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The AROC annual report: The state of rehabilitation in New Zealand in 2018

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The AROC annual report: The state of rehabilitation in New Zealand in 2018

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).

Publication Details
The AROC Annual Report:
The state of rehabilitation in New Zealand in 2018
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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, 2018

- Stroke (2405)
- Brain (642)
- Neuro (251)
- Spine (221)
- Ampules (70)
- Arthritis (71)
- Pain (256)
- Ortho-Fractures (4032)
- Ortho-Replacements (289)
- Ortho-Soft Tissue Injury (392)
- Other ortho (133)
- Cardiac (134)
- Pulmonary (112)
- Burns (9)
- Congenital (6)
- Other (256)
- MultiTrauma (71)
- Developmental (3)
- Reconstruction (3,800)
Funding source for rehabilitation in New Zealand, 2018

- MoH: 61.2%
- ACC: 38.0%
- Other: 0.7%
Changes in rehabilitation – compared to last year

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

• The first figure considers the number of episodes within each impairment group and documents real changes in episode volume since last year.

• The second figure presents the key changes in rehabilitation outcome measures between last year and this year. The horizontal axis describes the difference between last year and this year averages, while last year’s actual values are presented on the left side of the graph.
Change in number of episodes by impairment group, 2017 to 2018
Change in outcome measures, 2017 to 2018

2017

-1.2 -1 -0.8 -0.6 -0.4 -0.2 0 0.2 0.4 0.6 0.8

Disch to community (%) 97.3
FIM efficiency (per week) 6.5
FIM change (adm to disch) 19.3
FIM discharge score 90.7
FIM admission score 71.4
Length of stay (days) 20.7
Age (years) 77.8

2017 (n = 12,321)
2018 (n = 12,774)

Change in outcome measures, 2017 to 2018
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 - 2014 to 2018
Proportion of episodes by impairment group, 2014 to 2018
Change in outcome measures, 2014 to 2018

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>2014 (n = 11,954)</th>
<th>Difference from 2014 data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>77.7</td>
<td>1</td>
</tr>
<tr>
<td>Length of stay (days)</td>
<td>21.3</td>
<td>0</td>
</tr>
<tr>
<td>FIM admission score</td>
<td>74.0</td>
<td>0</td>
</tr>
<tr>
<td>FIM discharge score</td>
<td>91.4</td>
<td>-1</td>
</tr>
<tr>
<td>FIM change (adm to disch)</td>
<td>17.4</td>
<td>1</td>
</tr>
<tr>
<td>FIM efficiency (per week)</td>
<td>5.7</td>
<td>0</td>
</tr>
<tr>
<td>Disch to community (%)</td>
<td>97.1</td>
<td>0</td>
</tr>
</tbody>
</table>

2018 (n = 12,774)
Average age compared to five years ago

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 patients have been commencing rehabilitation sooner after their injury /onset of symptoms; in 2018 5.5% more patients were admitted to rehabilitation within a week of onset compared to in 2014.
Length of stay compared to five years ago

Over the last five years rehabilitation length of stay (LOS) has been declining; in 2018 patients stayed just under 1 day less than they did in 2014.
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 17% more patients assessed for their functional ability within 24 hours of rehabilitation commencing in 2018 when compared to 2014.
FIM scores at admission as a proportion of total possible compared to five years ago

Over the last five years the FIM admission score has declined, nearly 3% lower in 2018 compared to in 2014.
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 over the last few years and was 2.3% higher in 2018 than it was in 2014. In 2018 35.8% of FIM relative functional gain was achieved.
Over the last three years weekly FIM efficiency (change in FIM score possible from admission to discharge divided by length of stay x7) has increased slightly; in 2018 it was 1.2% higher than it was in 2014.
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

AROC State of Nations | 2018 report | New Zealand
Stroke casemix over time

Proportion of episodes within year

Year

2014
2015
2016
2017
2018
## Stroke episodes in 2018

<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>312</td>
<td>332</td>
<td>115</td>
<td>268</td>
<td>96</td>
<td>373</td>
<td>123</td>
<td>293</td>
<td>75</td>
<td>2,003</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>15.6%</td>
<td>16.6%</td>
<td>5.7%</td>
<td>13.4%</td>
<td>4.8%</td>
<td>18.6%</td>
<td>6.1%</td>
<td>14.6%</td>
<td>3.7%</td>
<td>100.0%</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>49.4%</td>
<td>45.5%</td>
<td>48.7%</td>
<td>50.0%</td>
<td>38.5%</td>
<td>54.2%</td>
<td>35.8%</td>
<td>52.2%</td>
<td>44.0%</td>
<td>48.7%</td>
</tr>
<tr>
<td>Male</td>
<td>50.3%</td>
<td>54.5%</td>
<td>51.3%</td>
<td>50.0%</td>
<td>61.5%</td>
<td>45.6%</td>
<td>64.2%</td>
<td>47.8%</td>
<td>56.0%</td>
<td>51.2%</td>
</tr>
<tr>
<td>Age group (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>24.4%</td>
<td>21.4%</td>
<td>20.9%</td>
<td>0.0%</td>
<td>83.3%</td>
<td>0.0%</td>
<td>89.4%</td>
<td>0.0%</td>
<td>100.0%</td>
<td>21.8%</td>
</tr>
<tr>
<td>Over 65</td>
<td>74.7%</td>
<td>78.3%</td>
<td>79.1%</td>
<td>100.0%</td>
<td>16.7%</td>
<td>100.0%</td>
<td>10.6%</td>
<td>100.0%</td>
<td>0.0%</td>
<td>77.5%</td>
</tr>
<tr>
<td>Age (Mean±95%CI)</td>
<td>72.8 (71.3-74.3)</td>
<td>73.8 (72.3-75.4)</td>
<td>74.4 (72.1-76.7)</td>
<td>81.8 (80.9-82.7)</td>
<td>56.8 (55.1-58.5)</td>
<td>80.9 (80.1-81.6)</td>
<td>55.8 (54.3-57.3)</td>
<td>80.8 (79.9-81.7)</td>
<td>54.2 (52.1-56.3)</td>
<td>74.4 (73.9-75.0)</td>
</tr>
<tr>
<td>Admission FIM (Mean±95%CI)</td>
<td>99.6 (98.4-100.9)</td>
<td>89.1 (87.9-90.3)</td>
<td>76.7 (74.7-78.6)</td>
<td>65.7 (64.6-66.9)</td>
<td>68.4 (66.4-70.3)</td>
<td>48.0 (47.0-49.0)</td>
<td>49.9 (47.9-51.8)</td>
<td>28.2 (27.3-29.1)</td>
<td>29.1 (27.0-31.2)</td>
<td>65.1 (63.9-66.3)</td>
</tr>
<tr>
<td>LOS (Mean±95%CI)</td>
<td>11.7 (11.0-12.5)</td>
<td>15.0 (13.9-16.0)</td>
<td>19.0 (16.5-21.6)</td>
<td>21.7 (20.2-23.1)</td>
<td>29.3 (25.2-33.5)</td>
<td>33.0 (30.9-35.1)</td>
<td>42.2 (38.1-46.3)</td>
<td>37.7 (35.1-40.2)</td>
<td>63.1 (53.1-73.1)</td>
<td>26.3 (25.3-27.3)</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>97.7%</td>
<td>98.2%</td>
<td>96.5%</td>
<td>98.1%</td>
<td>95.8%</td>
<td>97.6%</td>
<td>95.9%</td>
<td>95.4%</td>
<td>94.7%</td>
<td>97.1%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>2.3%</td>
<td>1.8%</td>
<td>3.5%</td>
<td>1.9%</td>
<td>4.2%</td>
<td>2.4%</td>
<td>4.1%</td>
<td>4.6%</td>
<td>5.3%</td>
<td>2.9%</td>
</tr>
<tr>
<td>FIM change (Mean±95%CI)</td>
<td>14.6 (13.6-15.6)</td>
<td>16.3 (15.1-17.4)</td>
<td>20.1 (17.6-22.6)</td>
<td>25.7 (23.8-27.5)</td>
<td>33.6 (30.9-36.3)</td>
<td>30.2 (28.0-32.3)</td>
<td>38.9 (35.4-42.3)</td>
<td>19.3 (16.7-22.0)</td>
<td>37.1 (30.9-43.2)</td>
<td>23.6 (22.7-24.4)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>1.2</td>
<td>1.1</td>
<td>1.1</td>
<td>1.2</td>
<td>1.1</td>
<td>0.9</td>
<td>0.9</td>
<td>0.5</td>
<td>0.6</td>
<td>0.9</td>
</tr>
</tbody>
</table>
Stroke discharge destination by AN-SNAP class

Discharge destination - Stroke

AN-SNAP class

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

Percentage

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

4AA1 (n=312) 4AA2 (n=332) 4AA3 (n=115) 4AA4 (n=268) 4AA5 (n=96) 4AA6 (n=373) 4AA7 (n=123) 4AZ3 (n=293) 4AZ4 (n=75) All Stroke (n=2,003)
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=312) 4AA2 (n=332) 4AA3 (n=115) 4AA4 (n=268) 4AA5 (n=96) 4AA6 (n=373) 4AA7 (n=123) 4AZ3 (n=293) 4AZ4 (n=75)
Change in outcome measures in stroke, 2017 to 2018

