

# AROC Ambulatory Report

July 2019 – June 2020

Anywhere Hospital



**Australasian  
Faculty of  
Rehabilitation  
Medicine**



australian health services  
research institute



**UNIVERSITY  
OF WOLLONGONG  
AUSTRALIA**

Introduction.....	3
AROC ambulatory data collection.....	4
Demographic data.....	10
Outcome measures - All impairments.....	24
Impairment specific outcome measures.....	50
Appendices.....	83
Acknowledgements.....	89
AROC contact details.....	90

# 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 metre walk test (if relevant)
- Aphasia tool (specify tool used)

## Brain Dysfunction

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

## Orthopaedic conditions

- Timed 10 metre walk test

## Reconditioning

- de Morton Mobility Index (DEMMI)

## Amputation of limb

- Timed up and go
- 6 minute walk test (optional)
- Timed 10 metre 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	38
August	32
September	20
October	34
November	26
December	33
January	17
February	24
March	30
April	19
May	20
June	11
Full year	304



# Completeness of data reported

AROC core data set items	Item collected	
	No.	%
Path	304	100.0
Facility code	304	100.0
Facility name	304	100.0
Ward code <sup>1</sup>	268	88.2
Ward name <sup>1</sup>	271	89.1
MRN	304	100.0
Letters of name	299	98.4
Date of birth	304	100.0
DOB estimate flag	304	100.0
Sex	304	100.0
Indigenous status	304	100.0
Geographical residence	304	100.0
Postcode	304	100.0
Episode begin date	304	100.0
Episode end date	304	100.0
Funding source	304	100.0
Health fund/other payer	173	99.4
NDIS	277	91.1
Referral date	304	100.0
Impairment code	304	100.0
Onset date &/or time since onset	303	99.7
Relevant inpatient episode date	300	98.7
Episode begin reason	304	100.0
First direct care episode	304	100.0
Interpreter required	304	100.0
Date of multi-disciplinary rehab plan	304	100.0
Accommodation prior to episode	304	100.0
Carer status prior to episode	300	99.7
Employment status prior to episode	304	100.0
Accommodation during episode	304	100.0
Carer status during episode	293	99.3
Existing comorbidity interfering with rehab	304	100.0
— Comorbidities identified	85	100.0

AROC core data set items	Item collected	
	No.	%
Cognitive impairment impacting rehab	303	99.7
Episode end reason	304	100.0
Final accommodation – episode end	282	100.0
Carer status – episode end	279	100.0
Employment status after discharge	73	24.0 ←
Return to pre-impairment activities	291	95.7
Days seen	298	98.0
Occasions of service	298	98.0
Disciplines involved in therapy	303	99.7
Lawton's start date	301	99.0
Lawton's start items	301	99.0
Lawton's end date	290	95.4
Lawton's end items	290	95.4
GAS start date <sup>1</sup>	27	8.9
GAS start scores <sup>1</sup>	21	6.9
GAS end date <sup>1</sup>	27	8.9
GAS end scores <sup>1</sup>	20	6.6

## Impairment specific items

Stroke	No.	%
— Rehab aimed at upper limb function	46	78.0 ←
— Rehab aimed at gait retraining	45	76.3 ←
— Rehab aimed at aphasia	44	74.6 ←
— ULMAS start date	12	92.3
— ULMAS start scores	12	92.3
— ULMAS end date	11	84.6 ←
— ULMAS end scores	11	84.6 ←
— Timed ten metre walk start date	17	100.0
— Timed ten metre walk test on admission	17	100.0
— Timed ten metre walk end date	17	100.0
— Timed ten metre walk test on discharge	17	100.0

AROC impairment specific items	Item collected	
	No.	%
<b>Brain injury*</b>	<b>11</b>	
— MPAI4 start date	9	81.8 ←
— MPAI4 start scores	9	81.8 ←
— MPAI4 end date	9	81.8 ←
— MPAI4 end scores	9	81.8 ←
<b>Spinal cord injury*</b>	<b>2</b>	
— Injury start level	2	100.0
<b>Reconditioning</b>	<b>34</b>	
— DEMMI start date	23	67.6 ←
— DEMMI start scores	23	67.6 ←
— DEMMI end date	22	64.7 ←
— DEMMI end scores	22	64.7 ←
<b>Amputation of limb</b>	<b>8</b>	
— Phase of care at episode start	7	87.5
— Phase of care during episode	7	87.5
— Phase of care at episode end	7	87.5
— Prosthetic device fitted	7	87.5
— Casting date <sup>2</sup>	4	66.7
— Date of first prosthetic fitting <sup>2</sup>	5	83.3
— Reason for delay in fitting <sup>2</sup>	1	16.7
— Timed up and go test	7	87.5
— Six min walk test <sup>1</sup>	6	75.0
— Ten metre walk test <sup>1</sup>	5	62.5

Orthopaedic conditions	No.	%
— Timed ten metre walk start date	100	76.9 ←
— Timed ten metre walk test on admission	81	62.3 ←
— Timed ten metre walk end date	99	81.1 ←
— Timed ten metre walk test on discharge	86	70.5 ←

\*Also includes MMT that contain this impairment

**Overall data completeness score 91.2**

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 completeness 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.

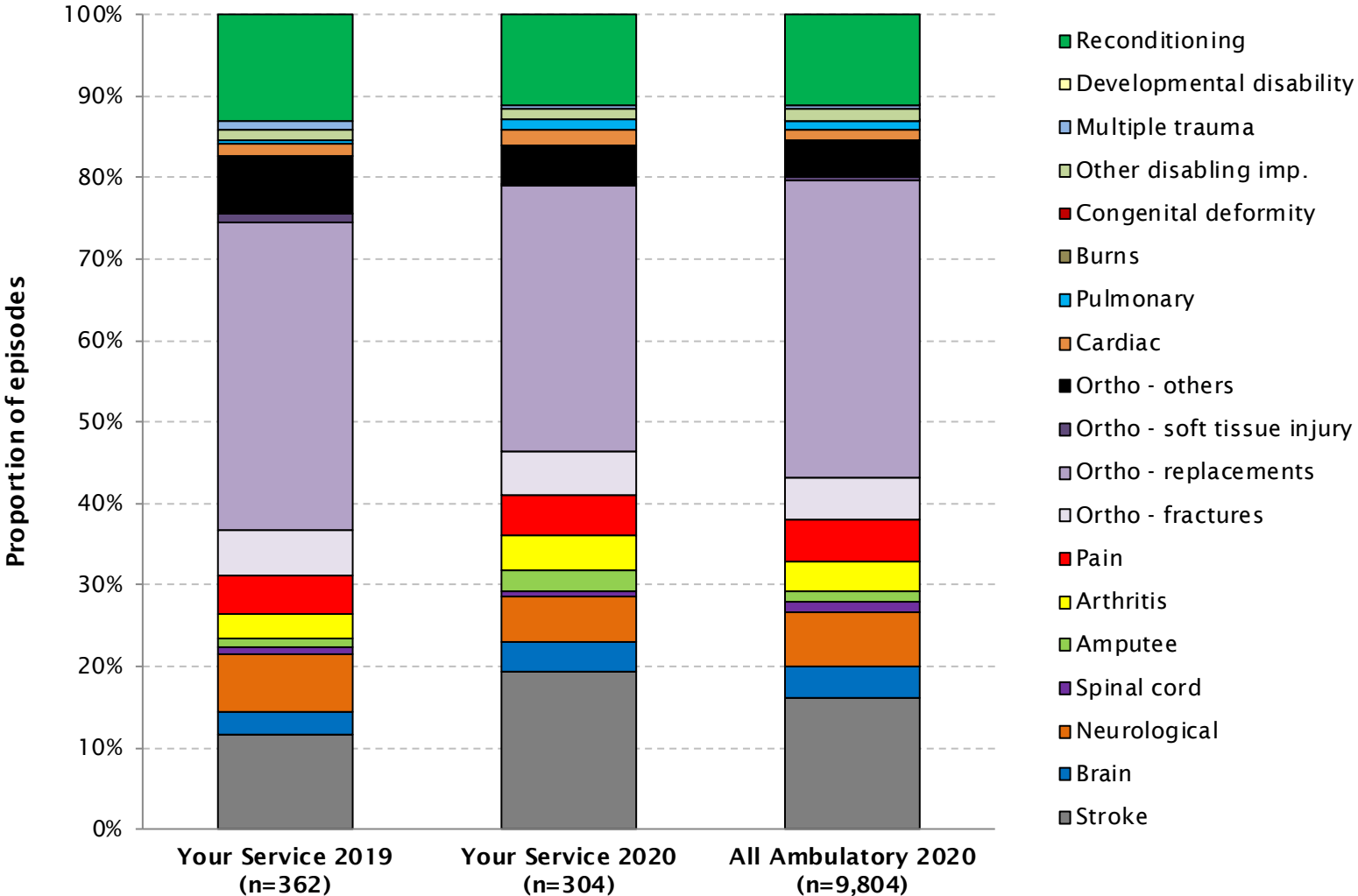
# Distribution of services and episodes



	Public		Private		All Ambulatory	
	No.	%	No.	%	No.	%
<b>Facilities</b>						
New South Wales	3	6.1	17	34.7	20	40.8
Victoria	0	—	3	6.1	3	6.1
Queensland	2	4.1	9	18.4	11	22.4
South Australia	8	16.3	0	—	8	16.3
Western Australia	1	2.0	1	2.0	2	4.1
Tasmania	1	2.0	0	—	1	2.0
Australian territories	0	—	1	2.0	1	2.0
NZ	3	6.1			3	6.1
<b>Total</b>	<b>18</b>	<b>36.7</b>	<b>31</b>	<b>63.3</b>	<b>49</b>	<b>100.0</b>

<b>Episodes</b>						
New South Wales	361	3.7	3,983	40.6	4,344	44.3
Victoria	0	—	367	3.7	367	3.7
Queensland	604	6.2	1,203	12.3	1,807	18.4
South Australia	1,689	17.2	0	—	1,689	17.2
Western Australia	495	5.0	97	1.0	592	6.0
Tasmania	9	0.1	0	—	9	0.1
Australian territories	0	—	402	4.1	402	4.1
NZ	606	6.2			606	6.2
<b>Total</b>	<b>3,764</b>	<b>38.3</b>	<b>6,052</b>	<b>61.7</b>	<b>9,816</b>	<b>100.0</b>

