

# Spinal Cord Dysfunction LOS and FIM Change Benchmarks in Australia & New Zealand by AN-SNAP V5, Calendar Year 2023



AN-SNAP class	Specialist Spinal Units				Non Specialist Spinal Units				All AROC Facilities			
	No.	Length of stay	FIM change	FIM gain	No.	Length of stay	FIM change	FIM gain	No.	Length of stay	FIM change	FIM gain
		Mean (95%CI)	Mean (95%CI)	per week		Mean (95%CI)	Mean (95%CI)	per week		Mean (95%CI)	Mean (95%CI)	per week
<b>Traumatic episodes</b>												
5AZ1	42	147.8 (118.6 - 177.0)	23.4 (16.3 - 30.4)	1.1	15	72.9 (48.9 - 96.8)	31.9 (18.9 - 44.9)	3.1	57	128.1 (103.9 - 152.3)	25.6 (19.3 - 31.9)	1.4
5AZ2	61	152.6 (131.6 - 173.5)	23.9 (17.8 - 29.9)	1.1	8	88.5 (45.7 - 131.3)	40.6 (16.1 - 65.2)	3.2	69	145.1 (125.5 - 164.8)	25.8 (19.7 - 31.9)	1.2
5AD1	40	37.8 (25.6 - 49.9)	12.1 (9.4 - 14.7)	2.2	31	16.8 (12.1 - 21.6)	14.3 (11.6 - 17.0)	5.9	71	28.6 (21.1 - 36.1)	13.0 (11.1 - 14.9)	3.2
5AD2	30	70.4 (47.9 - 93.0)	30.3 (26.2 - 34.4)	3.0	31	40.0 (25.3 - 54.7)	31.9 (27.5 - 36.4)	5.6	61	55.0 (41.1 - 68.9)	31.1 (28.1 - 34.2)	4.0
5AD3	72	99.0 (83.8 - 114.1)	38.7 (34.0 - 43.3)	2.7	22	59.4 (34.9 - 83.8)	27.0 (17.8 - 36.2)	3.2	94	89.7 (76.4 - 103.0)	35.9 (31.7 - 40.2)	2.8
5API	4	n.a	n.a	n.a	33	46.3 (32.0 - 60.6)	24.6 (20.3 - 28.9)	3.7	37	47.9 (34.3 - 61.6)	23.1 (19.0 - 27.3)	3.4
5AP2	20	101.6 (81.3 - 121.8)	29.7 (21.5 - 37.8)	2.0	21	57.8 (35.9 - 79.8)	37.2 (27.3 - 47.2)	4.5	41	79.1 (62.8 - 95.5)	33.5 (27.0 - 40.1)	3.0
<b>Total episodes</b>	<b>269</b>				<b>161</b>				<b>430</b>			
<b>Non-Traumatic episodes</b>												
5AZ1	15	144.7 (95.8 - 193.5)	27.1 (16.8 - 37.4)	1.3	14	85.3 (46.5 - 124.1)	25.4 (13.6 - 37.1)	2.1	29	116.0 (83.3 - 148.7)	26.2 (18.6 - 33.9)	1.6
5AZ2	8	131.3 (89.5 - 173.0)	13.5 (-1.8 - 28.8)	0.7	4	n.a	n.a	n.a	12	95.5 (55.5 - 135.5)	11.0 (1.0 - 21.0)	0.8
5AD1	38	41.3 (32.1 - 50.6)	13.5 (10.6 - 16.4)	2.3	114	18.9 (16.0 - 21.7)	15.9 (14.4 - 17.3)	5.9	152	24.5 (21.0 - 28.0)	15.3 (14.0 - 16.6)	4.4
5AD2	43	69.6 (56.4 - 82.8)	29.0 (25.1 - 32.8)	2.9	92	29.4 (24.9 - 33.8)	29.5 (27.1 - 32.0)	7.0	135	42.2 (36.1 - 48.3)	29.4 (27.3 - 31.5)	4.9
5AD3	91	87.3 (75.9 - 98.7)	35.0 (31.0 - 39.0)	2.8	120	56.1 (49.5 - 62.8)	31.1 (27.2 - 34.9)	3.9	211	69.6 (63.0 - 76.1)	32.8 (29.9 - 35.6)	3.3
<b>Total episodes</b>	<b>195</b>				<b>344</b>				<b>539</b>			

NOTE 1: Where the number of episodes < 5 details are not given for reasons of privacy and accuracy.

