

Brain Dysfunction LOS and FIM Change Benchmarks in Australia and New Zealand by AN-SNAP V4, Financial Year 2017



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	39	116.6 (94.7 - 138.5)	71.0 (63.1 - 79.0)	4.3	21	43.5 (31.7 - 55.3)	31.2 (19.3 - 43.1)	5.0	60	91.0 (73.8 - 108.2)	57.1 (48.9 - 65.3)	4.4
4AZ2	70	121.1 (93.9 - 148.3)	72.4 (65.7 - 79.0)	4.2	9	85.0 (55.3 - 114.7)	61.6 (38.4 - 84.7)	5.1	79	117.0 (92.5 - 141.5)	71.2 (64.7 - 77.6)	4.3
4AB1	133	12.1 (10.8 - 13.5)	10.1 (8.9 - 11.3)	5.8	107	12.6 (11.1 - 14.0)	12.4 (10.9 - 13.9)	6.9	240	12.3 (11.3 - 13.3)	11.1 (10.2 - 12.1)	6.3
4AB2	131	24.5 (20.4 - 28.6)	16.8 (14.7 - 18.9)	4.8	59	21.5 (16.3 - 26.6)	15.0 (12.5 - 17.5)	4.9	190	23.6 (20.3 - 26.8)	16.2 (14.6 - 17.9)	4.8
4AB3	38	19.8 (15.5 - 24.2)	26.1 (22.8 - 29.3)	9.2	119	18.0 (16.2 - 19.8)	22.1 (20.1 - 24.0)	8.6	157	18.5 (16.7 - 20.2)	23.0 (21.3 - 24.8)	8.7
4AB4	79	29.8 (25.5 - 34.1)	36.1 (33.5 - 38.7)	8.5	119	24.0 (20.5 - 27.5)	25.8 (23.3 - 28.3)	7.5	198	26.3 (23.6 - 29.1)	29.9 (28.0 - 31.9)	8.0
4AB5	57	47.1 (37.9 - 56.3)	42.7 (38.2 - 47.2)	6.3	34	25.8 (18.8 - 32.7)	32.9 (27.3 - 38.5)	8.9	91	39.1 (32.5 - 45.8)	39.0 (35.4 - 42.6)	7.0
4AB6	24	39.7 (30.4 - 49.0)	63.3 (58.1 - 68.5)	11.2	54	31.5 (27.6 - 35.4)	36.5 (31.2 - 41.8)	8.1	78	34.0 (30.0 - 38.1)	44.8 (39.9 - 49.6)	9.2
4AB7	38	64.3 (42.8 - 85.9)	70.3 (63.9 - 76.7)	7.6	41	42.4 (35.6 - 49.2)	43.2 (35.3 - 51.2)	7.1	79	53.0 (41.8 - 64.2)	56.2 (50.3 - 62.2)	7.4
4AP1	176	31.6 (28.2 - 34.9)	36.1 (33.0 - 39.3)	8.0	182	36.5 (33.0 - 40.0)	36.6 (34.2 - 39.1)	7.0	358	34.1 (31.6 - 36.5)	36.4 (34.4 - 38.4)	7.5
Total episodes	785				745				1,530			
Non-Traumatic episodes												
4AZ1	10	80.6 (53.2 - 108.0)	50.2 (27.3 - 73.1)	4.4	56	49.4 (42.3 - 56.5)	31.3 (23.7 - 38.9)	4.4	66	54.1 (46.3 - 61.9)	34.2 (26.7 - 41.6)	4.4
4AZ2	11	137.4 (68.2 - 206.6)	43.2 (27.1 - 59.2)	2.2	15	84.7 (48.2 - 121.2)	42.7 (27.4 - 57.9)	3.5	26	107.0 (70.3 - 143.6)	42.9 (32.0 - 53.8)	2.8
4AB1	80	13.4 (11.4 - 15.4)	10.0 (7.9 - 12.2)	5.3	261	12.5 (11.5 - 13.6)	10.2 (9.4 - 11.1)	5.7	341	12.7 (11.8 - 13.6)	10.2 (9.4 - 11.0)	5.6
4AB2	60	28.2 (22.9 - 33.5)	14.6 (12.1 - 17.2)	3.6	122	18.7 (15.2 - 22.3)	14.0 (12.5 - 15.5)	5.2	182	21.9 (18.9 - 24.9)	14.2 (12.9 - 15.5)	4.5
4AB3	43	18.0 (15.8 - 20.2)	24.1 (21.1 - 27.0)	9.4	292	17.9 (16.6 - 19.3)	23.1 (21.7 - 24.4)	9.0	335	18.0 (16.7 - 19.2)	23.2 (22.0 - 24.4)	9.0
4AB4	36	23.9 (20.5 - 27.3)	30.6 (26.2 - 34.9)	9.0	221	21.3 (19.5 - 23.1)	24.9 (23.1 - 26.6)	8.2	257	21.7 (20.0 - 23.3)	25.7 (24.0 - 27.3)	8.3
4AB5	24	46.8 (31.5 - 62.1)	35.6 (29.3 - 41.9)	5.3	89	29.2 (25.0 - 33.5)	27.3 (23.6 - 31.0)	6.5	113	33.0 (28.1 - 37.8)	29.1 (25.8 - 32.3)	6.2
4AB6	19	47.4 (34.6 - 60.2)	38.6 (23.7 - 53.4)	5.7	105	31.0 (27.4 - 34.7)	34.0 (30.0 - 38.1)	7.7	124	33.5 (29.7 - 37.3)	34.7 (30.6 - 38.9)	7.3
4AB7	19	77.8 (57.0 - 98.5)	47.4 (36.4 - 58.4)	4.3	75	36.2 (31.3 - 41.1)	32.6 (26.4 - 38.8)	6.3	94	44.6 (38.0 - 51.3)	35.6 (30.0 - 41.1)	5.6
Total episodes	302				1,236				1,538			

