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# The AROC annual report: the state of rehabilitation in Australia and New Zealand in 2010

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AROC

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# The AROC annual report: the state of rehabilitation in Australia and New Zealand in 2010

## **Abstract**

Powerpoint presentation presented at the ANZCOS / AFRM Conference, Brisbane.

## **Keywords**

annual, aroc, australian, 2010, rehabilitation, zealand, state, report

## **Publication Details**

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The logo for AROC, consisting of the lowercase letters 'aroc' in a white, italicized serif font, enclosed within a white oval shape with a dark red border.

*aroc*

# **The AROC Annual Report – the state of rehabilitation in Australia and New Zealand in 2010**

Presentation to the ANZCOS/AFRM Conference  
15 September 2011

Frances Simmonds, Director AROC  
Tara Stevermuer, AROC Data Manager  
A/Prof Ben Marosszky Clinical Director, AROC

# What is AROC ?

- AROC began as a joint initiative of the whole Australian rehabilitation sector (providers, payers, regulators and consumers) with support from key New Zealand providers
- Established 1 July 2002 as a not-for-profit Centre
- The Australasian Faculty of Rehabilitation Medicine (AFRM) is the auspice body and data custodian
- The Centre for Health Service Development (CHSD) at the University of Wollongong is the data manager and responsible for AROC's day to day operations

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# Aims of AROC

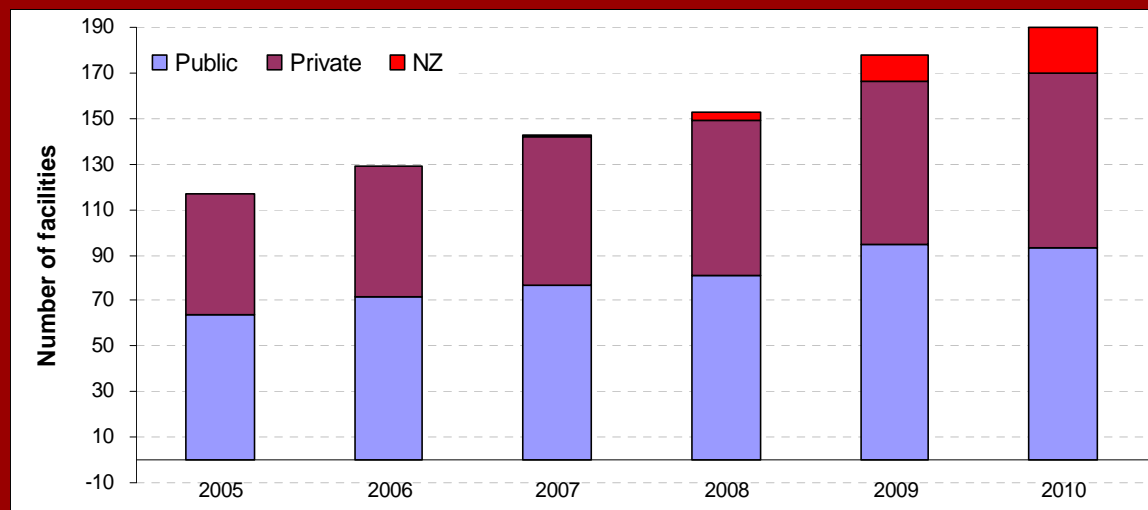
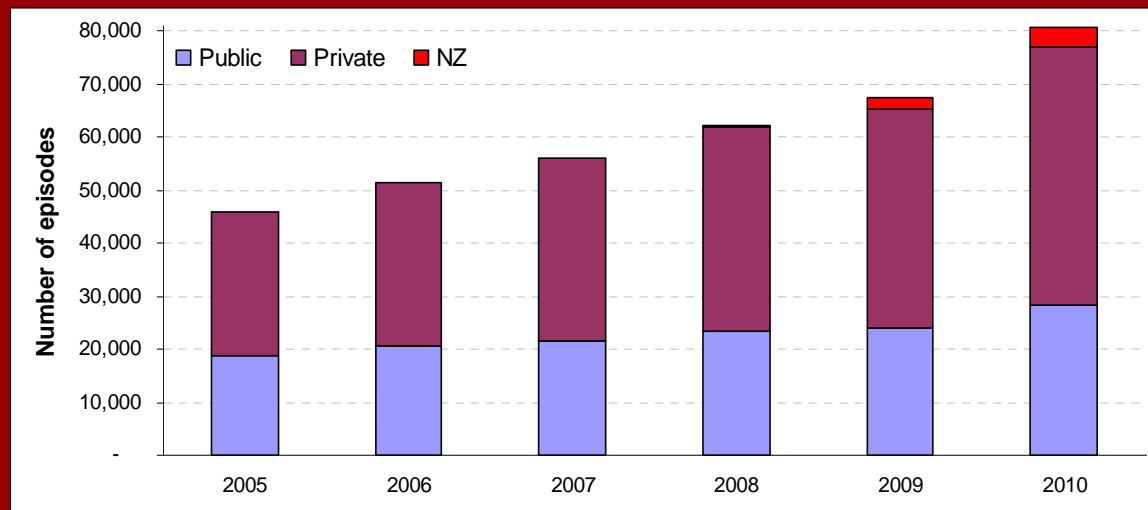
- To provide a national benchmarking system to facilitate the improvement of clinical rehabilitation outcomes for patients
- To produce information on the efficacy of interventions through the systematic collection of outcomes information in both the inpatient and ambulatory settings
- To report on functional outcomes
  - Six monthly benchmarking reports for each member facility
  - Annual in-patient report summarising the Australian data
  - Inaugural ambulatory report

# AROC Coverage

- There are approximately 180 rehabilitation units in Australia
- 172 submitted data to AROC in the 2010 calendar year
- In 2010 data describing 70,449 episodes was submitted to AROC
- There are approximately 30-35 rehabilitation units in New Zealand
- Currently 23 units are members of AROC
- Since Jan 2009 data describing more than 2,250 NZ episodes has been submitted to AROC