NOTE 2: Analysis includes first admission, complete episodes only

## AN-SNAP V5 classes for Spinal Cord Dysfunction

Class	Description of AN-SNAP class
5AZ1	Weighted FIM Motor score 13-18, Brain, Spine, MMT, Burns, Age >= 59
5AZ2	Weighted FIM Motor score 13-18, Brain, Spine, MMT, Burns, Age 18 - 58
5AD1	Spinal cord dysfunction, Weighted FIM Motor 55 - 91
5AD2	Spinal cord dysfunction, Weighted FIM Motor 37 - 54
5AD3	Spinal cord dysfunction, Weighted FIM Motor 19 - 36
5API	Major Multiple Trauma, Weighted FIM Motor 51 - 91
5AP2	Major Multiple Trauma, Weighted FIM Motor 19 - 50

## All Spinal Cord Dysfunction impairment codes

Traumatic spinal cord dysfunction	Non traumatic spinal cord dysfunction
4.211 Paraplegia, incomplete	4.111 Paraplegia, incomplete
4.212 Paraplegia, complete	4.112 Paraplegia, complete
4.2211 Quadriplegia, incomplete C1-4	4.1211 Quadriplegia, incomplete C1-4
4.2212 Quadriplegia, incomplete C5-8	4.1212 Quadriplegia, incomplete C5-8
4.2221 Quadriplegia, complete C1-4	4.1221 Quadriplegia, complete C1-4
4.2222 Quadriplegia, complete C5-8	4.1222 Quadriplegia, complete C5-8
4.23 Other traumatic spinal cord dysfunction	4.13 Other non-traumatic spinal cord dysfunction
<b>Major Multiple Trauma</b>	
14.1 Brain + spinal cord injury	
14.3 Spinal cord + multi fracture/amputation	

