

## Brain Dysfunction LOS and FIM Change Benchmarks in Australia and New Zealand by AN-SNAP V4, Calendar 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)	
<b>Traumatic episodes</b>												
4AZ1	31	116.3 (93.0 - 139.6)	60.1 (49.8 - 70.4)	3.6	31	54.2 (39.6 - 68.8)	29.6 (20.3 - 38.9)	3.8	62	85.2 (69.5 - 101.0)	44.8 (36.9 - 52.7)	3.7
4AZ2	43	125.1 (94.7 - 155.4)	68.1 (59.1 - 77.1)	3.8	2	n.a n.a	n.a n.a	n.a	45	123.9 (94.6 - 153.2)	66.5 (57.5 - 75.6)	3.8
4AB1	67	16.7 (14.0 - 19.3)	8.8 (7.0 - 10.5)	3.7	74	11.6 (10.1 - 13.2)	10.8 (9.2 - 12.4)	6.5	141	14.0 (12.5 - 15.6)	9.8 (8.6 - 11.0)	4.9
4AB2	116	28.6 (24.1 - 33.0)	17.1 (15.3 - 18.9)	4.2	36	29.4 (16.5 - 42.4)	14.1 (11.3 - 16.8)	3.3	152	28.8 (24.2 - 33.3)	16.4 (14.8 - 17.9)	4.0
4AB3	16	22.2 (14.2 - 30.1)	35.3 (28.8 - 41.8)	11.1	142	17.6 (16.0 - 19.2)	23.4 (21.6 - 25.2)	9.3	158	18.1 (16.4 - 19.7)	24.6 (22.8 - 26.4)	9.5
4AB4	69	29.6 (26.0 - 33.2)	36.7 (34.2 - 39.1)	8.7	123	22.2 (19.4 - 25.0)	27.1 (24.8 - 29.4)	8.5	192	24.9 (22.6 - 27.1)	30.5 (28.7 - 32.3)	8.6
4AB5	71	48.5 (40.5 - 56.4)	43.3 (40.3 - 46.3)	6.3	49	27.1 (22.2 - 32.0)	28.8 (24.9 - 32.7)	7.4	120	39.8 (34.4 - 45.1)	37.4 (34.7 - 40.1)	6.6
4AB6	29	63.7 (48.2 - 79.2)	56.5 (49.6 - 63.4)	6.2	54	30.6 (24.7 - 36.5)	30.8 (25.0 - 36.7)	7.1	83	42.2 (34.7 - 49.6)	39.8 (34.6 - 45.0)	6.6
4AB7	29	71.2 (53.8 - 88.5)	68.6 (63.0 - 74.1)	6.7	36	51.0 (35.0 - 66.9)	27.8 (20.5 - 35.0)	3.8	65	60.0 (48.1 - 71.9)	46.0 (39.2 - 52.8)	5.4
4AP1	177	33.4 (30.0 - 36.7)	33.6 (30.7 - 36.6)	7.1	88	30.5 (25.8 - 35.2)	31.6 (28.0 - 35.1)	7.2	265	32.4 (29.7 - 35.1)	33.0 (30.7 - 35.2)	7.1