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>2017</th>
<th>2018</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>74.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of stay (days)</td>
<td>26.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIM admission score (n = 1,861)</td>
<td>65.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIM discharge score (n = 1,861)</td>
<td>87.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIM change (adm to disch)</td>
<td>22.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIM efficiency (per week)</td>
<td>5.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disch to community (%)</td>
<td>97.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Difference from 2017 data

- Lower than 2017 data
- Higher than 2017 data

2017 (n = 1,861)  
2018 (n = 2,003)
Brain dysfunction episodes over time

Number of episodes by quarter - Brain dysfunction

- Specialist
- Non Specialist
- Total

<table>
<thead>
<tr>
<th>Year - Quarter</th>
<th>Number of episodes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-1</td>
<td>0</td>
</tr>
<tr>
<td>2014-2</td>
<td>20</td>
</tr>
<tr>
<td>2014-3</td>
<td>40</td>
</tr>
<tr>
<td>2014-4</td>
<td>60</td>
</tr>
<tr>
<td>2015-1</td>
<td>80</td>
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<td>2015-2</td>
<td>100</td>
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<td>2017-4</td>
<td>20</td>
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<td>2018-1</td>
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<td>20</td>
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<tr>
<td>2018-3</td>
<td>40</td>
</tr>
<tr>
<td>2018-4</td>
<td>60</td>
</tr>
</tbody>
</table>
Brain dysfunction casemix over time – Specialist facilities
Brain dysfunction casemix over time – Non specialist facilities

Non Specialist Facilities

Year

Proportion of episodes within year

0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
2014 2015 2016 2017 2018

4AZ2
4AZ1
4AB7
4AB6
4AB5
4AB4
4AB3
4AB2
4AB1
### Brain dysfunction episodes in 2018 - 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>74</td>
<td>80</td>
<td>16</td>
<td>41</td>
<td>39</td>
<td>11</td>
<td>12</td>
<td>11</td>
<td>14</td>
<td>298</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>24.8%</td>
<td>26.8%</td>
<td>5.4%</td>
<td>13.8%</td>
<td>13.1%</td>
<td>3.7%</td>
<td>4.0%</td>
<td>3.7%</td>
<td>4.7%</td>
<td>100.0%</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>29.7%</td>
<td>36.3%</td>
<td>50.0%</td>
<td>29.3%</td>
<td>28.2%</td>
<td>27.3%</td>
<td>33.3%</td>
<td>27.3%</td>
<td>28.6%</td>
<td>32.2%</td>
</tr>
<tr>
<td>Male</td>
<td>70.3%</td>
<td>63.8%</td>
<td>50.0%</td>
<td>70.7%</td>
<td>71.8%</td>
<td>72.7%</td>
<td>66.7%</td>
<td>72.7%</td>
<td>71.4%</td>
<td>67.8%</td>
</tr>
<tr>
<td>Age group (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>81.1%</td>
<td>85.0%</td>
<td>81.3%</td>
<td>53.7%</td>
<td>74.4%</td>
<td>72.7%</td>
<td>50.0%</td>
<td>63.6%</td>
<td>100.0%</td>
<td>76.2%</td>
</tr>
<tr>
<td>Over 65</td>
<td>18.9%</td>
<td>15.0%</td>
<td>18.8%</td>
<td>46.3%</td>
<td>25.6%</td>
<td>27.3%</td>
<td>50.0%</td>
<td>36.4%</td>
<td>0.0%</td>
<td>23.8%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>44.7 (40.4-49.0)</td>
<td>42.4 (38.5-46.2)</td>
<td>48.8 (38.1-59.4)</td>
<td>58.4 (52.3-64.5)</td>
<td>46.7 (40.1-53.3)</td>
<td>52.2 (37.2-67.2)</td>
<td>51.9 (38.8-65.1)</td>
<td>62.9 (57.2-68.6)</td>
<td>29.5 (23.6-35.4)</td>
<td>47.0 (44.7-49.2)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>111.7 (110.0-113.4)</td>
<td>99.2 (97.3-101.2)</td>
<td>86.5 (83.8-89.2)</td>
<td>79.7 (77.5-82.0)</td>
<td>68.8 (66.0-71.6)</td>
<td>47.0 (41.9-52.1)</td>
<td>33.5 (31.6-35.3)</td>
<td>25.9 (20.5-31.2)</td>
<td>21.3 (19.8-22.8)</td>
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<tr>
<td>LOS (Mean+95%CI)</td>
<td>13.0 (11.2-14.8)</td>
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<td>30.8 (24.9-36.8)</td>
<td>51.2 (39.5-63.0)</td>
<td>44.1 (27.1-61.1)</td>
<td>67.5 (36.5-98.6)</td>
<td>83.4 (50.9-115.8)</td>
<td>92.6 (64.5-120.7)</td>
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<td>Discharge destination (%)</td>
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<td>Discharged to community</td>
<td>98.7%</td>
<td>97.5%</td>
<td>94.1%</td>
<td>88.4%</td>
<td>97.5%</td>
<td>84.6%</td>
<td>85.7%</td>
<td>76.9%</td>
<td>81.3%</td>
<td>93.6%</td>
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<td>1.3%</td>
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<td>5.9%</td>
<td>11.6%</td>
<td>2.5%</td>
<td>15.4%</td>
<td>14.3%</td>
<td>23.1%</td>
<td>18.8%</td>
<td>6.4%</td>
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<td>FIM change (Mean+95%CI)</td>
<td>10.4 (8.9-11.9)</td>
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<td>33.3 (29.7-36.9)</td>
<td>40.9 (36.3-45.5)</td>
<td>42.1 (18.2-66.0)</td>
<td>53.3 (37.5-69.0)</td>
<td>39.4 (19.7-59.0)</td>
<td>75.8 (58.9-92.7)</td>
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<td>0.8</td>
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<td>0.5</td>
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## Brain dysfunction episodes in 2018 - Non specialist facilities

<table>
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<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>
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<td>15</td>
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<td>35</td>
<td>35</td>
<td>31</td>
<td>29</td>
<td>35</td>
<td>4</td>
<td>244</td>
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<td>Proportion of episodes</td>
<td>8.2%</td>
<td>6.1%</td>
<td>16.4%</td>
<td>14.3%</td>
<td>14.3%</td>
<td>12.7%</td>
<td>11.9%</td>
<td>14.3%</td>
<td>n &lt; 5</td>
<td>100.0%</td>
</tr>
<tr>
<td>Gender (%)</td>
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<td></td>
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<tr>
<td>Female</td>
<td>50.0%</td>
<td>66.7%</td>
<td>57.5%</td>
<td>45.7%</td>
<td>37.1%</td>
<td>45.2%</td>
<td>75.9%</td>
<td>65.7%</td>
<td>n &lt; 5</td>
<td>54.9%</td>
</tr>
<tr>
<td>Male</td>
<td>50.0%</td>
<td>33.3%</td>
<td>42.5%</td>
<td>54.3%</td>
<td>62.9%</td>
<td>54.8%</td>
<td>24.1%</td>
<td>34.3%</td>
<td>n &lt; 5</td>
<td>45.1%</td>
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<tr>
<td>Age group (%)</td>
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<tr>
<td>Under 65</td>
<td>25.0%</td>
<td>53.3%</td>
<td>20.0%</td>
<td>22.9%</td>
<td>31.4%</td>
<td>29.0%</td>
<td>27.6%</td>
<td>31.4%</td>
<td>n &lt; 5</td>
<td>29.5%</td>
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<tr>
<td>Over 65</td>
<td>70.0%</td>
<td>46.7%</td>
<td>80.0%</td>
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<td>68.6%</td>
<td>71.0%</td>
<td>72.4%</td>
<td>68.6%</td>
<td>n &lt; 5</td>
<td>69.7%</td>
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<tr>
<td>Age (Mean+95%CI)</td>
<td>70.6 (64.0-77.2)</td>
<td>64.6 (57.7-71.5)</td>
<td>74.2 (69.0-79.3)</td>
<td>72.5 (67.8-77.2)</td>
<td>72.3 (68.1-76.4)</td>
<td>73.5 (68.3-78.7)</td>
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<td>71.9 (67.3-76.5)</td>
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<td>71.5 (69.7-73.4)</td>
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<td>Admission FIM (Mean+95%CI)</td>
<td>107.6 (104.6-110.6)</td>
<td>93.5 (89.9-97.2)</td>
<td>86.2 (83.2-89.1)</td>
<td>76.1 (73.2-78.9)</td>
<td>62.4 (60.0-64.8)</td>
<td>54.3 (51.8-56.8)</td>
<td>36.7 (33.9-39.5)</td>
<td>24.6 (22.6-26.5)</td>
<td>n &lt; 5</td>
<td>64.7 (61.3-68.2)</td>
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<tr>
<td>LOS (Mean+95%CI)</td>
<td>9.4 (7.4-11.4)</td>
<td>20.1 (14.2-26.1)</td>
<td>15.0 (11.7-18.3)</td>
<td>18.4 (14.2-22.6)</td>
<td>23.0 (18.9-27.1)</td>
<td>23.8 (20.0-27.7)</td>
<td>29.1 (22.7-35.5)</td>
<td>37.6 (28.1-47.1)</td>
<td>n &lt; 5</td>
<td>23.1 (20.7-25.6)</td>
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<tr>
<td>Discharge destination (%)</td>
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</tr>
<tr>
<td>Discharged to community</td>
<td>95.0%</td>
<td>88.2%</td>
<td>97.5%</td>
<td>86.8%</td>
<td>97.1%</td>
<td>93.5%</td>
<td>93.1%</td>
<td>91.4%</td>
<td>n &lt; 5</td>
<td>92.0%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>5.0%</td>
<td>11.8%</td>
<td>2.5%</td>
<td>13.2%</td>
<td>2.9%</td>
<td>6.5%</td>
<td>6.9%</td>
<td>8.6%</td>
<td>n &lt; 5</td>
<td>8.0%</td>
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<td>FIM change (Mean+95%CI)</td>
<td>8.2 (5.6-10.8)</td>
<td>13.4 (7.7-19.1)</td>
<td>19.8 (16.5-23.1)</td>
<td>13.9 (7.4-20.4)</td>
<td>23.9 (18.9-28.8)</td>
<td>26.3 (18.8-33.8)</td>
<td>30.3 (20.6-40.1)</td>
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<td>22.4 (19.7-25.2)</td>
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<td>FIM efficiency (FIM change/LOS)</td>
<td>0.9</td>
<td>0.7</td>
<td>1.3</td>
<td>0.8</td>
<td>1.0</td>
<td>1.1</td>
<td>1.0</td>
<td>1.0</td>
<td>n &lt; 5</td>
<td>1.0</td>
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</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=74) 4AB2 (n=80) 4AB3 (n=16) 4AB4 (n=41) 4AB5 (n=39) 4AB6 (n=11) 4AB7 (n=12) 4AZ1 (n=11) 4AZ2 (n=14) All Brain dysfunction (n=298)
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

