AROC Annual Report – The state of inpatient rehabilitation in New Zealand in 2019

Tara L. Alexander  
*University of Wollongong, hurst@uow.edu.au*

Frances D. Simmonds  
*University of Wollongong, frances@uow.edu.au*

Jacquelin T. Capell  
*University of Wollongong, jcapell@uow.edu.au*

Lewis J. Green  
*University of Wollongong, lewis@uow.edu.au*

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AROC Annual Report – The state of inpatient rehabilitation in New Zealand in 2019

Abstract
This is the seventh 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).

Keywords
inpatient, aroc, state, –, annual, rehabilitation, zealand, report, 2019

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The AROC Annual Report:

The state of rehabilitation in New Zealand in 2019
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Introduction

This is the seventh 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 sixth instalment describes the 2018 data.

This report is the third to use the version 4 AN-SNAP classification (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 includes 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 has grown over the past few years, with 2018 seeing a 3.8% real increase in inpatient episodes of rehabilitation provided.
Number of episodes by impairment group, 2019

- Stroke (1,805)
- Brain (507)
- Neuro (275)
- Spine (261)
- Amputee (221)
- Arthritis (56)
- Pain (909)
- Ortho-Fractures (4,113)
- Ortho-Replacements (272)
- Ortho-Soft Tissue Injury (328)
- Other ortho (128)
- Cardiac (160)
- Pulmonary (89)
- Burns (3)
- Congenital (6)
- Other (77)
- MultiTrauma (66)
- Developmental (4)
- Recording (3,932)
Funding source for rehabilitation in New Zealand, 2019

- MoH: 59.1%
- ACC: 40.2%
- Other: 0.7%
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, 2018 to 2019

-50% -40% -30% -20% -10% 0% 10% 20% 30% 40%

Stroke (1,805)
Brain (507)
Neuro (275)
Spine (218)
Amputee (221)
Arthritis (56)
Pain (305)
Orthopaedic all (4,841)
Ortho-Fractures (4,113)
Ortho-Replacements (272)
Ortho-Soft tissue injury (328)
Other ortho (128)
Cardiac (130)
Pulmonary (89)
Other (177)
MultTrauma (95)
Reconditioning (3,562)
All impairments (12,294)

Percentage change in number of episodes

AROC State of Nations | 2019 report | New Zealand
Change in outcome measures, 2018 to 2019

- Age (years): 2018 = 78.1
  - Difference: Lower than 2018 data

- Length of stay (days): 2018 = 20.4
  - Difference: Higher than 2018 data

- FIM admission score: 2018 = 70.4
  - Difference: Lower than 2018 data

- FIM discharge score: 2018 = 90.3
  - Difference: Higher than 2018 data

- FIM change (adm to disch): 2018 = 19.9
  - Difference: Higher than 2018 data

- FIM efficiency (per week): 2018 = 6.8
  - Difference: Lower than 2018 data

- Disch to community (%): 2018 = 97.6
  - Difference: Higher than 2018 data

2018 (n = 12,901)  
2019 (n = 12,321)
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 - 2015 to 2019

Year

Number of episodes each year - 2015 to 2019
Proportion of episodes by impairment group, 2015 to 2019
Change in outcome measures, 2015 to 2019

<table>
<thead>
<tr>
<th>Measure</th>
<th>2015</th>
<th>Difference from 2015 data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>77.9</td>
<td>0.8</td>
</tr>
<tr>
<td>Length of stay (days)</td>
<td>20.8</td>
<td>0.3</td>
</tr>
<tr>
<td>FIM admission score</td>
<td>73.6</td>
<td>-2.1</td>
</tr>
<tr>
<td>FIM discharge score</td>
<td>91.7</td>
<td>-0.4</td>
</tr>
<tr>
<td>FIM change (adm to disch)</td>
<td>18.1</td>
<td>1.6</td>
</tr>
<tr>
<td>FIM efficiency (per week)</td>
<td>6.1</td>
<td>0.2</td>
</tr>
<tr>
<td>Disch to community (%)</td>
<td>97.3</td>
<td>-0.2</td>
</tr>
</tbody>
</table>

2015 (n = 12,190)
2019 (n = 12,321)
Over the last five years patients age has fluctuated very little.
Admission to rehabilitation within a week of injury or onset of symptoms compared to five years ago

Over the last five years half of all patients commenced rehabilitation within a week after their injury / onset of symptoms; the proportion has decreased slightly over time with 3% fewer patients in 2019 admitted to rehabilitation within a week of onset compared to in 2015.
Length of stay compared to five years ago

Over the last five years rehabilitation length of stay (LOS) has been consistently around 20-21 days.
Timeliness of FIM assessment within 24 hours compared to five years ago

Over the last 5 years timeliness of FIM assessment has greatly increased, with nearly 13% more patients assessed for their functional ability within 24 hours of rehabilitation commencing in 2019 when compared to 2015.
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 continued annually to decline slightly, being 3.4% lower in 2019 compared to in 2015.
Relative functional gain in FIM compared to five years ago

FIM Relative Functional Gain (RFG), or change in FIM score possible from admission to discharge has increased slightly over the last few years and was 1.3% higher in 2019 than it was in 2015. In 2019 35.9% of FIM relative functional gain was achieved.

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Over the last five years weekly FIM efficiency (change in FIM score possible from admission to discharge divided by length of stay x 7) has been fluctuating close to 12%. This is in keeping with the observed LOS and FIM change over this period.
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 years actual values are presented on the left side of the graph.
Stroke episodes over time

Number of episodes by quarter - Stroke

Year - Quarter

Number of episodes by quarter - Stroke
Stroke casemix over time

Proportion of episodes within year

Year

2015 (n=1,839)
2016 (n=1,967)
2017 (n=1,842)
2018 (n=2,008)
2019 (n=1,796)

Proportion of episodes within year

Year

2015 (n=1,839)
2016 (n=1,967)
2017 (n=1,842)
2018 (n=2,008)
2019 (n=1,796)
## Stroke episodes in 2019

### AN-SNAP class:

<table>
<thead>
<tr>
<th>AN-SNAP class:</th>
<th>4AA1</th>
<th>4AA2</th>
<th>4AA3</th>
<th>4AA4</th>
<th>4AA5</th>
<th>4AA6</th>
<th>4AA7</th>
<th>4AZ3</th>
<th>4AZ4</th>
<th>All Stroke</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of episodes</td>
<td>269</td>
<td>271</td>
<td>104</td>
<td>257</td>
<td>75</td>
<td>350</td>
<td>102</td>
<td>300</td>
<td>68</td>
<td>1,805</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>14.9%</td>
<td>15.0%</td>
<td>5.8%</td>
<td>14.2%</td>
<td>4.2%</td>
<td>19.4%</td>
<td>5.7%</td>
<td>16.6%</td>
<td>3.8%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

### Gender (%)

- **Female**
  - 48.0%
  - 37.3%
  - 51.0%
  - 51.0%
  - 36.0%
  - 50.0%
  - 42.2%
  - 50.3%
  - 45.6%
  - 46.9%
- **Male**
  - 51.7%
  - 62.4%
  - 49.0%
  - 49.0%
  - 46.0%
  - 40.0%
  - 57.8%
  - 49.7%
  - 54.4%
  - 53.0%

### Age group (%)

- **Under 65**
  - 27.1%
  - 24.4%
  - 14.4%
  - 0.0%
  - 77.3%
  - 0.0%
  - 85.3%
  - 0.0%
  - 100.0%
  - 20.4%
- **Over 65**
  - 72.9%
  - 75.6%
  - 85.6%
  - 100.0%
  - 22.7%
  - 100.0%
  - 14.7%
  - 100.0%
  - 0.0%
  - 79.3%

### Age (Mean+95%CI)

- Under 65: 72.3 (70.6-74.0)
- 65-74: 73.1 (71.5-74.8)
- 75-84: 76.2 (74.1-78.3)
- 85-94: 81.2 (80.3-82.1)
- 95-104: 56.8 (54.6-59.0)
- 105-114: 80.7 (79.9-81.5)
- 115-124: 55.9 (54.2-57.6)
- 125-134: 79.7 (78.8-80.6)
- 135-144: 54.1 (51.7-56.5)
- 145+: 74.5 (73.9-75.1)

### Admission FIM (Mean+95%CI)

- 99.2 (97.9-100.4)
- 88.2 (86.8-89.6)
- 76.7 (74.7-78.6)
- 65.2 (64.2-66.2)
- 67.9 (65.8-70.1)
- 47.7 (46.6-48.8)
- 49.0 (46.9-51.1)
- 29.4 (28.4-30.3)
- 29.2 (27.0-31.4)
- 63.4 (62.2-64.7)

### LOS (Mean+95%CI)

- 12.2 (11.2-13.3)
- 14.7 (13.6-15.8)
- 19.7 (17.1-22.2)
- 23.8 (20.6-27.1)
- 23.9 (21.1-26.6)
- 32.1 (30.3-34.0)
- 40.5 (35.9-45.2)
- 40.6 (37.9-43.2)
- 65.1 (56.8-73.4)
- 27.1 (26.1-28.2)

### Discharge destination (%)

- **Discharged to community**
  - 99.6%
  - 98.9%
  - 99.0%
  - 98.8%
  - 97.3%
  - 97.7%
  - 96.0%
  - 97.2%
  - 92.6%
  - 98.0%
- **Remaining in hospital system**
  - 0.4%
  - 1.1%
  - 1.0%
  - 1.2%
  - 2.7%
  - 2.3%
  - 4.0%
  - 2.8%
  - 7.4%
  - 2.0%

### FIM change (Mean+95%CI)

- 14.2 (13.2-15.3)
- 16.7 (15.4-18.1)
- 19.8 (17.3-22.2)
- 25.5 (23.6-27.4)
- 35.9 (32.7-39.1)
- 28.7 (26.4-30.9)
- 45.2 (41.3-49.2)
- 21.5 (18.9-24.0)
- 36.3 (29.8-42.8)
- 24.0 (23.1-24.9)

### FIM efficiency (FIM change/LOS)

- 1.2
- 1.1
- 1.0
- 1.1
- 1.5
- 0.9
- 1.1
- 0.5
- 0.6
- 0.9
Stroke discharge destination by AN-SNAP class

Discharge destination - Stroke

Percentage

AN-SNAP class

- Remaining in hospital system
- Unknown residence
- Other supported residence
- Private residence - ?? Support
- Private residence - with support
- Private residence - no support

4AA1 (n=269)
4AA2 (n=271)
4AA3 (n=104)
4AA4 (n=257)
4AA5 (n=75)
4AA6 (n=350)
4AA7 (n=102)
4AZ3 (n=300)
4AZ4 (n=68)
All Stroke (n=1,805)
Stroke LOS and FIM change by AN-SNAP class