<b>Total episodes</b>	<b>648</b>				<b>635</b>				<b>1,283</b>			
<b>Non-Traumatic episodes</b>												
4AZ1	20	115.3 (78.0 - 152.6)	43.7 (31.0 - 56.3)	2.7	43	52.8 (37.9 - 67.7)	30.0 (22.3 - 37.6)	4.0	63	72.7 (55.4 - 89.9)	34.3 (27.5 - 41.1)	3.3
4AZ2	8	114.6 (74.4 - 154.8)	66.9 (53.0 - 80.7)	4.1	9	122.4 (57.0 - 187.8)	50.4 (27.3 - 73.6)	2.9	17	118.8 (80.3 - 157.2)	58.2 (44.1 - 72.3)	3.4
4AB1	39	9.4 (8.0 - 10.7)	9.9 (7.6 - 12.1)	7.4	188	12.4 (10.4 - 14.4)	10.9 (9.8 - 12.0)	6.2	227	11.9 (10.2 - 13.6)	10.7 (9.7 - 11.7)	6.3
4AB2	46	31.7 (22.4 - 41.0)	14.2 (12.0 - 16.3)	3.1	102	23.0 (16.2 - 29.9)	13.7 (11.8 - 15.6)	4.2	148	25.7 (20.2 - 31.3)	13.9 (12.4 - 15.3)	3.8
4AB3	32	16.2 (13.2 - 19.3)	24.2 (20.4 - 28.1)	10.5	289	16.2 (15.1 - 17.3)	23.8 (22.6 - 25.0)	10.3	321	16.2 (15.1 - 17.2)	23.8 (22.7 - 25.0)	10.3
4AB4	19	37.2 (25.1 - 49.2)	34.2 (27.1 - 41.2)	6.4	202	23.2 (19.5 - 26.8)	24.0 (21.9 - 26.1)	7.2	221	24.4 (20.9 - 27.9)	24.9 (22.8 - 26.9)	7.1
4AB5	21	51.9 (32.3 - 71.5)	36.7 (29.7 - 43.7)	4.9	90	28.3 (21.5 - 35.1)	25.4 (21.1 - 29.7)	6.3	111	32.7 (25.9 - 39.6)	27.5 (23.7 - 31.3)	5.9
4AB6	18	55.2 (40.0 - 70.3)	40.6 (31.0 - 50.1)	5.1	129	36.1 (30.5 - 41.7)	33.6 (29.6 - 37.5)	6.5	147	38.4 (33.1 - 43.8)	34.4 (30.8 - 38.1)	6.3
4AB7	16	65.6 (45.2 - 85.9)	62.4 (51.7 - 73.2)	6.7	103	43.1 (37.8 - 48.4)	33.6 (28.6 - 38.5)	5.4	119	46.1 (40.7 - 51.6)	37.4 (32.6 - 42.3)	5.7
<b>Total episodes</b>	<b>219</b>				<b>1,155</b>				<b>1,374</b>			

