

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



AN-SNAP class	Specialist Brain Units				Non Specialist Brain Units				All AROC Facilities			
	No.	Length of stay	FIM change	FIM gain per week	No.	Length of stay	FIM change	FIM gain per week	No.	Length of stay	FIM change	FIM gain per week
		Mean (95%CI)	Mean (95%CI)			Mean (95%CI)	Mean (95%CI)			Mean (95%CI)	Mean (95%CI)	
Traumatic episodes												
4AZ1	35	114.6 (86.5 - 142.7)	55.4 (43.5 - 67.2)	3.4	23	62.3 (40.2 - 84.5)	36.0 (24.2 - 47.8)	4.0	58	93.9 (73.8 - 114.0)	47.7 (38.9 - 56.5)	3.6
4AZ2	68	124.9 (101.5 - 148.3)	70.7 (63.3 - 78.1)	4.0	10	101.2 (66.1 - 136.3)	60.9 (44.9 - 76.9)	4.2	78	121.9 (101.0 - 142.8)	69.4 (62.7 - 76.2)	4.0
4AB1	145	14.8 (13.2 - 16.3)	11.0 (9.8 - 12.3)	5.2	102	11.0 (9.8 - 12.3)	11.1 (9.6 - 12.7)	7.1	247	13.2 (12.2 - 14.3)	11.1 (10.1 - 12.0)	5.9
4AB2	167	24.8 (21.3 - 28.3)	16.2 (14.8 - 17.6)	4.6	75	22.3 (14.2 - 30.4)	13.5 (11.4 - 15.6)	4.2	242	24.0 (20.5 - 27.5)	15.3 (14.2 - 16.5)	4.5
4AB3	55	23.9 (20.1 - 27.6)	28.4 (25.3 - 31.4)	8.3	114	17.0 (14.6 - 19.5)	21.6 (19.9 - 23.3)	8.9	169	19.3 (17.1 - 21.4)	23.8 (22.2 - 25.4)	8.6
4AB4	72	31.6 (27.5 - 35.8)	39.2 (36.7 - 41.6)	8.7	124	23.6 (21.1 - 26.0)	23.0 (20.6 - 25.5)	6.8	196	26.5 (24.3 - 28.8)	29.0 (26.9 - 31.0)	7.6
4AB5	48	42.0 (34.6 - 49.4)	47.0 (43.5 - 50.5)	7.8	36	23.3 (19.0 - 27.6)	27.1 (21.3 - 33.0)	8.1	84	34.0 (29.0 - 39.0)	38.5 (34.6 - 42.3)	7.9
4AB6	40	65.7 (52.2 - 79.1)	53.6 (46.9 - 60.2)	5.7	48	26.5 (21.5 - 31.6)	30.2 (24.0 - 36.4)	8.0	88	44.3 (36.5 - 52.1)	40.8 (35.7 - 45.9)	6.4
