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The state of rehabilitation in New Zealand

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The State Rehabilitation in New Zealand

Presentation to NZRA
Biennial Conference, Auckland
4-6 March 2011

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Monique Berger, Research Fellow
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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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Purpose and Aims of AROC

The basic purpose and aims of AROC were established as, and continue to be:

- To provide national benchmarking systems to improve clinical rehabilitation outcomes
- To produce information on the efficacy of interventions through the systematic collection of outcomes information in both the inpatient and ambulatory settings
- To provide annual reports that summarise the data at a national level

Benchmarking Reports

- AROC provides analysis of each individual member facilities data for that member, and also compares that data to:
 - analysis of a benchmark group
 - the national data
 - industry developed impairment specific target outcomes
- AROC Benchmarking Reports distributed to facility members electronically twice yearly



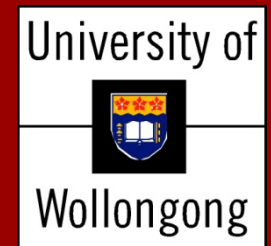
AROC Report

Anywhere Hospital

January 2008 – December 2008



**Australasian Faculty
of Rehabilitation
Medicine**



AROC Coverage

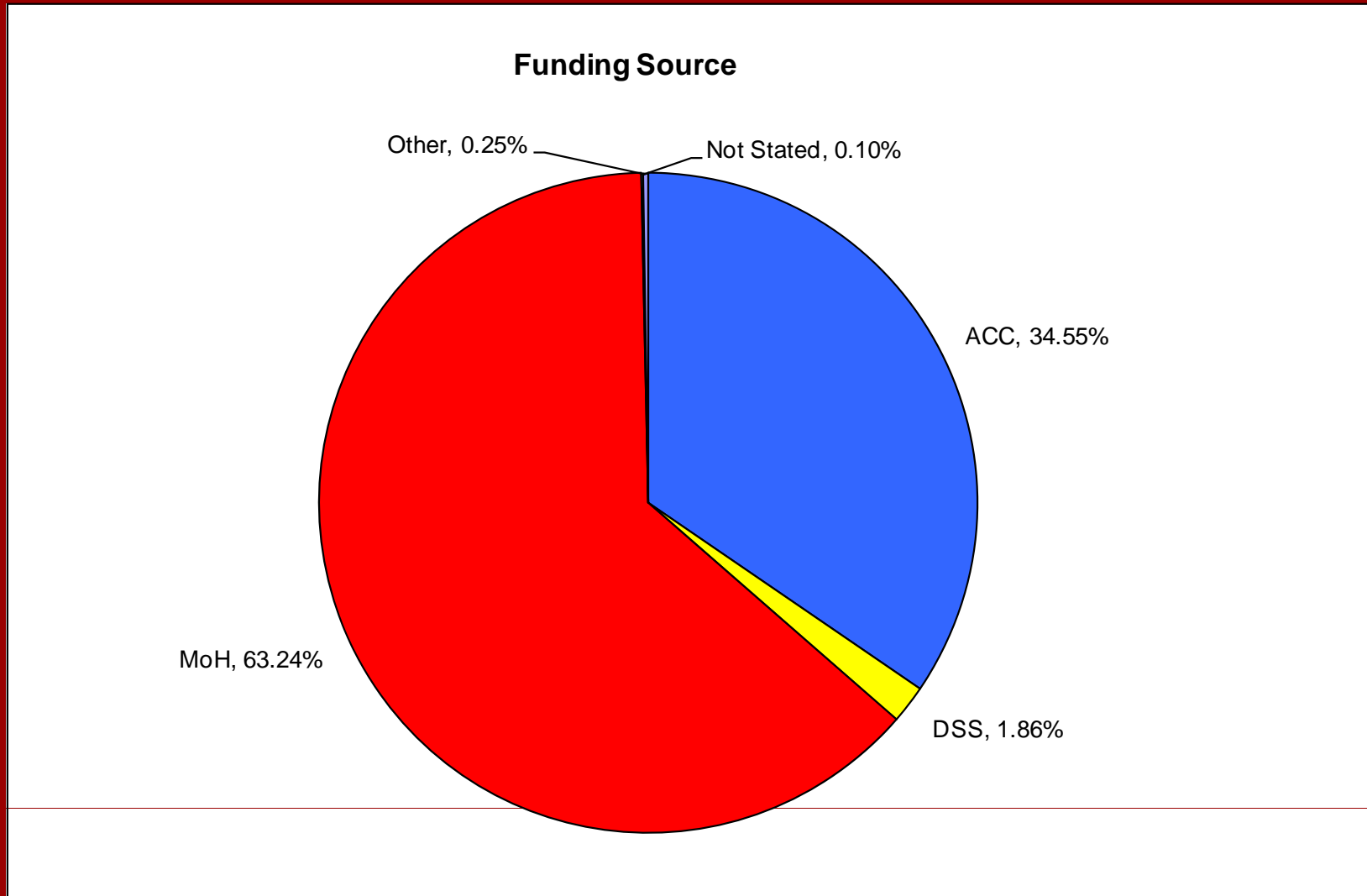
- AUSTRALIA
 - There are approximately 190 rehabilitation units in Australia
 - 183 currently belong to AROC and of those 163 submitted data to AROC in the 2010 calendar year
 - In 2010 data describing more than 65,000 episodes was submitted to AROC
- NEW ZEALAND
 - There are 31 currently identified rehabilitation units in New Zealand
 - Currently 24 units are members of AROC, with 17 submitting data in 2010
 - In 2010 data describing almost 3,000 episodes was submitted to AROC
 - Since Jan 2009 data describing more than 6,000 episodes has been submitted to AROC