LOS and FIM change by AN-SNAP class

Mean days/score

AN-SNAP class

Mean LOS

Mean FIM improvement

4AA1 (n=289)
4AA2 (n=271)
4AA3 (n=104)
4AA4 (n=257)
4AA5 (n=75)
4AA6 (n=350)
4AA7 (n=102)
4AZ3 (n=300)
4AZ4 (n=68)
Change in outcome measures in stroke, 2018 to 2019

Age (years) 74.4
Length of stay (days) 26.3
FIM admission score 65.1
FIM discharge score 88.6
FIM change (adm to disch) 23.5
FIM efficiency (per week) 6.3
Disch to community (%) 97.1

2018 (n = 2,024)
2019 (n = 1,805)

Lower than 2018 data
Higher than 2018 data
Brain dysfunction episodes over time

Number of episodes by quarter - Brain dysfunction

Year - Quarter

Number of episodes
Brain dysfunction casemix over time – Specialist facilities

Proportion of episodes within year

Year

2015 (n=244) 2016 (n=284) 2017 (n=298) 2018 (n=300) 2019 (n=257)

Specialist Facilities

4AZ2
4AZ1
4AB7
4AB6
4AB5
4AB4
4AB3
4AB2
4AB1
Brain dysfunction casemix over time –
Non specialist facilities

Non Specialist Facilities

Year

2015 (n=240) 2016 (n=223) 2017 (n=242) 2018 (n=248) 2019 (n=247)
## Brain dysfunction episodes in 2019 - Specialist facilities

<table>
<thead>
<tr>
<th>AN-SNAP class:</th>
<th>4AB1</th>
<th>4AB2</th>
<th>4AB3</th>
<th>4AB4</th>
<th>4AB5</th>
<th>4AB6</th>
<th>4AB7</th>
<th>4AZ1</th>
<th>4AZ2</th>
<th>All Brain dysfunction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of episodes</td>
<td>40</td>
<td>74</td>
<td>18</td>
<td>37</td>
<td>37</td>
<td>25</td>
<td>15</td>
<td>6</td>
<td>5</td>
<td>257</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>15.6%</td>
<td>28.8%</td>
<td>7.0%</td>
<td>14.4%</td>
<td>14.4%</td>
<td>9.7%</td>
<td>5.8%</td>
<td>2.3%</td>
<td>1.9%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Gender (%)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>32.5%</td>
<td>20.3%</td>
<td>44.4%</td>
<td>16.2%</td>
<td>21.6%</td>
<td>24.0%</td>
<td>46.7%</td>
<td>50.0%</td>
<td>20.0%</td>
<td>26.1%</td>
</tr>
<tr>
<td>Male</td>
<td>67.5%</td>
<td>79.7%</td>
<td>55.6%</td>
<td>83.8%</td>
<td>78.4%</td>
<td>76.0%</td>
<td>53.3%</td>
<td>50.0%</td>
<td>80.0%</td>
<td>73.9%</td>
</tr>
<tr>
<td>Age group (%)</td>
<td></td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>90.0%</td>
<td>91.9%</td>
<td>72.2%</td>
<td>78.4%</td>
<td>78.4%</td>
<td>80.0%</td>
<td>46.7%</td>
<td>83.3%</td>
<td>100.0%</td>
<td>82.5%</td>
</tr>
<tr>
<td>Over 65</td>
<td>10.0%</td>
<td>8.1%</td>
<td>27.8%</td>
<td>21.6%</td>
<td>21.6%</td>
<td>20.0%</td>
<td>53.3%</td>
<td>16.7%</td>
<td>0.0%</td>
<td>17.5%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>43.6 (37.7-49.5)</td>
<td>44.3 (40.3-48.2)</td>
<td>54.7 (45.7-63.6)</td>
<td>43.1 (36.3-49.9)</td>
<td>46.7 (41.0-52.5)</td>
<td>52.2 (44.0-60.4)</td>
<td>62.7 (53.8-71.6)</td>
<td>61.2 (54.4-67.9)</td>
<td>35.0 (24.5-45.5)</td>
<td>47.1 (44.8-49.5)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>110.8 (108.6-113.0)</td>
<td>98.5 (96.2-100.8)</td>
<td>89.7 (85.7-93.6)</td>
<td>78.9 (75.6-82.2)</td>
<td>66.3 (62.9-69.6)</td>
<td>45.8 (43.0-48.6)</td>
<td>35.6 (31.5-39.8)</td>
<td>22.8 (19.1-26.6)</td>
<td>24.2 (18.3-30.1)</td>
<td>81.2 (77.8-84.5)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>12.6 (10.7-14.4)</td>
<td>25.7 (19.8-31.7)</td>
<td>23.9 (18.3-29.6)</td>
<td>28.8 (21.4-36.2)</td>
<td>55.1 (41.9-68.4)</td>
<td>53.8 (41.3-66.3)</td>
<td>70.0 (44.0-96.0)</td>
<td>88.0 (55.5-120.5)</td>
<td>24.4 (90.3-158.5)</td>
<td>36.5 (32.0-40.9)</td>
</tr>
<tr>
<td>Discharge destination (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharged to community</td>
<td>95.1%</td>
<td>96.1%</td>
<td>94.7%</td>
<td>92.1%</td>
<td>97.4%</td>
<td>73.3%</td>
<td>80.0%</td>
<td>75.0%</td>
<td>100.0%</td>
<td>91.5%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>4.9%</td>
<td>3.9%</td>
<td>5.3%</td>
<td>7.9%</td>
<td>2.6%</td>
<td>26.7%</td>
<td>20.0%</td>
<td>25.0%</td>
<td>0.0%</td>
<td>8.5%</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>10.9 (9.0-12.8)</td>
<td>18.5 (16.4-20.6)</td>
<td>25.9 (21.5-30.4)</td>
<td>37.1 (33.1-41.2)</td>
<td>43.5 (38.7-48.3)</td>
<td>49.2 (39.6-58.7)</td>
<td>70.1 (60.9-79.3)</td>
<td>50.2 (23.2-77.1)</td>
<td>54.8 (33.7-75.9)</td>
<td>30.8 (28.2-33.5)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>0.9</td>
<td>0.7</td>
<td>1.1</td>
<td>1.3</td>
<td>0.8</td>
<td>0.9</td>
<td>1.0</td>
<td>0.6</td>
<td>0.4</td>
<td>0.8</td>
</tr>
</tbody>
</table>
# Brain dysfunction episodes in 2019 - Non specialist facilities

<table>
<thead>
<tr>
<th>AN-SNAP class:</th>
<th>4AB1</th>
<th>4AB2</th>
<th>4AB3</th>
<th>4AB4</th>
<th>4AB5</th>
<th>4AB6</th>
<th>4AB7</th>
<th>4AZ1</th>
<th>4AZ2</th>
<th>All Brain dysfunction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of episodes</td>
<td>15</td>
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<td>39</td>
<td>46</td>
<td>31</td>
<td>44</td>
<td>22</td>
<td>27</td>
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<td>15.6%</td>
<td>18.4%</td>
<td>12.4%</td>
<td>17.6%</td>
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<td>n &lt; 5</td>
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<tr>
<td>Female</td>
<td>46.7%</td>
<td>28.6%</td>
<td>51.3%</td>
<td>58.7%</td>
<td>51.6%</td>
<td>59.1%</td>
<td>45.5%</td>
<td>55.6%</td>
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<td>71.4%</td>
<td>48.7%</td>
<td>41.3%</td>
<td>48.4%</td>
<td>40.9%</td>
<td>54.5%</td>
<td>44.4%</td>
<td>n &lt; 5</td>
<td>47.6%</td>
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<td>Age group (%)</td>
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<tr>
<td>Under 65</td>
<td>53.3%</td>
<td>33.3%</td>
<td>28.2%</td>
<td>17.4%</td>
<td>25.8%</td>
<td>15.9%</td>
<td>9.1%</td>
<td>40.7%</td>
<td>n &lt; 5</td>
<td>26.4%</td>
</tr>
<tr>
<td>Over 65</td>
<td>46.7%</td>
<td>66.7%</td>
<td>71.8%</td>
<td>82.6%</td>
<td>74.2%</td>
<td>84.1%</td>
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<tr>
<td>Age (Mean+95%CI)</td>
<td>59.2 (48.8-69.6)</td>
<td>66.2 (58.2-74.3)</td>
<td>71.5 (66.1-76.9)</td>
<td>77.1 (73.9-80.2)</td>
<td>75.3 (70.9-79.6)</td>
<td>78.4 (74.9-82.0)</td>
<td>75.5 (70.5-80.6)</td>
<td>69.9 (64.4-75.3)</td>
<td>n &lt; 5</td>
<td>72.9 (71.0-74.8)</td>
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<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>106.4 (101.9-111.0)</td>
<td>97.3 (94.0-100.7)</td>
<td>85.3 (82.6-87.9)</td>
<td>72.7 (70.1-75.3)</td>
<td>63.3 (60.4-66.1)</td>
<td>50.5 (48.2-52.7)</td>
<td>36.7 (32.2-41.2)</td>
<td>24.7 (22.0-27.5)</td>
<td>n &lt; 5</td>
<td>65.6 (62.4-68.8)</td>
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<tr>
<td>LOS (Mean+95%CI)</td>
<td>9.6 (6.7-12.4)</td>
<td>17.3 (9.0-25.5)</td>
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<td>21.8 (17.4-26.2)</td>
<td>26.9 (17.1-36.6)</td>
<td>31.9 (21.7-42.0)</td>
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<td>Discharge destination (%)</td>
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<td>Discharged to community</td>
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<td>97.4%</td>
<td>93.8%</td>
<td>96.7%</td>
<td>82.6%</td>
<td>87.0%</td>
<td>92.3%</td>
<td>n &lt; 5</td>
<td>91.0%</td>
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<tr>
<td>Remaining in hospital system</td>
<td>12.5%</td>
<td>13.6%</td>
<td>2.6%</td>
<td>6.3%</td>
<td>3.3%</td>
<td>17.4%</td>
<td>13.0%</td>
<td>7.7%</td>
<td>n &lt; 5</td>
<td>9.0%</td>
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<tr>
<td>FIM change (Mean+95%CI)</td>
<td>8.0 (3.2-12.8)</td>
<td>10.3 (6.5-14.1)</td>
<td>19.3 (16.0-22.6)</td>
<td>16.5 (12.9-20.1)</td>
<td>22.4 (16.7-28.1)</td>
<td>24.9 (18.4-31.5)</td>
<td>30.7 (20.5-40.8)</td>
<td>28.6 (17.7-39.5)</td>
<td>n &lt; 5</td>
<td>20.7 (18.4-23.0)</td>
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<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>0.8</td>
<td>0.6</td>
<td>1.3</td>
<td>0.9</td>
<td>1.0</td>
<td>0.9</td>
<td>1.0</td>
<td>0.5</td>
<td>n &lt; 5</td>
<td>0.8</td>
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</tbody>
</table>
Brain dysfunction discharge destination by AN-SNAP Class – Specialist facilities

