

# AROC Ambulatory Report

July 2018 – June 2019

Anywhere Hospital



**Australasian  
Faculty of  
Rehabilitation  
Medicine**



australian health services  
research institute



**UNIVERSITY  
OF WOLLONGONG  
AUSTRALIA**

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# Definition of ambulatory rehabilitation



- Starts with a multi-disciplinary assessment
- Is multi-disciplinary, although all therapies may not necessarily be delivered concurrently
- Is goal orientated – includes goal setting and review
- The program of care is time limited
- Is delivered in an ambulatory setting, either centre or community based

Ambulatory rehabilitation may occur as:

- The continuation of an inpatient episode of rehabilitation
- A rehabilitation program provided solely in an ambulatory setting

- The AROC dataset includes items that relate specifically to evaluating the efficacy of ambulatory rehabilitation programs.
- Data is collected to reflect the program of rehabilitation, thus an 'episode' is defined by the initial and final service contact.
- The challenge in developing the dataset was to include an outcome tool that could best address the diverse range of service models and impairment groups represented in ambulatory rehabilitation, with a minimum burden on resources.
- The over-arching outcome tool included in the dataset is the Australian Modified Lawton's Instrumental Activities of Daily Living (IADL) scale.
- Impairment or discipline specific outcomes tools have been added to the dataset to provide more outcome specificity by cohort.
- V4.1 of the AROC dataset was introduced on 1 July 2017.
- V4 AROC data items have been mapped to the V4.1 AROC dataset.

## All impairments

- Australian Modified Lawton's IADL Scale

## Stroke

- Upper Limb Motor Assessment Scale (if relevant)
- Timed 10 meter walk test (if relevant)
- Aphasia tool (specify tool used)

## Brain Dysfunction

- Mayo - Portland Adaptability Inventory - 4 (MPAI-4)

## Orthopaedic conditions

- Timed 10 meter walk test

## Reconditioning

- de Morton Mobility Index (DEMMI)

## Amputation of limb

- Timed up and go
- 6 minute walk test (optional)
- Timed 10 meter walk test (optional)

- Demographic and episode start information is reported for all episodes.
- An episode is considered "complete" for the purpose of calculating outcome statistics in this report when mode of episode end is discharged to final or interim destination.
- Outcome measures are based on completed episodes, as defined above, however the volume of reported data may be further reduced if data items are missing.

- This descriptive report includes analysis of data that has been collected by your service, and the combined submitted data of all participating ambulatory rehabilitation services.
- Where sufficient data for an impairment group is available ( $\geq 5$ ), AROC provides comparison analysis.
- The data presented in this report represents a small proportion of all ambulatory rehabilitation services and models of service delivery. Interpretation of these results must be made with care.

# Completeness of data reported



Number of episodes submitted each month to AROC by

## Anywhere Hospital

Do these numbers look like a complete year was submitted?

	No. episodes
Month	
July	27
August	25
September	29
October	38
November	40
December	40
January	21
February	26
March	23
April	28
May	36
June	17
Full year	350



# Quality of data reported

AROC core data set items	Item collected	
	No.	%
Path	350	100.0
Facility code	350	100.0
Facility name	350	100.0
Ward code <sup>1</sup>	291	83.1
Ward name <sup>1</sup>	295	84.3
MRN	350	100.0
Letters of name	348	99.4
Date of birth	350	100.0
DOB estimate flag	348	99.4
Sex	350	100.0
Indigenous status	350	100.0
Geographical residence	350	100.0
Postcode	348	99.4
Episode begin date	350	100.0
Episode end date	350	100.0
Funding source	350	100.0
Health fund/other payer	237	99.6
NDIS	306	87.4
Referral date	347	99.1
Impairment code	349	99.7
Onset date &/or time since onset	346	98.9
Relevant inpatient episode date	321	91.7
Episode begin reason	347	99.1
First direct care episode	349	99.7
Interpreter required	349	99.7
Date of multi-disciplinary rehab plan	348	99.4
Accommodation prior to episode	348	99.4
Carer status prior to episode	343	99.7
Employment status prior to episode	348	99.4
Accommodation during episode	348	99.4
Carer status during episode	338	100.0
Existing comorbidity interfering with rehab	349	99.7
— Comorbidities identified	118	100.0

AROC core data set items	Item collected	
	No.	%
Cognitive impairment impacting rehab	325	92.9
Episode end reason	347	99.1
Final accommodation – episode end	332	100.0
Carer status – episode end	329	100.0
Employment status after discharge	89	25.4 ←
Return to pre-impairment activities	319	91.1
Days seen	344	98.3
Occasions of service	345	98.6
Disciplines involved in therapy	346	98.9
Lawton's start date	347	99.1
Lawton's start items	347	99.1
Lawton's end date	337	96.3
Lawton's end items	337	96.3
GAS start date <sup>1</sup>	22	6.3
GAS start scores <sup>1</sup>	15	4.3
GAS end date <sup>1</sup>	22	6.3
GAS end scores <sup>1</sup>	15	4.3

## Impairment specific items

Stroke	No.	%
— Rehab aimed at upper limb function	30	71.4 ←
— Rehab aimed at gait retraining	30	71.4 ←
— Rehab aimed at aphasia	30	71.4 ←
— ULMAS start date	11	84.6 ←
— ULMAS start scores	11	84.6 ←
— ULMAS end date	11	84.6 ←
— ULMAS end scores	11	84.6 ←
— Timed ten metre walk start date	10	76.9 ←
— Timed ten metre walk test on admission	9	69.2 ←
— Timed ten metre walk end date	11	84.6 ←
— Timed ten metre walk test on discharge	10	76.9 ←

AROC impairment specific items	Item collected	
	No.	%
<b>Brain injury*</b>	<b>10</b>	
— MPAI4 start date	5	50.0 ←
— MPAI4 start scores	5	50.0 ←
— MPAI4 end date	5	50.0 ←
— MPAI4 end scores	5	50.0 ←
<b>Spinal cord injury*</b>	<b>2</b>	
— Injury start level	1	50.0 ←
<b>Reconditioning</b>	<b>44</b>	
— DEMMI start date	35	79.5 ←
— DEMMI start scores	35	79.5 ←
— DEMMI end date	33	75.0 ←
— DEMMI end scores	33	75.0 ←
<b>Amputation of limb</b>	<b>4</b>	
— Phase of care at episode start	4	100.0
— Phase of care during episode	4	100.0
— Phase of care at episode end	4	100.0
— Prosthetic device fitted	4	100.0
— Casting date <sup>2</sup>	3	100.0
— Date of first prosthetic fitting <sup>2</sup>	3	100.0
— Reason for delay in fitting <sup>2</sup>	0	0.0
— Timed up and go test	3	75.0 ←
— Six min walk test <sup>1</sup>	3	75.0
— Ten metre walk test <sup>1</sup>	2	50.0
<b>Orthopaedic conditions</b>	<b>182</b>	
— Timed ten metre walk start date	144	79.1 ←
— Timed ten metre walk test on admission	123	67.6 ←
— Timed ten metre walk end date	138	77.5 ←
— Timed ten metre walk test on discharge	135	75.8 ←

\*Also includes MMT that contain this impairment

Overall data quality score 87.8

NOTE: AROC can provide case listings of missing data to assist with updating.

(1) These data items are optional to collect

(2) Not included in overall data quality score

The following section provides demographic data. These data are presented at service and national levels.

Such data are useful to provide context to the more detailed analysis of rehabilitation outcomes, but in themselves are not impacted by clinical practice.

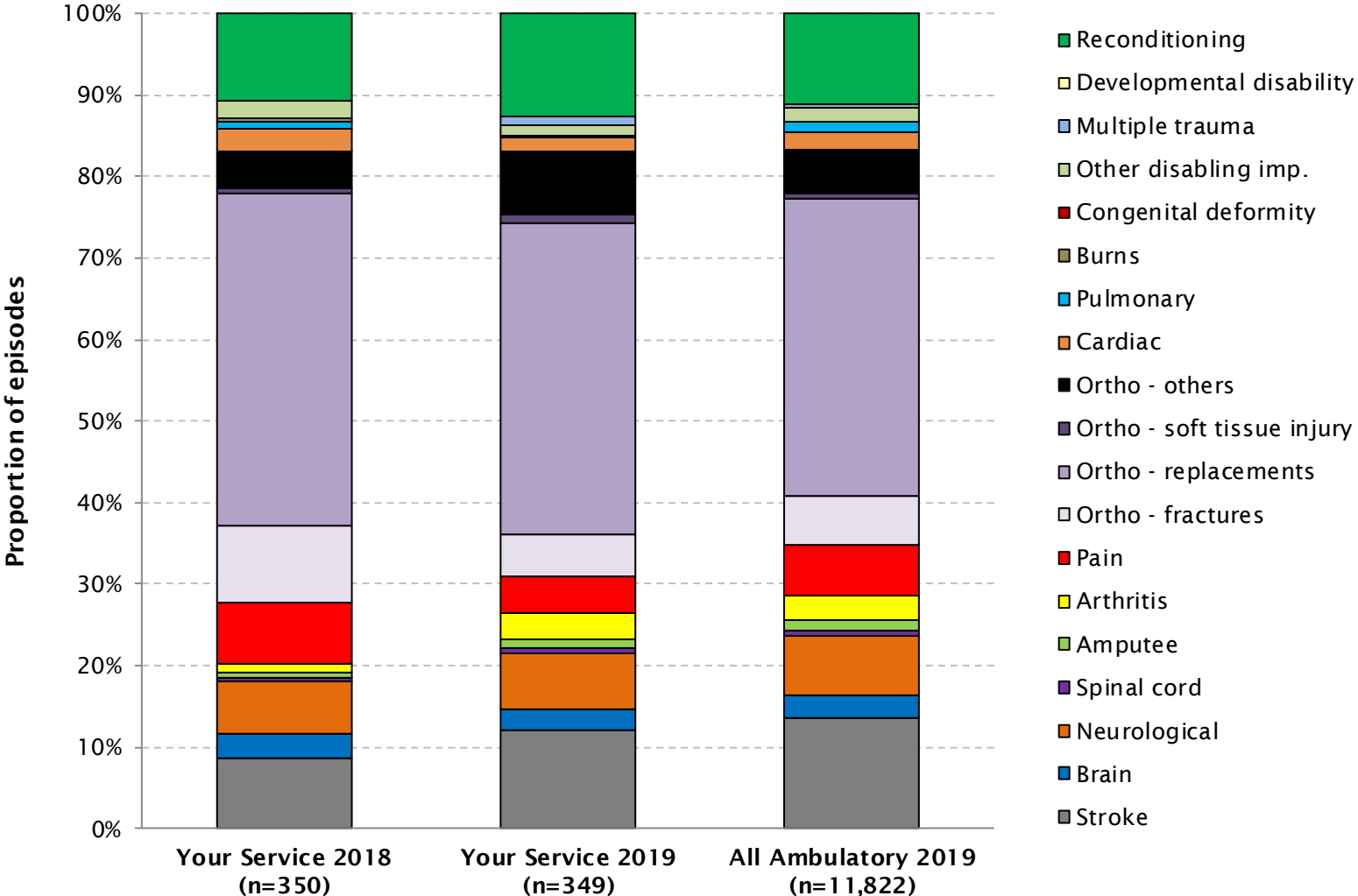
# Distribution of services and episodes



	Public		Private		All Ambulatory	
	No.	%	No.	%	No.	%
<b>Facilities</b>						
New South Wales	3	5.0	18	30.0	21	35.0
Victoria	0	—	4	6.7	4	6.7
Queensland	2	3.3	9	15.0	11	18.3
South Australia	8	13.3	1	1.7	9	15.0
Western Australia	1	1.7	1	1.7	2	3.3
Tasmania	1	1.7	0	—	1	1.7
Australian territories	1	1.7	1	1.7	2	3.3
NZ	10	16.7			10	16.7
<b>Total</b>	<b>26</b>	<b>43.3</b>	<b>34</b>	<b>56.7</b>	<b>60</b>	<b>100.0</b>

<b>Episodes</b>						
New South Wales	346	2.9	5,046	42.6	5,392	45.6
Victoria	0	—	1,132	9.6	1,132	9.6
Queensland	579	4.9	1,265	10.7	1,844	15.6
South Australia	1,751	14.8	35	0.3	1,786	15.1
Western Australia	397	3.4	73	0.6	470	4.0
Tasmania	16	0.1	0	—	16	0.1
Australian territories	1	0.0	418	3.5	419	3.5
NZ	777	6.6			777	6.6
<b>Total</b>	<b>3,867</b>	<b>32.7</b>	<b>7,969</b>	<b>67.3</b>	<b>11,836</b>	<b>100.0</b>

# Episodes by impairment group

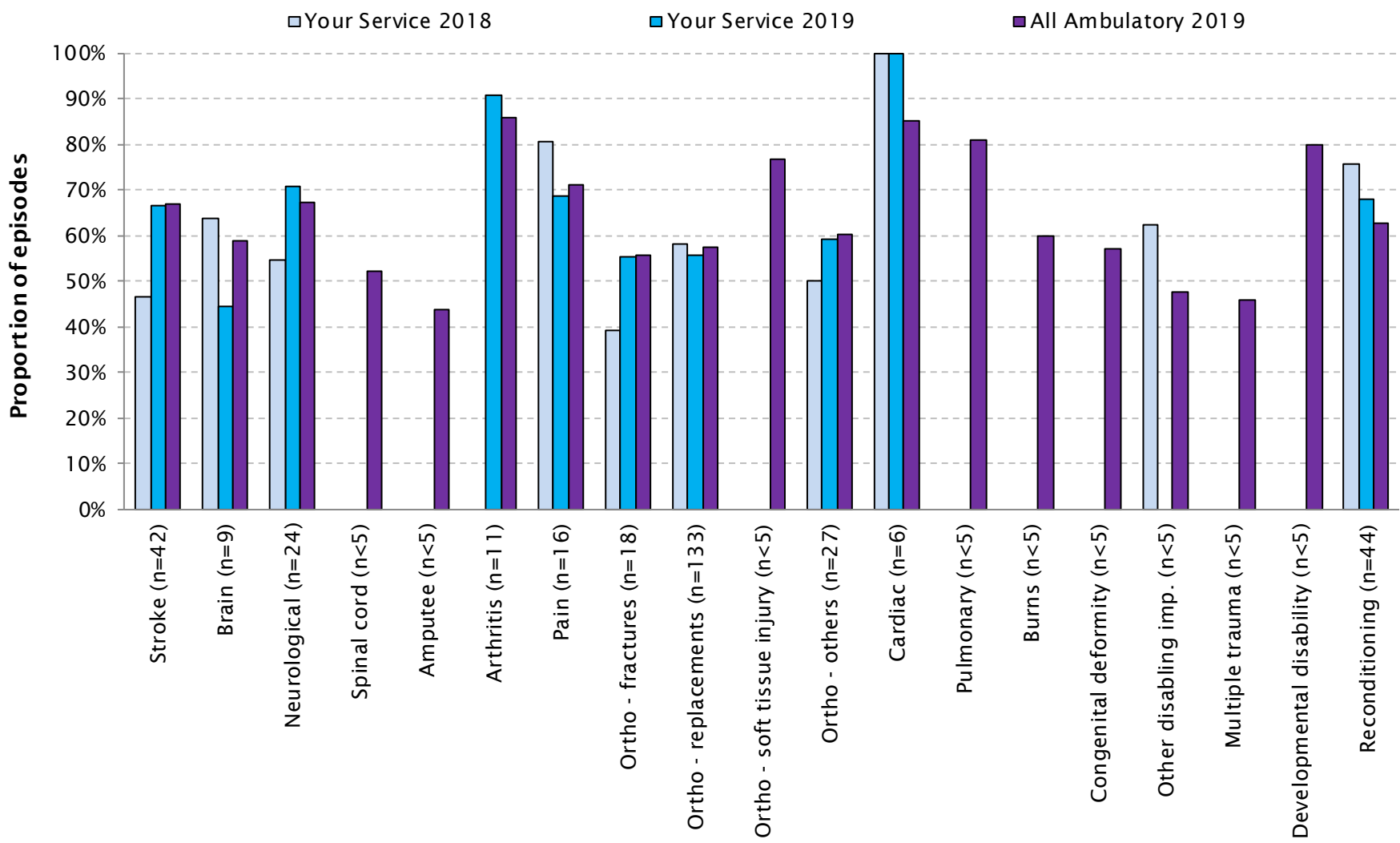


# Episodes by impairment group



Impairment group	Your Service 2018		Your Service 2019		All Ambulatory 2019	
	No.	%	No.	%	No.	%
Stroke	30	8.6	42	12.0	1,604	13.6
Brain	11	3.1	9	2.6	334	2.8
Neurological	22	6.3	24	6.9	855	7.2
Spinal cord	2	0.6	2	0.6	92	0.8
Amputee	2	0.6	4	1.1	149	1.3
Arthritis	4	1.1	11	3.2	351	3.0
Pain	26	7.4	16	4.6	727	6.1
Ortho - fractures	33	9.4	18	5.2	703	5.9
Ortho - replacements	143	40.9	133	38.1	4,319	36.5
Ortho - soft tissue injury	2	0.6	4	1.1	91	0.8
Ortho - others	16	4.6	27	7.7	635	5.4
Cardiac	10	2.9	6	1.7	242	2.0
Pulmonary	3	0.9	1	0.3	147	1.2
Burns	1	0.3	0	—	5	0.0
Congenital deformity	0	—	0	—	7	0.1
Other disabling imp.	8	2.3	4	1.1	200	1.7
Multiple trauma	0	—	4	1.1	37	0.3
Developmental disability	0	—	0	—	5	0.0
Reconditioning	37	10.6	44	12.6	1,319	11.2
Missing or excluded	0	—	1	—	14	—
<b>All episodes</b>	<b>350</b>	<b>100.0</b>	<b>350</b>	<b>100.0</b>	<b>11,836</b>	<b>100.0</b>

# First direct care rehabilitation episode by impairment group



# First direct care rehabilitation episode by impairment group

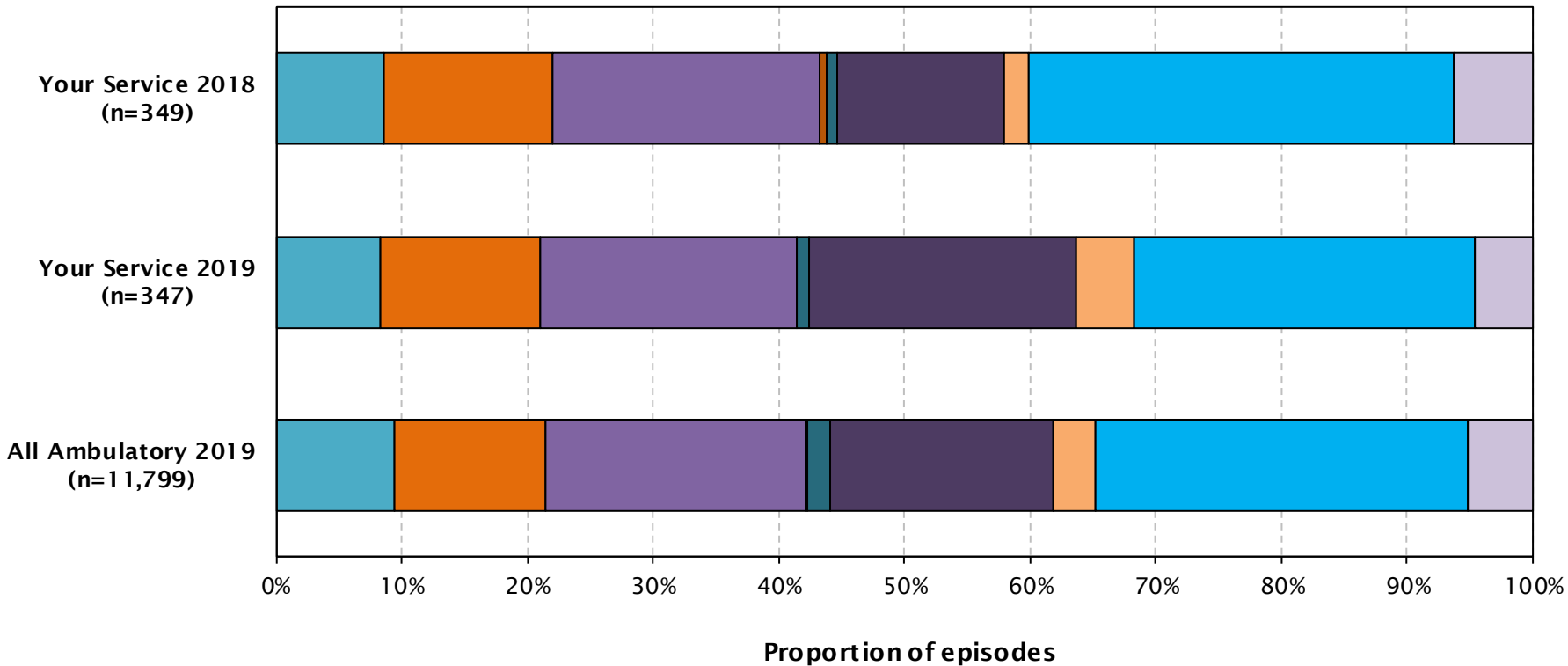


Impairment group	Your Service 2018				Your Service 2019				All Ambulatory 2019			
	No.	Primary admission	Subsequent admission	Missing	No.	Primary admission	Subsequent admission	Missing	No.	Primary admission	Subsequent admission	Missing
Stroke	30	14	16	0	42	28	14	0	1,604	1,074	526	4
Brain	11	7	4	0	9	4	5	0	334	197	137	0
Neurological	22	12	10	0	24	17	7	0	855	576	276	3
Spinal cord	2	2	0	0	2	0	2	0	92	48	44	0
Amputee	2	1	1	0	4	2	2	0	149	65	84	0
Arthritis	4	3	1	0	11	10	1	0	351	302	49	0
Pain	26	21	5	0	16	11	5	0	727	517	210	0
Ortho - fractures	33	13	20	0	18	10	8	0	703	393	310	0
Ortho - replacements	143	83	60	0	133	74	59	0	4,319	2,478	1,840	1
Ortho - soft tissue injury	2	2	0	0	4	3	1	0	91	70	20	1
Ortho - others	16	8	8	0	27	16	11	0	635	384	251	0
Cardiac	10	10	0	0	6	6	0	0	242	206	36	0
Pulmonary	3	3	0	0	1	0	1	0	147	119	28	0
Burns	1	1	0	0	0	0	0	0	5	3	2	0
Congenital deformity	0	0	0	0	0	0	0	0	7	4	3	0
Other disabling imp.	8	5	3	0	4	1	3	0	200	95	105	0
Multiple trauma	0	0	0	0	4	1	3	0	37	17	19	1
Developmental disability	0	0	0	0	0	0	0	0	5	4	1	0
Reconditioning	37	28	9	0	44	30	14	0	1,319	828	491	0
Missing or excluded	0				1				14			
<b>All episodes</b>	<b>350</b>	<b>213</b>	<b>137</b>	<b>0</b>	<b>350</b>	<b>213</b>	<b>136</b>	<b>0</b>	<b>11,836</b>	<b>7,380</b>	<b>4,432</b>	<b>10</b>

# Episode source



- Referred by GP
- Referred directly from specialist rooms
- Referred from acute specialist unit
- Referred from acute inpatient care different hospital
- Referred from sub-acute care different service
- Referred by therapist
- Referred from ED
- Referred from acute inpatient care same hospital
- Referred from sub-acute care same service



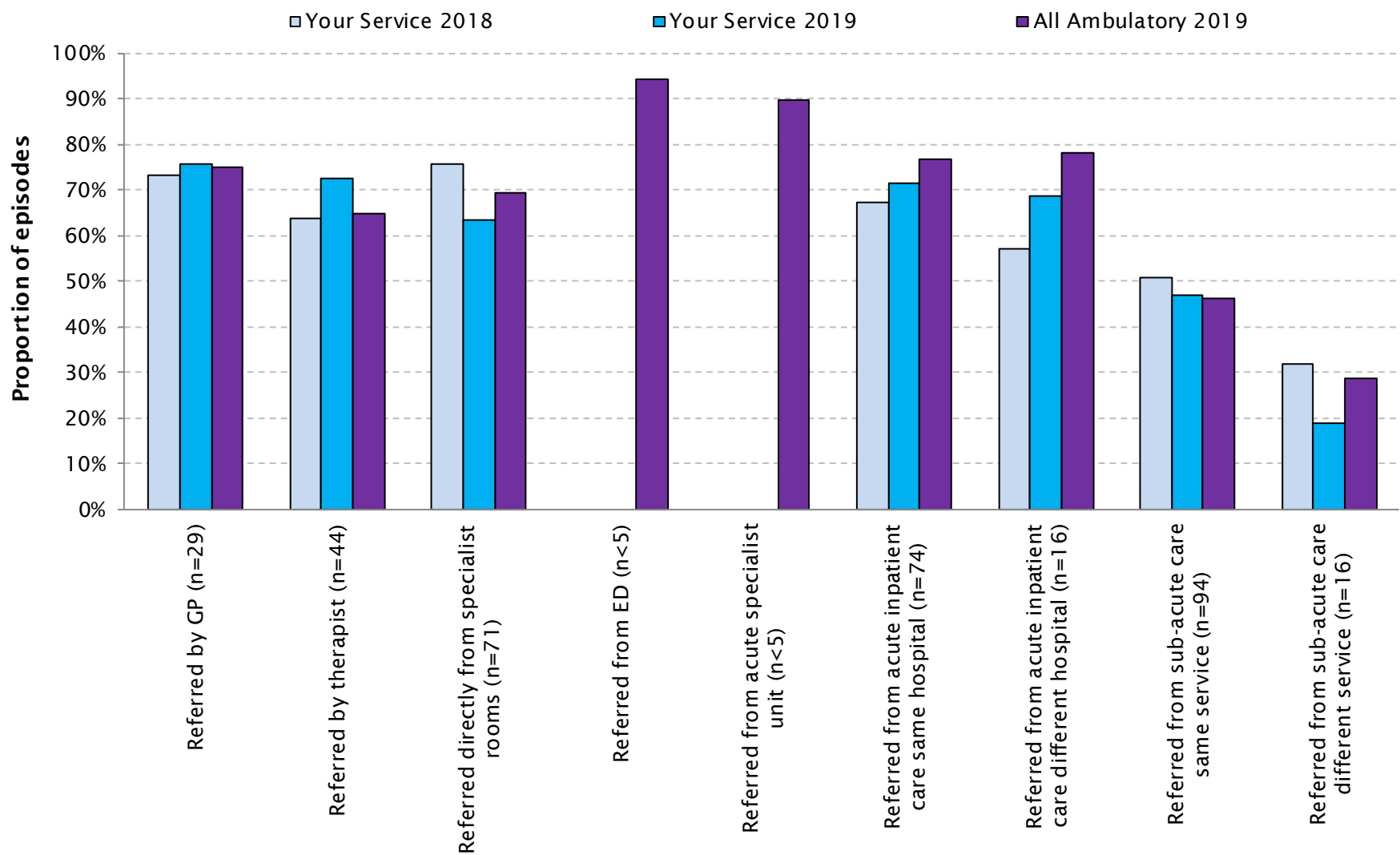


# Episode source



Episode source	Your Service 2018		Your Service 2019		All Ambulatory 2019	
	No.	%	No.	%	No.	%
Referred by GP	30	8.6	29	8.4	1,113	9.4
Referred by therapist	47	13.5	44	12.7	1,412	12.0
Referred directly from specialist rooms	74	21.2	71	20.5	2,448	20.7
Referred from ED	2	0.6	0	—	18	0.2
Referred from acute specialist unit	3	0.9	3	0.9	206	1.7
Referred from acute inpatient care same hospital	46	13.2	74	21.3	2,093	17.7
Referred from acute inpatient care different hospital	7	2.0	16	4.6	396	3.4
Referred from sub-acute care same service	118	33.8	94	27.1	3,500	29.7
Referred from sub-acute care different service	22	6.3	16	4.6	613	5.2
Missing	1		3		37	
<b>All episodes</b>	<b>350</b>	<b>100</b>	<b>350</b>	<b>100</b>	<b>11,836</b>	<b>100</b>

# First direct care rehabilitation episode by episode source

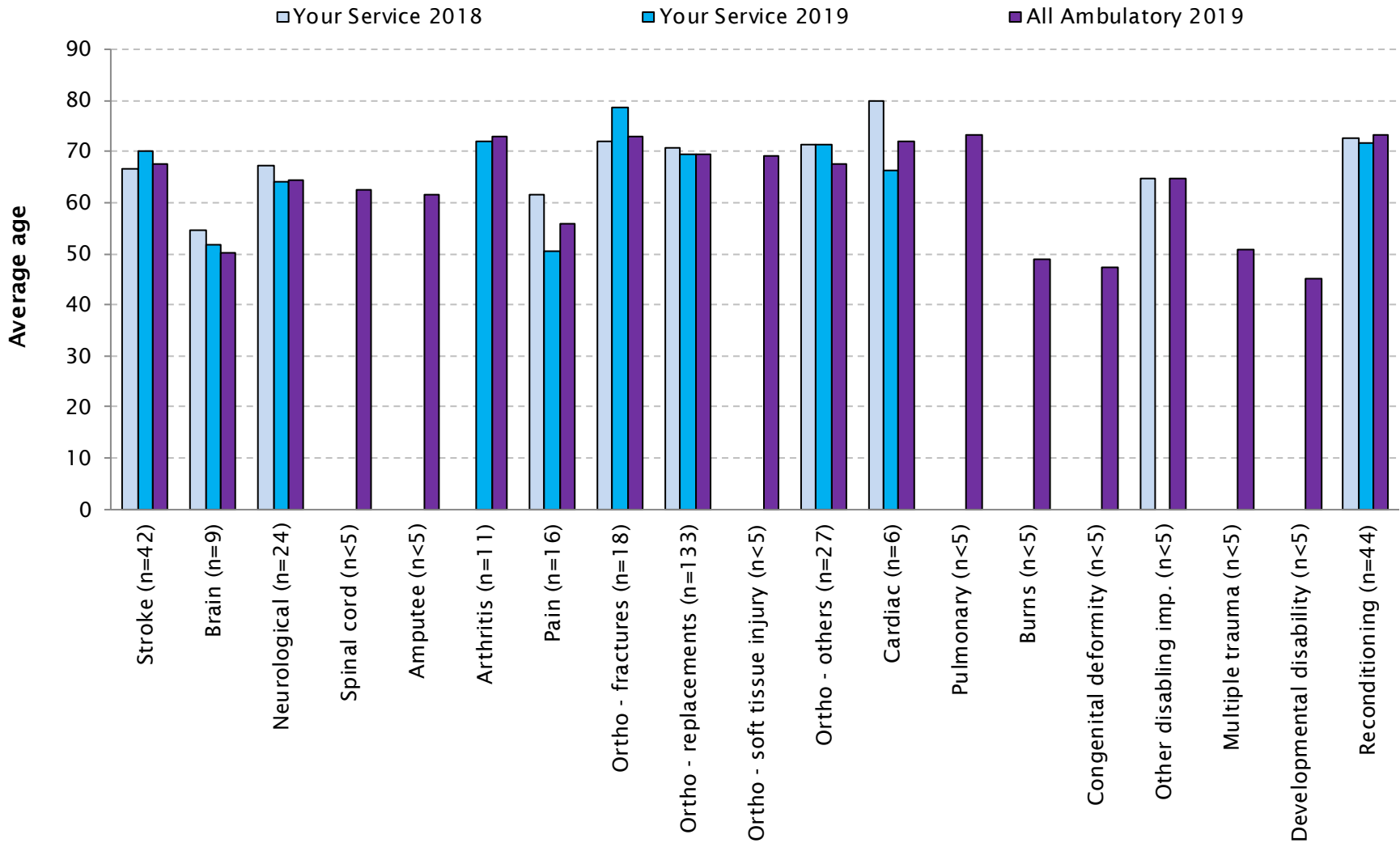


# First direct care rehabilitation episode by episode source



Impairment group	Your Service 2018				Your Service 2019				All Ambulatory 2019			
	No.	Primary admission	Subsequent admission	Missing	No.	Primary admission	Subsequent admission	Missing	No.	Primary admission	Subsequent admission	Missing
Referred by GP	30	22	8	0	29	22	7	0	1,113	834	277	2
Referred by therapist	47	30	17	0	44	32	12	0	1,412	914	498	0
Referred directly from specialist rooms	74	56	18	0	71	45	26	0	2,448	1,702	745	1
Referred from ED	2	1	1	0	0	0	0	0	18	17	1	0
Referred from acute specialist unit	3	1	2	0	3	3	0	0	206	185	21	0
Referred from acute inpatient care same hospital	46	31	15	0	74	53	21	0	2,093	1,608	484	1
Referred from acute inpatient care different hospital	7	4	3	0	16	11	5	0	396	310	86	0
Referred from sub-acute care same service	118	60	58	0	94	44	50	0	3,500	1,620	1,876	4
Referred from sub-acute care different service	22	7	15	0	16	3	13	0	613	176	437	0
Missing	1	1	0	0	3	0	2	1	37	18	10	9
<b>All episodes</b>	<b>350</b>	<b>213</b>	<b>137</b>	<b>0</b>	<b>350</b>	<b>213</b>	<b>136</b>	<b>1</b>	<b>11,836</b>	<b>7,384</b>	<b>4,435</b>	<b>17</b>