# Episodes by impairment group

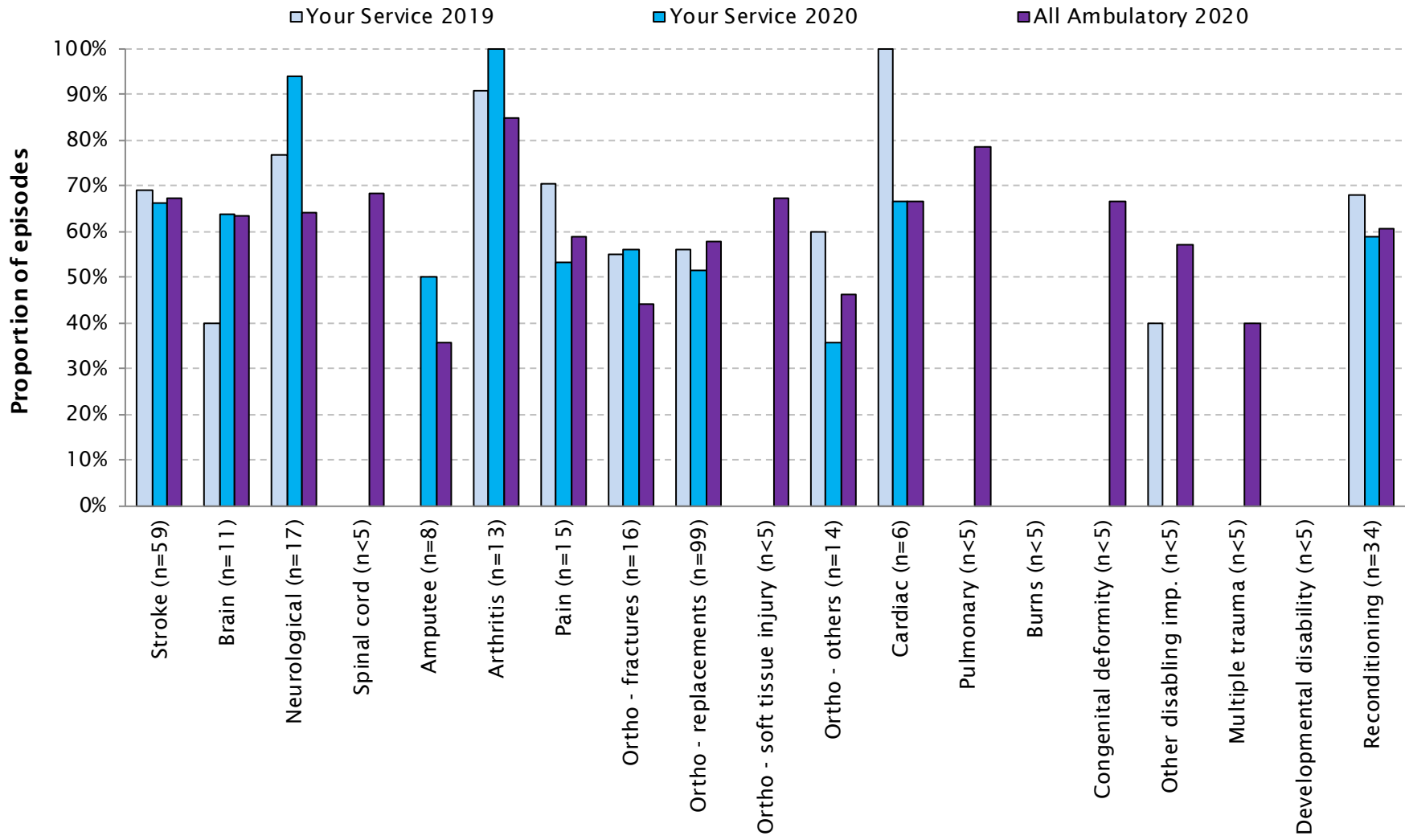


# Episodes by impairment group



Impairment group	Your Service 2019		Your Service 2020		All Ambulatory 2020	
	No.	%	No.	%	No.	%
Stroke	42	11.6	59	19.4	1,574	16.1
Brain	10	2.8	11	3.6	377	3.8
Neurological	26	7.2	17	5.6	672	6.9
Spinal cord	3	0.8	2	0.7	108	1.1
Amputee	4	1.1	8	2.6	140	1.4
Arthritis	11	3.0	13	4.3	352	3.6
Pain	17	4.7	15	4.9	509	5.2
Ortho - fractures	20	5.5	16	5.3	512	5.2
Ortho - replacements	137	37.8	99	32.6	3,563	36.3
Ortho - soft tissue injury	4	1.1	1	0.3	52	0.5
Ortho - others	25	6.9	14	4.6	438	4.5
Cardiac	6	1.7	6	2.0	123	1.3
Pulmonary	1	0.3	4	1.3	102	1.0
Burns	0	—	0	—	4	0.0
Congenital deformity	0	—	0	—	6	0.1
Other disabling imp.	5	1.4	4	1.3	152	1.6
Multiple trauma	4	1.1	1	0.3	35	0.4
Developmental disability	0	—	0	—	3	0.0
Reconditioning	47	13.0	34	11.2	1,082	11.0
Missing or excluded	0		0		12	
<b>All episodes</b>	<b>362</b>	<b>100.0</b>	<b>304</b>	<b>100.0</b>	<b>9,816</b>	<b>100.0</b>

# First direct care rehabilitation episode by impairment group



# First direct care rehabilitation episode by impairment group

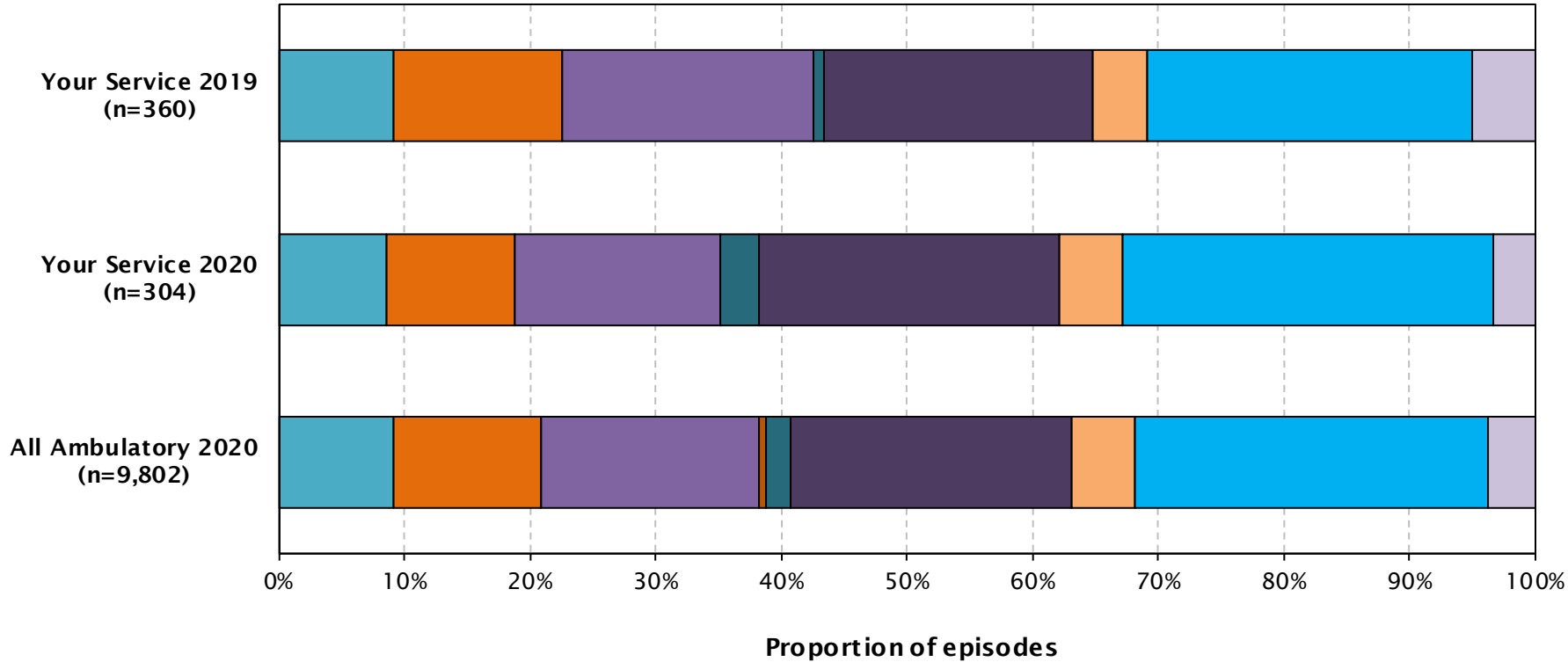


Impairment group	Your Service 2019				Your Service 2020				All Ambulatory 2020			
	No.	Primary admission	Subsequent admission	Missing	No.	Primary admission	Subsequent admission	Missing	No.	Primary admission	Subsequent admission	Missing
Stroke	42	29	13	0	59	39	20	0	1,574	1,059	514	1
Brain	10	4	6	0	11	7	4	0	377	239	136	2
Neurological	26	20	6	0	17	16	1	0	672	430	241	1
Spinal cord	3	1	2	0	2	2	0	0	108	74	34	0
Amputee	4	2	2	0	8	4	4	0	140	50	90	0
Arthritis	11	10	1	0	13	13	0	0	352	299	53	0
Pain	17	12	5	0	15	8	7	0	509	299	209	1
Ortho - fractures	20	11	9	0	16	9	7	0	512	226	285	1
Ortho - replacements	137	77	60	0	99	51	48	0	3,563	2,060	1,503	0
Ortho - soft tissue injury	4	3	1	0	1	0	1	0	52	35	17	0
Ortho - others	25	15	10	0	14	5	9	0	438	203	235	0
Cardiac	6	6	0	0	6	4	2	0	123	82	41	0
Pulmonary	1	0	1	0	4	4	0	0	102	80	22	0
Burns	0	0	0	0	0	0	0	0	4	2	2	0
Congenital deformity	0	0	0	0	0	0	0	0	6	4	2	0
Other disabling imp.	5	2	3	0	4	3	1	0	152	87	65	0
Multiple trauma	4	1	3	0	1	0	1	0	35	14	21	0
Developmental disability	0	0	0	0	0	0	0	0	3	3	0	0
Reconditioning	47	32	15	0	34	20	14	0	1,082	657	425	0
Missing or excluded	0				0				12			
<b>All episodes</b>	<b>362</b>	<b>225</b>	<b>137</b>	<b>0</b>	<b>304</b>	<b>185</b>	<b>119</b>	<b>0</b>	<b>9,816</b>	<b>5,903</b>	<b>3,895</b>	<b>6</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