Specialist - Discharge destination - Brain dysfunction

- Remaining in hospital system
- Unknown residence
- Other supported residence
- Private residence - ?? Support
- Private residence - with support
- Private residence - no support

**AN-SNAP class**

- 4AB1 (n=40)
- 4AB2 (n=74)
- 4AB3 (n=18)
- 4AB4 (n=37)
- 4AB5 (n=37)
- 4AB6 (n=25)
- 4AB7 (n=15)
- 4AZ1 (n=6)
- 4AZ2 (n=5)
- All Brain dysfunction (n=257)
Brain dysfunction discharge destination by AN-SNAP Class – Non specialist facilities

Non specialist - Discharge destination - Brain dysfunction

- Remaining in hospital system
- Unknown residence
- Other supported residence
- Private residence - ?? Support
- Private residence - with support
- Private residence - no support

Percentage

AN-SNAP class

4AB1 (n=15) 4AB2 (n=21) 4AB3 (n=39) 4AB4 (n=46) 4AB5 (n=31) 4AB6 (n=44) 4AB7 (n=22) 4AZ1 (n=27) 4AZ2 (n<5) All Brain dysfunction (n=250)
Brain dysfunction LOS and FIM change by AN-SNAP Class – Specialist facilities

Specialist - LOS and FIM change by AN-SNAP class

- Mean LOS
- Mean FIM improvement

AN-SNAP class

- 4AB1 (n=40)
- 4AB2 (n=74)
- 4AB3 (n=18)
- 4AB4 (n=37)
- 4AB5 (n=37)
- 4AB6 (n=25)
- 4AB7 (n=15)
- 4AZ1 (n=6)
- 4AZ2 (n=5)
Brain dysfunction LOS and FIM change by AN-SNAP Class – Non specialist facilities

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

Mean LOS  Mean FIM improvement

AN-SNAP class

4AB1 (n=15)  4AB2 (n=21)  4AB3 (n=39)  4AB4 (n=46)  4AB5 (n=31)  4AB6 (n=44)  4AB7 (n=22)  4AZ1 (n=27)  4AZ2 (n<5)
Change in outcome measures in brain dysfunction, 2018 to 2019 - Specialist facilities

Specialist - Difference from 2018 data - All Brain dysfunction

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>2018</th>
<th>Higher than 2018 data</th>
<th>Lower than 2018 data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>46.8</td>
<td></td>
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<tr>
<td>Length of stay (days)</td>
<td>33.5</td>
<td></td>
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<tr>
<td>FIM admission score</td>
<td>85.0</td>
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</tr>
<tr>
<td>FIM discharge score</td>
<td>112.5</td>
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</tr>
<tr>
<td>FIM change (adm to disch)</td>
<td>27.5</td>
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</tr>
<tr>
<td>FIM efficiency (per week)</td>
<td>5.7</td>
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</tr>
<tr>
<td>Disch to community (%)</td>
<td>97.7</td>
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</tr>
</tbody>
</table>

2018 (n = 300)
2019 (n = 257)

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Change in outcome measures in brain dysfunction, 2018 to 2019 - Non specialist facilities

Non specialist - Difference from 2018 data - All Brain dysfunction

- Age (years): 2018: 71.5
- Length of stay (days): 2018: 23.2
- FIM admission score: 2018: 64.9
- FIM discharge score: 2018: 87.1
- FIM change (adm to disch): 2018: 22.2
- FIM efficiency (per week): 2018: 6.7
- Disch to community (%): 2018: 94.7

2018 (n = 249)
2019 (n = 250)

Lower than 2018 data
Higher than 2018 data
Neurological conditions episodes over time

Number of episodes by quarter - Neurological conditions

Year - Quarter

Number of episodes
Neurological conditions casemix over time

Year

Proportion of episodes within year

2015 (n=275) 2016 (n=300) 2017 (n=285) 2018 (n=241) 2019 (n=272)
### Neurological conditions episodes in 2019

<table>
<thead>
<tr>
<th>AN-SNAP class:</th>
<th>4AC1</th>
<th>4AC2</th>
<th>4AC3</th>
<th>4AZ3</th>
<th>4AZ4</th>
<th>All Neurological conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of episodes</td>
<td>68</td>
<td>73</td>
<td>99</td>
<td>21</td>
<td>11</td>
<td>275</td>
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<td>Proportion of episodes</td>
<td>24.7%</td>
<td>26.5%</td>
<td>36.0%</td>
<td>7.6%</td>
<td>4.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Gender (%)</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>54.4%</td>
<td>46.6%</td>
<td>49.5%</td>
<td>52.4%</td>
<td>54.5%</td>
<td>49.8%</td>
</tr>
<tr>
<td>Male</td>
<td>45.6%</td>
<td>53.4%</td>
<td>50.5%</td>
<td>47.6%</td>
<td>45.5%</td>
<td>50.2%</td>
</tr>
<tr>
<td>Age group (%)</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>36.8%</td>
<td>16.4%</td>
<td>30.3%</td>
<td>0.0%</td>
<td>100.0%</td>
<td>28.7%</td>
</tr>
<tr>
<td>Over 65</td>
<td>63.2%</td>
<td>82.2%</td>
<td>68.7%</td>
<td>100.0%</td>
<td>0.0%</td>
<td>70.2%</td>
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<tr>
<td>Age (Mean+95%CI)</td>
<td>69.4 (65.9-72.9)</td>
<td>75.2 (72.7-77.8)</td>
<td>71.2 (68.4-74.0)</td>
<td>77.3 (74.1-80.6)</td>
<td>48.3 (40.2-56.4)</td>
<td>71.4 (69.7-73.0)</td>
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<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>99.4 (96.9-101.8)</td>
<td>75.3 (73.1-77.5)</td>
<td>55.6 (53.5-57.8)</td>
<td>34.7 (30.2-39.2)</td>
<td>46.3 (41.4-51.3)</td>
<td>70.2 (67.5-73.0)</td>
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<td>LOS (Mean+95%CI)</td>
<td>13.4 (11.4-15.5)</td>
<td>19.9 (17.0-22.8)</td>
<td>26.0 (21.9-30.0)</td>
<td>32.2 (19.4-44.9)</td>
<td>85.8 (43.2-128.4)</td>
<td>23.6 (20.7-26.5)</td>
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<td>Discharge destination (%)</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Discharged to community</td>
<td>100.0%</td>
<td>98.6%</td>
<td>96.9%</td>
<td>100.0%</td>
<td>81.8%</td>
<td>97.8%</td>
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<td>Remaining in hospital system</td>
<td>0.0%</td>
<td>1.4%</td>
<td>3.1%</td>
<td>0.0%</td>
<td>18.2%</td>
<td>2.2%</td>
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<tr>
<td>FIM change (Mean+95%CI)</td>
<td>11.5 (8.9-14.0)</td>
<td>13.7 (11.0-16.4)</td>
<td>20.1 (16.3-23.8)</td>
<td>26.4 (14.0-38.7)</td>
<td>43.1 (22.2-64.1)</td>
<td>17.4 (15.2-19.6)</td>
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<td>FIM efficiency (FIM change/LOS)</td>
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<td>0.7</td>
<td>0.8</td>
<td>0.8</td>
<td>0.5</td>
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</table>
Neurological conditions discharge destination by AN-SNAP class

Discharge destination - Neurological conditions

- Remaining in hospital system
- Unknown residence
- Other supported residence
- Private residence - ?? Support
- Private residence - with support
- Private residence - no support

AN-SNAP class

- 4AC1 (n=68)
- 4AC2 (n=73)
- 4AC3 (n=99)
- 4AZ3 (n=21)
- 4AZ4 (n=11)
- All Neurological conditions (n=275)
Neurological conditions LOS and FIM change by AN-SNAP class

LOS and FIM change by AN-SNAP class

Mean LOS
Mean FIM improvement

AN-SNAP class

4AC1 (n=68)
4AC2 (n=73)
4AC3 (n=99)
4AZ3 (n=21)
4AZ4 (n=11)
Change in outcome measures in neurological conditions, 2018 to 2019

Difference from 2018 data - All Neurological conditions

2018

-2 -1.5 -1 -0.5 0 0.5 1 1.5 2 2.5 3

Age (years) 69.7
Length of stay (days) 21.9
FIM admission score 67.8
FIM discharge score 86.5
FIM change (adm to disch) 18.7
FIM efficiency (per week) 6.0
Disch to community (%) 97.1

2018 (n = 241)
2019 (n = 275)

Lower than 2018 data
Higher than 2018 data

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Spinal cord dysfunction episodes over time

Number of episodes by quarter - Spinal cord dysfunction

- Specialist
- Non Specialist
- Total

Year - Quarter

Number of episodes
Spinal cord dysfunction casemix over time – Specialist facilities
Spinal cord dysfunction episodes over time – Non specialist facilities

Non Specialist Facilities

Proportion of episodes within year

Year

Non Specialist Facilities

2015 (n=58) 2016 (n=73) 2017 (n=75) 2018 (n=63) 2019 (n=54)

4AZ2
4AZ1
4AD4
4AD3
4AD2
4AD1
Spinal cord dysfunction episodes in 2019 - Specialist facilities

<table>
<thead>
<tr>
<th>AN-SNAP class:</th>
<th>4AD1</th>
<th>4AD2</th>
<th>4AD3</th>
<th>4AD4</th>
<th>4AZ1</th>
<th>4AZ2</th>
<th>All Spinal cord dysfunction</th>
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<td>49</td>
<td>36</td>
<td>23</td>
<td>32</td>
<td>23</td>
<td>188</td>
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<td>13.3%</td>
<td>26.1%</td>
<td>19.1%</td>
<td>12.2%</td>
<td>17.0%</td>
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<tr>
<td>Gender (%)</td>
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</tr>
<tr>
<td>Female</td>
<td>32.0%</td>
<td>38.8%</td>
<td>36.1%</td>
<td>39.1%</td>
<td>34.4%</td>
<td>4.3%</td>
<td>32.4%</td>
</tr>
<tr>
<td>Male</td>
<td>68.0%</td>
<td>61.2%</td>
<td>63.9%</td>
<td>56.5%</td>
<td>65.6%</td>
<td>95.7%</td>
<td>67.0%</td>
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<td>Age group (%)</td>
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</tr>
<tr>
<td>Under 65</td>
<td>48.0%</td>
<td>51.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>53.1%</td>
<td>100.0%</td>
<td>72.3%</td>
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<tr>
<td>Over 65</td>
<td>52.0%</td>
<td>49.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>46.9%</td>
<td>0.0%</td>
<td>27.7%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>62.7 (59.7-65.8)</td>
<td>65.7 (63.1-68.3)</td>
<td>32.1 (28.8-35.4)</td>
<td>31.7 (26.9-36.4)</td>
<td>63.9 (60.7-67.1)</td>
<td>29.2 (24.8-33.6)</td>
<td>49.9 (47.2-52.7)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>99.7 (95.4-103.9)</td>
<td>61.0 (58.8-63.2)</td>
<td>90.3 (85.0-95.6)</td>
<td>58.9 (56.2-61.7)</td>
<td>43.9 (41.0-46.8)</td>
<td>45.2 (42.6-47.8)</td>
<td>66.5 (63.2-69.8)</td>
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<tr>
<td>LOS (Mean+95%CI)</td>
<td>25.7 (17.0-34.4)</td>
<td>56.5 (46.8-66.2)</td>
<td>39.7 (23.6-55.8)</td>
<td>62.2 (53.2-71.2)</td>
<td>79.7 (66.4-93.0)</td>
<td>91.1 (72.7-109.5)</td>
<td>58.3 (52.2-64.4)</td>
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<tr>
<td>Discharge destination (%)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharged to community</td>
<td>96.0%</td>
<td>93.9%</td>
<td>97.2%</td>
<td>95.7%</td>
<td>90.9%</td>
<td>100.0%</td>
<td>95.2%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>4.0%</td>
<td>6.1%</td>
<td>2.8%</td>
<td>4.3%</td>
<td>9.1%</td>
<td>0.0%</td>
<td>4.8%</td>
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<td>FIM change (Mean+95%CI)</td>
<td>19.2 (15.7-22.8)</td>
<td>31.7 (25.8-37.6)</td>
<td>25.2 (19.9-30.4)</td>
<td>41.0 (33.9-48.2)</td>
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<td>FIM efficiency (FIM change/LOS)</td>
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<td>0.6</td>
<td>0.7</td>
<td>0.3</td>
<td>0.2</td>
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Spinal cord dysfunction episodes in 2019 - Non specialist facilities