# Change in number of episodes over time, 2005 to 2010

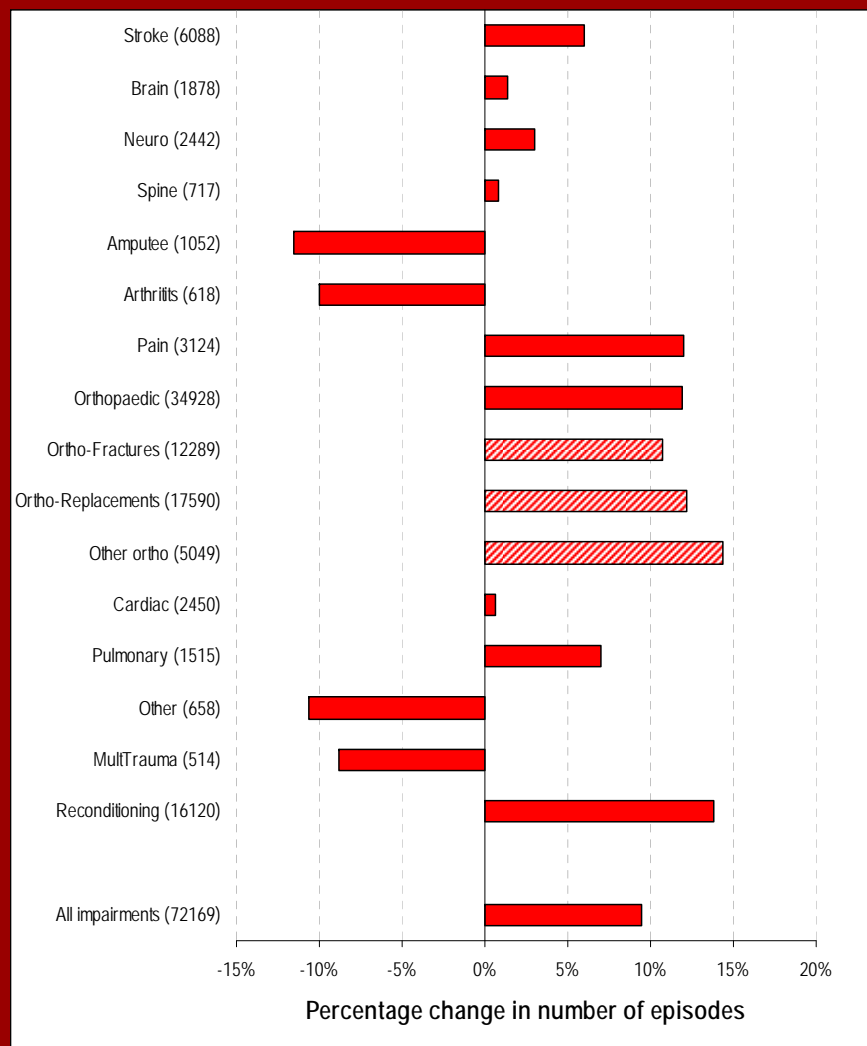
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# Change in number of episodes 2009 to 2010

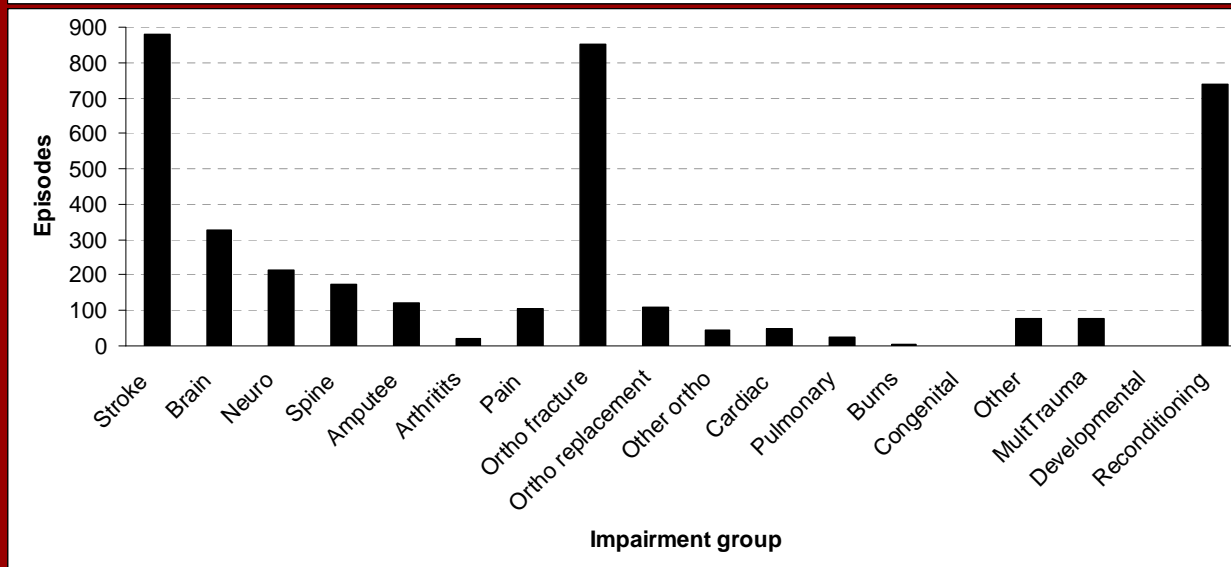
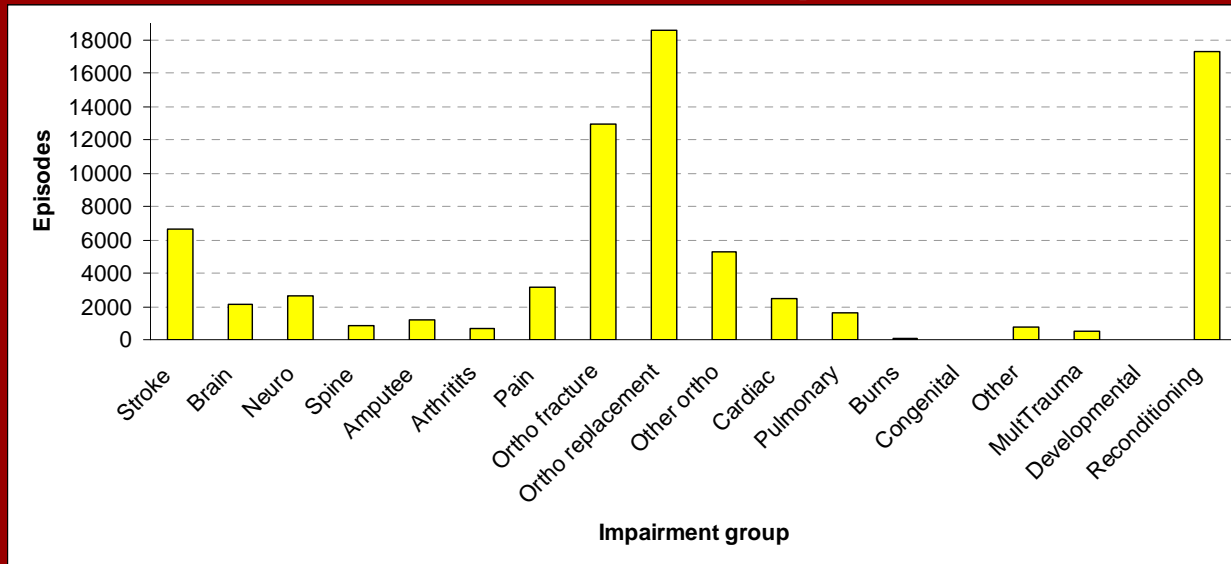
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# Episodes by impairment