AROC Coverage in NZ

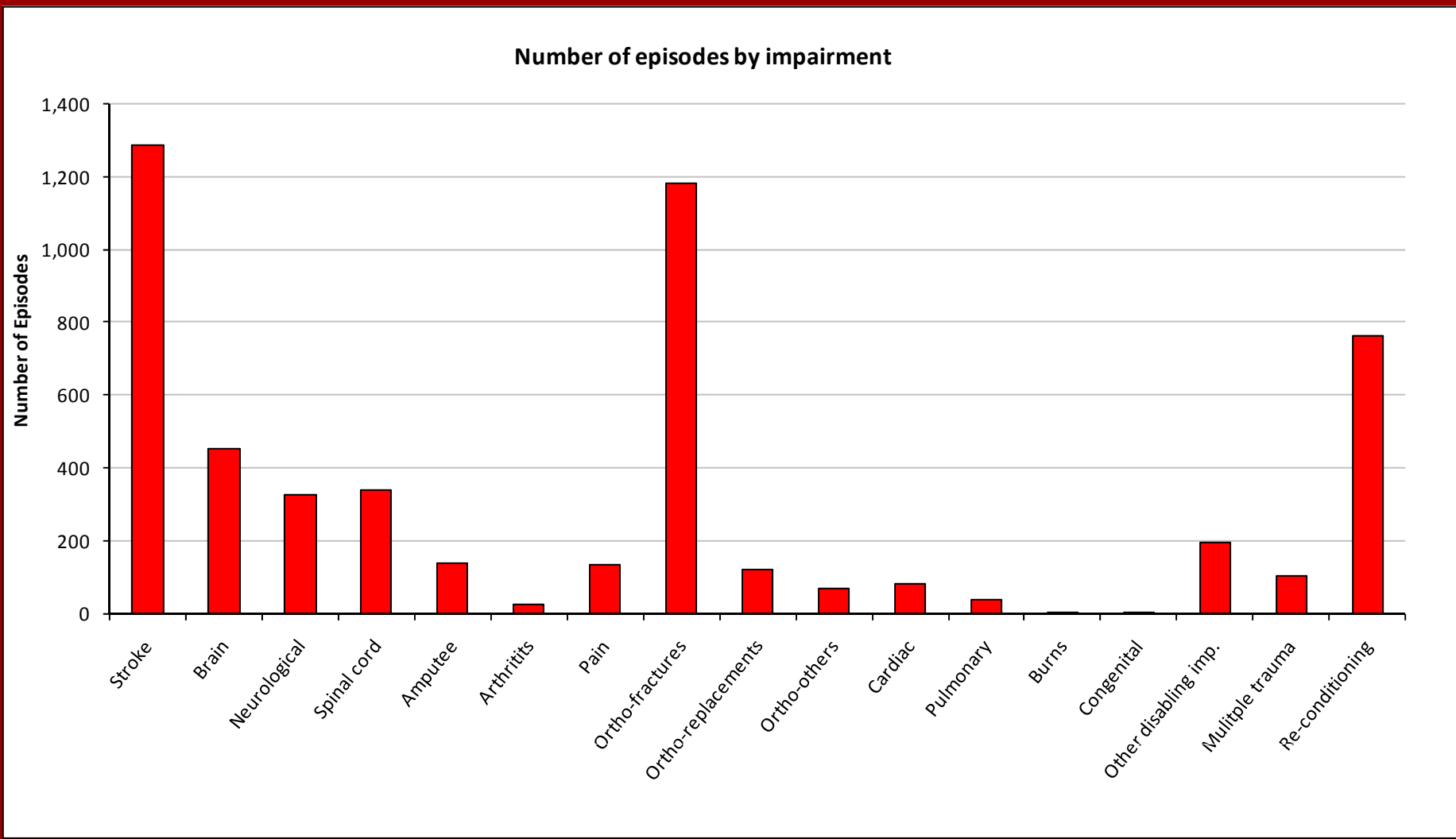
- There are 24 AROC members in NZ
- 18 are collecting and submitting
- 3 are expected to collect and begin submitting next quarter
- 1 very new member

