

Brain Dysfunction LOS and FIM Change Benchmarks in Australia and New Zealand by AN-SNAP V4, Calendar Year 2020



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	35	116.9 (88.2 - 145.6)	64.8 (54.4 - 75.2)	3.9	23	51.3 (38.1 - 64.5)	42.9 (30.4 - 55.4)	5.8	58	90.9 (71.0 - 110.7)	56.1 (47.7 - 64.5)	4.3
4AZ2	44	103.1 (79.2 - 126.9)	66.2 (57.4 - 74.9)	4.5	4	n.a n.a	n.a n.a	n.a	48	102.2 (80.3 - 124.1)	62.4 (53.3 - 71.5)	4.3
4AB1	64	16.3 (12.7 - 20.0)	6.9 (5.5 - 8.4)	3.0	84	9.9 (8.9 - 10.9)	10.5 (9.0 - 11.9)	7.4	148	12.7 (10.9 - 14.4)	8.9 (7.9 - 10.0)	4.9
4AB2	114	30.1 (22.5 - 37.7)	18.7 (17.3 - 20.1)	4.4	39	18.8 (14.6 - 23.0)	14.0 (11.1 - 16.9)	5.2	153	27.2 (21.4 - 33.0)	17.5 (16.2 - 18.8)	4.5
4AB3	26	24.9 (17.0 - 32.7)	28.6 (24.7 - 32.5)	8.0	153	16.8 (15.4 - 18.2)	22.5 (21.0 - 24.0)	9.4	179	18.0 (16.3 - 19.7)	23.4 (22.0 - 24.9)	9.1
4AB4	69	31.4 (25.2 - 37.7)	33.5 (30.2 - 36.9)	7.5	126	20.0 (18.2 - 21.7)	24.1 (21.8 - 26.3)	8.4	195	24.0 (21.4 - 26.6)	27.4 (25.4 - 29.4)	8.0
4AB5	67	45.8 (38.3 - 53.3)	41.5 (38.4 - 44.7)	6.3	50	27.8 (22.5 - 33.1)	31.5 (26.9 - 36.1)	7.9	117	38.1 (33.0 - 43.2)	37.2 (34.4 - 40.1)	6.8
4AB6	29	48.7 (39.1 - 58.3)	57.0 (50.1 - 63.8)	8.2	51	34.8 (28.5 - 41.2)	31.9 (26.2 - 37.7)	6.4	80	39.9 (34.4 - 45.4)	41.0 (35.9 - 46.1)	7.2
4AB7	24	77.1 (53.6 - 100.6)	62.6 (53.3 - 72.0)	5.7	38	38.5 (29.7 - 47.2)	35.0 (28.0 - 42.0)	6.4	62	53.4 (42.0 - 64.9)	45.7 (39.2 - 52.2)	6.0
4AP1	151	40.9 (35.4 - 46.4)	37.9 (34.5 - 41.3)	6.5	118	32.4 (27.5 - 37.3)	34.8 (31.6 - 37.9)	7.5	269	37.2 (33.4 - 40.9)	36.5 (34.1 - 38.9)	6.9
Total episodes	623				686				1,309			
Non-Traumatic episodes												
4AZ1	14	135.9 (90.1 - 181.8)	60.6 (48.0 - 73.2)	3.1	68	49.1 (42.8 - 55.3)	37.8 (30.7 - 44.9)	5.4	82	63.9 (52.4 - 75.4)	41.7 (35.3 - 48.1)	4.6
4AZ2	11	186.0 (56.3 - 315.7)	40.0 (18.1 - 61.9)	1.5	7	127.0 (23.5 - 230.5)	52.1 (26.7 - 77.6)	2.9	18	163.1 (75.0 - 251.1)	44.7 (28.2 - 61.2)	1.9
4AB1	43	12.5 (9.4 - 15.6)	10.6 (8.7 - 12.5)	5.9	203	12.4 (11.1 - 13.8)	11.8 (10.8 - 12.7)	6.6	246	12.4 (11.2 - 13.7)	11.6 (10.7 - 12.4)	6.5
4AB2	60	32.4 (25.1 - 39.6)	16.3 (14.4 - 18.3)	3.5	98	17.6 (15.3 - 19.9)	14.1 (12.4 - 15.9)	5.6	158	23.2 (19.9 - 26.4)	15.0 (13.7 - 16.3)	4.5
4AB3	36	19.9 (16.1 - 23.6)	23.3 (20.4 - 26.3)	8.2	284	16.7 (15.5 - 17.9)	22.9 (21.6 - 24.2)	9.6	320	17.1 (15.9 - 18.2)	23.0 (21.8 - 24.1)	9.4
4AB4	39	28.7 (23.2 - 34.3)	28.7 (25.3 - 32.2)	7.0	252	21.6 (19.3 - 23.9)	24.2 (22.5 - 25.9)	7.8	291	22.6 (20.4 - 24.7)	24.8 (23.2 - 26.4)	7.7
4AB5	39	46.3 (31.9 - 60.7)	34.3 (29.0 - 39.6)	5.2	104	27.3 (23.8 - 30.9)	27.3 (23.9 - 30.6)	7.0	143	32.5 (27.7 - 37.3)	29.2 (26.3 - 32.1)	6.3
4AB6	11	37.5 (24.1 - 51.0)	41.4 (27.6 - 55.1)	7.7	127	32.6 (28.5 - 36.6)	29.1 (25.2 - 33.0)	6.3	138	33.0 (29.1 - 36.8)	30.1 (26.3 - 33.9)	6.4
4AB7	18	90.6 (70.5 - 110.6)	58.8 (49.9 - 67.8)	4.5	82	42.3 (35.1 - 49.5)	39.8 (34.4 - 45.2)	6.6	100	51.0 (43.2 - 58.8)	43.2 (38.3 - 48.1)	5.9
Total episodes	271				1,225				1,496			

