

Brain Dysfunction LOS and FIM Change Benchmarks in Australia and New Zealand by AN-SNAP V4, Calendar Year 2016



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	33	109.2 (84.8 - 133.5)	65.3 (54.9 - 75.7)	4.2	28	54.1 (38.7 - 69.5)	34.2 (24.3 - 44.2)	4.4	61	83.9 (67.6 - 100.2)	51.0 (42.9 - 59.2)	4.3
4AZ2	66	130.8 (102.0 - 159.6)	72.1 (65.0 - 79.3)	3.9	11	101.6 (64.9 - 138.3)	59.9 (44.4 - 75.4)	4.1	77	126.6 (101.5 - 151.7)	70.4 (63.9 - 76.9)	3.9
4AB1	115	12.5 (11.3 - 13.8)	10.6 (9.3 - 12.0)	5.9	112	11.6 (10.2 - 12.9)	12.2 (10.7 - 13.6)	7.4	227	12.1 (11.2 - 13.0)	11.4 (10.4 - 12.4)	6.6
4AB2	138	23.0 (19.4 - 26.5)	17.3 (15.7 - 19.0)	5.3	57	22.8 (17.9 - 27.8)	14.9 (12.4 - 17.4)	4.6	195	22.9 (20.1 - 25.8)	16.6 (15.3 - 18.0)	5.1
4AB3	42	21.4 (17.8 - 25.1)	27.0 (23.5 - 30.4)	8.8	106	17.2 (15.4 - 19.0)	22.1 (20.4 - 23.7)	9.0	148	18.4 (16.7 - 20.1)	23.5 (21.9 - 25.0)	8.9
4AB4	79	31.1 (26.8 - 35.4)	37.5 (34.8 - 40.2)	8.4	118	22.5 (19.9 - 25.1)	24.5 (22.0 - 27.0)	7.6	197	25.9 (23.6 - 28.3)	29.7 (27.7 - 31.8)	8.0
4AB5	48	48.5 (40.3 - 56.7)	44.8 (39.9 - 49.6)	6.5	27	23.1 (19.0 - 27.2)	32.3 (26.0 - 38.5)	9.8	75	39.3 (33.3 - 45.4)	40.3 (36.2 - 44.3)	7.2
4AB6	30	64.2 (49.0 - 79.4)	57.9 (51.4 - 64.3)	6.3	42	27.5 (22.5 - 32.5)	34.5 (27.3 - 41.7)	8.8	72	42.8 (34.7 - 50.9)	44.3 (38.6 - 49.9)	7.2
4AB7	30	98.7 (58.3 - 139.1)	69.2 (61.5 - 76.9)	4.9	36	34.9 (28.6 - 41.1)	34.2 (25.5 - 42.8)	6.9	66	63.9 (43.7 - 84.1)	50.1 (42.9 - 57.3)	5.5
4AP1	164	31.9 (27.6 - 36.2)	35.7 (32.7 - 38.7)	7.8	159	33.3 (29.7 - 37.0)	34.2 (31.5 - 36.8)	7.2	323	32.6 (29.8 - 35.5)	34.9 (32.9 - 36.9)	7.5
Total episodes	745				696				1,441			
Non-Traumatic episodes												
4AZ1	8	86.5 (49.3 - 123.7)	50.5 (36.1 - 64.9)	4.1	53	49.3 (40.4 - 58.2)	35.8 (28.5 - 43.0)	5.1	61	54.2 (44.7 - 63.7)	37.7 (31.0 - 44.4)	4.9
4AZ2	5	137.0 (-17.8 - 291.8)	25.8 (2.0 - 49.6)	1.3	11	69.8 (49.0 - 90.7)	38.2 (21.1 - 55.3)	3.8	16	90.8 (42.1 - 139.6)	34.3 (20.6 - 48.0)	2.6
4AB1	67	13.7 (11.8 - 15.6)	10.7 (9.0 - 12.3)	5.4	231	12.0 (10.9 - 13.1)	10.7 (9.8 - 11.6)	6.2	298	12.4 (11.5 - 13.3)	10.7 (9.9 - 11.5)	6.0
4AB2	59	26.3 (21.1 - 31.5)	12.6 (10.4 - 14.8)	3.4	115	18.0 (14.2 - 21.8)	12.8 (11.2 - 14.4)	5.0	174	20.8 (17.7 - 23.9)	12.7 (11.4 - 14.0)	4.3
4AB3	49	21.1 (17.5 - 24.8)	26.2 (23.3 - 29.1)	8.7	255	17.5 (16.2 - 18.9)	22.0 (20.7 - 23.3)	8.8	304	18.1 (16.8 - 19.4)	22.7 (21.5 - 23.9)	8.8
4AB4	37	28.2 (23.1 - 33.4)	28.6 (24.0 - 33.3)	7.1	224	20.4 (18.8 - 22.1)	25.3 (23.5 - 27.0)	8.7	261	21.6 (19.9 - 23.2)	25.8 (24.1 - 27.4)	8.4
4AB5	21	45.0 (30.1 - 60.0)	37.8 (30.4 - 45.1)	5.9	82	30.4 (25.7 - 35.0)	32.0 (28.4 - 35.7)	7.4	103	33.4 (28.4 - 38.3)	33.2 (29.9 - 36.5)	7.0
4AB6	22	56.6 (42.7 - 70.6)	40.7 (31.0 - 50.5)	5.0	98	34.2 (29.8 - 38.6)	31.5 (27.3 - 35.7)	6.5	120	38.3 (33.7 - 42.9)	33.2 (29.3 - 37.1)	6.1
4AB7	16	76.8 (55.2 - 98.3)	50.5 (38.3 - 62.7)	4.6	77	37.4 (32.5 - 42.4)	37.8 (31.8 - 43.7)	7.1	93	44.2 (37.9 - 50.5)	39.9 (34.5 - 45.4)	6.3
Total episodes	284				1,146				1,430			