- There are 7 identified non AROC member rehab units

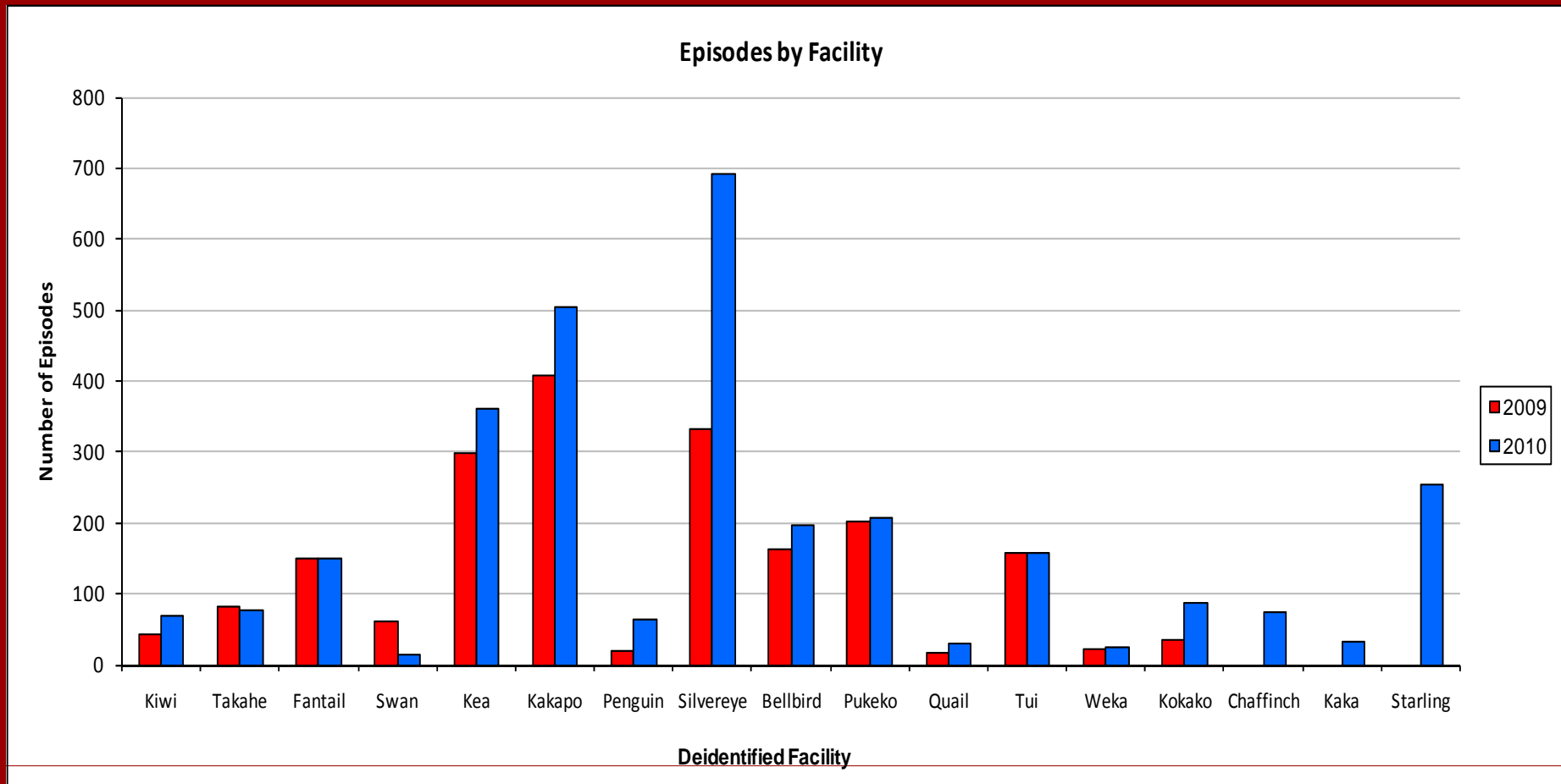
Funding Source



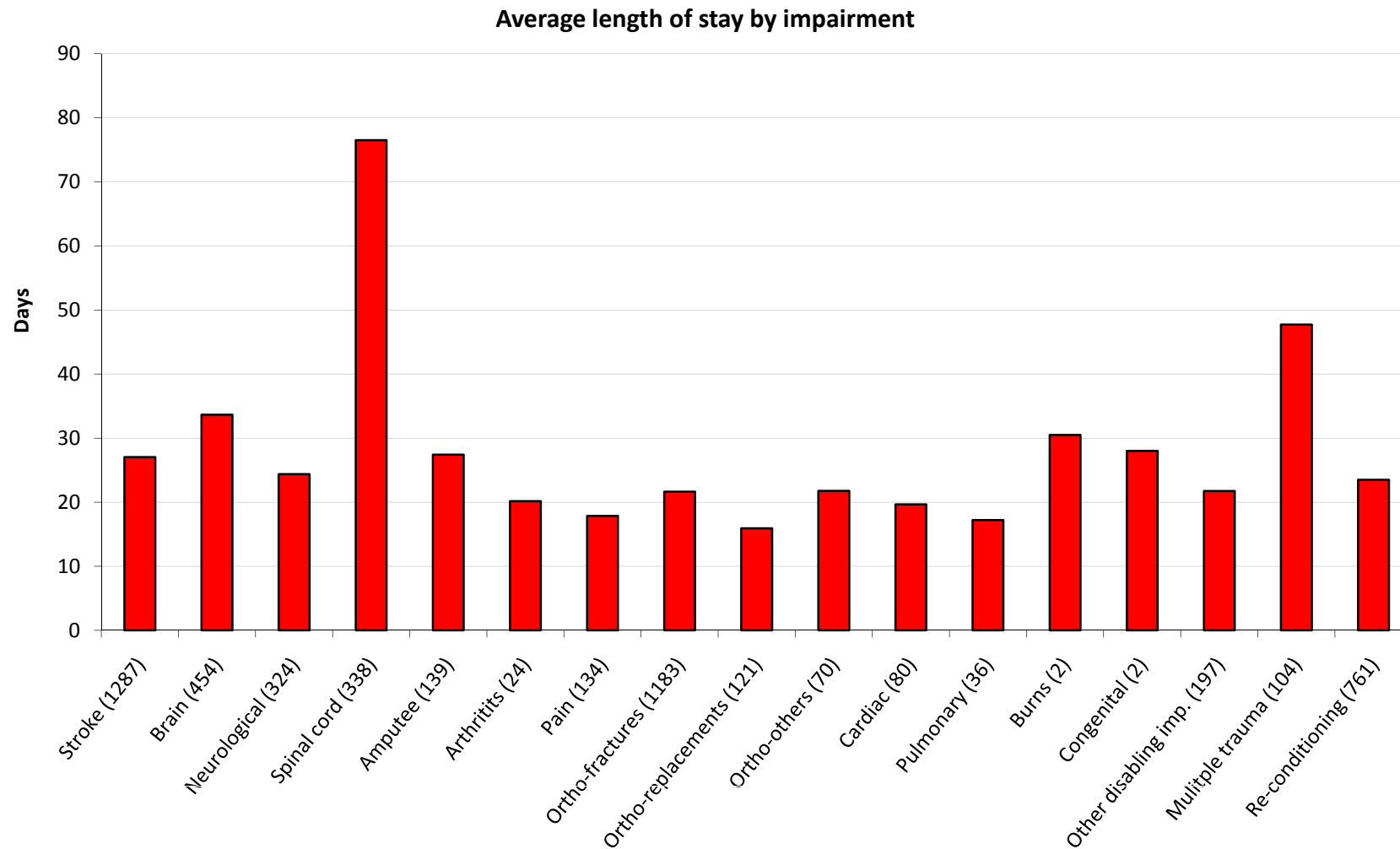
Episodes by Impairment



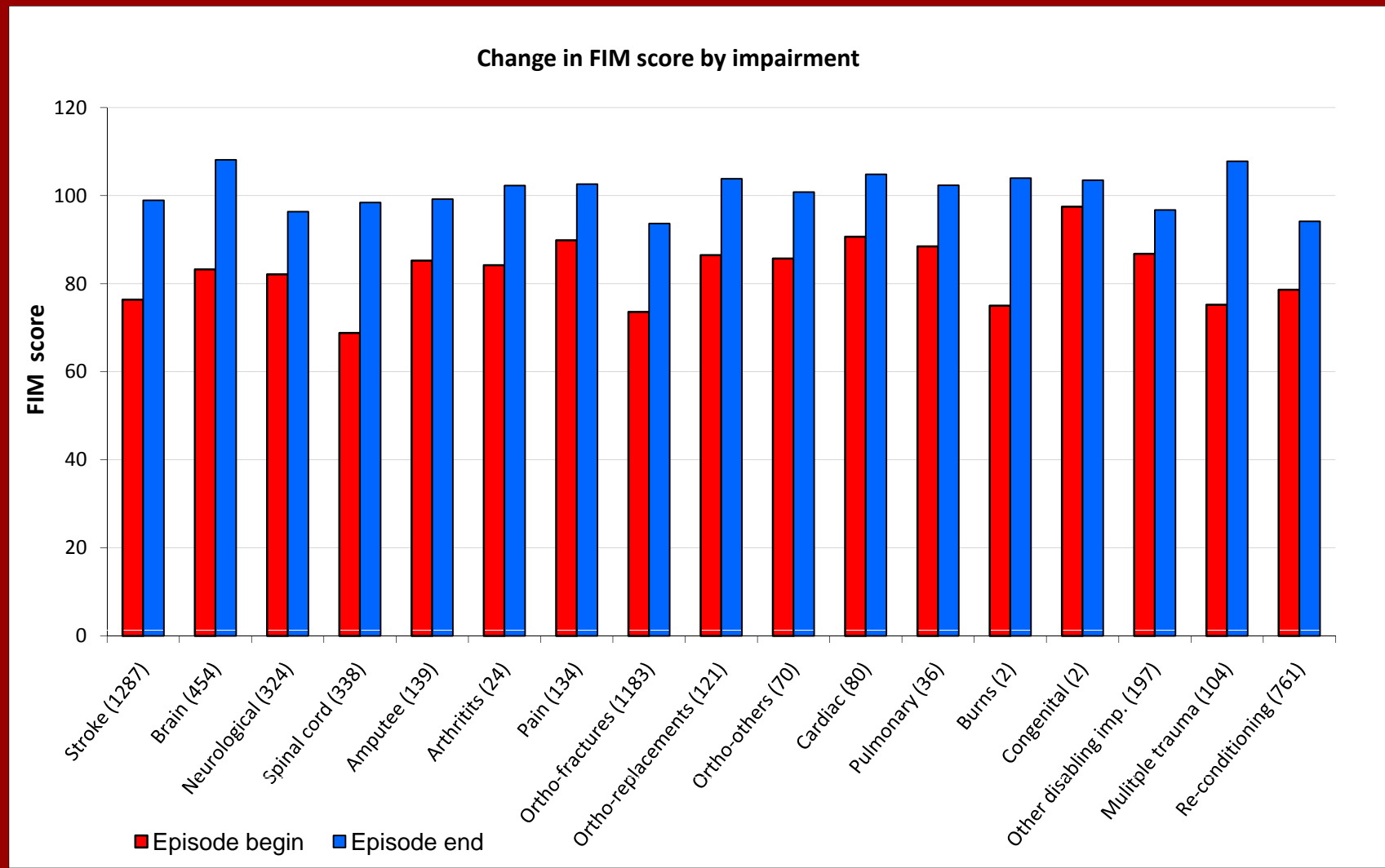
Episodes by Facility



ALOS by Impairment

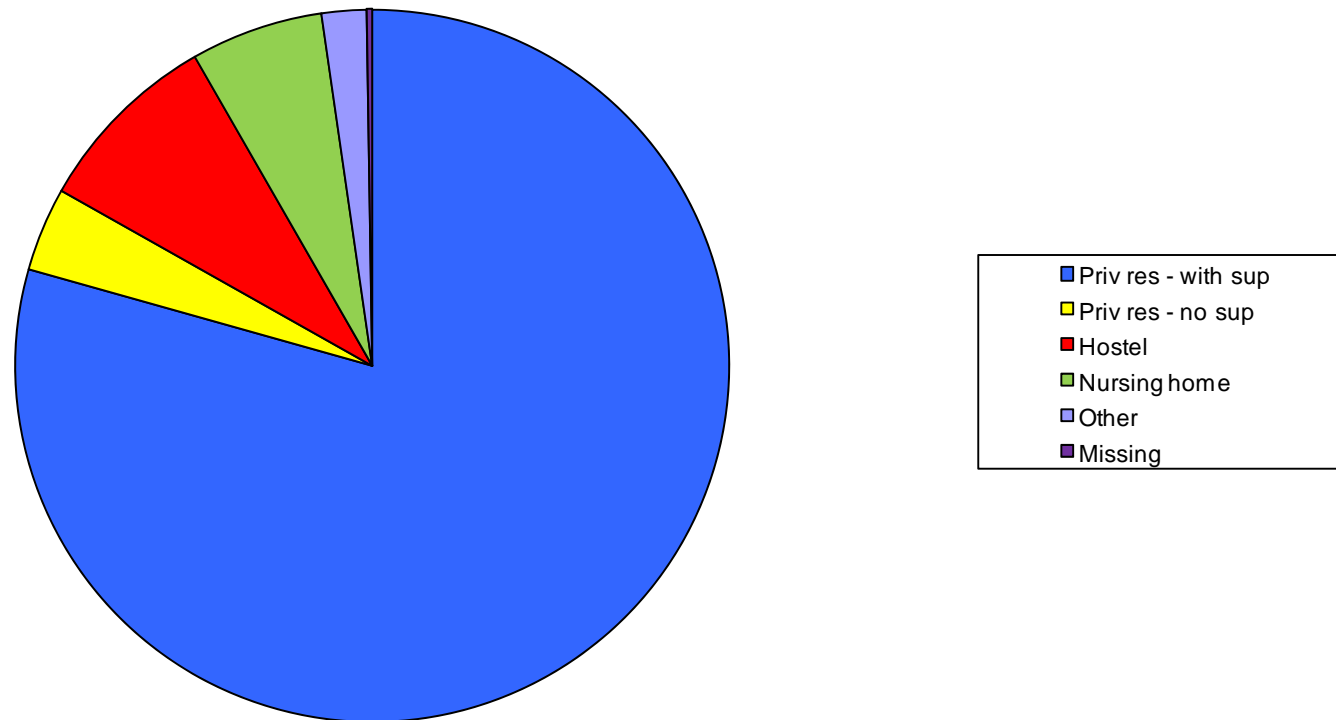


FIM Change by Impairment



Discharge Destination

Discharge Destination



NOF

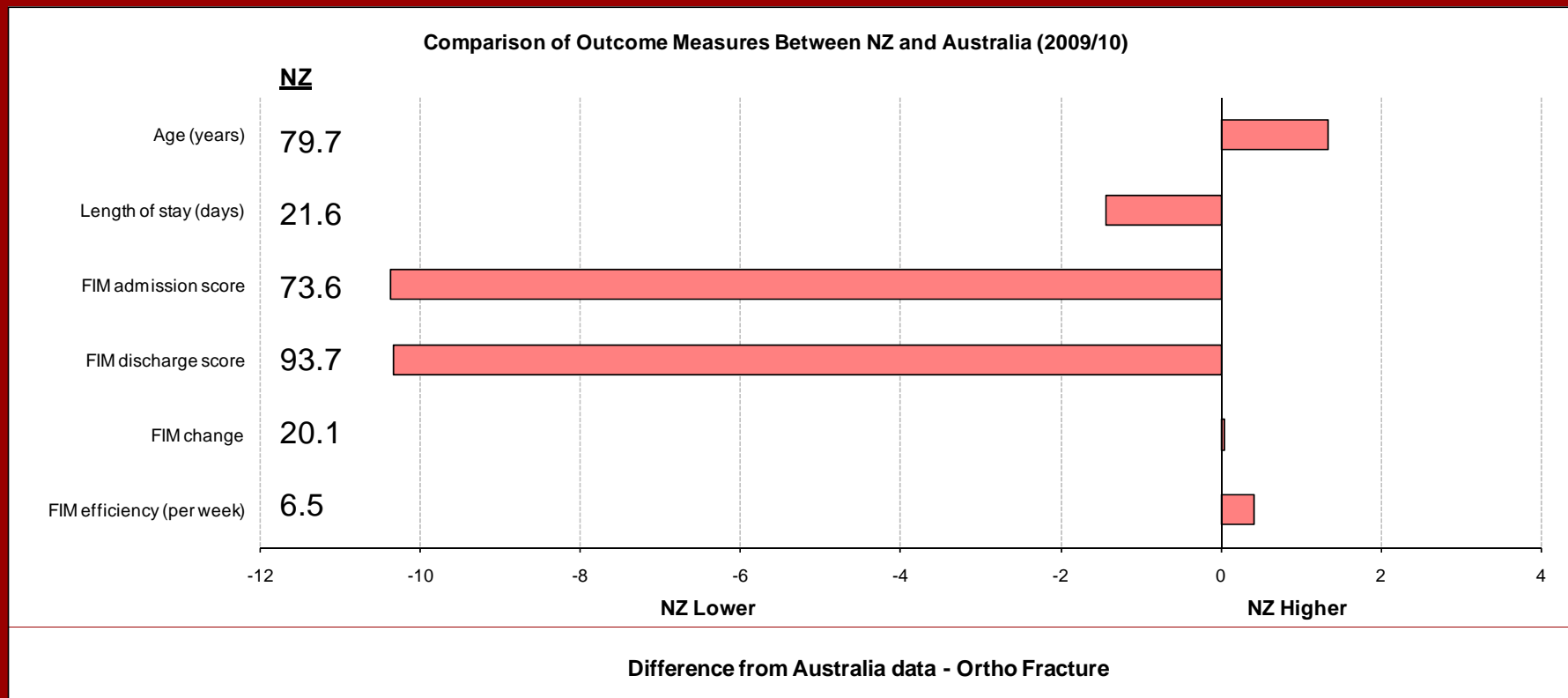
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| SNAP class | | # episodes | ALOS |
|-------------|--|------------|------|
| S2-227 | Ortho fracture, FIM motor 59-91 | 361 | 14.9 |
| S2-228 | Ortho fracture, FIM motor 48-57 | 227 | 20.7 |
| S2-229 | Ortho fracture, FIM motor 14-47, FIM cog 5-18 | 437 | 26.8 |
| S2-230 | Ortho fracture, FIM motor 14-47, FIM cog 19-36 | 140 | 23.9 |
| Grand Total | | 1165 | 21.6 |

- Less readmissions (n=59) – ALOS 25.9 days
- Less those that stayed in the hospital system after discharge (n=43)
- Of the remainder
 - Discharged to usual accommodation:
 - private residence (n=806) – ALOS 20.6 days
 - rest home (n=142) – ALOS 22.4 days
 - hospital level care (n=106) – ALOS 22 days
 - Discharged to interim accom (n=85, ALOS 23.7 days)

Orthopaedic Fracture

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| <i>Ortho fracture</i> | NZ | Aus | Difference |
|----------------------------------|-----------|------------|-------------------|
| Age (years) | 79.7 | 78.4 | 1.3 |
| Length of stay (days) | 21.6 | 23.1 | -1.4 |
| FIM admission score | 73.6 | 84.0 | -10.4 |
| FIM discharge score | 93.7 | 104.0 | -10.3 |
| FIM change | 20.1 | 20.0 | 0.0 |
| FIM efficiency (per week) | 6.5 | 6.1 | 0.4 |