# Age by impairment group



# Age by impairment group

Impairment group	Your Service 2018			Your Service 2019			All Ambulatory 2019		
	No.	Mean age	(95% CI)	No.	Mean age	(95% CI)	No.	Mean age	(95% CI)
Stroke	30	66.5	(61.4 - 71.5)	42	70.0	(65.8 - 74.2)	1,599	67.6	(66.9 - 68.3)
Brain	11	54.6	(41.8 - 67.5)	9	51.9	(38.7 - 65.0)	332	50.1	(48.1 - 52.2)
Neurological	22	67.1	(60.5 - 73.7)	24	64.0	(57.6 - 70.5)	854	64.5	(63.4 - 65.5)
Spinal cord	2	53.5	(-6.3 - 113.3)	2	54.0	(18.7 - 89.3)	91	62.4	(59.6 - 65.2)
Amputee	2	58.5	(51.6 - 65.4)	4	57.0	(43.1 - 70.9)	149	61.6	(59.2 - 63.9)
Arthritis	4	78.3	(65.7 - 90.8)	11	71.9	(64.3 - 79.5)	351	72.8	(71.7 - 73.9)
Pain	26	61.6	(56.7 - 66.6)	16	50.6	(41.3 - 59.8)	723	56.0	(54.5 - 57.5)
Ortho - fractures	32	71.9	(66.2 - 77.5)	18	78.7	(74.5 - 82.9)	703	73.0	(71.9 - 74.0)
Ortho - replacements	142	70.6	(69.2 - 72.0)	133	69.6	(67.8 - 71.3)	4,313	69.4	(69.2 - 69.7)
Ortho - soft tissue injury	2	61.5	(46.8 - 76.2)	4	80.0	(69.4 - 90.6)	91	69.1	(66.0 - 72.2)
Ortho - others	16	71.3	(69.0 - 73.6)	27	71.3	(65.0 - 77.7)	634	67.6	(66.5 - 68.7)
Cardiac	10	80.0	(75.8 - 84.2)	6	66.2	(53.7 - 78.7)	241	71.9	(70.3 - 73.5)
Pulmonary	3	74.3	(70.7 - 78.0)	1	82.0		147	73.2	(71.6 - 74.8)
Burns	1	47.0		0	—		5	49.0	(33.0 - 65.0)
Congenital deformity	0	—		0	—		7	47.3	(31.4 - 63.1)
Other disabling imp.	8	64.8	(50.8 - 78.7)	4	67.3	(42.5 - 92.0)	200	64.8	(62.6 - 67.1)
Multiple trauma	0	—		4	53.5	(35.9 - 71.1)	37	50.8	(44.5 - 57.0)
Developmental disability	0	—		0	—		5	45.2	(31.4 - 59.0)
Reconditioning	37	72.5	(68.1 - 76.9)	44	71.7	(67.7 - 75.7)	1,317	73.2	(72.5 - 73.9)
Missing or excluded	2			1			37		
<b>All episodes</b>	<b>350</b>	<b>69.2</b>	<b>(67.8 - 70.5)</b>	<b>350</b>	<b>68.5</b>	<b>(67.0 - 70.0)</b>	<b>11,836</b>	<b>67.9</b>	<b>(67.6 - 68.1)</b>

# NDIS funding status at episode end



Episode source	Your Service 2018		Your Service 2019 All Ambulatory 2019 (AU)			
	No.	%	No.	%	No.	%
Accepted - on a plan	1	0.6	7	2.3	139	1.3
Accepted - waiting	1	0.6	1	0.3	61	0.6
Awaiting eligibility determination	0	—	1	0.3	88	0.9
Eligible - hasn't applied	1	0.6	1	0.3	140	1.4
Eligible - NDIS not yet available in the region	0	—	0	—	9	0.1
Not eligible / not relevant	169	98.3	296	96.7	9,910	95.8
Missing	178		44		712	
<b>All episodes (AU)</b>	<b>350</b>		<b>350</b>		<b>11,059</b>	

# Staff type by impairment group

Percentage of patients receiving treatment from this staff type	Physiotherapist	Hydrotherapist	Occupational Therapist	Exercise Physiologist	Therapy Aide	Medical Officer	Registered Nurse	Enrolled Nurse	Speech Pathologist	Social Worker	Dietician	Psychologist	Other Staff Type
<b>Impairment group</b>													
Stroke (n=42)	73.8	9.5	85.7	26.2	38.1	23.8	9.5	2.4	50.0	33.3	16.7	0.0	26.2
Brain (n=9)	66.7	11.1	77.8	44.4	44.4	22.2	11.1	0.0	44.4	22.2	0.0	22.2	44.4
Neurological (n=24)	95.8	4.2	87.5	25.0	25.0	16.7	12.5	4.2	58.3	50.0	25.0	16.7	25.0
Spinal cord (n=2)	100.0	50.0	50.0	100.0	50.0	0.0	0.0	0.0	0.0	50.0	50.0	50.0	0.0
Amputee (n=4)	100.0	0.0	75.0	25.0	0.0	25.0	0.0	0.0	0.0	50.0	25.0	0.0	100.0
Arthritis (n=11)	90.9	45.5	90.9	45.5	45.5	45.5	18.2	9.1	9.1	27.3	45.5	0.0	36.4
Pain (n=16)	100.0	31.3	87.5	43.8	0.0	0.0	31.3	0.0	0.0	12.5	31.3	50.0	18.8
Ortho - fractures (n=18)	100.0	16.7	66.7	27.8	38.9	22.2	5.6	0.0	11.1	22.2	5.6	0.0	5.6
Ortho - replacements (n=131)	100.0	61.1	58.8	39.7	17.6	25.2	25.2	6.9	0.0	5.3	11.5	0.0	10.7
Ortho - soft tissue injury (n=4)	100.0	25.0	50.0	25.0	25.0	0.0	25.0	25.0	0.0	0.0	0.0	0.0	25.0
Ortho - others (n=27)	100.0	70.4	55.6	51.9	29.6	25.9	14.8	3.7	0.0	3.7	29.6	0.0	3.7
Cardiac (n=6)	100.0	0.0	16.7	50.0	0.0	0.0	16.7	0.0	0.0	0.0	33.3	16.7	66.7
Pulmonary (n=1)	100.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0
Burns (n=0)	—	—	—	—	—	—	—	—	—	—	—	—	—
Congenital deformity (n=0)	—	—	—	—	—	—	—	—	—	—	—	—	—
Other disabling imp. (n=4)	75.0	50.0	25.0	75.0	50.0	0.0	25.0	0.0	25.0	25.0	0.0	25.0	25.0
Multiple trauma (n=4)	75.0	0.0	50.0	50.0	50.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	25.0
Developmental disability (n=0)	—	—	—	—	—	—	—	—	—	—	—	—	—
Reconditioning (n=43)	93.0	23.3	72.1	55.8	41.9	25.6	7.0	4.7	9.3	16.3	18.6	9.3	11.6

# Outcome measures – All impairments

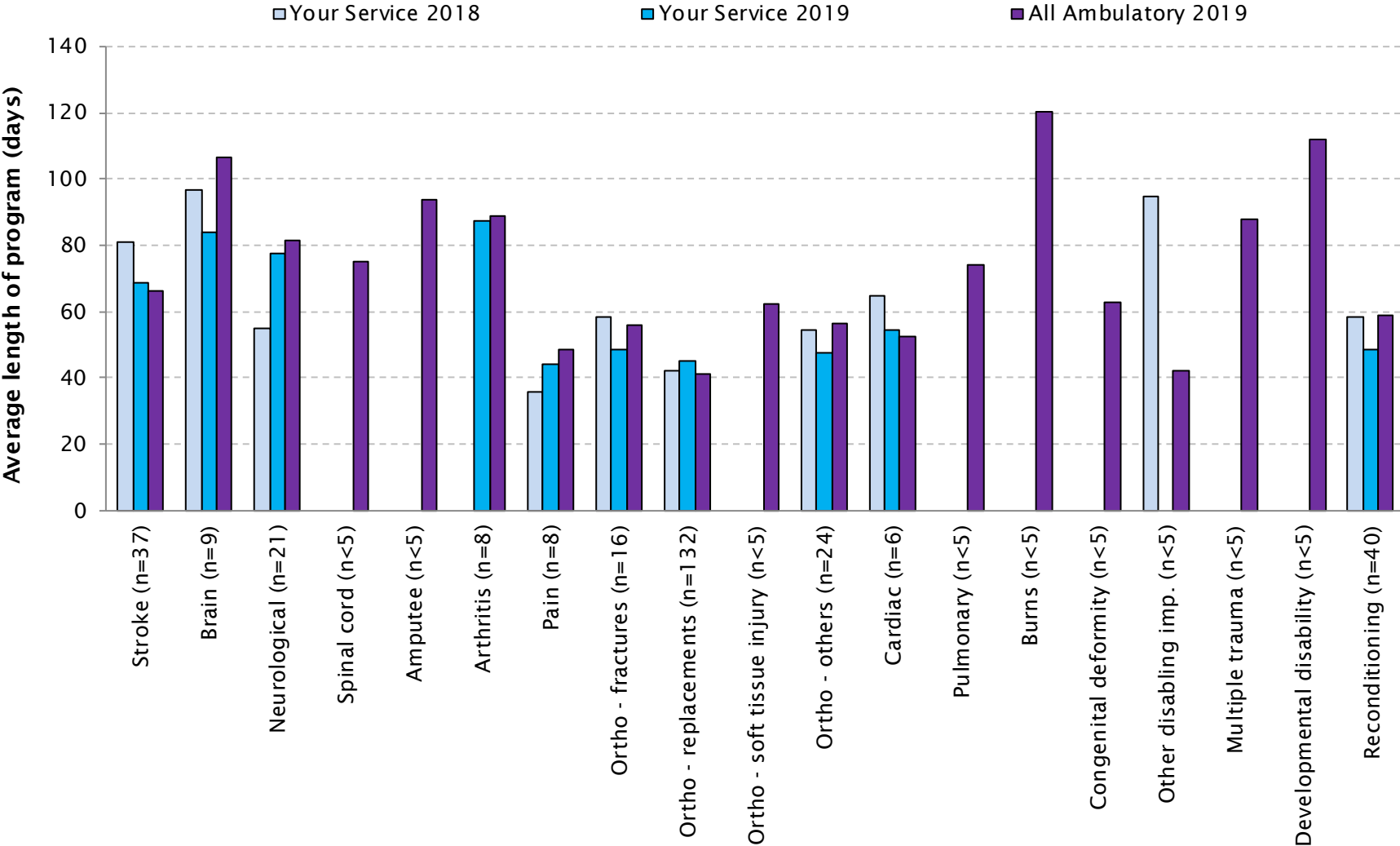


The following section presents analysis of each of the following elements:

- Episode length
- Occasions of service
- Employment status
- Independence outcomes
- Lawton's score outcomes



# Length of program by impairment group

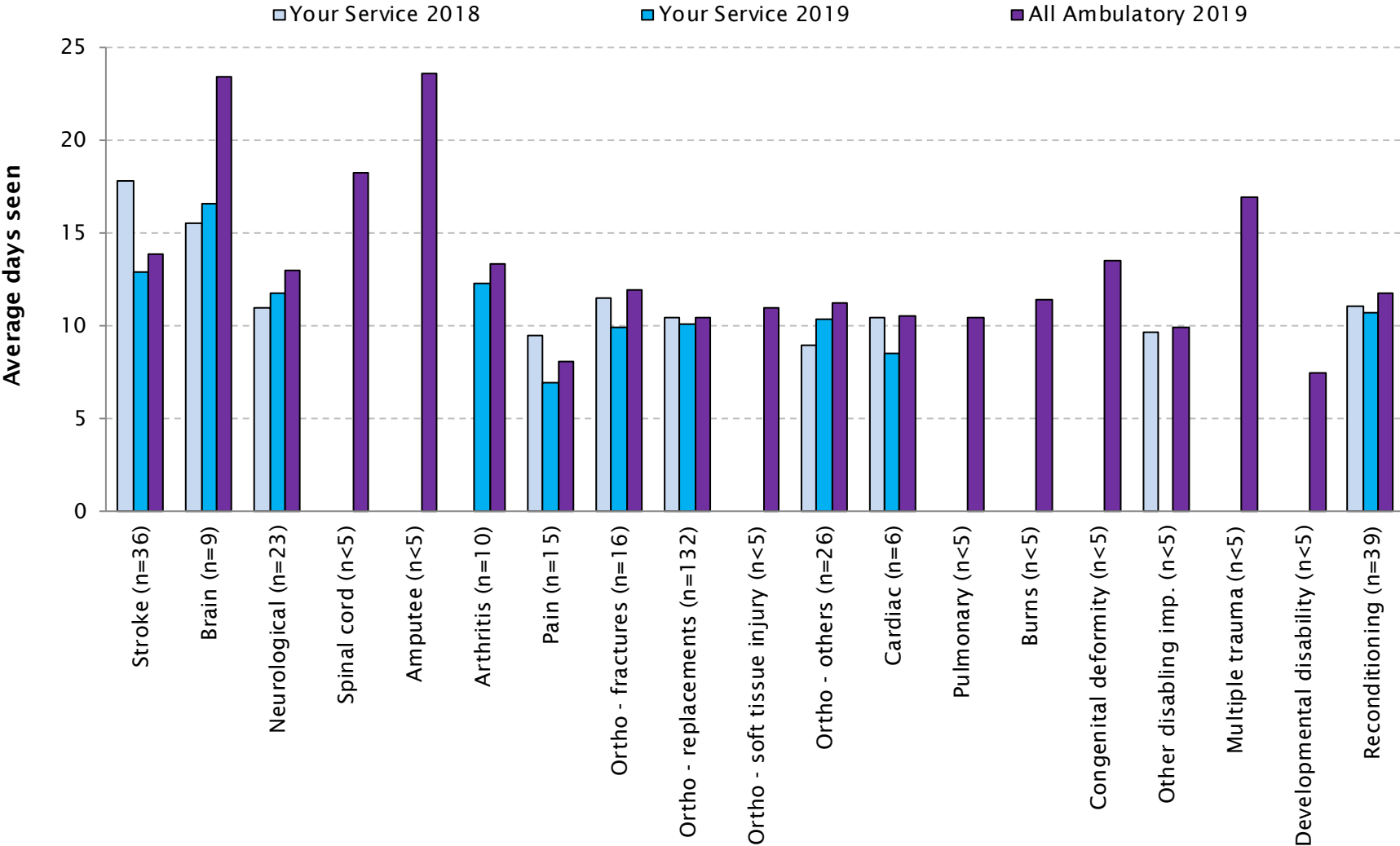


# Length of program by impairment group

Impairment group	Your Service 2018			Your Service 2019			All Ambulatory 2019		
	No.	Mean LOP	Trimmed data range*	No.	Mean LOP	Trimmed data range*	No.	Mean LOP	Trimmed data range*
Stroke	27	81.1	(35 - 273)	37	68.9	(22 - 185)	1,515	66.0	(16 - 161)
Brain	10	96.5		9	83.9		307	106.5	(21 - 266)
Neurological	16	54.8		21	77.5	(28 - 234)	786	81.4	(22 - 234)
Spinal cord	1	—		2	—		81	75.0	(25 - 154)
Amputee	2	—		3	—		131	93.9	(23 - 251)
Arthritis	4	—		8	87.3		312	88.6	(23 - 202)
Pain	16	35.8		8	44.1		515	48.8	(11 - 119)
Ortho - fractures	29	58.6	(17 - 131)	16	48.4		650	55.8	(17 - 120)
Ortho - replacements	115	42.1	(21 - 84)	132	45.3	(21 - 105)	4,145	41.1	(17 - 84)
Ortho - soft tissue injury	2	—		4	—		85	62.5	(24 - 118)
Ortho - others	13	54.3		24	47.4	(26 - 77)	589	56.5	(21 - 129)
Cardiac	10	64.9		6	54.7		230	52.5	(20 - 148)
Pulmonary	3	—		1	—		126	73.9	(28 - 210)
Burns	1	—		0	—		5	120.2	
Congenital deformity	0	—		0	—		6	62.7	
Other disabling imp.	8	94.9		4	—		176	42.0	(10 - 112)
Multiple trauma	0	—		3	—		36	87.7	(16 - 205)
Developmental disability	0	—		0	—		5	111.8	
Reconditioning	34	58.6	(21 - 158)	40	48.7	(28 - 80)	1,188	58.9	(21 - 136)
Missing or excluded	59			32			948		
<b>All episodes</b>	<b>350</b>	<b>57.2</b>	<b>(20 - 157)</b>	<b>350</b>	<b>54.4</b>	<b>(21 - 130)</b>	<b>11,836</b>	<b>56.3</b>	<b>(17 - 143)</b>

\*Includes middle 90% of episodes

# Days seen by impairment group

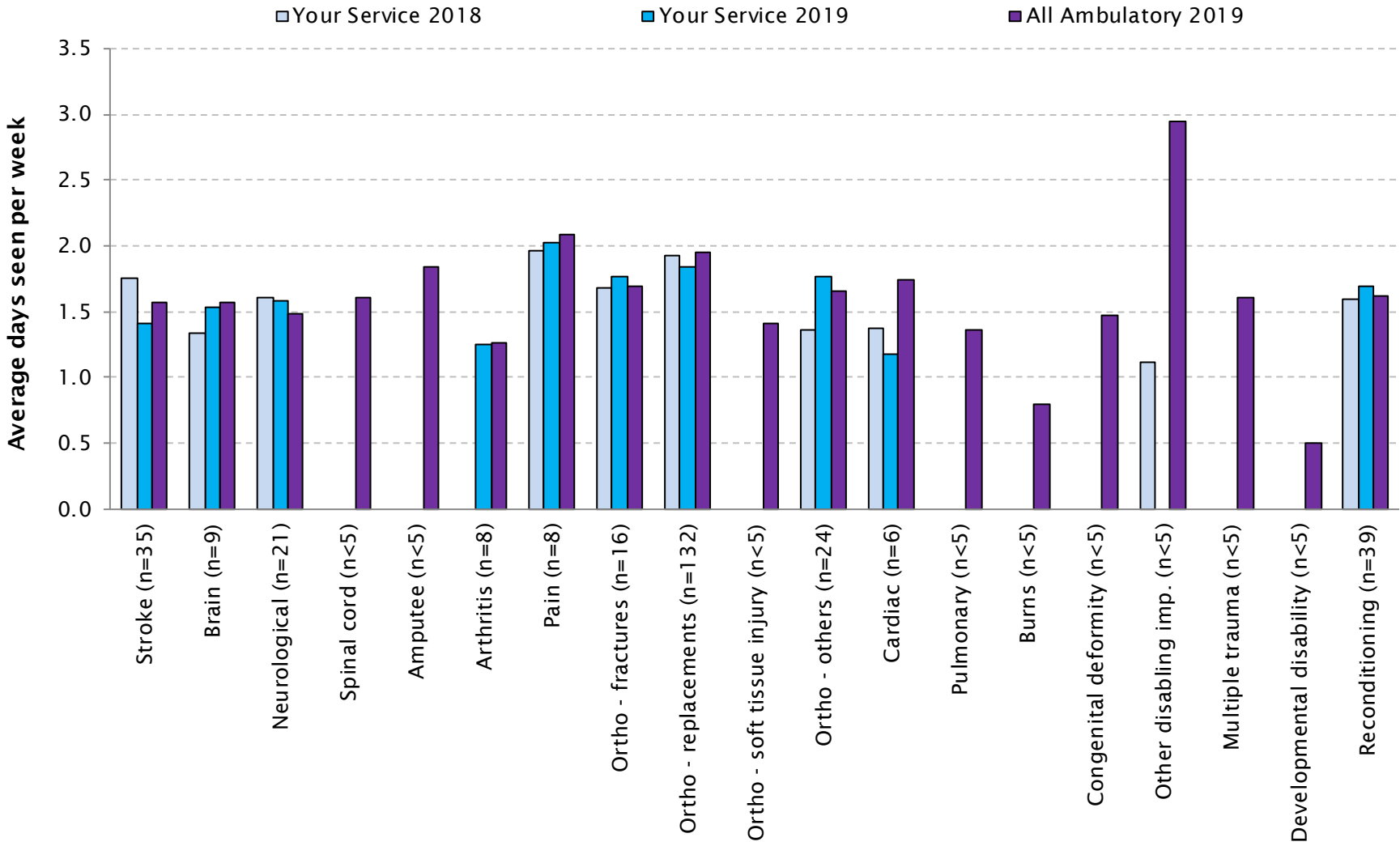


# Days seen by impairment group

Impairment group	Your Service 2018			Your Service 2019			All Ambulatory 2019		
	No. days seen	Mean	Trimmed data range*	No. days seen	Mean	Trimmed data range*	No. days seen	Mean	Trimmed data range*
Stroke	28	17.8	(3 - 43)	36	12.9	(3 - 47)	1,512	13.8	(3 - 35)
Brain	10	15.5		9	16.6		310	23.4	(3 - 81)
Neurological	17	10.9		23	11.7	(4 - 20)	803	12.9	(3 - 27)
Spinal cord	1	—		2	—		85	18.2	(6 - 46)
Amputee	2	—		3	—		131	23.6	(3 - 54)
Arthritis	4	—		10	12.3		326	13.3	(3 - 28)
Pain	20	9.5	(1 - 14)	15	6.9		703	8.1	(1 - 16)
Ortho - fractures	32	11.5	(2 - 25)	16	9.9		655	11.9	(3 - 25)
Ortho - replacements	118	10.4	(5 - 20)	132	10.1	(5 - 20)	4,200	10.4	(4 - 19)
Ortho - soft tissue injury	2	—		4	—		85	10.9	(5 - 20)
Ortho - others	14	8.9		26	10.3	(3 - 18)	604	11.2	(4 - 21)
Cardiac	10	10.4		6	8.5		231	10.5	(4 - 19)
Pulmonary	3	—		0	—		126	10.4	(2 - 18)
Burns	1	—		0	—		5	11.4	
Congenital deformity	0	—		0	—		6	13.5	
Other disabling imp.	8	9.6		4	—		193	9.9	(3 - 20)
Multiple trauma	0	—		3	—		34	16.9	(3 - 51)
Developmental disability	0	—		0	—		5	7.4	
Reconditioning	34	11.0	(5 - 22)	39	10.7	(5 - 18)	1,178	11.7	(3 - 22)
Missing or excluded	46			22			644		
<b>All episodes</b>	<b>350</b>	<b>11.8</b>	<b>(3 - 25)</b>	<b>350</b>	<b>10.8</b>	<b>(3 - 21)</b>	<b>11,836</b>	<b>11.9</b>	<b>(3 - 25)</b>

\*Includes middle 90% of episodes

# Days seen per elapsed week by impairment group

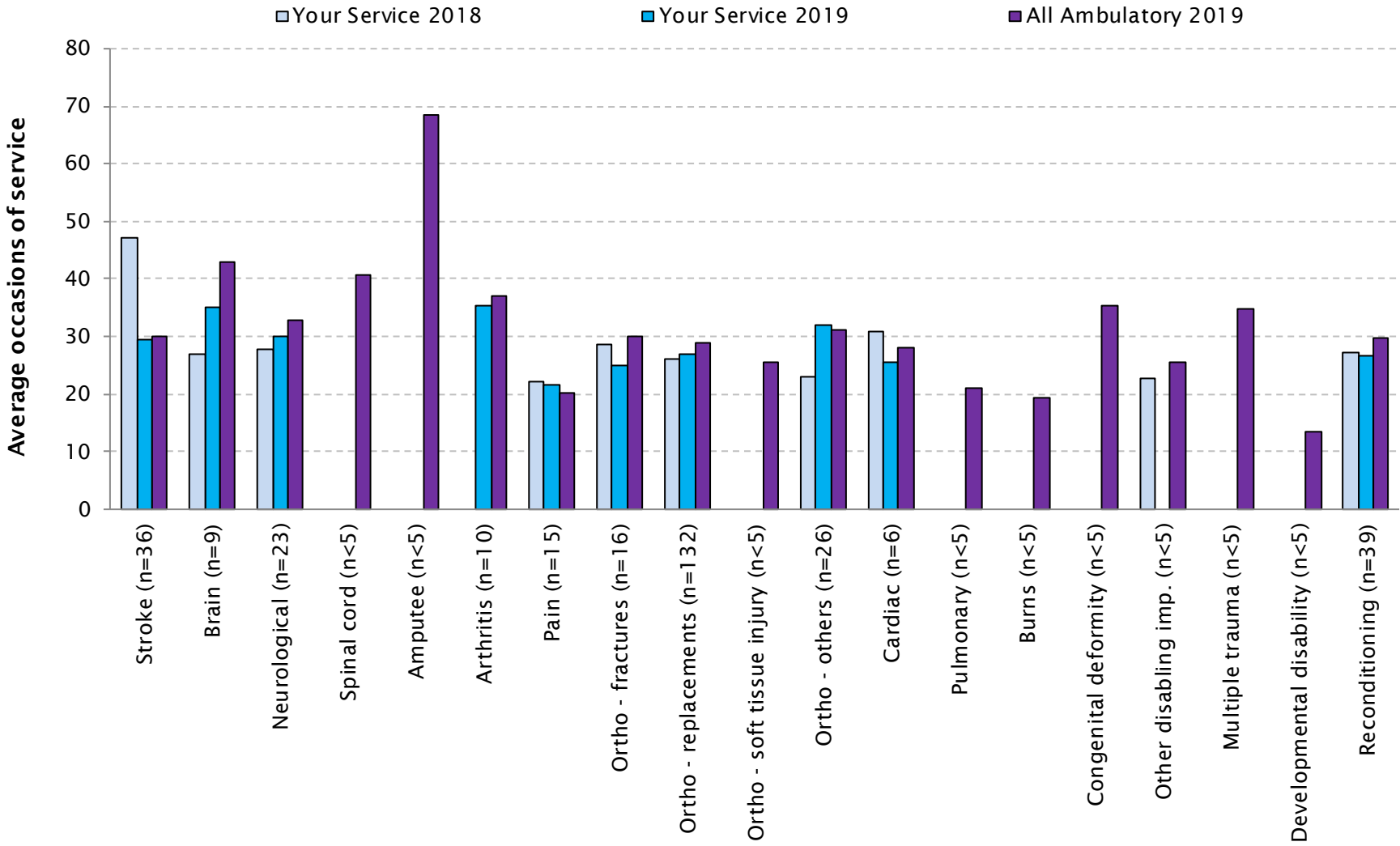


# Days seen per elapsed week by impairment group

Impairment group	Your Service 2018			Your Service 2019			All Ambulatory 2019		
	No.	Mean days seen per week	Trimmed data range*	No.	Mean days seen per week	Trimmed data range*	No.	Mean days seen per week	Trimmed data range*
Stroke	27	1.8	(0.5 - 3.4)	35	1.4	(0.6 - 2.9)	1,495	1.6	(0.4 - 3.1)
Brain	10	1.3		9	1.5		303	1.6	(0.4 - 3.2)
Neurological	16	1.6		21	1.6	(0.6 - 3.7)	779	1.5	(0.3 - 2.9)
Spinal cord	1	—		2	—		80	1.6	(0.6 - 2.5)
Amputee	2	—		3	—		124	1.8	(0.5 - 3.1)
Arthritis	4	—		8	1.3		312	1.3	(0.4 - 2.3)
Pain	16	2.0		8	2.0		513	2.1	(0.7 - 6.4)
Ortho - fractures	29	1.7	(0.7 - 2.9)	16	1.8		641	1.7	(0.7 - 2.5)
Ortho - replacements	115	1.9	(1.0 - 3.0)	132	1.8	(0.8 - 3.0)	4,144	2.0	(1.0 - 3.0)
Ortho - soft tissue injury	2	—		4	—		85	1.4	(0.7 - 2.4)
Ortho - others	13	1.4		24	1.8	(0.9 - 2.9)	589	1.7	(0.7 - 2.6)
Cardiac	10	1.4		6	1.2		228	1.7	(0.6 - 2.4)
Pulmonary	3	—		0	—		125	1.4	(0.2 - 2.3)
Burns	1	—		0	—		5	0.8	
Congenital deformity	0	—		0	—		6	1.5	
Other disabling imp.	8	1.1		4	—		175	2.9	(0.4 - 6.4)
Multiple trauma	0	—		3	—		34	1.6	(0.7 - 3.9)
Developmental disability	0	—		0	—		5	0.5	
Reconditioning	34	1.6	(0.7 - 2.8)	39	1.7	(0.7 - 2.9)	1,160	1.6	(0.6 - 2.5)
Missing or excluded	59			36			1,033		
<b>All episodes</b>	<b>350</b>	<b>1.7</b>	<b>(0.6 - 2.9)</b>	<b>350</b>	<b>1.7</b>	<b>(0.6 - 3.0)</b>	<b>11,836</b>	<b>1.8</b>	<b>(0.6 - 3.0)</b>

\*Includes middle 90% of episodes

# Occasions of service by impairment group



# Occasions of service by impairment group

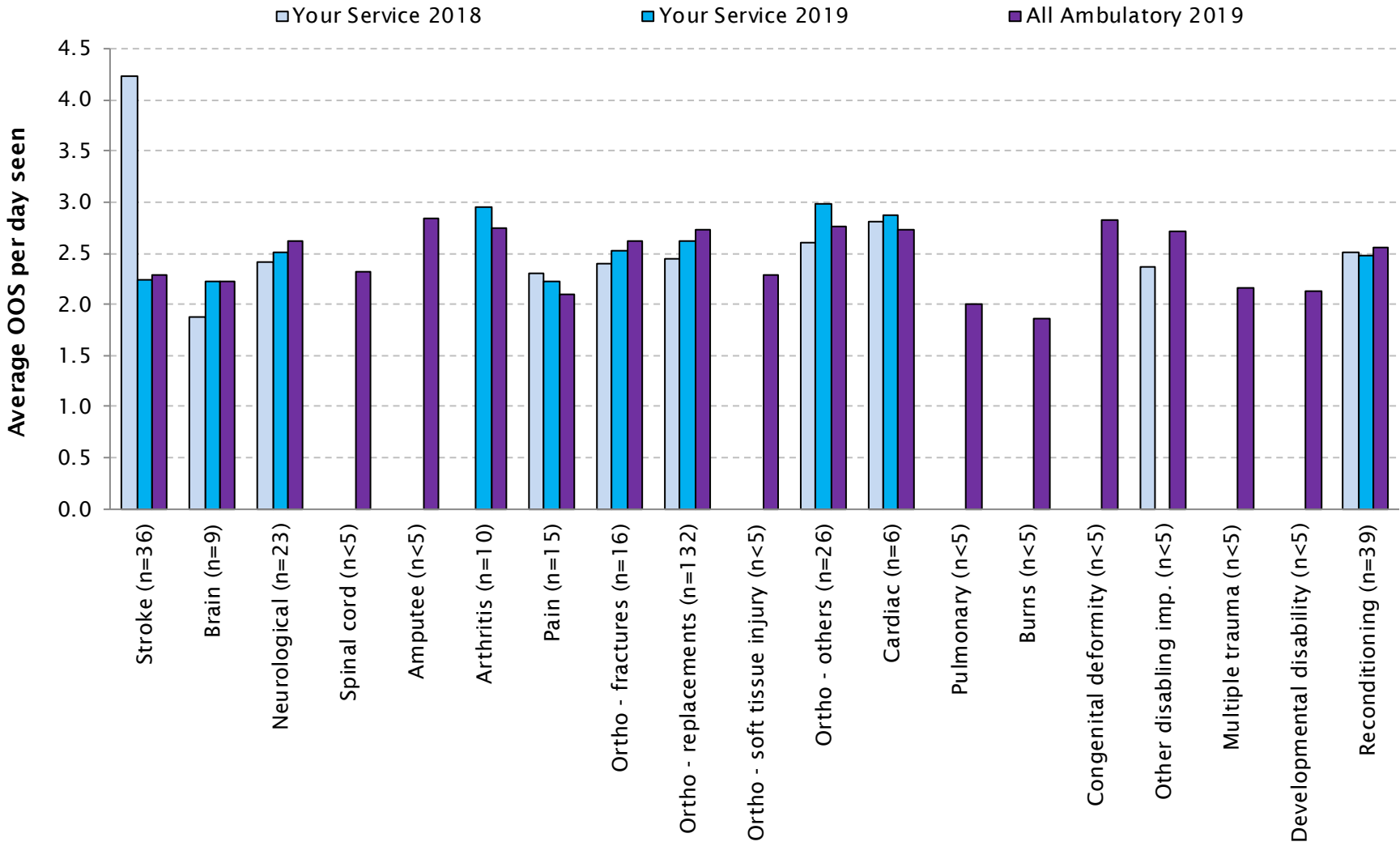


Impairment group	Your Service 2018			Your Service 2019			All Ambulatory 2019		
	No.	Mean occasions of service	Trimmed data range*	No.	Mean occasions of service	Trimmed data range*	No.	Mean occasions of service	Trimmed data range*
Stroke	28	47.1	(8 - 133)	36	29.5	(4 - 108)	1,514	29.9	(4 - 90)
Brain	10	27.0		9	35.1		310	43.0	(5 - 156)
Neurological	17	27.7		23	29.9	(10 - 66)	803	32.8	(7 - 71)
Spinal cord	1	—		2	—		85	40.7	(9 - 85)
Amputee	2	—		3	—		131	68.3	(5 - 176)
Arthritis	4	—		10	35.2		326	36.9	(8 - 90)
Pain	20	22.3	(1 - 39)	15	21.7		703	20.1	(1 - 54)
Ortho - fractures	32	28.6	(5 - 89)	16	24.9		655	30.0	(5 - 68)
Ortho - replacements	118	26.2	(10 - 53)	132	27.0	(10 - 60)	4,199	28.9	(8 - 60)
Ortho - soft tissue injury	2	—		4	—		85	25.5	(6 - 60)
Ortho - others	14	23.1		26	31.9	(13 - 96)	603	31.2	(8 - 72)
Cardiac	10	30.8		6	25.5		231	28.0	(8 - 49)
Pulmonary	3	—		1	—		127	21.1	(3 - 39)
Burns	1	—		0	—		5	19.2	
Congenital deformity	0	—		0	—		6	35.3	
Other disabling imp.	8	22.6		4	—		193	25.4	(6 - 57)
Multiple trauma	0	—		3	—		34	34.6	(6 - 79)
Developmental disability	0	—		0	—		5	13.4	
Reconditioning	34	27.1	(10 - 68)	39	26.5	(8 - 50)	1,178	29.6	(6 - 60)
Missing or excluded	46			21			643		
<b>All episodes</b>	<b>350</b>	<b>29.5</b>	<b>(6 - 63)</b>	<b>350</b>	<b>27.9</b>	<b>(5 - 64)</b>	<b>11,836</b>	<b>29.7</b>	<b>(5 - 70)</b>

\*Includes middle 90% of episodes



# Occasions of service per day seen by impairment group



# Occasions of service per day seen by impairment group



Impairment group	Your Service 2018			Your Service 2019			All Ambulatory 2019		
	No.	Mean OOS per day seen	Trimmed data range*	No.	Mean OOS per day seen	Trimmed data range*	No.	Mean OOS per day seen	Trimmed data range*
Stroke	28	4.2	(1.5 - 5.0)	36	2.2	(1.0 - 3.3)	1,512	2.3	(1.0 - 4.6)
Brain	10	1.9		9	2.2		310	2.2	(1.0 - 4.4)
Neurological	17	2.4		23	2.5	(1.1 - 4.5)	803	2.6	(1.2 - 4.4)
Spinal cord	1	—		2	—		85	2.3	(1.0 - 3.6)
Amputee	2	—		3	—		131	2.8	(1.4 - 4.3)
Arthritis	4	—		10	2.9		326	2.7	(1.2 - 4.4)
Pain	20	2.3	(1.0 - 3.0)	15	2.2		703	2.1	(1.0 - 4.7)
Ortho - fractures	32	2.4	(1.0 - 5.5)	16	2.5		655	2.6	(1.0 - 4.9)
Ortho - replacements	118	2.4	(1.4 - 3.5)	132	2.6	(1.4 - 4.0)	4,199	2.7	(1.3 - 4.5)
Ortho - soft tissue injury	2	—		4	—		85	2.3	(1.0 - 3.6)
Ortho - others	14	2.6		26	3.0	(2.0 - 6.0)	603	2.8	(1.0 - 4.1)
Cardiac	10	2.8		6	2.9		231	2.7	(1.5 - 3.7)
Pulmonary	3	—		0	—		126	2.0	(1.0 - 3.1)
Burns	1	—		0	—		5	1.9	
Congenital deformity	0	—		0	—		6	2.8	
Other disabling imp.	8	2.4		4	—		193	2.7	(1.1 - 3.1)
Multiple trauma	0	—		3	—		34	2.2	(1.0 - 3.8)
Developmental disability	0	—		0	—		5	2.1	
Reconditioning	34	2.5	(1.1 - 3.9)	39	2.5	(1.2 - 4.1)	1,178	2.6	(1.3 - 3.9)
Missing or excluded	46			22			646		
<b>All episodes</b>	<b>350</b>	<b>2.6</b>	<b>(1.0 - 3.9)</b>	<b>350</b>	<b>2.5</b>	<b>(1.0 - 4.3)</b>	<b>11,836</b>	<b>2.5</b>	<b>(1.0 - 4.3)</b>

\*Includes middle 90% of episodes

# Employment outcomes by impairment group



A patient with an 'equivalent employment outcome' is in:

- the same or similar job with same or similar hours  
or
- a different job by choice.

