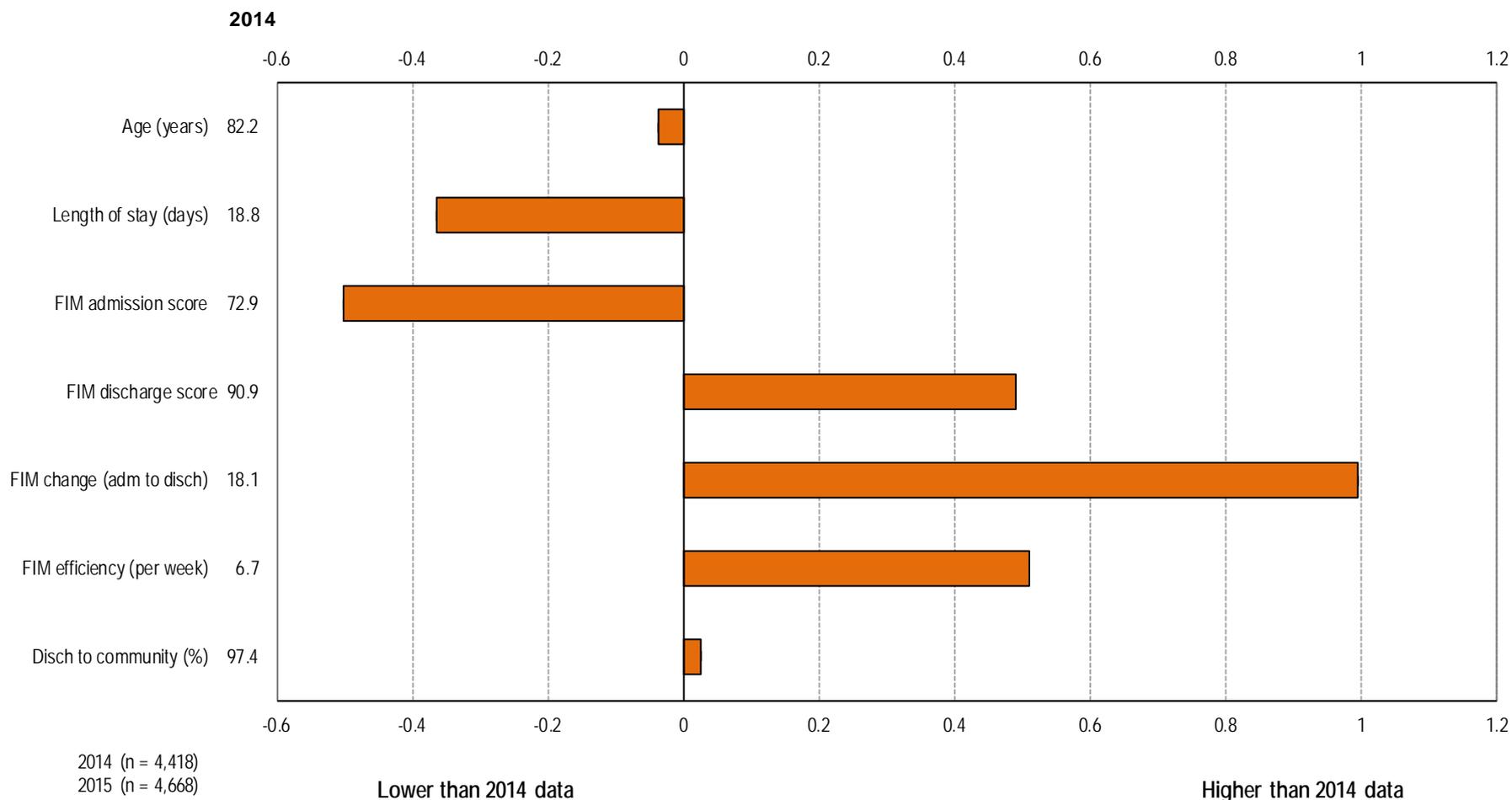


All orthopaedic conditions LOS and FIM change by orthopaedic group

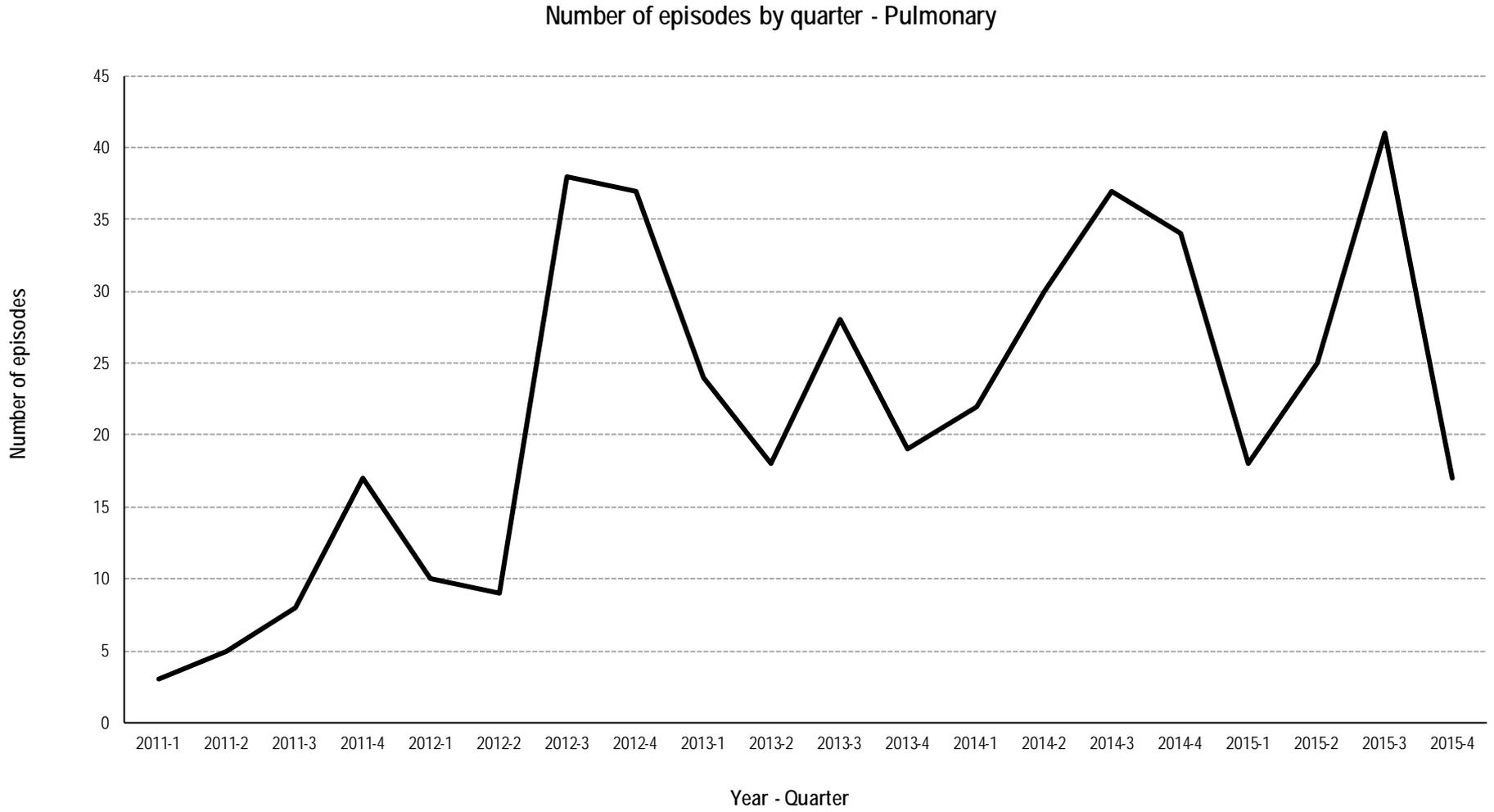


Change in outcome measures in orthopaedic conditions, 2014 to 2015

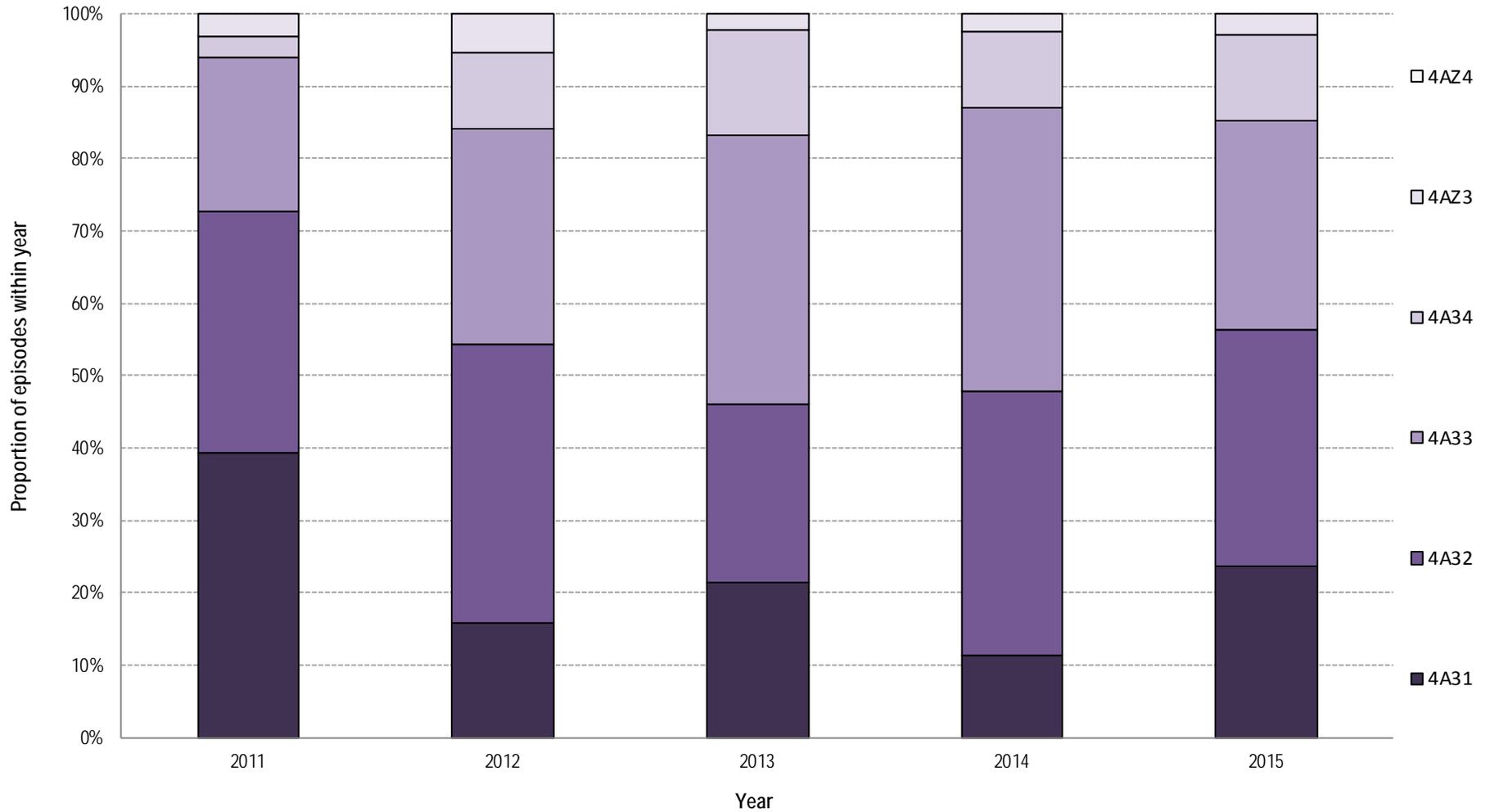
Difference from 2014 data - All orthopaedic conditions



