

Brain Dysfunction LOS and FIM Change Benchmarks in Australia and New Zealand by AN-SNAP V4, Financial Year 2019



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	34	101.8 (79.4 - 124.2)	71.2 (60.7 - 81.7)	4.9	16	61.1 (31.5 - 90.7)	39.6 (23.7 - 55.4)	4.5	50	88.8 (70.4 - 107.1)	61.1 (51.6 - 70.6)	4.8
4AZ2	78	117.7 (99.7 - 135.6)	71.7 (66.1 - 77.3)	4.3	3	n.a n.a	n.a n.a	n.a	81	123.2 (104.7 - 141.8)	70.0 (64.2 - 75.9)	4.0
4AB1	81	13.2 (11.8 - 14.7)	10.2 (8.7 - 11.7)	5.4	104	11.8 (10.5 - 13.1)	10.9 (9.3 - 12.5)	6.5	185	12.4 (11.4 - 13.4)	10.6 (9.5 - 11.7)	6.0
4AB2	153	27.1 (22.2 - 31.9)	17.6 (16.1 - 19.1)	4.6	52	22.9 (17.4 - 28.4)	14.4 (12.0 - 16.8)	4.4	205	26.0 (22.1 - 29.9)	16.8 (15.5 - 18.1)	4.5
4AB3	25	19.9 (15.0 - 24.8)	26.6 (23.1 - 30.0)	9.4	159	18.2 (16.5 - 19.8)	21.6 (20.1 - 23.0)	8.3	184	18.4 (16.8 - 20.0)	22.2 (20.9 - 23.6)	8.5
4AB4	69	31.2 (24.7 - 37.7)	33.7 (31.1 - 36.3)	7.6	128	20.7 (18.5 - 22.9)	25.0 (22.7 - 27.3)	8.4	197	24.4 (21.6 - 27.2)	28.0 (26.2 - 29.9)	8.0
4AB5	84	47.4 (39.6 - 55.3)	40.3 (37.1 - 43.6)	6.0	46	25.0 (19.5 - 30.4)	22.2 (17.9 - 26.4)	6.2	130	39.5 (33.7 - 45.2)	33.9 (30.9 - 36.9)	6.0
4AB6	32	48.0 (37.6 - 58.3)	58.1 (51.0 - 65.2)	8.5	52	30.7 (25.6 - 35.8)	31.5 (26.2 - 36.8)	7.2	84	37.3 (31.9 - 42.6)	41.6 (36.6 - 46.7)	7.8
4AB7	23	70.0 (52.6 - 87.5)	68.0 (61.6 - 74.3)	6.8	35	37.9 (29.9 - 45.9)	30.1 (23.1 - 37.1)	5.6	58	50.6 (41.3 - 59.9)	45.1 (38.3 - 52.0)	6.2
4AP1	203	34.5 (31.0 - 38.0)	37.4 (34.7 - 40.1)	7.6	155	38.0 (33.0 - 43.1)	34.7 (31.8 - 37.7)	6.4	358	36.0 (33.1 - 39.0)	36.2 (34.2 - 38.2)	7.0
Total episodes	782				750				1,532			
Non-Traumatic episodes												
4AZ1	18	91.1 (68.6 - 113.5)	43.2 (26.5 - 59.9)	3.3	65	40.7 (33.4 - 48.0)	35.2 (27.7 - 42.6)	6.0	83	51.6 (43.0 - 60.3)	36.9 (30.0 - 43.8)	5.0
4AZ2	16	121.9 (85.4 - 158.4)	41.8 (27.7 - 55.9)	2.4	7	111.3 (54.7 - 167.9)	14.4 (3.0 - 25.9)	0.9	23	118.7 (88.8 - 148.6)	33.5 (22.0 - 45.0)	2.0
4AB1	60	13.7 (11.7 - 15.8)	12.5 (10.9 - 14.1)	6.4	238	12.1 (10.9 - 13.4)	10.9 (9.9 - 11.8)	6.3	298	12.4 (11.4 - 13.5)	11.2 (10.4 - 12.0)	6.3
4AB2	62	26.9 (20.9 - 32.8)	15.8 (13.8 - 17.9)	4.1	128	17.8 (15.1 - 20.6)	11.8 (9.7 - 13.9)	4.6	190	20.8 (18.1 - 23.5)	13.1 (11.5 - 14.7)	4.4
4AB3	34	22.8 (17.3 - 28.3)	23.4 (19.3 - 27.5)	7.2	267	16.3 (15.1 - 17.5)	23.3 (22.0 - 24.6)	10.0	301	17.0 (15.8 - 18.3)	23.3 (22.1 - 24.5)	9.6
4AB4	24	33.5 (18.3 - 48.7)	30.6 (25.4 - 35.8)	6.4	228	21.5 (19.3 - 23.6)	24.8 (23.0 - 26.6)	8.1	252	22.6 (20.2 - 25.1)	25.3 (23.7 - 27.0)	7.8
4AB5	35	37.8 (31.3 - 44.3)	46.7 (43.4 - 50.1)	8.7	115	30.3 (25.9 - 34.6)	24.0 (20.6 - 27.4)	5.5	150	32.0 (28.3 - 35.7)	29.3 (26.1 - 32.4)	6.4
4AB6	17	51.6 (32.9 - 70.4)	50.6 (41.0 - 60.2)	6.9	102	29.8 (25.7 - 33.8)	30.5 (26.2 - 34.7)	7.2	119	32.9 (28.4 - 37.5)	33.3 (29.2 - 37.5)	7.1
4AB7	25	91.6 (61.5 - 121.7)	64.1 (56.3 - 71.8)	4.9	81	36.7 (32.2 - 41.2)	34.1 (28.1 - 40.2)	6.5	106	49.7 (40.7 - 58.6)	41.2 (35.7 - 46.7)	5.8
Total episodes	291				1,231				1,522			