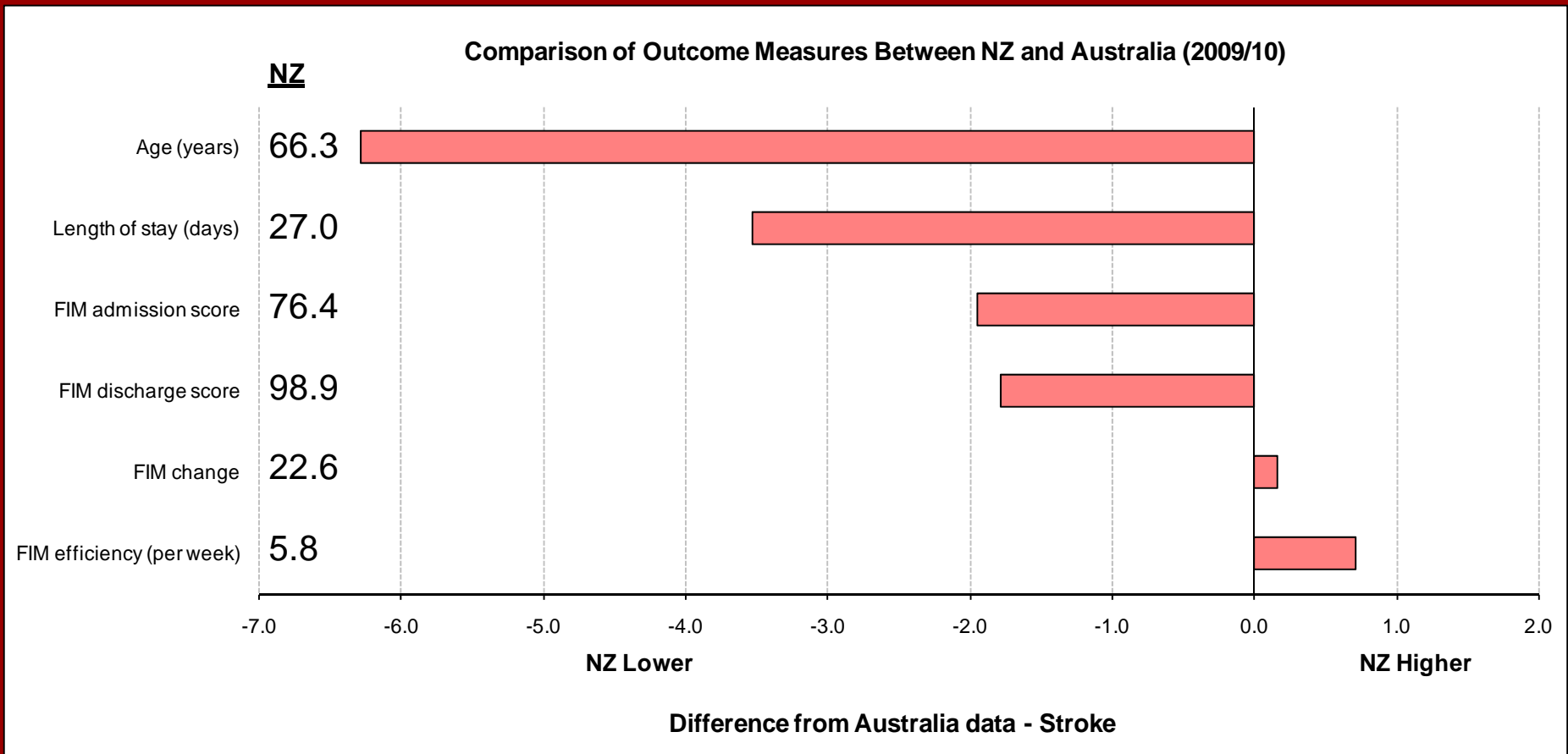
Stroke

| SNAP class | | # episodes | ALOS |
|-------------|--|------------|------|
| S2-204 | Stroke, FIM motor 63-91, FIM cog 20-35 | 479 | 15.6 |
| S2-205 | Stroke, FIM motor 63-91, FIM cog 5-19 | 53 | 20.5 |
| S2-206 | Stroke, FIM motor 47-62, FIM cog 16-35 | 244 | 22.8 |
| S2-207 | Stroke, FIM motor 47-62, FIM cog 5-15 | 19 | 25.8 |
| S2-208 | Stroke, FIM motor 14-46, age ≥ 75 | 160 | 31.2 |
| S2-209 | Stroke, FIM motor 14-46, age ≤ 74 | 280 | 44.7 |
| Grand Total | | 1235 | 26.0 |

- Less readmissions (n=132) – ALOS 19.2 days
- Less those that stayed in the hospital system after discharge (n=184)
- Of the remainder
 - Discharged to usual accommodation:
 - private residence (n=1001) – ALOS 26.1 days
 - rest home (n=54) – ALOS 30.9 days
 - hospital level care (n=62) – ALOS 30.1 days
 - Discharged to interim accom (n=74, ALOS 43.3 days)

Stroke

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| Stroke | NZ | Aus | Difference |
|----------------------------------|-----------|------------|-------------------|
| Age (years) | 66.3 | 72.6 | -6.3 |
| Length of stay (days) | 27.0 | 30.6 | -3.5 |
| FIM admission score | 76.4 | 78.3 | -1.9 |
| FIM discharge score | 98.9 | 100.7 | -1.8 |
| FIM change | 22.6 | 22.4 | 0.2 |
| FIM efficiency (per week) | 5.8 | 5.1 | 0.7 |