# Spinal Cord Dysfunction LOS and FIM Change Benchmarks in Australia & New Zealand by AN-SNAP V4, Calendar Year 2023



AN-SNAP class	Specialist Spinal Units				Non Specialist Spinal Units				All AROC Facilities			
	No.	Length of stay	FIM change	FIM gain per week	No.	Length of stay	FIM change	FIM gain per week	No.	Length of stay	FIM change	FIM gain per week
		Mean (95%CI)	Mean (95%CI)			Mean (95%CI)	Mean (95%CI)			Mean (95%CI)	Mean (95%CI)	
<b>Traumatic episodes</b>												
4AZ1	64	154.2 (130.7 - 177.6)	21.1 (15.6 - 26.6)	1.0	17	65.9 (42.6 - 89.3)	29.8 (17.7 - 42.0)	3.2	81	135.7 (115.0 - 156.3)	22.9 (17.9 - 28.0)	1.2
4AZ2	40	145.7 (122.1 - 169.2)	28.8 (20.8 - 36.8)	1.4	6	113.3 (74.7 - 152.0)	49.5 (20.4 - 78.6)	3.1	46	141.4 (120.4 - 162.5)	31.5 (23.5 - 39.5)	1.6
4AD1	25	46.1 (27.7 - 64.4)	16.0 (11.6 - 20.4)	2.4	30	19.2 (13.9 - 24.5)	20.9 (17.1 - 24.7)	7.6	55	31.4 (22.0 - 40.9)	18.7 (15.8 - 21.6)	4.2
4AD2	41	100.1 (75.9 - 124.4)	33.3 (27.0 - 39.5)	2.3	35	51.3 (35.2 - 67.5)	27.8 (21.5 - 34.2)	3.8	76	77.7 (61.7 - 93.6)	30.8 (26.3 - 35.2)	2.8
4AD3	40	47.6 (34.6 - 60.5)	22.2 (17.4 - 26.9)	3.3	18	36.2 (10.5 - 61.8)	22.4 (14.3 - 30.5)	4.3	58	44.0 (32.2 - 55.9)	22.2 (18.2 - 26.3)	3.5
4AD4	35	102.4 (84.5 - 120.3)	42.8 (36.6 - 49.0)	2.9	0	n.a	n.a	n.a	35	102.4 (84.5 - 120.3)	42.8 (36.6 - 49.0)	2.9
4API	23	91.2 (72.2 - 110.2)	24.8 (17.8 - 31.8)	1.9	54	50.8 (38.5 - 63.0)	29.5 (24.6 - 34.5)	4.1	77	62.9 (51.9 - 73.8)	28.1 (24.1 - 32.1)	3.1
<b>Total episodes</b>	<b>268</b>				<b>160</b>				<b>428</b>			
<b>Non-Traumatic episodes</b>												
4AZ1	26	133.5 (102.5 - 164.6)	27.0 (18.0 - 36.0)	1.4	16	90.6 (55.1 - 126.0)	23.9 (13.5 - 34.4)	1.9	42	117.2 (93.2 - 141.1)	25.9 (19.1 - 32.6)	1.5
4AZ2	2	n.a	n.a	n.a	4	n.a	n.a	n.a	6	48.7 (6.0 - 91.4)	14.5 (-5.1 - 34.1)	2.1
4AD1	34	52.5 (42.5 - 62.6)	21.7 (17.4 - 26.0)	2.9	143	22.0 (19.3 - 24.8)	20.0 (18.3 - 21.7)	6.3	177	27.9 (24.5 - 31.3)	20.3 (18.7 - 21.9)	5.1
4AD2	77	89.5 (76.3 - 102.7)	32.8 (29.0 - 36.5)	2.6	132	50.7 (45.1 - 56.3)	31.3 (27.8 - 34.9)	4.3	209	65.0 (58.5 - 71.5)	31.9 (29.3 - 34.5)	3.4
4AD3	33	44.7 (31.9 - 57.4)	18.0 (12.9 - 23.1)	2.8	38	19.6 (13.1 - 26.0)	22.3 (18.2 - 26.4)	8.0	71	31.2 (23.8 - 38.6)	20.3 (17.0 - 23.5)	4.5
4AD4	22	84.8 (67.0 - 102.5)	36.8 (27.6 - 46.1)	3.0	11	68.2 (38.4 - 98.0)	35.3 (23.0 - 47.5)	3.6	33	79.2 (63.7 - 94.8)	36.3 (28.9 - 43.7)	3.2
<b>Total episodes</b>	<b>194</b>				<b>344</b>				<b>538</b>			

NOTE 1: Where the number of episodes < 5 details are not given for reasons of privacy and accuracy.

NOTE 2: Analysis includes first admission, complete episodes only

## AN-SNAP V4 classes for Spinal Cord Dysfunction

Class	Description of AN-SNAP class
4AZ1	Weighted FIM motor score 13-18, Brain, Spine, MMT, Age ≥ 49
4AZ2	Weighted FIM motor score 13-18, Brain, Spine, MMT, Age ≤ 48
4AD1	Spinal cord dysfunction, Age ≥ 50, weighted FIM motor 42-91
4AD2	Spinal cord dysfunction, Age ≥ 50, weighted FIM motor 19-41
4AD3	Spinal cord dysfunction, Age ≤ 49, weighted FIM motor 34-91
4AD4	Spinal cord dysfunction, Age ≤ 49, weighted FIM motor 19-33
4API	Major Multiple Trauma, weighted FIM motor 19-91