A patient with a 'reduced employment outcome' is in:

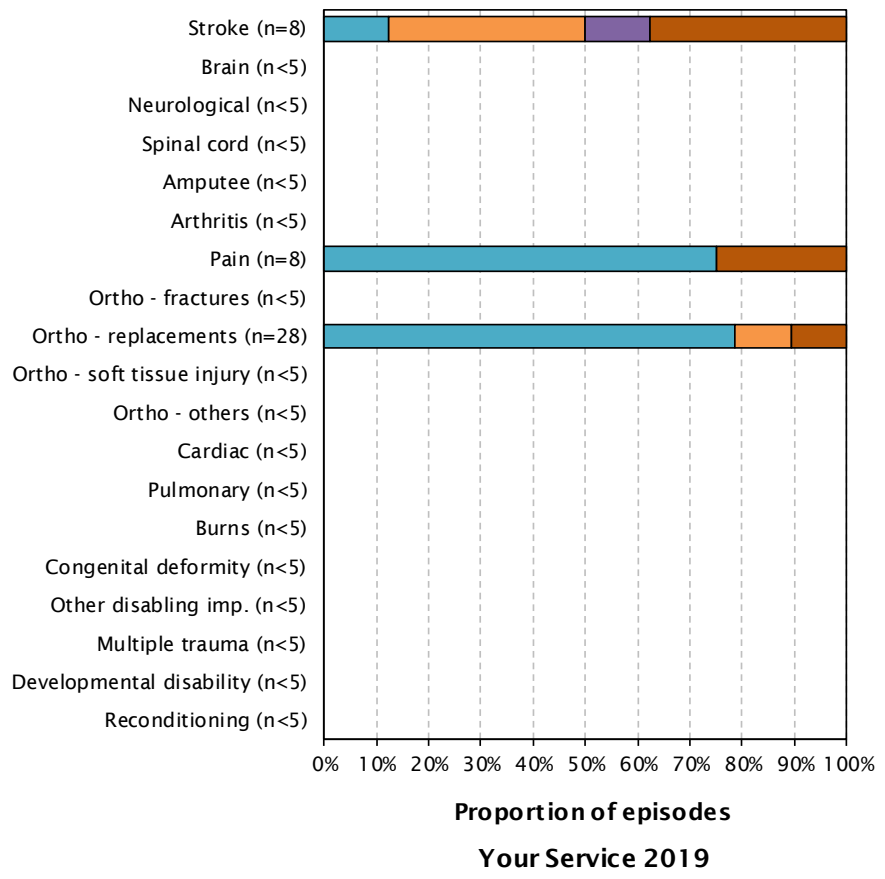
- the same or similar job with reduced hours  
or
- a different job due to reduced function  
or
- not able to work.

Employment outcomes are only considered for patients who were employed prior to injury / impairment or exacerbation of impairment.

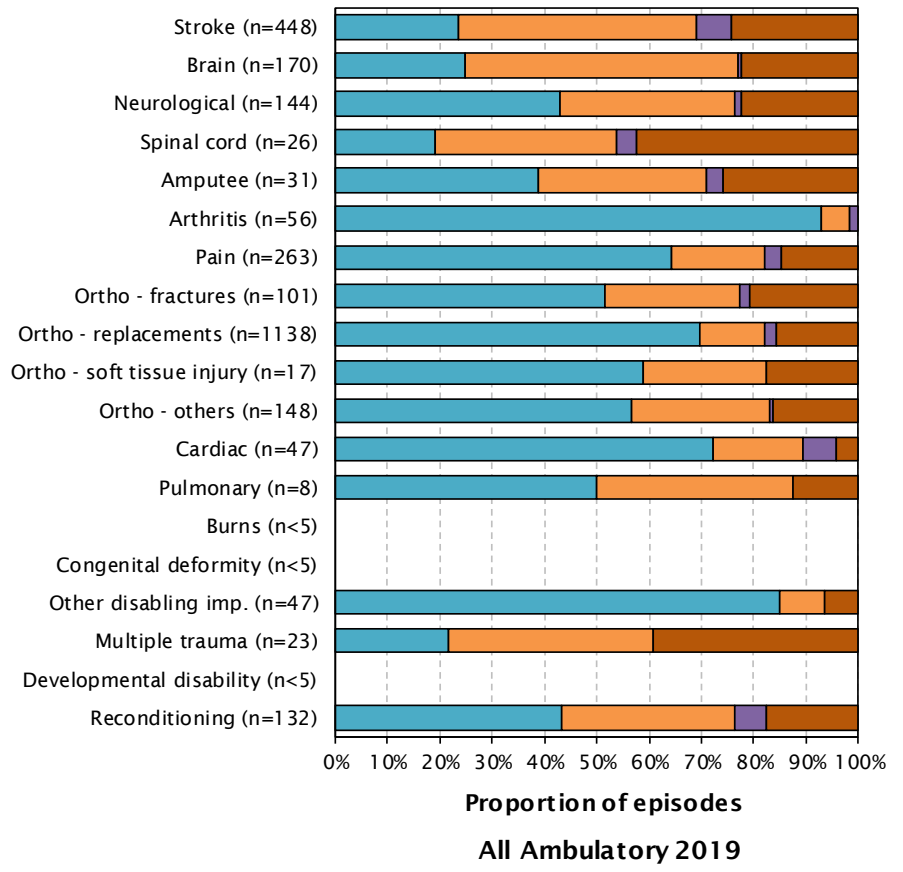
# Employment outcomes by impairment group



■ Equivalent employment outcome   
 ■ Reduced employment outcome  
■ Chosen to retire   
 ■ Too early to determine



■ Equivalent employment outcome   
 ■ Reduced employment outcome  
■ Chosen to retire   
 ■ Too early to determine



# Employment outcomes by impairment group

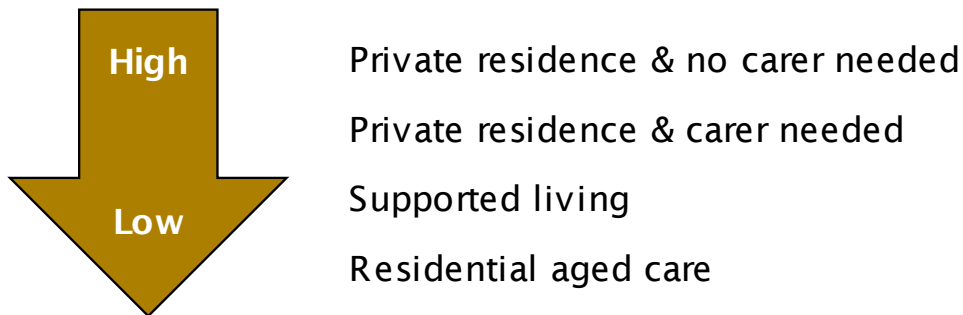


Impairment group	Your Service 2018		Your Service 2019		All Ambulatory 2019	
	Employed prior to impair (No.)	Equivalent employment outcome (%)	Employed prior to impair (No.)	Equivalent employment outcome (%)	Employed prior to impair (No.)	Equivalent employment outcome (%)
Stroke	11	27.3	8	12.5	448	23.4
Brain	6	33.3	3	33.3	170	24.7
Neurological	3	33.3	3	33.3	144	43.1
Spinal cord	0	—	0	—	26	19.2
Amputee	1	0.0	1	100.0	31	38.7
Arthritis	1	100.0	3	100.0	56	92.9
Pain	6	50.0	8	75.0	263	64.3
Ortho - fractures	5	60.0	1	100.0	101	51.5
Ortho - replacements	25	76.0	28	78.6	1,138	69.7
Ortho - soft tissue injury	0	—	0	—	17	58.8
Ortho - others	3	33.3	2	0.0	148	56.8
Cardiac	1	0.0	2	50.0	47	72.3
Pulmonary	0	—	0	—	8	50.0
Burns	1	0.0	0	—	0	—
Congenital deformity	0	—	0	—	1	—
Other disabling imp.	1	0.0	0	—	47	85.1
Multiple trauma	0	—	2	100.0	23	21.7
Developmental disability	0	—	0	—	0	—
Reconditioning	3	66.7	4	50.0	132	43.2
Missing or excluded	283		285		9,036	
<b>All episodes</b>	<b>350</b>	<b>52.2</b>	<b>350</b>	<b>63.1</b>	<b>11,836</b>	<b>54.5</b>

# Independence outcomes by impairment group

Independence outcomes are based on changes in accommodation and carer status.

Independence is ranked using the following order:



A patient is defined as having 'equivalent independence' when:

- independence after the rehabilitation episode was the same or greater than prior to rehabilitation.

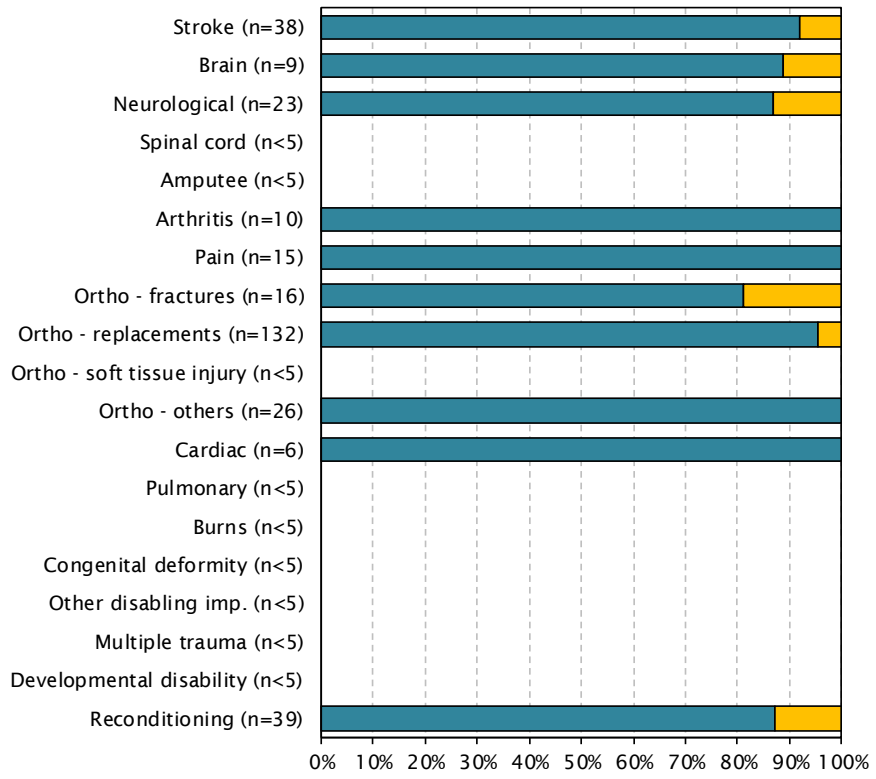
A patient is defined as having 'reduced independence' when:

- independence after the rehabilitation episode was less than before rehabilitation.

# Independence outcomes by impairment group

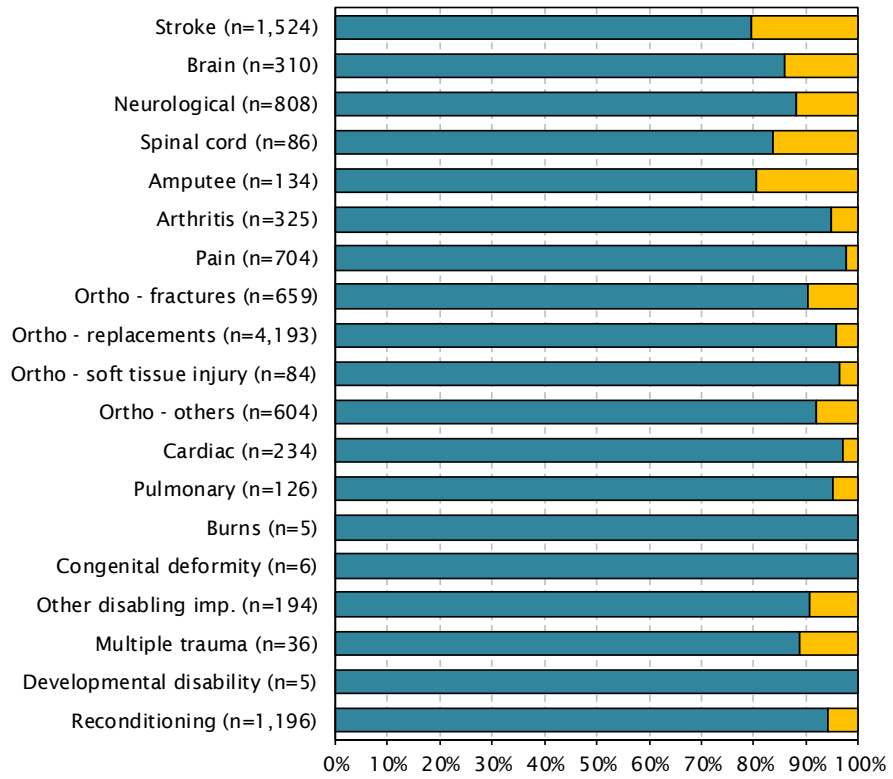


■ Equivalent independence   ■ Reduced independence



Proportion of episodes  
Your Service 2019

■ Equivalent independence   ■ Reduced independence



Proportion of episodes  
All Ambulatory 2019

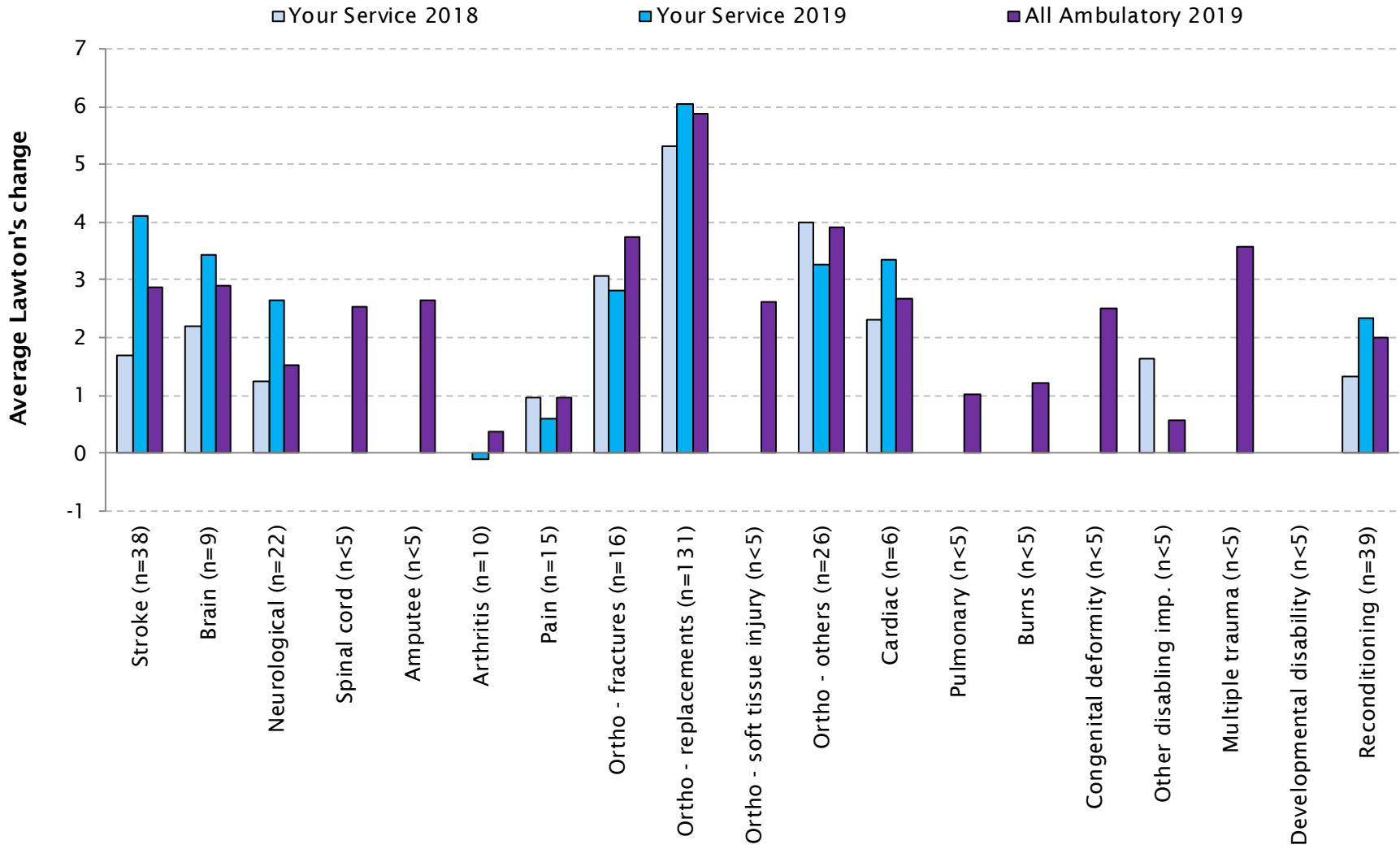
# Independence outcomes by impairment group



Impairment group	Your Service 2018		Your Service 2019		All Ambulatory 2019	
	No.	Equivalent independence outcome (%)	No.	Equivalent independence outcome (%)	No.	Equivalent independence outcome (%)
Stroke	26	80.8	38	92.1	1,524	79.5
Brain	10	80.0	9	88.9	310	85.8
Neurological	17	88.2	23	87.0	808	88.2
Spinal cord	1	100.0	2	100.0	86	83.7
Amputee	2	50.0	3	66.7	134	80.6
Arthritis	4	100.0	10	100.0	325	94.8
Pain	20	90.0	15	100.0	704	97.6
Ortho - fractures	30	90.0	16	81.3	659	90.4
Ortho - replacements	117	99.1	132	95.5	4,193	95.9
Ortho - soft tissue injury	2	100.0	4	75.0	84	96.4
Ortho - others	14	71.4	26	100.0	604	92.1
Cardiac	10	100.0	6	100.0	234	97.0
Pulmonary	3	100.0	1	100.0	126	95.2
Burns	1	100.0	0	—	5	100.0
Congenital deformity	0	—	0	—	6	100.0
Other disabling imp.	8	100.0	4	50.0	194	90.7
Multiple trauma	0	—	3	100.0	36	88.9
Developmental disability	0	—	0	—	5	100.0
Reconditioning	33	90.9	39	87.2	1,196	94.1
Missing or excluded	52		19		603	
<b>All episodes</b>	<b>350</b>	<b>92.3</b>	<b>350</b>	<b>92.4</b>	<b>11,836</b>	<b>91.8</b>



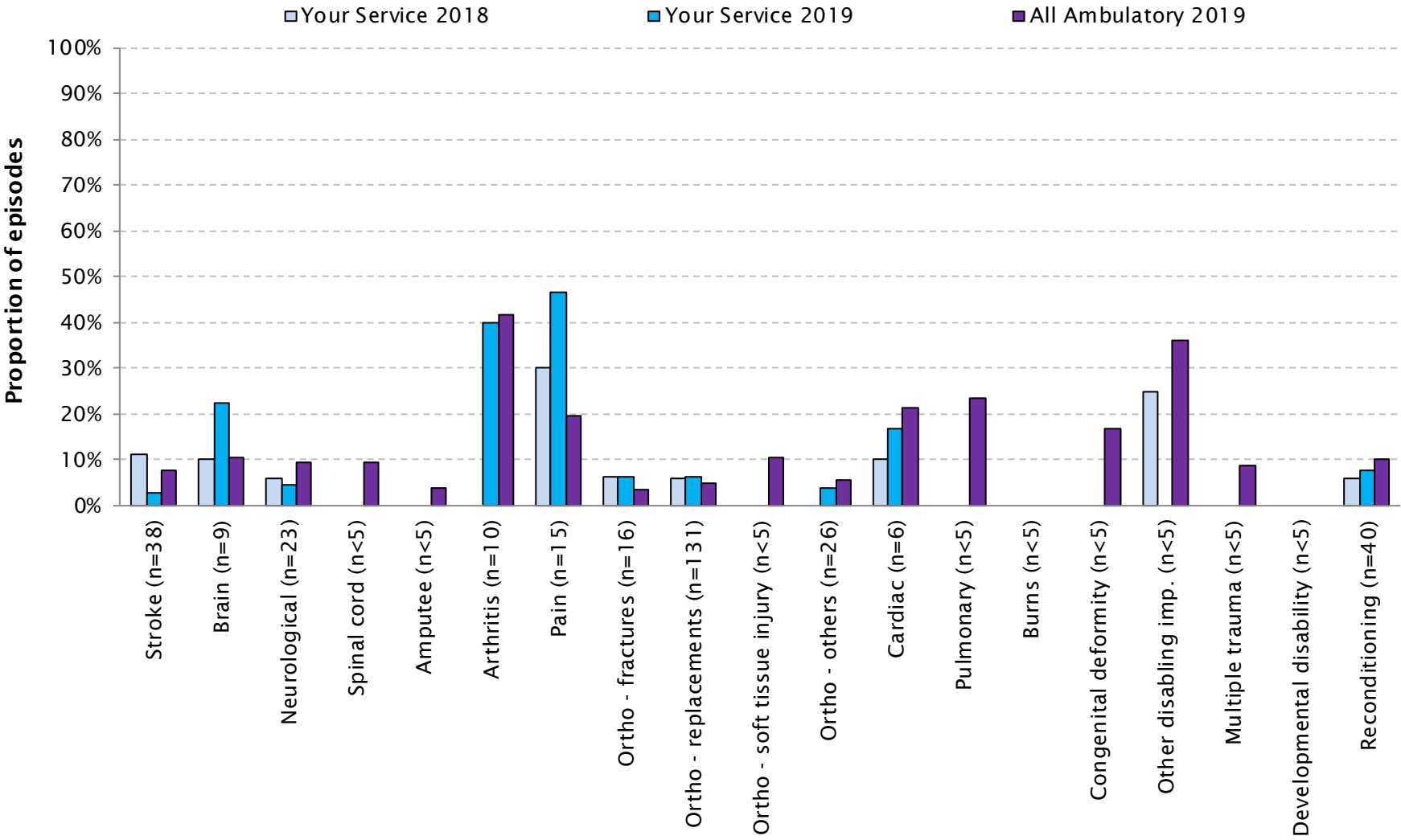
# Lawton's score change by impairment



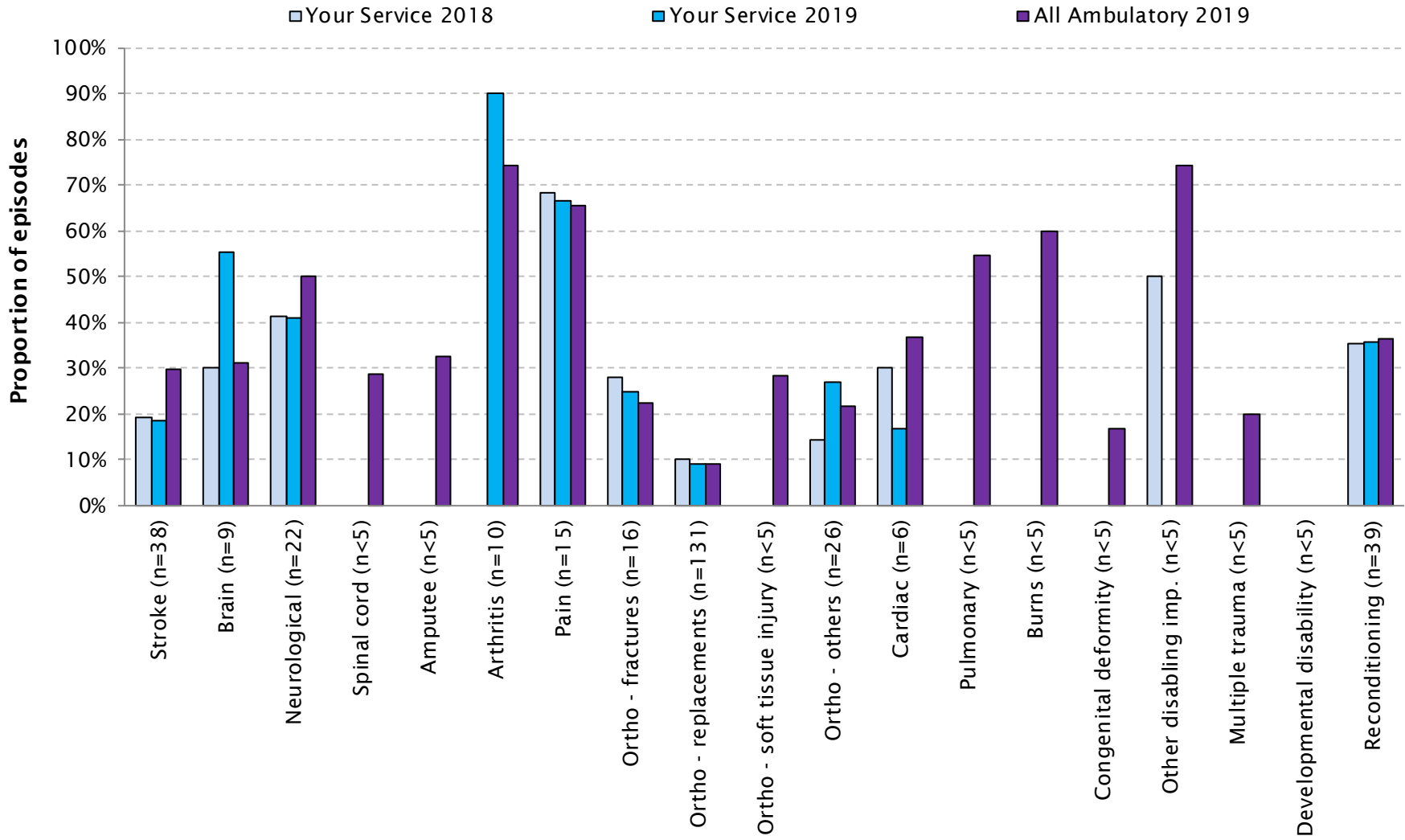
# Lawton's score change by impairment

Impairment group	Your Service 2018		Your Service 2019		All Ambulatory 2019	
	No.	Avg. Lawton's change	No.	Avg. Lawton's change	No.	Avg. Lawton's change
Stroke	26	1.7	38	4.1	1,507	2.9
Brain	10	2.2	9	3.4	299	2.9
Neurological	17	1.2	22	2.6	776	1.5
Spinal cord	1	7.0	2	1.5	84	2.5
Amputee	2	1.0	3	3.7	135	2.7
Arthritis	4	2.8	10	-0.1	307	0.4
Pain	19	0.9	15	0.6	698	1.0
Ortho - fractures	32	3.1	16	2.8	660	3.7
Ortho - replacements	118	5.3	131	6.0	4,184	5.9
Ortho - soft tissue injury	2	1.0	4	3.8	85	2.6
Ortho - others	14	4.0	26	3.3	601	3.9
Cardiac	10	2.3	6	3.3	225	2.7
Pulmonary	3	-0.3	1	0.0	104	1.0
Burns	1	4.0	0	—	5	1.2
Congenital deformity	0	—	0	—	6	2.5
Other disabling imp.	8	1.6	4	0.0	188	0.6
Multiple trauma	0	—	3	2.7	35	3.6
Developmental disability	0	—	0	—	4	—
Reconditioning	34	1.3	39	2.3	1,182	2.0
Missing or excluded	49		21		751	
<b>All episodes</b>	<b>350</b>	<b>3.3</b>	<b>350</b>	<b>4.0</b>	<b>11,836</b>	<b>3.7</b>

# Episodes with a Lawton's start score of 30 by impairment group



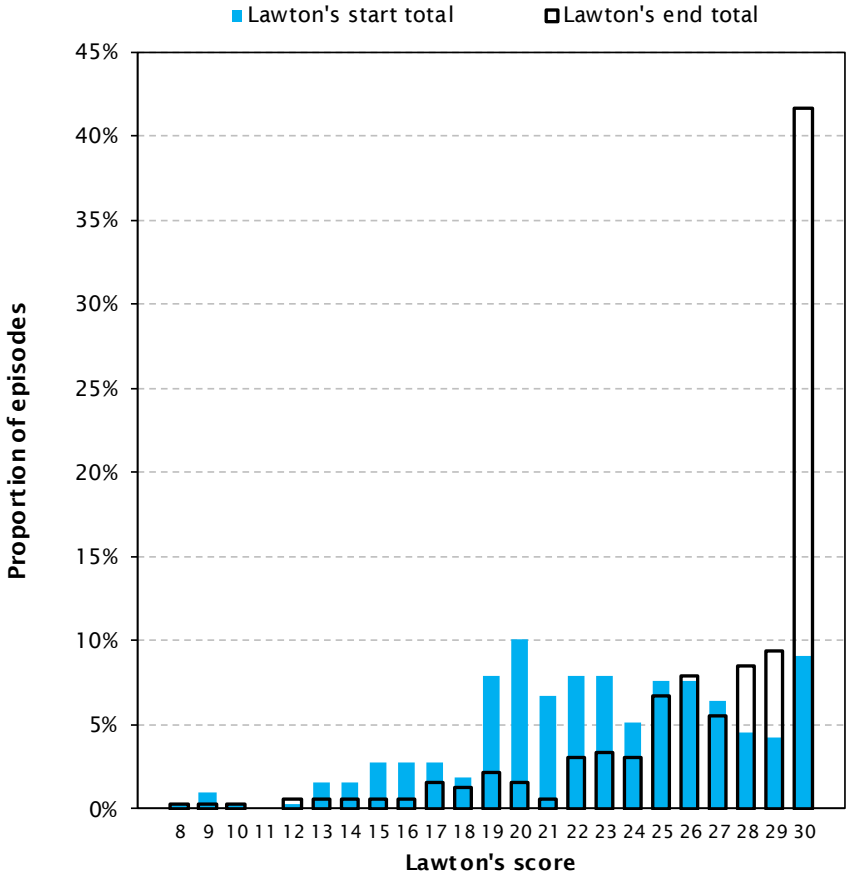
# Episodes with no change in Lawton's score by impairment group



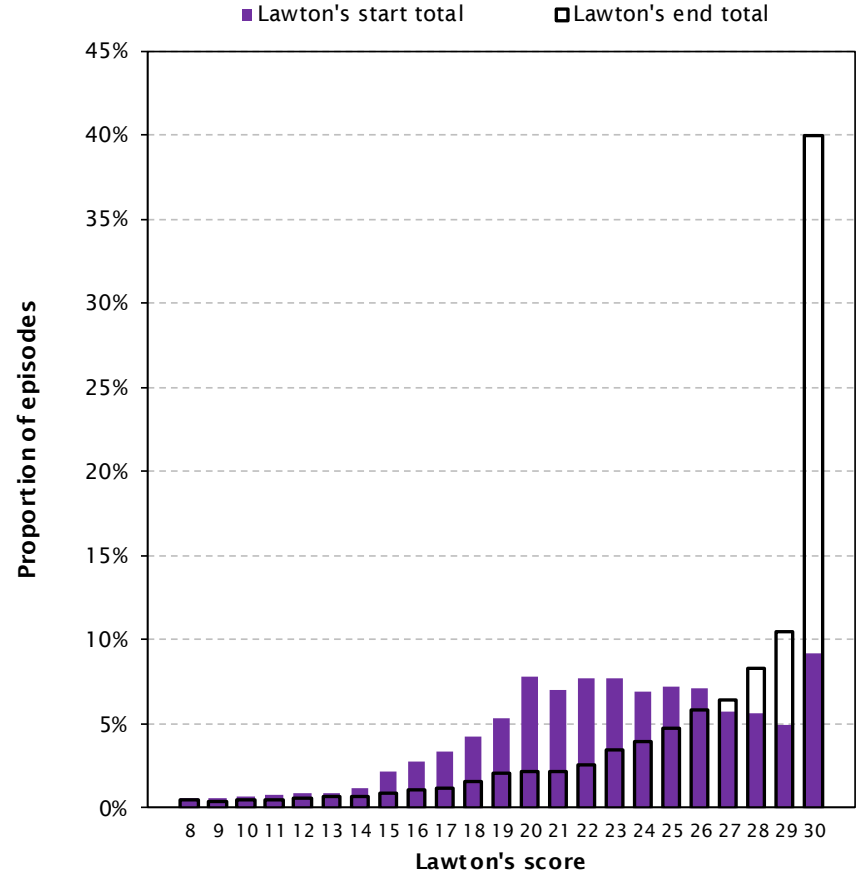
# Lawton's start and end total - all episodes



Your Service 2019 (n=329)