Pulmonary episodes over time



Pulmonary casemix over time

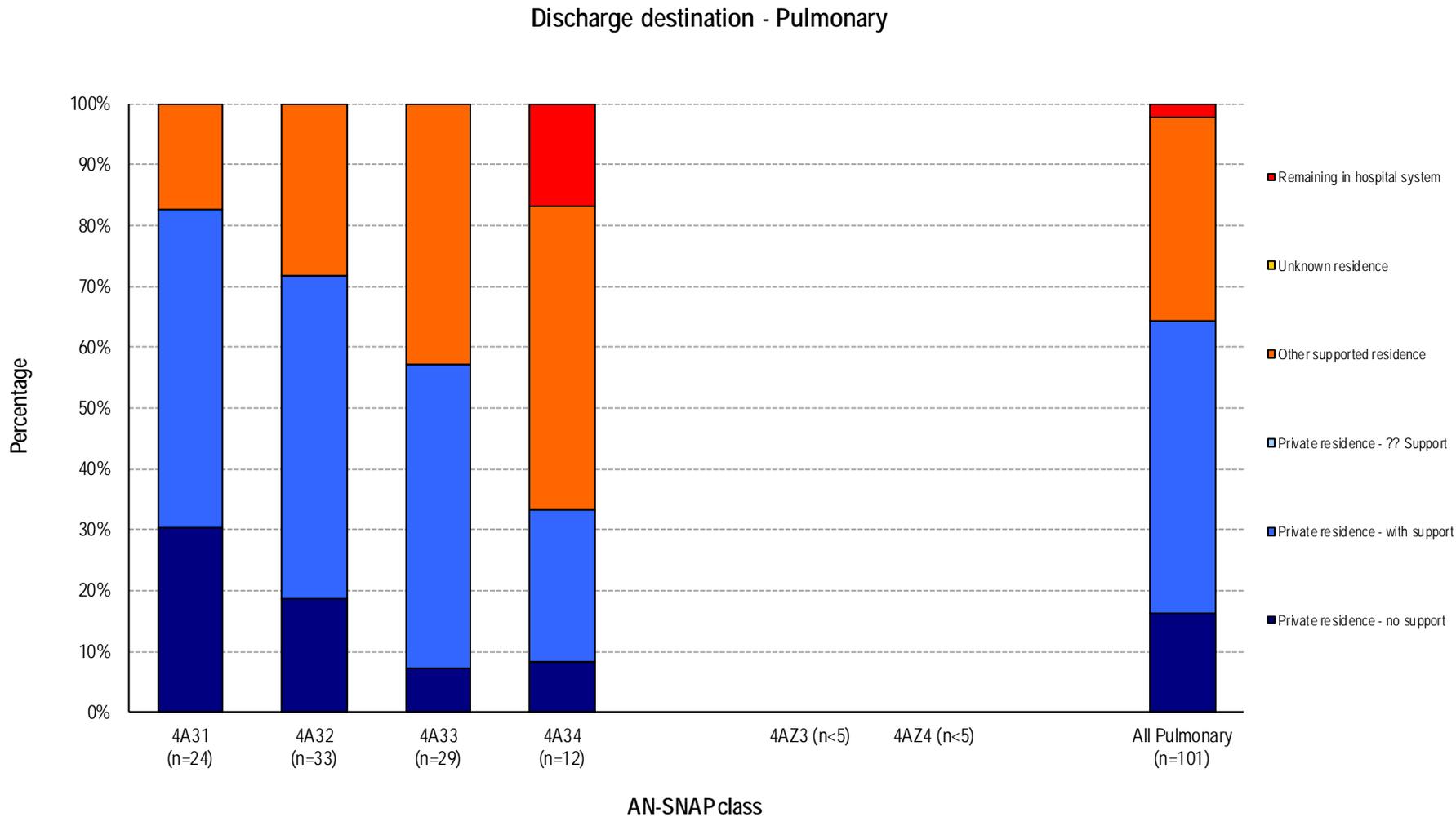


Pulmonary episodes in 2015

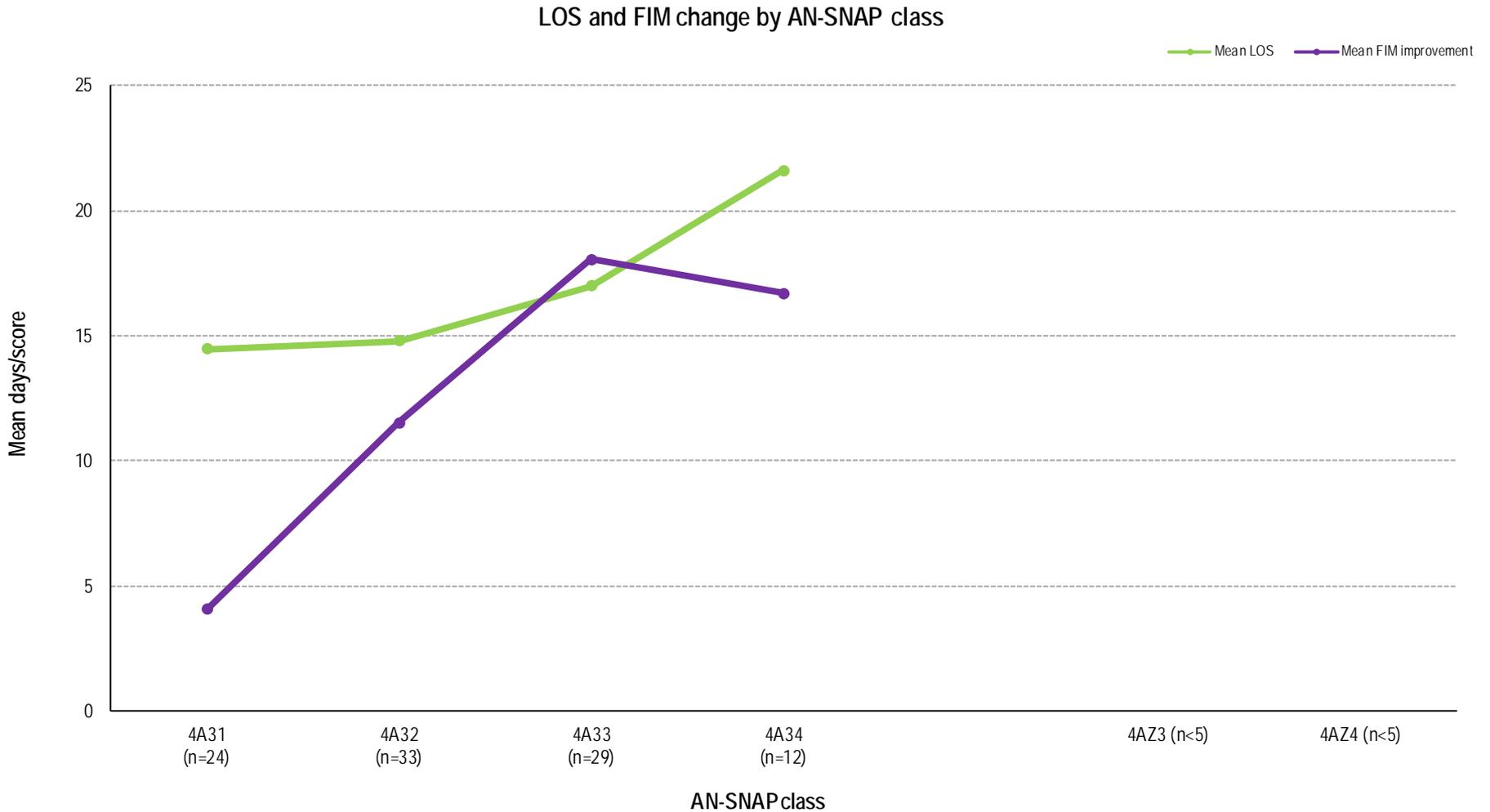


AN-SNAP class:	4A31	4A32	4A33	4A34	4AZ3	4AZ4	All Pulmonary
Number of episodes	24	33	29	12	3	0	101
Proportion of episodes	23.8%	32.7%	28.7%	11.9%	n < 5	n < 5	100.0%
Gender (%)							
<i>Female</i>	70.8%	51.5%	48.3%	66.7%	n < 5	n < 5	57.4%
<i>Male</i>	29.2%	48.5%	51.7%	33.3%	n < 5	n < 5	42.6%
Age group (%)							
<i>Under 65</i>	8.3%	3.0%	0.0%	0.0%	n < 5	n < 5	3.0%
<i>Over 65</i>	91.7%	97.0%	100.0%	100.0%	n < 5	n < 5	97.0%
Age (Mean+95%CI)	78.1 (75.0-81.3)	81.6 (78.3-84.9)	84.8 (82.0-87.6)	80.5 (76.2-84.8)	n < 5	n < 5	81.5 (79.8-83.1)
Admission FIM (Mean+95%CI)	107.3 (104.0-110.5)	87.1 (83.8-90.4)	66.0 (61.7-70.4)	45.4 (41.3-49.5)	n < 5	n < 5	79.5 (74.8-84.3)
LOS (Mean+95%CI)	14.5 (10.6-18.4)	14.8 (11.8-17.8)	17.0 (13.9-20.1)	21.6 (17.3-25.9)	n < 5	n < 5	16.2 (14.5-18.0)
Discharge destination (%)							
<i>Discharged to community</i>	100.0%	100.0%	100.0%	83.3%	n < 5	n < 5	98.0%
<i>Remaining in hospital system</i>	0.0%	0.0%	0.0%	16.7%	n < 5	n < 5	2.0%
FIM change (Mean+95%CI)	4.1 (1.4-6.8)	11.5 (8.3-14.7)	18.1 (13.6-22.5)	16.7 (8.7-24.7)	n < 5	n < 5	12.3 (10.0-14.7)
FIM efficiency (FIM change/LOS)	0.3	0.8	1.1	0.8	n < 5	n < 5	0.8

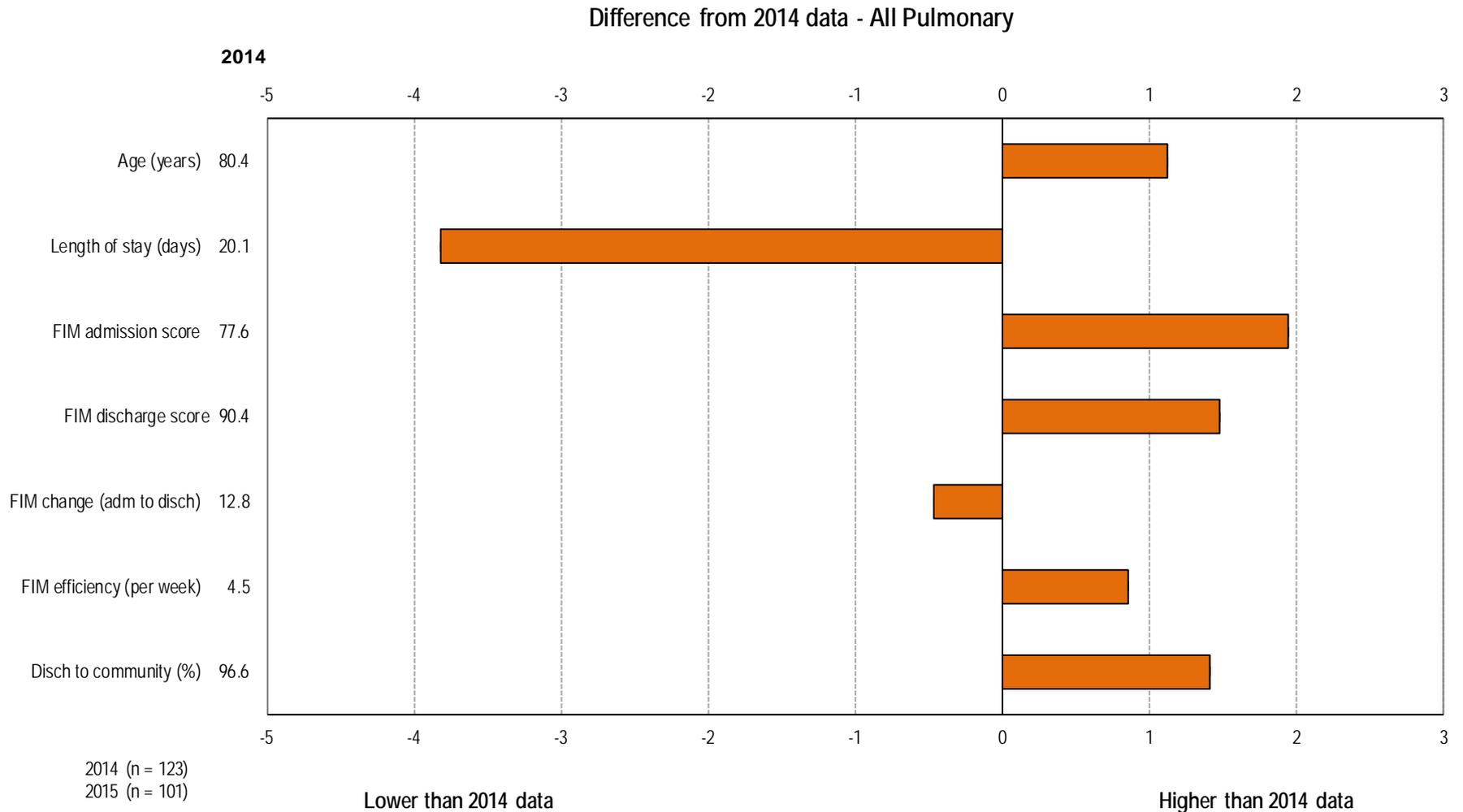
Pulmonary discharge destination by AN-SNAP class