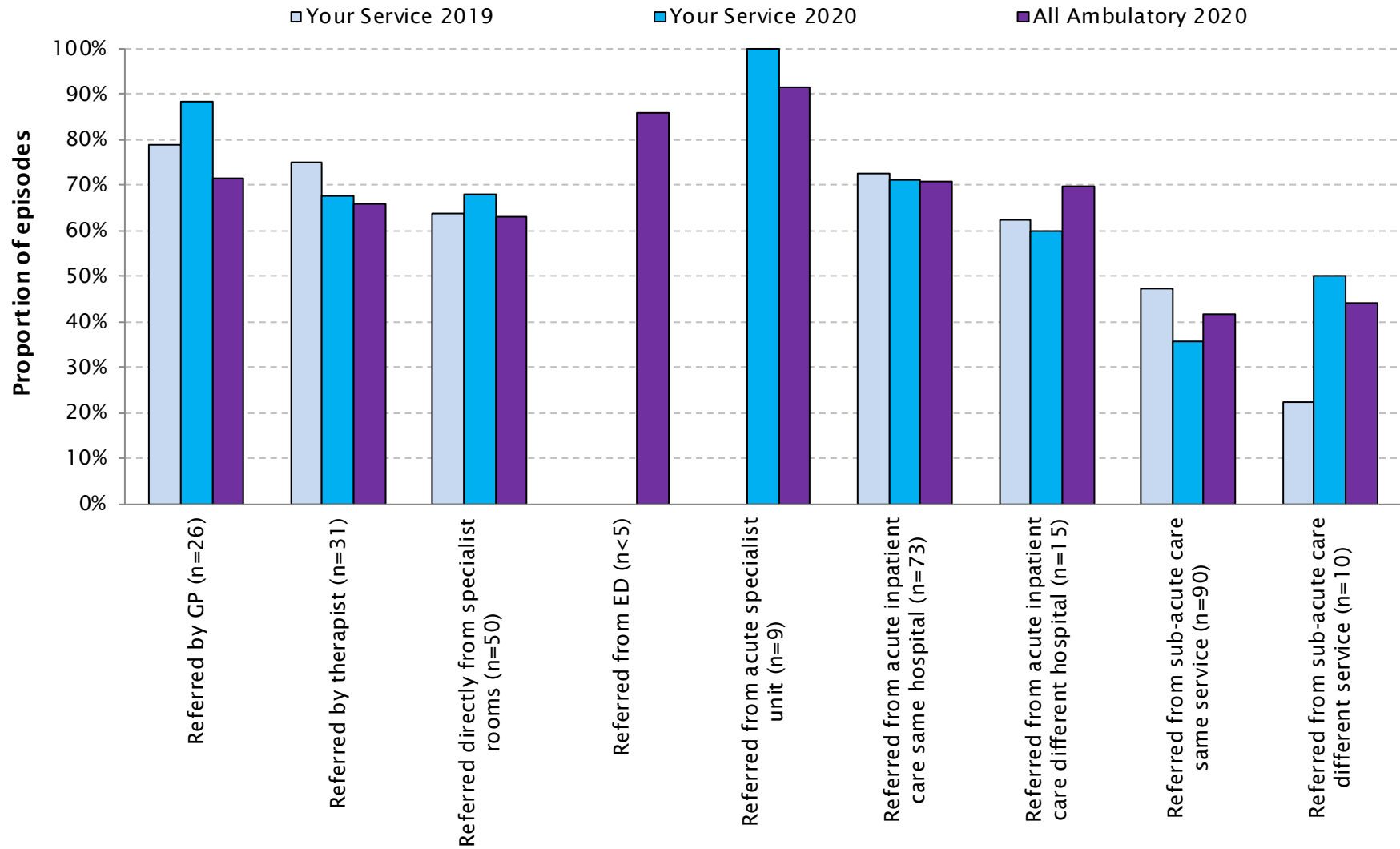


# Episode source



Episode source	Your Service 2019		Your Service 2020		All Ambulatory 2020	
	No.	%	No.	%	No.	%
Referred by GP	33	9.2	26	8.6	893	9.1
Referred by therapist	48	13.3	31	10.2	1,157	11.8
Referred directly from specialist rooms	72	20.0	50	16.4	1,699	17.3
Referred from ED	0	—	0	—	57	0.6
Referred from acute specialist unit	3	0.8	9	3.0	193	2.0
Referred from acute inpatient care same hospital	77	21.4	73	24.0	2,185	22.3
Referred from acute inpatient care different hospital	16	4.4	15	4.9	494	5.0
Referred from sub-acute care same service	93	25.8	90	29.6	2,761	28.2
Referred from sub-acute care different service	18	5.0	10	3.3	363	3.7
Missing	2		0		14	
<b>All episodes</b>	<b>362</b>	<b>100</b>	<b>304</b>	<b>100</b>	<b>9,816</b>	<b>100</b>

# First direct care rehabilitation episode by episode source

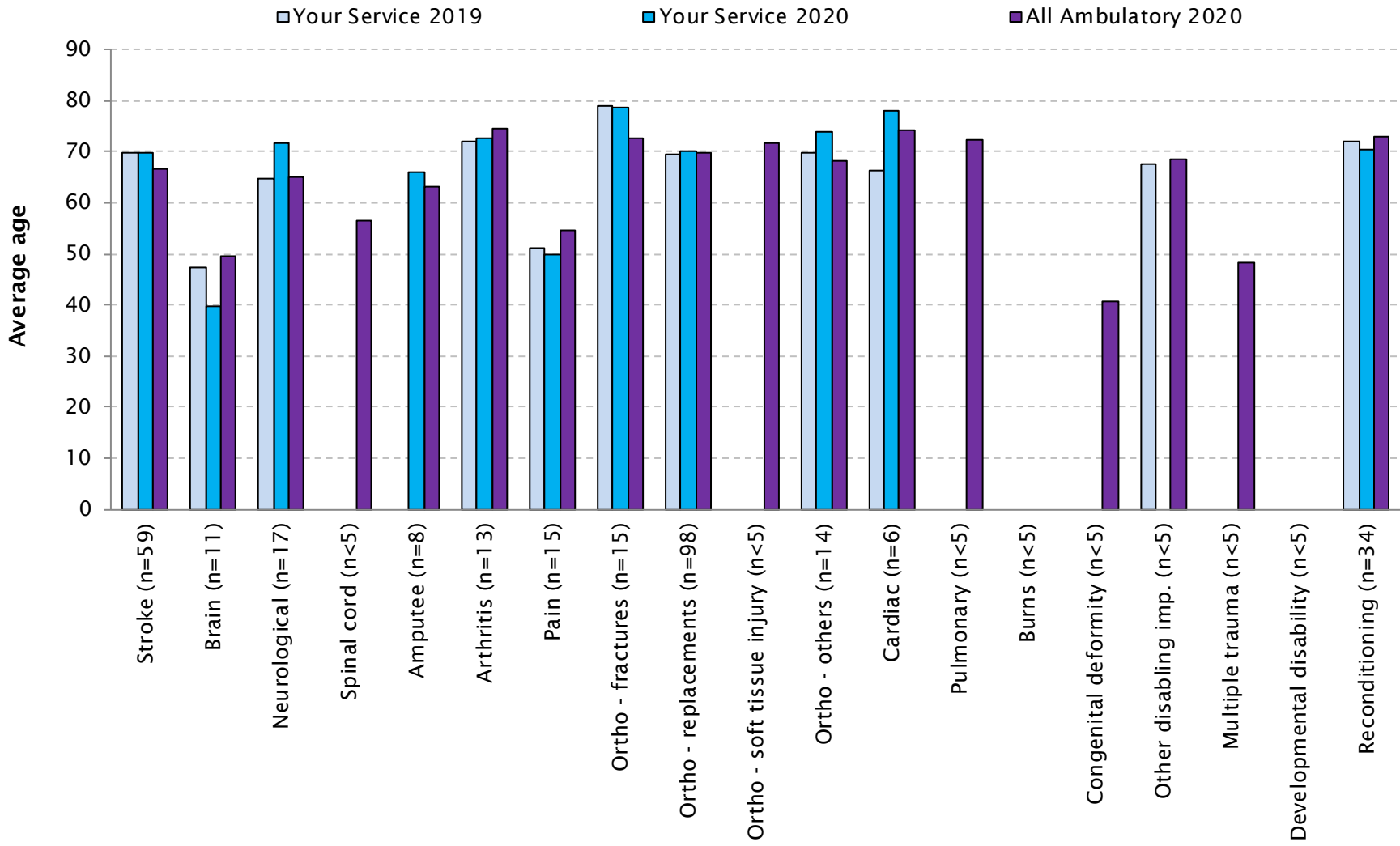


# First direct care rehabilitation episode by episode source



Impairment group	Your Service 2019				Your Service 2020				All Ambulatory 2020			
	No.	Primary admission	Subsequent admission	Missing	No.	Primary admission	Subsequent admission	Missing	No.	Primary admission	Subsequent admission	Missing
Referred by GP	33	26	7	0	26	23	3	0	893	640	252	1
Referred by therapist	48	36	12	0	31	21	10	0	1,157	762	394	1
Referred directly from specialist rooms	72	46	26	0	50	34	16	0	1,699	1,074	624	1
Referred from ED	0	0	0	0	0	0	0	0	57	49	8	0
Referred from acute specialist unit	3	3	0	0	9	9	0	0	193	177	16	0
Referred from acute inpatient care same hospital	77	56	21	0	73	52	21	0	2,185	1,547	638	0
Referred from acute inpatient care different hospital	16	10	6	0	15	9	6	0	494	345	149	0
Referred from sub-acute care same service	93	44	49	0	90	32	58	0	2,761	1,151	1,610	0
Referred from sub-acute care different service	18	4	14	0	10	5	5	0	363	160	203	0
Missing	2	0	2	0	0	0	0	0	14	7	4	3
<b>All episodes</b>	<b>362</b>	<b>225</b>	<b>137</b>	<b>0</b>	<b>304</b>	<b>185</b>	<b>119</b>	<b>0</b>	<b>9,816</b>	<b>5,912</b>	<b>3,898</b>	<b>6</b>

# Age by impairment group



# Age by impairment group



Impairment group	Your Service 2019			Your Service 2020			All Ambulatory 2020		
	No.	Mean age	(95% CI)	No.	Mean age	(95% CI)	No.	Mean age	(95% CI)
Stroke	42	69.9	(65.8 - 73.9)	59	69.8	(66.1 - 73.6)	1,572	66.6	(65.9 - 67.4)
Brain	10	47.4	(35.8 - 59.0)	11	39.8	(29.0 - 50.6)	377	49.5	(47.7 - 51.3)
Neurological	26	64.8	(58.6 - 71.0)	17	71.5	(64.4 - 78.6)	670	64.9	(63.7 - 66.1)
Spinal cord	3	59.3	(36.4 - 82.2)	2	61.5	(60.5 - 62.5)	108	56.4	(52.8 - 60.0)
Amputee	4	57.0	(43.1 - 70.9)	8	65.9	(59.6 - 72.1)	140	63.2	(61.1 - 65.3)
Arthritis	11	71.9	(64.3 - 79.5)	13	72.5	(68.4 - 76.7)	350	74.5	(73.4 - 75.7)
Pain	17	51.2	(42.4 - 60.0)	15	49.9	(40.6 - 59.3)	508	54.7	(53.0 - 56.4)
Ortho - fractures	20	79.1	(75.2 - 82.9)	15	78.6	(74.2 - 83.0)	511	72.7	(71.6 - 73.9)
Ortho - replacements	137	69.5	(67.7 - 71.2)	98	69.9	(68.0 - 71.9)	3,558	69.6	(69.3 - 69.9)
Ortho - soft tissue injury	4	80.0	(69.4 - 90.6)	1	64.0		52	71.8	(68.3 - 75.3)
Ortho - others	25	69.7	(63.3 - 76.2)	14	73.8	(67.9 - 79.7)	438	68.1	(66.8 - 69.4)
Cardiac	6	66.2	(53.7 - 78.7)	6	78.0	(68.5 - 87.5)	123	74.3	(72.5 - 76.1)
Pulmonary	1	82.0		4	76.3	(69.6 - 82.9)	102	72.1	(70.3 - 74.0)
Burns	0	—		0	—		4	—	
Congenital deformity	0	—		0	—		5	40.8	(22.4 - 59.2)
Other disabling imp.	5	67.4	(48.2 - 86.6)	4	68.0	(54.1 - 81.9)	152	68.4	(65.9 - 71.0)
Multiple trauma	4	53.5	(35.9 - 71.1)	1	47.0		35	48.1	(42.9 - 53.4)
Developmental disability	0	—		0	—		3	—	
Reconditioning	47	72.0	(68.2 - 75.9)	34	70.2	(65.5 - 75.0)	1,082	73.1	(72.2 - 73.9)
Missing or excluded	0			2			26		
<b>All episodes</b>	<b>362</b>	<b>68.3</b>	<b>(66.8 - 69.8)</b>	<b>304</b>	<b>68.6</b>	<b>(67.0 - 70.3)</b>	<b>9,816</b>	<b>67.6</b>	<b>(67.4 - 67.9)</b>