4AB7	22	91.0 (47.4 - 134.6)	65.9 (55.7 - 76.1)	5.1	30	33.4 (24.3 - 42.4)	26.1 (17.5 - 34.7)	5.5	52	57.8 (37.2 - 78.3)	42.9 (34.5 - 51.4)	5.2
4AP1	215	41.3 (36.4 - 46.2)	34.5 (31.7 - 37.2)	5.8	117	33.0 (28.0 - 38.0)	31.6 (28.4 - 34.8)	6.7	332	38.4 (34.7 - 42.1)	33.5 (31.3 - 35.6)	6.1
Total episodes	867				679				1,546			
Non-Traumatic episodes												
4AZ1	17	77.3 (54.0 - 100.6)	53.6 (41.0 - 66.2)	4.9	53	65.3 (47.3 - 83.3)	33.8 (26.7 - 40.8)	3.6	70	68.2 (53.5 - 82.9)	38.6 (32.1 - 45.0)	4.0
4AZ2	11	132.5 (80.1 - 185.0)	48.8 (30.3 - 67.3)	2.6	9	72.1 (46.4 - 97.8)	44.1 (26.7 - 61.6)	4.3	20	105.4 (72.5 - 138.2)	46.7 (34.3 - 59.1)	3.1
4AB1	104	13.2 (11.9 - 14.6)	10.3 (9.0 - 11.7)	5.5	228	12.6 (11.5 - 13.7)	10.6 (9.7 - 11.5)	5.9	332	12.8 (11.9 - 13.6)	10.5 (9.7 - 11.2)	5.7
4AB2	70	25.2 (20.0 - 30.4)	12.3 (10.2 - 14.5)	3.4	123	22.3 (17.2 - 27.4)	11.8 (10.3 - 13.3)	3.7	193	23.3 (19.6 - 27.1)	12.0 (10.8 - 13.2)	3.6
4AB3	57	20.5 (16.9 - 24.2)	26.1 (23.2 - 28.9)	8.9	259	18.4 (16.9 - 20.0)	22.2 (21.0 - 23.5)	8.4	316	18.8 (17.4 - 20.3)	22.9 (21.8 - 24.1)	8.5
4AB4	51	30.4 (23.9 - 36.8)	30.5 (26.7 - 34.4)	7.0	208	21.6 (19.8 - 23.3)	24.5 (22.6 - 26.5)	8.0	259	23.3 (21.4 - 25.2)	25.7 (23.9 - 27.5)	7.7
4AB5	24	50.0 (32.4 - 67.6)	33.6 (25.9 - 41.3)	4.7	84	25.5 (22.2 - 28.7)	30.6 (27.1 - 34.1)	8.4	108	30.9 (25.9 - 35.9)	31.3 (28.1 - 34.5)	7.1
4AB6	32	57.0 (39.8 - 74.3)	38.6 (29.5 - 47.8)	4.7	111	31.2 (27.9 - 34.5)	33.4 (29.4 - 37.3)	7.5	143	37.0 (32.0 - 41.9)	34.5 (30.9 - 38.2)	6.5
4AB7	22	78.5 (43.1 - 113.8)	48.3 (36.4 - 60.2)	4.3	82	38.9 (34.5 - 43.4)	39.0 (33.3 - 44.7)	7.0	104	47.3 (38.5 - 56.0)	41.0 (35.7 - 46.2)	6.1
Total episodes	388				1,157				1,545			