<table>
<thead>
<tr>
<th>AN-SNAP class:</th>
<th>4AD1</th>
<th>4AD2</th>
<th>4AD3</th>
<th>4AD4</th>
<th>4AZ1</th>
<th>4AZ2</th>
<th>All Spinal cord dysfunction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of episodes</td>
<td>13</td>
<td>10</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>43.3%</td>
<td>33.3%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>16.7%</td>
<td>n &lt; 5</td>
<td>100.0%</td>
</tr>
<tr>
<td>Gender (%)</td>
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</tr>
<tr>
<td>Female</td>
<td>46.2%</td>
<td>30.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>20.0%</td>
<td>n &lt; 5</td>
<td>33.3%</td>
</tr>
<tr>
<td>Male</td>
<td>53.8%</td>
<td>70.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>80.0%</td>
<td>n &lt; 5</td>
<td>66.7%</td>
</tr>
<tr>
<td>Age group (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>23.1%</td>
<td>50.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>0.0%</td>
<td>n &lt; 5</td>
<td>33.3%</td>
</tr>
<tr>
<td>Over 65</td>
<td>76.9%</td>
<td>50.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>100.0%</td>
<td>n &lt; 5</td>
<td>66.7%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>70.5 (66.2-74.8)</td>
<td>67.8 (62.6-73.0)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>71.8 (65.4-78.2)</td>
<td>n &lt; 5</td>
<td>67.5 (63.2-71.8)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>92.1 (86.8-97.3)</td>
<td>64.4 (58.8-70.0)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>38.8 (26.2-51.3)</td>
<td>n &lt; 5</td>
<td>74.4 (66.6-82.2)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>16.2 (11.3-21.0)</td>
<td>35.9 (29.0-42.8)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>47.0 (27.8-66.2)</td>
<td>n &lt; 5</td>
<td>28.1 (22.3-34.0)</td>
</tr>
<tr>
<td>Discharge destination (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharged to community</td>
<td>92.9%</td>
<td>76.9%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>57.1%</td>
<td>n &lt; 5</td>
<td>76.3%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>7.1%</td>
<td>23.1%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>42.9%</td>
<td>n &lt; 5</td>
<td>23.7%</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>14.9 (10.0-19.8)</td>
<td>23.6 (11.4-35.8)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>11.8 (-8.1-31.6)</td>
<td>n &lt; 5</td>
<td>17.5 (12.0-23.0)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>0.9</td>
<td>0.7</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>0.3</td>
<td>n &lt; 5</td>
<td>0.6</td>
</tr>
</tbody>
</table>
Spinal cord dysfunction discharge destination by AN-SNAP class – Specialist facilities

Specialist - Discharge destination - Spinal cord dysfunction

AN-SNAP class

- Remaining in hospital system
- Unknown residence
- Other supported residence
- Private residence - ? Support
- Private residence - with support
- Private residence - no support

4AD1 (n=25)
4AD2 (n=49)
4AD3 (n=36)
4AD4 (n=23)
4AZ1 (n=32)
4AZ2 (n=23)
All Spinal cord dysfunction (n=188)
Spinal cord dysfunction discharge destination by AN-SNAP class – Non specialist facilities

Non specialist - Discharge destination - Spinal cord dysfunction

AN-SNAP class

- Remaining in hospital system
- Unknown residence
- Other supported residence
- Private residence - ?? Support
- Private residence - with support
- Private residence - no support

<table>
<thead>
<tr>
<th>AN-SNAP class</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>4AD1 (n=13)</td>
<td></td>
</tr>
<tr>
<td>4AD2 (n=10)</td>
<td></td>
</tr>
<tr>
<td>4AD3 (n&lt;5)</td>
<td></td>
</tr>
<tr>
<td>4AD4 (n&lt;5)</td>
<td></td>
</tr>
<tr>
<td>4AZ1 (n=5)</td>
<td></td>
</tr>
<tr>
<td>4AZ2 (n&lt;5)</td>
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</tr>
<tr>
<td>All Spinal cord dysfunction (n=30)</td>
<td></td>
</tr>
</tbody>
</table>
Spinal cord dysfunction LOS and FIM change by AN-SNAP class – Specialist facilities

Specialist - LOS and FIM change by AN-SNAP class

Mean LOS Mean FIM improvement

AN-SNAP class

4AD1 (n=25) 4AD2 (n=49) 4AD3 (n=36) 4AD4 (n=23) 4AZ1 (n=32) 4AZ2 (n=23)

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

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

Mean days/score

AN-SNAP class

4AD1 (n=13) 4AD2 (n=10) 4AD3 (n<5) 4AD4 (n<5) 4AZ1 (n=5) 4AZ2 (n<5)

Mean LOS Mean FIM improvement

4AD1
(n=13)
4AD2
(n=10)
4AD3 (n<5) 4AD4 (n<5) 4AZ1
(n=5) 4AZ2 (n<5)
Change in outcome measures in spinal cord dysfunction, 2018 to 2019 - Specialist facilities

- Age (years): 2018 (n = 194) 51.0
- Length of stay (days): 2018 (n = 194) 59.2
- FIM admission score: 2018 (n = 194) 69.0
- FIM discharge score: 2018 (n = 194) 96.2
- FIM change (adm to disch): 2018 (n = 194) 27.2
- FIM efficiency (per week): 2018 (n = 194) 3.2
- Disch to community (%): 2018 (n = 194) 96.4

2018 vs 2019:
- Age (years): Higher than 2018 data
- Length of stay (days): Lower than 2018 data
- FIM admission score: Lower than 2018 data
- FIM discharge score: Lower than 2018 data
- FIM change (adm to disch): Lower than 2018 data
- FIM efficiency (per week): Higher than 2018 data
- Disch to community (%): Lower than 2018 data
Change in outcome measures in spinal cord dysfunction, 2018 to 2019 - Non specialist facilities

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>2018</th>
<th>2019</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>70.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of stay (days)</td>
<td>35.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIM admission score</td>
<td>69.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIM discharge score</td>
<td>84.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIM change (adm to disch)</td>
<td>14.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIM efficiency (per week)</td>
<td>2.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disch to community (%)</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2018 (n = 25)  2019 (n = 30)

Lower than 2018 data: Age, Length of stay, FIM admission score, FIM change, FIM efficiency.
Higher than 2018 data: FIM discharge score, Disch to community.
Amputation episodes over time

Number of episodes by quarter - Amputation of limb

Year - Quarter

Number of episodes

Amputation casemix over time

Year

Proportion of episodes within year

- 4AZ4
- 4AZ3
- 4AE4
- 4AE3
- 4AE2
- 4AE1
## Amputation episodes in 2019

<table>
<thead>
<tr>
<th>AN-SNAP class:</th>
<th>4AE1</th>
<th>4AE2</th>
<th>4AE3</th>
<th>4AE4</th>
<th>4AZ3</th>
<th>4AZ4</th>
<th>All Amputation of limb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of episodes</td>
<td>4</td>
<td>128</td>
<td>54</td>
<td>30</td>
<td>4</td>
<td>0</td>
<td>221</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>n &lt; 5</td>
<td>57.9%</td>
<td>24.4%</td>
<td>13.6%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>100.0%</td>
</tr>
<tr>
<td>Gender (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>n &lt; 5</td>
<td>39.8%</td>
<td>42.6%</td>
<td>43.3%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>39.8%</td>
</tr>
<tr>
<td>Male</td>
<td>n &lt; 5</td>
<td>60.2%</td>
<td>57.4%</td>
<td>56.7%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>60.2%</td>
</tr>
<tr>
<td>Age group (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>n &lt; 5</td>
<td>31.3%</td>
<td>18.5%</td>
<td>100.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>37.6%</td>
</tr>
<tr>
<td>Over 65</td>
<td>n &lt; 5</td>
<td>68.8%</td>
<td>81.5%</td>
<td>0.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>62.4%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>n &lt; 5</td>
<td>69.9 (68.4-71.5)</td>
<td>74.6 (72.1-77.1)</td>
<td>46.3 (44.0-48.6)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>67.9 (66.3-69.5)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>n &lt; 5</td>
<td>83.5 (81.0-86.1)</td>
<td>47.8 (44.7-50.9)</td>
<td>97.9 (91.7-104.1)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>76.8 (73.7-80.0)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>n &lt; 5</td>
<td>22.3 (19.7-24.8)</td>
<td>34.5 (29.3-39.7)</td>
<td>29.8 (9.7-49.9)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>26.0 (22.7-29.3)</td>
</tr>
<tr>
<td>Discharge destination (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharged to community</td>
<td>n &lt; 5</td>
<td>94.5%</td>
<td>88.7%</td>
<td>90.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>92.7%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>n &lt; 5</td>
<td>5.5%</td>
<td>11.3%</td>
<td>10.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>7.3%</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>n &lt; 5</td>
<td>16.2 (14.3-18.2)</td>
<td>25.8 (21.2-30.5)</td>
<td>11.0 (7.6-14.3)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>17.6 (15.9-19.4)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>n &lt; 5</td>
<td>0.7</td>
<td>0.7</td>
<td>0.4</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>0.7</td>
</tr>
</tbody>
</table>
Amputation discharge destination by AN-SNAP class