## All Spinal Cord Dysfunction impairment codes

### Traumatic spinal cord dysfunction

- 4.211 Paraplegia, incomplete
- 4.212 Paraplegia, complete
- 4.2211 Quadriplegia, incomplete C1-4
- 4.2212 Quadriplegia, incomplete C5-8
- 4.2221 Quadriplegia, complete C1-4
- 4.2222 Quadriplegia, complete C5-8
- 4.23 Other traumatic spinal cord dysfunction

### Non traumatic spinal cord dysfunction

- 4.111 Paraplegia, incomplete
- 4.112 Paraplegia, complete
- 4.1211 Quadriplegia, incomplete C1-4
- 4.1212 Quadriplegia, incomplete C5-8
- 4.1221 Quadriplegia, complete C1-4
- 4.1222 Quadriplegia, complete C5-8
- 4.13 Other non-traumatic spinal cord dysfunction

### Major Multiple Trauma

- 14.1 Brain + spinal cord injury
- 14.3 Spinal cord + multi fracture/amputation

# Spinal Cord Dysfunction LOS and FIM Change Benchmarks in Australia & New Zealand by AN-SNAP V3, Calendar Year 2023



AN-SNAP class	Specialist Spinal Units				Non Specialist Spinal Units				All AROC Facilities			
	No.	Length of stay	FIM change	FIM gain	No.	Length of stay	FIM change	FIM gain	No.	Length of stay	FIM change	FIM gain
		Mean (95%CI)	Mean (95%CI)	per week		Mean (95%CI)	Mean (95%CI)	per week		Mean (95%CI)	Mean (95%CI)	per week
<b>Traumatic episodes</b>												
3-202	61	171.2 (146.3 - 196.1)	19.0 (13.5 - 24.4)	0.8	7	100.0 (47.9 - 152.1)	37.4 (19.3 - 55.5)	2.6	68	163.9 (140.3 - 187.4)	20.9 (15.5 - 26.3)	0.9
3-220	8	17.3 (4.1 - 30.4)	3.0 (1.7 - 4.3)	1.2	4	n.a	n.a	n.a	12	14.2 (5.3 - 23.0)	3.4 (2.1 - 4.8)	1.7
3-221	46	50.4 (36.8 - 64.0)	18.2 (15.1 - 21.4)	2.5	38	26.9 (14.4 - 39.4)	19.1 (16.0 - 22.3)	5.0	84	39.8 (30.1 - 49.4)	18.6 (16.4 - 20.8)	3.3
3-222	99	101.0 (88.1 - 113.9)	35.2 (31.1 - 39.4)	2.4	55	51.5 (39.9 - 63.1)	29.8 (24.3 - 35.3)	4.1	154	83.3 (73.4 - 93.3)	33.3 (30.0 - 36.6)	2.8
3-223	26	104.7 (82.0 - 127.3)	38.3 (30.0 - 46.5)	2.6	0	n.a	n.a	n.a	26	104.7 (82.0 - 127.3)	38.3 (30.0 - 46.5)	2.6
3-238	1	n.a	n.a	n.a	5	21.4 (12.5 - 30.3)	4.6 (1.6 - 7.6)	1.5	6	22.7 (14.9 - 30.4)	4.3 (1.8 - 6.9)	1.3
3-239	11	77.4 (55.2 - 99.6)	23.2 (14.3 - 32.0)	2.1	26	47.7 (31.6 - 63.8)	25.6 (22.6 - 28.6)	3.8	37	56.5 (42.9 - 70.1)	24.9 (21.6 - 28.2)	3.1
3-240	13	131.2 (91.4 - 170.9)	26.6 (13.8 - 39.4)	1.4	20	51.4 (31.1 - 71.6)	36.2 (26.6 - 45.7)	4.9	33	82.8 (58.9 - 106.7)	32.4 (24.6 - 40.2)	2.7
3-241	3	n.a	n.a	n.a	5	121.8 (82.1 - 161.5)	69.4 (58.0 - 80.8)	4.0	8	117.8 (92.5 - 143.0)	57.8 (44.0 - 71.5)	3.4
<b>Total episodes</b>	<b>268</b>				<b>160</b>				<b>428</b>			
<b>Non-Traumatic episodes</b>												
3-202	7	149.4 (75.6 - 223.3)	22.4 (7.1 - 37.7)	1.1	5	22.6 (12.4 - 32.8)	4.4 (0.7 - 8.1)	1.4	12	96.6 (41.9 - 151.3)	14.9 (4.9 - 24.9)	1.1
3-220	4	n.a	n.a	n.a	7	12.9 (4.6 - 21.1)	4.6 (1.8 - 7.4)	2.5	11	10.4 (4.9 - 15.8)	4.3 (2.2 - 6.4)	2.9
3-221	53	50.5 (42.0 - 59.0)	18.2 (15.2 - 21.1)	2.5	150	20.7 (18.0 - 23.4)	19.4 (17.9 - 20.9)	6.6	203	28.5 (25.0 - 32.0)	19.1 (17.7 - 20.5)	4.7
3-222	118	92.5 (81.3 - 103.6)	32.1 (28.8 - 35.4)	2.4	175	53.0 (47.0 - 59.0)	30.8 (27.9 - 33.8)	4.1	293	68.9 (62.7 - 75.1)	31.4 (29.2 - 33.6)	3.2
3-223	13	82.1 (60.7 - 103.5)	41.0 (27.3 - 54.7)	3.5	7	43.1 (22.5 - 63.8)	38.6 (25.0 - 52.1)	6.3	20	68.5 (51.2 - 85.7)	40.2 (30.4 - 49.9)	4.1
<b>Total episodes</b>	<b>195</b>				<b>344</b>				<b>539</b>			