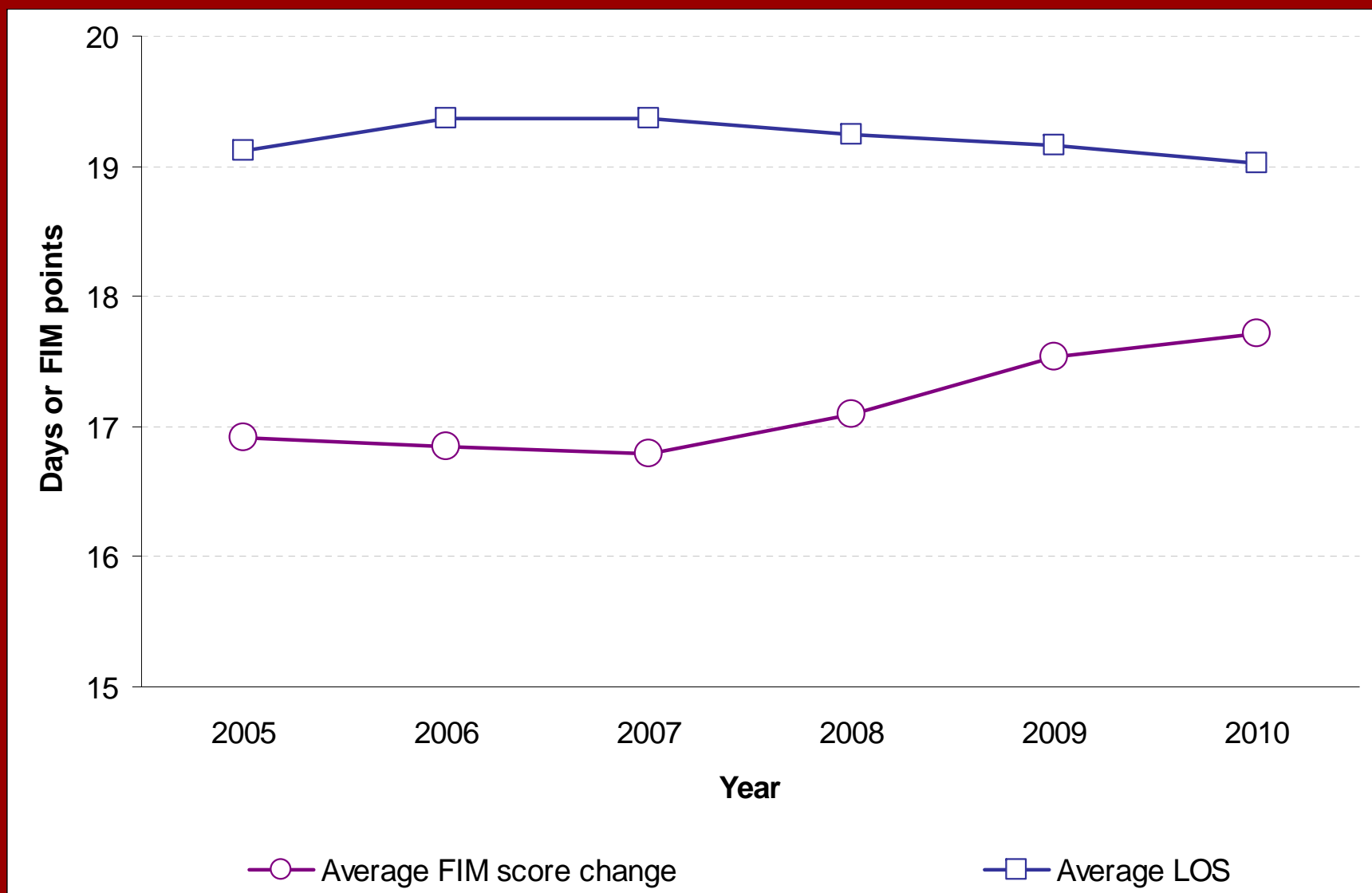
## Australia & New Zealand, 2010/11

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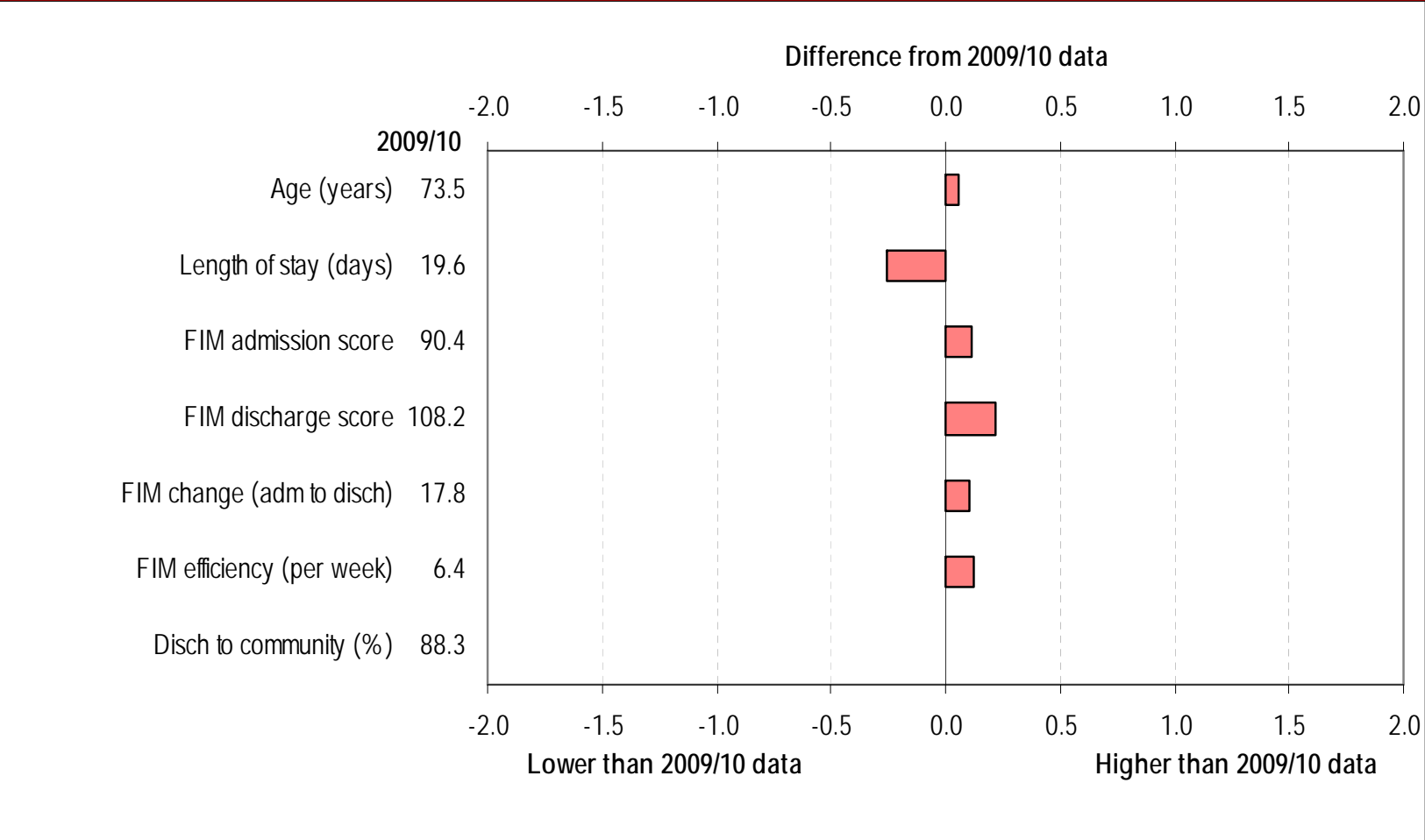