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, Financial Year 2019



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	69	129.4 (109.8 - 148.9)	71.4 (64.4 - 78.4)	3.9	9	128.4 (49.0 - 207.9)	27.1 (7.1 - 47.1)	1.5	78	129.3 (109.8 - 148.7)	66.3 (59.0 - 73.5)	3.6
3-210	17	9.8 (7.8 - 11.8)	10.2 (5.9 - 14.5)	7.3	82	13.5 (11.9 - 15.0)	15.0 (13.2 - 16.7)	7.8	99	12.8 (11.4 - 14.2)	14.2 (12.5 - 15.8)	7.7
3-211	128	16.5 (14.6 - 18.3)	15.3 (13.5 - 17.0)	6.5	159	15.4 (13.8 - 17.0)	15.0 (13.5 - 16.5)	6.8	287	15.9 (14.7 - 17.1)	15.1 (14.0 - 16.2)	6.7
3-212	75	22.2 (19.2 - 25.2)	19.7 (16.9 - 22.5)	6.2	43	19.3 (15.7 - 22.8)	20.2 (16.7 - 23.6)	7.3	118	21.2 (18.9 - 23.5)	19.9 (17.7 - 22.0)	6.6
3-213	129	36.6 (30.4 - 42.8)	28.0 (26.1 - 30.0)	5.4	58	23.9 (18.8 - 28.9)	19.3 (16.3 - 22.4)	5.7	187	32.6 (28.0 - 37.3)	25.3 (23.6 - 27.1)	5.4
3-214	105	51.3 (44.0 - 58.5)	49.6 (45.8 - 53.3)	6.8	209	25.3 (23.0 - 27.7)	28.1 (26.0 - 30.2)	7.8	314	34.0 (30.8 - 37.2)	35.3 (33.1 - 37.5)	7.3
3-215	27	89.1 (63.7 - 114.5)	69.4 (59.9 - 78.8)	5.4	32	41.2 (30.9 - 51.4)	32.0 (23.5 - 40.5)	5.4	59	63.1 (49.0 - 77.3)	49.1 (41.2 - 57.0)	5.4
3-238	23	19.9 (14.8 - 25.0)	11.8 (9.1 - 14.5)	4.1	15	13.7 (10.2 - 17.1)	9.6 (6.7 - 12.5)	4.9	38	17.4 (14.0 - 20.9)	10.9 (8.9 - 12.9)	4.4
3-239	91	26.4 (23.3 - 29.5)	28.1 (26.1 - 30.0)	7.4	77	29.6 (24.2 - 35.0)	26.1 (23.8 - 28.4)	6.2	168	27.9 (24.9 - 30.9)	27.2 (25.7 - 28.7)	6.8
3-240	76	42.4 (36.8 - 48.1)	50.1 (47.1 - 53.2)	8.3	58	53.8 (44.3 - 63.2)	49.6 (46.4 - 52.8)	6.5	134	47.3 (42.1 - 52.6)	49.9 (47.7 - 52.1)	7.4
3-241	42	75.8 (63.1 - 88.5)	73.1 (68.4 - 77.9)	6.8	8	70.6 (27.6 - 113.7)	68.8 (55.5 - 82.0)	6.8	50	75.0 (62.5 - 87.4)	72.4 (67.9 - 76.9)	6.8
Total episodes	782				750				1,532			
Non-Traumatic episodes												
3-202	23	114.0 (86.4 - 141.7)	34.9 (22.9 - 46.9)	2.1	31	53.3 (38.4 - 68.3)	31.4 (20.7 - 42.1)	4.1	54	79.2 (62.5 - 95.9)	32.9 (24.9 - 40.9)	2.9
3-210	41	13.7 (11.8 - 15.6)	14.0 (12.2 - 15.9)	7.2	167	12.0 (10.9 - 13.1)	14.6 (13.3 - 16.0)	8.6	208	12.3 (11.4 - 13.3)	14.5 (13.4 - 15.7)	8.3
3-211	60	18.2 (15.2 - 21.2)	14.8 (12.4 - 17.1)	5.7	305	14.0 (12.9 - 15.1)	16.0 (14.9 - 17.1)	8.0	365	14.7 (13.6 - 15.7)	15.8 (14.8 - 16.8)	7.6
3-212	28	20.3 (15.6 - 24.9)	21.1 (17.0 - 25.3)	7.3	95	21.4 (17.4 - 25.5)	16.9 (14.7 - 19.1)	5.5	123	21.2 (17.9 - 24.5)	17.9 (15.9 - 19.9)	5.9
3-213	46	34.9 (27.2 - 42.6)	25.0 (21.3 - 28.8)	5.0	117	25.6 (21.3 - 29.9)	16.5 (13.6 - 19.5)	4.5	163	28.2 (24.4 - 32.0)	18.9 (16.5 - 21.4)	4.7
3-214	65	46.0 (37.3 - 54.6)	47.6 (43.2 - 52.1)	7.3	415	24.8 (23.1 - 26.5)	28.4 (26.6 - 30.2)	8.0	480	27.7 (25.7 - 29.7)	31.0 (29.3 - 32.8)	7.8
3-215	28	96.9 (69.0 - 124.7)	60.6 (50.8 - 70.5)	4.4	101	40.5 (34.7 - 46.4)	33.2 (27.6 - 38.8)	5.7	129	52.8 (44.3 - 61.2)	39.2 (34.0 - 44.4)	5.2
Total episodes	291				1,231				1,522			

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

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2.11 Sub-arachnoid haemorrhage
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Traumatic brain dysfunction
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2.22 Closed injury
Major Multiple Trauma
14.1 Brain + spinal cord injury
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