# NDIS funding status at episode end



Episode source	Your Service 2019		Your Service 2020 All Ambulatory 2020 (AU)			
	No.	%	No.	%	No.	%
Accepted - on a plan	8	2.5	6	2.2	227	2.5
Accepted - waiting	1	0.3	1	0.4	55	0.6
Awaiting eligibility determination	1	0.3	2	0.7	107	1.2
Eligible - hasn't applied	3	0.9	6	2.2	167	1.8
Eligible - NDIS not yet available in the region	0	—	0	—	9	0.1
Not eligible / not relevant	306	95.9	262	94.6	8,594	93.8
Missing	43		27		51	
<b>All episodes (AU)</b>	<b>362</b>		<b>304</b>		<b>9,210</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=59)	81.4	3.4	86.4	18.6	35.6	15.3	11.9	0.0	45.8	25.4	8.5	1.7	25.4
Brain (n=11)	54.5	0.0	81.8	36.4	18.2	18.2	0.0	0.0	45.5	36.4	0.0	18.2	36.4
Neurological (n=17)	94.1	11.8	100.0	11.8	47.1	47.1	29.4	17.6	35.3	41.2	17.6	0.0	23.5
Spinal cord (n=2)	100.0	0.0	50.0	0.0	50.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0
Amputee (n=8)	100.0	0.0	62.5	12.5	75.0	37.5	0.0	0.0	0.0	75.0	12.5	0.0	87.5
Arthritis (n=13)	92.3	53.8	92.3	46.2	15.4	69.2	30.8	15.4	0.0	30.8	61.5	0.0	15.4
Pain (n=15)	100.0	20.0	100.0	26.7	13.3	6.7	0.0	0.0	6.7	13.3	26.7	73.3	13.3
Ortho - fractures (n=16)	93.8	31.3	56.3	37.5	56.3	18.8	0.0	0.0	0.0	25.0	0.0	0.0	25.0
Ortho - replacements (n=99)	98.0	65.7	68.7	34.3	35.4	27.3	29.3	8.1	1.0	4.0	4.0	0.0	11.1
Ortho - soft tissue injury (n=1)	100.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
Ortho - others (n=14)	100.0	64.3	85.7	28.6	28.6	35.7	14.3	14.3	0.0	0.0	14.3	0.0	21.4
Cardiac (n=5)	80.0	0.0	60.0	80.0	0.0	0.0	20.0	20.0	0.0	20.0	40.0	20.0	40.0
Pulmonary (n=4)	75.0	0.0	50.0	0.0	25.0	0.0	0.0	0.0	50.0	0.0	25.0	0.0	100.0
Burns (n=0)	—	—	—	—	—	—	—	—	—	—	—	—	—
Congenital deformity (n=0)	—	—	—	—	—	—	—	—	—	—	—	—	—
Other disabling imp. (n=4)	75.0	25.0	25.0	50.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	25.0
Multiple trauma (n=1)	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Developmental disability (n=0)	—	—	—	—	—	—	—	—	—	—	—	—	—
Reconditioning (n=34)	97.1	32.4	76.5	58.8	41.2	11.8	5.9	8.8	2.9	20.6	26.5	0.0	26.5

# Outcome measures – All impairments

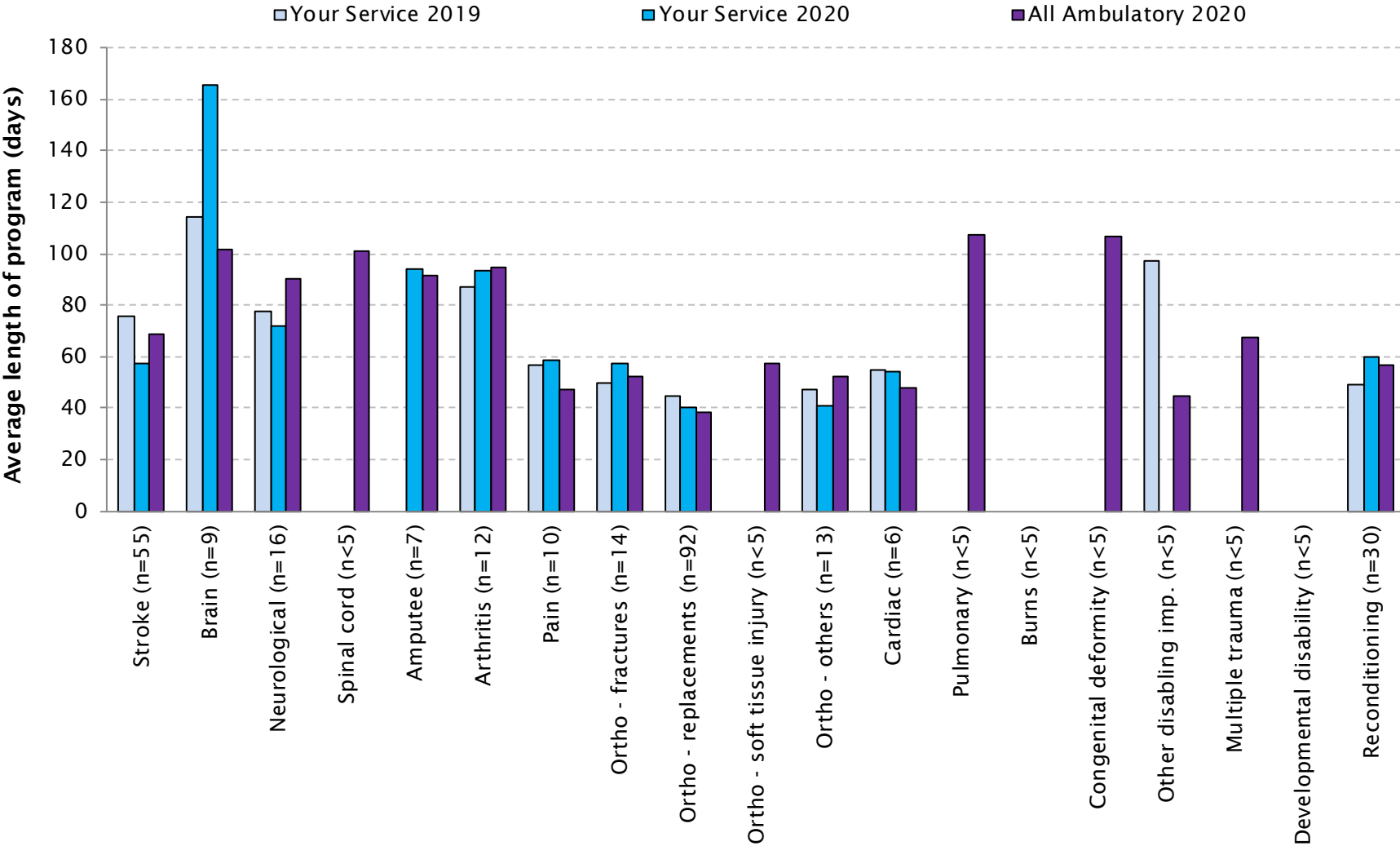


The following section presents analysis of each of the following elements:

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



# Length of program by impairment group

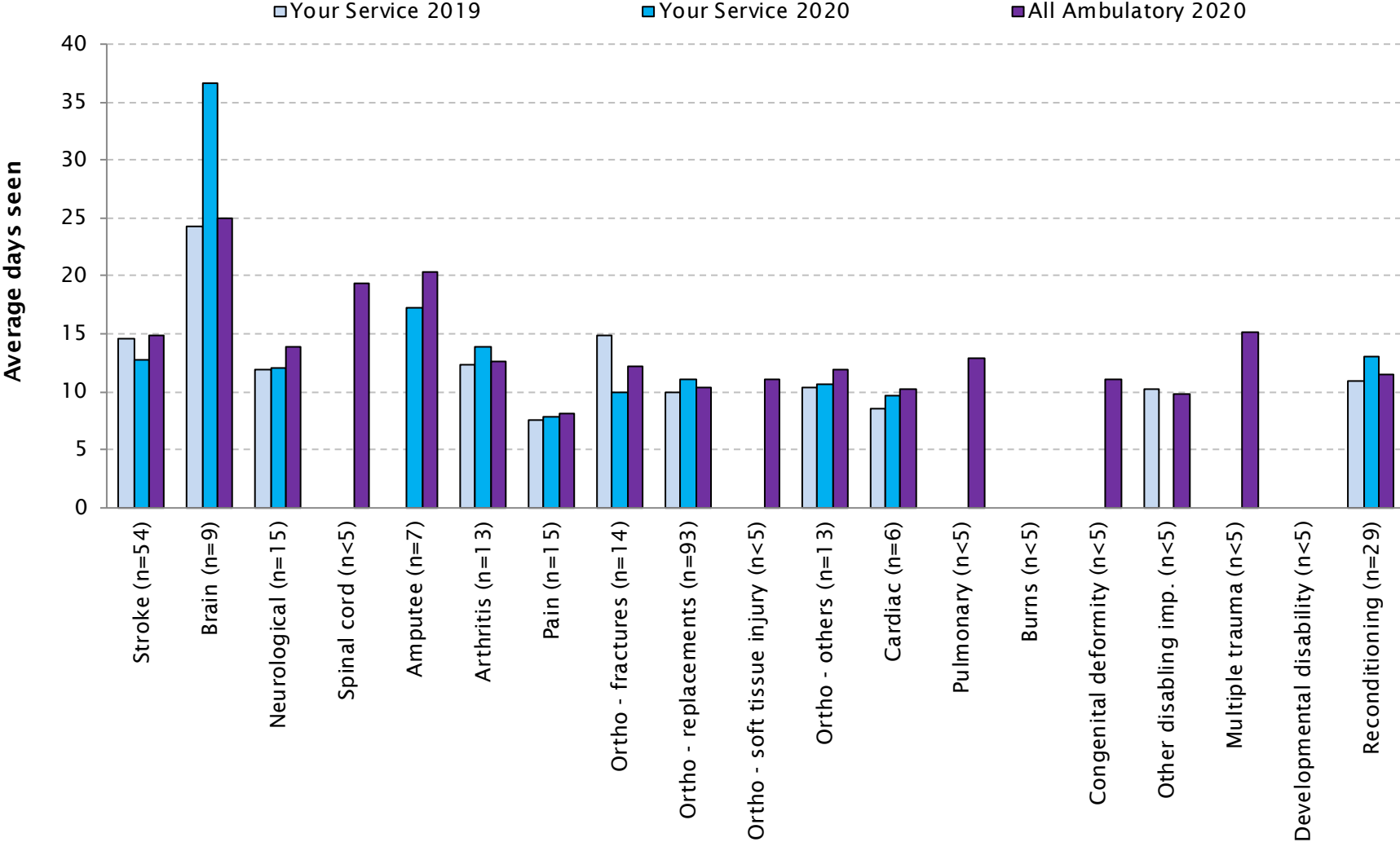


# Length of program by impairment group

Impairment group	Your Service 2019			Your Service 2020			All Ambulatory 2020		
	No.	Mean LOP	Trimmed data range*	No.	Mean LOP	Trimmed data range*	No.	Mean LOP	Trimmed data range*
Stroke	37	75.7	(22 - 219)	55	57.5	(20 - 148)	1,480	69.0	(20 - 168)
Brain	10	114.5		9	165.1		353	101.8	(24 - 240)
Neurological	23	77.9	(28 - 234)	16	71.6		608	90.3	(23 - 240)
Spinal cord	3	—		2	—		72	101.1	(36 - 295)
Amputee	3	—		7	93.9		124	91.2	(21 - 216)
Arthritis	8	87.3		12	93.7		322	94.9	(28 - 203)
Pain	9	56.4		10	58.4		375	47.4	(11 - 117)
Ortho - fractures	18	49.7		14	57.5		463	52.0	(15 - 112)
Ortho - replacements	135	44.7	(20 - 105)	92	40.4	(11 - 77)	3,324	38.4	(14 - 72)
Ortho - soft tissue injury	4	—		1	—		51	57.2	(22 - 143)
Ortho - others	22	47.5	(26 - 77)	13	41.0		416	52.1	(17 - 111)
Cardiac	6	54.7		6	54.5		114	48.1	(20 - 112)
Pulmonary	1	—		2	—		87	107.2	(32 - 248)
Burns	0	—		0	—		3	—	
Congenital deformity	0	—		0	—		5	106.6	
Other disabling imp.	5	97.4		3	—		128	44.5	(10 - 160)
Multiple trauma	3	—		1	—		33	67.3	(29 - 163)
Developmental disability	0	—		0	—		3	—	
Reconditioning	43	49.2	(28 - 80)	30	60.0	(21 - 107)	987	56.8	(20 - 122)
Missing or excluded	32			31			868		
<b>All episodes</b>	<b>362</b>	<b>57.4</b>	<b>(21 - 161)</b>	<b>304</b>	<b>58.8</b>	<b>(14 - 166)</b>	<b>9,816</b>	<b>57.4</b>	<b>(15 - 152)</b>

\*Includes middle 90% of episodes

# Days seen by impairment group

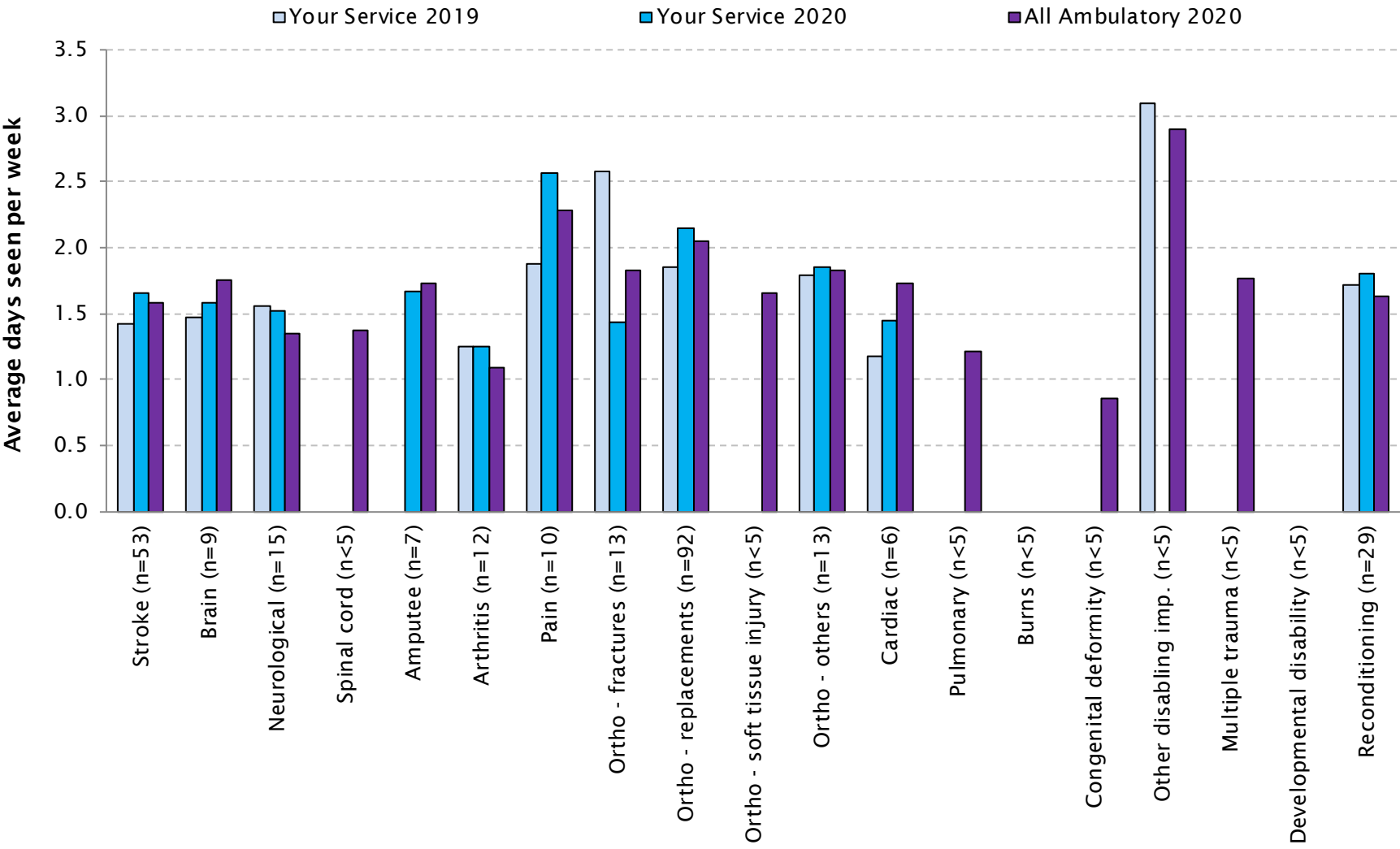


# Days seen by impairment group

Impairment group	Your Service 2019			Your Service 2020			All Ambulatory 2020		
	No. days seen	Mean	Trimmed data range*	No. days seen	Mean	Trimmed data range*	No. days seen	Mean	Trimmed data range*
Stroke	37	14.6	(3 - 49)	54	12.8	(3 - 40)	1,464	14.9	(3 - 38)
Brain	10	24.2		9	36.7		348	24.9	(4 - 75)
Neurological	25	12.0	(4 - 21)	15	12.0		617	13.9	(3 - 30)
Spinal cord	3	—		2	—		95	19.3	(3 - 56)
Amputee	3	—		7	17.3		122	20.3	(4 - 46)
Arthritis	10	12.3		13	13.8		330	12.5	(3 - 27)
Pain	16	7.5		15	7.8		494	8.2	(1 - 17)
Ortho - fractures	18	14.9		14	9.9		471	12.2	(3 - 24)
Ortho - replacements	136	9.9	(4 - 20)	93	11.1	(4 - 20)	3,420	10.3	(4 - 19)
Ortho - soft tissue injury	4	—		1	—		51	11.0	(5 - 21)
Ortho - others	24	10.4	(3 - 18)	13	10.6		420	11.9	(4 - 23)
Cardiac	6	8.5		6	9.7		117	10.2	(3 - 16)
Pulmonary	0	—		2	—		87	12.8	(4 - 23)
Burns	0	—		0	—		3	—	
Congenital deformity	0	—		0	—		5	11.0	
Other disabling imp.	5	10.2		3	—		147	9.8	(4 - 18)
Multiple trauma	3	—		1	—		32	15.1	(7 - 33)
Developmental disability	0	—		0	—		3	—	
Reconditioning	42	10.9	(6 - 18)	29	13.0	(5 - 25)	966	11.4	(3 - 23)
Missing or excluded	20			27			624		
<b>All episodes</b>	<b>362</b>	<b>11.4</b>	<b>(3 - 22)</b>	<b>304</b>	<b>12.4</b>	<b>(3 - 25)</b>	<b>9,816</b>	<b>12.1</b>	<b>(3 - 27)</b>