Pulmonary LOS and FIM change by AN-SNAP class

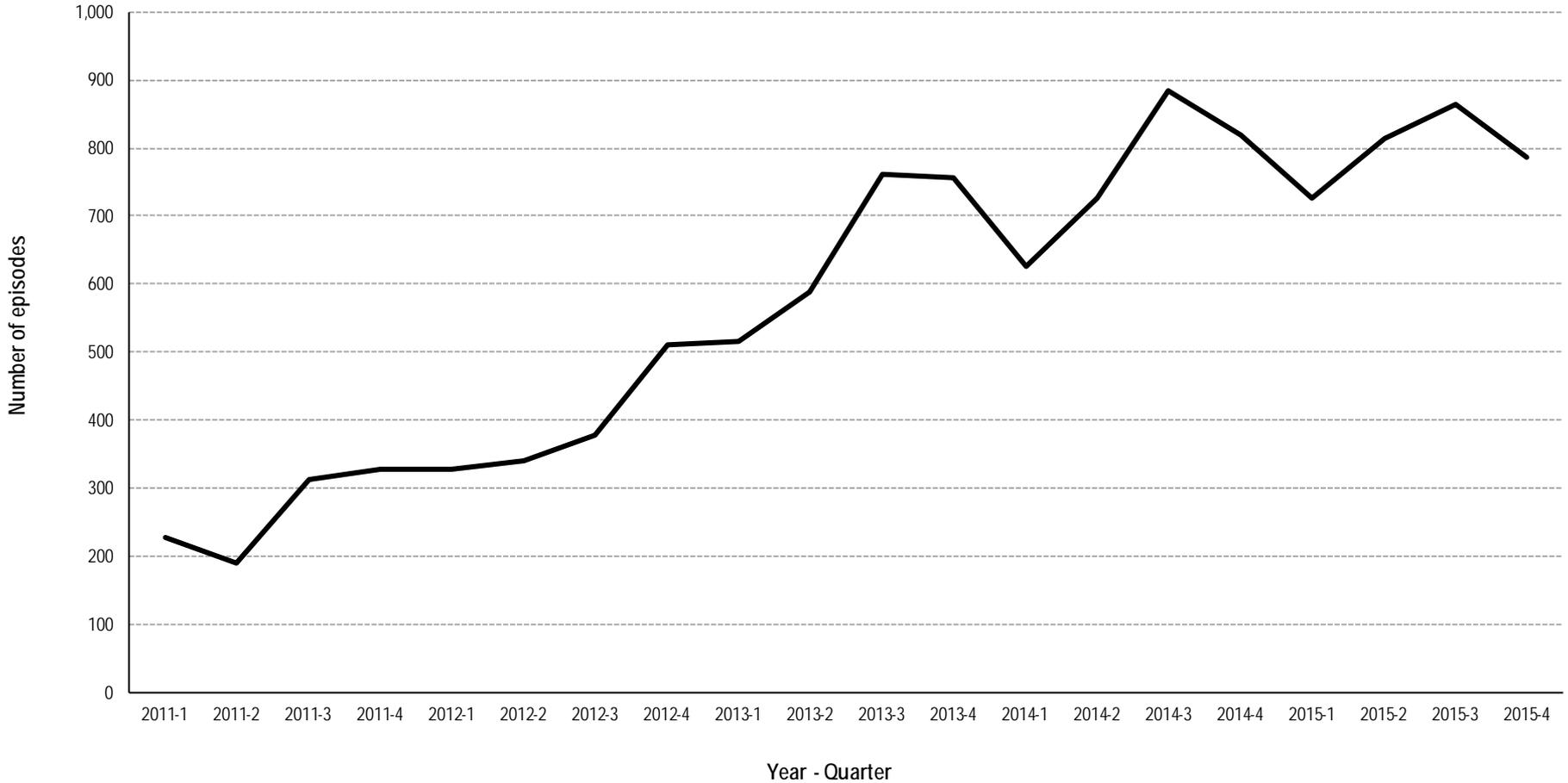


Change in outcome measures in pulmonary, 2014 to 2015

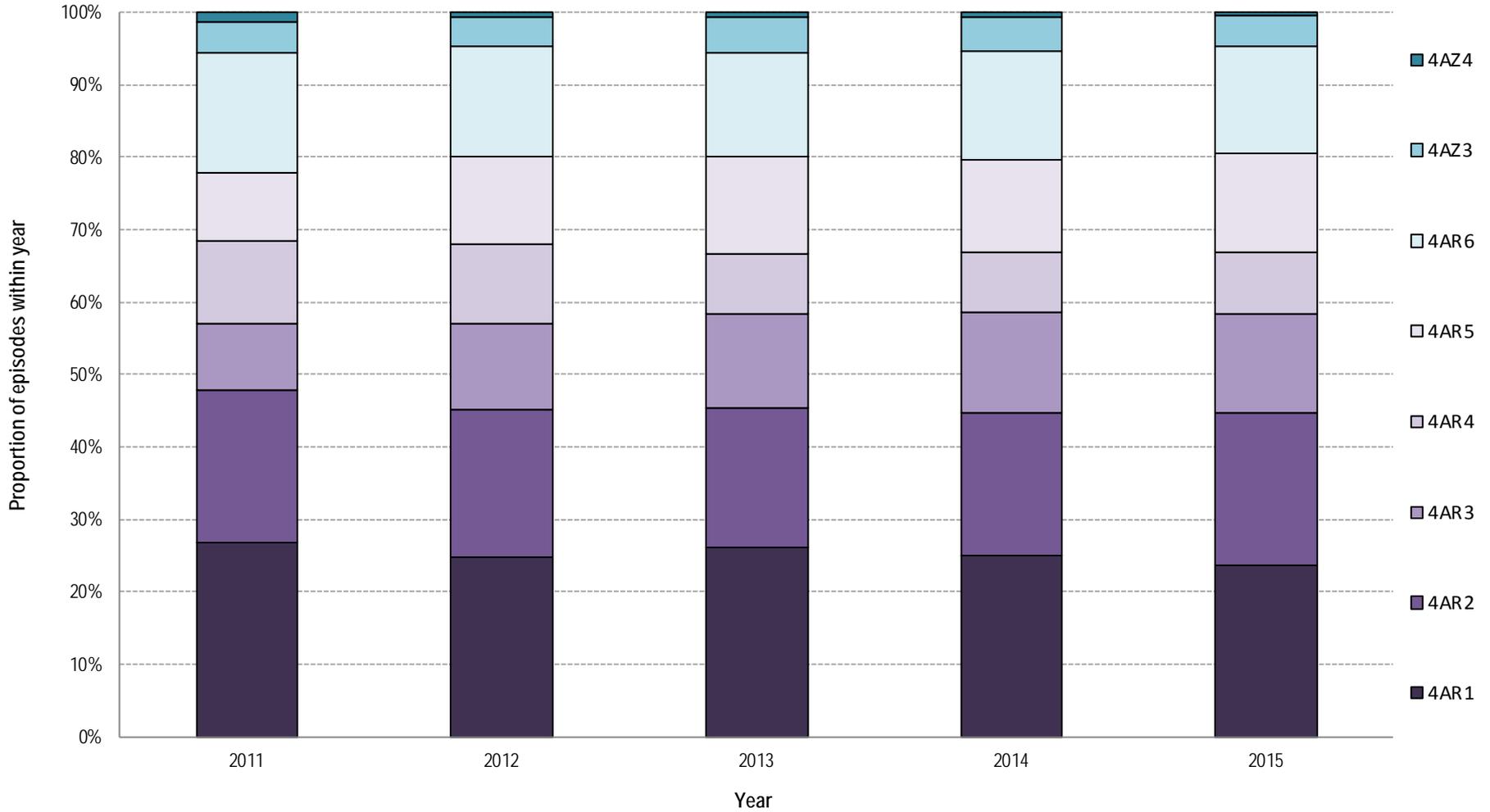


Reconditioning episodes over time

Number of episodes by quarter - Reconditioning



Reconditioning casemix over time



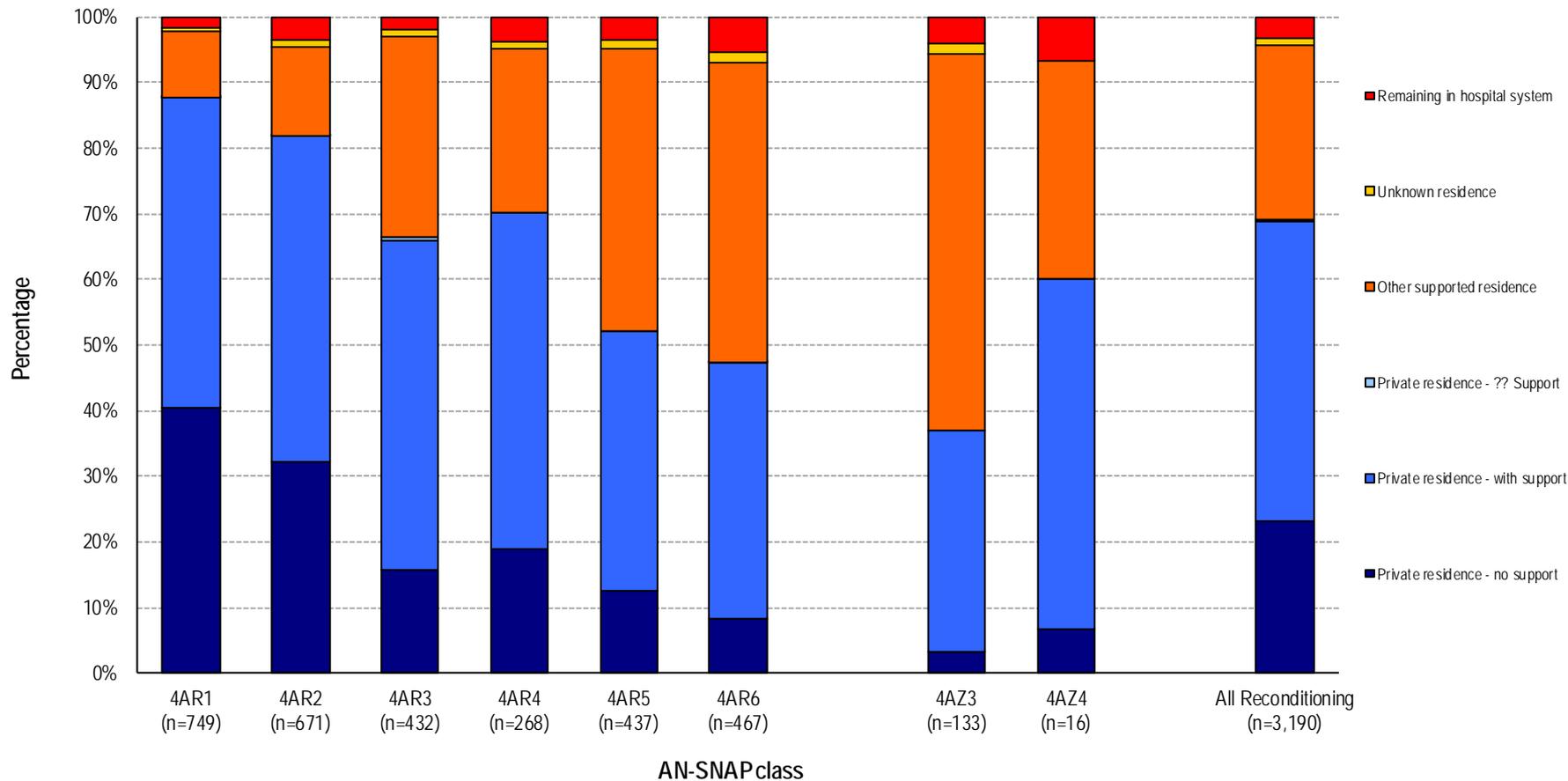
Reconditioning episodes in 2015



AN-SNAP class:	4AR1	4AR2	4AR3	4AR4	4AR5	4AR6	4AZ3	4AZ4	All Reconditioning
Number of episodes	749	671	432	268	437	467	133	16	3,190
Proportion of episodes	23.5%	21.0%	13.5%	8.4%	13.7%	14.6%	4.2%	0.5%	100.0%
Gender (%)									
<i>Female</i>	54.1%	54.4%	54.2%	49.6%	51.0%	48.8%	53.4%	43.8%	52.5%
<i>Male</i>	45.9%	45.6%	45.8%	50.4%	49.0%	51.2%	46.6%	50.0%	47.4%
Age group (%)									
<i>Under 65</i>	11.9%	6.7%	3.5%	9.0%	7.1%	9.2%	0.0%	100.0%	8.3%
<i>Over 65</i>	87.6%	92.7%	95.6%	90.3%	92.7%	90.8%	100.0%	0.0%	91.2%
Age (Mean+95%CI)	77.7 (76.9-78.5)	80.0 (79.2-80.8)	82.1 (81.2-83.0)	79.6 (78.2-80.9)	82.2 (81.3-83.2)	79.7 (78.6-80.7)	81.7 (80.2-83.1)	49.6 (42.7-56.6)	79.9 (79.5-80.3)
Admission FIM (Mean+95%CI)	103.1 (102.5-103.8)	88.5 (88.0-88.9)	75.7 (75.1-76.4)	71.9 (71.2-72.6)	59.1 (58.4-59.8)	46.5 (45.5-47.4)	29.5 (27.6-31.3)	40.4 (34.5-46.2)	76.5 (75.6-77.3)
LOS (Mean+95%CI)	11.8 (11.2-12.3)	14.8 (14.1-15.6)	16.2 (15.2-17.2)	19.6 (17.3-21.9)	20.3 (18.3-22.3)	24.4 (22.8-26.1)	25.3 (21.3-29.3)	27.8 (16.6-39.0)	17.2 (16.7-17.8)
Discharge destination (%)									
<i>Discharged to community</i>	98.4%	96.4%	98.1%	96.2%	96.5%	94.7%	95.9%	93.3%	96.8%
<i>Remaining in hospital system</i>	1.6%	3.6%	1.9%	3.8%	3.5%	5.3%	4.1%	6.7%	3.2%
FIM change (Mean+95%CI)	7.4 (6.9-7.9)	14.3 (13.6-15.1)	13.8 (12.6-14.9)	21.4 (19.8-23.0)	19.1 (17.7-20.6)	21.2 (19.3-23.0)	15.0 (11.5-18.5)	15.8 (5.0-26.6)	14.8 (14.3-15.3)
FIM efficiency (FIM change/LOS)	0.6	1.0	0.8	1.1	0.9	0.9	0.6	0.6	0.9