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 2016



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	70	143.8 (116.5 - 171.2)	67.4 (60.0 - 74.9)	3.3	18	73.8 (49.4 - 98.2)	37.6 (24.2 - 50.9)	3.6	88	129.5 (106.5 - 152.6)	61.3 (54.3 - 68.3)	3.3
3-210	29	10.4 (8.0 - 12.8)	10.8 (7.6 - 13.9)	7.2	67	11.8 (10.1 - 13.5)	13.0 (11.0 - 14.9)	7.7	96	11.4 (10.0 - 12.8)	12.3 (10.6 - 14.0)	7.6
3-211	167	16.0 (14.5 - 17.4)	15.6 (14.1 - 17.1)	6.8	152	14.3 (12.8 - 15.7)	16.5 (15.0 - 17.9)	8.1	319	15.1 (14.1 - 16.2)	16.0 (14.9 - 17.0)	7.4
3-212	71	21.9 (18.8 - 25.0)	20.4 (17.8 - 23.0)	6.5	44	24.6 (18.8 - 30.5)	16.2 (13.0 - 19.4)	4.6	115	22.9 (20.0 - 25.9)	18.8 (16.8 - 20.8)	5.7
3-213	82	34.8 (28.4 - 41.2)	27.1 (24.3 - 29.9)	5.5	39	26.9 (20.5 - 33.3)	23.5 (19.2 - 27.8)	6.1	121	32.3 (27.4 - 37.1)	26.0 (23.6 - 28.3)	5.6
3-214	113	50.6 (43.8 - 57.5)	50.6 (47.2 - 54.1)	7.0	170	24.1 (22.1 - 26.0)	30.4 (27.7 - 33.1)	8.8	283	34.7 (31.4 - 38.0)	38.5 (36.1 - 40.9)	7.8
3-215	29	96.0 (55.2 - 136.8)	67.3 (57.5 - 77.0)	4.9	37	37.7 (30.0 - 45.5)	31.7 (23.1 - 40.3)	5.9	66	63.3 (43.7 - 83.0)	47.3 (39.6 - 55.1)	5.2
3-238	30	13.0 (11.1 - 15.0)	11.4 (9.0 - 13.8)	6.1	14	11.0 (6.8 - 15.2)	11.0 (7.2 - 14.8)	7.0	44	12.4 (10.5 - 14.3)	11.3 (9.3 - 13.3)	6.4
3-239	62	23.3 (19.6 - 27.0)	29.3 (26.8 - 31.7)	8.8	78	29.9 (24.8 - 34.9)	26.5 (24.3 - 28.7)	6.2	140	27.0 (23.6 - 30.3)	27.7 (26.1 - 29.4)	7.2
3-240	61	43.6 (35.8 - 51.3)	49.0 (45.5 - 52.5)	7.9	66	45.0 (36.9 - 53.0)	48.8 (45.5 - 52.1)	7.6	127	44.3 (38.8 - 49.8)	48.9 (46.5 - 51.3)	7.7
3-241	31	71.4 (55.8 - 86.9)	74.8 (68.0 - 81.6)	7.3	12	58.3 (39.2 - 77.3)	50.7 (37.3 - 64.0)	6.1	43	67.7 (55.3 - 80.1)	68.1 (61.2 - 75.0)	7.0
Total episodes	745				697				1,442			
Non-Traumatic episodes												
3-202	11	79.8 (50.8 - 108.8)	41.7 (27.4 - 56.1)	3.7	30	56.3 (42.7 - 69.9)	35.0 (25.6 - 44.5)	4.4	41	62.6 (49.7 - 75.5)	36.8 (28.9 - 44.7)	4.1
3-210	31	13.3 (10.8 - 15.7)	14.7 (11.6 - 17.8)	7.8	172	13.0 (11.7 - 14.2)	14.4 (13.2 - 15.6)	7.8	203	13.0 (11.9 - 14.1)	14.4 (13.4 - 15.5)	7.8
3-211	87	16.2 (14.1 - 18.3)	14.6 (12.5 - 16.6)	6.3	276	13.7 (12.6 - 14.8)	15.1 (14.0 - 16.2)	7.7	363	14.3 (13.3 - 15.3)	15.0 (14.0 - 15.9)	7.3
3-212	30	23.8 (18.5 - 29.1)	17.2 (13.1 - 21.3)	5.1	103	15.6 (13.4 - 17.7)	17.0 (14.9 - 19.2)	7.7	133	17.4 (15.3 - 19.6)	17.1 (15.2 - 19.0)	6.9
3-213	33	33.3 (25.8 - 40.9)	16.8 (12.6 - 21.0)	3.5	92	25.1 (20.5 - 29.8)	21.3 (18.6 - 24.0)	5.9	125	27.3 (23.3 - 31.3)	20.1 (17.9 - 22.4)	5.2
3-214	76	42.8 (35.9 - 49.6)	37.0 (32.9 - 41.1)	6.1	382	27.4 (25.6 - 29.3)	29.6 (27.8 - 31.4)	7.5	458	30.0 (28.0 - 32.0)	30.8 (29.1 - 32.5)	7.2
3-215	16	99.1 (49.1 - 149.0)	48.0 (34.6 - 61.4)	3.4	91	43.0 (37.7 - 48.4)	37.8 (32.3 - 43.4)	6.2	107	51.4 (42.0 - 60.8)	39.4 (34.2 - 44.5)	5.4
Total episodes	284				1,146				1,430			

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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2.11 Sub-arachnoid haemorrhage
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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
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