

Brain Dysfunction LOS and FIM Change Benchmarks in Australia and New Zealand by AN-SNAP V4, Calendar Year 2018



AN-SNAP class	Specialist Brain Units				Non Specialist Brain Units				All AROC Facilities			
	Length of stay		FIM change	FIM gain	Length of stay		FIM change	FIM gain	Length of stay		FIM change	FIM gain
	No.	Mean (95%CI)	Mean (95%CI)	per week	No.	Mean (95%CI)	Mean (95%CI)	per week	No.	Mean (95%CI)	Mean (95%CI)	per week
Traumatic episodes												
4AZ1	47	100.1 (83.0 - 117.1)	65.9 (56.8 - 74.9)	4.6	18	42.2 (30.1 - 54.3)	33.8 (19.5 - 48.2)	5.6	65	84.0 (69.8 - 98.3)	57.0 (48.7 - 65.3)	4.7
4AZ2	66	123.8 (105.5 - 142.1)	70.9 (64.2 - 77.7)	4.0	7	138.0 (44.4 - 231.6)	48.3 (24.7 - 71.9)	2.4	73	125.2 (106.6 - 143.7)	68.7 (62.1 - 75.4)	3.8
4AB1	93	12.7 (11.2 - 14.1)	9.3 (7.8 - 10.7)	5.1	122	11.4 (10.3 - 12.5)	11.1 (9.6 - 12.5)	6.8	215	12.0 (11.1 - 12.8)	10.3 (9.2 - 11.3)	6.0
4AB2	158	25.4 (21.0 - 29.8)	18.0 (16.6 - 19.4)	5.0	52	20.9 (16.2 - 25.6)	15.9 (13.6 - 18.3)	5.3	210	24.3 (20.8 - 27.8)	17.5 (16.3 - 18.7)	5.0
4AB3	26	20.7 (15.3 - 26.1)	27.8 (24.6 - 31.0)	9.4	147	18.8 (16.5 - 21.1)	22.1 (20.5 - 23.7)	8.2	173	19.1 (16.9 - 21.2)	23.0 (21.5 - 24.4)	8.4
4AB4	72	30.5 (25.7 - 35.4)	33.9 (31.4 - 36.3)	7.8	121	22.8 (20.4 - 25.2)	25.0 (22.6 - 27.4)	7.7	193	25.7 (23.3 - 28.1)	28.3 (26.5 - 30.2)	7.7
4AB5	91	44.3 (38.1 - 50.4)	41.4 (38.4 - 44.3)	6.5	46	26.2 (21.0 - 31.3)	24.7 (20.1 - 29.3)	6.6	137	38.2 (33.5 - 42.8)	35.8 (32.9 - 38.6)	6.6
4AB6	17	51.2 (36.2 - 66.2)	61.7 (51.2 - 72.2)	8.4	45	26.9 (23.2 - 30.6)	32.3 (27.8 - 36.7)	8.4	62	33.6 (28.1 - 39.1)	40.3 (35.0 - 45.7)	8.4
4AB7	24	63.3 (47.6 - 78.9)	64.9 (55.4 - 74.5)	7.2	22	41.5 (31.7 - 51.4)	29.4 (20.0 - 38.7)	4.9	46	52.9 (43.0 - 62.7)	47.9 (39.5 - 56.3)	6.3
4AP1	201	35.7 (31.9 - 39.4)	39.5 (36.8 - 42.3)	7.8	148	33.0 (27.8 - 38.2)	32.9 (30.0 - 35.7)	7.0	349	34.5 (31.4 - 37.6)	36.7 (34.7 - 38.7)	7.4
Total episodes	795				728				1,523			
Non-Traumatic episodes												
4AZ1	23	91.0 (69.8 - 112.2)	44.0 (31.6 - 56.3)	3.4	75	42.1 (33.6 - 50.6)	33.2 (26.7 - 39.8)	5.5	98	53.6 (44.5 - 62.7)	35.7 (29.9 - 41.6)	4.7
4AZ2	13	120.9 (86.4 - 155.4)	44.0 (26.0 - 62.0)	2.5	6	89.3 (54.3 - 124.4)	22.7 (3.9 - 41.4)	1.8	19	110.9 (84.9 - 137.0)	37.3 (23.3 - 51.2)	2.4
4AB1	72	13.4 (11.2 - 15.5)	11.9 (10.4 - 13.5)	6.3	259	12.2 (11.2 - 13.2)	11.3 (10.5 - 12.2)	6.5	331	12.4 (11.5 - 13.3)	11.5 (10.7 - 12.2)	6.4
4AB2	64	28.5 (22.5 - 34.5)	14.0 (11.8 - 16.1)	3.4	113	18.0 (15.7 - 20.4)	12.2 (10.5 - 13.8)	4.7	177	21.8 (19.1 - 24.6)	12.8 (11.5 - 14.1)	4.1
4AB3	30	28.0 (20.5 - 35.5)	26.5 (22.4 - 30.5)	6.6	299	16.5 (15.4 - 17.6)	22.7 (21.4 - 24.1)	9.6	329	17.5 (16.3 - 18.8)	23.0 (21.8 - 24.3)	9.2
4AB4	36	26.9 (19.4 - 34.4)	27.9 (23.5 - 32.3)	7.3	203	23.0 (20.3 - 25.7)	22.8 (20.5 - 25.1)	6.9	239	23.6 (21.1 - 26.1)	23.6 (21.5 - 25.6)	7.0
4AB5	35	44.7 (35.6 - 53.8)	42.3 (38.0 - 46.7)	6.6	99	29.3 (24.8 - 33.8)	21.3 (18.0 - 24.7)	5.1	134	33.4 (29.1 - 37.6)	26.8 (23.7 - 29.9)	5.6
4AB6	20	54.7 (38.8 - 70.6)	45.9 (36.7 - 55.0)	5.9	108	32.0 (27.9 - 36.1)	29.2 (24.8 - 33.7)	6.4	128	35.6 (31.1 - 40.1)	31.8 (27.7 - 36.0)	6.3
4AB7	17	92.8 (59.6 - 126.1)	58.8 (49.2 - 68.4)	4.4	79	34.6 (29.9 - 39.3)	27.1 (21.0 - 33.2)	5.5	96	44.9 (36.7 - 53.2)	32.7 (26.9 - 38.5)	5.1
Total episodes	310				1,241				1,551			