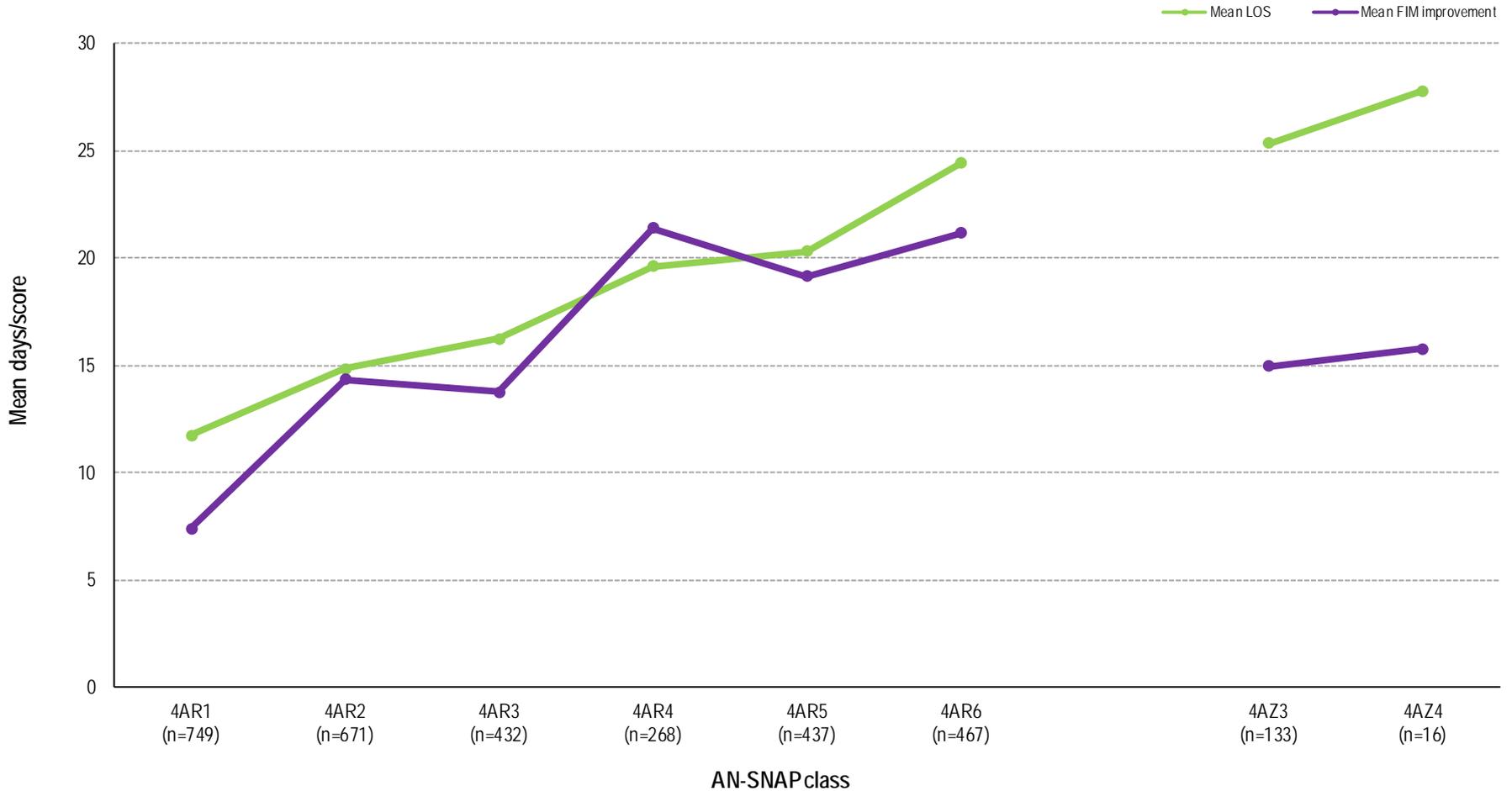
Reconditioning discharge destination by AN-SNAP class