Discharge destination - Amputation of limb

<table>
<thead>
<tr>
<th>AN-SNAP class</th>
<th>Remaining in hospital system</th>
<th>Unknown residence</th>
<th>Other supported residence</th>
<th>Private residence - ?? Support</th>
<th>Private residence - with support</th>
<th>Private residence - no support</th>
</tr>
</thead>
<tbody>
<tr>
<td>4AE1 (n&lt;5)</td>
<td>0%</td>
<td>10%</td>
<td>20%</td>
<td>30%</td>
<td>40%</td>
<td>50%</td>
</tr>
<tr>
<td>4AE2 (n=128)</td>
<td>50%</td>
<td>30%</td>
<td>10%</td>
<td>20%</td>
<td>30%</td>
<td>40%</td>
</tr>
<tr>
<td>4AE3 (n=54)</td>
<td>40%</td>
<td>30%</td>
<td>20%</td>
<td>10%</td>
<td>0%</td>
<td>10%</td>
</tr>
<tr>
<td>4AE4 (n=30)</td>
<td>30%</td>
<td>20%</td>
<td>10%</td>
<td>0%</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>4AZ3 (n&lt;5)</td>
<td>20%</td>
<td>10%</td>
<td>0%</td>
<td>10%</td>
<td>20%</td>
<td>30%</td>
</tr>
<tr>
<td>4AZ4 (n&lt;5)</td>
<td>10%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>All Amputation of limb (n=221)</td>
<td>0%</td>
<td>10%</td>
<td>20%</td>
<td>30%</td>
<td>40%</td>
<td>50%</td>
</tr>
</tbody>
</table>

AROC State of Nations | 2019 report | New Zealand
Amputation LOS and FIM change by AN-SNAP class

LOS and FIM change by AN-SNAP class

- Green line: Mean LOS
- Purple line: Mean FIM improvement

<table>
<thead>
<tr>
<th>AN-SNAP class</th>
<th>Mean days/score</th>
</tr>
</thead>
<tbody>
<tr>
<td>4AE1 (n&lt;5)</td>
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</tr>
<tr>
<td>4AE2 (n=128)</td>
<td></td>
</tr>
<tr>
<td>4AE3 (n=54)</td>
<td></td>
</tr>
<tr>
<td>4AE4 (n=30)</td>
<td></td>
</tr>
<tr>
<td>4AZ3 (n&lt;5)</td>
<td></td>
</tr>
<tr>
<td>4AZ4 (n&lt;5)</td>
<td></td>
</tr>
</tbody>
</table>
Change in outcome measures in amputation, 2018 to 2019

- Age (years) 69.9
- Length of stay (days) 24.2
- FIM admission score 75.0
- FIM discharge score 92.8
- FIM change (adm to disch) 17.9
- FIM efficiency (per week) 5.2
- Disch to community (%) 95.2

2018 (n = 169)
2019 (n = 221)

Difference from 2018 data - All Amputation of limb

Lower than 2018 data
Higher than 2018 data
Arthritis episodes over time

Number of episodes by quarter - Arthritis

Year - Quarter
## Arthritis episodes in 2019

<table>
<thead>
<tr>
<th>AN-SNAP class:</th>
<th>4A91</th>
<th>4A92</th>
<th>4A93</th>
<th>4AZ3</th>
<th>4AZ4</th>
<th>All Arthritis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of episodes</td>
<td>16</td>
<td>25</td>
<td>10</td>
<td>4</td>
<td>1</td>
<td>56</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>28.6%</td>
<td>44.6%</td>
<td>17.9%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>100.0%</td>
</tr>
<tr>
<td>Gender (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>87.5%</td>
<td>40.0%</td>
<td>50.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>58.9%</td>
</tr>
<tr>
<td>Male</td>
<td>12.5%</td>
<td>60.0%</td>
<td>50.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>41.1%</td>
</tr>
<tr>
<td>Age group (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>12.5%</td>
<td>20.0%</td>
<td>30.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>19.6%</td>
</tr>
<tr>
<td>Over 65</td>
<td>87.5%</td>
<td>80.0%</td>
<td>70.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>80.4%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>76.8 (68.9-84.8)</td>
<td>75.3 (69.8-80.8)</td>
<td>76.2 (68.2-84.2)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>76.3 (72.6-79.9)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>90.3 (85.8-94.9)</td>
<td>69.2 (66.0-72.4)</td>
<td>55.3 (49.4-61.2)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>69.4 (64.5-74.2)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>13.9 (10.8-17.1)</td>
<td>19.4 (13.8-24.9)</td>
<td>33.9 (15.5-52.3)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>21.8 (17.1-26.6)</td>
</tr>
<tr>
<td>Discharge destination (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharged to community</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>100.0%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>0.0%</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>12.9 (8.8-16.9)</td>
<td>23.2 (17.3-29.1)</td>
<td>30.7 (21.5-39.9)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>21.9 (18.0-25.8)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>0.9</td>
<td>1.2</td>
<td>0.9</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>1.0</td>
</tr>
</tbody>
</table>
Arthritis discharge destination by AN-SNAP class

Discharge destination - Arthritis

AN-SNAP class

Percentage

- Remaining in hospital system
- Unknown residence
- Other supported residence
- Private residence - ?? Support
- Private residence - with support
- Private residence - no support

4A91 (n=16)
4A92 (n=25)
4A93 (n=10)
4AZ3 (n<5)
4AZ4 (n<5)
All Arthritis (n=56)
Arthritis LOS and FIM change by AN-SNAP class

LOS and FIM change by AN-SNAP class

Mean days/score

AN-SNAP class

Mean LOS
Mean FIM improvement

4A91 (n=16)
4A92 (n=25)
4A93 (n=10)
4AZ3 (n<5)
4AZ4 (n<5)
Change in outcome measures in arthritis, 2018 to 2019

Difference from 2018 data - All Arthritis

-10 -8 -6 -4 -2 0 2 4 6 8

2018

-10 -8 -6 -4 -2 0 2 4 6 8

2018 (n = 47)
2019 (n = 56)

Lower than 2018 data

Higher than 2018 data

Age (years) 76.7
Length of stay (days) 16.6
FIM admission score 77.1
FIM discharge score 93.3
FIM change (adm to disch) 16.3
FIM efficiency (per week) 6.9
Disch to community (%) 100.0

Change in outcome measures in arthritis, 2018 to 2019
Orthopaedic fracture episodes over time

Number of episodes by quarter - Orthopaedic fractures
Orthopaedic fracture casemix over time

Proportion of episodes within year

Year

2015 (n=3,883) 2016 (n=3,801) 2017 (n=4,034) 2018 (n=4,044) 2019 (n=4,086)

Proportion of episodes within year

Year

4AZ4
4AZ3
4AH4
4AH3
4AH2
4AH1
### Orthopaedic fracture episodes in 2019

<table>
<thead>
<tr>
<th>AN-SNAP class:</th>
<th>4AH1</th>
<th>4AH2</th>
<th>4AH3</th>
<th>4AH4</th>
<th>4AZ3</th>
<th>4AZ4</th>
<th>All Orthopaedic fractures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of episodes</td>
<td>557</td>
<td>984</td>
<td>868</td>
<td>1,393</td>
<td>280</td>
<td>4</td>
<td>4,113</td>
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<tr>
<td>Proportion of episodes</td>
<td>13.5%</td>
<td>23.9%</td>
<td>21.1%</td>
<td>33.9%</td>
<td>6.8%</td>
<td>n &lt; 5</td>
<td>100.0%</td>
</tr>
<tr>
<td>Gender (%)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>76.3%</td>
<td>71.4%</td>
<td>72.4%</td>
<td>69.8%</td>
<td>69.6%</td>
<td>n &lt; 5</td>
<td>71.5%</td>
</tr>
<tr>
<td>Male</td>
<td>23.7%</td>
<td>28.6%</td>
<td>27.5%</td>
<td>30.2%</td>
<td>30.4%</td>
<td>n &lt; 5</td>
<td>28.4%</td>
</tr>
<tr>
<td>Age group (%)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>11.1%</td>
<td>4.9%</td>
<td>3.2%</td>
<td>4.1%</td>
<td>0.0%</td>
<td>n &lt; 5</td>
<td>4.9%</td>
</tr>
<tr>
<td>Over 65</td>
<td>88.3%</td>
<td>94.4%</td>
<td>95.7%</td>
<td>95.5%</td>
<td>100.0%</td>
<td>n &lt; 5</td>
<td>94.5%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>76.8 (75.8-77.8)</td>
<td>81.8 (81.2-82.4)</td>
<td>83.2 (82.6-83.8)</td>
<td>83.6 (83.1-84.1)</td>
<td>87.1 (86.3-88.0)</td>
<td>n &lt; 5</td>
<td>82.4 (82.1-82.7)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>95.1 (94.4-95.8)</td>
<td>83.0 (82.4-83.6)</td>
<td>68.3 (67.8-68.9)</td>
<td>51.5 (50.9-52.1)</td>
<td>31.3 (30.2-32.3)</td>
<td>n &lt; 5</td>
<td>67.5 (66.9-68.2)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>12.9 (11.4-14.4)</td>
<td>14.5 (13.9-15.1)</td>
<td>17.9 (17.2-18.7)</td>
<td>22.9 (22.2-23.6)</td>
<td>23.0 (21.4-24.6)</td>
<td>n &lt; 5</td>
<td>18.4 (18.0-18.8)</td>
</tr>
<tr>
<td>Discharge destination (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharged to community</td>
<td>98.6%</td>
<td>99.0%</td>
<td>98.2%</td>
<td>94.8%</td>
<td>94.2%</td>
<td>n &lt; 5</td>
<td>97.0%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>1.4%</td>
<td>1.0%</td>
<td>1.8%</td>
<td>5.2%</td>
<td>5.8%</td>
<td>n &lt; 5</td>
<td>3.0%</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>14.6 (13.9-15.3)</td>
<td>16.0 (15.4-16.6)</td>
<td>23.7 (22.9-24.6)</td>
<td>28.3 (27.4-29.2)</td>
<td>22.9 (20.3-25.5)</td>
<td>n &lt; 5</td>
<td>22.0 (21.6-22.5)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>1.1</td>
<td>1.1</td>
<td>1.3</td>
<td>1.2</td>
<td>1.0</td>
<td>n &lt; 5</td>
<td>1.2</td>
</tr>
</tbody>
</table>
Orthopaedic fracture discharge destination by AN-SNAP class

Discharge destination - Orthopaedic fractures

Percentage

4AH1 (n=557) 4AH2 (n=984) 4AH3 (n=868) 4AH4 (n=1,393) 4AZ3 (n=280) 4AZ4 (n<5) All Orthopaedic fractures (n=4,113)

AN-SNAP class

Remaining in hospital system
Unknown residence
Other supported residence
Private residence - ?? Support
Private residence - with support
Private residence - no support
Orthopaedic fracture LOS and FIM change by AN-SNAP class

LOS and FIM change by AN-SNAP class

Mean days/score

Mean LOS

Mean FIM improvement

AN-SNAP class

4AH1 (n=557)