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# ALOS & FIM change over time



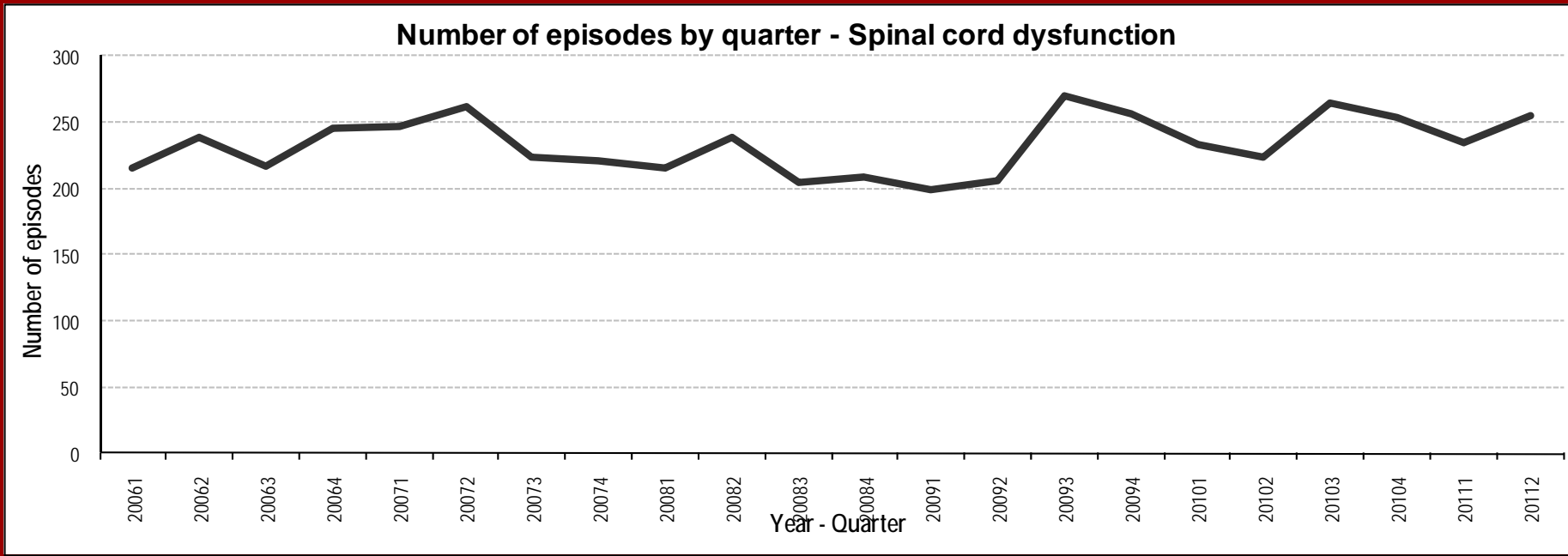
# Overall rehabilitation outcomes summary – change in measures 2009/10 to 2010/11 (Australia only)



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# SCI Data

# SCI episodes - volume over time



# Spinal Cord Dysfunction Episodes 2010

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**Table 2: Spinal cord dysfunction episodes in 2010/11**

AN-SNAP class:	S2-220	S2-221	S2-222	S2-223	All Spinal cord dysfunction
Number of episodes	34	307	309	67	717
Proportion of episodes	4.7%	42.8%	43.1%	9.3%	100.0%
Sector (%)					
<i>Private</i>	35.3	30.6	9.1	1.5	18.8
<i>Public</i>	64.7	69.4	90.9	98.5	81.2
Gender (%)					
<i>Female</i>	38.2	41.4	35.9	20.9	37.0
<i>Male</i>	61.8	58.6	64.1	79.1	63.0
Age (Mean+95%CI)	56.8 (51.0–62.6)	57.8 (55.6–60.0)	62.5 (60.8–64.1)	22.2 (21.1–23.3)	56.5 (55.0–57.9)
Admission FIM (Mean+95%CI)	118.1 (116.7–119.6)	96.2 (94.8–97.5)	62.4 (60.9–63.9)	60.7 (57.6–63.8)	81.6 (79.7–83.4)
LOS (Mean+95%CI)	14.3 (11.0–17.6)	29.8 (26.7–33.0)	70.7 (63.0–78.5)	77.9 (86.9–128.8)	51.1 (46.7–55.4)
Discharge destination (%)					
<i>Discharged to community</i>	94.1	87.0	70.2	67.2	78.2
<i>Remaining in hospital system</i>	5.9	13.0	29.8	32.8	21.8
FIM improvement (Mean+95%CI)	2.7 (1.6–3.9)	17.2 (16.0–18.5)	29.4 (26.8–32.0)	37.7 (31.3–44.0)	22.7 (21.3–24.2)
FIM efficiency (FIM imp./LOS)	0.2	0.6	0.4	0.3	0.4