Discharge destination - Reconditioning

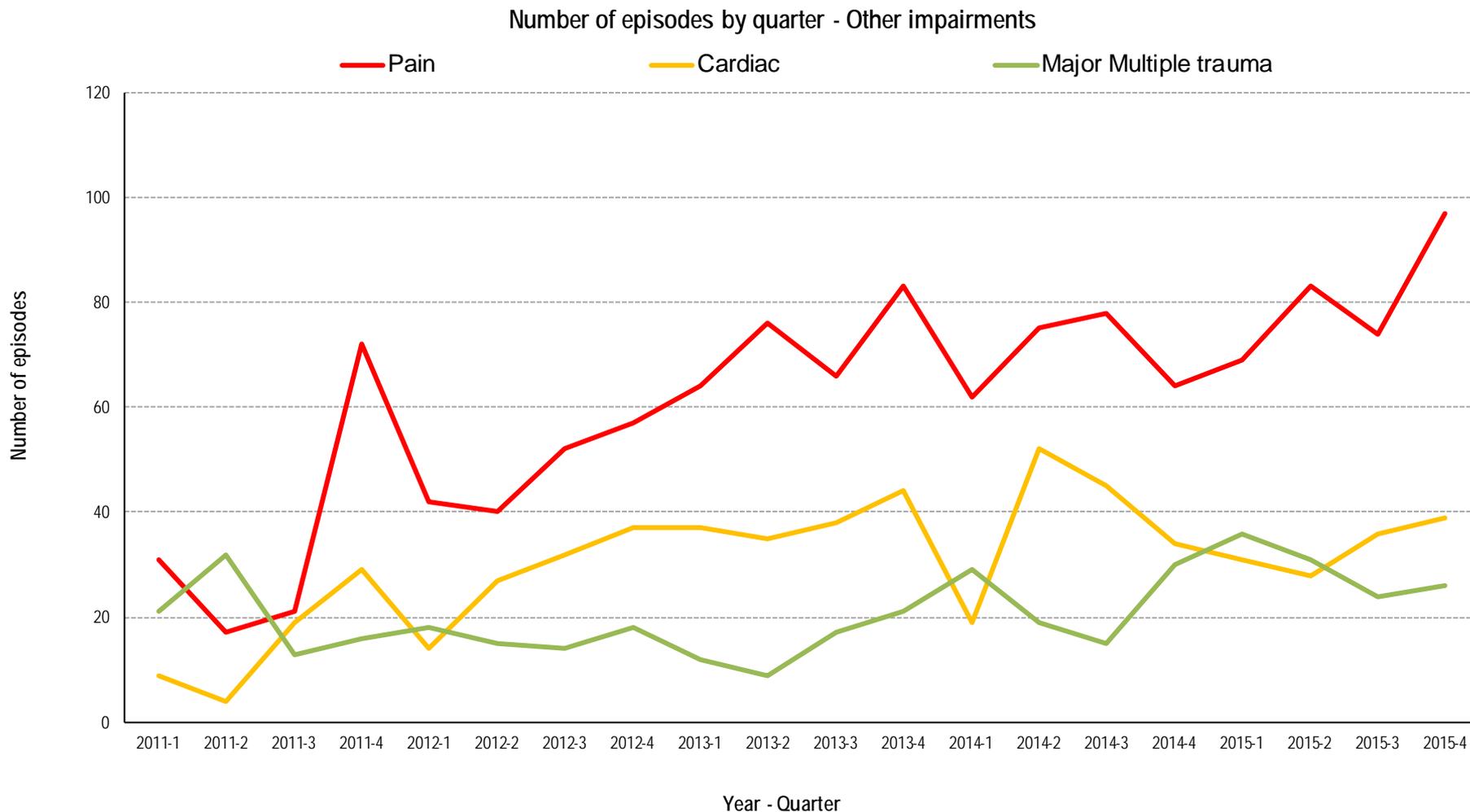


Reconditioning LOS and FIM change by AN-SNAP class

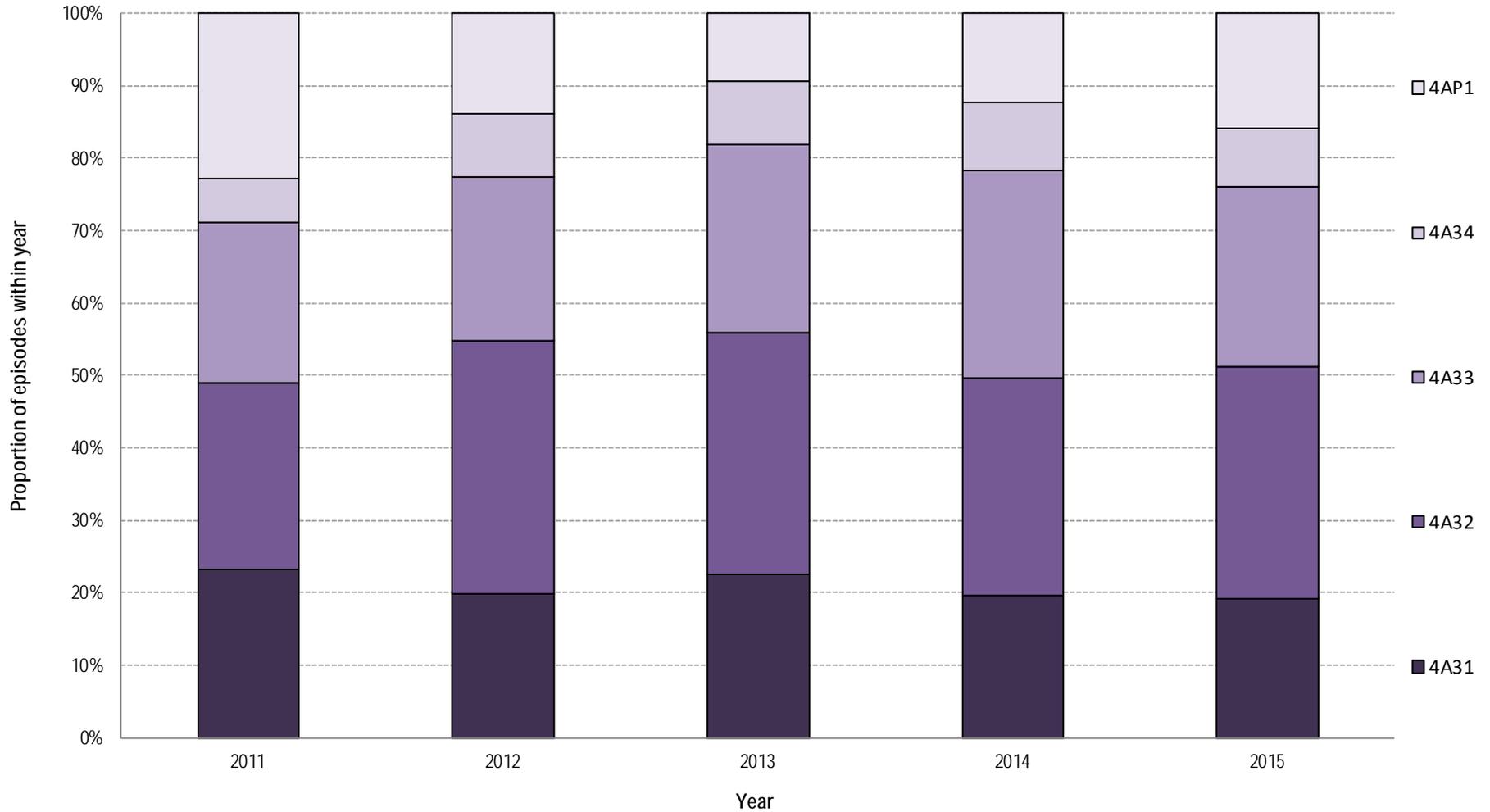
LOS and FIM change by AN-SNAP class



Other impairment episodes over time



Other impairments casemix over time

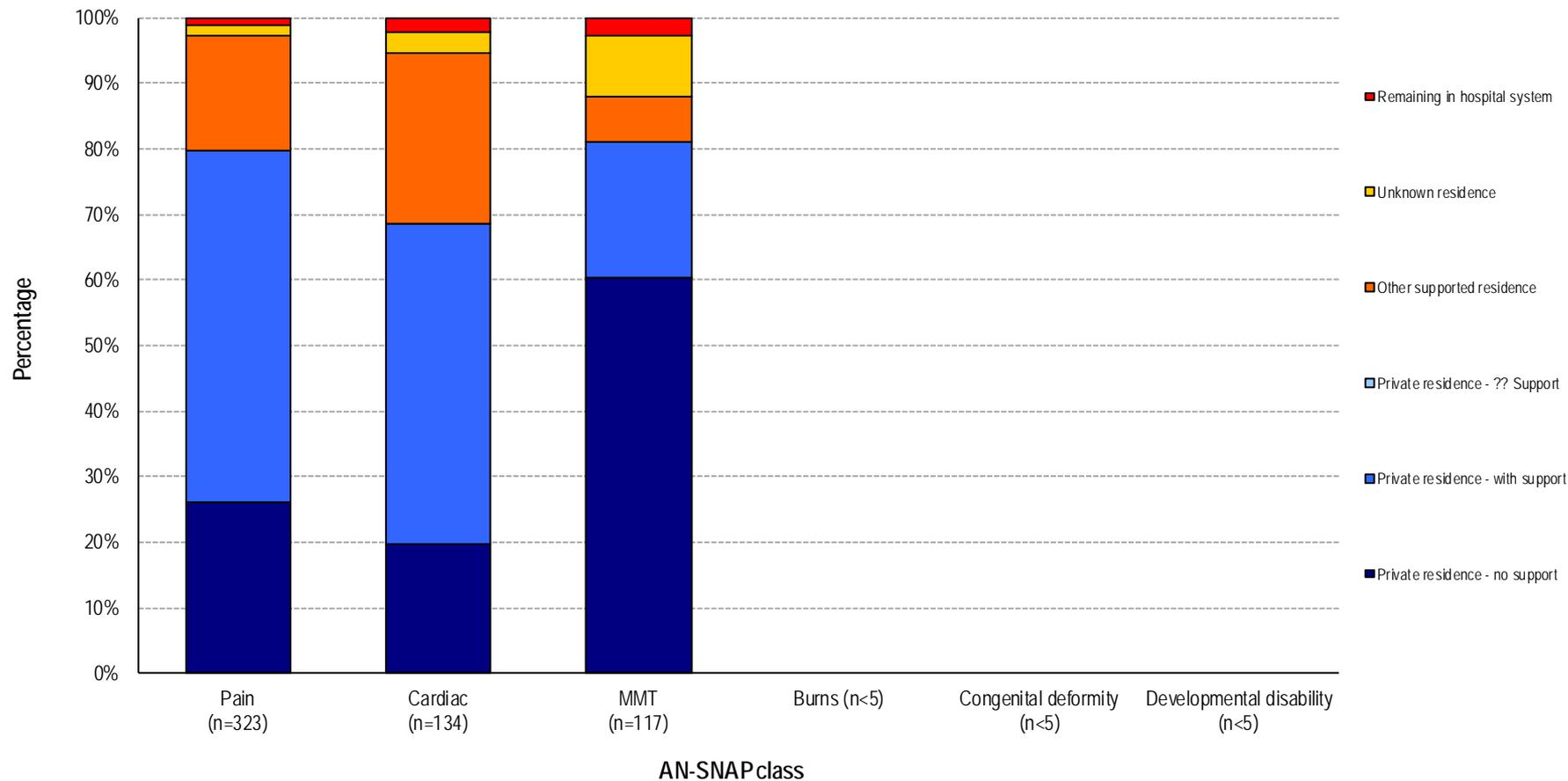


Other impairment episodes in 2015

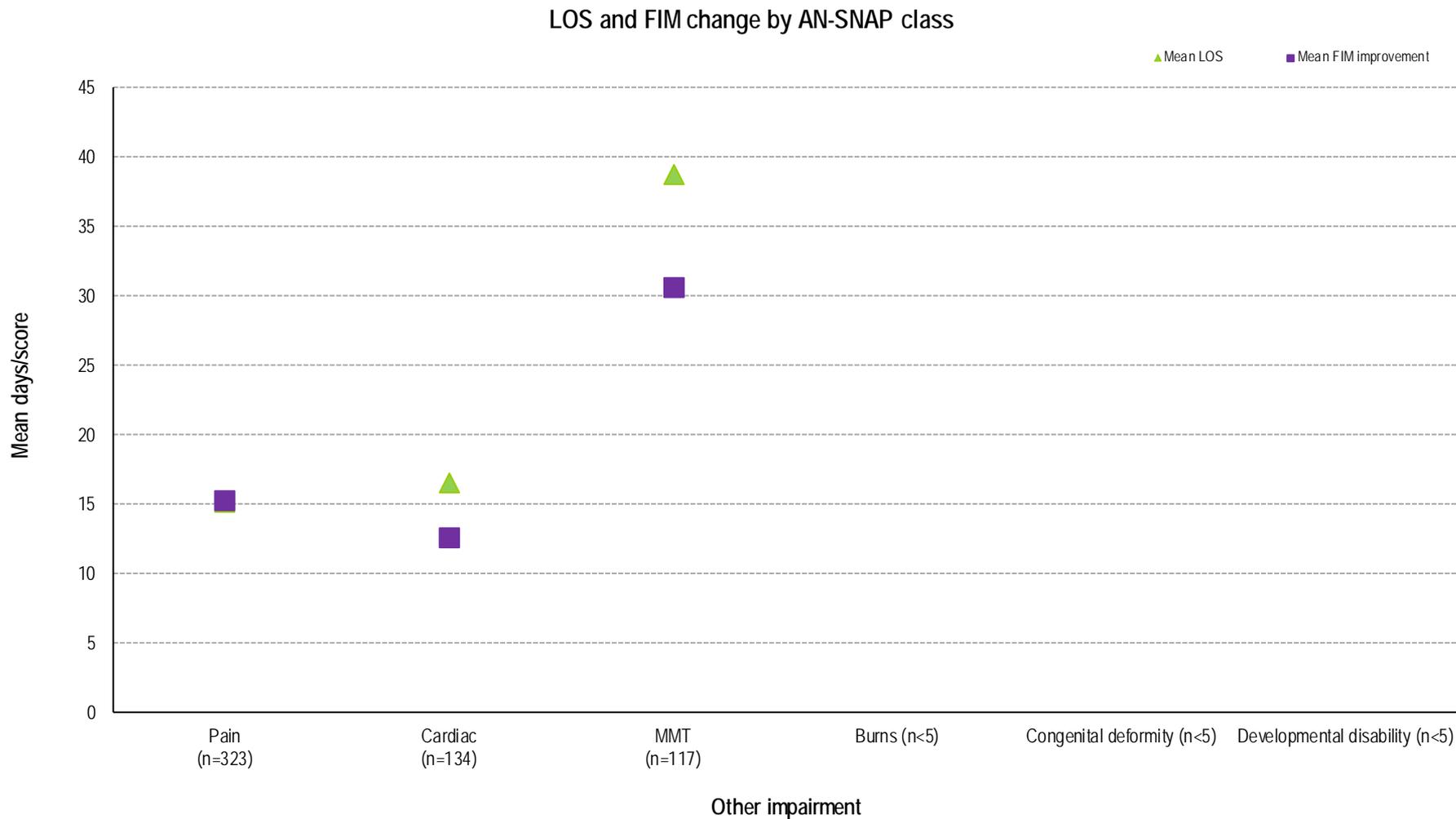
AN-SNAP class:	Pain	Cardiac	MMT	Burns	Congenital deformity	Developmental disability
Number of episodes	323	134	117	4	3	1
Proportion of total episodes in 2015	2.7%	1.1%	1.0%	n < 5	n < 5	n < 5
Gender (%)						
<i>Female</i>	73.1%	56.0%	27.4%	n < 5	n < 5	n < 5
<i>Male</i>	26.9%	44.0%	72.6%	n < 5	n < 5	n < 5
