

Brain Dysfunction LOS and FIM Change Benchmarks in Australia and New Zealand by AN-SNAP V4, Financial Year 2021



AN-SNAP class	Specialist Brain Units				Non Specialist Brain Units				All AROC Facilities			
	Length of stay		FIM change	FIM gain per week	Length of stay		FIM change	FIM gain per week	Length of stay		FIM change	FIM gain per week
	No.	Mean (95%CI)	Mean (95%CI)		No.	Mean (95%CI)	Mean (95%CI)		No.	Mean (95%CI)	Mean (95%CI)	
Traumatic episodes												
4AZ1	29	124.4 (94.0 - 154.9)	52.7 (41.0 - 64.4)	3.0	22	58.2 (40.0 - 76.4)	37.2 (24.2 - 50.2)	4.5	51	95.9 (74.7 - 117.0)	46.0 (37.1 - 55.0)	3.4
4AZ2	43	121.2 (92.2 - 150.1)	62.7 (52.4 - 72.9)	3.6	1	n.a n.a	n.a n.a	n.a	44	120.5 (91.8 - 149.1)	61.2 (50.7 - 71.7)	3.6
4AB1	70	16.8 (14.2 - 19.5)	8.1 (6.6 - 9.7)	3.4	78	11.8 (10.3 - 13.4)	11.7 (10.2 - 13.1)	6.9	148	14.2 (12.7 - 15.7)	10.0 (8.9 - 11.1)	4.9
4AB2	130	26.3 (22.8 - 29.8)	17.9 (16.4 - 19.4)	4.8	40	24.9 (15.6 - 34.1)	12.7 (9.9 - 15.5)	3.6	170	25.9 (22.5 - 29.4)	16.7 (15.3 - 18.0)	4.5
4AB3	20	24.9 (16.0 - 33.7)	27.8 (23.1 - 32.5)	7.8	156	17.7 (16.2 - 19.2)	22.3 (20.8 - 23.8)	8.8	176	18.5 (16.8 - 20.2)	22.9 (21.5 - 24.4)	8.7
4AB4	79	33.1 (27.5 - 38.7)	33.1 (30.3 - 35.8)	7.0	133	21.6 (19.4 - 23.7)	25.7 (23.5 - 27.9)	8.3	212	25.9 (23.3 - 28.4)	28.4 (26.7 - 30.2)	7.7
4AB5	81	46.8 (39.9 - 53.8)	41.1 (38.2 - 44.1)	6.1	57	28.2 (23.7 - 32.6)	29.9 (25.8 - 33.9)	7.4	138	39.1 (34.4 - 43.8)	36.5 (33.9 - 39.0)	6.5
4AB6	33	55.3 (41.7 - 68.8)	57.3 (50.8 - 63.7)	7.3	54	32.1 (25.9 - 38.3)	32.4 (27.2 - 37.5)	7.1	87	40.9 (34.1 - 47.6)	41.8 (37.0 - 46.6)	7.2