# Spinal episodes by impairment

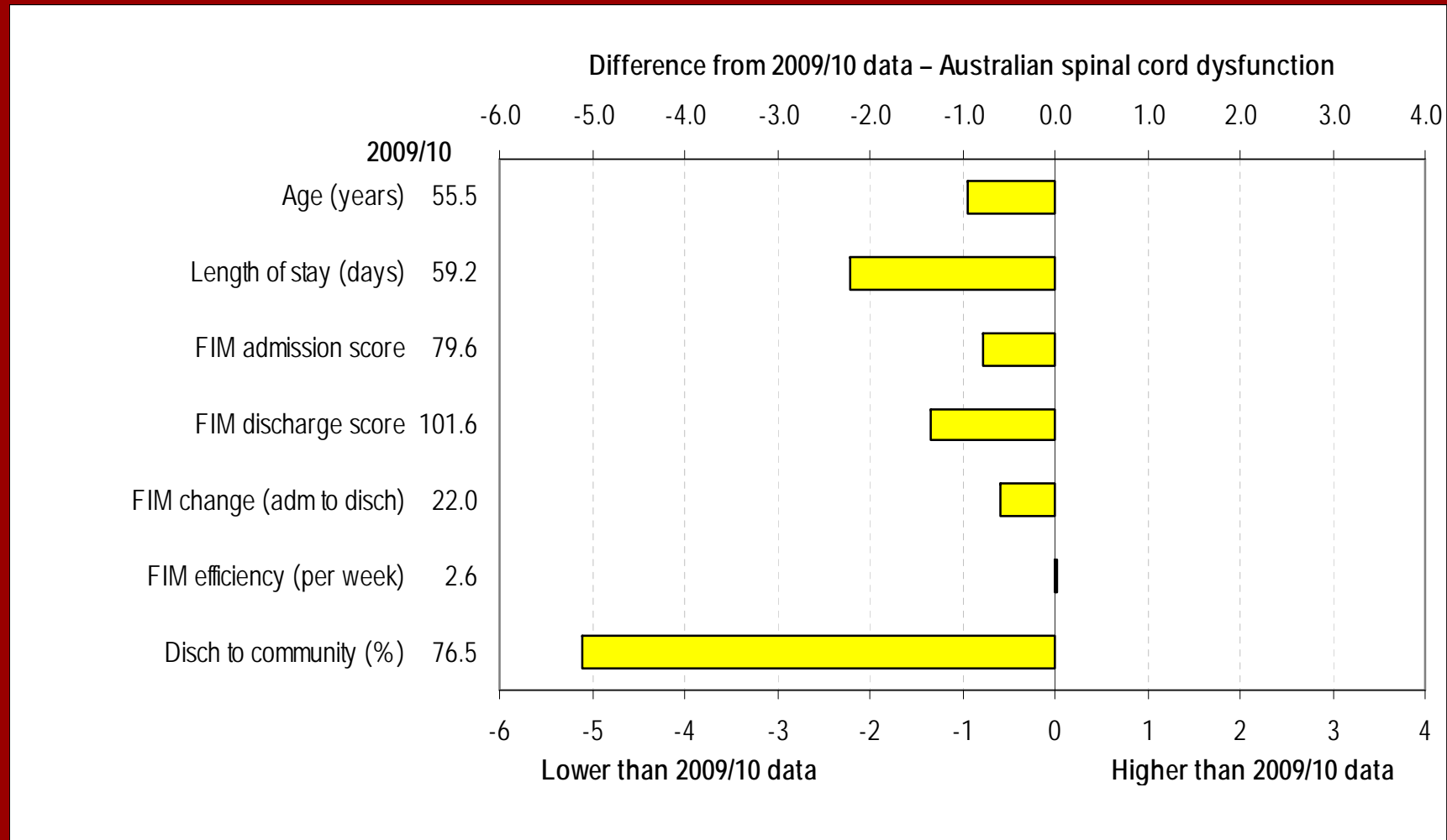
- 2010/11 data
- 62% Para vs 38% Tetra
- Para - 30% complete vs 70% incomplete
- Tetra - 20% complete vs 80% incomplete



# Spinal cord dysfunction

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## change in measures 2009/10 to 2010/11