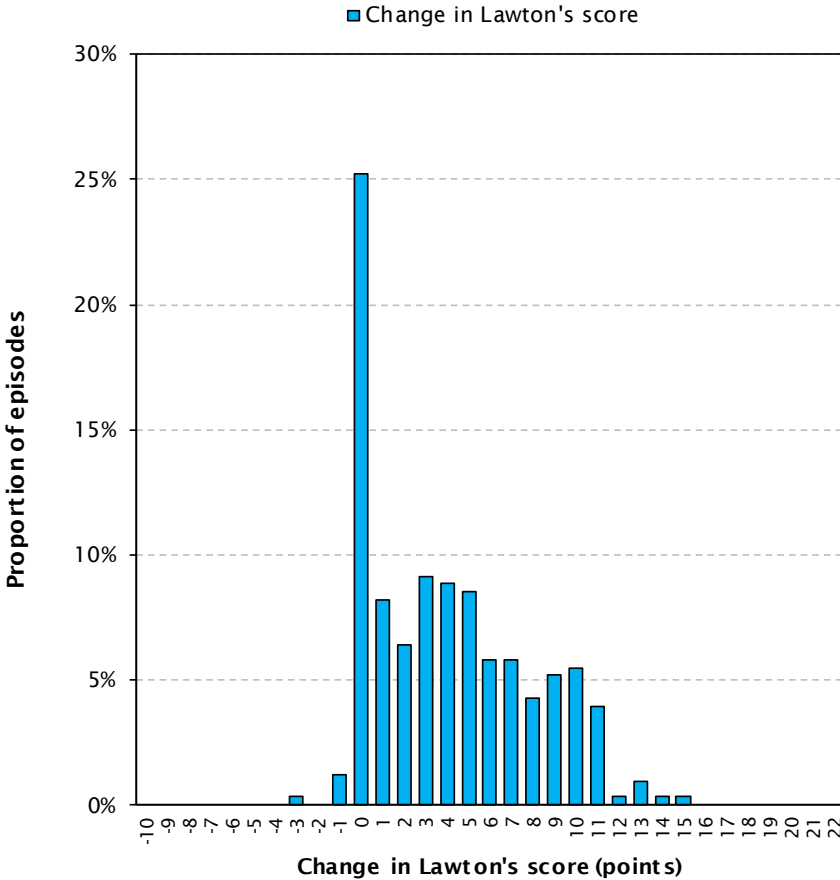
All Ambulatory 2019 (n=11,092)



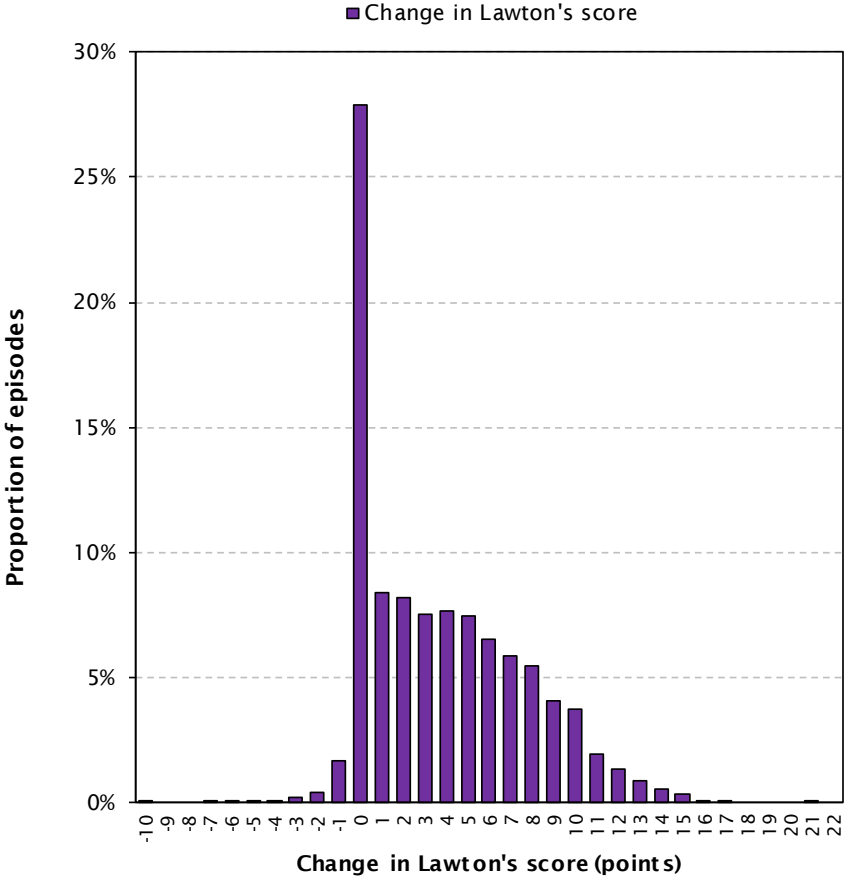
# Change in Lawton's score – all episodes



Your Service 2019 (n=329)



All Ambulatory 2019 (n=11,082)

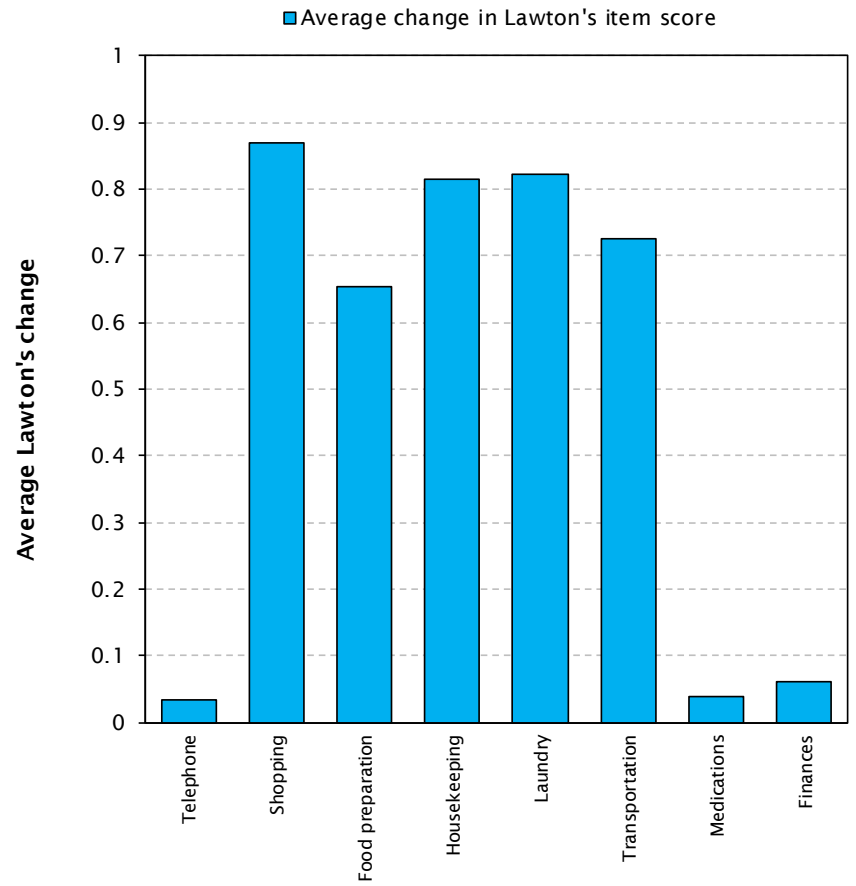


Note: 10 episode(s) had a Lawton's change score < -10.

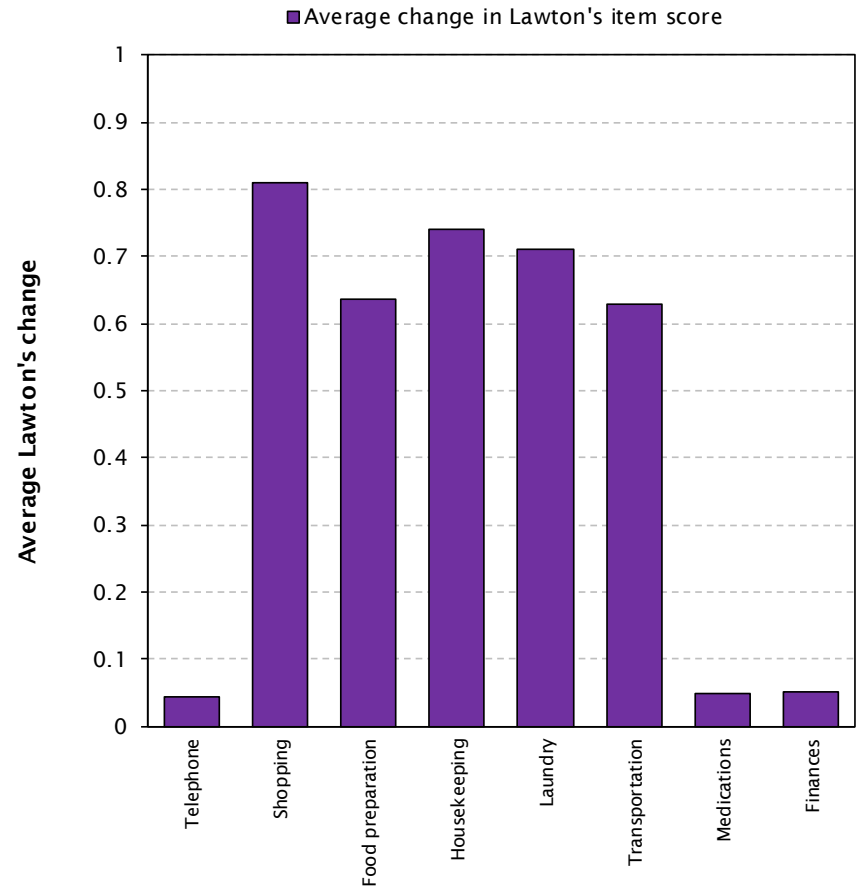
# Change in Lawton's item scores – all episodes



Your Service 2019 (n=329)



All Ambulatory 2019 (n=11,082)

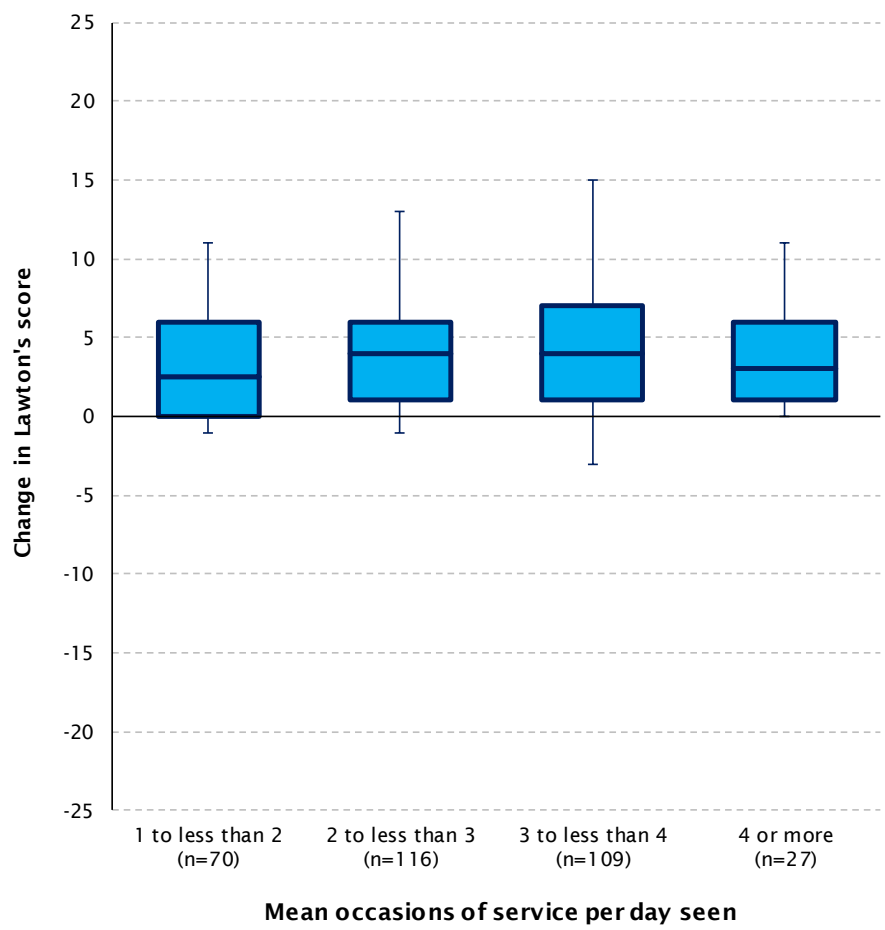


Note: 10 episode(s) had a Lawton's change score < -10.

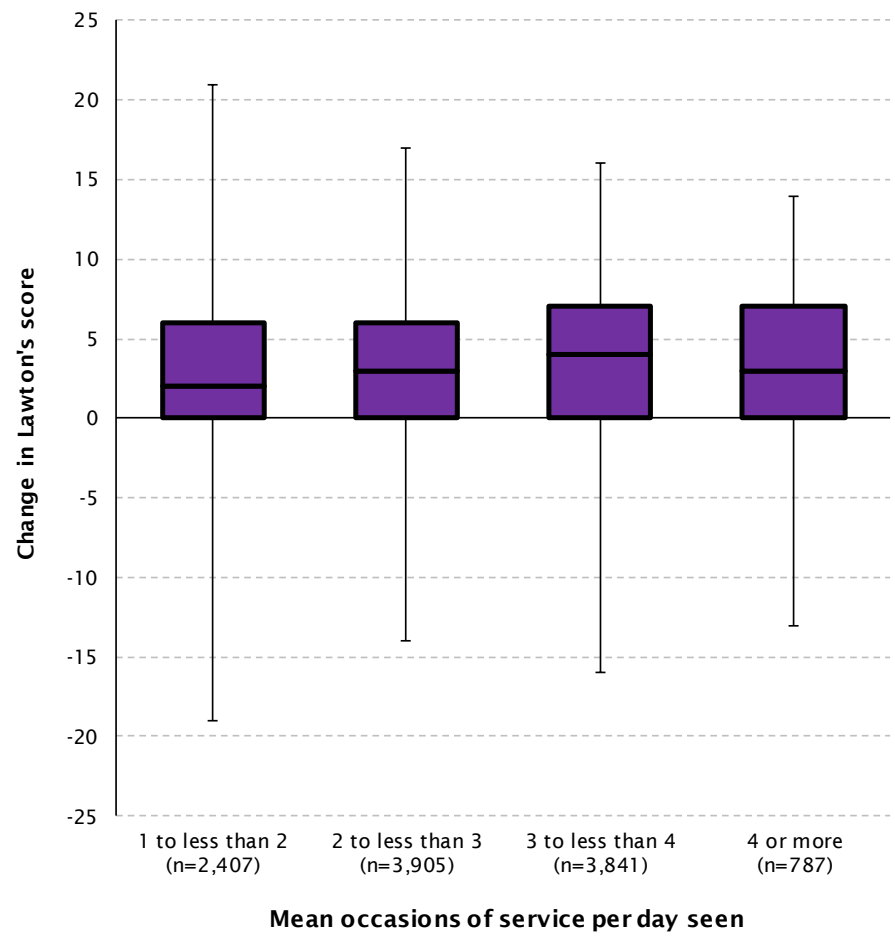
# Change in Lawton's score by OOS/day seen - all episodes



Your Service 2019



All Ambulatory 2019

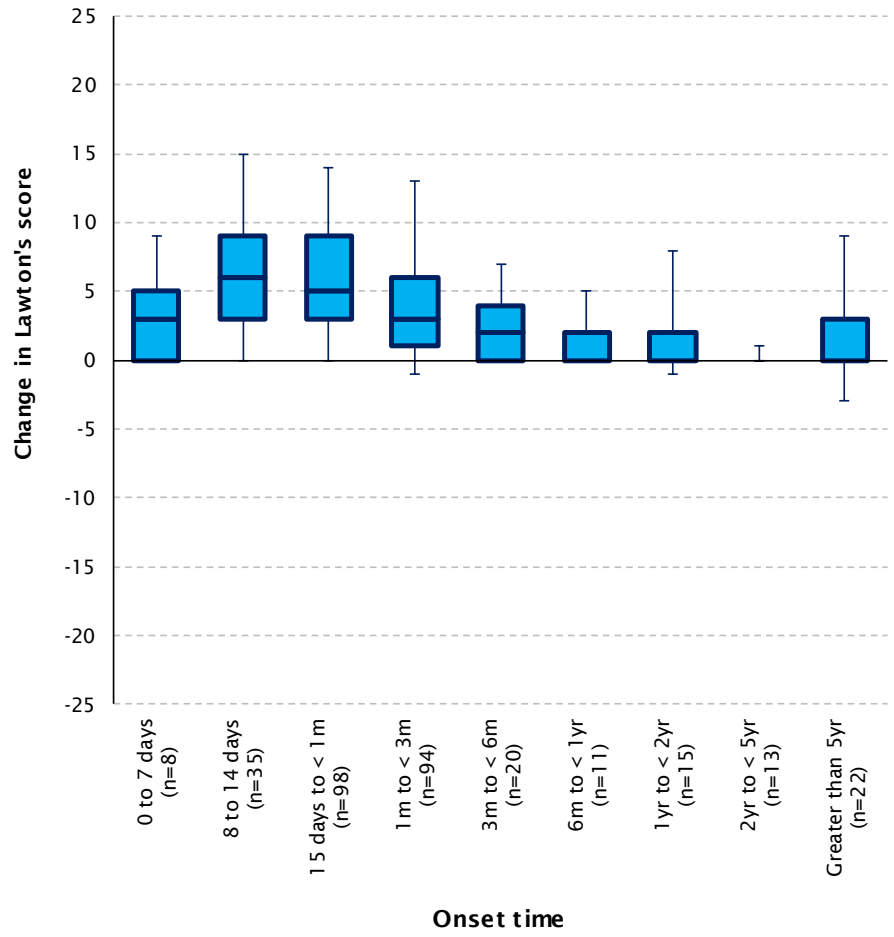




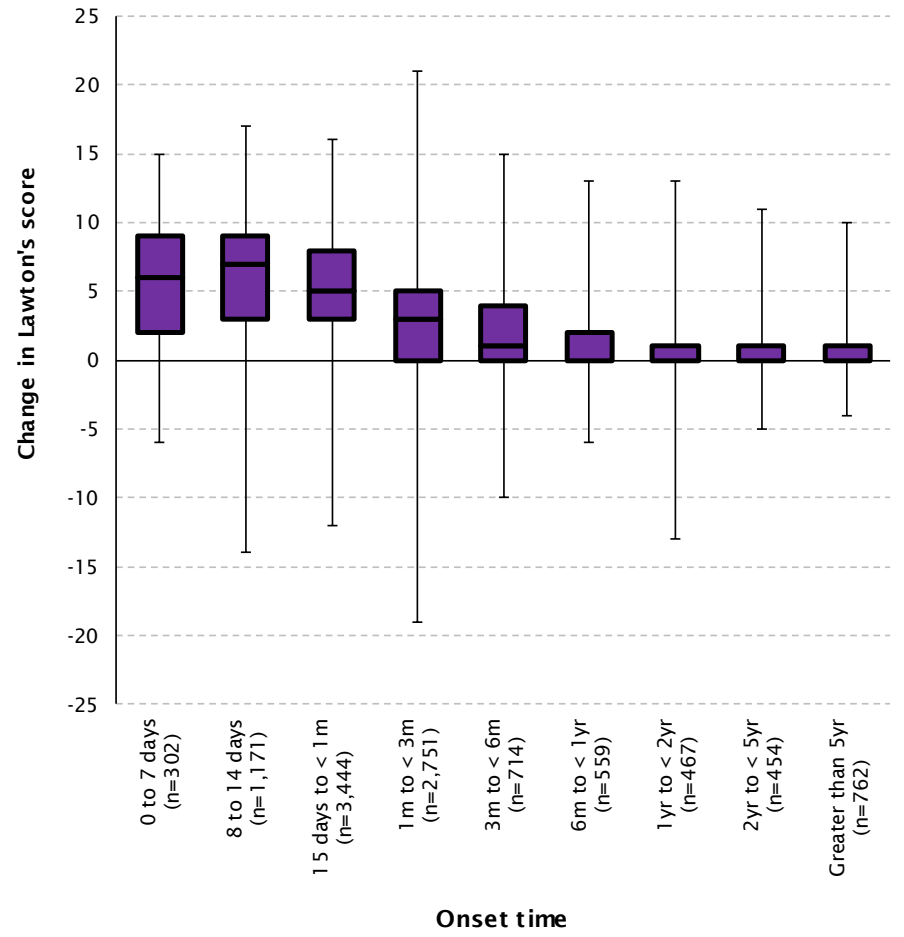
# Change in Lawton's score by onset time – all episodes



Your Service 2019



All Ambulatory 2019



No single outcome measure can provide comprehensive outcome information across the range of impairments treated in ambulatory settings. For this reason, in addition to the Australian Modified Lawton's IADL Scale which is used for every episode, a number of impairment specific measures are included in the AROC Ambulatory Dataset V4.1. This dataset was implemented in August 2017, following widespread clinical consultation.

The following section provides information about these measures, as relevant to your facility's patient population:

- Upper Limb Motor Assessment Scale (UL-MAS)
- Timed 10 Metre Walk Test
- Mayo-Portland Adaptability Inventory-4 (MPAI-4)
- De Morton Mobility Index (DEMMI)
- Timed Up and Go

# Upper Limb Motor Assessment Scale (UL-MAS)



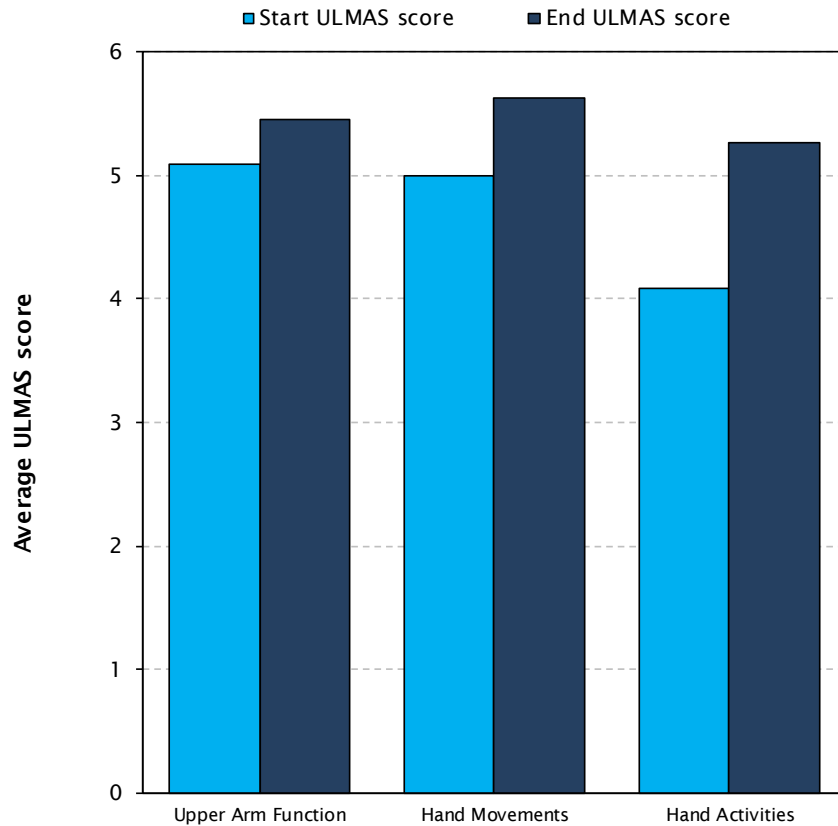
- This data item is collected in addition to the Australian Modified Lawton's IADL Scale for patients who have sustained upper limb impairment following a stroke
- The UL-MAS is used to assess everyday upper limb motor function in adults following stroke

For further information refer to the AROC Ambulatory Data Dictionary V4.1 for Clinicians.

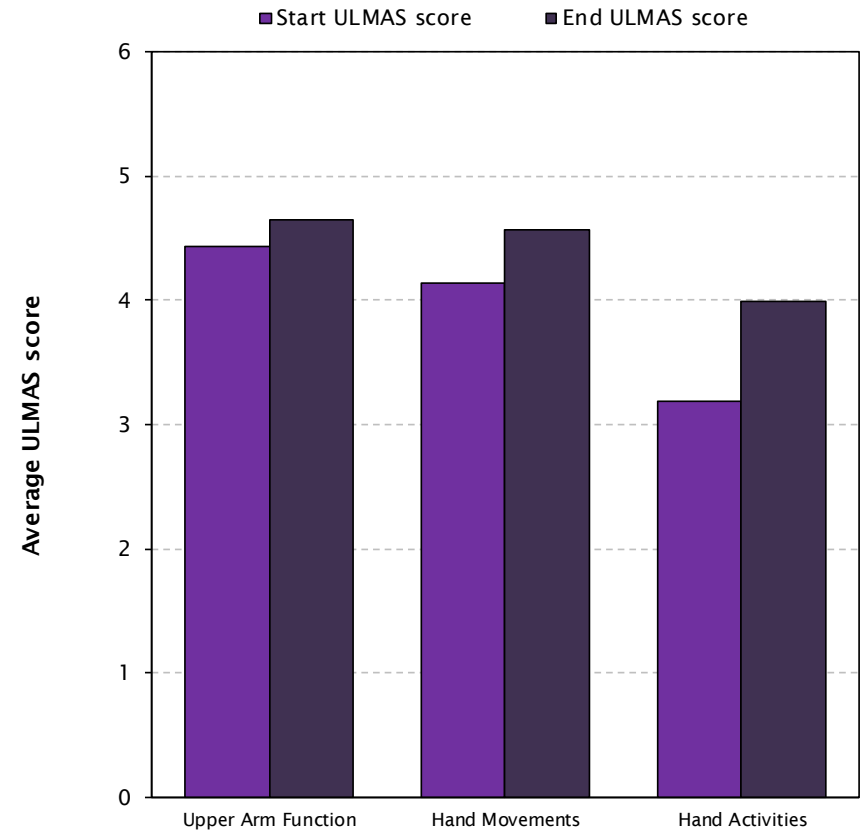
# Average ULMAS start and end score by sub-group



Your Service 2019 (n=11)



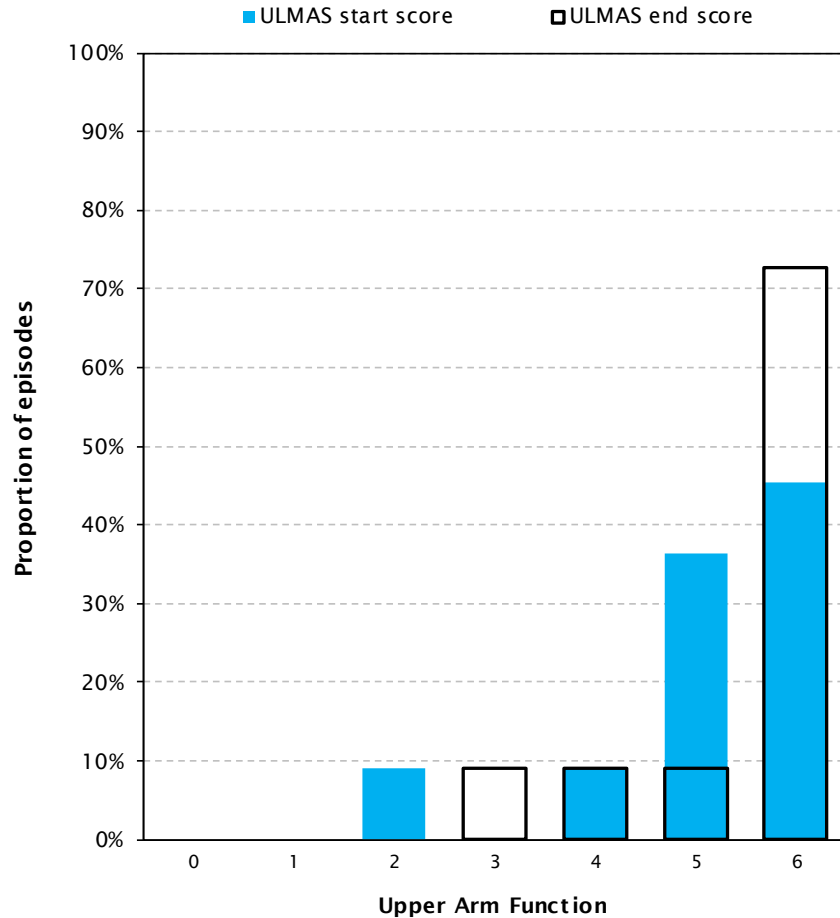
All Ambulatory 2019 (n=276)



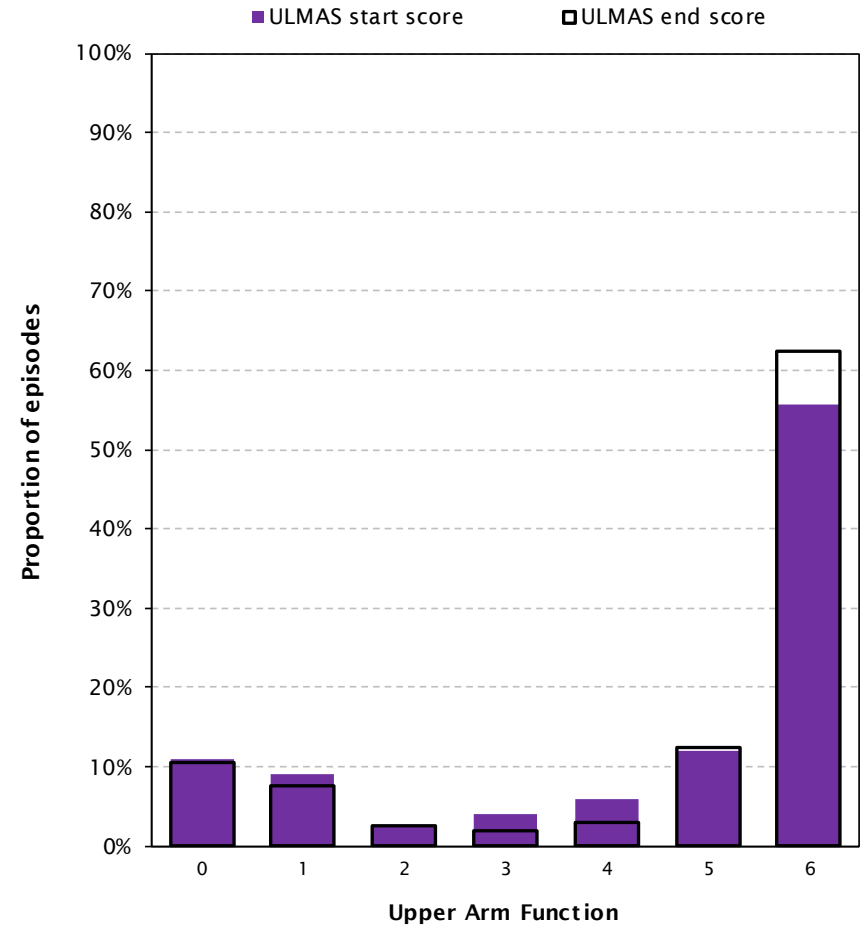
# ULMAS start and end total – Upper arm function



Your Service 2019 (n=11)



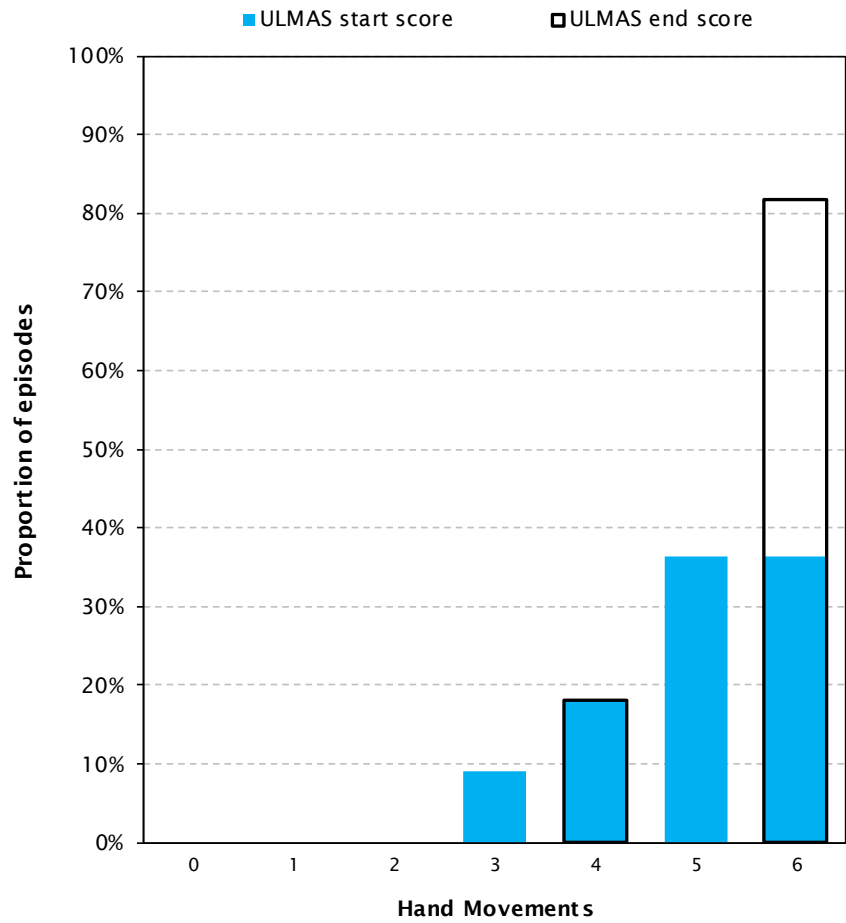
All Ambulatory 2019 (n=276)



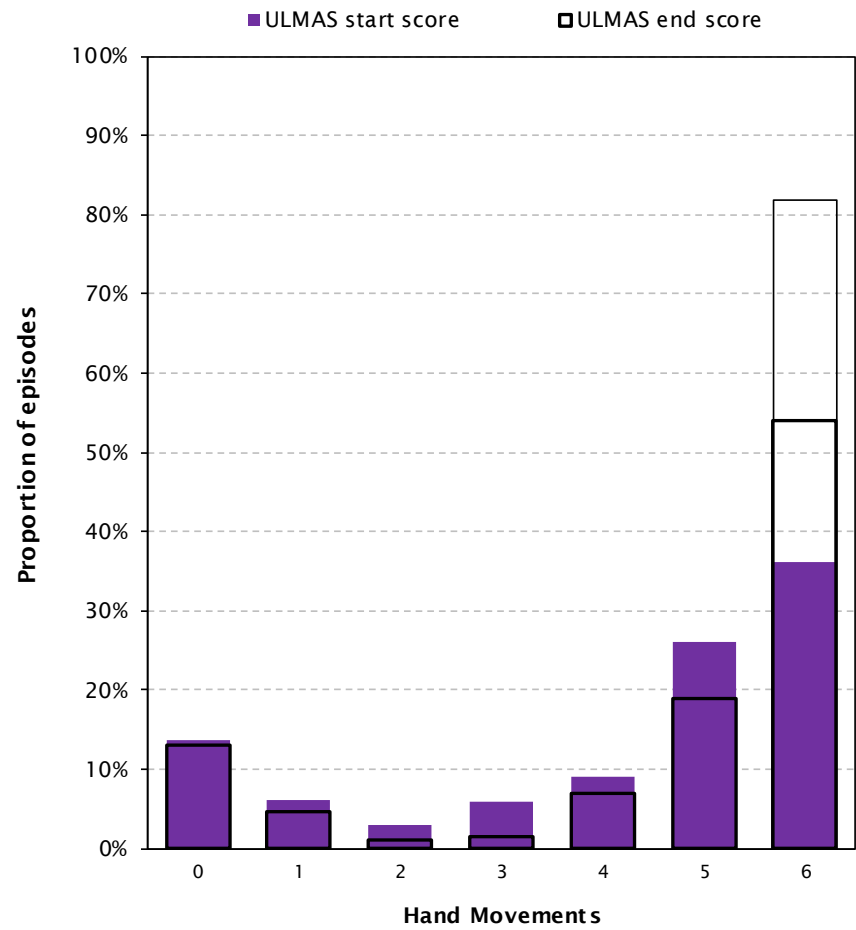
# ULMAS start and end total – Hand movements