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 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)	
<b>Traumatic episodes</b>												
3-202	49	130.6 (103.0 - 158.2)	63.9 (54.7 - 73.0)	3.4	17	57.0 (35.2 - 78.8)	33.7 (19.2 - 48.2)	4.1	66	111.6 (89.0 - 134.3)	56.1 (47.7 - 64.4)	3.5
3-210	10	10.1 (6.7 - 13.5)	6.7 (2.4 - 11.0)	4.6	41	11.3 (9.3 - 13.3)	13.6 (11.0 - 16.2)	8.4	51	11.1 (9.3 - 12.8)	12.3 (9.9 - 14.6)	7.8
3-211	99	18.8 (16.7 - 21.0)	14.1 (11.9 - 16.3)	5.2	138	14.9 (13.3 - 16.4)	15.8 (14.3 - 17.3)	7.5	237	16.5 (15.2 - 17.8)	15.1 (13.8 - 16.4)	6.4
3-212	51	30.2 (23.9 - 36.6)	19.9 (17.2 - 22.6)	4.6	44	24.5 (15.5 - 33.4)	22.2 (18.6 - 25.8)	6.3	95	27.6 (22.2 - 32.9)	20.9 (18.7 - 23.1)	5.3
3-213	104	35.3 (30.1 - 40.5)	26.4 (24.0 - 28.8)	5.2	30	26.1 (16.0 - 36.3)	23.7 (18.8 - 28.5)	6.3	134	33.2 (28.6 - 37.9)	25.8 (23.6 - 27.9)	5.4
3-214	110	48.2 (41.6 - 54.9)	50.3 (47.5 - 53.1)	7.3	235	26.8 (24.1 - 29.4)	29.8 (27.9 - 31.8)	7.8	345	33.6 (30.6 - 36.6)	36.4 (34.5 - 38.2)	7.6
3-215	36	87.1 (70.1 - 104.0)	69.3 (62.6 - 75.9)	5.6	38	50.7 (36.8 - 64.5)	22.4 (15.5 - 29.3)	3.1	74	68.4 (56.8 - 80.0)	45.2 (38.0 - 52.4)	4.6
3-238	34	20.4 (15.3 - 25.5)	10.6 (8.5 - 12.6)	3.6	17	15.6 (11.0 - 20.3)	8.5 (6.2 - 10.8)	3.8	51	18.8 (15.0 - 22.5)	9.9 (8.3 - 11.5)	3.7
3-239	81	28.3 (25.6 - 31.0)	28.0 (26.0 - 30.0)	6.9	37	25.5 (20.7 - 30.4)	28.7 (26.1 - 31.2)	7.9	118	27.4 (25.0 - 29.8)	28.2 (26.6 - 29.8)	7.2
3-240	53	42.2 (36.3 - 48.2)	51.4 (47.8 - 55.1)	8.5	32	42.8 (33.3 - 52.3)	45.0 (40.6 - 49.5)	7.4	85	42.4 (37.3 - 47.6)	49.0 (46.1 - 51.9)	8.1
3-241	21	87.2 (58.6 - 115.7)	66.2 (57.4 - 75.1)	5.3	6	64.8 (25.3 - 104.4)	48.0 (26.6 - 69.4)	5.2	27	82.2 (58.4 - 106.0)	62.2 (53.6 - 70.8)	5.3
<b>Total episodes</b>	<b>648</b>				<b>635</b>				<b>1,283</b>			
<b>Non-Traumatic episodes</b>												
3-202	19	114.9 (78.1 - 151.6)	47.3 (34.5 - 60.1)	2.9	29	76.0 (48.0 - 104.0)	33.1 (23.2 - 43.0)	3.0	48	91.4 (68.4 - 114.3)	38.7 (30.6 - 46.8)	3.0
3-210	28	10.1 (7.7 - 12.4)	12.8 (9.6 - 15.9)	8.9	150	12.0 (10.0 - 14.0)	14.8 (13.4 - 16.1)	8.6	178	11.7 (10.0 - 13.4)	14.5 (13.2 - 15.7)	8.6
3-211	44	15.1 (12.6 - 17.6)	15.8 (12.8 - 18.8)	7.3	267	15.4 (13.4 - 17.3)	15.7 (14.4 - 16.9)	7.1	311	15.4 (13.6 - 17.1)	15.7 (14.5 - 16.9)	7.2
3-212	12	23.8 (15.3 - 32.3)	12.3 (7.5 - 17.0)	3.6	93	24.5 (15.9 - 33.1)	20.1 (17.6 - 22.6)	5.7	105	24.5 (16.8 - 32.1)	19.2 (16.9 - 21.5)	5.5
3-213	39	44.4 (29.3 - 59.4)	20.5 (16.9 - 24.1)	3.2	81	21.5 (17.9 - 25.1)	19.8 (17.0 - 22.7)	6.5	120	28.9 (23.2 - 34.6)	20.1 (17.8 - 22.3)	4.8
3-214	56	42.3 (34.9 - 49.7)	38.9 (34.0 - 43.8)	6.4	432	28.5 (25.9 - 31.1)	29.5 (27.7 - 31.4)	7.3	488	30.1 (27.6 - 32.6)	30.6 (28.9 - 32.3)	7.1
3-215	21	90.0 (64.7 - 115.4)	61.4 (50.6 - 72.3)	4.8	103	44.7 (38.6 - 50.9)	32.9 (27.7 - 38.1)	5.1	124	52.4 (45.1 - 59.7)	37.7 (32.6 - 42.8)	5.0
<b>Total episodes</b>	<b>219</b>				<b>1,155</b>				<b>1,374</b>			

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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

### All Brain Dysfunction impairment codes

#### Non-traumatic brain dysfunction

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