Age group (%)						
<i>Under 65</i>	6.2%	3.7%	75.2%	n < 5	n < 5	n < 5
<i>Over 65</i>	92.9%	95.5%	24.8%	n < 5	n < 5	n < 5
Age (Mean+95%CI)	80.9 (79.7-82.1)	82.6 (81.2-84.0)	45.9 (41.7-50.0)	n < 5	n < 5	n < 5
Admission FIM (Mean+95%CI)	83.3 (81.2-85.5)	82.9 (79.1-86.8)	77.7 (72.0-83.4)	n < 5	n < 5	n < 5
LOS (Mean+95%CI)	15.2 (13.9-16.4)	16.6 (14.8-18.4)	38.8 (32.0-45.5)	n < 5	n < 5	n < 5
Discharge destination (%)						
<i>Discharged to community</i>	98.8%	97.7%	97.4%	n < 5	n < 5	n < 5
<i>Remaining in hospital system</i>	1.2%	2.3%	2.6%	n < 5	n < 5	n < 5
FIM change (Mean+95%CI)	15.3 (13.9-16.6)	12.6 (10.2-14.9)	30.6 (25.9-35.4)	n < 5	n < 5	n < 5
FIM efficiency (FIM change/LOS)	1.0	0.8	0.8	n < 5	n < 5	n < 5