Your Service 2019 (n=11)



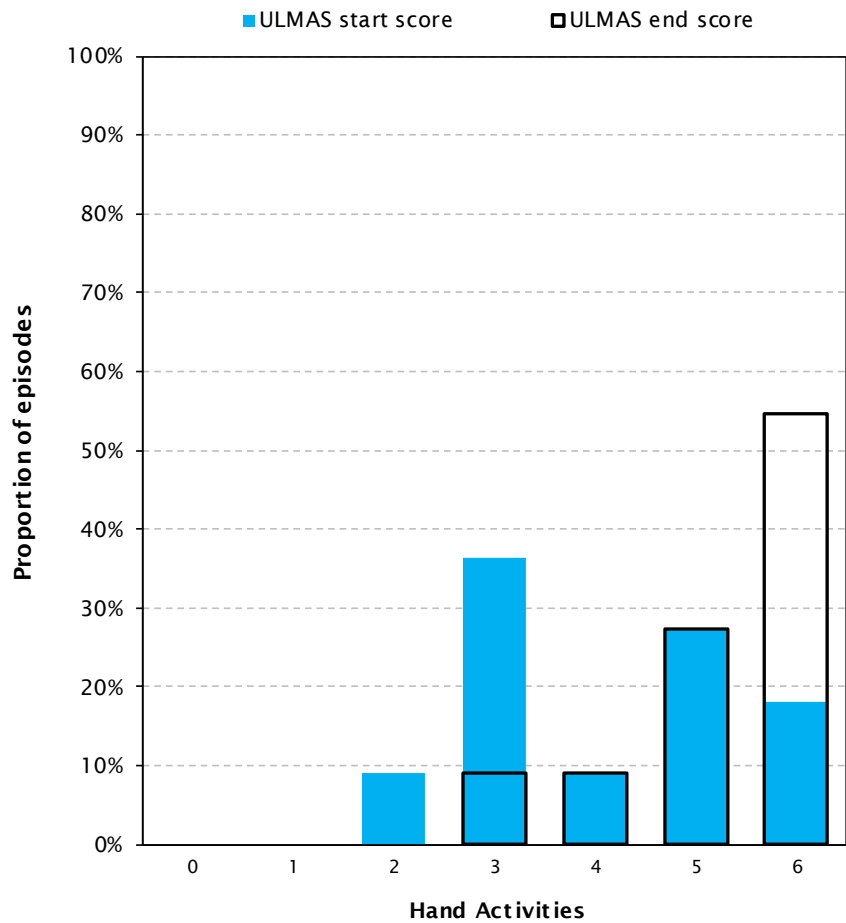
All Ambulatory 2019 (n=276)



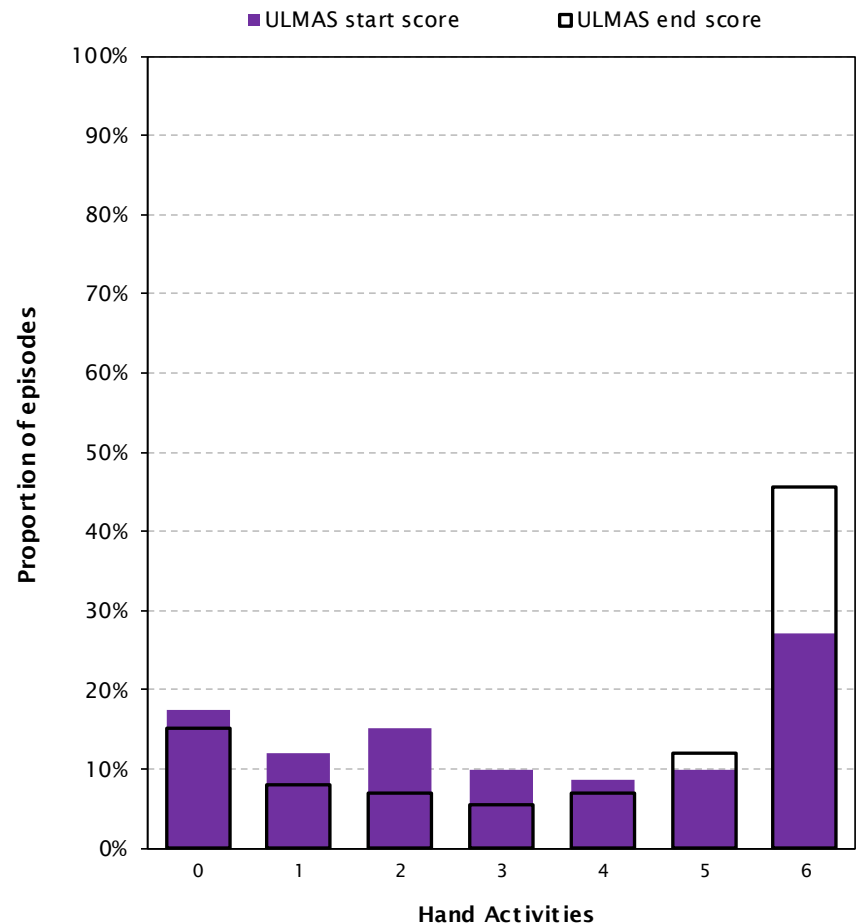
# ULMAS start and end total - Hand activities



Your Service 2019 (n=11)



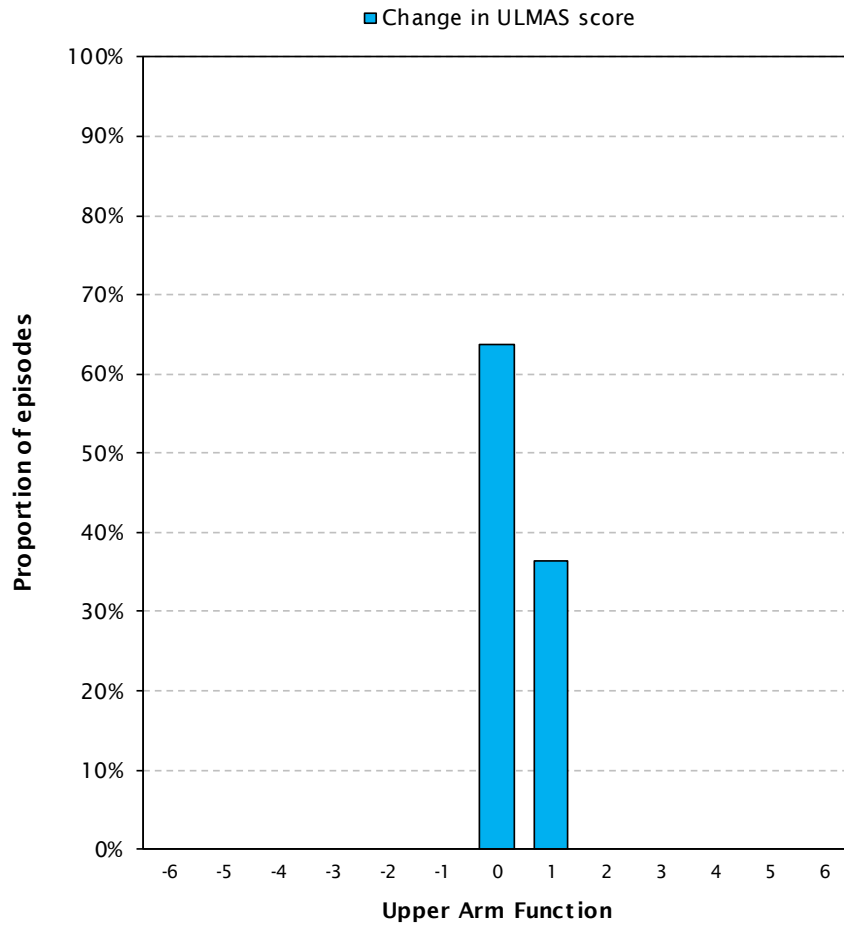
All Ambulatory 2019 (n=276)



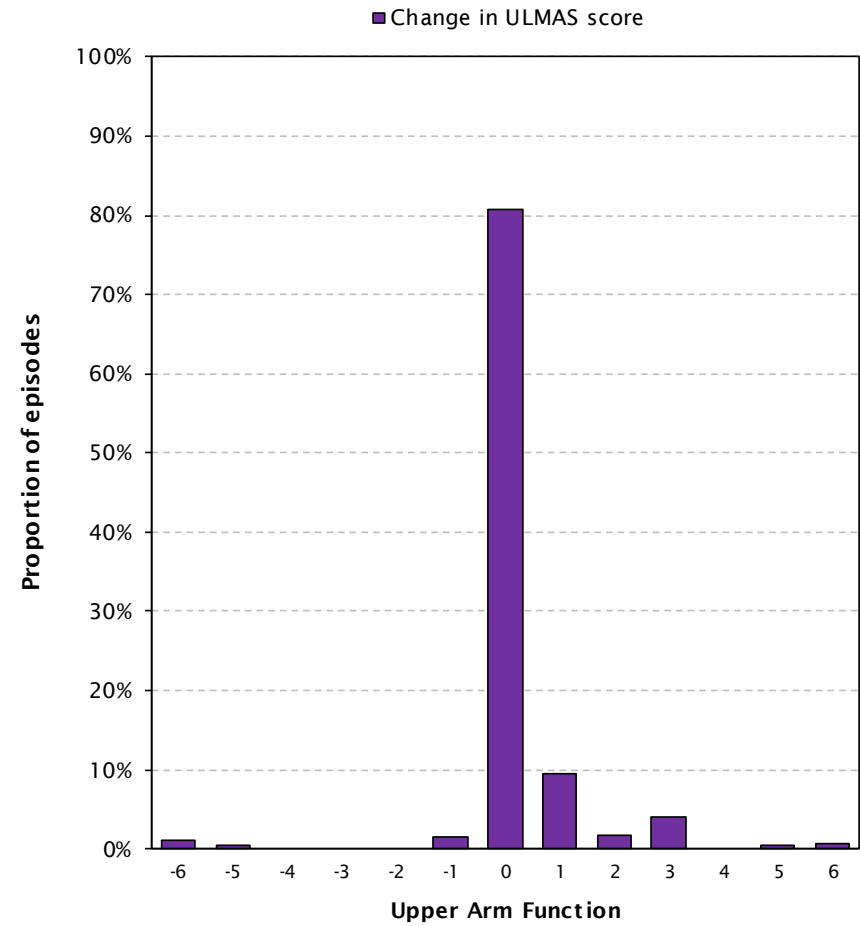
# Change in ULMAS score – Upper arm function



Your Service 2019 (n=11)



All Ambulatory 2019 (n=276)

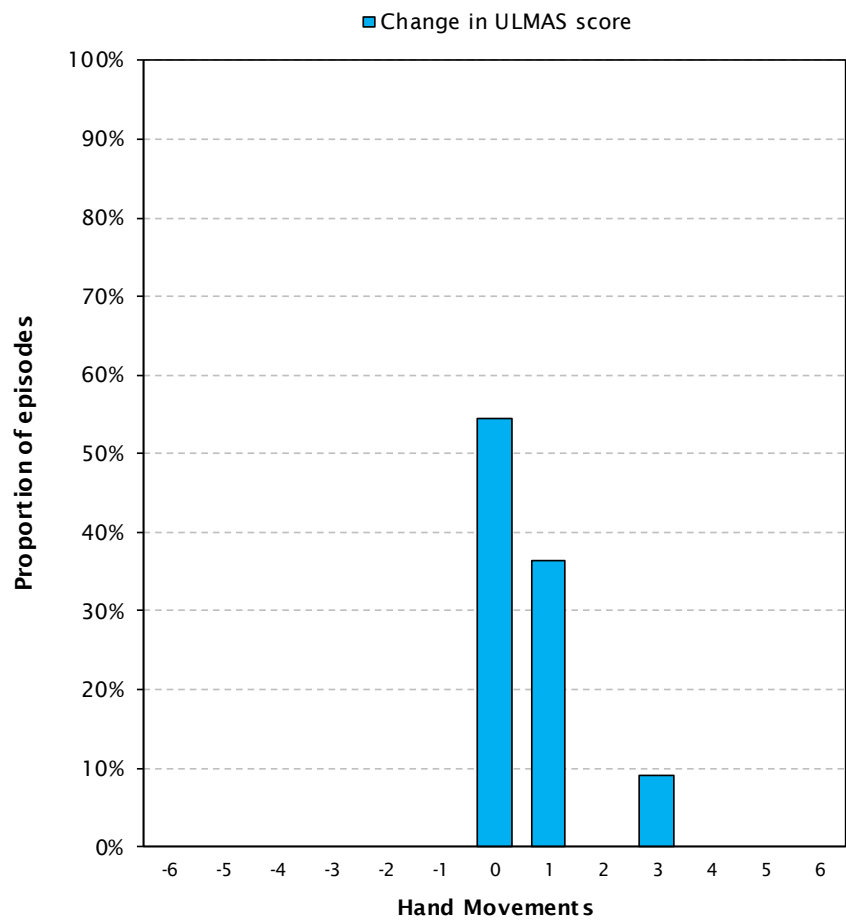




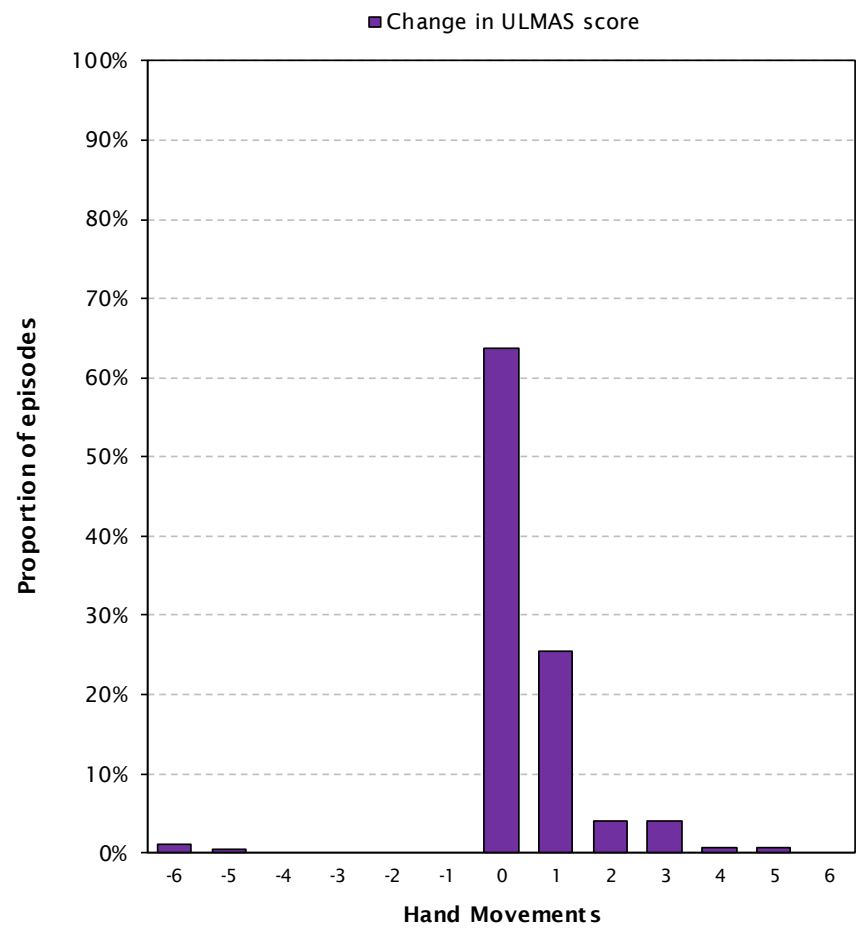
# Change in ULMAS score – Hand movements



Your Service 2019 (n=11)



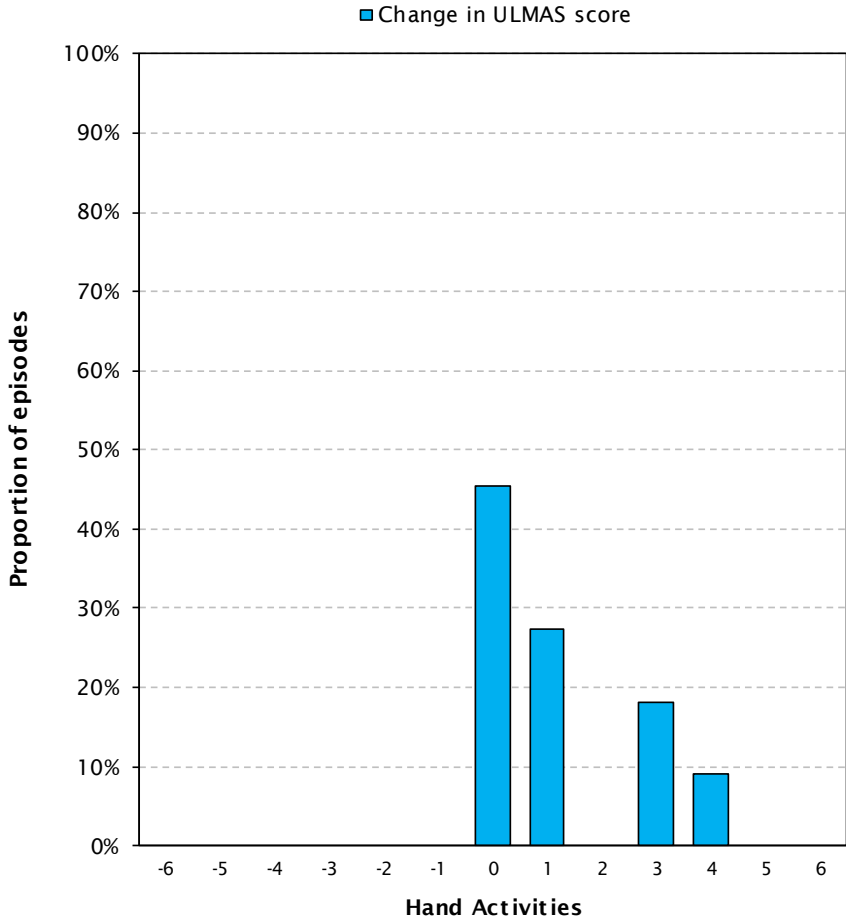
All Ambulatory 2019 (n=276)



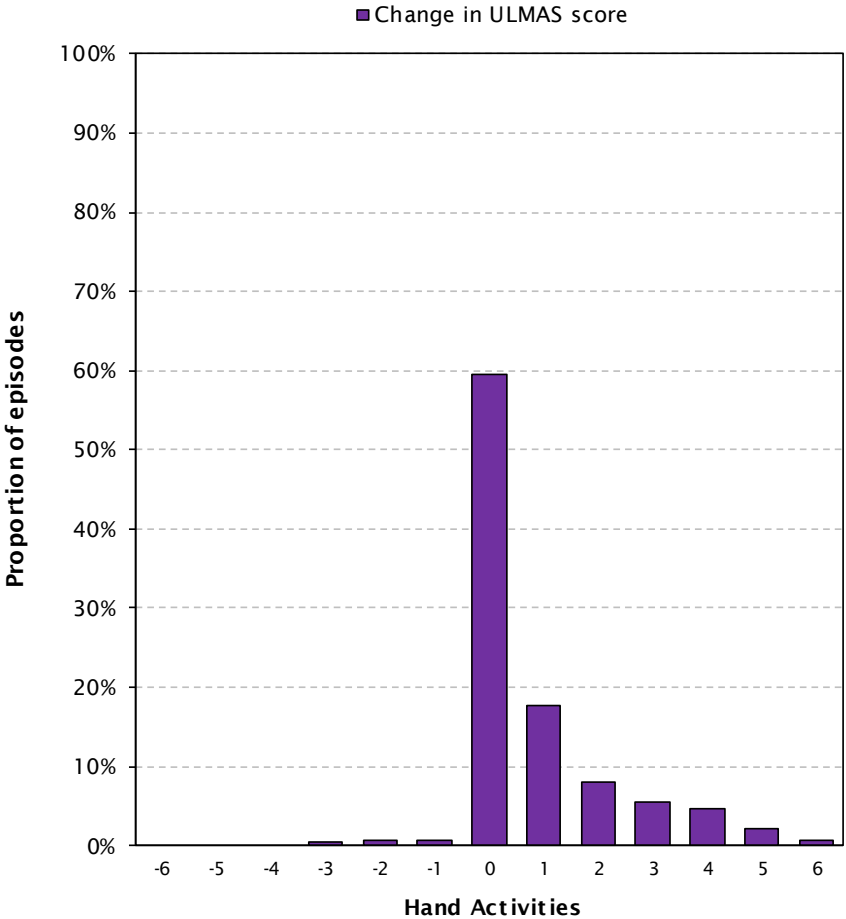
# Change in ULMAS score – Hand activities



Your Service 2019 (n=11)



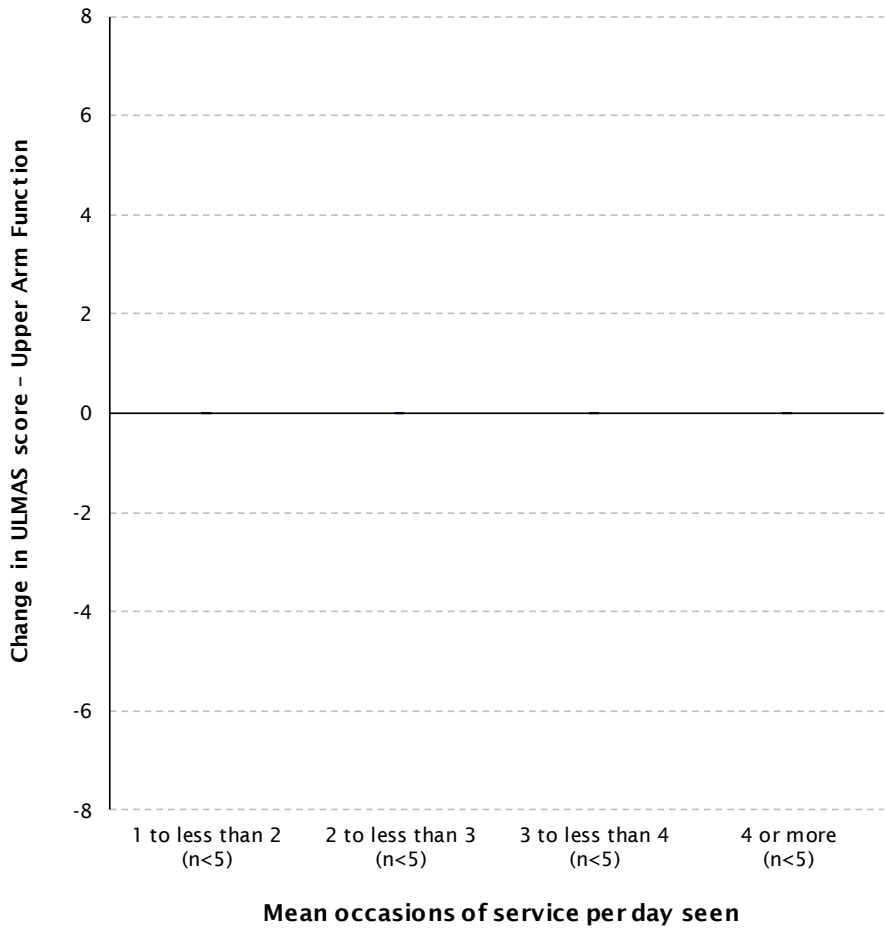
All Ambulatory 2019 (n=276)



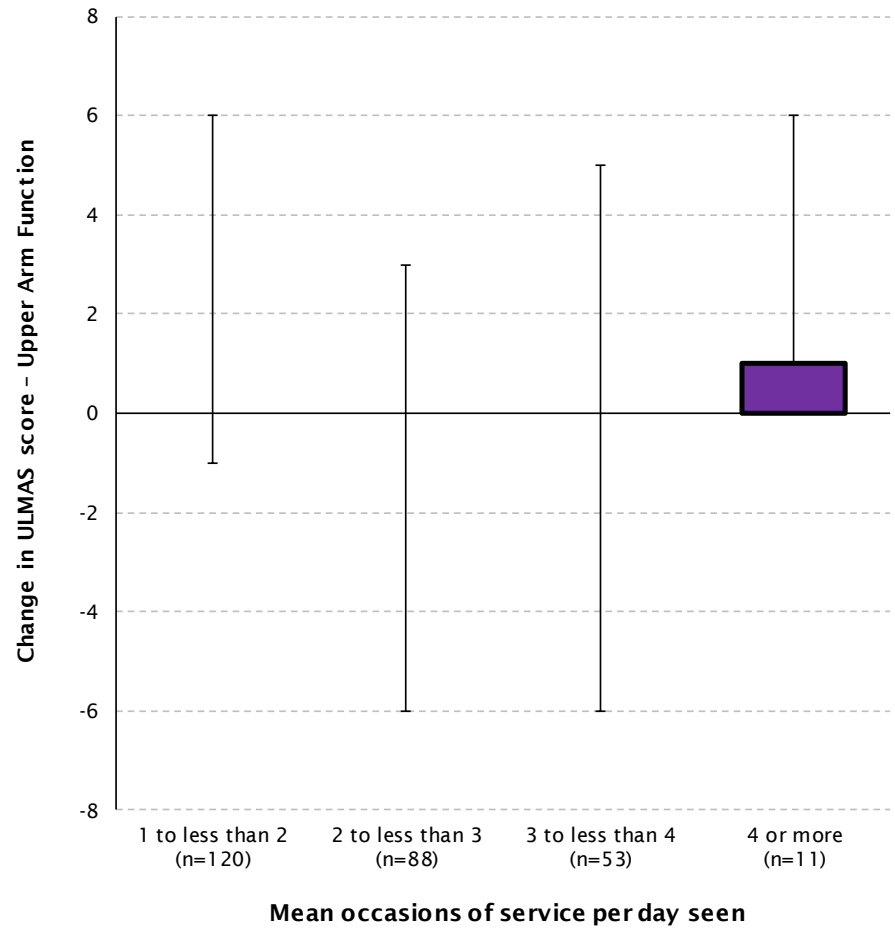
# Change in ULMAS score by OOS/day seen - Upper arm function



Your Service 2019



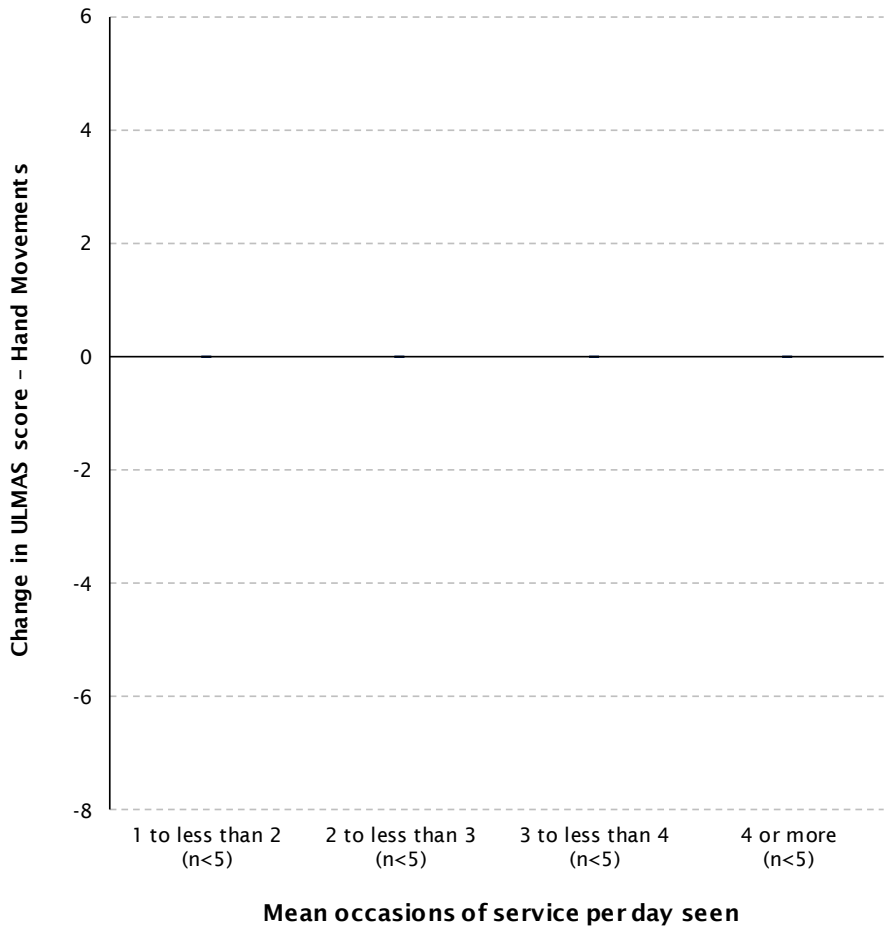
All Ambulatory 2019



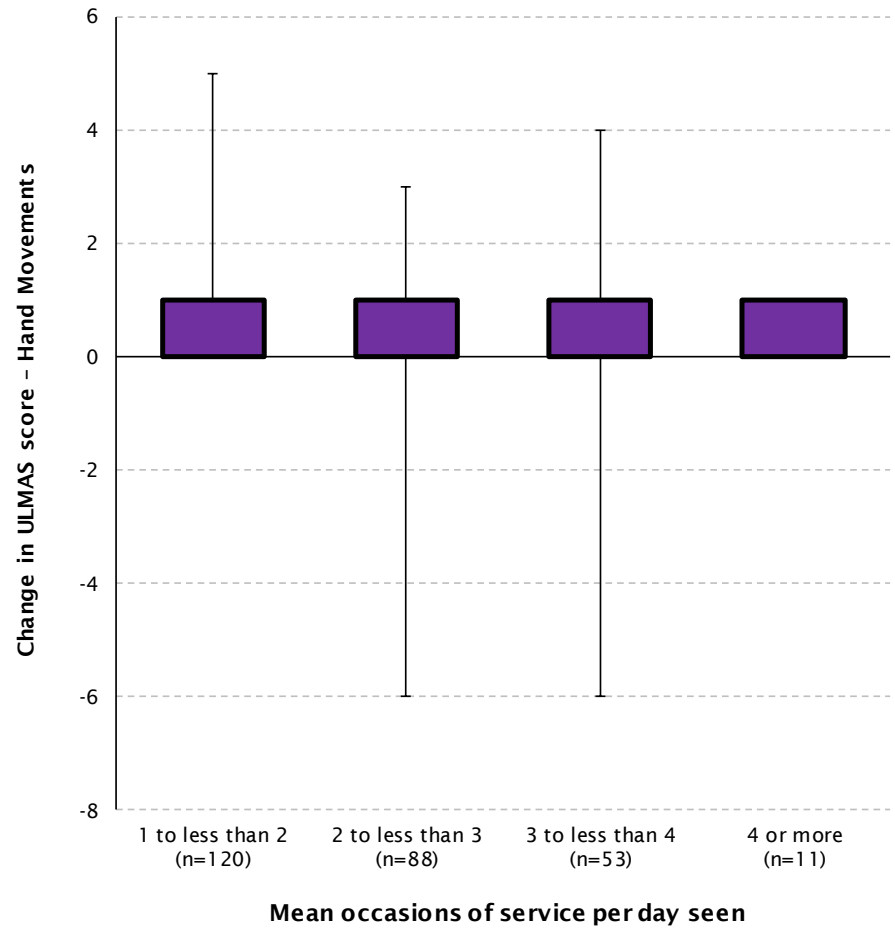
# Change in ULMAS score by OOS/day seen - Hand movements