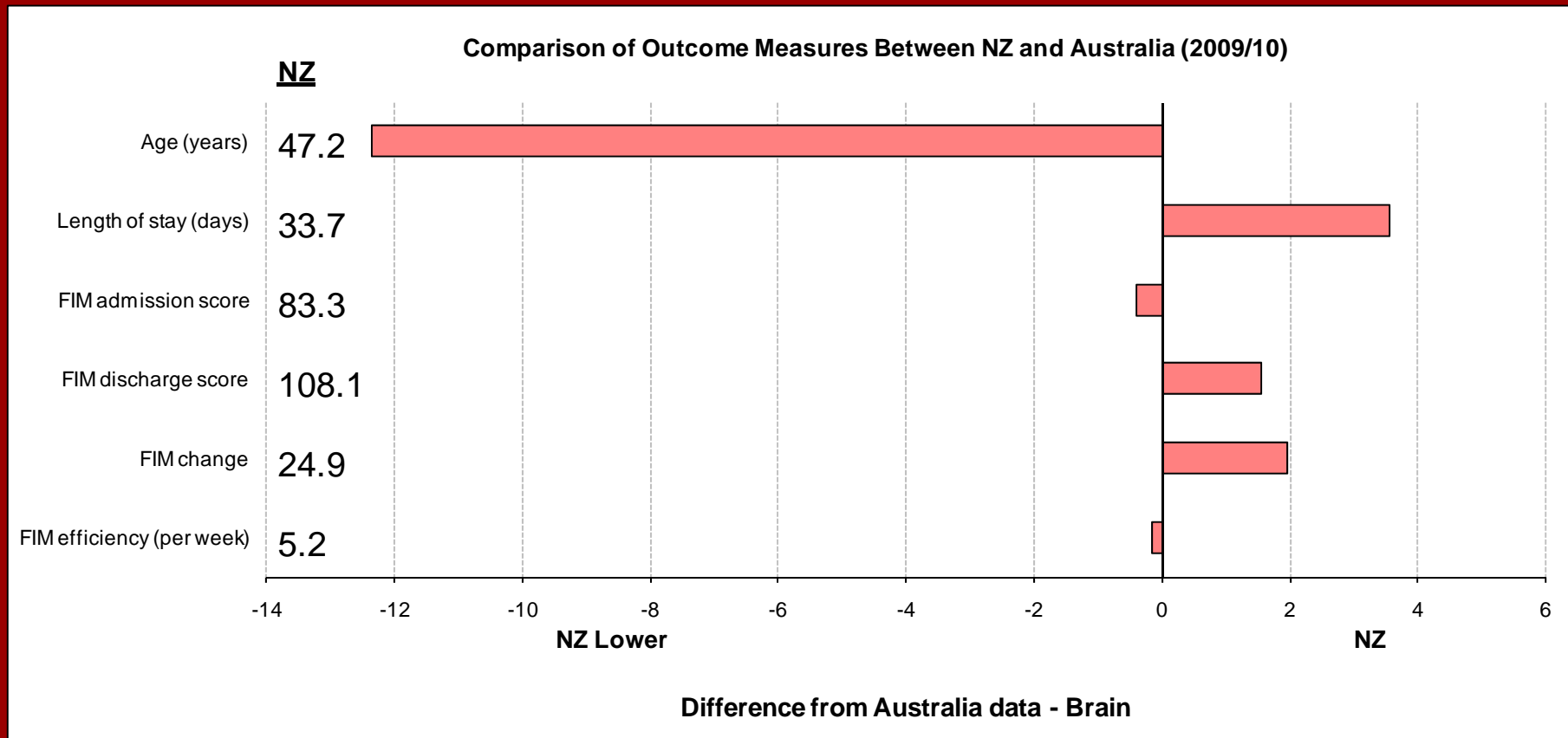
Brain Injury

| SNAP class | | # episodes | ALOS |
|-------------|---|------------|------|
| S2-210 | Brain Dysfunction, FIM motor 6-91, FIM cog 32-35 | 50 | 14.5 |
| S2-211 | Brain Dysfunction, FIM motor 56-91, FIM cog 24-31 | 149 | 18.7 |
| S2-212 | Brain Dysfunction, FIM mptpr 56-91, FIM cog 20-23 | 37 | 27.8 |
| S2-213 | Brain Dysfunction, FIM motor 56-91, FIM cog 5-19 | 75 | 36.5 |
| S2-214 | Brain Dysfunction, FIM motor 24-55 | 88 | 37.4 |
| S2-215 | Brain Dysfunction, FIM motor 14-23 | 35 | 69.9 |
| Grand Total | | 434 | 30.0 |

- Less readmissions (n=48) – ALOS 24.9 days
- Less those that stayed in the hospital system after discharge (n=55)
- Of the remainder
 - Discharged to usual accommodation:
 - private residence (n=352) – ALOS 30.8 days
 - rest home (n=7) – ALOS 116.5 days
 - hospital level care (n=3) – ALOS 26.3 days
 - Discharged to interim accom (n=47, ALOS 50.4 days)

Brain

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| <i>Brain</i> | NZ | Aus | Difference |
|----------------------------------|-----------|------------|-------------------|
| Age (years) | 47.2 | 59.6 | -12.4 |
| Length of stay (days) | 33.7 | 30.1 | 3.6 |
| FIM admission score | 83.3 | 83.7 | -0.4 |
| FIM discharge score | 108.1 | 106.6 | 1.5 |
| FIM change | 24.9 | 22.9 | 1.9 |
| FIM efficiency (per week) | 5.2 | 5.3 | -0.2 |

Spinal Cord Injury

| SNAP class | | # episodes | ALOS |
|-------------|---|------------|------|
| S2-220 | Spinal Cord Dysfunction, FIM motor 81-91 | 10 | 21.7 |
| S2-221 | Spinal Cord Dysfunction, FIM motor 47-80 | 99 | 33.5 |
| S2-222 | Spinal Cord Dysfunction, FIM motor 14-46, age>=33 | 126 | 80.6 |
| S2-223 | Spinal Cord Dysfunction, FIM motor 14-46, age<=32 | 43 | 80.0 |
| Grand Total | | 278 | 61.6 |

| | LOS < 90 days | | LOS >= 90 days | | Total | |
|-------------|---------------|------|----------------|-------|-------|------|
| SNAP class | # | ALOS | # | ALOS | # | ALOS |
| S2-220 | 10 | 21.7 | | | 10 | 21.7 |
| S2-221 | 95 | 29.6 | 4 | 124.8 | 99 | 33.5 |
| S2-222 | 81 | 53.0 | 45 | 130.5 | 126 | 80.6 |
| S2-223 | 30 | 61.7 | 13 | 122.4 | 43 | 80.0 |
| Grand Total | 216 | 42.4 | 62 | 128.4 | 278 | 61.6 |