4AB7	24	64.5 (52.9 - 76.2)	66.3 (56.5 - 76.2)	7.2	27	48.9 (33.7 - 64.0)	28.5 (20.4 - 36.5)	4.1	51	56.3 (46.3 - 66.2)	46.3 (38.1 - 54.5)	5.8
4AP1	163	36.2 (32.0 - 40.5)	35.5 (32.3 - 38.7)	6.9	101	29.7 (25.5 - 33.9)	32.3 (29.2 - 35.5)	7.6	264	33.8 (30.6 - 36.9)	34.3 (32.0 - 36.6)	7.1
Total episodes	672				669				1,341			
Non-Traumatic episodes												
4AZ1	20	129.2 (89.9 - 168.4)	49.9 (36.9 - 62.8)	2.7	52	47.8 (40.6 - 54.9)	35.5 (27.6 - 43.4)	5.2	72	70.4 (55.8 - 85.0)	39.5 (32.7 - 46.3)	3.9
4AZ2	8	100.5 (58.7 - 142.3)	47.9 (26.9 - 68.8)	3.3	9	130.1 (69.3 - 190.9)	51.4 (28.8 - 74.0)	2.8	17	116.2 (78.7 - 153.6)	49.8 (34.7 - 64.8)	3.0
4AB1	40	12.1 (8.7 - 15.4)	10.0 (7.9 - 12.1)	5.8	203	13.3 (11.2 - 15.3)	10.9 (9.8 - 12.0)	5.8	243	13.1 (11.3 - 14.9)	10.8 (9.8 - 11.7)	5.8
4AB2	60	30.4 (24.4 - 36.4)	16.0 (14.1 - 17.9)	3.7	101	21.0 (14.8 - 27.1)	13.9 (12.1 - 15.7)	4.6	161	24.5 (20.0 - 29.0)	14.7 (13.4 - 16.0)	4.2
4AB3	33	18.1 (15.0 - 21.1)	23.3 (19.8 - 26.8)	9.0	296	16.4 (15.3 - 17.5)	23.4 (22.1 - 24.6)	10.0	329	16.6 (15.6 - 17.6)	23.4 (22.2 - 24.5)	9.9
4AB4	36	30.8 (23.3 - 38.3)	30.4 (26.4 - 34.5)	6.9	227	21.7 (19.8 - 23.6)	23.6 (21.8 - 25.5)	7.6	263	22.9 (20.9 - 25.0)	24.6 (22.9 - 26.3)	7.5
4AB5	34	43.2 (33.5 - 53.0)	36.8 (31.6 - 42.0)	6.0	96	26.3 (21.4 - 31.1)	28.7 (25.0 - 32.3)	7.6	130	30.7 (26.2 - 35.2)	30.8 (27.7 - 33.9)	7.0
4AB6	18	50.3 (35.2 - 65.5)	41.2 (30.7 - 51.8)	5.7	140	32.2 (28.7 - 35.7)	29.4 (25.4 - 33.4)	6.4	158	34.3 (30.7 - 37.9)	30.7 (27.0 - 34.5)	6.3
4AB7	16	94.1 (71.6 - 116.7)	66.9 (61.0 - 72.7)	5.0	88	41.7 (36.0 - 47.4)	37.2 (31.8 - 42.7)	6.3	104	49.8 (42.8 - 56.7)	41.8 (36.7 - 46.9)	5.9
Total episodes	265				1,212				1,477			