Your Service 2019



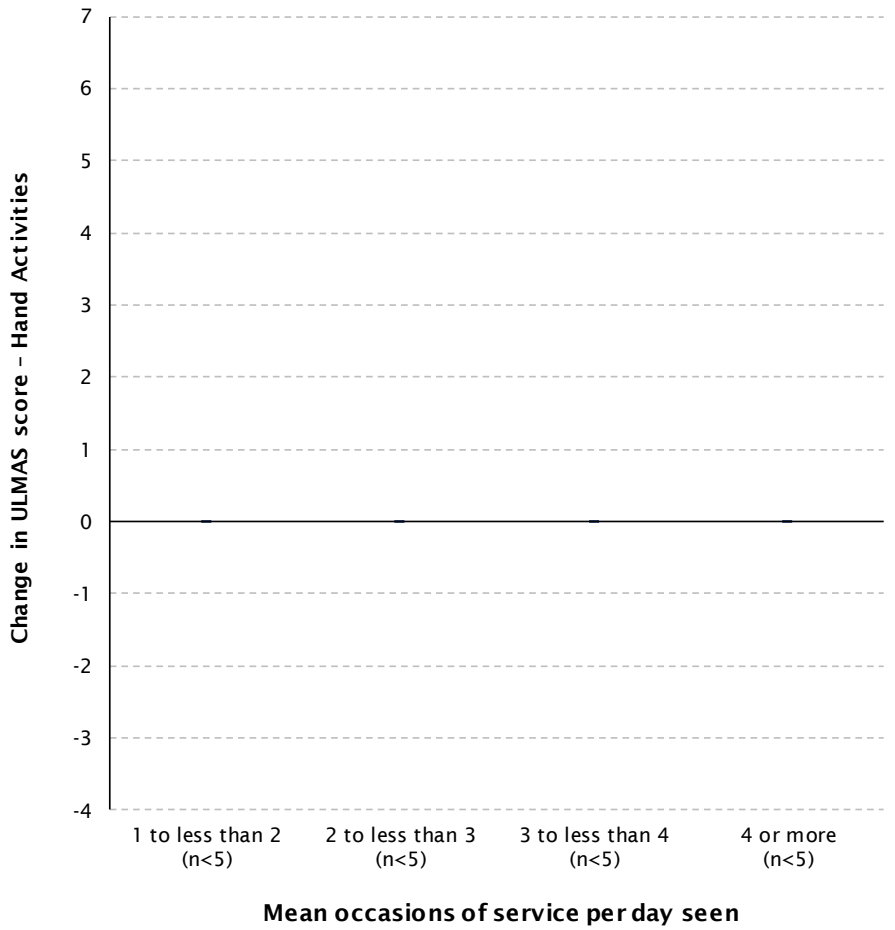
All Ambulatory 2019



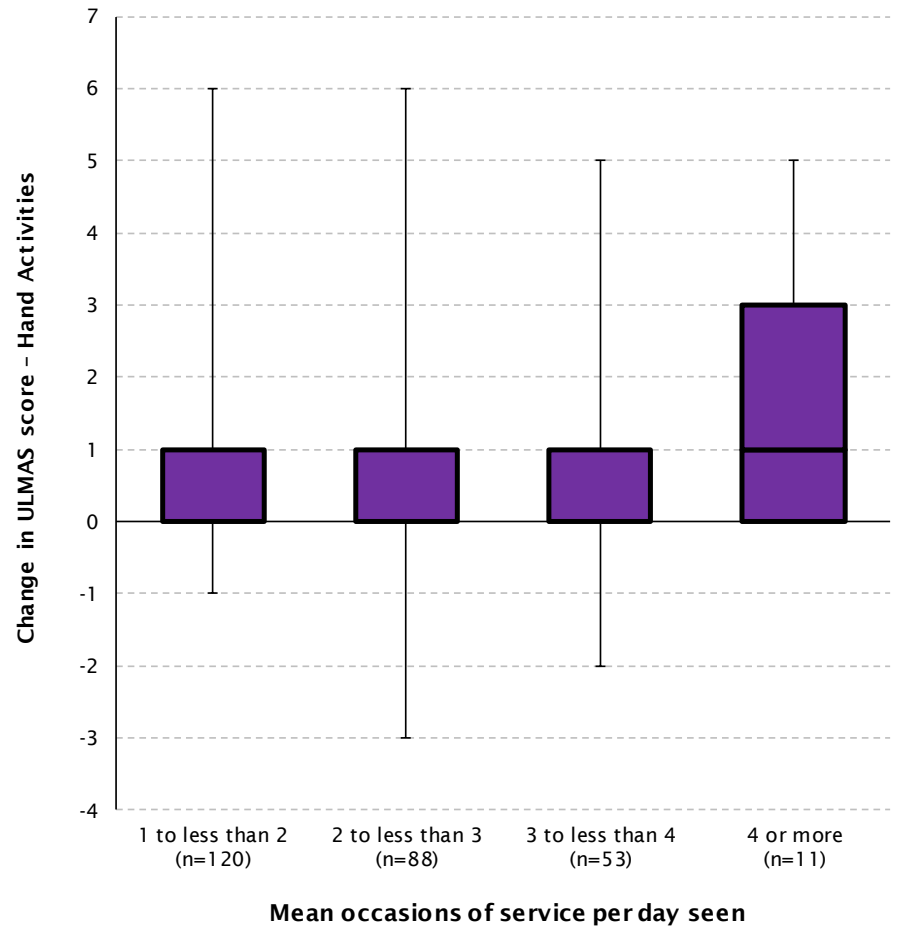
# Change in ULMAS score by OOS/day seen - Hand activities



Your Service 2019



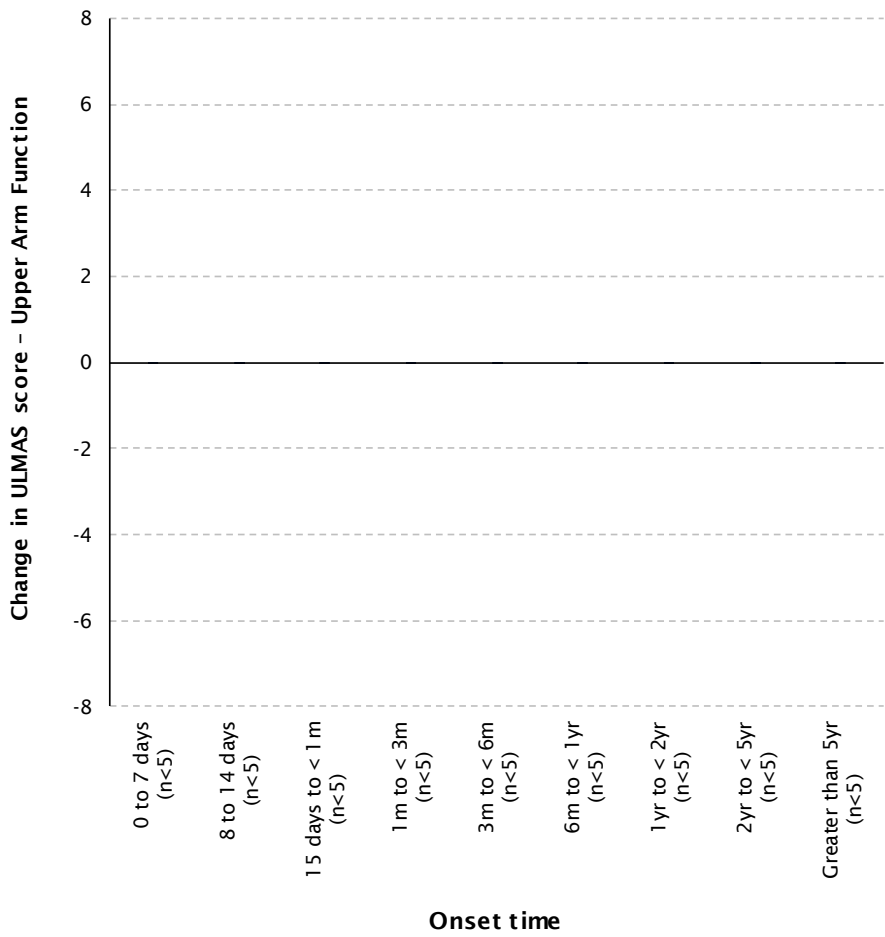
All Ambulatory 2019



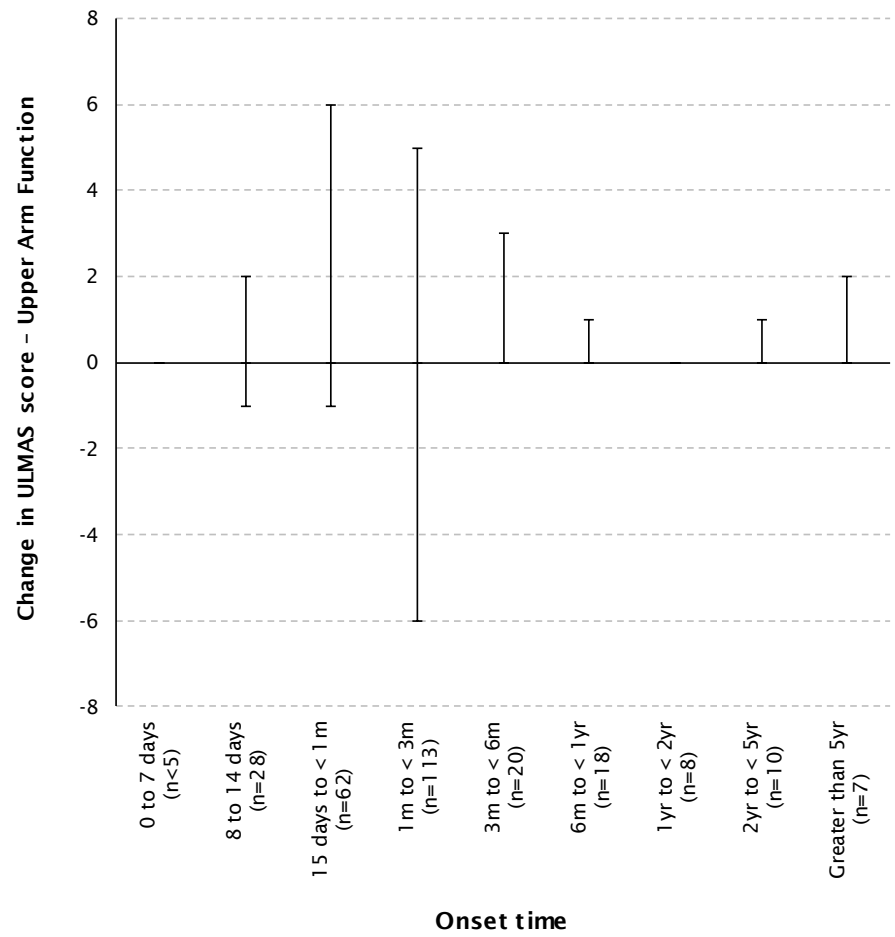
# Change in ULMAS score by onset time - Upper arm function



Your Service 2019



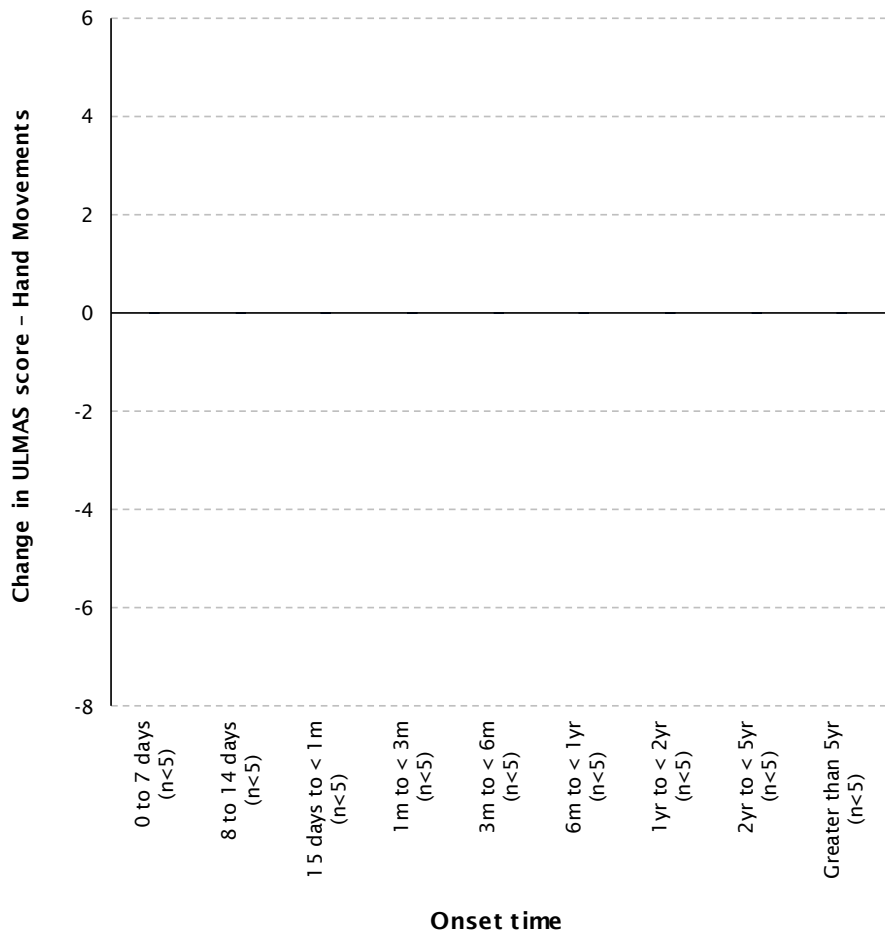
All Ambulatory 2019



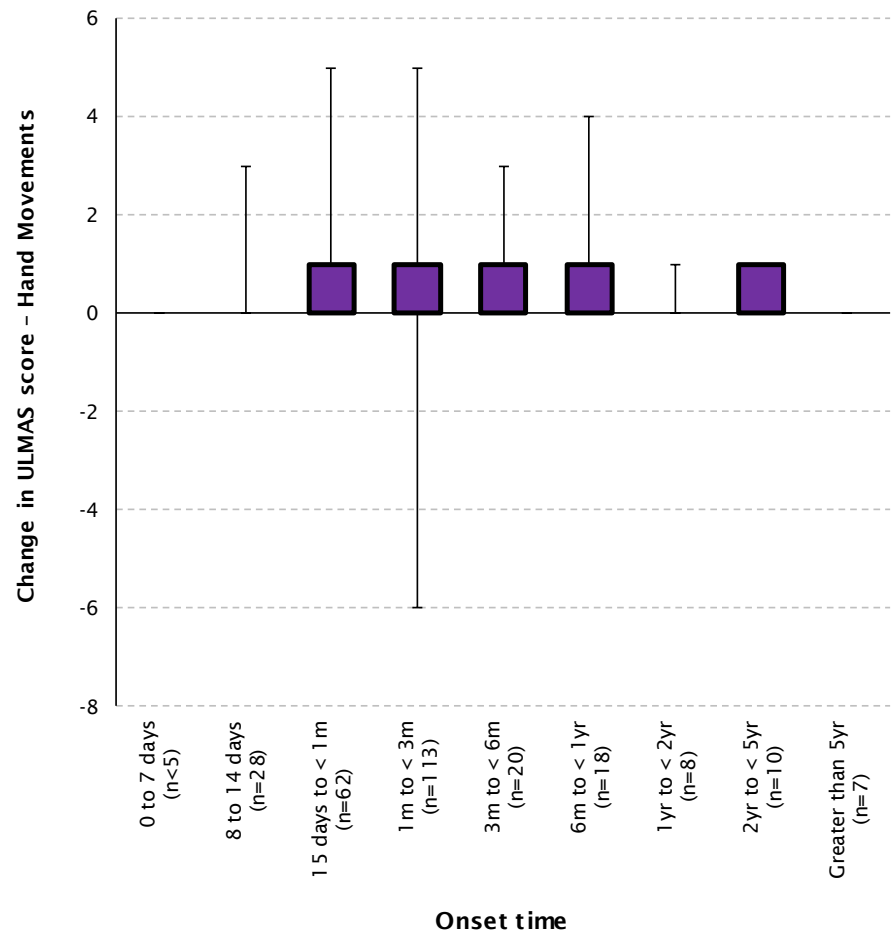
# Change in ULMAS score by onset time - Hand movements



Your Service 2019



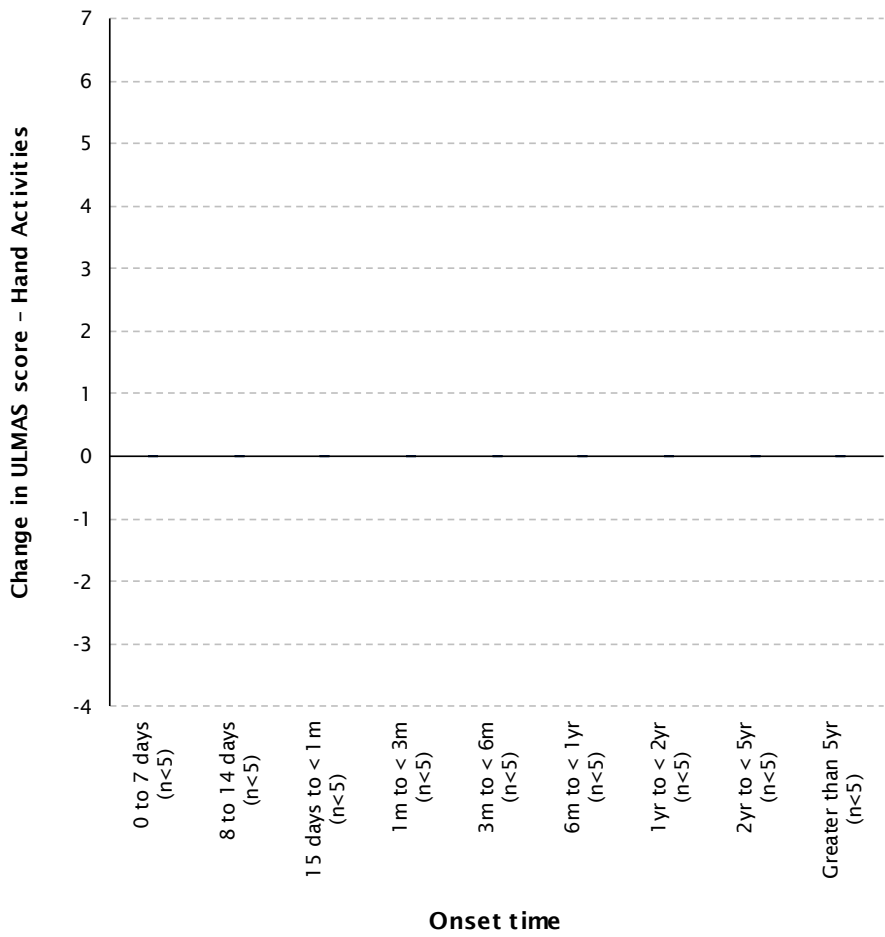
All Ambulatory 2019



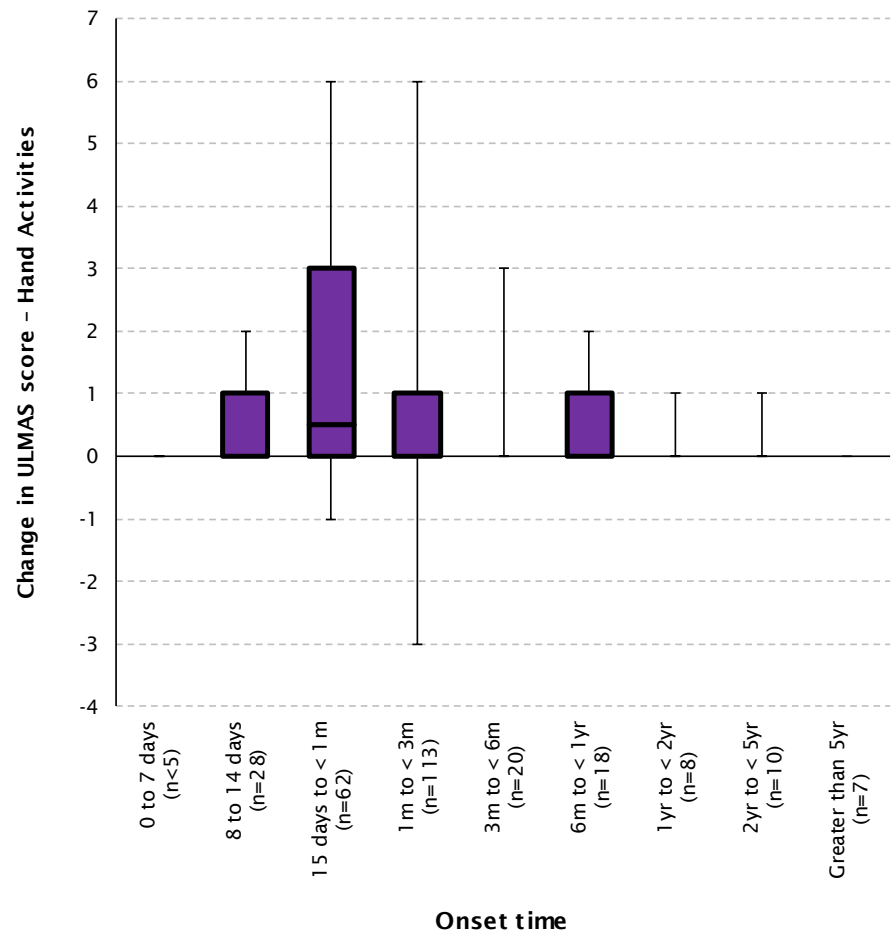
# Change in ULMAS score by onset time - Hand activities



Your Service 2019



All Ambulatory 2019





# Timed 10 metre walk test



This data item is collected in addition to the Australian Modified Lawton's IADL Scale for patients who may have gait impairment as a result of:

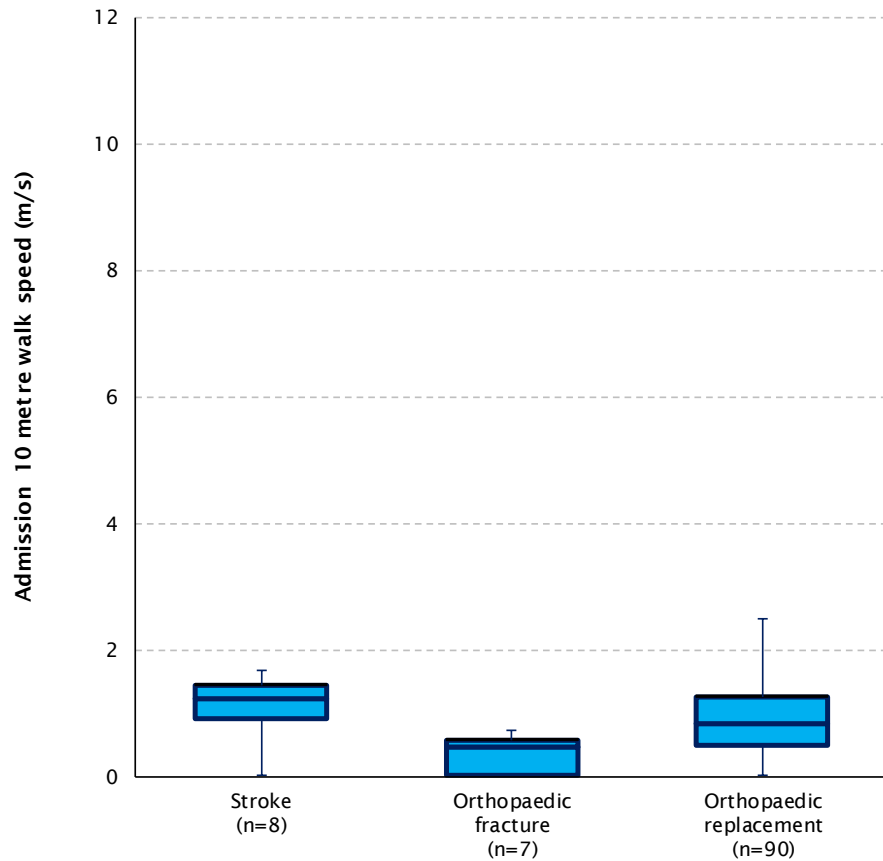
- Stroke
- Lower limb orthopaedic injury or joint replacement
- Amputation of lower limb (optional measure)

For further information refer to the AROC Ambulatory Data Dictionary V4.1 for Clinicians.

# Admission timed 10 metre walk test speed by impairment

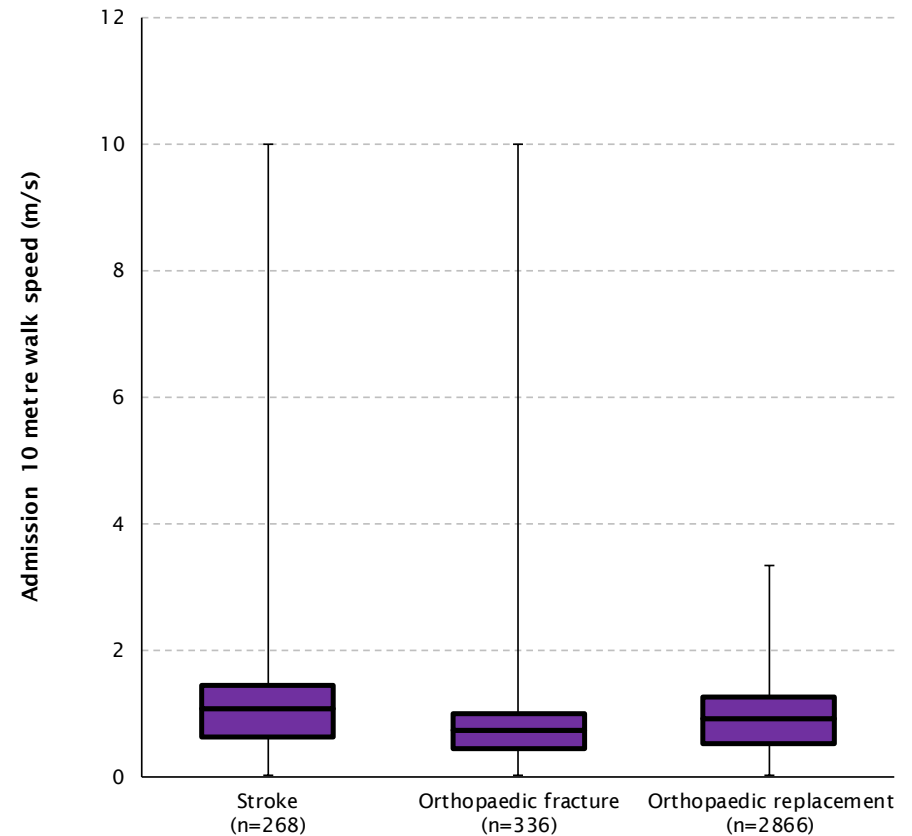


### Your Service 2019



Note: All admissions.

### All Ambulatory 2019

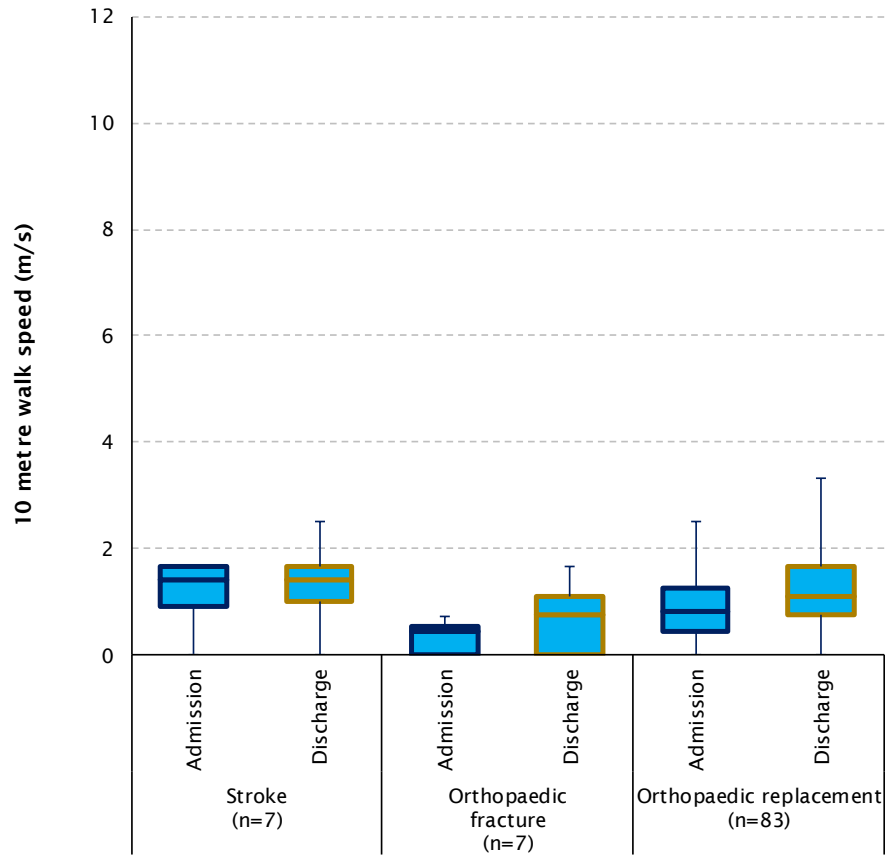


Note: All admissions.

# Admission and discharge timed 10 metre walk test speed by impairment

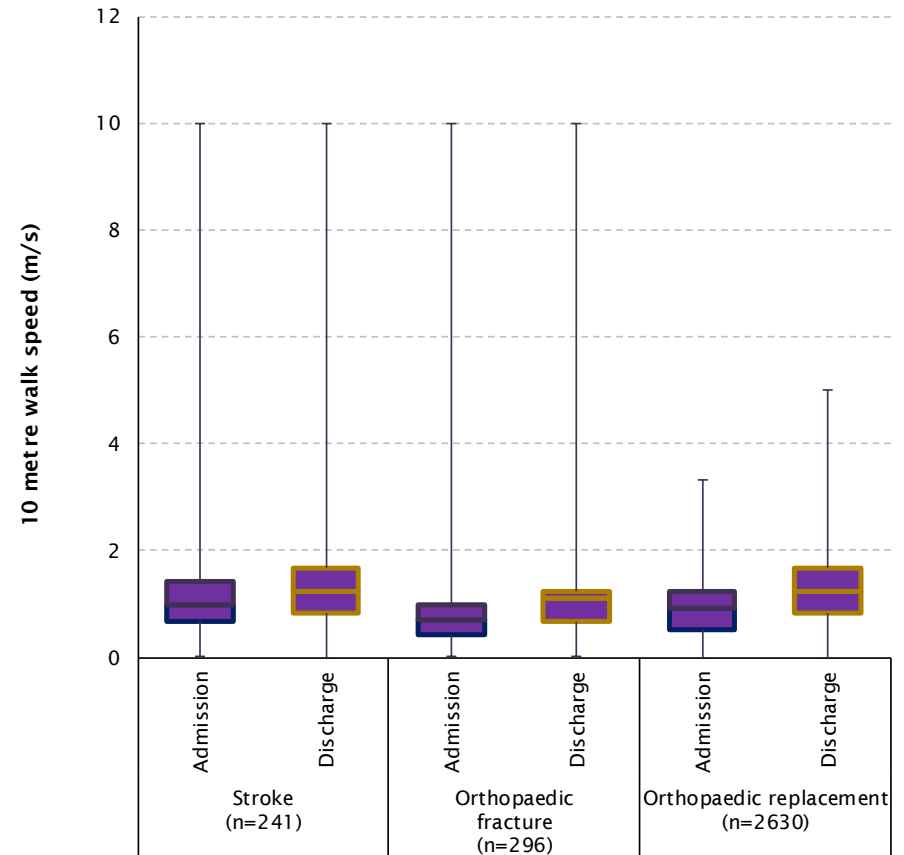


Your Service 2019



Note: Completed episodes only.

All Ambulatory 2019

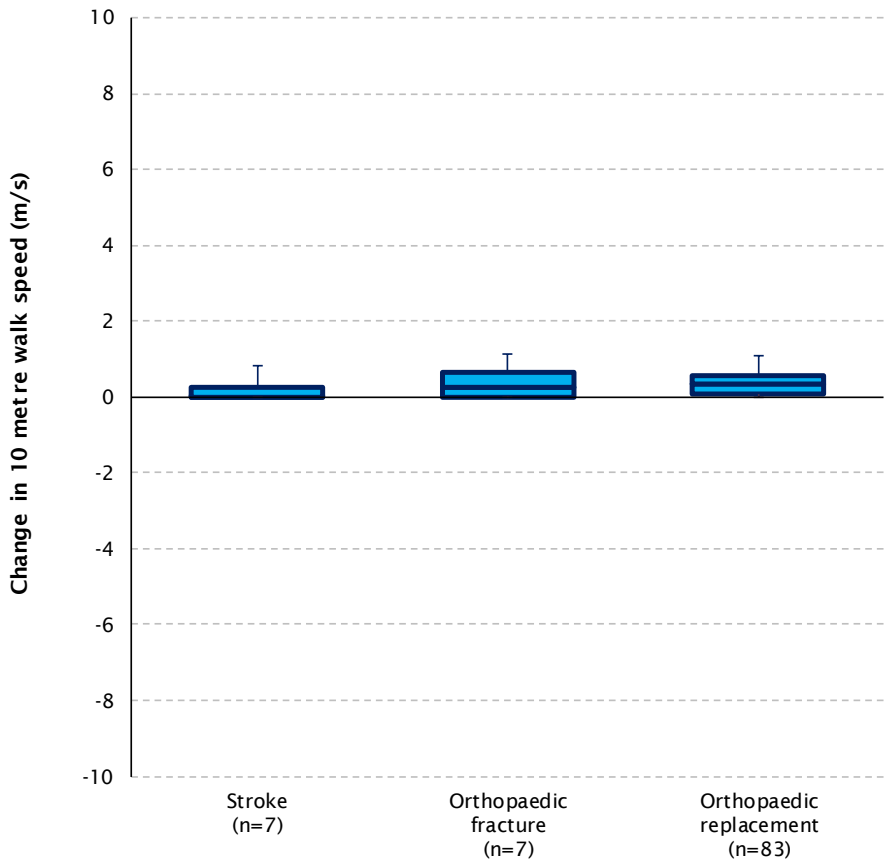


Note: Completed episodes only.

# Change in 10 metre walk speed by impairment

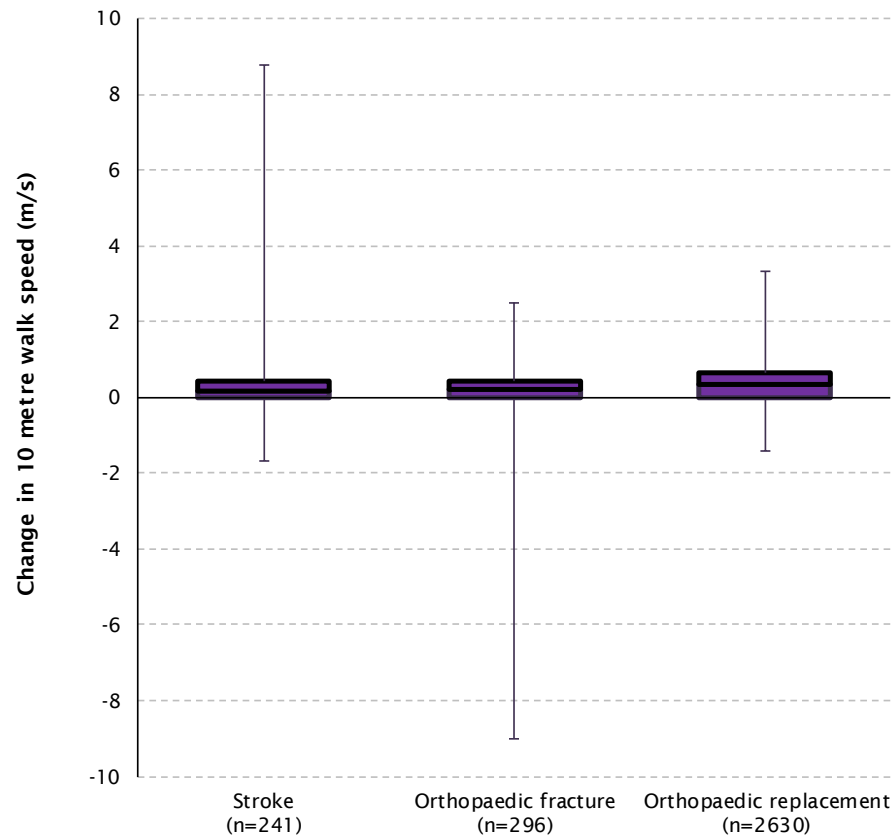


Your Service 2019



Note: Completed episodes only.