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 Brain 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
4AB1	Brain dysfunction, weighted FIM motor 71-91, FIM cognition 26-35
4AB2	Brain dysfunction, weighted FIM motor 71-91, FIM cognition 5-25
4AB3	Brain dysfunction, weighted FIM motor 41-70, FIM cognition 26-35
4AB4	Brain dysfunction, weighted FIM motor 41-70, FIM cognition 17-25
4AB5	Brain dysfunction, weighted FIM motor 41-70, FIM cognition 5-16
4AB6	Brain dysfunction, weighted FIM motor 29-40
4AB7	Brain dysfunction, weighted FIM motor 19-28
4AP1	Major Multiple Trauma, weighted FIM motor 19-91

All Brain Dysfunction impairment codes

Non-traumatic brain dysfunction
2.11 Sub-arachnoid haemorrhage
2.12 Anoxic brain damage
2.13 Other non-traumatic brain dysfunction
Traumatic brain dysfunction
2.21 Open injury
2.22 Closed injury
Major Multiple Trauma
14.1 Brain + spinal cord injury
14.2 Brain + multiple fracture/amputation

Brain Dysfunction LOS and FIM Change Benchmarks in Australia and New Zealand by AN-SNAP V3, Calendar Year 2018



AN-SNAP class	Specialist Brain Units				Non Specialist Brain Units				All AROC Facilities			
	Length of stay		FIM change	FIM gain	Length of stay		FIM change	FIM gain	Length of stay		FIM change	FIM gain
	No.	Mean (95%CI)	Mean (95%CI)	per week	No.	Mean (95%CI)	Mean (95%CI)	per week	No.	Mean (95%CI)	Mean (95%CI)	per week
Traumatic episodes												
3-202	71	129.8 (112.1 - 147.5)	68.1 (60.8 - 75.4)	3.7	12	94.1 (34.1 - 154.1)	21.9 (5.6 - 38.2)	1.6	83	124.7 (107.2 - 142.1)	61.4 (53.9 - 69.0)	3.4
3-210	16	9.4 (7.0 - 11.8)	7.4 (3.3 - 11.5)	5.5	93	12.7 (11.1 - 14.3)	14.1 (12.3 - 16.0)	7.8	109	12.2 (10.8 - 13.6)	13.1 (11.4 - 14.9)	7.5
3-211	144	16.0 (14.3 - 17.6)	14.5 (12.9 - 16.1)	6.4	158	14.9 (13.5 - 16.3)	16.1 (14.6 - 17.6)	7.6	302	15.4 (14.3 - 16.5)	15.4 (14.3 - 16.5)	7.0
3-212	74	24.6 (20.9 - 28.2)	20.1 (17.4 - 22.7)	5.7	37	17.4 (14.2 - 20.7)	19.7 (16.0 - 23.4)	7.9	111	22.2 (19.4 - 24.9)	19.9 (17.8 - 22.1)	6.3
3-213	143	34.4 (29.0 - 39.8)	28.8 (26.9 - 30.8)	5.9	57	24.3 (19.5 - 29.1)	22.2 (19.6 - 24.8)	6.4	200	31.5 (27.4 - 35.7)	27.0 (25.3 - 28.6)	6.0
3-214	86	46.4 (40.0 - 52.9)	48.7 (44.8 - 52.5)	7.3	190	26.1 (23.8 - 28.4)	27.7 (25.5 - 29.8)	7.4	276	32.4 (29.6 - 35.2)	34.2 (32.0 - 36.4)	7.4
3-215	40	80.9 (64.5 - 97.3)	65.6 (56.7 - 74.4)	5.7	28	40.5 (30.7 - 50.3)	32.5 (23.3 - 41.6)	5.6	68	64.3 (52.8 - 75.7)	51.9 (44.4 - 59.4)	5.7
3-238	23	17.2 (13.0 - 21.3)	12.4 (10.3 - 14.6)	5.1	16	13.3 (8.9 - 17.8)	9.9 (7.0 - 12.9)	5.2	39	15.6 (12.5 - 18.7)	11.4 (9.6 - 13.2)	5.1