4AH2 (n=984)

4AH3 (n=868)

4AH4 (n=1,393)

4AZ3 (n=280)

4AZ4 (<5)

AROC State of Nations | 2019 report | New Zealand
Change in outcome measures in orthopaedic fracture, 2018 to 2019
Orthopaedic replacement episodes over time

Number of episodes by quarter - Orthopaedic replacements

- Year - Quarter
- Number of episodes

AROC State of Nations | 2019 report | New Zealand
Orthopaedic replacement casemix over time

![Casemix Proportion Chart](chart.png)

- Year: 2015 (n=354), 2016 (n=313), 2017 (n=259), 2018 (n=256), 2019 (n=270)
- Proportion of episodes within year:
  - 4AZ4
  - 4AZ3
  - 4A23
  - 4A22
  - 4A21

A ROC State of Nations | 2019 report | New Zealand
Orthopaedic replacement episodes in 2019

<table>
<thead>
<tr>
<th>AN-SNAP class:</th>
<th>4A21</th>
<th>4A22</th>
<th>4A23</th>
<th>4AZ3</th>
<th>4AZ4</th>
<th>All Orthopaedic replacements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of episodes</td>
<td>34</td>
<td>123</td>
<td>109</td>
<td>3</td>
<td>1</td>
<td>272</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>12.5%</td>
<td>45.2%</td>
<td>40.1%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>100.0%</td>
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<tr>
<td>Gender (%)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>50.0%</td>
<td>67.5%</td>
<td>61.5%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>62.9%</td>
</tr>
<tr>
<td>Male</td>
<td>50.0%</td>
<td>32.5%</td>
<td>38.5%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>37.1%</td>
</tr>
<tr>
<td>Age group (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>14.7%</td>
<td>5.7%</td>
<td>4.6%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>6.6%</td>
</tr>
<tr>
<td>Over 65</td>
<td>85.3%</td>
<td>94.3%</td>
<td>93.6%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>92.3%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>73.7 (70.6-76.9)</td>
<td>78.4 (76.8-80.0)</td>
<td>79.9 (78.2-81.7)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>78.5 (77.4-79.6)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>103.3 (101.0-105.6)</td>
<td>86.7 (84.9-88.4)</td>
<td>62.6 (60.3-64.9)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>78.2 (75.9-80.4)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>8.6 (7.1-10.1)</td>
<td>14.3 (8.2-20.4)</td>
<td>19.5 (17.2-21.9)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>16.1 (13.1-19.1)</td>
</tr>
<tr>
<td>Discharge destination (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharged to community</td>
<td>97.1%</td>
<td>98.4%</td>
<td>99.1%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>98.5%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>2.9%</td>
<td>1.6%</td>
<td>0.9%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>1.5%</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>9.1 (7.2-11.0)</td>
<td>16.5 (15.0-18.0)</td>
<td>28.8 (26.0-31.7)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>20.6 (19.0-22.2)</td>
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<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>1.1</td>
<td>1.2</td>
<td>1.5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>1.3</td>
</tr>
</tbody>
</table>
Orthopaedic replacement discharge destination by AN-SNAP class

Discharge destination - Orthopaedic replacements

- Remaining in hospital system
- Unknown residence
- Other supported residence
- Private residence - ?? Support
- Private residence - with support
- Private residence - no support

<table>
<thead>
<tr>
<th>AN-SNAP class</th>
<th>Percentage</th>
<th>Discharge destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>4A21 (n=34)</td>
<td>100%</td>
<td>Private residence - no support</td>
</tr>
<tr>
<td>4A22 (n=123)</td>
<td>100%</td>
<td>Private residence - no support</td>
</tr>
<tr>
<td>4A23 (n=109)</td>
<td>100%</td>
<td>Private residence - no support</td>
</tr>
<tr>
<td>4AZ3 (n&lt;5)</td>
<td></td>
<td>Remaining in hospital system</td>
</tr>
<tr>
<td>4AZ4 (n&lt;5)</td>
<td></td>
<td>Remaining in hospital system</td>
</tr>
<tr>
<td>All Orthopaedic replacements (n=272)</td>
<td></td>
<td>Remaining in hospital system</td>
</tr>
</tbody>
</table>
Orthopaedic replacement LOS and FIM change by AN-SNAP class

LOS and FIM change by AN-SNAP class

Mean days/score

AN-SNAP class

4A21 (n=34) 4A22 (n=123) 4A23 (n=109) 4AZ3 (n<5) 4AZ4 (n<5)

Mean LOS Mean FIM improvement
Change in outcome measures in orthopaedic replacement, 2018 to 2019

Difference from 2018 data - All Orthopaedic replacements

- Age (years) 79.3
- Length of stay (days) 13.9
- FIM admission score 80.0
- FIM discharge score 98.6
- FIM change (adm to disch) 18.6
- FIM efficiency (per week) 9.3
- Disch to community (%) 98.9

2018 (n = 261)
2019 (n = 272)
All orthopaedic episodes over time

Number of episodes by quarter - All orthopaedic conditions

- Ortho fracture
- Ortho replacement
- Soft tissue injury
- Other ortho
- All orthopaedic
# All orthopaedic episodes in 2019

<table>
<thead>
<tr>
<th>AN-SNAP class:</th>
<th>Ortho fracture</th>
<th>Ortho replacement</th>
<th>Soft tissue injury</th>
<th>Other ortho</th>
<th>All orthopaedic conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of episodes</td>
<td>4,113</td>
<td>272</td>
<td>328</td>
<td>128</td>
<td>4,841</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>85.0%</td>
<td>5.6%</td>
<td>6.8%</td>
<td>2.6%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Gender (%)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>71.5%</td>
<td>62.9%</td>
<td>65.2%</td>
<td>58.6%</td>
<td>70.3%</td>
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<tr>
<td>Male</td>
<td>28.4%</td>
<td>37.1%</td>
<td>34.8%</td>
<td>41.4%</td>
<td>29.7%</td>
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<td>Age group (%)</td>
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<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>4.9%</td>
<td>6.6%</td>
<td>3.4%</td>
<td>17.2%</td>
<td>5.2%</td>
</tr>
<tr>
<td>Over 65</td>
<td>94.5%</td>
<td>92.3%</td>
<td>96.3%</td>
<td>82.8%</td>
<td>94.2%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>82.4 (82.1-82.7)</td>
<td>78.5 (77.4-79.6)</td>
<td>83.3 (82.4-84.3)</td>
<td>74.2 (72.0-76.4)</td>
<td>82.0 (81.7-82.3)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>67.5 (66.9-68.2)</td>
<td>78.2 (75.9-80.4)</td>
<td>74.5 (72.5-76.5)</td>
<td>77.3 (73.7-81.0)</td>
<td>68.9 (68.3-69.5)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>18.4 (18.0-18.8)</td>
<td>16.1 (13.1-19.1)</td>
<td>15.3 (14.1-16.5)</td>
<td>16.6 (14.5-18.7)</td>
<td>18.0 (17.6-18.4)</td>
</tr>
<tr>
<td>Discharge destination (%)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Discharged to community</td>
<td>97.0%</td>
<td>98.5%</td>
<td>97.5%</td>
<td>99.2%</td>
<td>97.2%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>3.0%</td>
<td>1.5%</td>
<td>2.5%</td>
<td>0.8%</td>
<td>2.8%</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>22.0 (21.6-22.5)</td>
<td>20.6 (19.0-22.2)</td>
<td>15.9 (14.4-17.4)</td>
<td>19.5 (17.2-21.8)</td>
<td>21.5 (21.1-21.9)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>1.2</td>
<td>1.3</td>
<td>1.0</td>
<td>1.2</td>
<td>1.2</td>
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</tbody>
</table>
All Orthopaedic episodes discharge destination by orthopaedic group

Discharge destination - All orthopaedic conditions

Orthopaedic group

Ortho fracture (n=4,113)
Ortho replacement (n=272)
Soft tissue injury (n=328)
Other ortho (n=128)
All orthopaedic conditions (n=4,841)
All orthopaedic conditions LOS and FIM change by orthopaedic group

LOS and FIM change by AN-SNAP class

Mean LOS  Mean FIM improvement

Orthopaedic group

Ortho fracture (n=4,113)
Ortho replacement (n=272)
Soft tissue injury (n=328)
Other ortho (n=128)
Change in outcome measures in orthopaedic conditions, 2018 to 2019

Difference from 2018 data - All orthopaedic conditions

- Age (years) 82.3
- Length of stay (days) 17.9
- FIM admission score 69.8
- FIM discharge score 90.2
- FIM change (adm to disch) 20.4
- FIM efficiency (per week) 8.0
- Disch to community (%) 97.5

2018 (n = 4,853)
2019 (n = 4,841)

Lower than 2018 data
Higher than 2018 data
Pulmonary episodes over time

Number of episodes by quarter - Pulmonary

Year - Quarter

Number of episodes by quarter - Pulmonary
Pulmonary casemix over time
## Pulmonary episodes in 2019

<table>
<thead>
<tr>
<th>AN-SNAP class:</th>
<th>4A31</th>
<th>4A32</th>
<th>4A33</th>
<th>4A34</th>
<th>4AZ3</th>
<th>4AZ4</th>
<th>All Pulmonary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of episodes</td>
<td>11</td>
<td>34</td>
<td>30</td>
<td>13</td>
<td>1</td>
<td>0</td>
<td>89</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>12.4%</td>
<td>38.2%</td>
<td>33.7%</td>
<td>14.6%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>100.0%</td>
</tr>
<tr>
<td>Gender (%)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>72.7%</td>
<td>55.9%</td>
<td>33.3%</td>
<td>46.2%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>48.3%</td>
</tr>
<tr>
<td>Male</td>
<td>27.3%</td>
<td>44.1%</td>
<td>66.7%</td>
<td>53.8%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>51.7%</td>
</tr>
<tr>
<td>Age group (%)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>0.0%</td>
<td>5.9%</td>
<td>3.3%</td>
<td>0.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>3.4%</td>
</tr>
<tr>
<td>Over 65</td>
<td>100.0%</td>
<td>94.1%</td>
<td>96.7%</td>
<td>100.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>96.6%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>80.8 (75.7-85.9)</td>
<td>79.0 (75.7-82.4)</td>
<td>83.1 (80.1-86.1)</td>
<td>82.8 (78.8-86.8)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>81.1 (79.3-83.0)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>102.0 (97.2-106.8)</td>
<td>88.8 (85.7-91.9)</td>
<td>63.7 (60.2-67.3)</td>
<td>48.1 (42.9-53.3)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>76.2 (71.8-80.5)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>11.5 (7.5-15.4)</td>
<td>13.7 (12.0-15.4)</td>
<td>16.3 (13.9-18.7)</td>
<td>20.7 (13.7-27.7)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>15.2 (13.7-16.7)</td>
</tr>
<tr>
<td>Discharge destination (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharged to community</td>
<td>100.0%</td>
<td>97.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>98.8%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>0.0%</td>
<td>3.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>1.2%</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>9.5 (4.0-15.1)</td>
<td>14.3 (11.4-17.1)</td>
<td>25.1 (20.0-30.3)</td>
<td>24.4 (11.7-37.1)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>18.5 (15.5-21.5)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>0.8</td>
<td>1.0</td>
<td>1.5</td>
<td>1.2</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>1.2</td>
</tr>
</tbody>
</table>
Pulmonary discharge destination by AN-SNAP class