\*Includes middle 90% of episodes

# Days seen per elapsed week by impairment group

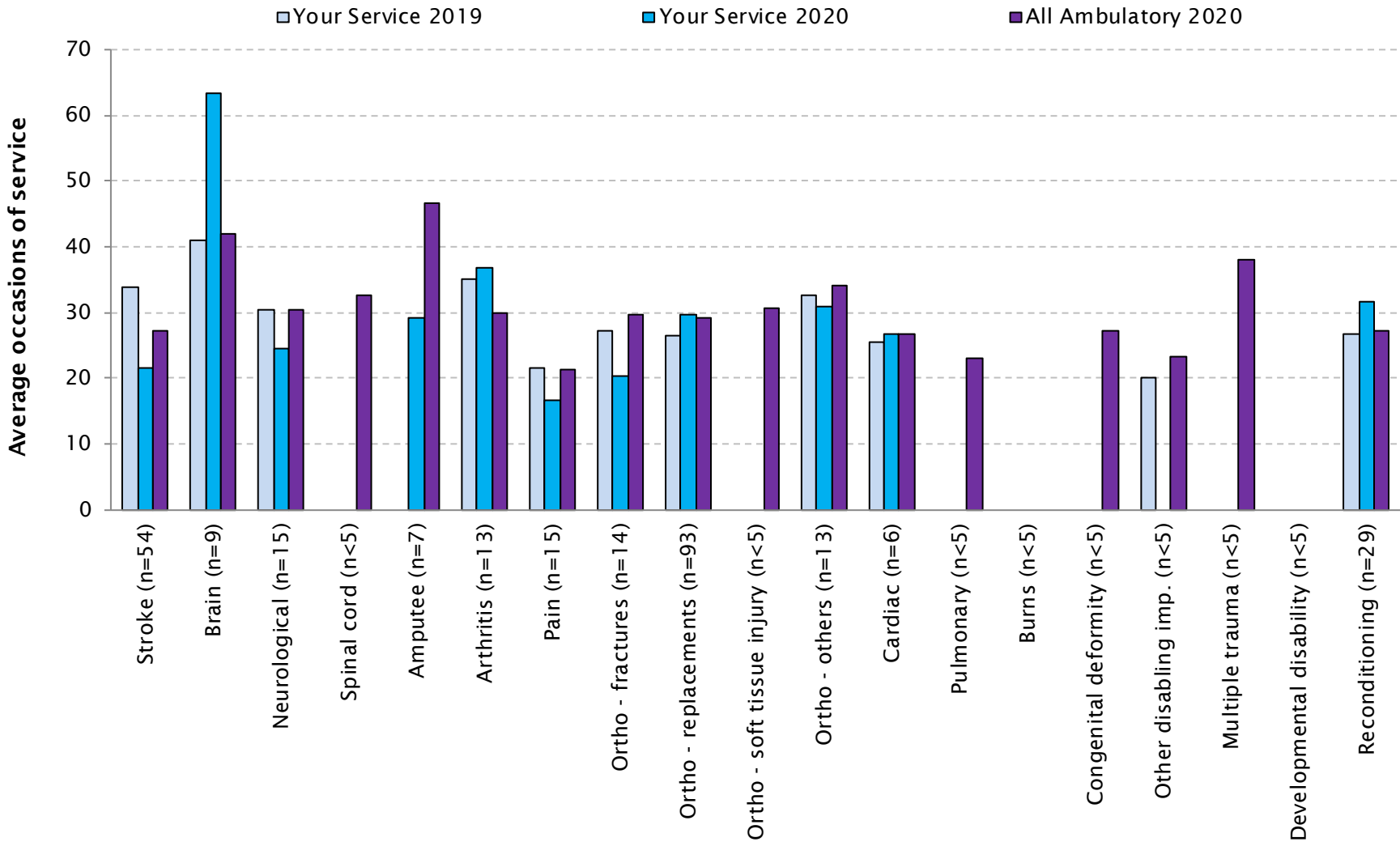


# Days seen per elapsed week by impairment group

Impairment group	Your Service 2019			Your Service 2020			All Ambulatory 2020		
	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	36	1.4	(0.5 - 2.9)	53	1.6	(0.4 - 3.0)	1,439	1.6	(0.5 - 3.1)
Brain	10	1.5		9	1.6		344	1.7	(0.6 - 3.1)
Neurological	23	1.6	(0.6 - 3.7)	15	1.5		598	1.3	(0.3 - 2.6)
Spinal cord	3	—		2	—		71	1.4	(0.3 - 3.1)
Amputee	3	—		7	1.7		119	1.7	(0.4 - 3.2)
Arthritis	8	1.3		12	1.2		322	1.1	(0.4 - 2.2)
Pain	9	1.9		10	2.6		371	2.3	(0.7 - 6.4)
Ortho - fractures	18	2.6		13	1.4		456	1.8	(0.8 - 2.8)
Ortho - replacements	135	1.9	(0.8 - 3.0)	92	2.1	(1.1 - 3.3)	3,321	2.0	(1.2 - 3.0)
Ortho - soft tissue injury	4	—		1	—		51	1.7	(0.5 - 2.9)
Ortho - others	22	1.8	(0.9 - 2.9)	13	1.9		416	1.8	(0.9 - 2.5)
Cardiac	6	1.2		6	1.5		113	1.7	(0.8 - 2.5)
Pulmonary	0	—		2	—		87	1.2	(0.2 - 2.3)
Burns	0	—		0	—		3	—	
Congenital deformity	0	—		0	—		5	0.9	
Other disabling imp.	5	3.1		3	—		128	2.9	(0.5 - 6.4)
Multiple trauma	3	—		1	—		32	1.8	(0.7 - 3.1)
Developmental disability	0	—		0	—		3	—	
Reconditioning	42	1.7	(0.8 - 2.9)	29	1.8	(1.0 - 3.2)	944	1.6	(0.6 - 2.5)
Missing or excluded	35			36			993		
<b>All episodes</b>	<b>362</b>	<b>1.8</b>	<b>(0.6 - 3.0)</b>	<b>304</b>	<b>1.8</b>	<b>(0.6 - 3.1)</b>	<b>9,816</b>	<b>1.8</b>	<b>(0.5 - 3.0)</b>

\*Includes middle 90% of episodes

# Occasions of service by impairment group



# Occasions of service by impairment group

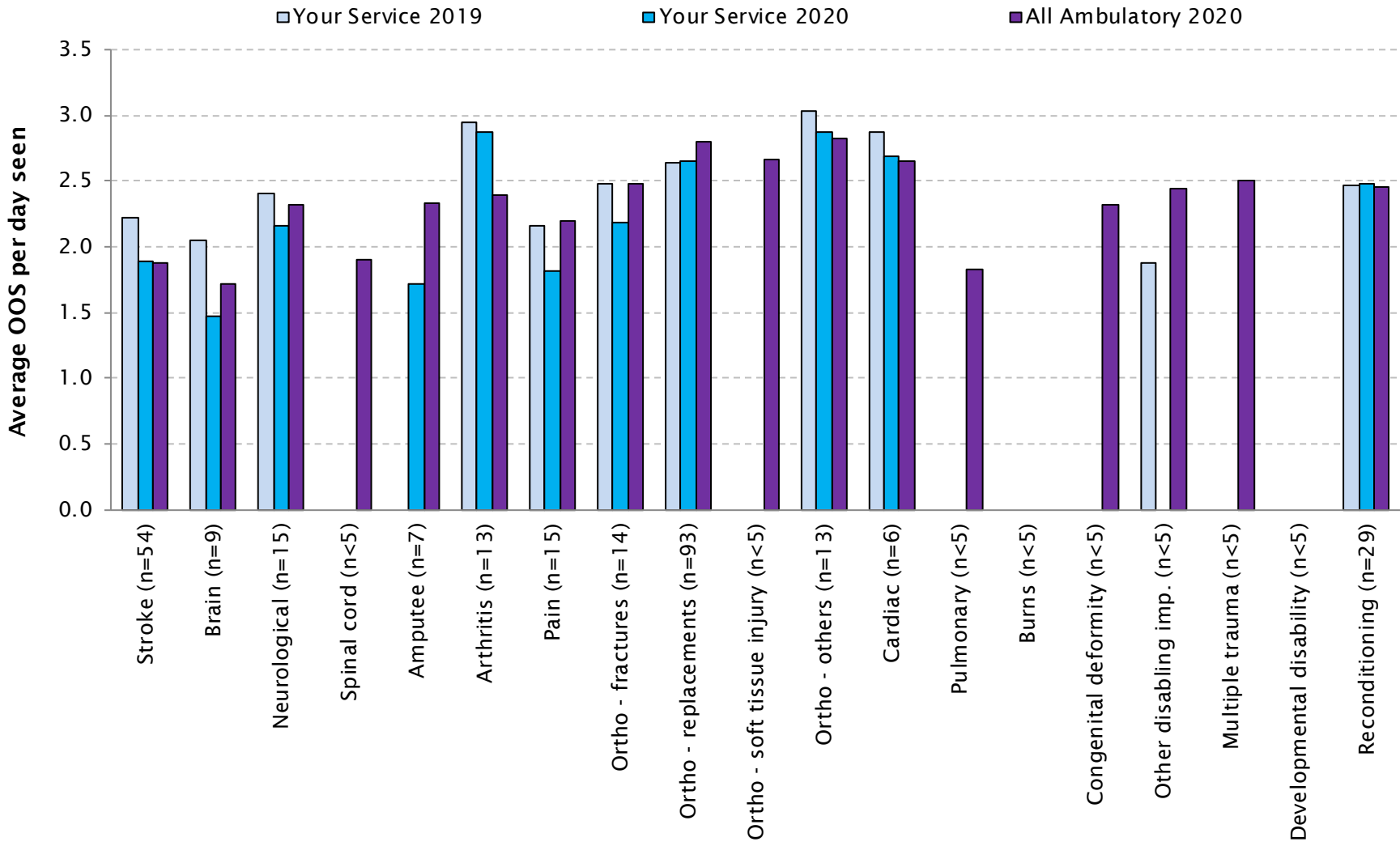


Impairment group	Your Service 2019			Your Service 2020			All Ambulatory 2020		
	No.	Mean occasions of service	Trimmed data range*	No.	Mean occasions of service	Trimmed data range*	No.	Mean occasions of service	Trimmed data range*
Stroke	37	33.9	(4 - 151)	54	21.6	(4 - 68)	1,472	27.3	(3 - 72)
Brain	10	41.0		9	63.3		349	42.0	(6 - 135)
Neurological	25	30.4	(5 - 69)	15	24.5		617	30.5	(5 - 68)
Spinal cord	3	—		2	—		94	32.7	(5 - 73)
Amputee	3	—		7	29.3		122	46.7	(7 - 110)
Arthritis	10	35.2		13	36.9		330	30.0	(6 - 78)
Pain	16	21.6		15	16.7		494	21.3	(1 - 57)
Ortho - fractures	18	27.2		14	20.4		471	29.7	(5 - 68)
Ortho - replacements	136	26.5	(8 - 60)	93	29.6	(7 - 60)	3,420	29.2	(7 - 59)
Ortho - soft tissue injury	4	—		1	—		51	30.7	(6 - 78)
Ortho - others	24	32.7	(13 - 96)	13	31.0		420	34.1	(9 - 72)
Cardiac	6	25.5		6	26.7		117	26.8	(7 - 48)
Pulmonary	1	—		2	—		87	23.1	(5 - 40)
Burns	0	—		0	—		3	—	
Congenital deformity	0	—		0	—		5	27.2	
Other disabling imp.	5	20.0		3	—		147	23.4	(7 - 41)
Multiple trauma	3	—		1	—		32	38.0	(13 - 92)
Developmental disability	0	—		0	—		3	—	
Reconditioning	42	26.8	(11 - 39)	29	31.6	(10 - 55)	968	27.2	(6 - 55)
Missing or excluded	19			27			614		
<b>All episodes</b>	<b>362</b>	<b>28.5</b>	<b>(5 - 66)</b>	<b>304</b>	<b>27.8</b>	<b>(5 - 63)</b>	<b>9,816</b>	<b>29.6</b>	<b>(4 - 66)</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 2019			Your Service 2020			All Ambulatory 2020		
	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	37	2.2	(1.0 - 3.3)	54	1.9	(1.0 - 4.0)	1,462	1.9	(1.0 - 3.6)
Brain	10	2.1		9	1.5		348	1.7	(1.0 - 3.0)
Neurological	25	2.4	(1.0 - 4.5)	15	2.2		617	2.3	(1.1 - 4.0)
Spinal cord	3	—		2	—		94	1.9	(1.0 - 4.0)
Amputee	3	—		7	1.7		122	2.3	(1.2 - 3.3)
Arthritis	10	2.9		13	2.9		330	2.4	(1.1 - 3.3)
Pain	16	2.2		15	1.8		494	2.2	(1.0 - 5.0)
Ortho - fractures	18	2.5		14	2.2		471	2.5	(1.1 - 4.0)
Ortho - replacements	136	2.6	(1.4 - 4.0)	93	2.7	(1.1 - 4.4)	3,420	2.8	(1.2 - 4.5)
Ortho - soft tissue injury	4	—		1	—		51	2.7	(1.1 - 6.0)
Ortho - others	24	3.0	(2.0 - 6.0)	13	2.9		420	2.8	(1.3 - 4.0)
Cardiac	6	2.9		6	2.7		117	2.7	(1.0 - 3.4)
Pulmonary	0	—		2	—		87	1.8	(1.0 - 3.0)
Burns	0	—		0	—		3	—	
Congenital deformity	0	—		0	—		5	2.3	
Other disabling imp.	5	1.9		3	—		147	2.4	(1.2 - 3.0)
Multiple trauma	3	—		1	—		32	2.5	(1.3 - 4.0)
Developmental disability	0	—		0	—		3	—	
Reconditioning	42	2.5	(1.5 - 3.3)	29	2.5	(1.7 - 3.2)	965	2.5	(1.1 - 3.6)
Missing or excluded	20			27			628		
<b>All episodes</b>	<b>362</b>	<b>2.5</b>	<b>(1.0 - 4.2)</b>	<b>304</b>	<b>2.3</b>	<b>(1.0 - 4.0)</b>	<b>9,816</b>	<b>2.5</b>	<b>(1.0 - 4.0)</b>