NOTE 1: Where the number of episodes < 5 details are not given for reasons of privacy and accuracy.

NOTE 2: Analysis includes first admission, complete episodes only

## AN-SNAP V3 classes for Spinal Cord Dysfunction

Class	Description of AN-SNAP class
3-202	Brain, Neurological, Spinal & Major Multiple Trauma, FIM 13
3-220	Spinal Cord Dysfunction, FIM motor 81-91
3-221	Spinal Cord Dysfunction, FIM motor 47-80
3-222	Spinal Cord Dysfunction, FIM motor 14-46, age>=33
3-223	Spinal Cord Dysfunction, FIM motor 14-46, age<=32
3-238	Major Multiple Trauma, FIM total 101-126
3-239	Major Multiple Trauma, FIM total 74-100 or Burns
3-240	Major Multiple Trauma, FIM total 44-73
3-241	Major Multiple Trauma, FIM total 19-43

## All Spinal Cord Dysfunction impairment codes

### Traumatic spinal cord dysfunction

- 4.211 Paraplegia, incomplete
- 4.212 Paraplegia, complete
- 4.2211 Quadriplegia, incomplete C1-4
- 4.2212 Quadriplegia, incomplete C5-8
- 4.2221 Quadriplegia, complete C1-4
- 4.2222 Quadriplegia, complete C5-8
- 4.23 Other traumatic spinal cord dysfunction

### Major Multiple Trauma

- 14.1 Brain + spinal cord injury
- 14.3 Spinal cord + multi fracture/amputation

### Non traumatic spinal cord dysfunction

- 4.111 Paraplegia, incomplete
- 4.112 Paraplegia, complete
- 4.1211 Quadriplegia, incomplete C1-4
- 4.1212 Quadriplegia, incomplete C5-8
- 4.1221 Quadriplegia, complete C1-4
- 4.1222 Quadriplegia, complete C5-8
- 4.13 Other non-traumatic spinal cord dysfunction