3-239	71	23.7 (20.3 - 27.0)	29.2 (27.1 - 31.3)	8.6	81	22.1 (18.9 - 25.3)	25.9 (23.7 - 28.1)	8.2	152	22.8 (20.5 - 25.1)	27.5 (25.9 - 29.0)	8.4
3-240	88	45.5 (39.5 - 51.5)	48.8 (45.8 - 51.8)	7.5	49	56.9 (45.0 - 68.8)	50.7 (47.2 - 54.3)	6.2	137	49.6 (43.8 - 55.4)	49.5 (47.2 - 51.8)	7.0
3-241	39	68.5 (56.4 - 80.5)	73.2 (67.8 - 78.5)	7.5	7	51.4 (24.2 - 78.6)	66.7 (51.9 - 81.5)	9.1	46	65.9 (54.9 - 76.8)	72.2 (67.2 - 77.2)	7.7
Total episodes	795				728				1,523			
Non-Traumatic episodes												
3-202	27	100.9 (79.4 - 122.3)	39.1 (27.5 - 50.8)	2.7	39	57.2 (41.7 - 72.7)	31.5 (22.9 - 40.1)	3.9	66	75.0 (61.4 - 88.7)	34.6 (27.6 - 41.6)	3.2
3-210	33	12.0 (9.9 - 14.2)	14.7 (12.3 - 17.1)	8.5	199	11.5 (10.5 - 12.4)	14.1 (13.0 - 15.2)	8.6	232	11.5 (10.7 - 12.4)	14.2 (13.2 - 15.2)	8.6
3-211	76	16.9 (13.9 - 19.8)	13.9 (11.8 - 16.1)	5.8	304	14.2 (13.3 - 15.2)	16.0 (15.0 - 17.1)	7.9	380	14.8 (13.8 - 15.7)	15.6 (14.7 - 16.5)	7.4
3-212	33	21.8 (17.5 - 26.1)	21.6 (17.5 - 25.6)	6.9	84	21.9 (18.0 - 25.7)	14.9 (11.9 - 17.9)	4.8	117	21.9 (18.9 - 24.9)	16.8 (14.3 - 19.3)	5.4
3-213	56	37.3 (30.1 - 44.4)	22.4 (18.8 - 26.0)	4.2	98	27.7 (22.5 - 32.9)	15.6 (12.8 - 18.3)	3.9	154	31.2 (26.9 - 35.5)	18.1 (15.8 - 20.3)	4.1
3-214	62	49.5 (40.9 - 58.2)	42.4 (37.8 - 47.1)	6.0	420	25.6 (23.8 - 27.3)	26.6 (24.7 - 28.5)	7.3	482	28.7 (26.7 - 30.6)	28.6 (26.8 - 30.5)	7.0
3-215	23	96.6 (68.6 - 124.5)	58.0 (48.4 - 67.6)	4.2	97	35.5 (31.0 - 40.1)	29.9 (24.3 - 35.5)	5.9	120	47.2 (39.6 - 54.9)	35.3 (30.0 - 40.5)	5.2
Total episodes	310				1,241				1,551			

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 Brain Dysfunction

Class	Description of AN-SNAP class
3-202	Brain, Neurological, Spinal & Major Multiple Trauma, FIM 13
3-210	Brain Dysfunction, FIM motor 56-91, FIM cognition 32-35
3-211	Brain Dysfunction, FIM motor 56-91, FIM cognition 24-31
3-212	Brain Dysfunction, FIM motor 56-91, FIM cognition 20-23
3-213	Brain Dysfunction, FIM motor 56-91, FIM cognition 5-19
3-214	Brain Dysfunction, FIM motor 24-55
3-215	Brain Dysfunction, FIM motor 14-23
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 Brain Dysfunction impairment codes

Non-traumatic brain dysfunction
2.11 Sub-arachnoid haemorrhage
2.12 Anoxic brain damage
2.13 Other non-traumatic brain dysfunction
Traumatic brain dysfunction
2.21 Open injury
2.22 Closed injury
Major Multiple Trauma
14.1 Brain + spinal cord injury
14.2 Brain + multiple fracture/amputation