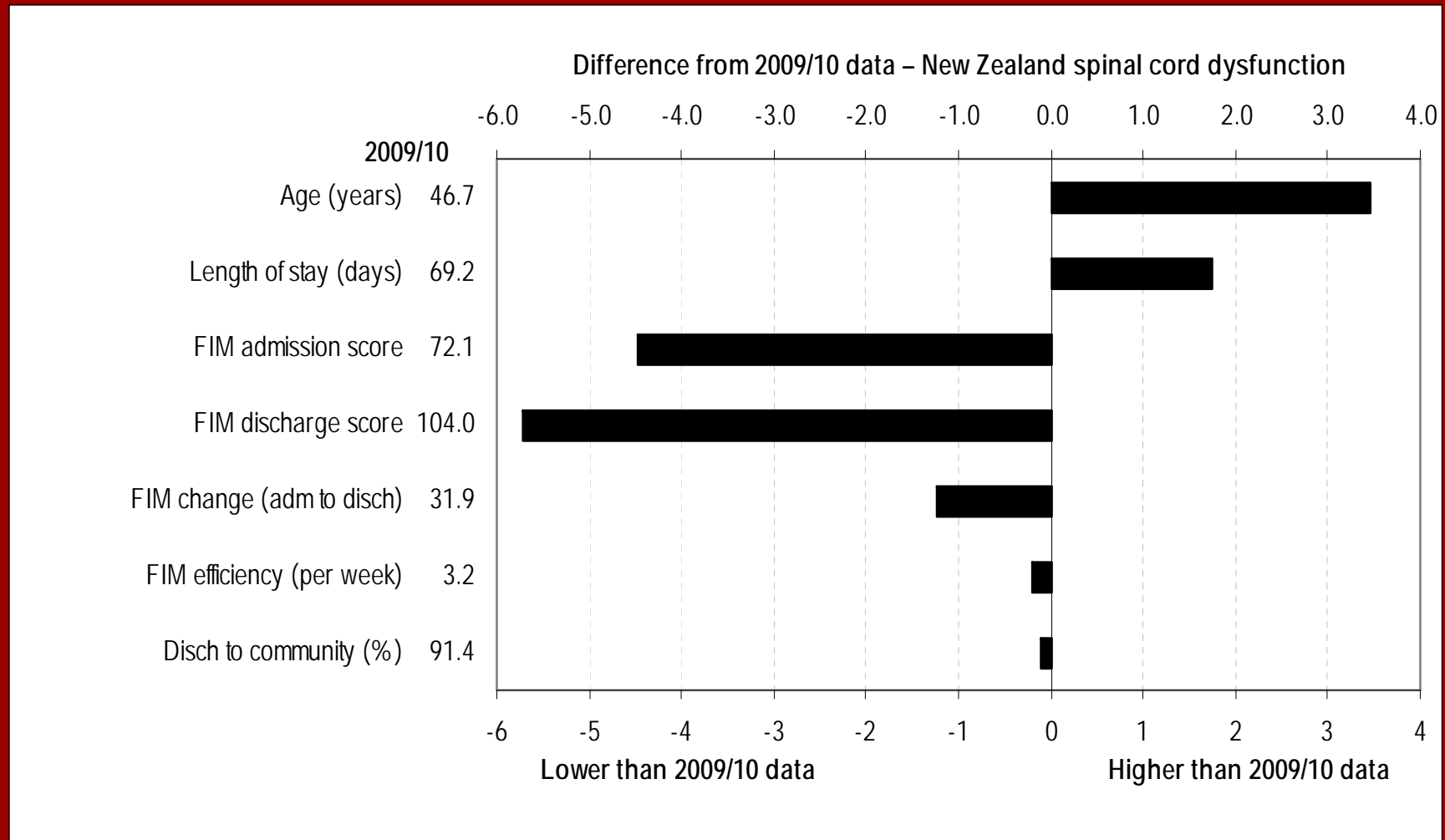


**NOTE:** 820 episodes in 2009/10 and 837 episodes in 2010/11

# Spinal cord dysfunction

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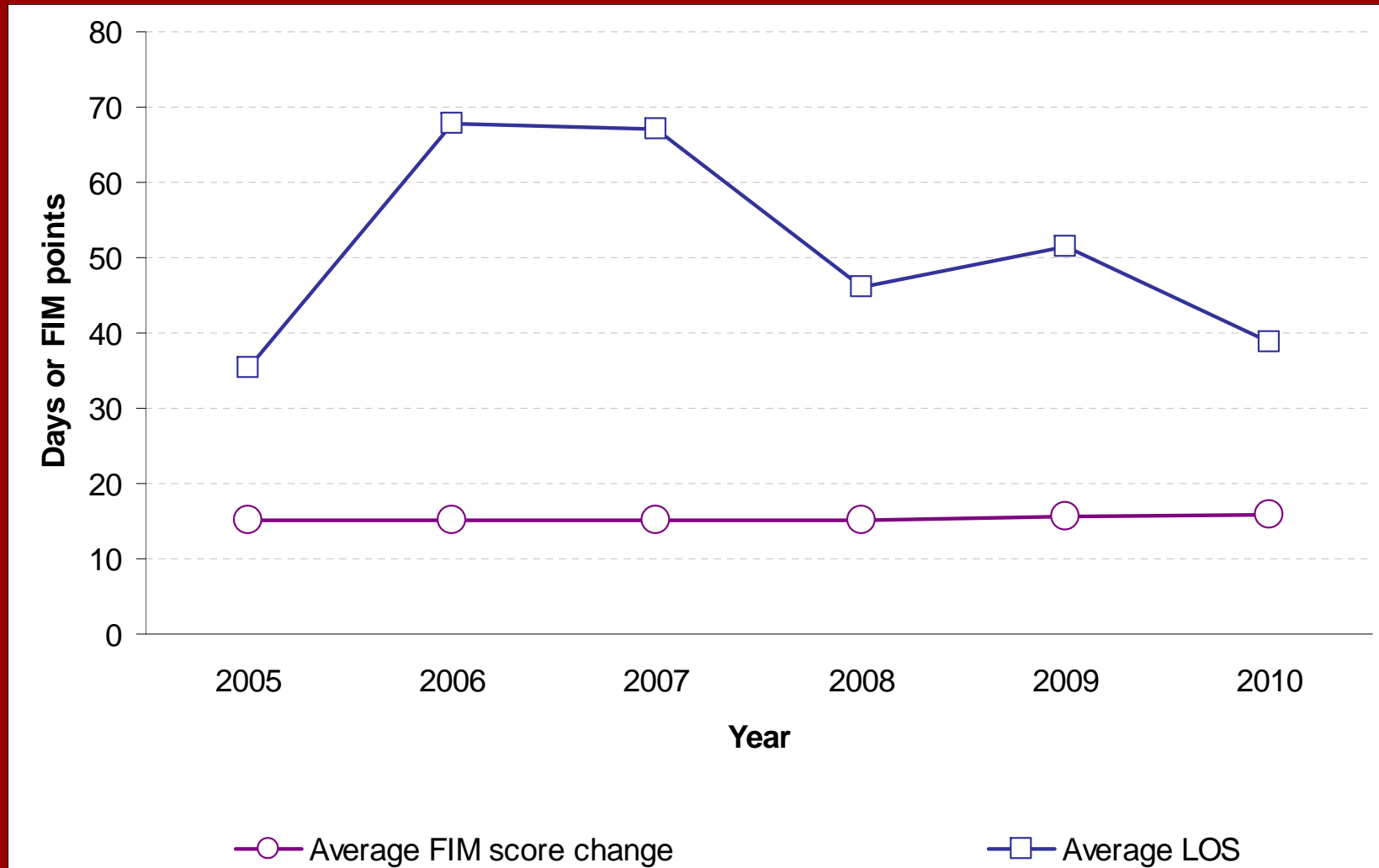
## change in measures 2009/10 to 2010/11



**NOTE:** 163 episodes in 2009/10 and 172 episodes in 2010/11

# ALOS & FIM change over time *aroc*

## - Spinal cord dysfunction



# Spinal Adjunct Dataset

- SCI benchmarking workshop 2009
- No outcome targets agreed ... instead agreement to collect additional data items (ASIA scale, level of injury)
- Agreed clinically relevant groups for outcome benchmarking
- Adjunct data collected over last 2 years ... volume still quite small
- Initial analysis .....

# Spinal cord dysfunction

## Adjunct data – clinical groups



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Clinical group	Episodes	Percent
Group 1 - Traumatic ASIA AB Tetra	19	8.9%
Group 2 - Traumatic ASIA AB Para	19	8.9%
Group 3 - Traumatic ASIA CD Tetra	35	16.4%
Group 4 - Traumatic ASIA CD Para	24	11.2%
Group 5 - N-Traumatic ASIA AB Tetra	4	1.9%
Group 6 - N-Traumatic ASIA AB Para	17	7.9%
Group 7 - N-Traumatic ASIA CD Tetra	19	8.9%
Group 8 - N-Traumatic ASIA CD Para	42	19.6%
Group 9 - All other spinal cord dysfunction	35	16.4%
<b>All matched spinal data</b>	<b>214</b>	<b>100.0%</b>

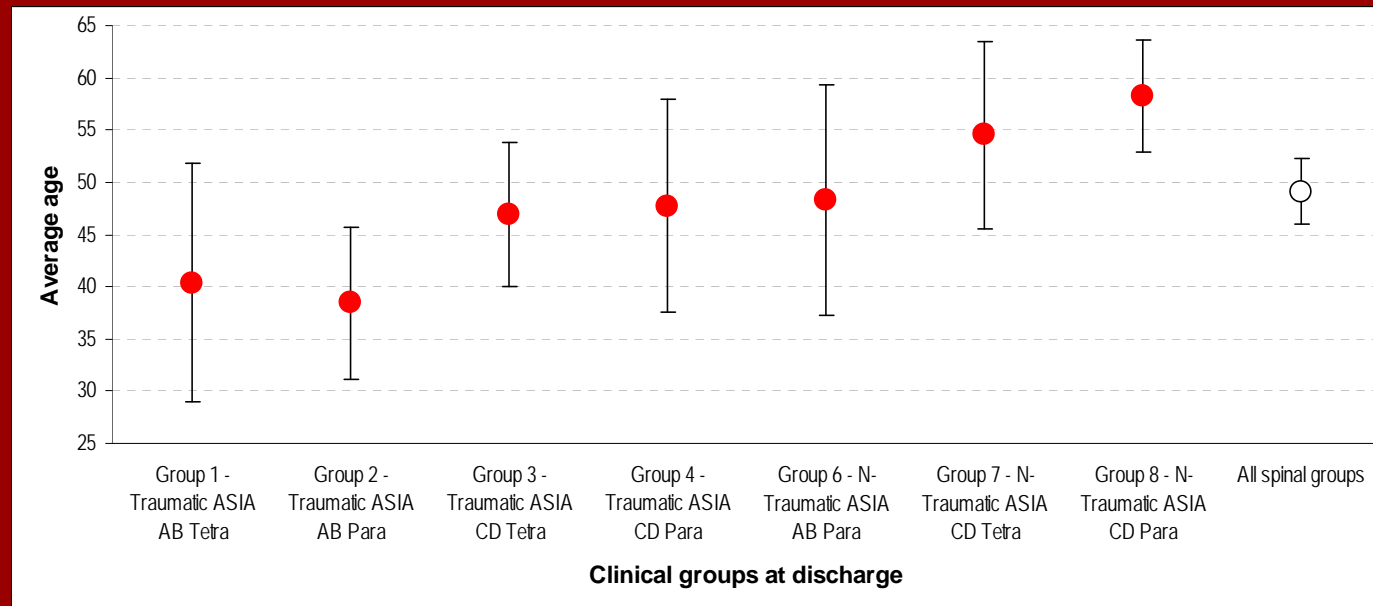
**NOTE:** Group 5 excluded from further analysis due to small numbers. Group 9 presented on this slide only as not part of clinically relevant target groups. These episodes include those with invalid ages, LOS, FIM scores and incomplete episodes