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 2017



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	76	134.2 (108.3 - 160.1)	72.4 (65.8 - 78.9)	3.8	10	57.7 (28.9 - 86.5)	37.4 (14.6 - 60.2)	4.5	86	125.3 (101.8 - 148.8)	68.3 (61.5 - 75.0)	3.8
3-210	33	8.5 (6.8 - 10.1)	7.6 (5.2 - 10.0)	6.3	69	13.3 (11.6 - 15.0)	11.7 (9.7 - 13.7)	6.1	102	11.7 (10.4 - 13.1)	10.4 (8.8 - 12.0)	6.2
3-211	173	16.3 (14.6 - 18.0)	16.1 (14.6 - 17.6)	6.9	149	14.7 (13.2 - 16.2)	17.1 (15.6 - 18.6)	8.1	322	15.6 (14.4 - 16.7)	16.6 (15.5 - 17.6)	7.4
3-212	80	23.5 (19.6 - 27.4)	21.9 (19.2 - 24.6)	6.5	44	20.8 (14.9 - 26.7)	16.9 (13.5 - 20.2)	5.7	124	22.5 (19.3 - 25.8)	20.1 (18.0 - 22.2)	6.2
3-213	93	32.8 (27.1 - 38.5)	26.1 (22.8 - 29.4)	5.6	53	27.7 (21.3 - 34.0)	23.6 (20.4 - 26.9)	6.0	146	31.0 (26.7 - 35.3)	25.2 (22.8 - 27.6)	5.7
3-214	99	45.3 (38.5 - 52.2)	52.9 (48.9 - 56.9)	8.2	183	26.7 (24.3 - 29.0)	32.1 (29.6 - 34.6)	8.4	282	33.2 (30.2 - 36.2)	39.4 (37.0 - 41.8)	8.3
3-215	39	78.9 (56.3 - 101.6)	71.5 (63.9 - 79.1)	6.3	45	43.3 (36.2 - 50.4)	39.1 (31.3 - 47.0)	6.3	84	59.8 (48.2 - 71.5)	54.2 (47.7 - 60.6)	6.3
3-238	30	14.8 (11.2 - 18.3)	9.9 (7.5 - 12.4)	4.7	11	15.5 (8.7 - 22.2)	11.6 (8.8 - 14.4)	5.3	41	15.0 (11.8 - 18.1)	10.4 (8.5 - 12.3)	4.9
3-239	73	25.4 (21.7 - 29.2)	28.0 (25.9 - 30.1)	7.7	79	31.1 (26.0 - 36.1)	28.1 (26.2 - 30.1)	6.3	152	28.4 (25.2 - 31.6)	28.1 (26.6 - 29.5)	6.9
3-240	60	42.5 (36.6 - 48.4)	50.4 (46.5 - 54.2)	8.3	92	45.8 (40.6 - 50.9)	48.2 (45.1 - 51.3)	7.4	152	44.5 (40.6 - 48.4)	49.0 (46.6 - 51.4)	7.7
3-241	29	67.4 (52.2 - 82.6)	72.5 (66.1 - 79.0)	7.5	10	51.7 (32.7 - 70.7)	50.5 (31.0 - 70.0)	6.8	39	63.4 (50.8 - 75.9)	66.9 (59.3 - 74.4)	7.4
Total episodes	785				745				1,530			
Non-Traumatic episodes												
3-202	13	108.2 (77.1 - 139.2)	40.2 (21.2 - 59.2)	2.6	34	62.7 (44.9 - 80.4)	31.5 (22.2 - 40.8)	3.5	47	75.3 (59.1 - 91.4)	33.9 (25.5 - 42.3)	3.2
3-210	41	12.5 (10.6 - 14.4)	12.8 (10.0 - 15.7)	7.2	198	13.4 (12.0 - 14.7)	13.8 (12.7 - 14.9)	7.2	239	13.2 (12.1 - 14.4)	13.6 (12.6 - 14.7)	7.2
3-211	94	16.1 (14.1 - 18.1)	14.0 (11.8 - 16.3)	6.1	298	14.0 (13.0 - 15.1)	15.1 (14.0 - 16.2)	7.5	392	14.5 (13.6 - 15.5)	14.9 (13.9 - 15.8)	7.2
3-212	31	24.5 (19.6 - 29.4)	19.2 (15.6 - 22.8)	5.5	102	16.7 (14.2 - 19.1)	17.4 (15.5 - 19.3)	7.3	133	18.5 (16.2 - 20.8)	17.8 (16.1 - 19.5)	6.7
3-213	37	36.8 (29.7 - 44.0)	24.9 (19.6 - 30.2)	4.7	105	24.0 (19.8 - 28.2)	20.8 (18.6 - 23.1)	6.1	142	27.3 (23.6 - 31.0)	21.9 (19.7 - 24.1)	5.6
3-214	64	39.5 (32.0 - 47.0)	35.6 (30.0 - 41.1)	6.3	410	27.0 (25.3 - 28.7)	29.7 (27.9 - 31.5)	7.7	474	28.7 (26.9 - 30.5)	30.5 (28.8 - 32.2)	7.4
3-215	22	96.9 (59.5 - 134.2)	51.1 (40.8 - 61.5)	3.7	89	43.4 (37.6 - 49.2)	33.7 (27.7 - 39.8)	5.4	111	54.0 (44.5 - 63.6)	37.2 (31.8 - 42.6)	4.8
Total episodes	302				1,236				1,538			

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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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