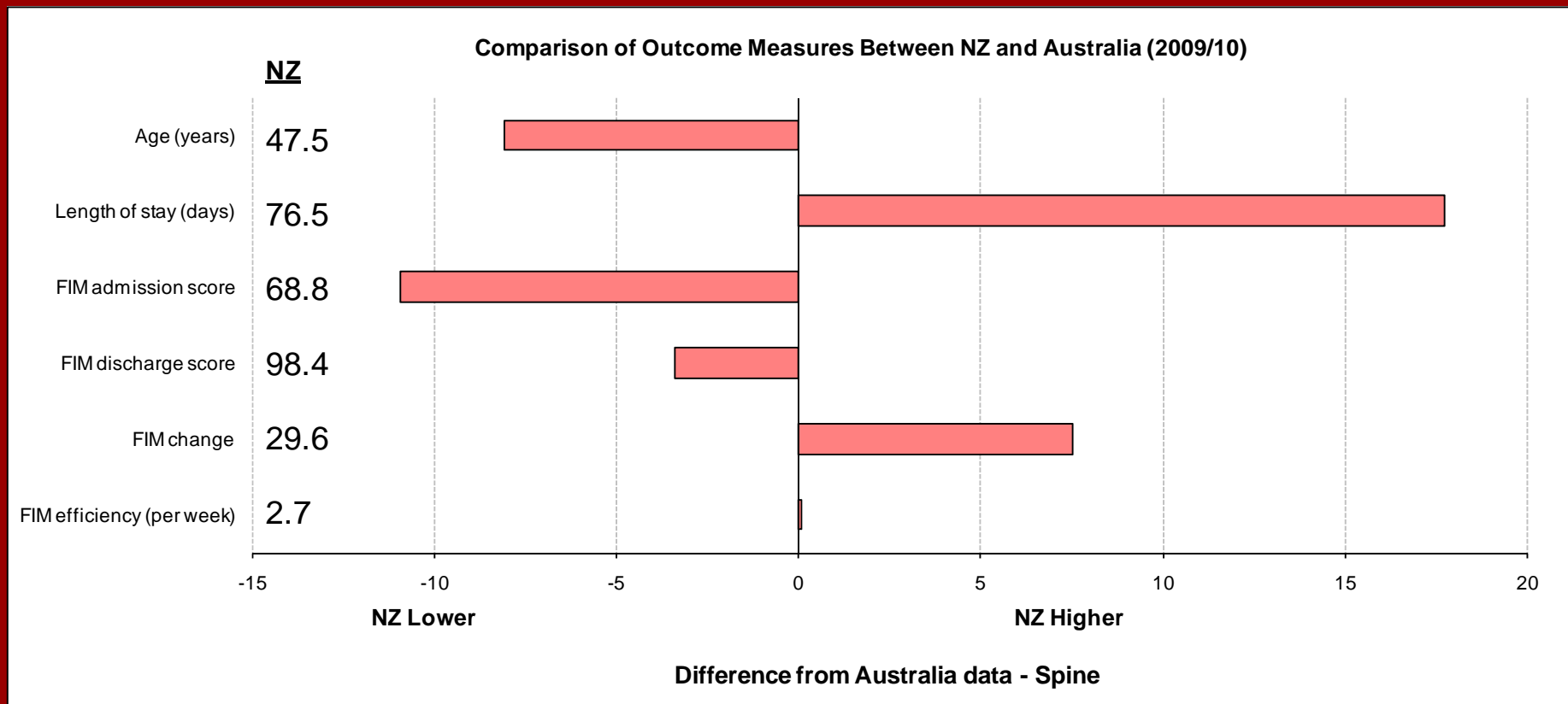
Spinal Cord Injury

| SNAP class | | # episodes | ALOS |
|-------------|---|------------|------|
| S2-220 | Spinal Cord Dysfunction, FIM motor 81-91 | 10 | 21.7 |
| S2-221 | Spinal Cord Dysfunction, FIM motor 47-80 | 99 | 33.5 |
| S2-222 | Spinal Cord Dysfunction, FIM motor 14-46, age \geq 33 | 126 | 80.6 |
| S2-223 | Spinal Cord Dysfunction, FIM motor 14-46, age \leq 32 | 43 | 80.0 |
| Grand Total | | 278 | 61.6 |

- Less readmissions (n=17) – ALOS 71.6 days
- Less those that stayed in the hospital system after discharge (n=34)
- Of the remainder
 - Discharged to usual accommodation:
 - private residence (n=247) – ALOS 67.2 days
 - rest home (n=1) – ALOS 164 days
 - hospital level care (n=6) – ALOS 70 days
 - Discharged to interim accom (n=70, ALOS 112.6 days)

Spine

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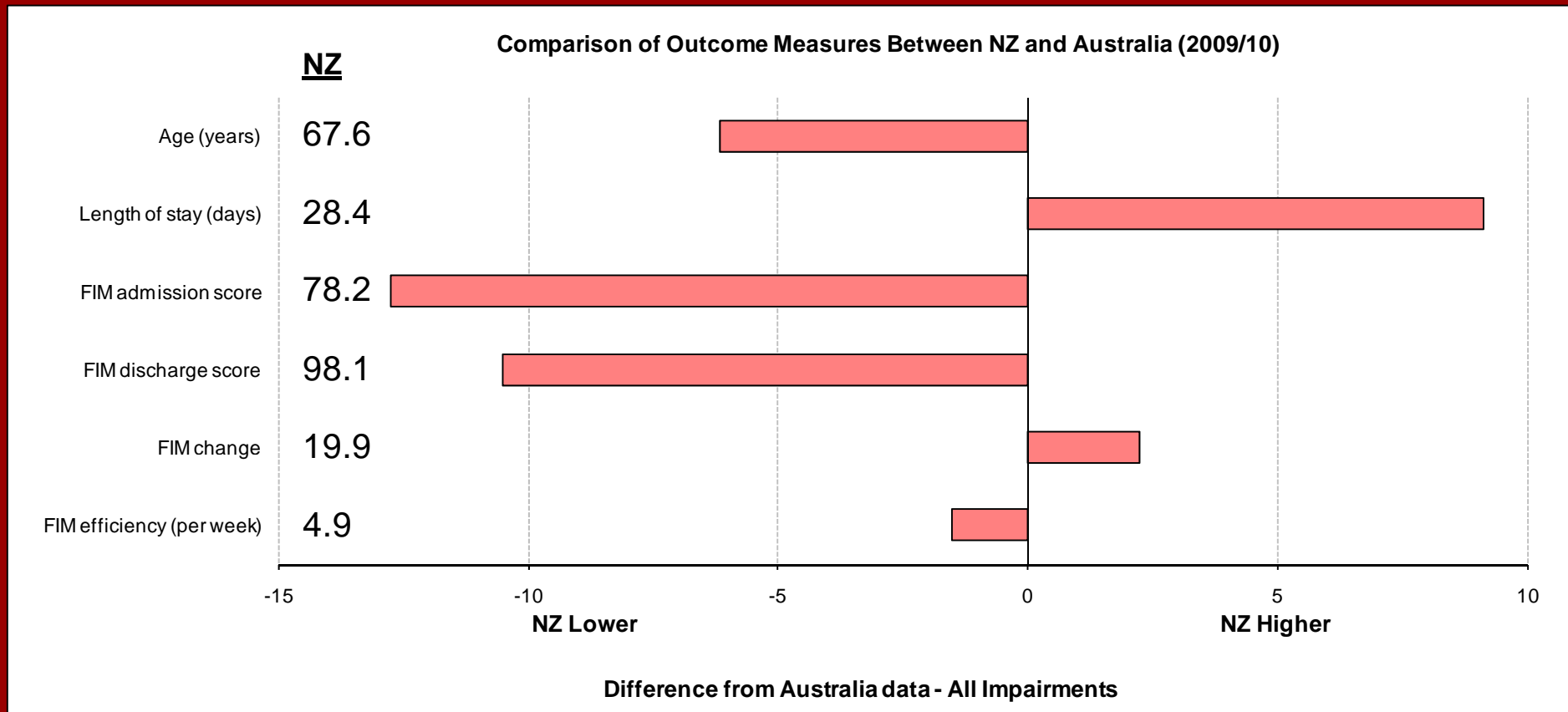


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| Spine | NZ | Aus | Difference |
|----------------------------------|-----------|------------|-------------------|
| Age (years) | 47.5 | 55.6 | -8.1 |
| Length of stay (days) | 76.5 | 58.8 | 17.7 |
| FIM admission score | 68.8 | 79.7 | -10.9 |
| FIM discharge score | 98.4 | 101.8 | -3.4 |
| FIM change | 29.6 | 22.1 | 7.5 |
| FIM efficiency (per week) | 2.7 | 2.6 | 0.1 |