# Spinal cord dysfunction

## Adjunct data – Average age

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Clinical group	Average age		
	Episodes	Average (95%CI)	Range
Group 1 - Traumatic ASIA AB Tetra	16	40.4 (29.0–51.8)	19 to 85
Group 2 - Traumatic ASIA AB Para	17	38.4 (31.1–45.7)	17 to 63
Group 3 - Traumatic ASIA CD Tetra	29	46.9 (40.0–53.8)	18 to 77
Group 4 - Traumatic ASIA CD Para	22	47.7 (37.6–57.9)	12 to 82
Group 6 - N-Traumatic ASIA AB Para	15	48.3 (37.3–59.3)	19 to 75
Group 7 - N-Traumatic ASIA CD Tetra	17	54.5 (45.5–63.5)	19 to 79
Group 8 - N-Traumatic ASIA CD Para	37	58.3 (52.9–63.6)	21 to 84
<b>All spinal groups</b>	<b>153</b>	<b>49.1 (46.0–52.2)</b>	<b>12 to 85</b>

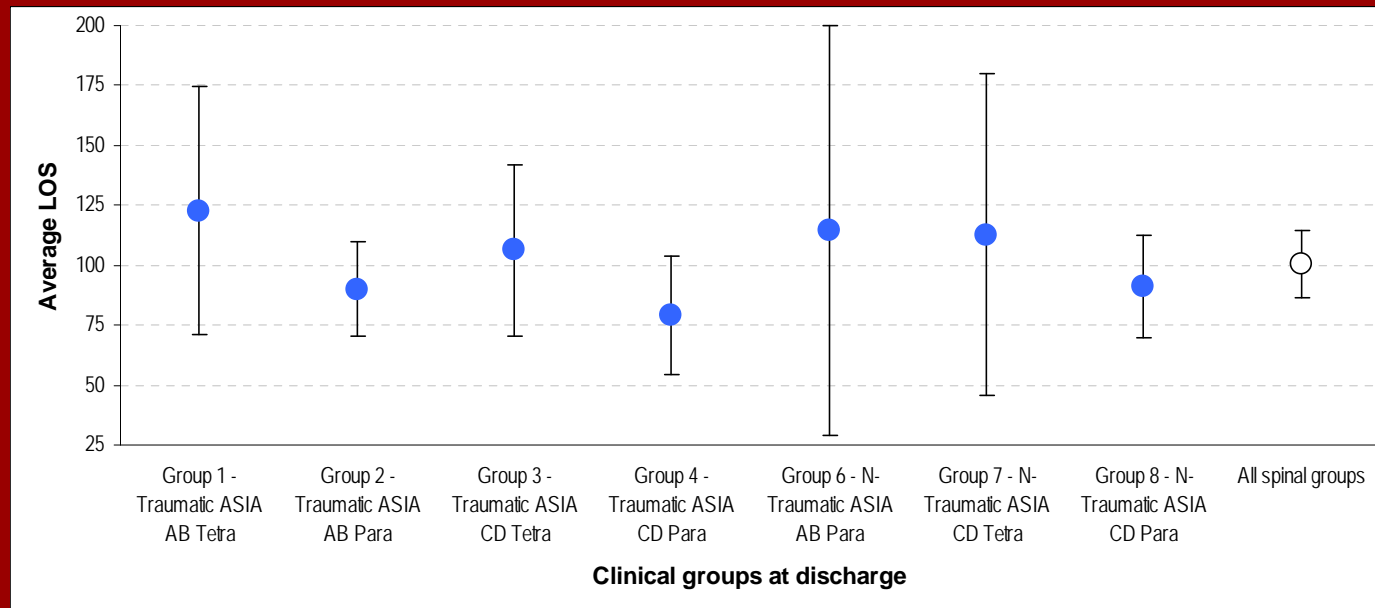


# Spinal cord dysfunction

## Adjunct data – Average LOS

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Clinical group	Average LOS		
	Episodes	Average (95%CI)	Range
Group 1 - Traumatic ASIA AB Tetra	16	122.7 (70.8–174.5)	9 to 361
Group 2 - Traumatic ASIA AB Para	11	90.1 (70.1–110.1)	33 to 131
Group 3 - Traumatic ASIA CD Tetra	25	106.2 (70.4–142.0)	4 to 375
Group 4 - Traumatic ASIA CD Para	17	79.3 (54.6–104.0)	9 to 167
Group 6 - N-Traumatic ASIA AB Para	8	114.3 (28.8–199.7)	9 to 352
Group 7 - N-Traumatic ASIA CD Tetra	13	112.7 (45.7–179.7)	15 to 385
Group 8 - N-Traumatic ASIA CD Para	32	91.0 (69.6–112.5)	7 to 285
<b>All spinal groups</b>	<b>122</b>	<b>100.4 (86.5–114.2)</b>	<b>4 to 385</b>