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 2020



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	52	122.8 (97.6 - 147.9)	68.2 (60.1 - 76.3)	3.9	15	58.9 (45.5 - 72.4)	45.6 (27.1 - 64.1)	5.4	67	108.5 (87.8 - 129.1)	63.1 (55.3 - 71.0)	4.1
3-210	14	9.6 (7.2 - 12.1)	7.7 (3.8 - 11.6)	5.6	75	11.6 (10.3 - 12.9)	13.4 (11.6 - 15.2)	8.1	89	11.3 (10.1 - 12.4)	12.5 (10.8 - 14.2)	7.8
3-211	94	20.7 (17.1 - 24.4)	13.9 (11.8 - 16.1)	4.7	143	14.7 (13.3 - 16.2)	17.5 (16.1 - 18.9)	8.3	237	17.1 (15.4 - 18.8)	16.1 (14.8 - 17.3)	6.6
3-212	45	21.0 (17.4 - 24.7)	20.4 (17.4 - 23.5)	6.8	28	17.7 (14.4 - 21.0)	15.4 (11.0 - 19.8)	6.1	73	19.8 (17.1 - 22.4)	18.5 (15.9 - 21.1)	6.6
3-213	127	38.0 (30.2 - 45.9)	27.1 (25.1 - 29.2)	5.0	45	23.6 (19.1 - 28.0)	22.7 (19.1 - 26.3)	6.7	172	34.3 (28.3 - 40.2)	26.0 (24.2 - 27.8)	5.3
3-214	95	45.4 (40.1 - 50.7)	48.5 (44.9 - 52.1)	7.5	224	25.7 (23.3 - 28.1)	29.5 (27.4 - 31.7)	8.0	319	31.6 (29.1 - 34.1)	35.2 (33.1 - 37.3)	7.8
3-215	32	85.0 (62.9 - 107.0)	58.0 (48.4 - 67.6)	4.8	36	42.0 (31.2 - 52.8)	32.4 (24.7 - 40.0)	5.4	68	62.2 (49.3 - 75.2)	44.4 (37.6 - 51.2)	5.0
3-238	27	18.6 (14.0 - 23.2)	10.6 (7.9 - 13.2)	4.0	11	23.0 (13.2 - 32.8)	10.0 (6.7 - 13.3)	3.0	38	19.9 (15.6 - 24.2)	10.4 (8.3 - 12.5)	3.7
3-239	57	29.4 (25.9 - 32.8)	30.8 (28.4 - 33.1)	7.3	52	20.2 (16.4 - 24.0)	26.5 (23.9 - 29.0)	9.2	109	25.0 (22.3 - 27.7)	28.7 (26.9 - 30.5)	8.0
3-240	49	52.4 (42.9 - 61.9)	50.1 (46.0 - 54.1)	6.7	54	46.7 (37.9 - 55.6)	46.6 (42.9 - 50.3)	7.0	103	49.4 (43.0 - 55.9)	48.2 (45.5 - 51.0)	6.8
3-241	31	77.5 (61.1 - 93.8)	70.4 (62.8 - 77.9)	6.4	3	n.a n.a	n.a n.a	n.a	34	74.8 (59.3 - 90.2)	69.6 (62.2 - 77.0)	6.5
Total episodes	623				686				1,309			
Non-Traumatic episodes												
3-202	12	206.9 (92.0 - 321.8)	43.7 (23.5 - 63.8)	1.5	37	65.9 (44.5 - 87.3)	40.2 (30.0 - 50.5)	4.3	49	100.4 (64.2 - 136.6)	41.1 (31.9 - 50.2)	2.9
3-210	28	12.4 (9.8 - 15.1)	13.6 (11.3 - 15.9)	7.7	153	12.4 (10.9 - 13.8)	13.7 (12.5 - 14.9)	7.8	181	12.4 (11.0 - 13.7)	13.7 (12.6 - 14.8)	7.8
3-211	53	17.1 (13.4 - 20.8)	15.4 (12.9 - 18.0)	6.3	272	14.5 (13.3 - 15.6)	17.2 (16.1 - 18.3)	8.3	325	14.9 (13.8 - 16.0)	16.9 (15.9 - 17.9)	7.9
3-212	25	26.0 (18.0 - 34.0)	17.2 (13.3 - 21.2)	4.6	76	17.5 (14.6 - 20.5)	16.8 (14.5 - 19.2)	6.7	101	19.6 (16.6 - 22.7)	16.9 (14.9 - 19.0)	6.0
3-213	64	39.8 (32.0 - 47.6)	25.2 (22.3 - 28.2)	4.4	107	25.5 (20.6 - 30.4)	19.6 (16.8 - 22.3)	5.4	171	30.8 (26.5 - 35.2)	21.7 (19.6 - 23.8)	4.9
3-214	62	40.5 (30.6 - 50.5)	34.5 (30.0 - 39.0)	6.0	484	25.7 (24.0 - 27.4)	28.0 (26.5 - 29.6)	7.6	546	27.4 (25.5 - 29.3)	28.8 (27.3 - 30.2)	7.4
3-215	27	98.8 (75.7 - 121.9)	60.3 (52.4 - 68.2)	4.3	96	45.2 (38.9 - 51.5)	40.7 (35.3 - 46.0)	6.3	123	57.0 (48.9 - 65.0)	45.0 (40.3 - 49.7)	5.5
Total episodes	271				1,225				1,496			

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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