AN-SNAP class

4AB1 (n=20) 4AB2 (n=15) 4AB3 (n=40) 4AB4 (n=35) 4AB5 (n=35) 4AB6 (n=31) 4AB7 (n=29) 4AZ1 (n=35) 4AZ2 (n<5) All Brain dysfunction (n=244)

Percentage

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Brain dysfunction LOS and FIM change by AN-SNAP Class – Specialist facilities

Specialist - LOS and FIM change by AN-SNAP class

Mean days/score

AN-SNAP class

4AB1 (n=74) 4AB2 (n=80) 4AB3 (n=16) 4AB4 (n=41) 4AB5 (n=39) 4AB6 (n=11) 4AB7 (n=12) 4AZ1 (n=11) 4AZ2 (n=14)

Mean LOS  Mean FIM improvement
Brain 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

Mean LOS
Mean FIM improvement

4AB1 (n=20) 4AB2 (n=15) 4AB3 (n=40) 4AB4 (n=35) 4AB5 (n=35) 4AB6 (n=31) 4AB7 (n=29) 4AZ1 (n=35) 4AZ2 (n<5)
Change in outcome measures in brain dysfunction, 2017 to 2018 - Specialist facilities

Specialist - Difference from 2017 data - All Brain dysfunction

2017

-4 -3 -2 -1 0 1 2 3

-4 -3 -2 -1 0 1 2 3

Disch to community (%) 98.7
FIM efficiency (per week) 6.2
FIM change (adm to disch) 30.0
FIM discharge score 113.1
FIM admission score 83.1
Length of stay (days) 34.1
Age (years) 45.8
FIM change (adm to disch) 30.0
FIM efficiency (per week) 6.2
Disch to community (%) 98.7

2017 (n = 298)
2018 (n = 298)

Lower than 2017 data
Higher than 2017 data
Change in outcome measures in brain dysfunction, 2017 to 2018 - Non specialist facilities

- Age (years): 71.0
- Length of stay (days): 22.3
- FIM admission score: 68.1
- FIM discharge score: 90.5
- FIM change (adm to disch): 22.4
- FIM efficiency (per week): 7.0
- Disch to community (%): 95.8

2017 (n = 242)
2018 (n = 244)

Lower than 2017 data
Higher than 2017 data
Neurological conditions episodes over time

Number of episodes by quarter - Neurological conditions

AROC State of Nations | 2018 report | New Zealand
Neurological conditions casemix over time

Year

- 2014
- 2015
- 2016
- 2017
- 2018

Proportion of episodes within year

- 4AZ4
- 4AZ3
- 4AC3
- 4AC2
- 4AC1
### Neurological conditions episodes in 2018

<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>
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<td>Number of episodes</td>
<td>48</td>
<td>78</td>
<td>86</td>
<td>18</td>
<td>9</td>
<td>239</td>
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<td>Proportion of episodes</td>
<td>20.1%</td>
<td>32.6%</td>
<td>36.0%</td>
<td>7.5%</td>
<td>3.8%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Gender (%)</td>
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<tr>
<td>Female</td>
<td>58.3%</td>
<td>47.4%</td>
<td>51.2%</td>
<td>16.7%</td>
<td>55.6%</td>
<td>49.0%</td>
</tr>
<tr>
<td>Male</td>
<td>41.7%</td>
<td>52.6%</td>
<td>48.8%</td>
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<td>44.4%</td>
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<td>Age group (%)</td>
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<td>Under 65</td>
<td>43.8%</td>
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<tr>
<td>Over 65</td>
<td>56.3%</td>
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<td>70.9%</td>
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<td>0.0%</td>
<td>69.9%</td>
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<tr>
<td>Age (Mean+95%CI)</td>
<td>65.1 (60.0-70.2)</td>
<td>72.1 (69.0-75.1)</td>
<td>70.2 (66.8-73.7)</td>
<td>78.3 (75.0-81.7)</td>
<td>48.7 (39.4-58.0)</td>
<td>69.6 (67.6-71.6)</td>
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<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>100.3 (97.8-102.9)</td>
<td>75.4 (73.3-77.4)</td>
<td>51.0 (48.3-53.8)</td>
<td>28.9 (24.5-33.3)</td>
<td>42.0 (38.4-45.6)</td>
<td>67.8 (64.7-70.9)</td>
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<td>LOS (Mean+95%CI)</td>
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<td>61.1 (23.5-98.8)</td>
<td>22.0 (19.4-24.5)</td>
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<td>Discharge destination (%)</td>
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<tr>
<td>Discharged to community</td>
<td>100.0%</td>
<td>97.4%</td>
<td>95.3%</td>
<td>94.1%</td>
<td>100.0%</td>
<td>97.0%</td>
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<tr>
<td>Remaining in hospital system</td>
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<td>4.7%</td>
<td>5.9%</td>
<td>0.0%</td>
<td>3.0%</td>
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<td>FIM change (Mean+95%CI)</td>
<td>9.7 (7.4-11.9)</td>
<td>17.8 (14.9-20.8)</td>
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<td>26.6 (14.7-38.5)</td>
<td>32.6 (14.4-50.9)</td>
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<td>FIM efficiency (FIM change/LOS)</td>
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<td>0.5</td>
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</tbody>
</table>
Neurological conditions discharge destination by AN-SNAP class

Discharge destination - Neurological conditions

Percentage

AN-SNAP class

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

4AC1 (n=48)
4AC2 (n=78)
4AC3 (n=86)
4AZ3 (n=18)
4AZ4 (n=9)
All Neurological conditions (n=239)
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=48)
4AC2 (n=78)
4AC3 (n=86)
4AZ3 (n=18)
4AZ4 (n=9)
Change in outcome measures in neurological conditions, 2017 to 2018

- **Disch to community (%)**: 95.7
- **FIM efficiency (per week)**: 6.1
- **FIM change (adm to disch)**: 18.2
- **FIM discharge score**: 91.9
- **FIM admission score**: 73.6
- **Length of stay (days)**: 20.9
- **Age (years)**: 68.2

### Difference from 2017 data - All Neurological conditions

- **Lower than 2017 data**: 2017 (n = 285) vs. 2018 (n = 239)
- **Higher than 2017 data**:
Spinal cord dysfunction episodes over time

Number of episodes by quarter - Spinal cord dysfunction

- Specialist
- Non Specialist
- Total
Spinal cord dysfunction casemix over time – Specialist facilities

Year

Proportion of episodes within year

Specialist Facilities

- 4AZ2
- 4AZ1
- 4AD4
- 4AD3
- 4AD2
- 4AD1

2014 2015 2016 2017 2018
Spinal cord dysfunction episodes over time – Non specialist facilities