NOTE 1: Where the number of episodes < 5 details are not given for reasons of privacy and accuracy.

NOTE 2: Incomplete episodes are excluded from analysis

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 2016



AN-SNAP class	Specialist Brain Units				Non Specialist Brain Units				All AROC Facilities			
	No.	Length of stay Mean (95%CI)	FIM change Mean (95%CI)	FIM gain per week	No.	Length of stay Mean (95%CI)	FIM change Mean (95%CI)	FIM gain per week	No.	Length of stay Mean (95%CI)	FIM change Mean (95%CI)	FIM gain per week
Traumatic episodes												
3-202	74	135.8 (112.3 - 159.3)	64.3 (56.5 - 72.1)	3.3	16	78.2 (49.3 - 107.0)	41.3 (27.8 - 54.8)	3.7	90	125.6 (105.2 - 146.0)	60.2 (53.2 - 67.2)	3.4
3-210	35	13.5 (10.9 - 16.0)	13.9 (10.7 - 17.2)	7.2	61	12.0 (10.3 - 13.7)	13.8 (11.9 - 15.8)	8.1	96	12.5 (11.1 - 13.9)	13.9 (12.2 - 15.6)	7.7
3-211	201	17.4 (15.8 - 18.9)	13.9 (12.6 - 15.2)	5.6	158	16.8 (12.9 - 20.8)	14.6 (13.1 - 16.1)	6.1	359	17.1 (15.2 - 19.1)	14.2 (13.3 - 15.2)	5.8
3-212	90	25.1 (21.0 - 29.2)	19.7 (17.5 - 22.0)	5.5	53	19.2 (16.0 - 22.3)	16.3 (13.4 - 19.3)	6.0	143	22.9 (20.1 - 25.8)	18.5 (16.7 - 20.3)	5.6
3-213	82	35.6 (28.8 - 42.3)	27.7 (24.7 - 30.6)	5.4	48	24.8 (19.0 - 30.6)	20.3 (16.3 - 24.3)	5.7	130	31.6 (26.8 - 36.5)	25.0 (22.5 - 27.4)	5.5
3-214	124	46.0 (39.9 - 52.0)	48.6 (45.6 - 51.6)	7.4	189	24.6 (22.2 - 27.0)	28.0 (25.5 - 30.5)	8.0	313	33.1 (30.1 - 36.1)	36.1 (33.9 - 38.4)	7.7
3-215	27	95.5 (60.6 - 130.4)	60.4 (48.9 - 71.9)	4.4	29	35.9 (25.1 - 46.7)	27.9 (18.2 - 37.6)	5.4	56	64.6 (45.4 - 83.8)	43.6 (35.0 - 52.1)	4.7
3-238	43	18.4 (11.5 - 25.3)	9.1 (7.6 - 10.7)	3.5	15	12.9 (7.8 - 18.1)	10.7 (6.5 - 14.8)	5.8	58	17.0 (11.6 - 22.4)	9.5 (8.0 - 11.1)	3.9
3-239	76	29.0 (24.5 - 33.5)	28.9 (26.8 - 31.0)	7.0	55	23.5 (19.5 - 27.4)	26.6 (23.6 - 29.5)	7.9	131	26.7 (23.6 - 29.8)	27.9 (26.2 - 29.7)	7.3
3-240	79	58.7 (49.2 - 68.1)	46.5 (43.3 - 49.8)	5.6	44	55.8 (43.0 - 68.5)	45.5 (40.8 - 50.1)	5.7	123	57.6 (50.1 - 65.2)	46.1 (43.5 - 48.8)	5.6
3-241	36	78.0 (64.0 - 92.0)	74.4 (68.0 - 80.8)	6.7	11	55.1 (32.9 - 77.3)	39.3 (20.0 - 58.5)	5.0	47	72.6 (60.6 - 84.7)	66.2 (58.4 - 73.9)	6.4
Total episodes	867				679				1,546			
Non-Traumatic episodes												
3-202	22	108.4 (77.7 - 139.1)	46.3 (35.6 - 57.1)	3.0	31	83.9 (54.6 - 113.2)	36.0 (26.3 - 45.6)	3.0	53	94.1 (72.6 - 115.5)	40.3 (33.0 - 47.5)	3.0
3-210	45	12.8 (10.7 - 15.0)	14.3 (11.7 - 16.9)	7.8	175	12.4 (11.4 - 13.5)	13.3 (12.1 - 14.5)	7.5	220	12.5 (11.6 - 13.5)	13.5 (12.4 - 14.6)	7.5
3-211	119	15.5 (13.6 - 17.3)	13.0 (11.4 - 14.6)	5.9	300	16.1 (14.3 - 17.9)	15.9 (14.8 - 16.9)	6.9	419	15.9 (14.6 - 17.3)	15.0 (14.1 - 15.9)	6.6
3-212	36	21.1 (17.5 - 24.7)	18.7 (14.9 - 22.6)	6.2	80	17.8 (15.5 - 20.0)	17.0 (14.5 - 19.4)	6.7	116	18.8 (16.9 - 20.7)	17.5 (15.4 - 19.6)	6.5
3-213	48	42.1 (30.5 - 53.8)	17.8 (14.0 - 21.5)	3.0	94	23.7 (19.0 - 28.5)	19.8 (17.0 - 22.5)	5.8	142	29.9 (24.7 - 35.2)	19.1 (16.9 - 21.3)	4.5
3-214	93	41.4 (34.2 - 48.6)	36.6 (32.4 - 40.7)	6.2	389	27.5 (25.8 - 29.3)	29.8 (27.9 - 31.6)	7.6	482	30.2 (28.2 - 32.2)	31.1 (29.4 - 32.8)	7.2
3-215	25	78.0 (45.7 - 110.2)	55.9 (44.4 - 67.4)	5.0	88	43.3 (38.7 - 47.8)	38.5 (33.0 - 44.0)	6.2	113	50.9 (42.6 - 59.2)	42.4 (37.2 - 47.5)	5.8
Total episodes	388				1,157				1,545			

NOTE 1: Where the number of episodes < 5 details are not given for reasons of privacy and accuracy.

NOTE 2: Incomplete episodes are excluded from analysis

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

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