Other impairment discharge destination by impairment group

Discharge destination - Other impairments



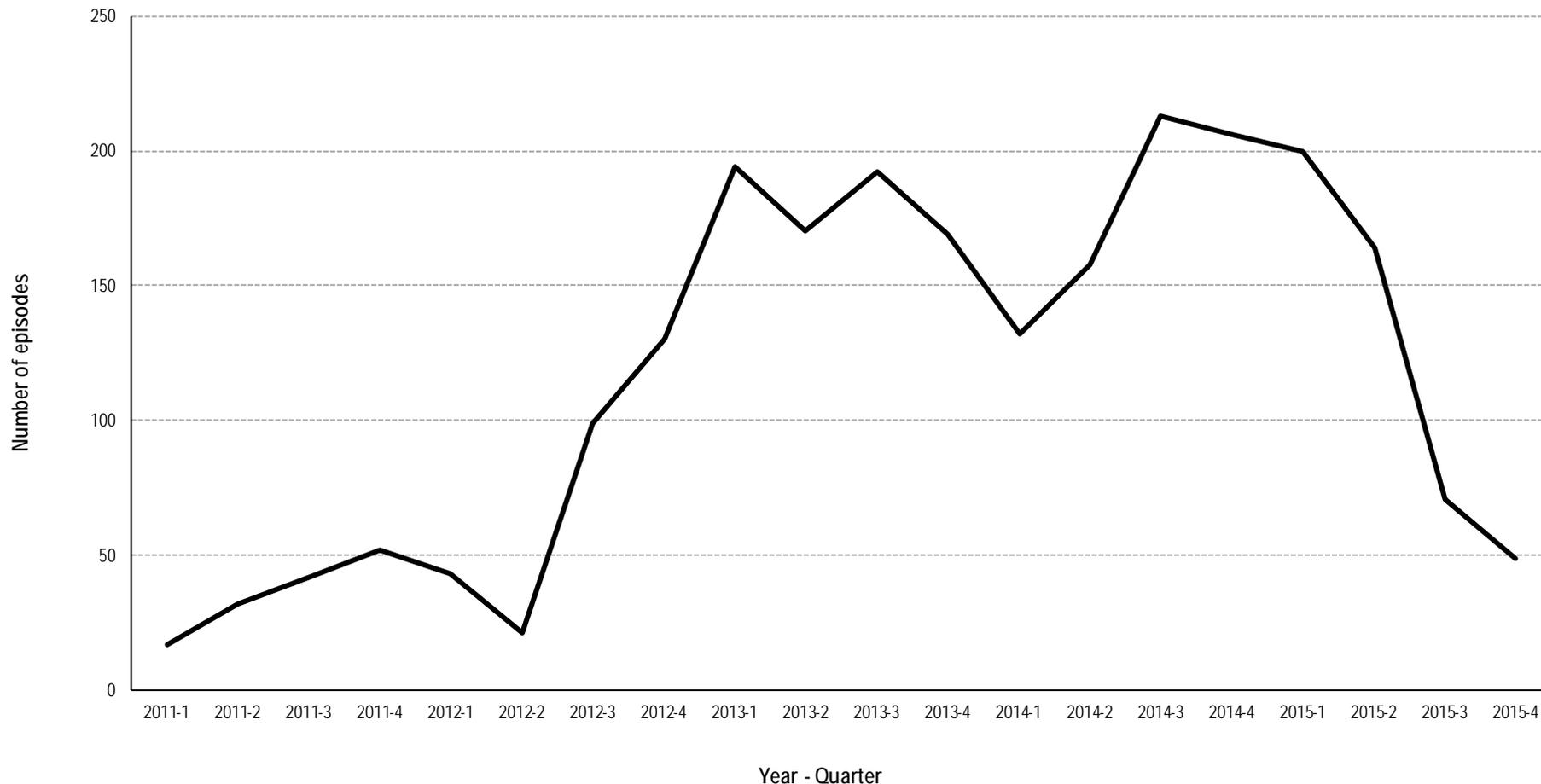
Other impairment LOS and FIM change by impairment group



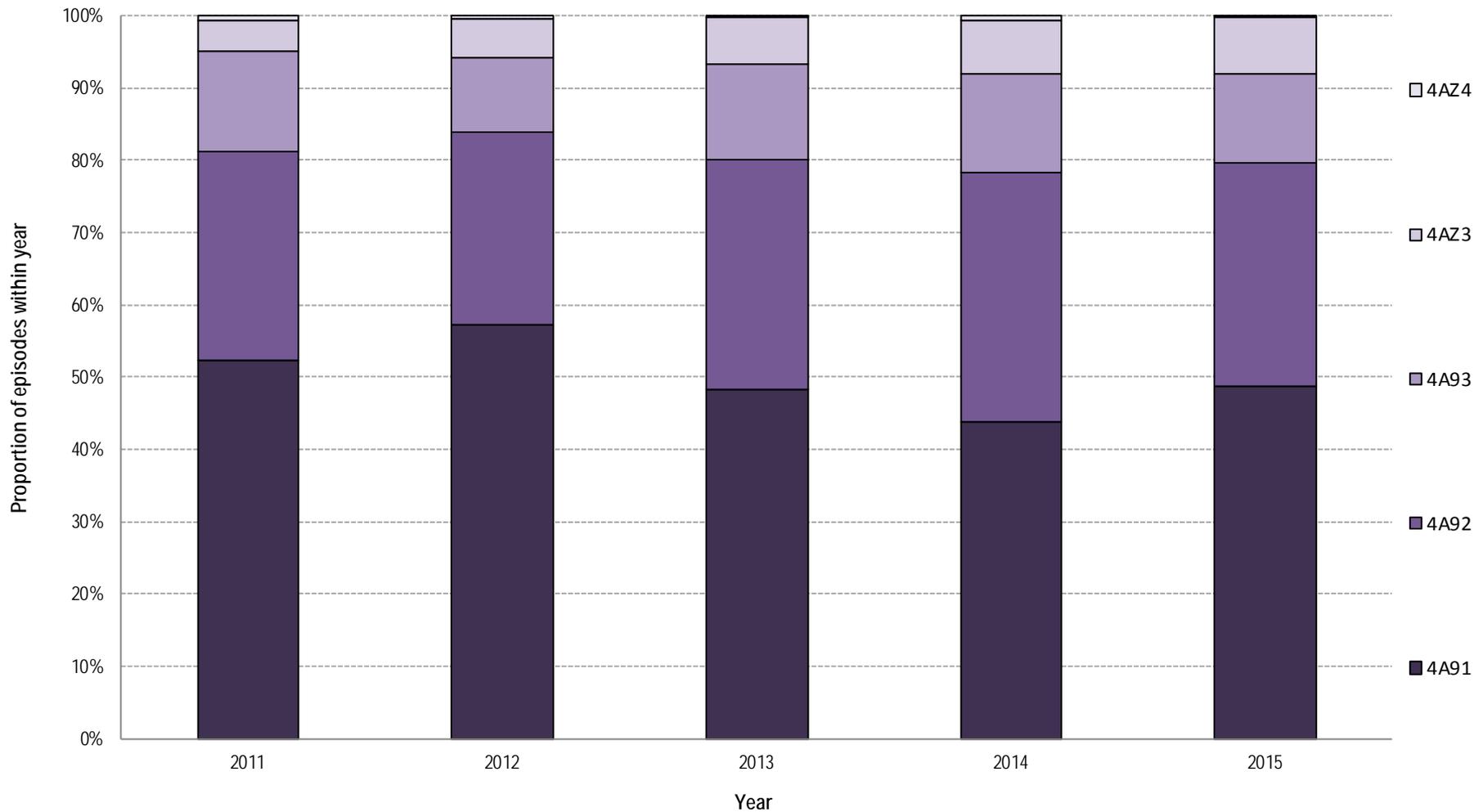
Other disabling impairment episodes over time