All Ambulatory 2019

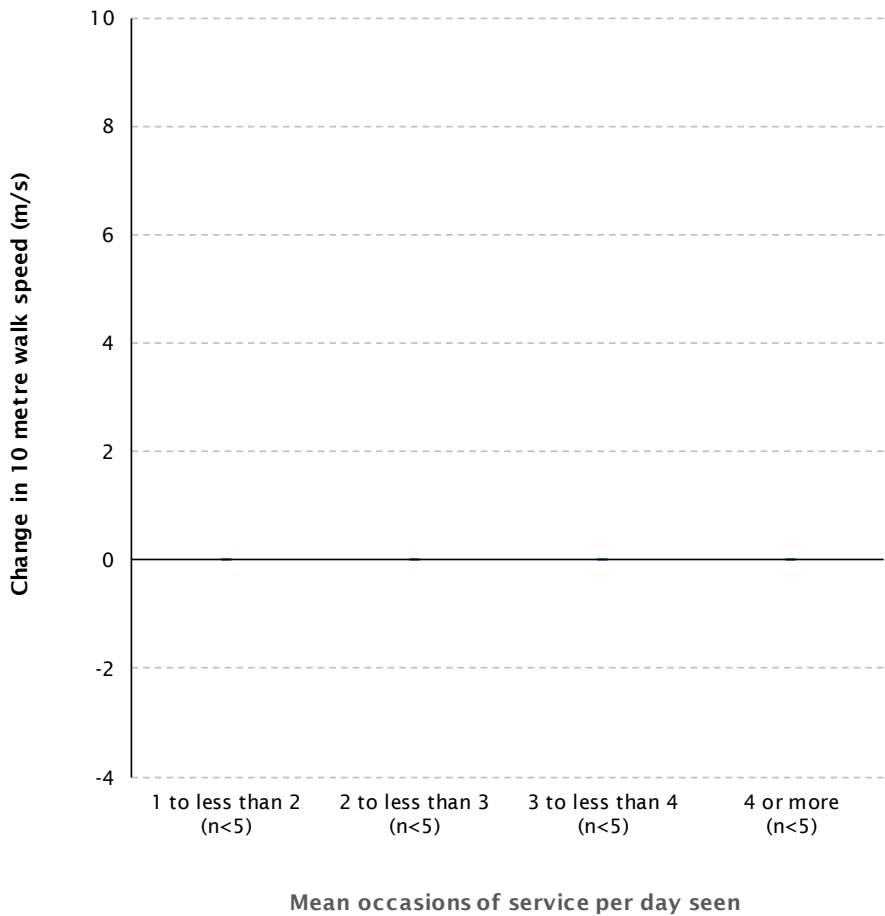


Note: Completed episodes only.

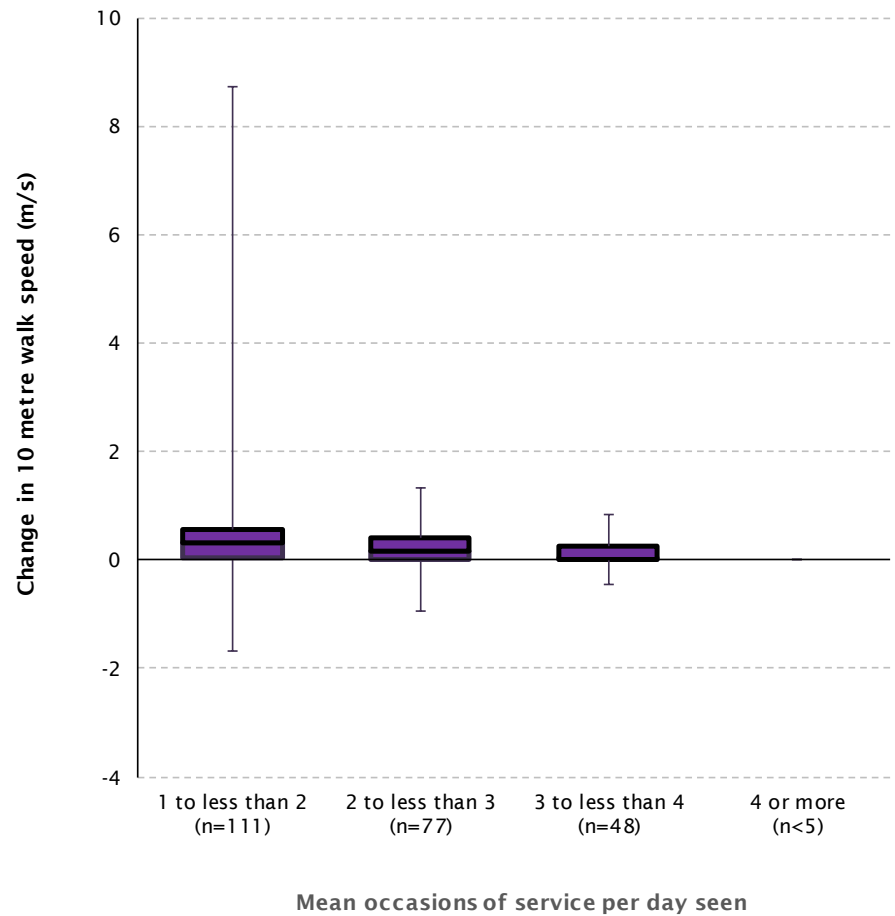
# Change in 10 metre walk speed by OOS/day seen – Stroke



Your Service 2019

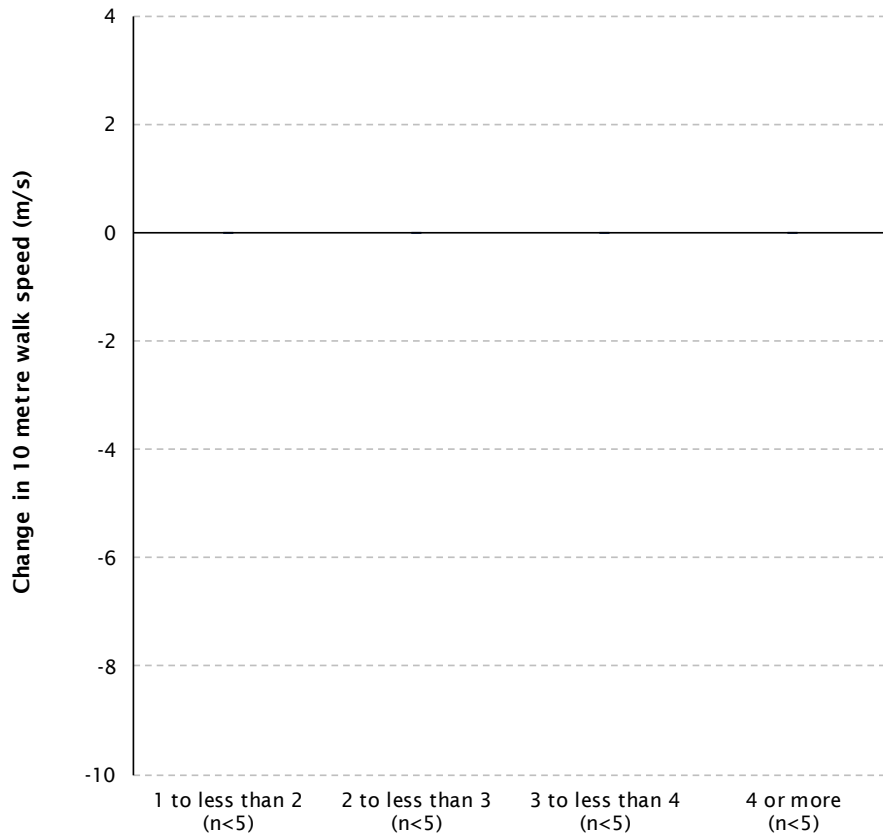


All Ambulatory 2019



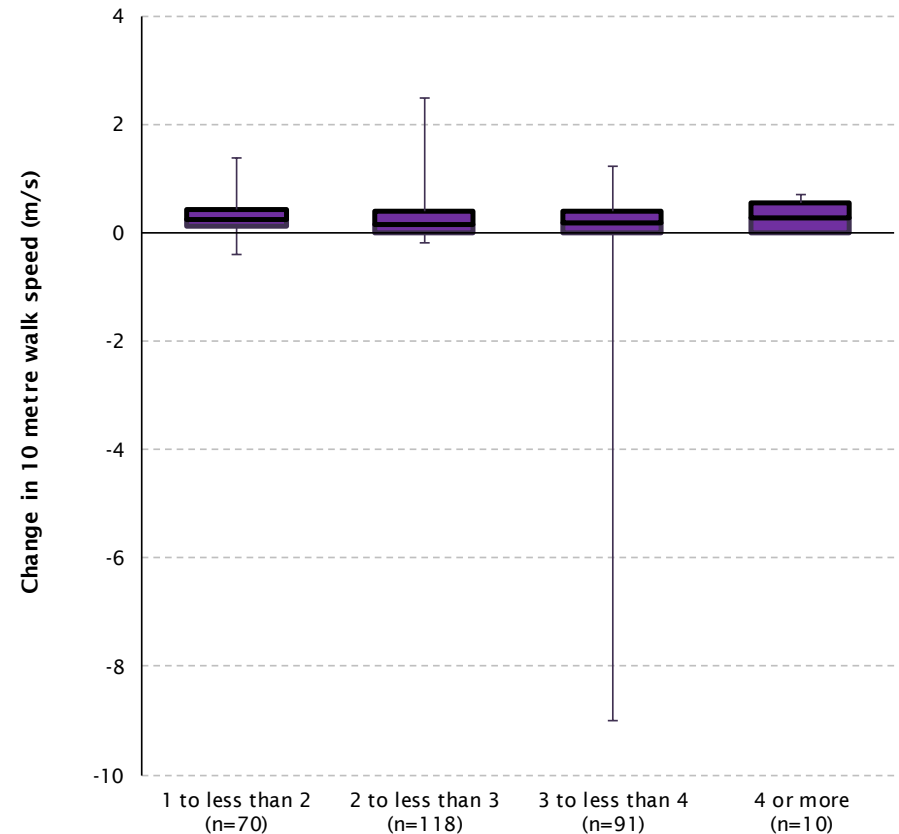
# Change in 10 metre walk speed by OOS/day seen – Orthopaedic fractures

Your Service 2019



Mean occasions of service per day seen

All Ambulatory 2019

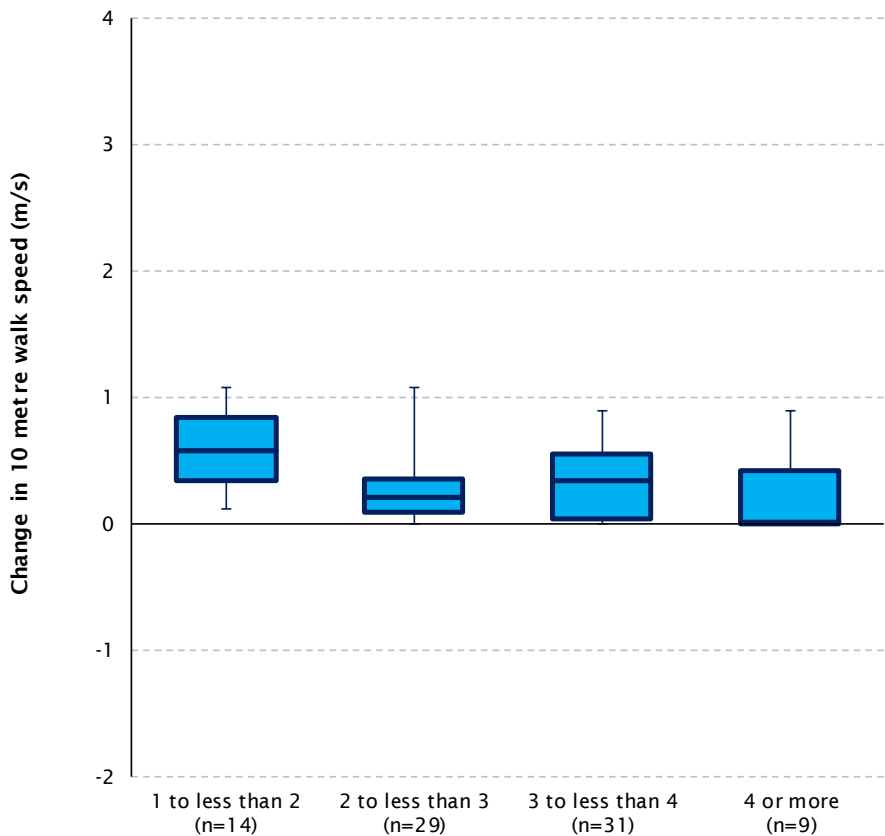


Mean occasions of service per day seen

# Change in 10 metre walk speed by OOS/day seen – Orthopaedic replacements

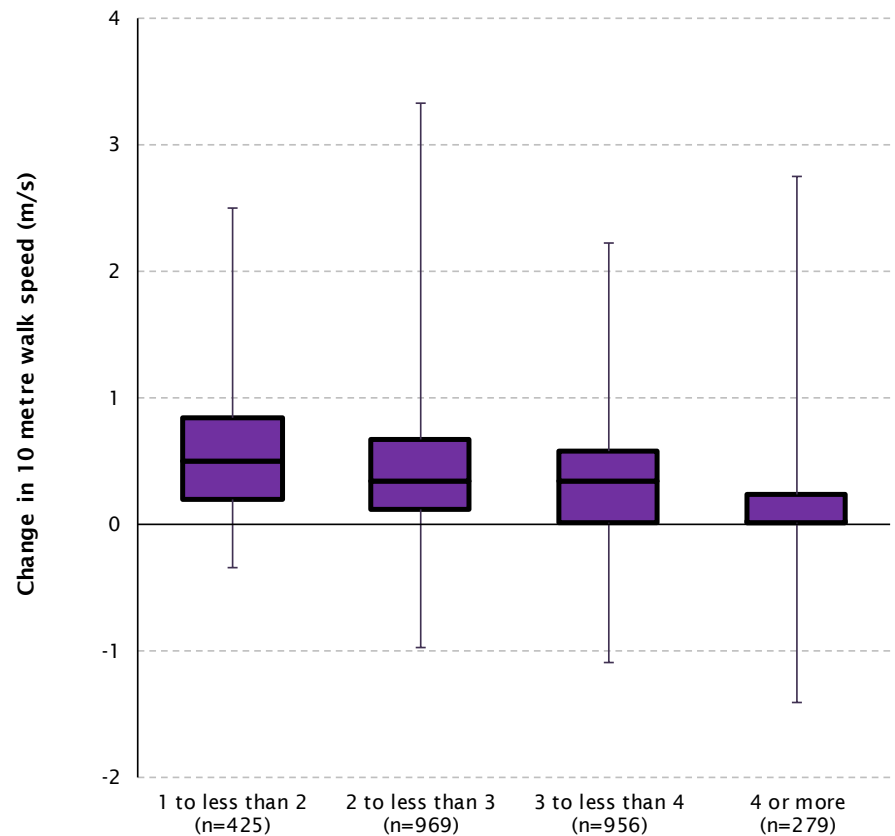


Your Service 2019



Mean occasions of service per day seen

All Ambulatory 2019



Mean occasions of service per day seen

- This data item is collected in addition to the Australian Modified Lawton's IADL Scale for patients who may have functional impairment as a result of deconditioning
- The DEMMI is an advanced instrument for accurately measuring and monitoring changes in mobility for all older adults

Only complete for rehabilitation episodes with AROC impairment codes:

- 16.1 - Reconditioning following surgery
- 16.2 - Reconditioning following medical illness
- 16.3 - Cancer rehabilitation

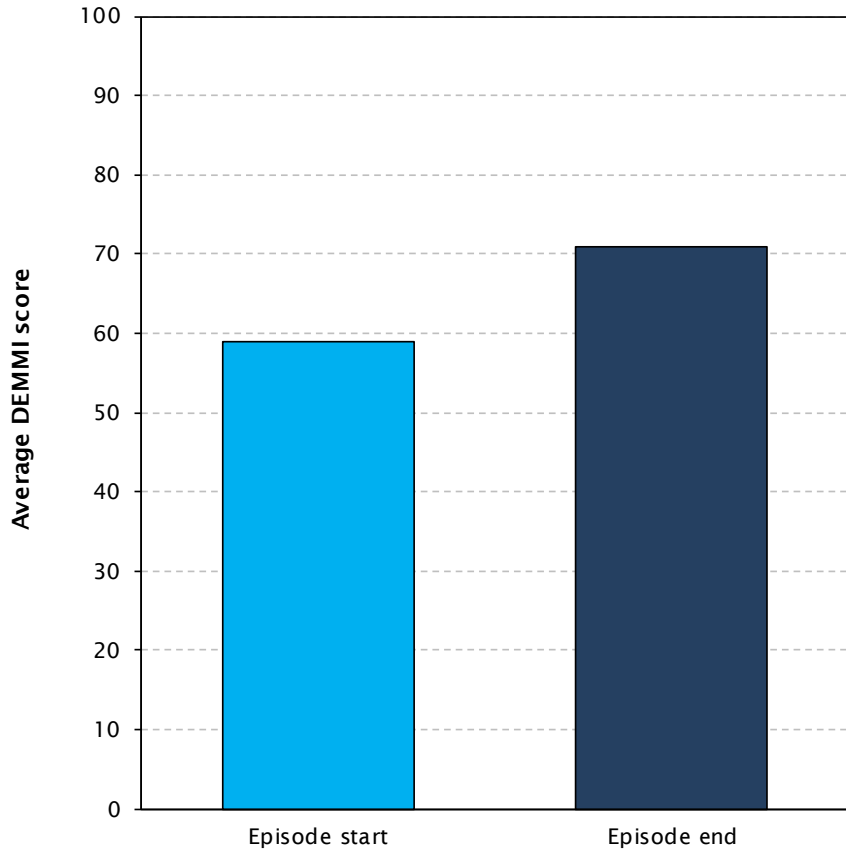
For further information refer to the AROC Ambulatory Data Dictionary V4.1 for Clinicians.



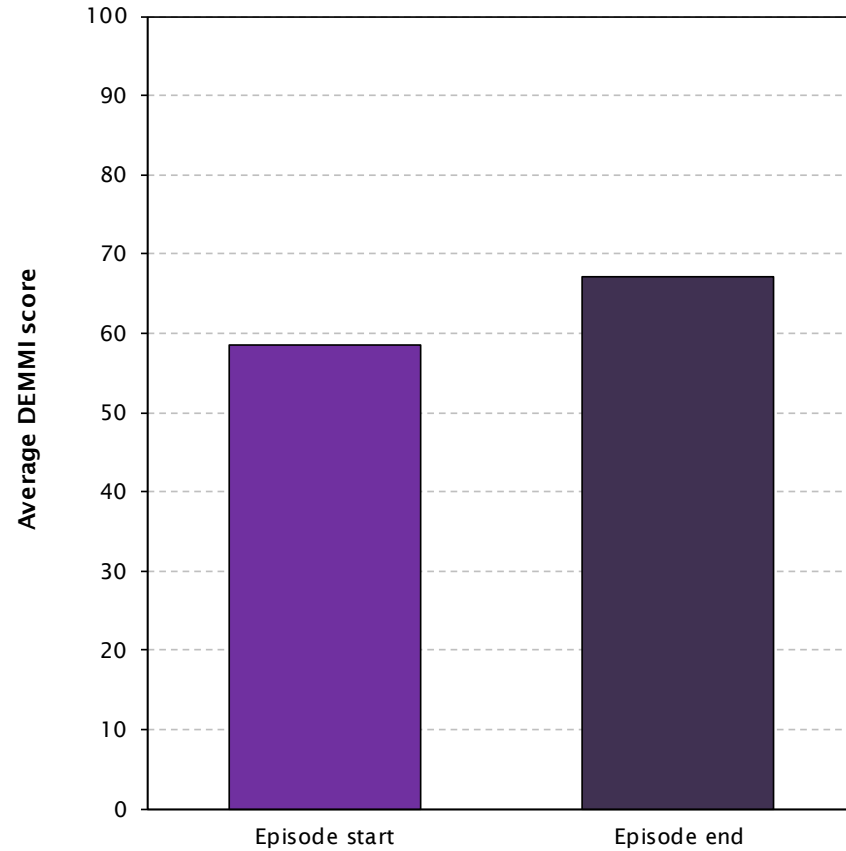
# Average DEMMI start and end score



Your Service 2019 (n=31)



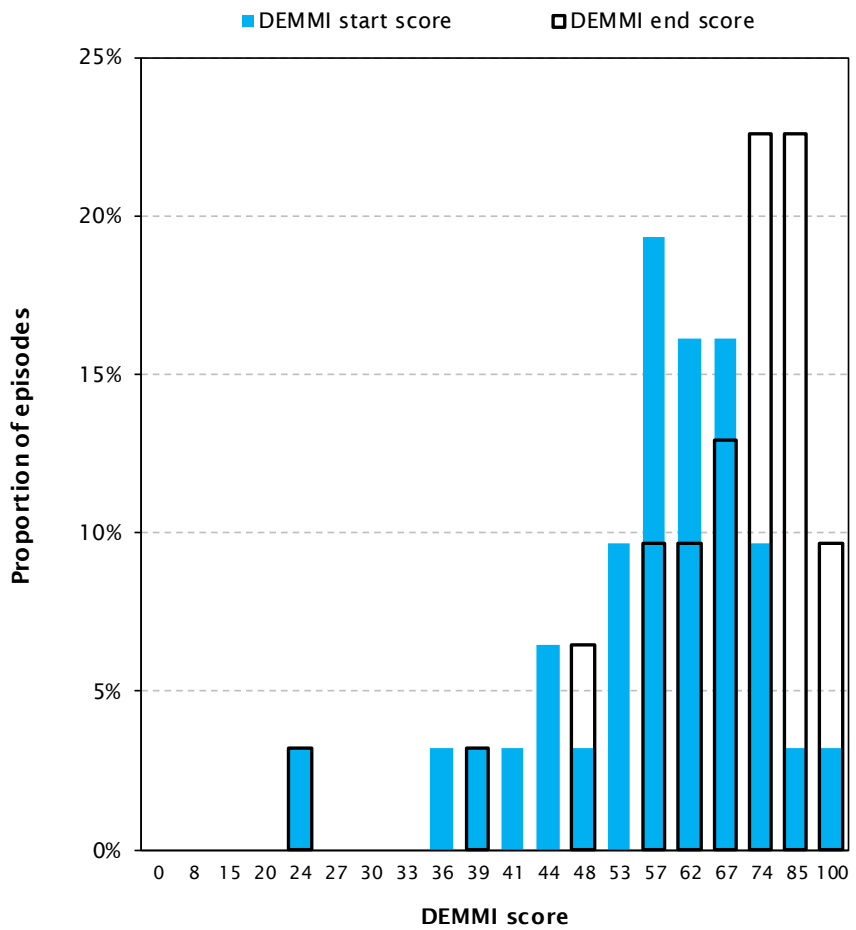
All Ambulatory 2019 (n=812)



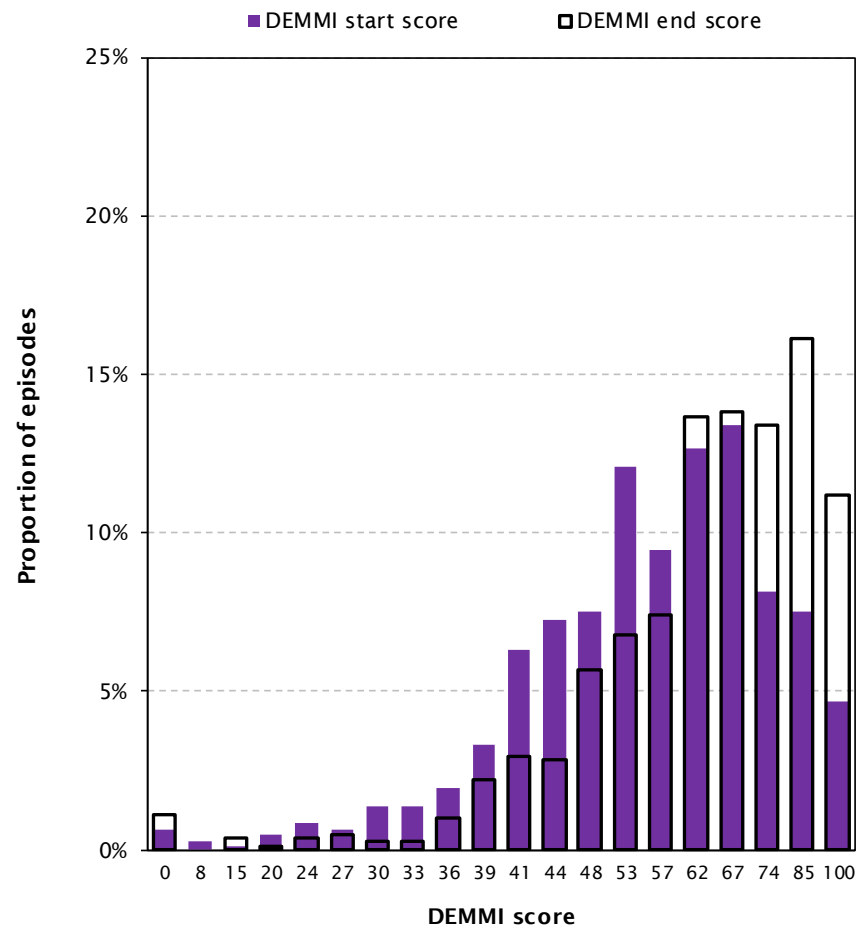
# DEMMI start and end total - all episodes



Your Service 2019 (n=31)



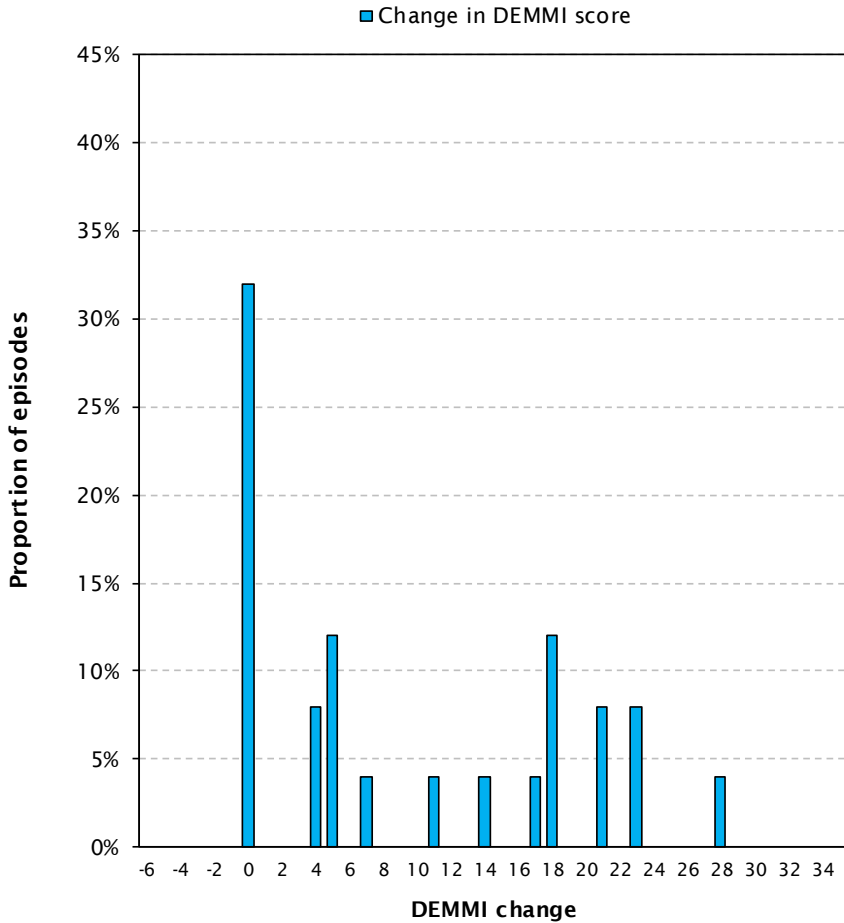
All Ambulatory 2019 (n=812)



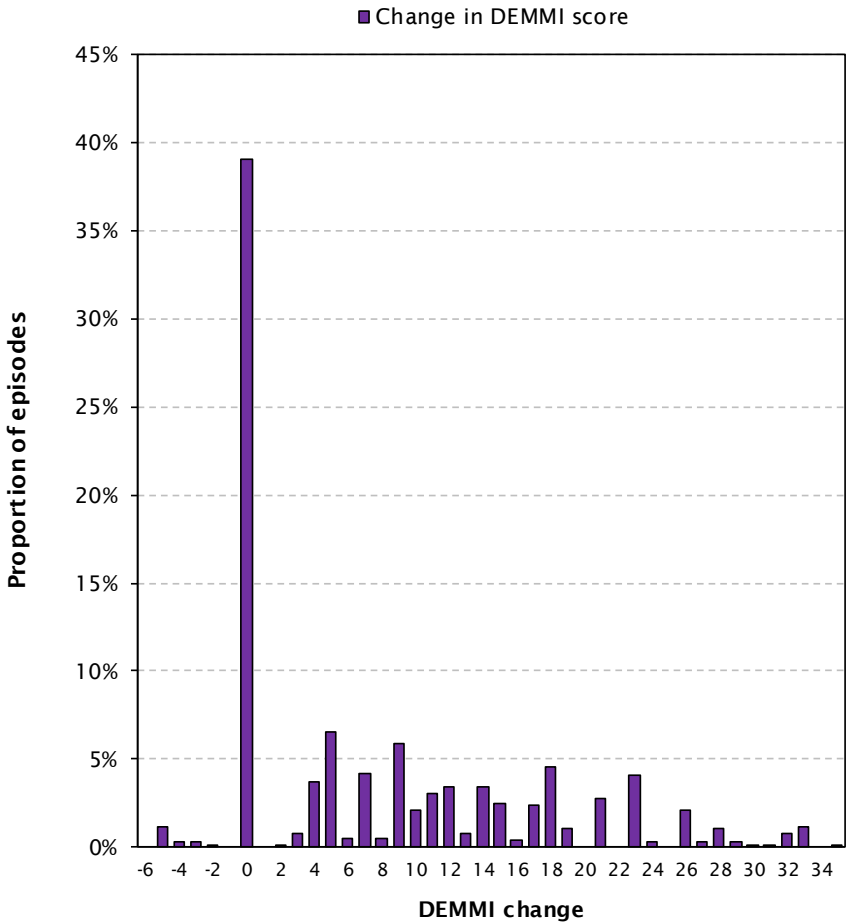
# Change in DEMMI score – all episodes



Your Service 2019 (n=31)

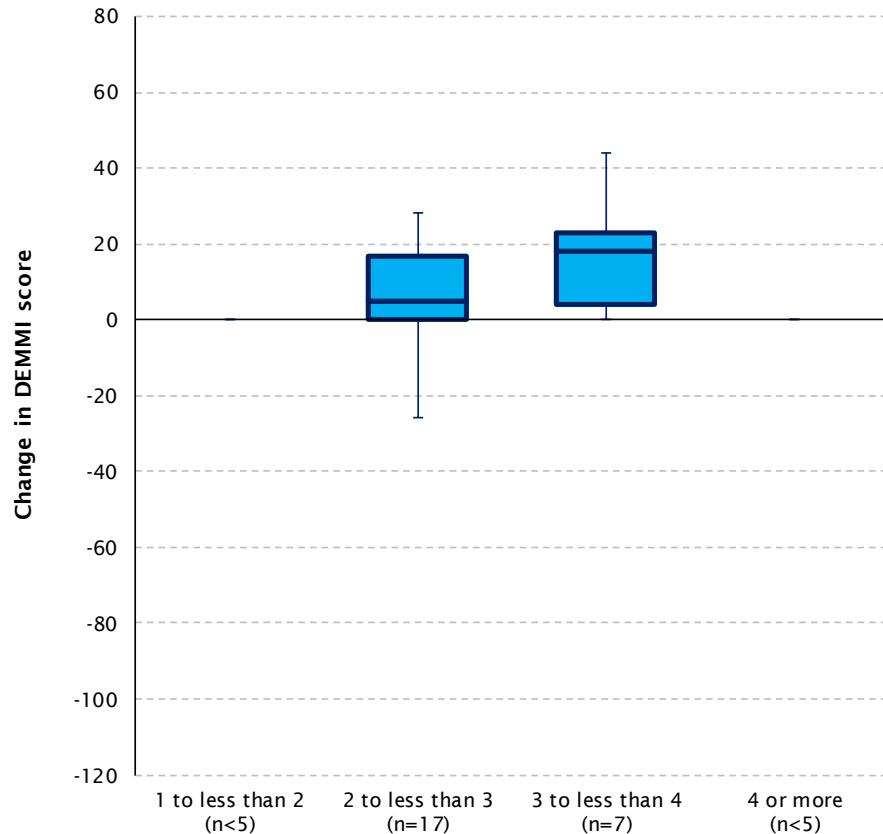


All Ambulatory 2019 (n=812)



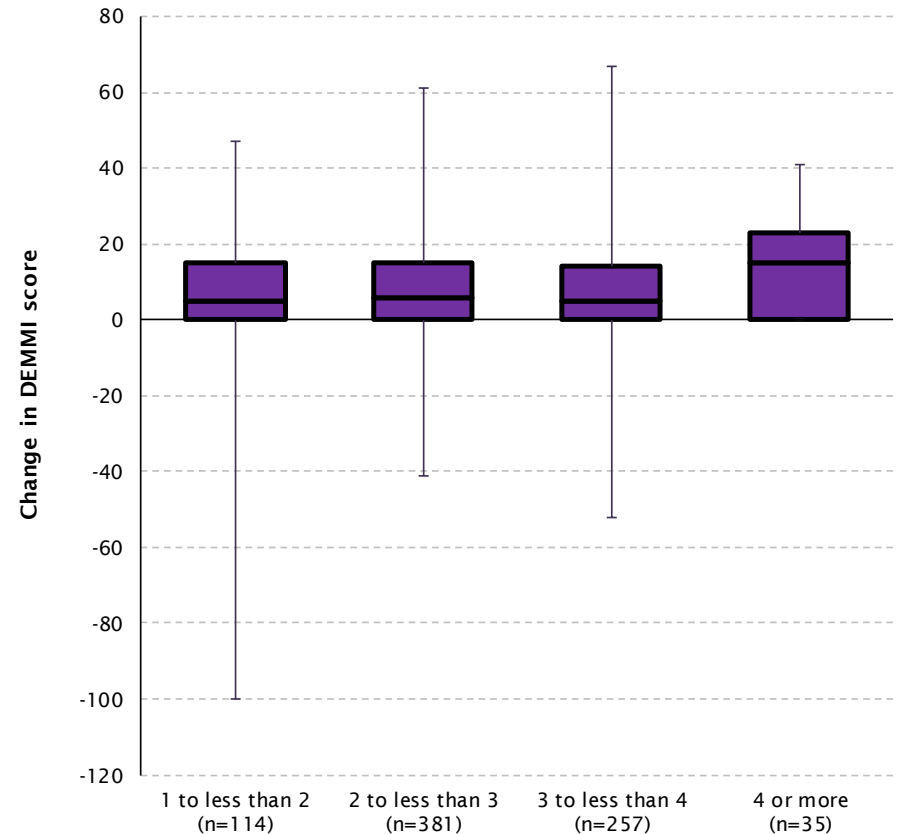
# Change in DEMMI score by OOS/day seen - all episodes