Non Specialist Facilities

Proportion of episodes within year

Year

Non Specialist Facilities

4AZ2

4AZ1

4AD4

4AD3

4AD2

4AD1

Year

2014

2015

2016

2017

2018
### Spinal cord dysfunction episodes in 2018 - Specialist facilities

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<thead>
<tr>
<th>AN-SNAP class:</th>
<th>4AD1</th>
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<th>4AZ1</th>
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<td>19.1%</td>
<td>15.5%</td>
<td>13.4%</td>
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<td>Gender (%)</td>
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<tr>
<td>Female</td>
<td>28.9%</td>
<td>32.4%</td>
<td>30.0%</td>
<td>23.1%</td>
<td>21.6%</td>
<td>12.0%</td>
<td>25.3%</td>
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<td>Male</td>
<td>71.1%</td>
<td>67.6%</td>
<td>70.0%</td>
<td>76.9%</td>
<td>78.4%</td>
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<td>Age group (%)</td>
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<tr>
<td>Under 65</td>
<td>63.2%</td>
<td>45.9%</td>
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<td>100.0%</td>
<td>45.9%</td>
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<td>71.6%</td>
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<tr>
<td>Over 65</td>
<td>36.8%</td>
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<td>54.1%</td>
<td>0.0%</td>
<td>28.4%</td>
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<td>Age (Mean+95%CI)</td>
<td>62.8 (60.2-65.5)</td>
<td>67.5 (64.1-70.8)</td>
<td>34.1 (30.1-38.1)</td>
<td>27.2 (23.3-31.1)</td>
<td>66.9 (63.6-70.1)</td>
<td>29.3 (25.7-32.9)</td>
<td>51.0 (48.1-53.8)</td>
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<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>98.7 (94.1-103.2)</td>
<td>62.4 (59.9-64.9)</td>
<td>95.8 (89.8-101.8)</td>
<td>59.7 (57.4-62.0)</td>
<td>44.0 (41.5-46.6)</td>
<td>45.7 (44.2-47.2)</td>
<td>69.0 (65.4-72.5)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>31.9 (24.9-39.0)</td>
<td>57.1 (48.1-66.1)</td>
<td>32.1 (20.2-44.1)</td>
<td>61.2 (48.6-73.8)</td>
<td>89.1 (71.0-107.1)</td>
<td>91.6 (74.4-108.9)</td>
<td>59.2 (53.0-65.5)</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>97.3%</td>
<td>96.7%</td>
<td>92.3%</td>
<td>94.6%</td>
<td>100.0%</td>
<td>96.4%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>0.0%</td>
<td>2.7%</td>
<td>3.3%</td>
<td>7.7%</td>
<td>5.4%</td>
<td>0.0%</td>
<td>3.6%</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>17.9 (13.9-21.9)</td>
<td>30.1 (23.5-36.6)</td>
<td>21.0 (16.4-25.7)</td>
<td>43.7 (36.6-50.7)</td>
<td>26.4 (19.0-33.8)</td>
<td>30.4 (20.8-40.0)</td>
<td>27.2 (24.4-30.1)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>0.6</td>
<td>0.5</td>
<td>0.7</td>
<td>0.7</td>
<td>0.3</td>
<td>0.3</td>
<td>0.5</td>
</tr>
</tbody>
</table>
## Spinal cord dysfunction episodes in 2018 - 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>14</td>
<td>11</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>27</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>51.9%</td>
<td>40.7%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</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>35.7%</td>
<td>9.1%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>25.9%</td>
</tr>
<tr>
<td>Male</td>
<td>64.3%</td>
<td>90.9%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>74.1%</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>28.6%</td>
<td>9.1%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>22.2%</td>
</tr>
<tr>
<td>Over 65</td>
<td>71.4%</td>
<td>90.9%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>77.8%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>70.3 (63.8-76.8)</td>
<td>74.6 (69.8-79.5)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>71.2 (66.3-76.1)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>89.2 (81.5-96.9)</td>
<td>55.4 (47.8-62.9)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>72.6 (64.3-81.0)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>16.8 (9.8-23.8)</td>
<td>42.8 (17.6-68.1)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>31.7 (19.1-44.4)</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>91.7%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>79.4%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>0.0%</td>
<td>8.3%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>20.6%</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>12.1 (4.3-19.8)</td>
<td>21.4 (9.4-33.3)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>16.1 (9.5-22.7)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>0.7</td>
<td>0.5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>0.5</td>
</tr>
</tbody>
</table>
Spinal cord dysfunction discharge destination by AN-SNAP class – Specialist facilities

Specialist - Discharge destination - Spinal cord dysfunction

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

AN-SNAP class

- 4AD1 (n=38)
- 4AD2 (n=37)
- 4AD3 (n=30)
- 4AD4 (n=26)
- 4AZ1 (n=37)
- 4AZ2 (n=25)
- All Spinal cord dysfunction (n=194)
Spinal cord dysfunction discharge destination by AN-SNAP class – Non specialist facilities

Non specialist - Discharge destination - Spinal cord dysfunction

<table>
<thead>
<tr>
<th>AN-SNAP class</th>
<th>Percentage Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>4AD1 (n=14)</td>
<td>Remaining in hospital system (40%)</td>
</tr>
<tr>
<td>4AD2 (n=11)</td>
<td>Remaining in hospital system (50%)</td>
</tr>
<tr>
<td>4AD3 (n&lt;5)</td>
<td>Remaining in hospital system (50%)</td>
</tr>
<tr>
<td>4AD4 (n&lt;5)</td>
<td>Remaining in hospital system (50%)</td>
</tr>
<tr>
<td>4AZ1 (n&lt;5)</td>
<td>Remaining in hospital system (50%)</td>
</tr>
<tr>
<td>4AZ2 (n&lt;5)</td>
<td>Remaining in hospital system (50%)</td>
</tr>
<tr>
<td>All Spinal cord dysfunction (n=27)</td>
<td>Remaining in hospital system (60%)</td>
</tr>
</tbody>
</table>
Spinal cord dysfunction LOS and FIM change by AN-SNAP class – Specialist facilities
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 LOS
Mean FIM improvement

4AD1 (n=14)
4AD2 (n=11)
4AD3 (n<5)
4AD4 (n<5)
4AZ1 (n<5)
4AZ2 (n<5)
Change in outcome measures in spinal cord dysfunction, 2017 to 2018 - Specialist facilities

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>2017</th>
<th>2018</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>48.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of stay (days)</td>
<td>53.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIM admission score</td>
<td>71.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIM discharge score</td>
<td>94.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIM change (adm to disch)</td>
<td>22.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIM efficiency (per week)</td>
<td>3.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disch to community (%)</td>
<td>98.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2017 (n = 190)  
2018 (n = 194)

Lower than 2017 data  
Higher than 2017 data
Change in outcome measures in spinal cord dysfunction, 2017 to 2018 - Non specialist facilities

<table>
<thead>
<tr>
<th>Measure</th>
<th>2017 (n = 45)</th>
<th>2018 (n = 27)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>69.0</td>
<td></td>
</tr>
<tr>
<td>Length of stay (days)</td>
<td>31.9</td>
<td></td>
</tr>
<tr>
<td>FIM admission score</td>
<td>67.6</td>
<td></td>
</tr>
<tr>
<td>FIM discharge score</td>
<td>86.6</td>
<td></td>
</tr>
<tr>
<td>FIM change (adm to disch)</td>
<td>19.0</td>
<td></td>
</tr>
<tr>
<td>FIM efficiency (per week)</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td>Disch to community (%)</td>
<td>93.3</td>
<td></td>
</tr>
</tbody>
</table>

- Lower than 2017 data
- Higher than 2017 data
Amputation episodes over time

Number of episodes by quarter - Amputation of limb

Year - Quarter

Number of episodes
Amputation casemix over time
## Amputation episodes in 2018

<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>3</td>
<td>103</td>
<td>42</td>
<td>17</td>
<td>3</td>
<td>0</td>
<td>170</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>n &lt; 5</td>
<td>60.6%</td>
<td>24.7%</td>
<td>10.0%</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>28.2%</td>
<td>50.0%</td>
<td>41.2%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>34.1%</td>
</tr>
<tr>
<td>Male</td>
<td>n &lt; 5</td>
<td>71.8%</td>
<td>50.0%</td>
<td>58.8%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>65.9%</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>28.2%</td>
<td>21.4%</td>
<td>100.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>32.9%</td>
</tr>
<tr>
<td>Over 65</td>
<td>n &lt; 5</td>
<td>71.8%</td>
<td>78.6%</td>
<td>0.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>65.9%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>n &lt; 5</td>
<td>71.4 (69.5-73.4)</td>
<td>74.3 (71.2-77.4)</td>
<td>47.9 (45.6-50.1)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>69.8 (67.9-71.6)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>n &lt; 5</td>
<td>83.1 (80.4-85.8)</td>
<td>51.0 (48.1-53.8)</td>
<td>90.4 (82.5-98.3)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>75.1 (71.9-78.3)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>n &lt; 5</td>
<td>20.5 (18.3-22.8)</td>
<td>30.7 (26.6-34.8)</td>
<td>27.4 (22.1-32.7)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>24.0 (22.0-26.1)</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>94.1%</td>
<td>100.0%</td>
<td>94.1%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>95.2%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>n &lt; 5</td>
<td>5.9%</td>
<td>0.0%</td>
<td>5.9%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>4.8%</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>n &lt; 5</td>
<td>17.5 (15.5-19.5)</td>
<td>21.6 (15.7-27.5)</td>
<td>11.3 (7.4-15.2)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>17.8 (15.7-19.9)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>n &lt; 5</td>
<td>0.8</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

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

AN-SNAP class:

4AE1 (n<5)
4AE2 (n=103)
4AE3 (n=42)
4AE4 (n=17)
4AZ3 (n<5)
4AZ4 (n<5)
All Amputation of limb (n=170)
Amputation LOS and FIM change by AN-SNAP class

LOS and FIM change by AN-SNAP class

Mean days/score

AN-SNAP class

4AE1 (n<5) 4AE2 (n=103) 4AE3 (n=42) 4AE4 (n=17) 4AZ3 (n<5) 4AZ4 (n<5)
Change in outcome measures in amputation, 2017 to 2018