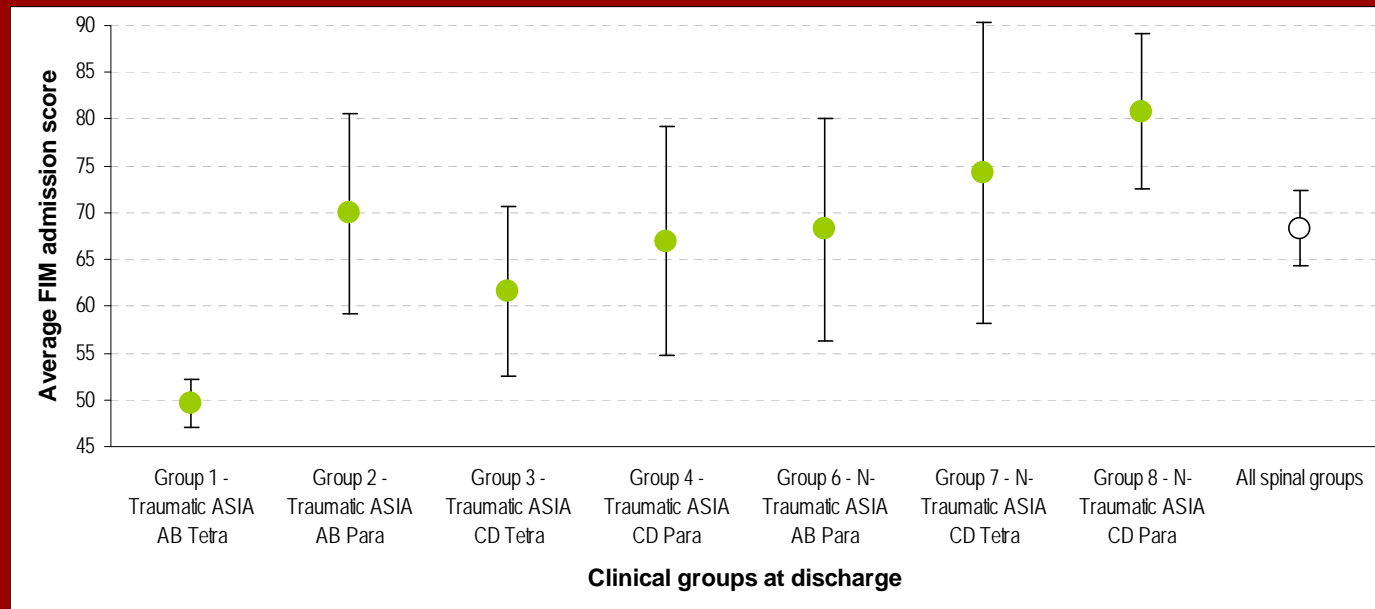


# Spinal cord dysfunction

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## Adjunct data – Average FIM admission score

Clinical group	FIM admission total		
	Episodes	Average (95%CI)	Range
Group 1 - Traumatic ASIA AB Tetra	16	49.6 (47.0–52.3)	40 to 61
Group 2 - Traumatic ASIA AB Para	11	69.9 (59.3–80.6)	55 to 99
Group 3 - Traumatic ASIA CD Tetra	25	61.6 (52.6–70.6)	24 to 107
Group 4 - Traumatic ASIA CD Para	17	66.9 (54.7–79.1)	31 to 121
Group 6 - N-Traumatic ASIA AB Para	8	68.3 (56.4–80.1)	51 to 90
Group 7 - N-Traumatic ASIA CD Tetra	13	74.3 (58.2–90.4)	44 to 116
Group 8 - N-Traumatic ASIA CD Para	32	80.8 (72.6–89.1)	29 to 120
<b>All spinal groups</b>	<b>122</b>	<b>68.4 (64.3–72.4)</b>	<b>24 to 121</b>



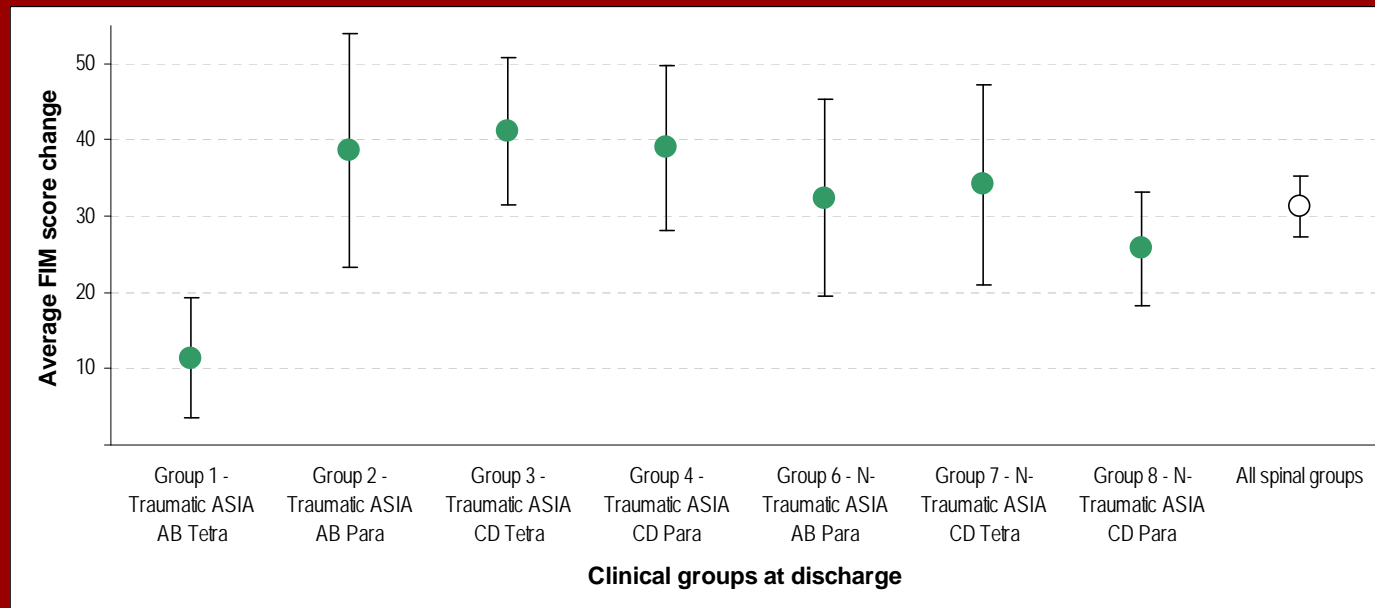


# Spinal cord dysfunction

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## Adjunct data – Average FIM change

Clinical group	FIM change		
	Episodes	Average (95%CI)	Range
Group 1 - Traumatic ASIA AB Tetra	16	11.4 (3.6–19.2)	0 to 48
Group 2 - Traumatic ASIA AB Para	11	38.6 (23.2–54.0)	2 to 60
Group 3 - Traumatic ASIA CD Tetra	25	41.1 (31.5–50.7)	-2 to 92
Group 4 - Traumatic ASIA CD Para	17	39.0 (28.1–49.9)	5 to 70
Group 6 - N-Traumatic ASIA AB Para	8	32.4 (19.4–45.3)	4 to 48
Group 7 - N-Traumatic ASIA CD Tetra	13	34.2 (21.1–47.2)	7 to 65
Group 8 - N-Traumatic ASIA CD Para	32	25.8 (18.4–33.2)	-24 to 58
<b>All spinal groups</b>	<b>122</b>	<b>31.4 (27.4–35.4)</b>	<b>-24 to 92</b>



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