All Impairments

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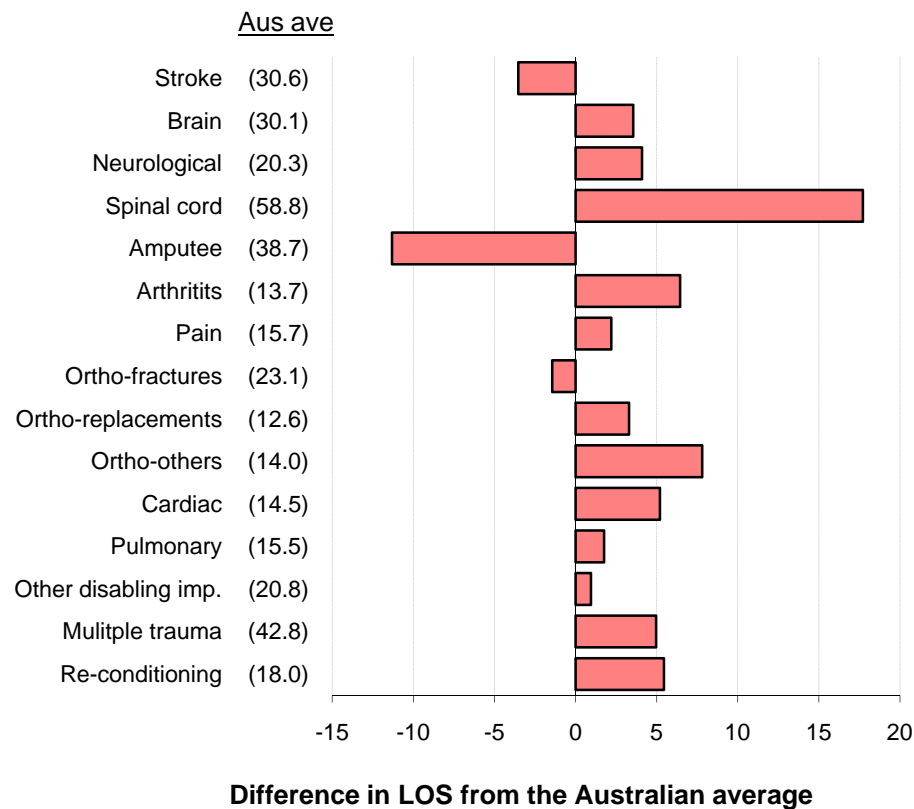


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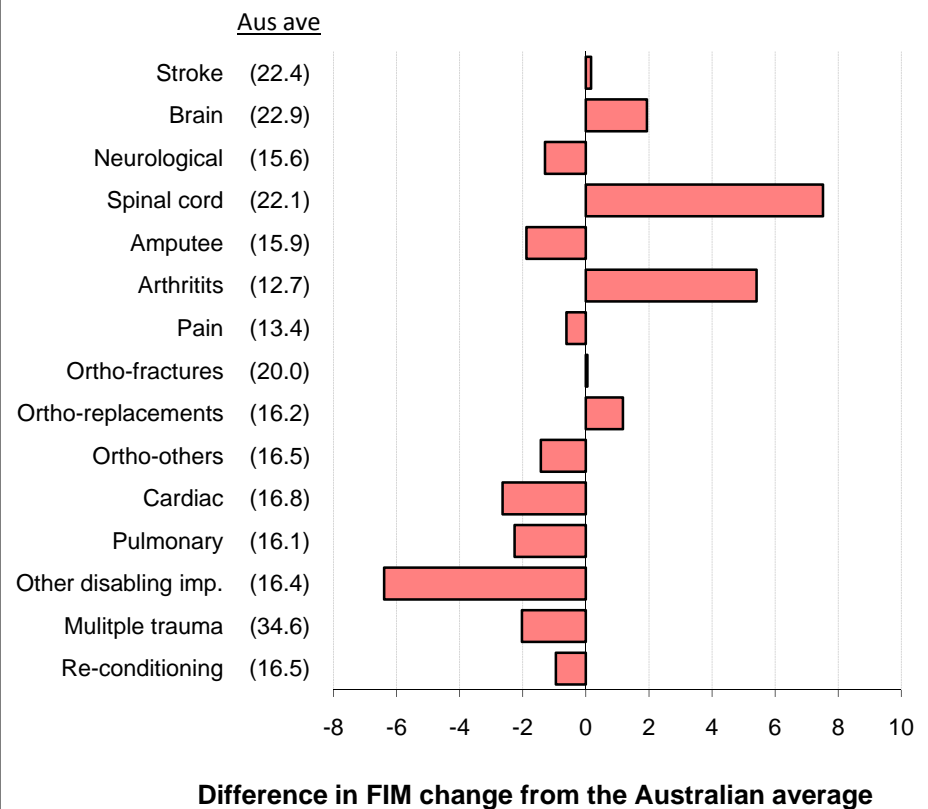
| <i>All Impairments</i> | NZ | Aus | Difference |
|----------------------------------|-----------|------------|-------------------|
| Age (years) | 67.6 | 73.8 | -6.2 |
| Length of stay (days) | 28.4 | 19.2 | 9.1 |
| FIM admission score | 78.2 | 90.9 | -12.7 |
| FIM discharge score | 98.1 | 108.6 | -10.5 |
| FIM change | 19.9 | 17.7 | 2.2 |
| FIM efficiency (per week) | 4.9 | 6.4 | -1.5 |

NZ vs Aus Outcomes

Length of stay in New Zealand compared to Australia



FIM change in New Zealand compared to Australia



NZ Outcomes - 2009

| Impairment | Count | LOS | FIM Change | FIM Efficiency (per week) |
|--------------------------|--------------|------------|-------------------|----------------------------------|
| Stroke | 514 | 26.11 | 21.50 | 5.76 |
| Ortho fracture | 455 | 21.93 | 19.03 | 6.07 |
| Debility | 246 | 23.80 | 14.98 | 4.41 |
| Brain | 173 | 35.18 | 24.73 | 4.92 |
| Spine | 133 | 72.59 | 29.49 | 2.84 |
| Neuro | 117 | 23.77 | 12.91 | 3.80 |
| Other | 78 | 23.50 | 9.69 | 2.89 |
| MultTrauma | 48 | 42.48 | 31.50 | 5.19 |
| Ortho replacement | 46 | 16.67 | 16.48 | 6.92 |
| Pain | 45 | 19.07 | 12.84 | 4.71 |
| Amputee | 44 | 29.50 | 11.51 | 2.73 |
| Cardiac | 33 | 23.09 | 11.49 | 3.48 |
| Other ortho | 33 | 18.30 | 13.89 | 5.31 |
| Pulmonary | 17 | 16.47 | 15.55 | 6.61 |
| Arthritits | 12 | 16.25 | 18.36 | 7.91 |
| Total | 1,994 | 28.29 | 20.21 | 5.00 |

NZ Outcomes - 2010

| Impairment | Count | LOS | FIM Change | FIM Efficiency (per week) |
|--------------------------|--------------|------------|-------------------|----------------------------------|
| Stroke | 707 | 26.62 | 22.79 | 5.99 |
| Ortho fracture | 713 | 21.30 | 20.76 | 6.82 |
| Debility | 502 | 23.04 | 15.85 | 4.82 |
| Brain | 219 | 33.21 | 25.69 | 5.42 |
| Spine | 148 | 67.12 | 31.10 | 3.24 |
| Neuro | 182 | 25.37 | 15.14 | 4.18 |
| Other | 112 | 19.55 | 10.45 | 3.74 |
| MultTrauma | 45 | 51.11 | 32.02 | 4.39 |
| Ortho replacement | 72 | 15.72 | 17.70 | 7.88 |
| Pain | 88 | 17.38 | 12.74 | 5.13 |
| Amputee | 92 | 26.64 | 15.22 | 4.00 |
| Cardiac | 47 | 20.62 | 16.15 | 5.48 |
| Other ortho | 34 | 20.62 | 16.51 | 5.61 |
| Pulmonary | 19 | 17.89 | 11.95 | 4.67 |
| Arthritits | 12 | 24.08 | 17.83 | 5.18 |
| Total | 2,992 | 26.50 | 20.09 | 5.30 |

The logo for the Australasian Rehabilitation Outcomes Centre (AROC) is located in the top right corner. It consists of the lowercase letters "aroc" in a black, italicized serif font, enclosed within a white oval with a thin black border.

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