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>69.1</td>
<td></td>
</tr>
<tr>
<td>Length of stay (days)</td>
<td>27.0</td>
<td></td>
</tr>
<tr>
<td>FIM admission score</td>
<td>79.9</td>
<td></td>
</tr>
<tr>
<td>FIM discharge score</td>
<td>95.4</td>
<td></td>
</tr>
<tr>
<td>FIM change (adm to disch)</td>
<td>15.6</td>
<td></td>
</tr>
<tr>
<td>FIM efficiency (per week)</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>Disch to community (%)</td>
<td>90.3</td>
<td></td>
</tr>
</tbody>
</table>

Comparison between 2017 (n = 196) and 2018 (n = 170):
- Lower than 2017 data
- Higher than 2017 data

AROC State of Nations | 2018 report | New Zealand
Arthritis episodes over time

Number of episodes by quarter - Arthritis

Year - Quarter

Number of episodes
Arthritis casemix over time

Year

Proportion of episodes within year

2014
2015
2016
2017
2018

4AZ4
4AZ3
4A93
4A92
4A91
## Arthritis episodes in 2018

<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>20</td>
<td>16</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>47</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>42.6%</td>
<td>34.0%</td>
<td>21.3%</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><strong>Female</strong></td>
<td>50.0%</td>
<td>68.8%</td>
<td>70.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>61.7%</td>
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<tr>
<td><strong>Male</strong></td>
<td>50.0%</td>
<td>31.3%</td>
<td>30.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>38.3%</td>
</tr>
<tr>
<td>Age group (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Under 65</strong></td>
<td>20.0%</td>
<td>6.3%</td>
<td>0.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>10.6%</td>
</tr>
<tr>
<td><strong>Over 65</strong></td>
<td>80.0%</td>
<td>93.8%</td>
<td>100.0%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>89.4%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>73.7 (67.5-79.9)</td>
<td>78.9 (74.8-83.1)</td>
<td>79.2 (73.6-84.8)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>76.7 (73.4-79.9)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>92.9 (88.2-97.7)</td>
<td>74.3 (70.0-78.6)</td>
<td>52.0 (45.6-58.4)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>77.1 (71.6-82.6)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>12.6 (7.4-17.8)</td>
<td>14.8 (10.3-19.4)</td>
<td>29.0 (19.3-38.7)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>16.6 (12.8-20.3)</td>
</tr>
<tr>
<td>Discharge destination (%)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Discharged to community</strong></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><strong>Remaining in hospital system</strong></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>10.5 (5.5-15.4)</td>
<td>21.8 (14.0-29.5)</td>
<td>17.3 (10.1-24.6)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>16.3 (12.3-20.3)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>0.8</td>
<td>1.5</td>
<td>0.6</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

- 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>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=20)</td>
<td>10%</td>
<td></td>
<td>30%</td>
<td>50%</td>
<td>10%</td>
<td>0%</td>
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<tr>
<td>4A92 (n=16)</td>
<td>10%</td>
<td></td>
<td>40%</td>
<td>50%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>4A93 (n=10)</td>
<td>10%</td>
<td></td>
<td>40%</td>
<td>50%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>4AZ3 (n&lt;5)</td>
<td>10%</td>
<td></td>
<td>40%</td>
<td>50%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>4AZ4 (n&lt;5)</td>
<td>10%</td>
<td></td>
<td>40%</td>
<td>50%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>All Arthritis (n=47)</td>
<td>10%</td>
<td></td>
<td>40%</td>
<td>50%</td>
<td>10%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Arthritis LOS and FIM change by AN-SNAP class

LOS and FIM change by AN-SNAP class

Mean days/score

AN-SNAP class

4A91 (n=20)
4A92 (n=16)
4A93 (n=10)
4AZ3 (n<5)
4AZ4 (n<5)

Mean LOS
Mean FIM improvement

AROC State of Nations | 2018 report | New Zealand
## Change in outcome measures in arthritis, 2017 to 2018

<table>
<thead>
<tr>
<th>Measure</th>
<th>2017</th>
<th>2018</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>78.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of stay (days)</td>
<td>18.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIM admission score</td>
<td>74.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIM discharge score</td>
<td>95.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIM change (adm to disch)</td>
<td>21.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIM efficiency (per week)</td>
<td>7.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disch to community (%)</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Difference from 2017 data - All Arthritis

- **Age (years)**: 78.1 - 2017, 78.1 - 2017 (n = 45) - Lower than 2017 data
- **Length of stay (days)**: 18.7 - 2017, 18.7 - 2017 (n = 45) - Lower than 2017 data
- **FIM admission score**: 74.2 - 2017, 74.2 - 2017 (n = 45) - Higher than 2017 data
- **FIM discharge score**: 95.3 - 2017, 95.3 - 2017 (n = 47) - Higher than 2017 data
- **FIM efficiency (per week)**: 7.9 - 2017, 7.9 - 2017 (n = 47) - Higher than 2017 data
- **Disch to community (%)**: 100.0 - 2017, 100.0 - 2017 (n = 47) - Higher than 2017 data
Orthopaedic fracture episodes over time

Number of episodes by quarter - Orthopaedic fractures

Year - Quarter

Number of episodes
Orthopaedic fracture casemix over time
## Orthopaedic fracture episodes in 2018

<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>595</td>
<td>1,013</td>
<td>857</td>
<td>1,274</td>
<td>264</td>
<td>10</td>
<td>4,032</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>14.8%</td>
<td>25.1%</td>
<td>21.3%</td>
<td>31.6%</td>
<td>6.5%</td>
<td>0.2%</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>72.3%</td>
<td>72.1%</td>
<td>73.3%</td>
<td>73.7%</td>
<td>64.8%</td>
<td>50.0%</td>
<td>72.4%</td>
</tr>
<tr>
<td>Male</td>
<td>27.7%</td>
<td>27.9%</td>
<td>26.7%</td>
<td>26.3%</td>
<td>35.2%</td>
<td>50.0%</td>
<td>27.6%</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>9.4%</td>
<td>3.6%</td>
<td>4.3%</td>
<td>3.1%</td>
<td>0.0%</td>
<td>100.0%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Over 65</td>
<td>89.2%</td>
<td>96.2%</td>
<td>94.6%</td>
<td>96.3%</td>
<td>100.0%</td>
<td>0.0%</td>
<td>94.8%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>78.2 (77.3-79.1)</td>
<td>82.1 (81.5-82.7)</td>
<td>83.6 (83.0-84.2)</td>
<td>84.1 (83.6-84.6)</td>
<td>86.0 (85.1-86.9)</td>
<td>52.0 (47.6-56.4)</td>
<td>82.7 (82.3-83.0)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>95.6 (94.9-96.3)</td>
<td>83.2 (82.6-83.8)</td>
<td>68.5 (68.0-69.1)</td>
<td>51.4 (50.8-52.0)</td>
<td>29.2 (28.1-30.2)</td>
<td>30.1 (22.8-37.4)</td>
<td>68.5 (67.8-69.2)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>12.5 (11.2-13.9)</td>
<td>14.5 (14.0-15.1)</td>
<td>19.3 (18.5-20.0)</td>
<td>23.1 (22.3-23.9)</td>
<td>22.0 (20.3-23.6)</td>
<td>29.6 (12.5-46.7)</td>
<td>18.5 (18.1-18.9)</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>99.5%</td>
<td>98.7%</td>
<td>98.4%</td>
<td>95.4%</td>
<td>94.0%</td>
<td>80.0%</td>
<td>97.4%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>0.5%</td>
<td>1.3%</td>
<td>1.6%</td>
<td>4.6%</td>
<td>6.0%</td>
<td>20.0%</td>
<td>2.6%</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>14.5 (13.8-15.2)</td>
<td>16.2 (15.6-16.8)</td>
<td>23.1 (22.2-23.9)</td>
<td>27.3 (26.3-28.2)</td>
<td>18.1 (15.7-20.5)</td>
<td>23.4 (7.5-39.3)</td>
<td>21.0 (20.6-21.5)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>1.2</td>
<td>1.1</td>
<td>1.2</td>
<td>1.2</td>
<td>0.8</td>
<td>0.8</td>
<td>1.1</td>
</tr>
</tbody>
</table>
Orthopaedic fracture discharge destination by AN-SNAP class

Discharge destination - Orthopaedic fractures

- 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>Discharge destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>4AH1 (n=595)</td>
<td>Remaining in hospital system: 40%</td>
</tr>
<tr>
<td>4AH2 (n=1,013)</td>
<td>Remaining in hospital system: 40%</td>
</tr>
<tr>
<td>4AH3 (n=857)</td>
<td>Remaining in hospital system: 40%</td>
</tr>
<tr>
<td>4AH4 (n=1,274)</td>
<td>Remaining in hospital system: 40%</td>
</tr>
<tr>
<td>4AZ3 (n=264)</td>
<td>Remaining in hospital system: 40%</td>
</tr>
<tr>
<td>4AZ4 (n=10)</td>
<td>Remaining in hospital system: 40%</td>
</tr>
<tr>
<td>All Orthopaedic fractures (n=4,032)</td>
<td>Remaining in hospital system: 40%</td>
</tr>
</tbody>
</table>
Orthopaedic fracture LOS and FIM change by AN-SNAP class