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 2021



AN-SNAP class	Specialist Brain Units				Non Specialist Brain Units				All AROC Facilities			
	Length of stay		FIM change	FIM gain per week	Length of stay		FIM change	FIM gain per week	Length of stay		FIM change	FIM gain per week
	No.	Mean (95%CI)	Mean (95%CI)		No.	Mean (95%CI)	Mean (95%CI)		No.	Mean (95%CI)	Mean (95%CI)	
Traumatic episodes												
3-202	46	140.5 (110.7 - 170.3)	58.2 (47.9 - 68.4)	2.9	12	64.0 (38.9 - 89.1)	41.5 (22.1 - 60.9)	4.5	58	124.7 (99.2 - 150.2)	54.7 (45.5 - 63.9)	3.1
3-210	14	11.0 (8.4 - 13.6)	8.4 (4.2 - 12.7)	5.4	53	12.9 (11.0 - 14.7)	13.7 (11.8 - 15.7)	7.5	67	12.5 (10.9 - 14.1)	12.6 (10.8 - 14.4)	7.1
3-211	110	20.0 (17.3 - 22.7)	14.5 (12.5 - 16.6)	5.1	154	15.6 (14.1 - 17.2)	16.7 (15.3 - 18.1)	7.5	264	17.5 (16.0 - 18.9)	15.8 (14.6 - 17.0)	6.3
3-212	58	28.7 (23.2 - 34.2)	20.5 (18.0 - 23.0)	5.0	39	23.9 (14.7 - 33.2)	18.7 (14.7 - 22.6)	5.5	97	26.8 (21.8 - 31.8)	19.8 (17.6 - 21.9)	5.2
3-213	130	34.4 (29.2 - 39.5)	25.9 (23.9 - 27.9)	5.3	35	25.9 (21.6 - 30.2)	21.9 (17.5 - 26.3)	5.9	165	32.6 (28.4 - 36.7)	25.1 (23.2 - 26.9)	5.4
3-214	109	49.5 (43.5 - 55.6)	50.2 (47.2 - 53.2)	7.1	244	25.7 (23.4 - 28.0)	29.9 (28.1 - 31.8)	8.1	353	33.1 (30.4 - 35.7)	36.2 (34.3 - 38.0)	7.7
3-215	30	84.0 (66.0 - 101.9)	62.3 (51.2 - 73.3)	5.2	29	49.9 (34.9 - 65.0)	22.2 (14.1 - 30.3)	3.1	59	67.2 (54.8 - 79.7)	42.6 (34.0 - 51.1)	4.4
3-238	29	20.4 (15.8 - 25.0)	10.9 (8.8 - 13.0)	3.7	16	18.0 (14.3 - 21.7)	10.6 (8.7 - 12.4)	4.1	45	19.5 (16.3 - 22.8)	10.8 (9.3 - 12.3)	3.9
3-239	74	28.3 (25.3 - 31.2)	28.1 (26.0 - 30.2)	7.0	43	24.4 (19.5 - 29.4)	27.9 (25.6 - 30.3)	8.0	117	26.9 (24.2 - 29.5)	28.0 (26.5 - 29.6)	7.3
3-240	47	47.2 (39.2 - 55.2)	53.2 (49.3 - 57.2)	7.9	40	38.8 (31.0 - 46.6)	44.5 (40.6 - 48.4)	8.0	87	43.4 (37.7 - 49.0)	49.2 (46.3 - 52.1)	7.9
3-241	25	73.1 (55.2 - 91.0)	68.4 (60.6 - 76.2)	6.6	4	n.a n.a	n.a n.a	n.a	29	72.2 (56.7 - 87.7)	67.0 (59.7 - 74.2)	6.5
Total episodes	672				669				1,341			
Non-Traumatic episodes												
3-202	17	120.1 (77.1 - 163.0)	46.3 (30.6 - 62.0)	2.7	33	65.6 (45.8 - 85.4)	39.1 (27.6 - 50.6)	4.2	50	84.1 (63.7 - 104.6)	41.5 (32.4 - 50.7)	3.5
3-210	29	12.1 (9.4 - 14.7)	14.7 (12.3 - 17.2)	8.5	152	13.0 (10.9 - 15.1)	14.5 (13.2 - 15.8)	7.8	181	12.8 (11.0 - 14.6)	14.5 (13.3 - 15.7)	7.9
3-211	44	15.9 (12.6 - 19.2)	14.0 (11.3 - 16.7)	6.2	283	14.5 (13.1 - 16.0)	16.2 (15.1 - 17.4)	7.8	327	14.7 (13.4 - 16.1)	15.9 (14.9 - 17.0)	7.6
3-212	19	22.3 (15.7 - 28.8)	14.9 (10.9 - 18.9)	4.7	82	21.3 (14.4 - 28.3)	18.8 (16.3 - 21.3)	6.2	101	21.5 (15.7 - 27.3)	18.1 (15.9 - 20.3)	5.9
3-213	62	38.7 (30.9 - 46.5)	23.5 (20.6 - 26.5)	4.3	99	22.9 (19.8 - 26.0)	20.2 (17.2 - 23.1)	6.2	161	29.0 (25.3 - 32.8)	21.5 (19.3 - 23.6)	5.2
3-214	70	38.7 (33.1 - 44.4)	37.9 (33.5 - 42.4)	6.9	468	26.5 (24.6 - 28.3)	28.1 (26.4 - 29.8)	7.4	538	28.1 (26.3 - 29.9)	29.4 (27.8 - 31.0)	7.3
3-215	24	110.8 (86.6 - 135.0)	60.0 (52.7 - 67.3)	3.8	95	45.2 (38.8 - 51.5)	37.6 (32.1 - 43.0)	5.8	119	58.4 (50.0 - 66.8)	42.1 (37.2 - 46.9)	5.0
Total episodes	265				1,212				1,477			

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

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Major Multiple Trauma
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