Number of episodes by quarter - Other disabling impairments



Other disabling impairments casemix over time



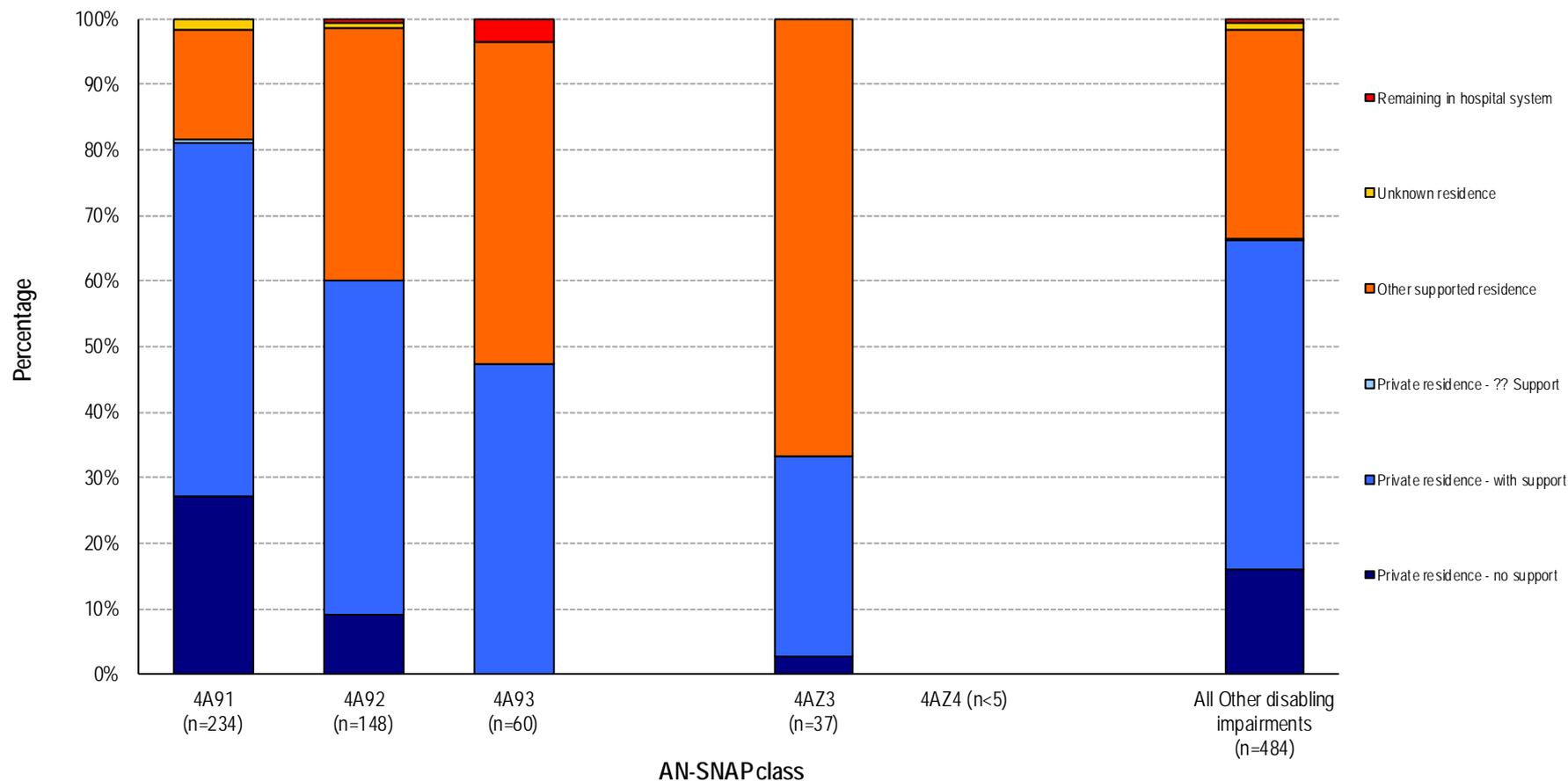
Other disabling impairment episodes in 2015



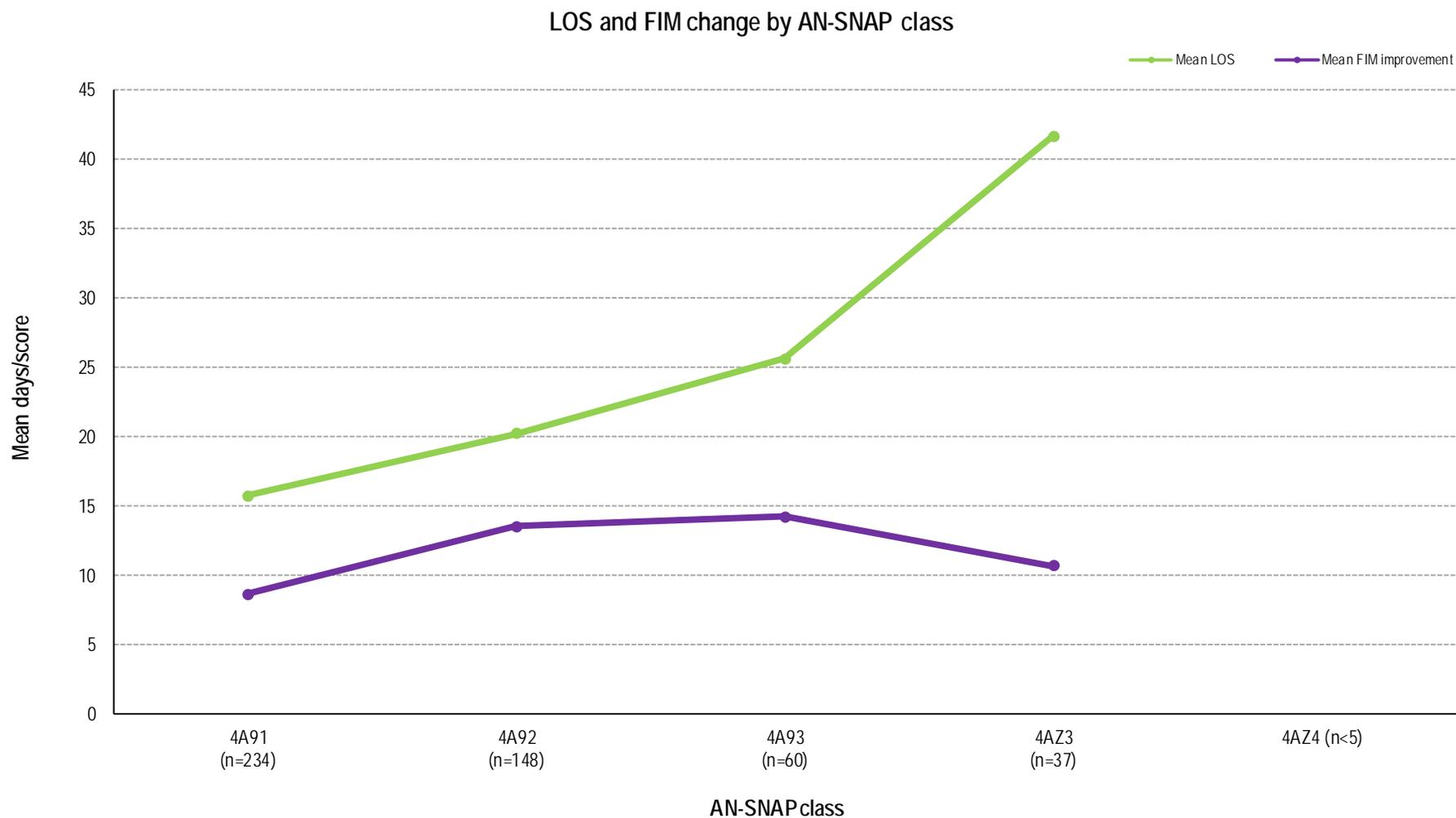
AN-SNAP class:	4A91	4A92	4A93	4AZ3	4AZ4	All Other disabling impairments
Number of episodes	234	148	60	37	1	484
Proportion of episodes	48.3%	30.6%	12.4%	7.6%	n < 5	100.0%
Gender (%)						
<i>Female</i>	57.7%	54.1%	46.7%	62.2%	n < 5	55.2%
<i>Male</i>	41.9%	45.9%	53.3%	37.8%	n < 5	44.4%
Age group (%)						
<i>Under 65</i>	12.8%	3.4%	3.3%	0.0%	n < 5	7.9%
<i>Over 65</i>	86.8%	96.6%	95.0%	100.0%	n < 5	91.7%
Age (Mean+95%CI)	77.5 (75.7-79.3)	82.3 (80.6-84.0)	81.1 (78.7-83.4)	82.4 (79.7-85.0)	n < 5	79.8 (78.7-80.9)
Admission FIM (Mean+95%CI)	95.6 (93.9-97.2)	67.4 (65.7-69.1)	49.2 (46.0-52.5)	31.6 (28.2-35.1)	n < 5	76.6 (74.4-78.9)
LOS (Mean+95%CI)	15.8 (13.9-17.6)	20.2 (17.9-22.5)	25.7 (22.7-28.7)	41.7 (19.1-64.3)	n < 5	20.2 (18.1-22.3)
Discharge destination (%)						
<i>Discharged to community</i>	100.0%	99.3%	96.6%	100.0%	n < 5	99.4%
<i>Remaining in hospital system</i>	0.0%	0.7%	3.4%	0.0%	n < 5	0.6%
FIM change (Mean+95%CI)	8.7 (7.5-9.8)	13.5 (11.4-15.7)	14.2 (10.3-18.2)	10.7 (4.0-17.4)	n < 5	11.0 (9.9-12.1)
FIM efficiency (FIM change/LOS)	0.6	0.7	0.6	0.3	n < 5	0.5

Other disabling impairment discharge destination by AN-SNAP class

Discharge destination - Other disabling impairments



Other disabling impairment LOS and FIM change by AN-SNAP class



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