<table>
<thead>
<tr>
<th>AN-SNAP Class</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>4AH1</td>
<td>n=595</td>
</tr>
<tr>
<td>4AH2</td>
<td>n=1,013</td>
</tr>
<tr>
<td>4AH3</td>
<td>n=857</td>
</tr>
<tr>
<td>4AH4</td>
<td>n=1,274</td>
</tr>
<tr>
<td>4AZ3</td>
<td>n=264</td>
</tr>
<tr>
<td>4AZ4</td>
<td>n=10</td>
</tr>
</tbody>
</table>

Mean days/score

- Mean LOS
- Mean FIM improvement

LOS and FIM change by AN-SNAP class
Change in outcome measures in orthopaedic fracture, 2017 to 2018

Difference from 2017 data - All Orthopaedic fractures

- Age (years) 82.7
- Length of stay (days) 18.4
- FIM admission score 68.6
- FIM discharge score 89.1
- FIM change (adm to disch) 20.5
- FIM efficiency (per week) 7.8
- Disch to community (%) 98.0

2017 (n = 4,065)
2018 (n = 4,032)

Lower than 2017 data
Higher than 2017 data
Orthopaedic replacement episodes over time

Number of episodes by quarter - Orthopaedic replacements

Year - Quarter

Number of episodes
Orthopaedic replacement casemix over time
Orthopaedic replacement episodes in 2018

<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>38</td>
<td>120</td>
<td>91</td>
<td>2</td>
<td>0</td>
<td>256</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>14.8%</td>
<td>46.9%</td>
<td>35.5%</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>55.3%</td>
<td>60.0%</td>
<td>59.3%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>59.0%</td>
</tr>
<tr>
<td>Male</td>
<td>44.7%</td>
<td>40.0%</td>
<td>40.7%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>41.0%</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>2.6%</td>
<td>5.0%</td>
<td>5.5%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>4.7%</td>
</tr>
<tr>
<td>Over 65</td>
<td>97.4%</td>
<td>93.3%</td>
<td>94.5%</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>94.1%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>80.7 (78.3-83.1)</td>
<td>78.9 (77.4-80.3)</td>
<td>78.8 (76.8-80.7)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>79.2 (78.1-80.2)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>102.7 (101.1-104.2)</td>
<td>86.9 (85.6-88.3)</td>
<td>61.3 (58.6-64.0)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>79.7 (77.5-82.0)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>8.1 (6.6-9.6)</td>
<td>12.7 (11.2-14.2)</td>
<td>18.0 (15.5-20.5)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>13.9 (12.7-15.2)</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>99.2%</td>
<td>97.8%</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>0.8%</td>
<td>2.2%</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>8.4 (6.8-9.9)</td>
<td>17.6 (16.2-19.0)</td>
<td>25.0 (22.4-27.6)</td>
<td>n &lt; 5</td>
<td>n &lt; 5</td>
<td>18.8 (17.4-20.2)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>1.0</td>
<td>1.4</td>
<td>1.4</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>Discharge location</th>
</tr>
</thead>
<tbody>
<tr>
<td>4A21 (n=38)</td>
<td></td>
</tr>
<tr>
<td>4A22 (n=120)</td>
<td></td>
</tr>
<tr>
<td>4A23 (n=91)</td>
<td></td>
</tr>
<tr>
<td>4AZ3 (n&lt;5)</td>
<td></td>
</tr>
<tr>
<td>4AZ4 (n&lt;5)</td>
<td></td>
</tr>
<tr>
<td>All Orthopaedic replacements (n=256)</td>
<td></td>
</tr>
</tbody>
</table>
Orthopaedic replacement LOS and FIM change by AN-SNAP class

LOS and FIM change by AN-SNAP class

Mean LOS
Mean FIM improvement

AN-SNAP class

4A21 (n=38) 4A22 (n=120) 4A23 (n=91) 4AZ3 (n<5) 4AZ4 (n<5)
Change in outcome measures in orthopaedic replacement, 2017 to 2018

Difference from 2017 data - All Orthopaedic replacements

2017

Age (years) 79.2
Length of stay (days) 13.7
FIM admission score 81.3
FIM discharge score 98.8
FIM change (adm to disch) 17.5
FIM efficiency (per week) 8.9
Disch to community (%) 97.4

2017 (n = 269) 2018 (n = 256)

Lower than 2017 data Higher than 2017 data
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 2018

<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>4,032</td>
<td>256</td>
<td>392</td>
<td>133</td>
<td>4,813</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>83.8%</td>
<td>5.3%</td>
<td>8.1%</td>
<td>2.8%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Gender (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>72.4%</td>
<td>59.0%</td>
<td>64.5%</td>
<td>57.1%</td>
<td>70.6%</td>
</tr>
<tr>
<td>Male</td>
<td>27.6%</td>
<td>41.0%</td>
<td>35.5%</td>
<td>42.9%</td>
<td>29.4%</td>
</tr>
<tr>
<td>Age group (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>4.4%</td>
<td>4.7%</td>
<td>3.6%</td>
<td>15.0%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Over 65</td>
<td>94.8%</td>
<td>94.1%</td>
<td>95.4%</td>
<td>82.7%</td>
<td>94.5%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>82.7 (82.3-83.0)</td>
<td>79.2 (78.1-80.2)</td>
<td>83.6 (82.6-84.5)</td>
<td>74.0 (72.1-75.9)</td>
<td>82.3 (82.0-82.6)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>68.5 (67.8-69.2)</td>
<td>79.7 (77.5-82.0)</td>
<td>72.2 (70.2-74.3)</td>
<td>80.4 (77.3-83.5)</td>
<td>69.7 (69.1-70.3)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>18.5 (18.1-18.9)</td>
<td>13.9 (12.7-15.2)</td>
<td>15.5 (14.5-16.5)</td>
<td>14.8 (12.9-16.7)</td>
<td>17.9 (17.5-18.3)</td>
</tr>
<tr>
<td>Discharge destination (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharged to community</td>
<td>97.4%</td>
<td>98.8%</td>
<td>97.9%</td>
<td>96.2%</td>
<td>97.5%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>2.6%</td>
<td>1.2%</td>
<td>2.1%</td>
<td>3.8%</td>
<td>2.5%</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>21.0 (20.6-21.5)</td>
<td>18.8 (17.4-20.2)</td>
<td>16.5 (15.1-17.8)</td>
<td>18.4 (16.2-20.5)</td>
<td>20.5 (20.1-20.9)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>1.1</td>
<td>1.3</td>
<td>1.1</td>
<td>1.2</td>
<td>1.1</td>
</tr>
</tbody>
</table>
All Orthopaedic episodes discharge destination by orthopaedic group

Discharge destination - All orthopaedic conditions

Percentage

Orthopaedic group

- Ortho fracture (n=4,032)
- Ortho replacement (n=256)
- Soft tissue injury (n=392)
- Other ortho (n=133)
- All orthopaedic conditions (n=4,813)

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

AROC State of Nations | 2018 report | New Zealand
All orthopaedic conditions LOS and FIM change by orthopaedic group

LOS and FIM change by AN-SNAP class

Orthopaedic group

- Ortho fracture (n=4,032)
- Ortho replacement (n=256)
- Soft tissue injury (n=392)
- Other ortho (n=133)
Change in outcome measures in orthopaedic conditions, 2017 to 2018

Difference from 2017 data - All orthopaedic conditions

2017

-0.4 -0.3 -0.2 -0.1 0 0.1 0.2 0.3 0.4 0.5 0.6

Age (years) 82.3
Length of stay (days) 17.8
FIM admission score 70.0
FIM discharge score 90.0
FIM change (adm to disch) 20.0
FIM efficiency (per week) 7.9
Disch to community (%) 97.8

2017 (n = 4,845)
2018 (n = 4,813)