Discharge destination - Pulmonary

AN-SNAP class

Percentage

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

4A31 (n=11) 4A32 (n=34) 4A33 (n=30) 4A34 (n=13) 4AZ3 (n<5) 4AZ4 (n<5) All Pulmonary (n=89)

- Remaining in hospital system
- Unknown residence
- Other supported residence
- Private residence - ?? Support
- Private residence - with support
- Private residence - no support
Pulmonary LOS and FIM change by AN-SNAP class

LOS and FIM change by AN-SNAP class

Mean days/score

AN-SNAP class

4A31 (n=11) 4A32 (n=34) 4A33 (n=30) 4A34 (n=13) 4AZ3 (n<5) 4AZ4 (n<5)

Mean LOS Mean FIM improvement
Change in outcome measures in pulmonary, 2018 to 2019

Difference from 2018 data - All Pulmonary

-2 -1.5 -1 -0.5 0 0.5 1 1.5 2 2.5 3
-2 -1.5 -1 -0.5 0 0.5 1 1.5 2 2.5 3

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>2018 Value</th>
<th>Discrepancy</th>
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<tr>
<td>Age (years)</td>
<td>80.8</td>
<td>Higher</td>
</tr>
<tr>
<td>Length of stay (days)</td>
<td>16.5</td>
<td>Lower</td>
</tr>
<tr>
<td>FIM admission score</td>
<td>73.7</td>
<td>Higher</td>
</tr>
<tr>
<td>FIM discharge score</td>
<td>93.7</td>
<td>Higher</td>
</tr>
<tr>
<td>FIM change (adm to disch)</td>
<td>20.0</td>
<td>Higher</td>
</tr>
<tr>
<td>FIM efficiency (per week)</td>
<td>8.5</td>
<td>Lower</td>
</tr>
<tr>
<td>Disch to community (%)</td>
<td>98.0</td>
<td>Higher</td>
</tr>
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</table>

2018 (n = 103)
2019 (n = 89)
Reconditioning episodes over time
Reconditioning casemix over time
## Reconditioning episodes in 2019

<table>
<thead>
<tr>
<th>AN-SNAP class:</th>
<th>4AR1</th>
<th>4AR2</th>
<th>4AR3</th>
<th>4AR4</th>
<th>4AR5</th>
<th>4AR6</th>
<th>4AZ3</th>
<th>4AZ4</th>
<th>All</th>
<th>Reconditioning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of episodes</td>
<td>471</td>
<td>592</td>
<td>590</td>
<td>123</td>
<td>879</td>
<td>649</td>
<td>182</td>
<td>17</td>
<td>3,562</td>
<td></td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>13.2%</td>
<td>16.6%</td>
<td>16.6%</td>
<td>3.5%</td>
<td>24.7%</td>
<td>18.2%</td>
<td>5.1%</td>
<td>0.5%</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>Gender (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>53.5%</td>
<td>55.2%</td>
<td>52.2%</td>
<td>51.2%</td>
<td>51.3%</td>
<td>50.2%</td>
<td>56.0%</td>
<td>58.8%</td>
<td>52.7%</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>46.5%</td>
<td>44.4%</td>
<td>47.8%</td>
<td>48.0%</td>
<td>48.6%</td>
<td>49.8%</td>
<td>44.0%</td>
<td>41.2%</td>
<td>47.2%</td>
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</tr>
<tr>
<td>Age group (%)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>10.4%</td>
<td>8.6%</td>
<td>3.2%</td>
<td>13.0%</td>
<td>3.2%</td>
<td>8.5%</td>
<td>0.0%</td>
<td>100.0%</td>
<td>6.6%</td>
<td></td>
</tr>
<tr>
<td>Over 65</td>
<td>89.0%</td>
<td>90.7%</td>
<td>95.9%</td>
<td>87.0%</td>
<td>96.6%</td>
<td>91.4%</td>
<td>100.0%</td>
<td>0.0%</td>
<td>92.9%</td>
<td></td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>77.3 (76.2-78.3)</td>
<td>79.8 (78.9-80.7)</td>
<td>82.0 (81.2-82.7)</td>
<td>77.6 (75.2-79.9)</td>
<td>82.8 (82.2-83.4)</td>
<td>80.1 (79.2-80.9)</td>
<td>83.0 (81.9-84.1)</td>
<td>50.0 (43.9-56.1)</td>
<td>80.6 (80.2-80.9)</td>
<td></td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>101.6 (100.8-102.4)</td>
<td>87.3 (86.8-87.8)</td>
<td>75.8 (75.2-76.3)</td>
<td>75.3 (74.4-76.1)</td>
<td>62.1 (61.6-62.7)</td>
<td>47.6 (46.8-48.3)</td>
<td>29.6 (28.3-31.0)</td>
<td>37.2 (32.4-42.0)</td>
<td>70.4 (69.7-71.1)</td>
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</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>12.1 (11.3-12.9)</td>
<td>14.7 (13.9-15.5)</td>
<td>16.3 (15.4-17.1)</td>
<td>19.0 (16.4-21.7)</td>
<td>19.0 (18.1-19.8)</td>
<td>23.7 (22.4-25.1)</td>
<td>25.1 (22.6-27.6)</td>
<td>41.6 (26.0-57.1)</td>
<td>18.1 (17.6-18.6)</td>
<td></td>
</tr>
<tr>
<td>Discharge destination (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharged to community</td>
<td>98.7%</td>
<td>97.6%</td>
<td>97.8%</td>
<td>98.3%</td>
<td>97.7%</td>
<td>97.0%</td>
<td>98.8%</td>
<td>100.0%</td>
<td>97.8%</td>
<td></td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>1.3%</td>
<td>2.4%</td>
<td>2.2%</td>
<td>1.7%</td>
<td>2.3%</td>
<td>3.0%</td>
<td>1.2%</td>
<td>0.0%</td>
<td>2.2%</td>
<td></td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>7.9 (7.1-8.6)</td>
<td>14.8 (14.0-15.6)</td>
<td>14.6 (13.8-15.5)</td>
<td>22.5 (20.2-24.7)</td>
<td>19.0 (18.1-20.0)</td>
<td>21.5 (20.0-22.9)</td>
<td>17.9 (14.5-21.3)</td>
<td>18.4 (9.1-27.6)</td>
<td>16.5 (16.0-17.0)</td>
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<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>0.6</td>
<td>1.0</td>
<td>0.9</td>
<td>1.2</td>
<td>1.0</td>
<td>0.9</td>
<td>0.7</td>
<td>0.4</td>
<td>0.9</td>
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</tr>
</tbody>
</table>
Reconditioning discharge destination by AN-SNAP class

Discharge destination - Reconditioning

- Remaining in hospital system
- Unknown residence
- Other supported residence
- Private residence - ?? Support
- Private residence - with support
- Private residence - no support

AN-SNAP class

<table>
<thead>
<tr>
<th>AN-SNAP class</th>
<th>n</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>4AR1 (n=471)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4AR2 (n=592)</td>
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<td></td>
</tr>
<tr>
<td>4AR3 (n=590)</td>
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<td></td>
</tr>
<tr>
<td>4AR4 (n=123)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4AR5 (n=879)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4AR6 (n=649)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4AZ3 (n=182)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4AZ4 (n=17)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Reconditioning (n=3,562)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Reconditioning LOS and FIM change by AN-SNAP class

LOS and FIM change by AN-SNAP class

- Mean LOS
- Mean FIM improvement

AN-SNAP class

4AR1 (n=471)
4AR2 (n=592)
4AR3 (n=590)
4AR4 (n=123)
4AR5 (n=879)
4AR6 (n=649)
4AZ3 (n=182)
4AZ4 (n=17)
Change in outcome measures in reconditioning, 2018 to 2019

<table>
<thead>
<tr>
<th>Measure</th>
<th>2018 Value</th>
<th>2019 Value</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>80.0</td>
<td>80.0</td>
<td>0.0</td>
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<tr>
<td>Length of stay (days)</td>
<td>17.5</td>
<td>17.5</td>
<td>0.0</td>
</tr>
<tr>
<td>FIM admission score</td>
<td>72.1</td>
<td>72.1</td>
<td>0.0</td>
</tr>
<tr>
<td>FIM discharge score</td>
<td>88.9</td>
<td>88.9</td>
<td>0.0</td>
</tr>
<tr>
<td>FIM change (adm to disch)</td>
<td>16.9</td>
<td>16.9</td>
<td>0.0</td>
</tr>
<tr>
<td>FIM efficiency (per week)</td>
<td>6.7</td>
<td>6.7</td>
<td>0.0</td>
</tr>
<tr>
<td>Disch to community (%)</td>
<td>98.2</td>
<td>98.2</td>
<td>0.0</td>
</tr>
</tbody>
</table>

- Lower than 2018 data
- Higher than 2018 data

2018 (n = 3,938)
2019 (n = 3,562)
Other impairment episodes over time

Number of episodes by quarter - Other impairments

- Pain
- Cardiac
- Major Multiple trauma
Other impairments casemix over time

Year
2015 (n=650)
2016 (n=526)
2017 (n=496)
2018 (n=513)
2019 (n=591)