Your Service 2019



Mean occasions of service per day seen

All Ambulatory 2019

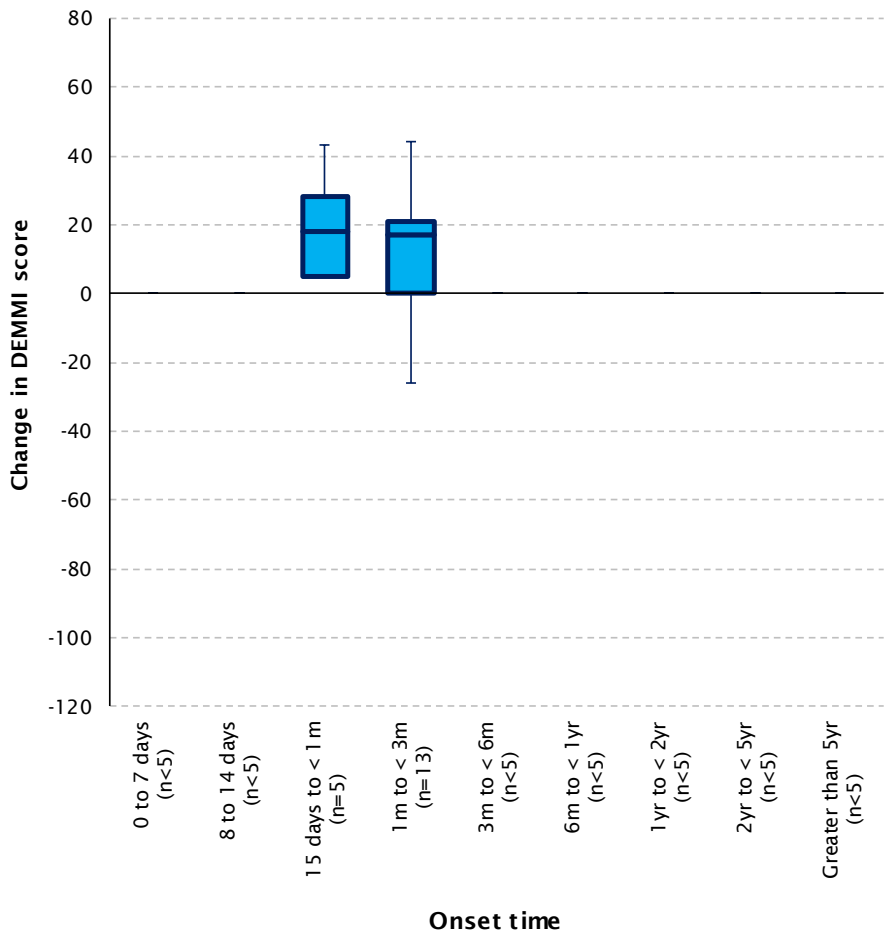


Mean occasions of service per day seen

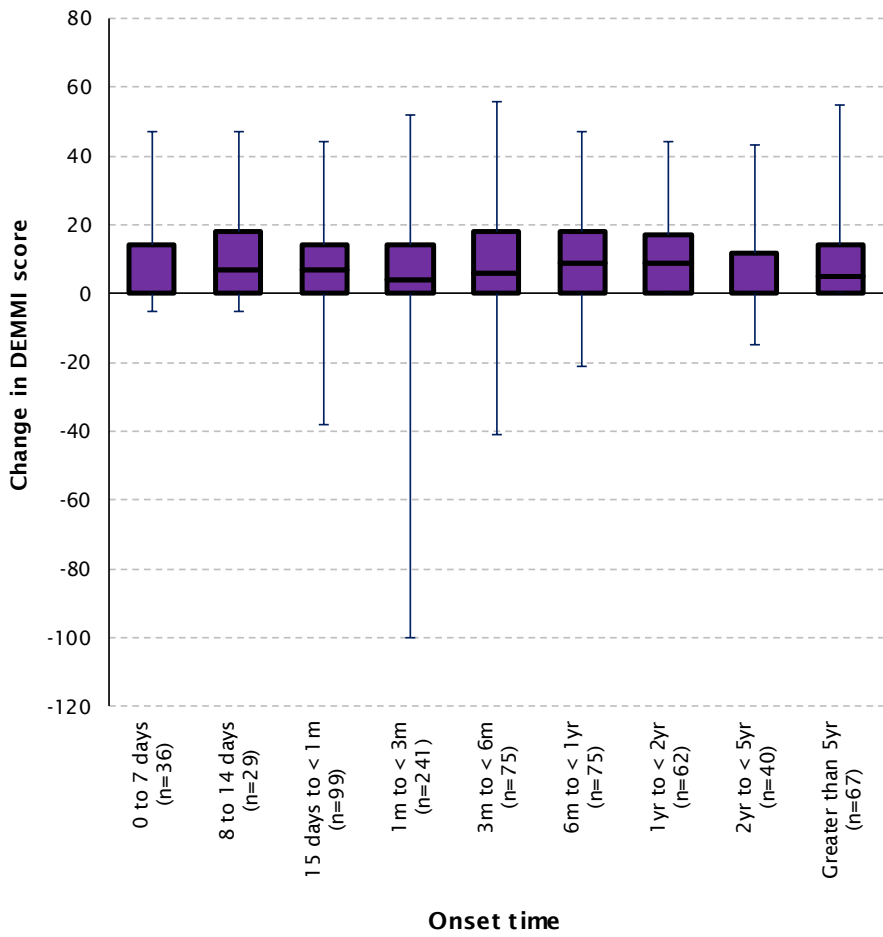
# Change in DEMMI score by onset time - all episodes



Your Service 2019



All Ambulatory 2019



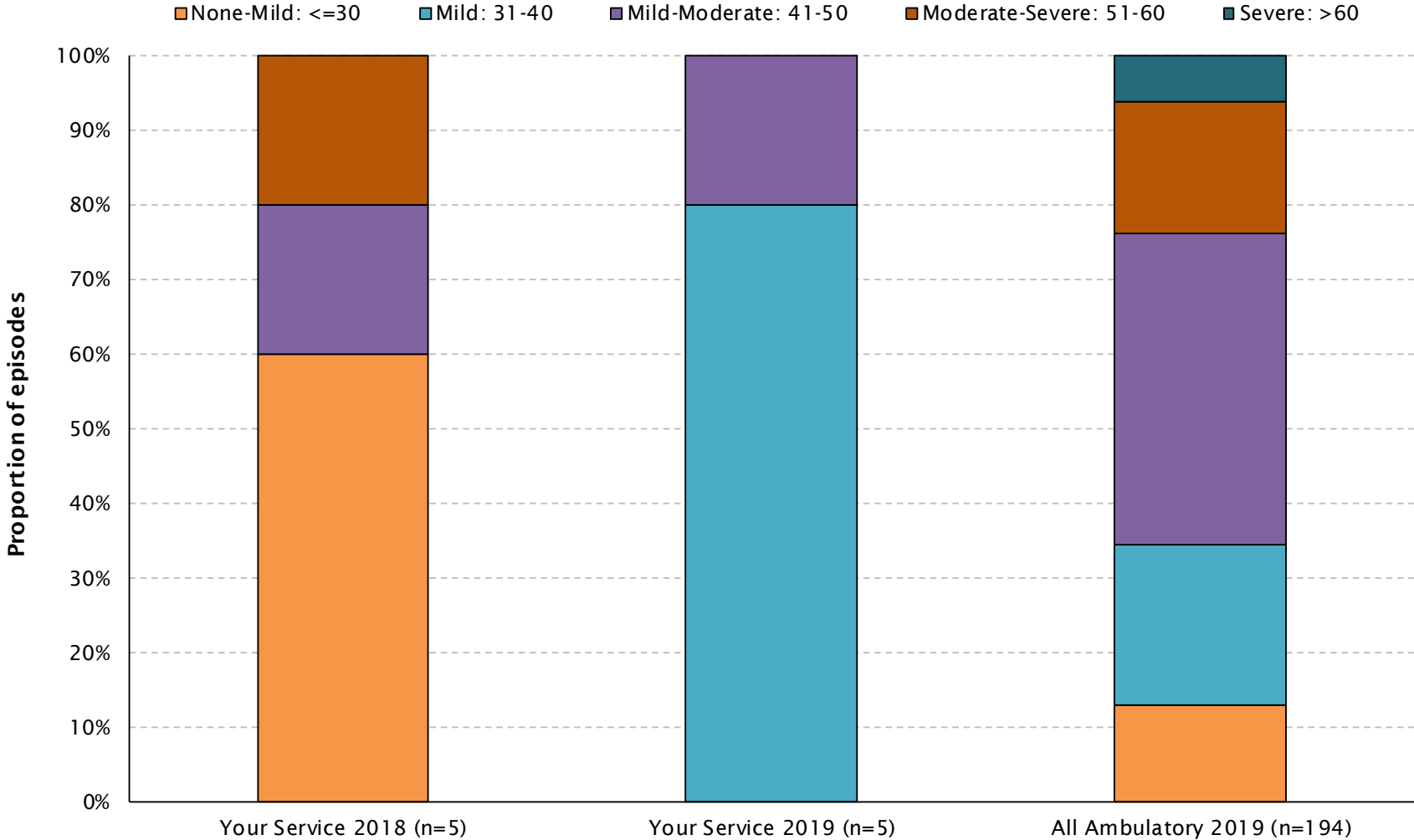
# Mayo-Portland Adaptability Index-4 (MPAI-4)



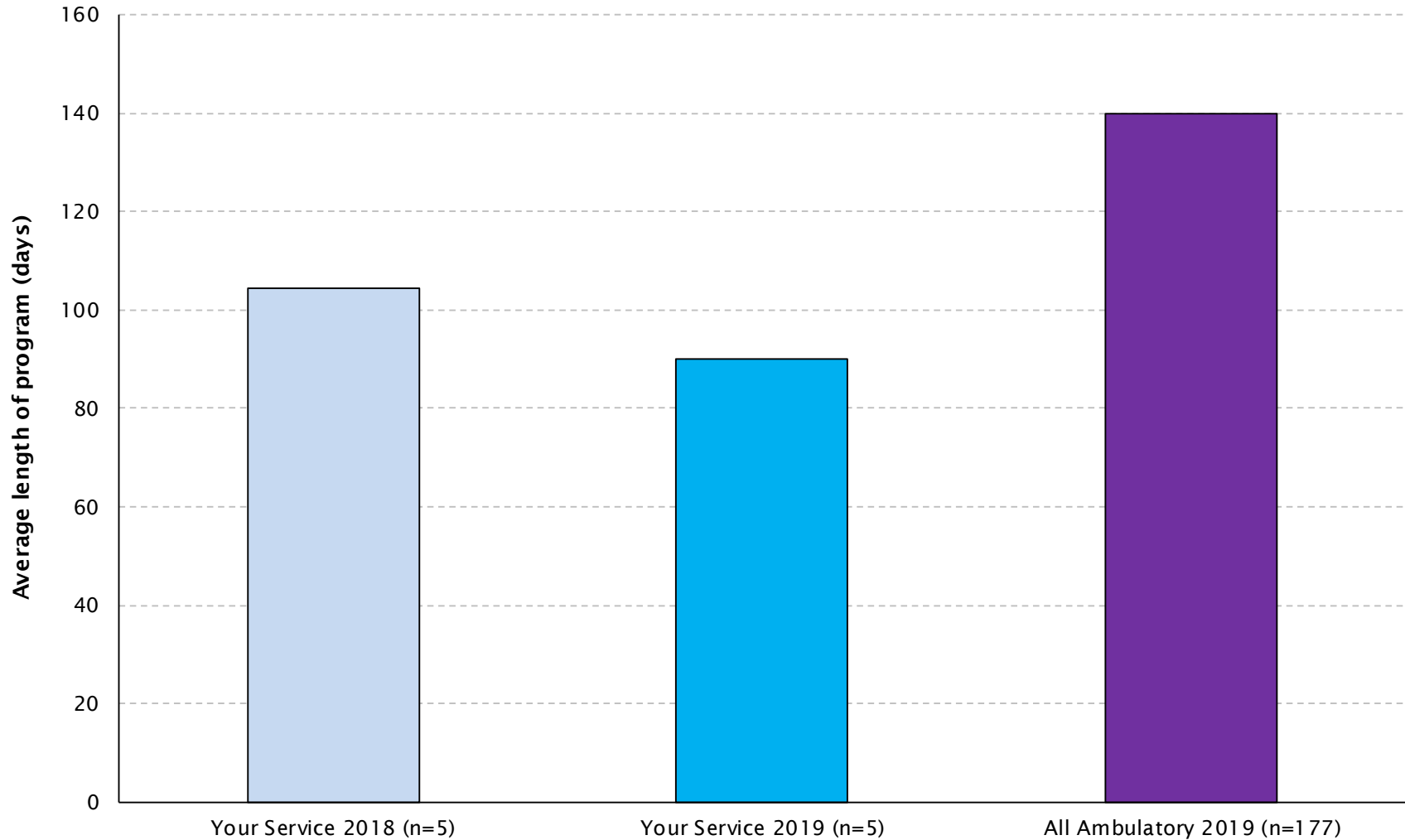
- This data item is collected in addition to the Australian Modified Lawton's IADL Scale for patients who may have functional impairment as a result of brain injury
- The MPAI-4 was specifically designed for the evaluation of individuals during the post-acute period following ABI
- The MPAI-4 consists of 29 items in three subscales (the Ability Index, the Adjustment Index and the Participation Index) plus an additional six items that are not included in the MPAI-4 score

For further information refer to the AROC Ambulatory Data Dictionary V4.1 for Clinicians.

# Casemix of episodes submitted MPAI-4



# Average program length for episodes with submitted MPAI-4

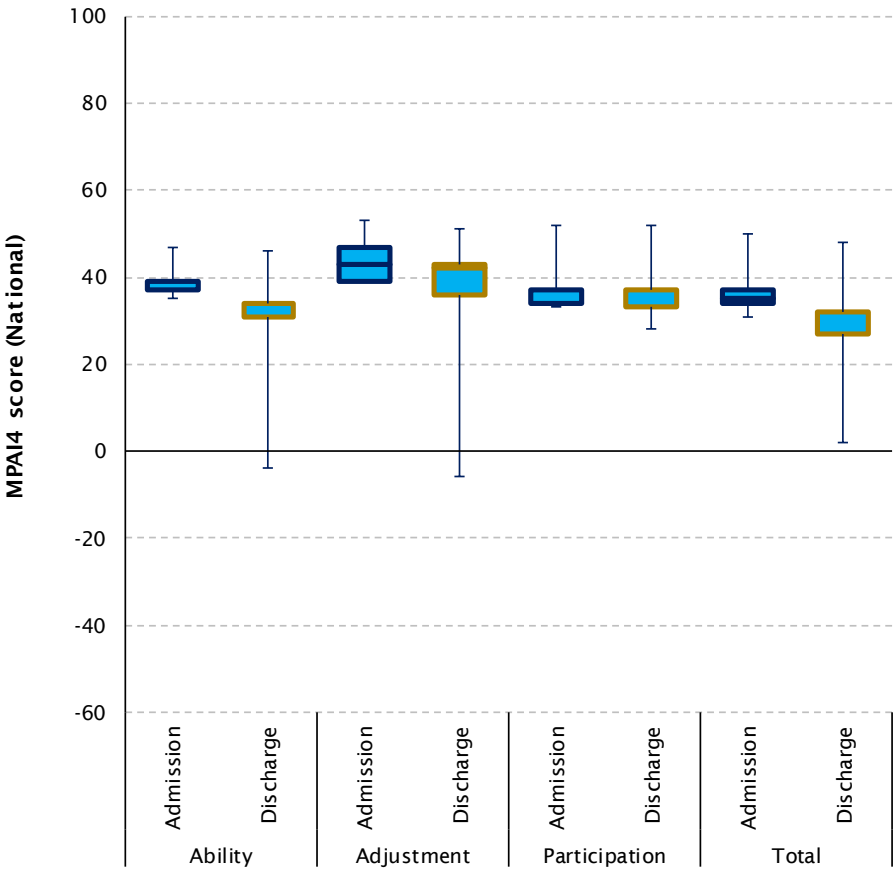




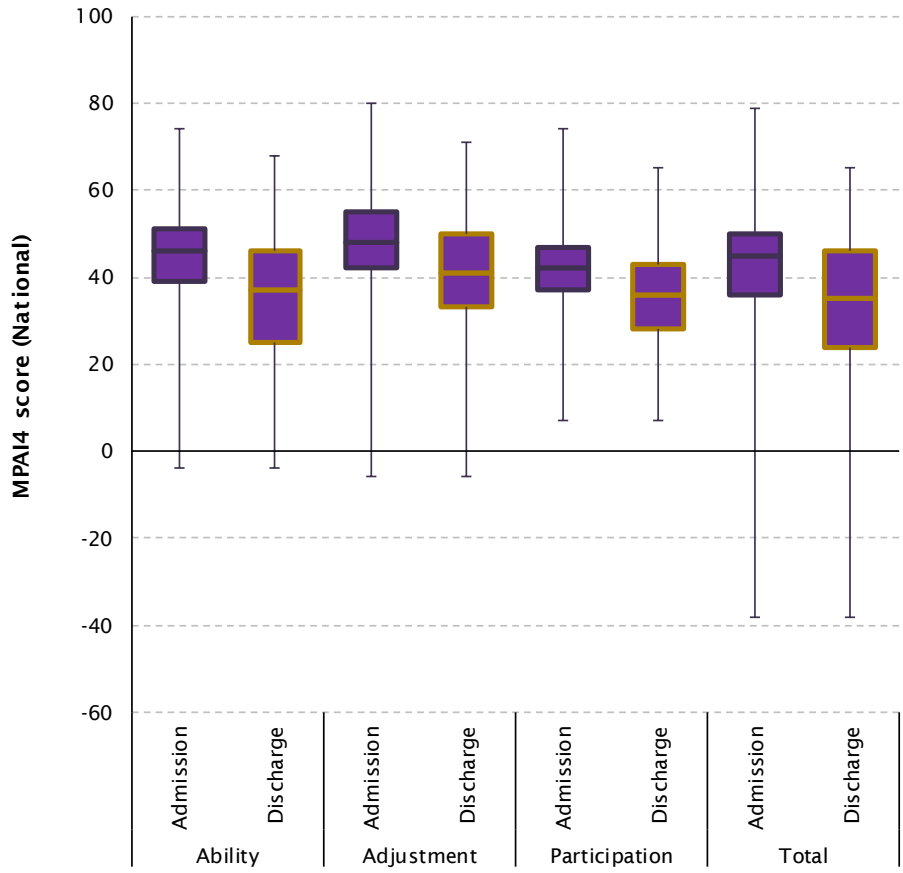
# Admission and discharge T score distribution of spread by MPAI-4 index



Your Service 2019 (n=5)



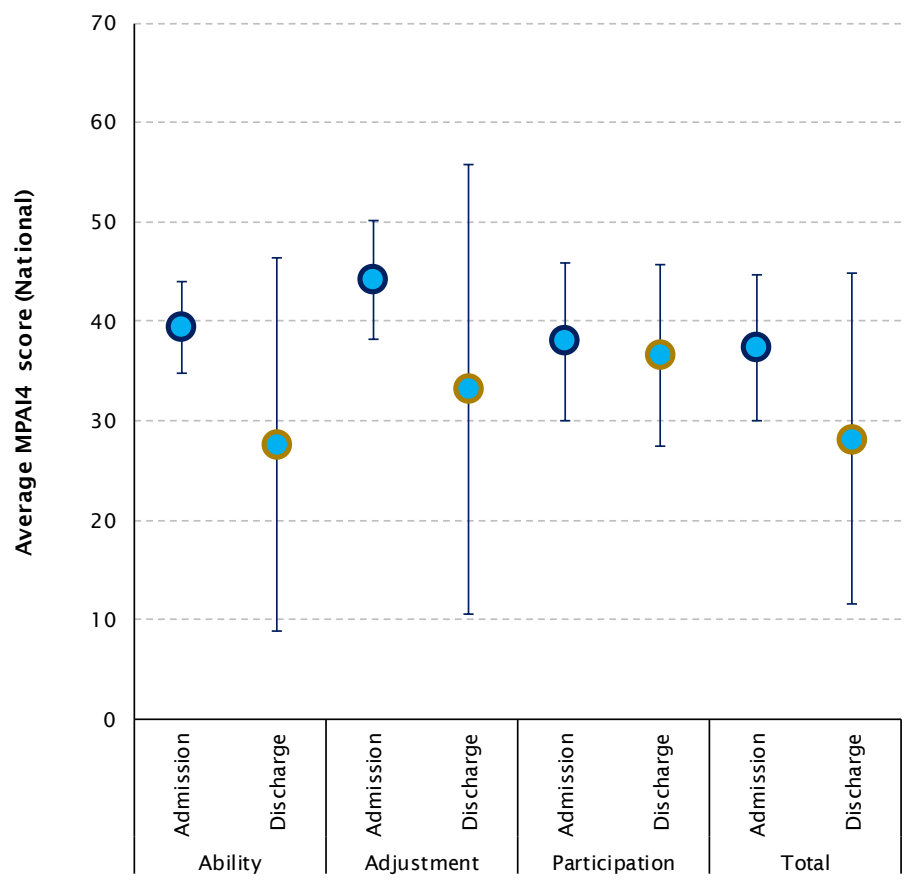
All Ambulatory 2019 (n=177)



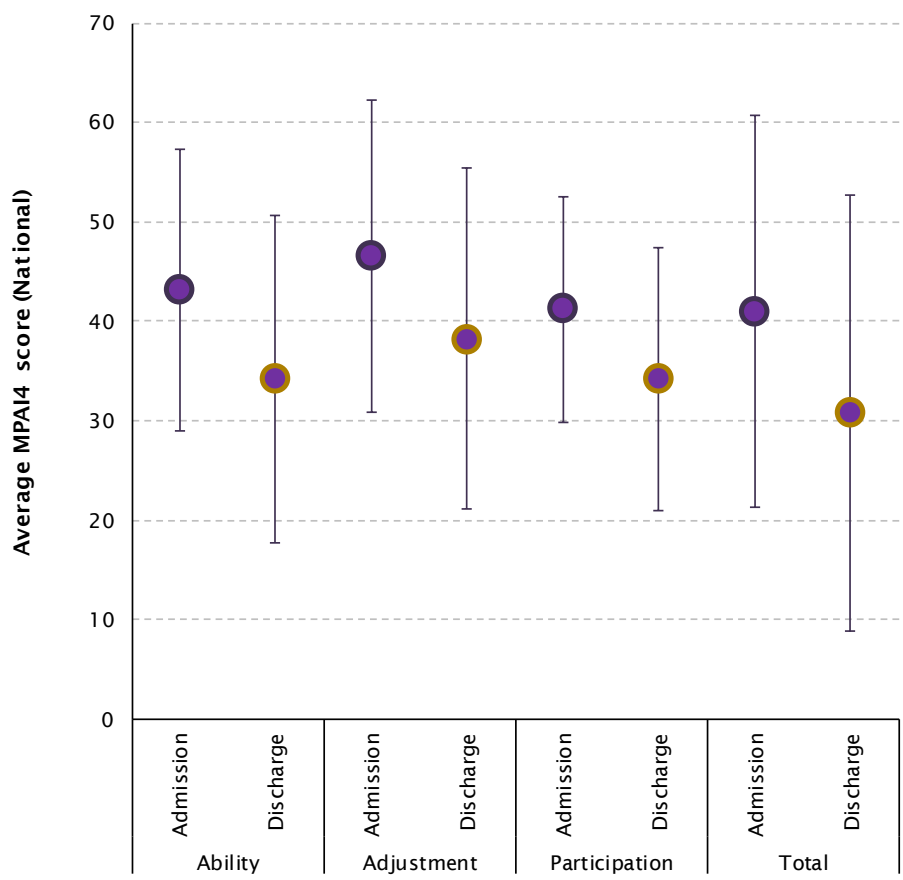
# Admission and discharge average T score by MPAI-4 index



Your Service 2019 (n=5)



All Ambulatory 2019 (n=177)



# Appendix 1: The Australian Modified Lawton's



- The Australian Modified Lawton's represents a sensitive measure of the outcome of ambulatory rehabilitation as it relates to instrumental tasks, such as a patient's ability to do their own shopping, cleaning, cooking, manage their finances, skills that demonstrate their independence in the wider context
- In general most participants in ambulatory care have already demonstrated a degree of functional independence, thus a straight ADL tool (such as the FIM), is not an appropriate outcome measure in this setting
- The Lawton's tool is quick and easy to administer, requires minimal training, and is not discipline or impairment specific
- The Lawton's is endorsed by AFRM as the over-arching ambulatory benchmarking outcome tool of choice
- It has demonstrated validity and reliability in measurement of outcomes Green J, Eagar K, Owen A, Gordon R and Quinsey K (2006). Towards a Measure of Function for Home and Community Care Services in Australia: Part II - Evaluation of the Screening Tool and Assessment Instruments. Australian Journal of Primary Health 12 (1), 82-90
- The Lawton's is not suggested to replace any service or impairment specific outcome measures that services may already collect or are considering collecting, but to provide a platform from which to launch a national benchmarking program with the expectation of further development over time

# Appendix 1: Definition of terms



## Episode

The program of ambulatory rehabilitation. A completed episode is one with a mode of episode end of discharge/case closure.

## Elapsed time

The elapsed time describes the number of days from commencement to end of an ambulatory rehabilitation program. It is calculated as the episode end date minus the start date.

## Days Seen

Days seen is the number of days within an episode of ambulatory rehabilitation on which an occasion of service has been provided.

## Occasions of Service (OOS)

An occasion of service is any therapy session and/or therapist contact within an episode. A patient may have several occasions of service on a 'day seen' and these may be delivered by the same or different staff type. Total occasions of service reflects the total number of therapy sessions provided to the patient during those visits. For example:

Mr Jones attends the program on Monday, Wednesday and Friday. On Monday he sees the physio and also attends hydrotherapy. On Wednesday he has a group exercise session, sees the OT and the speech pathologist. On Friday he sees the physio and attends hydrotherapy again. This program continues for 6 weeks. At week 7 his program is reviewed and he only needs to attend group exercise therapy and hydrotherapy twice a week until the program concludes at week 12.

**The total number of days seen in this instance is  $(3 \times 6) + (2 \times 6) = 30$**

**The total occasions of service in this instance is  $(7 \times 6) + (4 \times 6) = 66$**

## **Therapy type**

Reflects the type of therapy the patient is receiving and is collected by staff type. Where a single staff type provides more than one therapy, e.g. hydrotherapy provided/supervised by a physiotherapist, the staff type selected should reflect the type of therapy session the patient is receiving.

## **ADL**

Activities of daily living describe a person's level of functioning in basic physical activities such as bathing, dressing, transferring, toileting, continence, eating, and walking.

## **IADL**

Instrumental activities of daily living (also known as extended or domestic activities of daily living), describe tasks that enable a person to live independently in the community and include, but not are limited to, light housework, preparing meals, taking medications, shopping for groceries, using the telephone, and managing money.

## **Outcome Measure**

The score recorded using the specified outcome measure at both the beginning and end of an ambulatory rehabilitation program.

## **Valid Outcome Measure**

A valid Outcome Measure requires all items within the scale to have a value assigned and be completed for both the episode begin and episode end assessments.

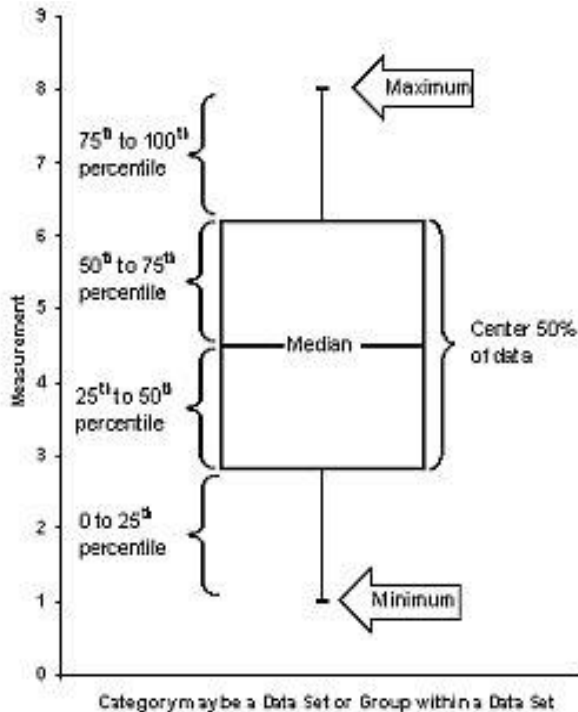
## **Outcome Measure change**

The calculated difference between the valid Outcome Measure score at the beginning and the end of the ambulatory rehabilitation episode.

# Appendix 3: Interpreting box plots

## Box Plots

Box plots, or box-and-whisker plots, provide insight into the distribution of observations within a data set by dividing it into four sections. The box indicates the spread of the central 50% of the data; the median is denoted by a horizontal line through the box. The portion of the box above the median line denotes the 50th - 75th percentile range. Likewise, the portion of the box below the median denotes the 25th-50th percentile range. The whiskers represent the full range of data, the whisker above the box extends to the maximum data value and the whisker below the box extends to the minimum data value.



# Appendix 4: AROC Impairment Codes

## STROKE

### Haemorrhagic

- 1.11 Left body involvement
- 1.12 Right body involvement
- 1.13 Bilateral involvement
- 1.14 No paresis
- 1.19 Other Orthopaedic fractures

### Ischaemic

- 1.21 Left body involvement (right brain)
- 1.22 Right body involvement (left brain)
- 1.23 Bilateral involvement
- 1.24 No paresis
- 1.29 Other Orthopaedic fractures

## BRAIN DYSFUNCTION

### Non-traumatic

- 2.11 Sub-arachnoid haemorrhage
- 2.12 Anoxic brain damage
- 2.13 Other non-traumatic brain dysfunction

### Traumatic

- 2.21 Open injury
- 2.22 Closed injury

## NEUROLOGICAL CONDITIONS

- 3.1 Multiple Sclerosis
- 3.2 Parkinsonism
- 3.3 Polyneuropathy
- 3.4 Guillian-Barre
- 3.5 Cerebral palsy
- 3.8 Neuromuscular disorders
- 3.9 Other neurological conditions

## SPINAL CORD DYSFUNCTION

### Non traumatic spinal cord dysfunction

- 4.111 Paraplegia, incomplete
- 4.112 Paraplegia, complete
- 4.1211 Quadriplegia, incomplete C1-4
- 4.1212 Quadriplegia, incomplete C5-8
- 4.1221 Quadriplegia, complete C1-4
- 4.1222 Quadriplegia, complete C5-8
- 4.13 Other non-traumatic spinal cord dysfunction

### Traumatic spinal cord dysfunction

- 4.211 Paraplegia, incomplete
- 4.212 Paraplegia, complete
- 4.2211 Quadriplegia, incomplete C1-4
- 4.2212 Quadriplegia, incomplete C5-8
- 4.2221 Quadriplegia, complete C1-4
- 4.2222 Quadriplegia, complete C5-8
- 4.23 Other traumatic spinal cord dysfunction

## AMPUTATION OF LIMB

### Not resulting from trauma

- 5.11 Single upper above elbow
- 5.12 Single upper below elbow
- 5.13 Single lower above knee (includes through knee)
- 5.14 Single lower below knee
- 5.15 Double lower above knee (includes through knee)
- 5.16 Double lower above/below knee
- 5.17 Double lower below knee
- 5.18 Partial foot (single or double)
- 5.19 Other amputation not from trauma

## AMPUTATION OF LIMB

### Resulting from trauma

- 5.21 Single upper above elbow
- 5.22 Single upper below elbow
- 5.23 Single lower above knee (includes through knee)
- 5.24 Single lower below knee
- 5.25 Double lower above knee (includes through knee)
- 5.26 Double lower above/below knee
- 5.27 Double lower below knee
- 5.28 Partial foot (single or double)
- 5.29 Other amputation from trauma

## ARTHRITIS

- 6.1 Rheumatoid arthritis
- 6.2 Osteoarthritis
- 6.9 Other arthritis

## PAIN SYNDROMES

- 7.1 Neck pain
- 7.2 Back Pain
- 7.3 Extremity pain
- 7.4 Headache (includes migraine)
- 7.5 Multi-site pain
- 7.9 Other pain (includes abdo/chest wall)

# Appendix 4: AROC Impairment Codes

## ORTHOPAEDIC CONDITIONS

### Fractures (includes dislocation)

- 8.111 Fracture of hip, unilateral (incl. #NOF)
- 8.112 Fracture of hip, bilateral (incl. #NOF)
- 8.12 Fracture of shaft of femur
- 8.13 Fracture of pelvis
- 8.141 Fracture of knee
- 8.142 Fracture of lower leg, ankle, foot
- 8.15 Fracture of upper limb
- 8.16 Fracture of spine
- 8.17 Fracture of multiple sites
- 8.19 Other orthopaedic fracture

### Post Orthopaedic Surgery

- 8.211 Unilateral hip replacement
- 8.212 Bilateral hip replacement
- 8.221 Unilateral knee replacement
- 8.222 Bilateral knee replacement
- 8.231 Knee and hip replacement, same side
- 8.232 Knee and hip replacement, diff sides
- 8.24 Shoulder replacement
- 8.25 Post spinal surgery
- 8.26 Other orthopaedic surgery

### Soft tissue injury

- 8.3 Soft tissue injury

## CARDIAC

- 9.1 Following recent onset of new cardiac impairment
- 9.2 Chronic cardiac insufficiency
- 9.3 Heart and heart/lung transplant

## PULMONARY

- 10.1 Chronic obstructive pulmonary disease
- 10.2 Lung transplant
- 10.9 Other pulmonary

## BURNS

- 11 Burns

## CONGENITAL DEFORMITIES

- 12.1 Spina bifida
- 12.9 Other congenital deformity

## OTHER DISABLING IMPAIRMENTS

- 13.1 Lymphoedema
- 13.3 Conversion disorder
- 13.9 Other disabling impairments that cannot be classified into a specific group

## MAJOR MULTIPLE TRAUMA

- 14.1 Brain + spinal cord injury
- 14.2 Brain + multiple fracture/amputation
- 14.3 Spinal cord + multi fracture/amputation
- 14.9 Other multiple trauma

## DEVELOPMENTAL DISABILITIES

- 15.1 Developmental disabilities (excludes cerebral palsy)

## RE-CONDITIONING/RESTORATIVE

- 16.1 Reconditioning following surgery
- 16.2 Reconditioning following medical illness
- 16.3 Cancer rehabilitation



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