Lower than 2017 data

Higher than 2017 data
Pulmonary episodes over time

Number of episodes by quarter - Pulmonary

Year - Quarter

Number of episodes
Pulmonary casemix over time
## Pulmonary episodes in 2018

<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>30</td>
<td>40</td>
<td>14</td>
<td>5</td>
<td>1</td>
<td>102</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>10.8%</td>
<td>29.4%</td>
<td>39.2%</td>
<td>13.7%</td>
<td>4.9%</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>
</tr>
<tr>
<td>Female</td>
<td>45.5%</td>
<td>56.7%</td>
<td>55.0%</td>
<td>57.1%</td>
<td>80.0%</td>
<td>n &lt; 5</td>
<td>55.9%</td>
</tr>
<tr>
<td>Male</td>
<td>54.5%</td>
<td>43.3%</td>
<td>45.0%</td>
<td>42.9%</td>
<td>20.0%</td>
<td>n &lt; 5</td>
<td>44.1%</td>
</tr>
<tr>
<td>Age group (%)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>9.1%</td>
<td>0.0%</td>
<td>5.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>n &lt; 5</td>
<td>3.9%</td>
</tr>
<tr>
<td>Over 65</td>
<td>90.9%</td>
<td>100.0%</td>
<td>95.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>n &lt; 5</td>
<td>96.1%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>73.7 (69.7-77.8)</td>
<td>81.2 (78.7-83.8)</td>
<td>82.8 (80.0-85.5)</td>
<td>81.9 (78.4-85.5)</td>
<td>80.6 (71.8-89.4)</td>
<td>n &lt; 5</td>
<td>80.9 (79.2-82.6)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>106.6 (102.0-111.3)</td>
<td>88.0 (84.9-91.1)</td>
<td>67.9 (64.7-71.2)</td>
<td>47.1 (39.8-54.4)</td>
<td>30.5 (13.8-47.2)</td>
<td>n &lt; 5</td>
<td>73.8 (69.2-78.3)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>9.2 (6.9-11.4)</td>
<td>12.4 (10.1-14.7)</td>
<td>18.0 (15.1-20.9)</td>
<td>25.9 (21.1-30.8)</td>
<td>20.0 (11.9-28.1)</td>
<td>n &lt; 5</td>
<td>16.4 (14.6-18.3)</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>100.0%</td>
<td>100.0%</td>
<td>94.7%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>n &lt; 5</td>
<td>98.0%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>0.0%</td>
<td>0.0%</td>
<td>5.3%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>n &lt; 5</td>
<td>2.0%</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>6.2 (2.8-9.6)</td>
<td>15.9 (12.3-19.5)</td>
<td>22.0 (18.1-25.9)</td>
<td>29.6 (17.9-41.3)</td>
<td>35.8 (3.0-68.5)</td>
<td>n &lt; 5</td>
<td>19.8 (16.6-22.9)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>0.7</td>
<td>1.3</td>
<td>1.2</td>
<td>1.1</td>
<td>1.8</td>
<td>n &lt; 5</td>
<td>1.2</td>
</tr>
</tbody>
</table>
Pulmonary discharge destination by AN-SNAP class

Discharge destination - Pulmonary

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

AN-SNAP class

4A31 (n=11)
4A32 (n=30)
4A33 (n=40)
4A34 (n=14)
4AZ3 (n=5)
4AZ4 (n<5)
All Pulmonary (n=102)
Pulmonary LOS and FIM change by AN-SNAP class
Change in outcome measures in pulmonary, 2017 to 2018

- Age (years) 79.9
- Length of stay (days) 17.4
- FIM admission score 79.3
- FIM discharge score 93.4
- FIM change (adm to disch) 14.2
- FIM efficiency (per week) 5.7
- Disch to community (%) 97.5

2017 (n = 81)
2018 (n = 102)
Reconditioning episodes over time
Reconditioning casemix over time

Proportion of episodes within year

Year

2014 2015 2016 2017 2018

Proportion of episodes within year

4AZ4
4AZ3
4AR6
4AR5
4AR4
4AR3
4AR2
4AR1
### Reconditioning episodes in 2018

<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 Reconditioning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of episodes</td>
<td>649</td>
<td>739</td>
<td>557</td>
<td>157</td>
<td>808</td>
<td>700</td>
<td>230</td>
<td>21</td>
<td>3,900</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>16.6%</td>
<td>18.9%</td>
<td>14.3%</td>
<td>4.0%</td>
<td>20.7%</td>
<td>17.9%</td>
<td>5.9%</td>
<td>0.5%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Gender (%)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>55.3%</td>
<td>59.0%</td>
<td>57.1%</td>
<td>54.1%</td>
<td>51.9%</td>
<td>49.4%</td>
<td>56.1%</td>
<td>38.1%</td>
<td>54.5%</td>
</tr>
<tr>
<td>Male</td>
<td>44.7%</td>
<td>41.0%</td>
<td>42.9%</td>
<td>45.9%</td>
<td>48.1%</td>
<td>50.1%</td>
<td>43.9%</td>
<td>61.9%</td>
<td>45.4%</td>
</tr>
<tr>
<td>Age group (%)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>11.4%</td>
<td>8.0%</td>
<td>5.2%</td>
<td>9.6%</td>
<td>4.7%</td>
<td>7.9%</td>
<td>0.0%</td>
<td>100.0%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Over 65</td>
<td>88.6%</td>
<td>91.7%</td>
<td>93.9%</td>
<td>93.5%</td>
<td>94.6%</td>
<td>91.6%</td>
<td>100.0%</td>
<td>0.0%</td>
<td>91.9%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>77.1 (76.1-78.0)</td>
<td>80.0 (79.3-80.7)</td>
<td>81.8 (81.0-82.6)</td>
<td>78.4 (76.5-80.2)</td>
<td>81.4 (80.7-82.1)</td>
<td>79.8 (78.9-80.6)</td>
<td>82.8 (81.7-83.8)</td>
<td>49.3 (43.7-54.9)</td>
<td>80.0 (79.7-80.4)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>102.1 (101.4-102.7)</td>
<td>87.4 (86.9-87.8)</td>
<td>76.2 (75.6-76.7)</td>
<td>75.3 (74.6-76.1)</td>
<td>62.1 (61.5-62.7)</td>
<td>48.2 (47.4-48.9)</td>
<td>30.2 (28.9-31.4)</td>
<td>38.6 (33.1-44.0)</td>
<td>72.1 (71.4-72.8)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>11.8 (11.2-12.4)</td>
<td>14.6 (13.7-15.4)</td>
<td>16.2 (15.3-17.1)</td>
<td>19.1 (17.5-20.7)</td>
<td>18.7 (17.8-19.5)</td>
<td>23.2 (22.2-24.3)</td>
<td>22.7 (20.7-24.6)</td>
<td>38.5 (28.3-48.7)</td>
<td>17.5 (17.1-17.9)</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>
</tr>
<tr>
<td>Discharged to community</td>
<td>98.6%</td>
<td>98.4%</td>
<td>98.2%</td>
<td>98.7%</td>
<td>98.5%</td>
<td>97.5%</td>
<td>96.7%</td>
<td>95.0%</td>
<td>98.2%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>1.4%</td>
<td>1.6%</td>
<td>1.8%</td>
<td>1.3%</td>
<td>1.5%</td>
<td>2.5%</td>
<td>3.3%</td>
<td>5.0%</td>
<td>1.8%</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>7.7 (7.1-8.3)</td>
<td>15.3 (14.6-16.0)</td>
<td>14.3 (13.4-15.2)</td>
<td>21.3 (19.0-23.7)</td>
<td>20.2 (19.2-21.2)</td>
<td>23.2 (21.8-24.6)</td>
<td>20.1 (17.0-23.3)</td>
<td>30.9 (16.6-45.2)</td>
<td>16.9 (16.4-17.4)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>0.7</td>
<td>1.0</td>
<td>0.9</td>
<td>1.1</td>
<td>1.1</td>
<td>1.0</td>
<td>0.9</td>
<td>0.8</td>
<td>1.0</td>
</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

- 4AR1 (n=649)
- 4AR2 (n=739)
- 4AR3 (n=557)
- 4AR4 (n=157)
- 4AR5 (n=808)
- 4AR6 (n=700)
- 4AZ3 (n=230)
- 4AZ4 (n=21)
- All Reconditioning (n=3,900)
Reconditioning LOS and FIM change by AN-SNAP class

LOS and FIM change by AN-SNAP class

Mean days/score

AN-SNAP class

4AR1 (n=649) 4AR2 (n=739) 4AR3 (n=557) 4AR4 (n=157) 4AR5 (n=808) 4AR6 (n=700) 4AZ3 (n=230) 4AZ4 (n=21)
Change in outcome measures in reconditioning, 2017 to 2018

Difference from 2017 data - All Reconditioning

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>79.9</td>
<td>Lower than 2017 data</td>
</tr>
<tr>
<td>Length of stay (days)</td>
<td>18.3</td>
<td>Lower than 2017 data</td>
</tr>
<tr>
<td>FIM admission score</td>
<td>74.1</td>
<td>Lower than 2017 data</td>
</tr>
<tr>
<td>FIM discharge score</td>
<td>90.2</td>
<td>Higher than 2017 data</td>
</tr>
<tr>
<td>FIM change (adm to disch)</td>
<td>16.1</td>
<td>Higher than 2017 data</td>
</tr>
<tr>
<td>FIM efficiency (per week)</td>
<td>6.2</td>
<td>Higher than 2017 data</td>
</tr>
<tr>
<td>Disch to community (%)</td>
<td>96.8</td>
<td>Higher than 2017 data</td>
</tr>
</tbody>
</table>