Proportion of episodes within year

4AP1
4A34
4A33
4A32
4A31
## Other impairment episodes in 2019

<table>
<thead>
<tr>
<th>AN-SNAP class:</th>
<th>Pain</th>
<th>Cardiac</th>
<th>MMT</th>
<th>Burns</th>
<th>Congenital deformity</th>
<th>Developmental disability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of episodes</td>
<td>305</td>
<td>130</td>
<td>95</td>
<td>3</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Proportion of total episodes in 2019</td>
<td>2.5%</td>
<td>1.1%</td>
<td>0.8%</td>
<td>n &lt; 5</td>
<td>0.0%</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>Gender (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>66.6%</td>
<td>45.4%</td>
<td>25.3%</td>
<td>n &lt; 5</td>
<td>100.0%</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>Male</td>
<td>33.4%</td>
<td>54.6%</td>
<td>74.7%</td>
<td>n &lt; 5</td>
<td>0.0%</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>Age group (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>1.6%</td>
<td>5.4%</td>
<td>84.2%</td>
<td>n &lt; 5</td>
<td>50.0%</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>Over 65</td>
<td>98.0%</td>
<td>94.6%</td>
<td>15.8%</td>
<td>n &lt; 5</td>
<td>50.0%</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>82.7 (81.7-83.8)</td>
<td>80.2 (78.6-81.8)</td>
<td>42.4 (38.4-46.5)</td>
<td>n &lt; 5</td>
<td>61.5 (42.4-80.6)</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>77.4 (75.1-79.6)</td>
<td>77.2 (73.6-80.8)</td>
<td>70.6 (64.2-76.9)</td>
<td>n &lt; 5</td>
<td>69.8 (42.5-97.1)</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>15.3 (14.1-16.4)</td>
<td>16.1 (14.6-17.6)</td>
<td>41.1 (33.4-48.9)</td>
<td>n &lt; 5</td>
<td>16.6 (1.5-31.7)</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>Discharge destination (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharged to community</td>
<td>98.4%</td>
<td>97.6%</td>
<td>96.8%</td>
<td>n &lt; 5</td>
<td>83.3%</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>1.6%</td>
<td>2.4%</td>
<td>3.2%</td>
<td>n &lt; 5</td>
<td>16.7%</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>17.2 (15.7-18.8)</td>
<td>16.9 (14.4-19.4)</td>
<td>33.5 (28.6-38.4)</td>
<td>n &lt; 5</td>
<td>16.2 (4.2-28.2)</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>1.1</td>
<td>1.0</td>
<td>0.8</td>
<td>n &lt; 5</td>
<td>1.0</td>
<td>n &lt; 5</td>
</tr>
</tbody>
</table>
Other impairment discharge destination by impairment group

Discharge destination - Other impairments

- Remaining in hospital system
- Unknown residence
- Other supported residence
- Private residence - ?? Support
- Private residence - with support
- Private residence - no support

AN-SNAP class

Pain (n=305)
Cardiac (n=130)
MMT (n=95)
Burns (n<5)
Congenital deformity (n=6)
Developmental disability (n<5)
Other impairment LOS and FIM change by impairment group

LOS and FIM change by AN-SNAP class

- Pain (n=305)
- Cardiac (n=130)
- MMT (n=95)
- Burns (n<5)
- Congenital deformity (n=6)
- Developmental disability (n<5)

Mean LOS
Mean FIM improvement
Change in outcome measures in pain, 2018 to 2019

- **Age (years)**: 82.5
- **Length of stay (days)**: 14.4
- **FIM admission score**: 79.4
- **FIM discharge score**: 95.9
- **FIM change (adm to disch)**: 16.4
- **FIM efficiency (per week)**: 8.0
- **Disch to community (%)**: 98.4

**Difference from 2018 data - Pain**

- Lower than 2018 data
- Higher than 2018 data

2018 (n = 252)
2019 (n = 305)
Change in outcome measures in cardiac, 2018 to 2019

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>2018</th>
<th>2019</th>
<th>Difference from 2018 data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>80.2</td>
<td>80.2</td>
<td>0</td>
</tr>
<tr>
<td>Length of stay (days)</td>
<td>14.2</td>
<td>14.2</td>
<td>0</td>
</tr>
<tr>
<td>FIM admission score</td>
<td>80.3</td>
<td>80.3</td>
<td>0</td>
</tr>
<tr>
<td>FIM discharge score</td>
<td>99.3</td>
<td>99.3</td>
<td>0</td>
</tr>
<tr>
<td>FIM change (adm to disch)</td>
<td>19.1</td>
<td>19.1</td>
<td>0</td>
</tr>
<tr>
<td>FIM efficiency (per week)</td>
<td>9.4</td>
<td>9.4</td>
<td>0</td>
</tr>
<tr>
<td>Disch to community (%)</td>
<td>95.8</td>
<td>95.8</td>
<td>0</td>
</tr>
</tbody>
</table>

2018 (n = 127)
2019 (n = 130)

Lower than 2018 data
Higher than 2018 data
Change in outcome measures in MMT, 2018 to 2019

2018

-6 -4 -2 0 2 4 6 8

Age (years) 44.0
Length of stay (days) 44.3
FIM admission score 64.2
FIM discharge score 101.4
FIM change (adm to disch) 37.2
FIM efficiency (per week) 5.9
Disch to community (%) 97.2

Lower than 2018 data | Higher than 2018 data

2018 (n = 72) 2019 (n = 95)
Other disabling impairment episodes over time

Number of episodes by quarter - Other disabling impairments

Year - Quarter

Number of episodes

0 50 100 150 200 250
Other disabling impairments casemix over time

Proportion of episodes within year

Year

2015 (n=510) 2016 (n=297) 2017 (n=323) 2018 (n=279) 2019 (n=176)
Other disabling impairment episodes in 2019

<table>
<thead>
<tr>
<th>AN-SNAP class:</th>
<th>4A91</th>
<th>4A92</th>
<th>4A93</th>
<th>4AZ3</th>
<th>4AZ4</th>
<th>All Other disabling impairments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of episodes</td>
<td>72</td>
<td>62</td>
<td>32</td>
<td>7</td>
<td>3</td>
<td>177</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>40.7%</td>
<td>35.0%</td>
<td>18.1%</td>
<td>4.0%</td>
<td>n &lt; 5</td>
<td>100.0%</td>
</tr>
<tr>
<td>Gender (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>61.1%</td>
<td>46.8%</td>
<td>53.1%</td>
<td>57.1%</td>
<td>n &lt; 5</td>
<td>54.8%</td>
</tr>
<tr>
<td>Male</td>
<td>38.9%</td>
<td>53.2%</td>
<td>46.9%</td>
<td>42.9%</td>
<td>n &lt; 5</td>
<td>45.2%</td>
</tr>
<tr>
<td>Age group (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>20.8%</td>
<td>8.1%</td>
<td>12.5%</td>
<td>0.0%</td>
<td>n &lt; 5</td>
<td>15.3%</td>
</tr>
<tr>
<td>Over 65</td>
<td>77.8%</td>
<td>88.7%</td>
<td>87.5%</td>
<td>100.0%</td>
<td>n &lt; 5</td>
<td>82.5%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>74.5 (70.3-78.7)</td>
<td>81.0 (78.3-83.7)</td>
<td>77.8 (73.3-82.3)</td>
<td>82.6 (75.0-90.1)</td>
<td>n &lt; 5</td>
<td>77.1 (74.8-79.4)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>96.6 (93.6-99.7)</td>
<td>70.5 (68.1-73.0)</td>
<td>47.0 (43.4-50.5)</td>
<td>31.7 (25.8-37.6)</td>
<td>n &lt; 5</td>
<td>74.8 (71.2-78.3)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>14.2 (11.7-16.8)</td>
<td>18.5 (15.5-21.4)</td>
<td>27.6 (20.3-35.0)</td>
<td>30.9 (18.0-43.7)</td>
<td>n &lt; 5</td>
<td>19.5 (17.1-21.9)</td>
</tr>
<tr>
<td>Discharge destination (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharged to community</td>
<td>98.6%</td>
<td>96.7%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>n &lt; 5</td>
<td>97.7%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>1.4%</td>
<td>3.3%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>n &lt; 5</td>
<td>2.3%</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>10.9 (8.9-12.9)</td>
<td>19.2 (15.5-22.9)</td>
<td>22.6 (15.8-29.4)</td>
<td>11.6 (5.0-18.1)</td>
<td>n &lt; 5</td>
<td>16.1 (14.0-18.2)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>0.8</td>
<td>1.0</td>
<td>0.8</td>
<td>0.4</td>
<td>n &lt; 5</td>
<td>0.8</td>
</tr>
</tbody>
</table>
Other disabling impairment discharge destination by AN-SNAP class

Discharge destination - Other disabling impairments

<table>
<thead>
<tr>
<th>AN-SNAP class</th>
<th>Remaining in hospital system</th>
<th>Unknown residence</th>
<th>Other supported residence</th>
<th>Private residence - ?? Support</th>
<th>Private residence - with support</th>
<th>Private residence - no support</th>
</tr>
</thead>
<tbody>
<tr>
<td>4A91 (n=72)</td>
<td><img src="chart1" alt="" /></td>
<td><img src="chart2" alt="" /></td>
<td><img src="chart3" alt="" /></td>
<td><img src="chart4" alt="" /></td>
<td><img src="chart5" alt="" /></td>
<td><img src="chart6" alt="" /></td>
</tr>
<tr>
<td>4A92 (n=62)</td>
<td><img src="chart1" alt="" /></td>
<td><img src="chart2" alt="" /></td>
<td><img src="chart3" alt="" /></td>
<td><img src="chart4" alt="" /></td>
<td><img src="chart5" alt="" /></td>
<td><img src="chart6" alt="" /></td>
</tr>
<tr>
<td>4A93 (n=32)</td>
<td><img src="chart1" alt="" /></td>
<td><img src="chart2" alt="" /></td>
<td><img src="chart3" alt="" /></td>
<td><img src="chart4" alt="" /></td>
<td><img src="chart5" alt="" /></td>
<td><img src="chart6" alt="" /></td>
</tr>
<tr>
<td>4AZ3 (n=7)</td>
<td><img src="chart1" alt="" /></td>
<td><img src="chart2" alt="" /></td>
<td><img src="chart3" alt="" /></td>
<td><img src="chart4" alt="" /></td>
<td><img src="chart5" alt="" /></td>
<td><img src="chart6" alt="" /></td>
</tr>
<tr>
<td>4AZ4 (n&lt;5)</td>
<td><img src="chart1" alt="" /></td>
<td><img src="chart2" alt="" /></td>
<td><img src="chart3" alt="" /></td>
<td><img src="chart4" alt="" /></td>
<td><img src="chart5" alt="" /></td>
<td><img src="chart6" alt="" /></td>
</tr>
<tr>
<td>All Other disabling impairments (n=177)</td>
<td><img src="chart1" alt="" /></td>
<td><img src="chart2" alt="" /></td>
<td><img src="chart3" alt="" /></td>
<td><img src="chart4" alt="" /></td>
<td><img src="chart5" alt="" /></td>
<td><img src="chart6" alt="" /></td>
</tr>
</tbody>
</table>
Other disabling impairment LOS and FIM change by AN-SNAP class

LOS and FIM change by AN-SNAP class

Mean LOS
Mean FIM improvement

AN-SNAP class

4A91 (n=72)
4A92 (n=62)
4A93 (n=32)
4AZ3 (n=7)
4AZ4 (n<5)
Change in outcome measures in other disabling impairments, 2018 to 2019

2018 (n = 280)
2019 (n = 177)

- Age (years) 80.6
- Length of stay (days) 20.2
- FIM admission score 71.5
- FIM discharge score 86.1
- FIM change (adm to disch) 14.5
- FIM efficiency (per week) 5.0
- Disch to community (%) 98.2

Lower than 2018 data
Higher than 2018 data

Difference from 2018 data - All Other disabling impairments
AROC Contact Details

Australasian Rehabilitation Outcomes Centre
Australian Health Services Research Institute
iC Enterprise 1, Innovation Campus
University of Wollongong NSW 2522
Phone: +61-2-4221-4411
Email: aroc@uow.edu.au
Web: aroc.org.au