2017 (n = 3,448)  
2018 (n = 3,900)
Other impairment episodes over time

Number of episodes by quarter - Other impairments

Year - Quarter

Pain
Cardiac
Major Multiple trauma
Other impairments casemix over time

Proportion of episodes within year

Year

2014
2015
2016
2017
2018

4AP1
4A34
4A33
4A32
4A31
# Other impairment episodes in 2018

<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>248</td>
<td>124</td>
<td>71</td>
<td>9</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Proportion of total episodes in 2018</td>
<td>1.9%</td>
<td>1.0%</td>
<td>0.6%</td>
<td>0.1%</td>
<td>0.0%</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>Gender (%)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>67.3%</td>
<td>54.0%</td>
<td>23.9%</td>
<td>44.4%</td>
<td>20.0%</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>Male</td>
<td>32.7%</td>
<td>46.0%</td>
<td>76.1%</td>
<td>55.6%</td>
<td>80.0%</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>4.0%</td>
<td>8.1%</td>
<td>81.7%</td>
<td>44.4%</td>
<td>40.0%</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>Over 65</td>
<td>95.6%</td>
<td>90.3%</td>
<td>18.3%</td>
<td>55.6%</td>
<td>60.0%</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>82.4 (81.1-83.8)</td>
<td>80.1 (78.0-82.2)</td>
<td>44.2 (39.5-48.8)</td>
<td>69.6 (58.6-80.5)</td>
<td>67.2 (54.4-80.0)</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>79.2 (76.5-81.9)</td>
<td>80.3 (75.9-84.7)</td>
<td>64.1 (57.7-70.5)</td>
<td>81.4 (69.5-93.4)</td>
<td>69.8 (50.6-89.0)</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>14.5 (13.1-15.8)</td>
<td>14.4 (12.6-16.3)</td>
<td>44.3 (33.9-54.7)</td>
<td>25.4 (9.9-41.0)</td>
<td>17.2 (11.1-23.3)</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>95.7%</td>
<td>97.1%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>1.6%</td>
<td>4.3%</td>
<td>2.9%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>16.6 (15.0-18.2)</td>
<td>19.0 (15.5-22.4)</td>
<td>37.2 (31.5-42.8)</td>
<td>15.3 (9.9-20.8)</td>
<td>13.4 (2.6-24.2)</td>
<td>n &lt; 5</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>1.1</td>
<td>1.3</td>
<td>0.8</td>
<td>0.6</td>
<td>0.8</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

<table>
<thead>
<tr>
<th>Impairment</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>Pain (n=248)</td>
<td>14%</td>
<td>20%</td>
<td>2%</td>
<td>5%</td>
<td>20%</td>
<td>53%</td>
</tr>
<tr>
<td>Cardiac (n=124)</td>
<td>9%</td>
<td>20%</td>
<td>2%</td>
<td>3%</td>
<td>20%</td>
<td>58%</td>
</tr>
<tr>
<td>MMT (n=71)</td>
<td>5%</td>
<td>20%</td>
<td>2%</td>
<td>3%</td>
<td>20%</td>
<td>58%</td>
</tr>
<tr>
<td>Burns (n=9)</td>
<td>5%</td>
<td>20%</td>
<td>2%</td>
<td>3%</td>
<td>20%</td>
<td>58%</td>
</tr>
<tr>
<td>Congenital deformity</td>
<td>5%</td>
<td>20%</td>
<td>2%</td>
<td>3%</td>
<td>20%</td>
<td>58%</td>
</tr>
<tr>
<td>Developmental disability (n&lt;5)</td>
<td>5%</td>
<td>20%</td>
<td>2%</td>
<td>3%</td>
<td>20%</td>
<td>58%</td>
</tr>
</tbody>
</table>
Other impairment LOS and FIM change by impairment group

LOS and FIM change by AN-SNAP class

Mean days/score

Other impairment

Pain (n=248)
Cardiac (n=124)
MMT (n=71)
Burns (n=9)
Congenital deformity (n=5)
Developmental disability (n<5)

Mean LOS
Mean FIM improvement
Change in outcome measures in pain, 2017 to 2018

2017

Age (years) 81.3
Length of stay (days) 15.3
FIM admission score 79.0
FIM discharge score 95.0
FIM change (adm to disch) 15.9
FIM efficiency (per week) 7.3
Disch to community (%) 99.6

2017 (n = 236) 2018 (n = 248)

Lower than 2017 data Higher than 2017 data
Change in outcome measures in cardiac, 2017 to 2018

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>2017</th>
<th>2018</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>80.6</td>
<td>80.6</td>
<td>0</td>
</tr>
<tr>
<td>Length of stay (days)</td>
<td>16.2</td>
<td>15.8</td>
<td>-0.4</td>
</tr>
<tr>
<td>FIM admission score</td>
<td>78.9</td>
<td>81.7</td>
<td>2.8</td>
</tr>
<tr>
<td>FIM discharge score</td>
<td>92.2</td>
<td>93.0</td>
<td>0.8</td>
</tr>
<tr>
<td>FIM change (adm to disch)</td>
<td>13.3</td>
<td>18.4</td>
<td>5.1</td>
</tr>
<tr>
<td>FIM efficiency (per week)</td>
<td>5.8</td>
<td>6.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Disch to community (%)</td>
<td>97.4</td>
<td>98.0</td>
<td>0.6</td>
</tr>
</tbody>
</table>

2017 (n = 119) 2018 (n = 124)

Higher than 2017 data

Lower than 2017 data
Change in outcome measures in MMT, 2017 to 2018

- Age (years): 44.6
- Length of stay (days): 32.4
- FIM admission score: 75.6
- FIM discharge score: 107.4
- FIM change (adm to disch): 31.8
- FIM efficiency (per week): 6.9
- Disch to community (%): 97.6

2017 (n = 86)
2018 (n = 71)
Other disabling impairment episodes over time

Number of episodes by quarter - Other disabling impairments

Year - Quarter

Number of episodes
## Other disabling impairment episodes in 2018

<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>103</td>
<td>100</td>
<td>39</td>
<td>22</td>
<td>1</td>
<td>266</td>
</tr>
<tr>
<td>Proportion of episodes</td>
<td>38.7%</td>
<td>37.6%</td>
<td>14.7%</td>
<td>8.3%</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>51.5%</td>
<td>52.0%</td>
<td>38.5%</td>
<td>54.5%</td>
<td>n &lt; 5</td>
<td>50.4%</td>
</tr>
<tr>
<td>Male</td>
<td>48.5%</td>
<td>48.0%</td>
<td>61.5%</td>
<td>45.5%</td>
<td>n &lt; 5</td>
<td>49.6%</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>12.6%</td>
<td>8.0%</td>
<td>7.7%</td>
<td>0.0%</td>
<td>n &lt; 5</td>
<td>9.4%</td>
</tr>
<tr>
<td>Over 65</td>
<td>86.4%</td>
<td>92.0%</td>
<td>92.3%</td>
<td>100.0%</td>
<td>n &lt; 5</td>
<td>90.2%</td>
</tr>
<tr>
<td>Age (Mean+95%CI)</td>
<td>78.3 (75.2-81.4)</td>
<td>81.5 (78.7-84.2)</td>
<td>81.2 (77.8-84.5)</td>
<td>84.5 (80.1-88.8)</td>
<td>n &lt; 5</td>
<td>80.3 (78.6-82.1)</td>
</tr>
<tr>
<td>Admission FIM (Mean+95%CI)</td>
<td>92.9 (90.4-95.5)</td>
<td>66.8 (64.6-69.0)</td>
<td>46.2 (43.2-49.2)</td>
<td>32.1 (28.3-35.9)</td>
<td>n &lt; 5</td>
<td>71.1 (68.3-74.0)</td>
</tr>
<tr>
<td>LOS (Mean+95%CI)</td>
<td>14.6 (12.5-16.7)</td>
<td>21.1 (18.6-23.5)</td>
<td>29.1 (23.2-34.9)</td>
<td>30.5 (23.3-37.6)</td>
<td>n &lt; 5</td>
<td>20.5 (18.8-22.3)</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>96.0%</td>
<td>97.4%</td>
<td>100.0%</td>
<td>n &lt; 5</td>
<td>98.1%</td>
</tr>
<tr>
<td>Remaining in hospital system</td>
<td>0.0%</td>
<td>4.0%</td>
<td>2.6%</td>
<td>0.0%</td>
<td>n &lt; 5</td>
<td>1.9%</td>
</tr>
<tr>
<td>FIM change (Mean+95%CI)</td>
<td>10.2 (8.5-11.9)</td>
<td>17.7 (15.3-20.0)</td>
<td>17.5 (11.0-24.0)</td>
<td>14.2 (7.5-20.9)</td>
<td>n &lt; 5</td>
<td>14.5 (12.9-16.1)</td>
</tr>
<tr>
<td>FIM efficiency (FIM change/LOS)</td>
<td>0.7</td>
<td>0.8</td>
<td>0.6</td>
<td>0.5</td>
<td>n &lt; 5</td>
<td>0.7</td>
</tr>
</tbody>
</table>
Other disabling impairment discharge destination by AN-SNAP class

Discharge destination - Other disabling impairments

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

AN-SNAP class:
- 4A91 (n=103)
- 4A92 (n=100)
- 4A93 (n=39)
- 4AZ3 (n=22)
- 4AZ4 (n<5)
- All Other disabling impairments (n=266)
Other disabling impairment LOS and FIM change by AN-SNAP class

LOS and FIM change by AN-SNAP class

Mean LOS
Mean FIM improvement

Mean days/score

AN-SNAP class

4A91 (n=103)
4A92 (n=100)
4A93 (n=39)
4AZ3 (n=22)
4AZ4 (n<5)
Change in outcome measures in other disabling impairments, 2017 to 2018

Difference from 2017 data - All Other disabling impairments

-6 -5 -4 -3 -2 -1 0 1 2 3

-6 -5 -4 -3 -2 -1 0 1 2 3

2017

-6 -5 -4 -3 -2 -1 0 1 2 3

Lower than 2017 data

Higher than 2017 data

2017 (n = 323)
2018 (n = 266)

Age (years) 79.5
Length of stay (days) 19.4
FIM admission score 75.9
FIM discharge score 91.1
FIM change (adm to disch) 15.2
FIM efficiency (per week) 5.5
Disch to community (%) 96.3
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