\*Includes middle 90% of episodes

# Employment outcomes by impairment group



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

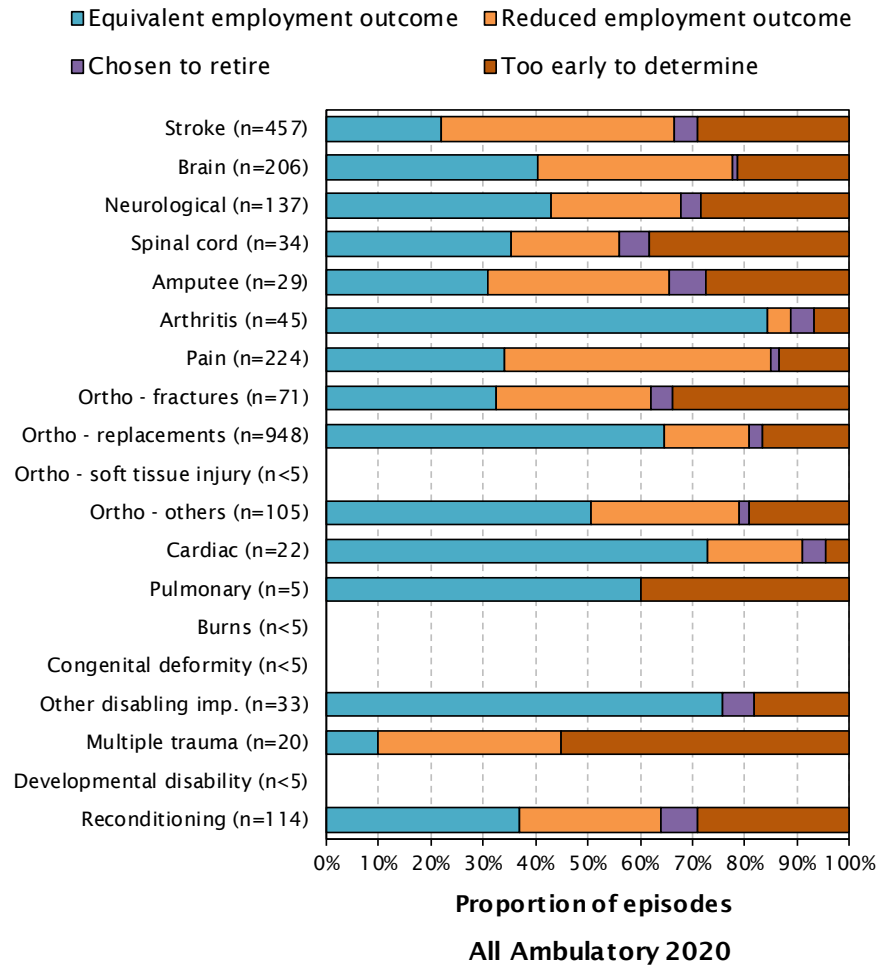
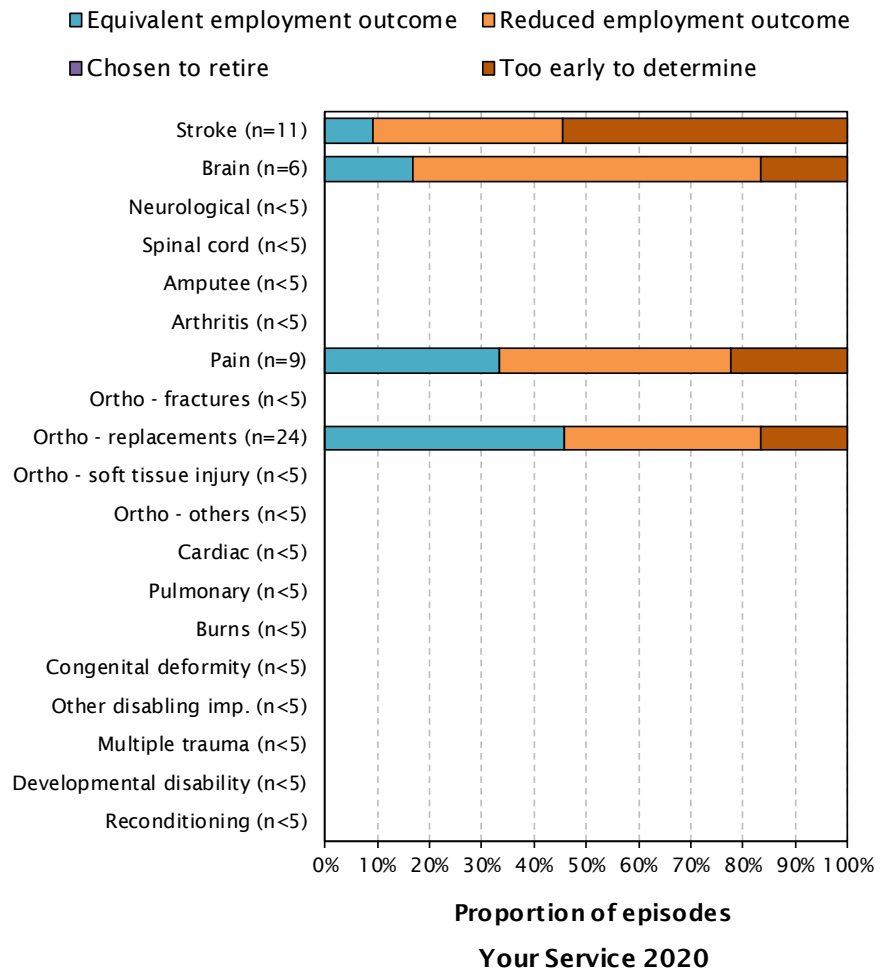
- the same or similar job with same or similar hours  
or
- a different job by choice.

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



# Employment outcomes by impairment group

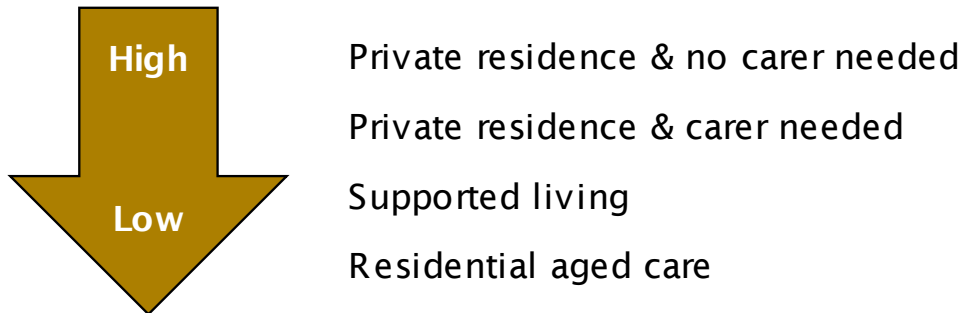


Impairment group	Your Service 2019		Your Service 2020		All Ambulatory 2020	
	Employed prior to impair (No.)	Equivalent employment outcome (%)	Employed prior to impair (No.)	Equivalent employment outcome (%)	Employed prior to impair (No.)	Equivalent employment outcome (%)
Stroke	9	11.1	11	9.1	457	21.9
Brain	3	33.3	6	16.7	206	40.3
Neurological	3	33.3	3	66.7	137	43.1
Spinal cord	0	—	0	—	34	35.3
Amputee	1	100.0	2	50.0	29	31.0
Arthritis	3	100.0	2	100.0	45	84.4
Pain	8	75.0	9	33.3	224	33.9
Ortho - fractures	1	100.0	2	50.0	71	32.4
Ortho - replacements	31	77.4	24	45.8	948	64.5
Ortho - soft tissue injury	0	—	0	—	4	—
Ortho - others	2	0.0	4	25.0	105	50.5
Cardiac	2	50.0	1	100.0	22	72.7
Pulmonary	0	—	0	—	5	60.0
Burns	0	—	0	—	2	—
Congenital deformity	0	—	0	—	1	—
Other disabling imp.	0	—	1	0.0	33	75.8
Multiple trauma	2	100.0	1	0.0	20	10.0
Developmental disability	0	—	0	—	1	—
Reconditioning	5	40.0	4	0.0	114	36.8
Missing or excluded	292		234		7,358	
<b>All episodes</b>	<b>362</b>	<b>61.4</b>	<b>304</b>	<b>34.3</b>	<b>9,816</b>	<b>46.9</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.

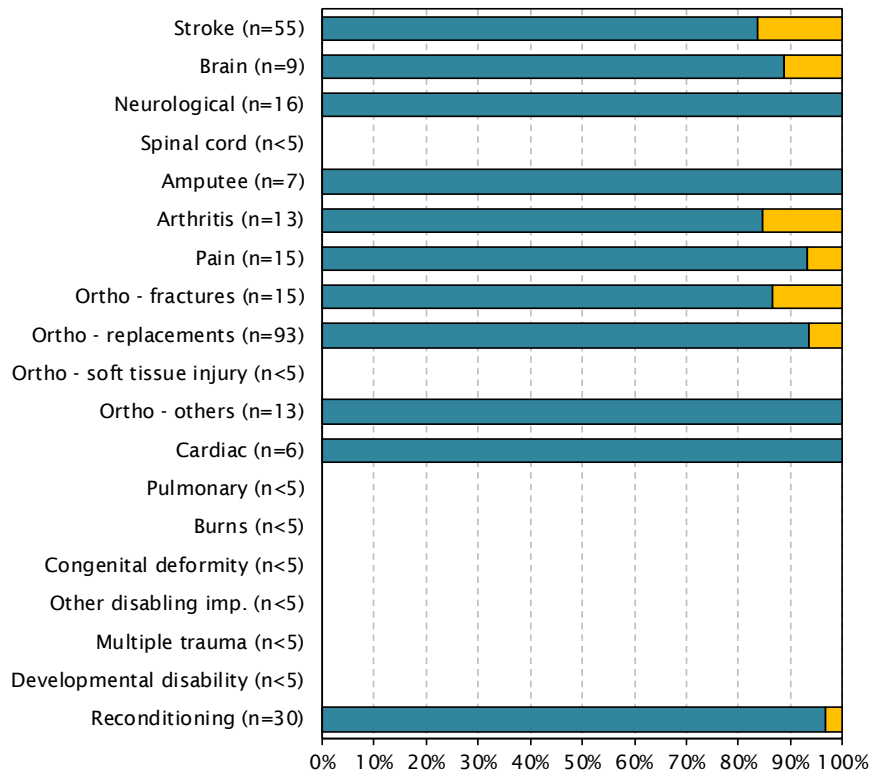
A patient is defined as having 'reduced independence' when:

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

# Independence outcomes by impairment group

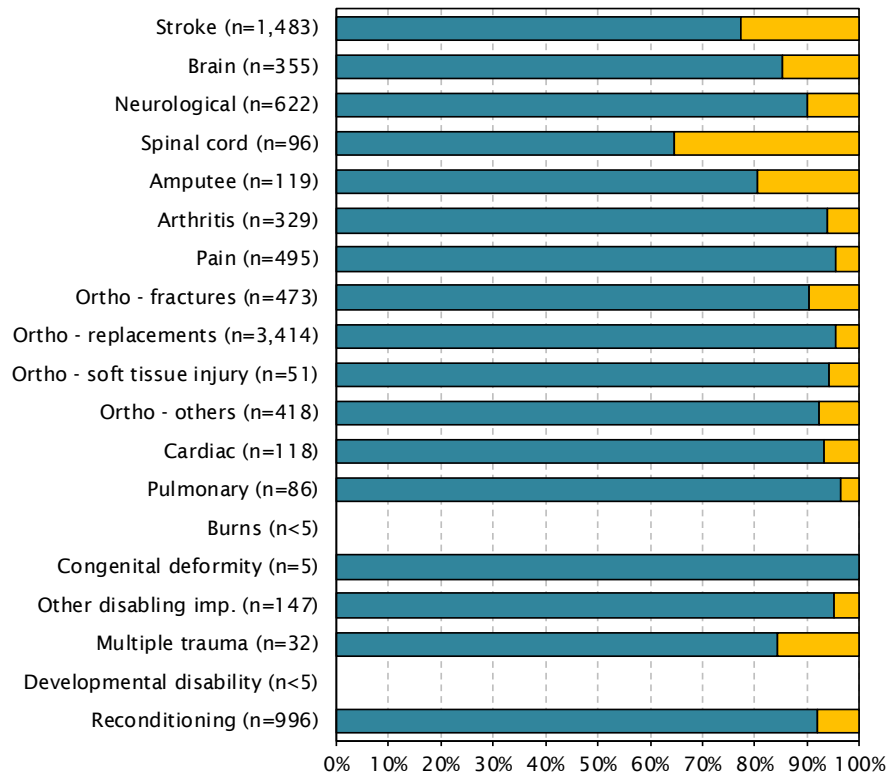


■ Equivalent independence   ■ Reduced independence



Proportion of episodes  
Your Service 2020

■ Equivalent independence   ■ Reduced independence



Proportion of episodes  
All Ambulatory 2020

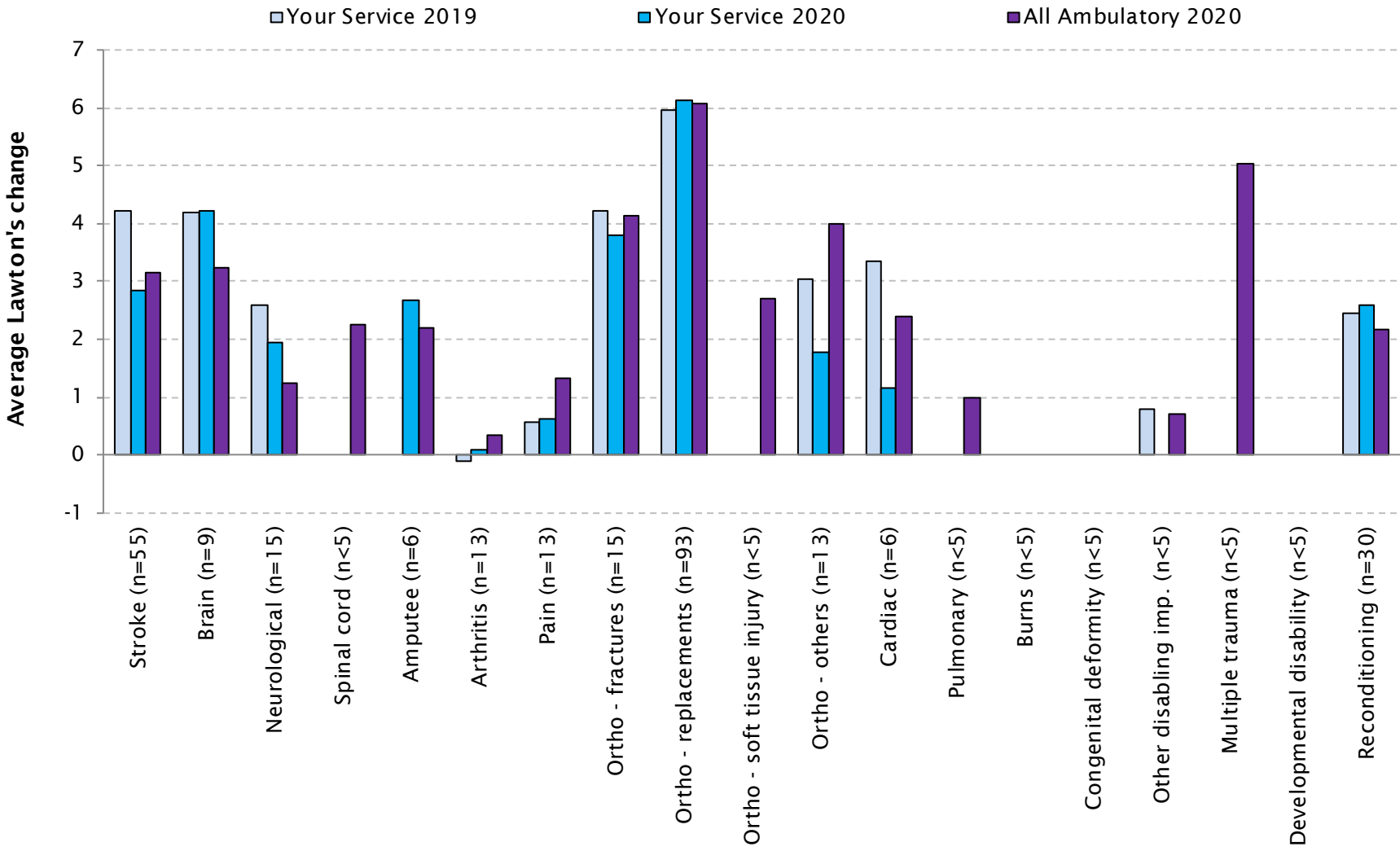
# Independence outcomes by impairment group



Impairment group	Your Service 2019		Your Service 2020		All Ambulatory 2020	
	No.	Equivalent independence outcome (%)	No.	Equivalent independence outcome (%)	No.	Equivalent independence outcome (%)
Stroke	38	89.5	55	83.6	1,483	77.3
Brain	10	80.0	9	88.9	355	85.4
Neurological	25	88.0	16	100.0	622	90.2
Spinal cord	3	66.7	2	100.0	96	64.6
Amputee	3	66.7	7	100.0	119	80.7
Arthritis	10	100.0	13	84.6	329	93.9
Pain	16	100.0	15	93.3	495	95.4
Ortho - fractures	18	83.3	15	86.7	473	90.5
Ortho - replacements	136	94.9	93	93.5	3,414	95.5
Ortho - soft tissue injury	4	75.0	1	100.0	51	94.1
Ortho - others	24	100.0	13	100.0	418	92.3
Cardiac	6	100.0	6	100.0	118	93.2
Pulmonary	1	100.0	2	100.0	86	96.5
Burns	0	—	0	—	3	—
Congenital deformity	0	—	0	—	5	100.0
Other disabling imp.	5	60.0	3	100.0	147	95.2
Multiple trauma	3	100.0	1	100.0	32	84.4
Developmental disability	0	—	0	—	3	—
Reconditioning	42	85.7	30	96.7	996	92.0
Missing or excluded	18		23		571	
<b>All episodes</b>	<b>362</b>	<b>91.3</b>	<b>304</b>	<b>92.2</b>	<b>9,816</b>	<b>90.4</b>



# Lawton's score change by impairment

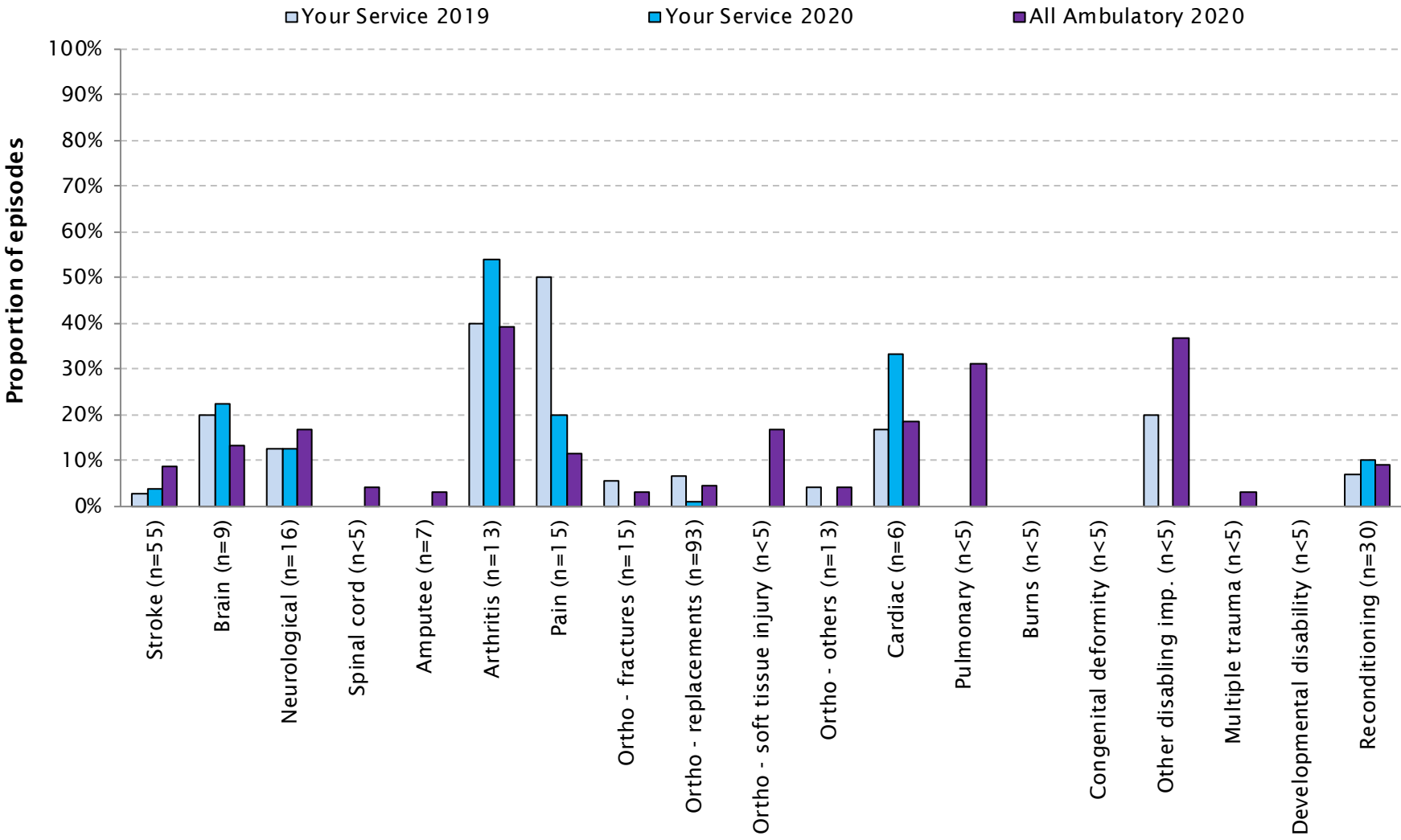


# Lawton's score change by impairment

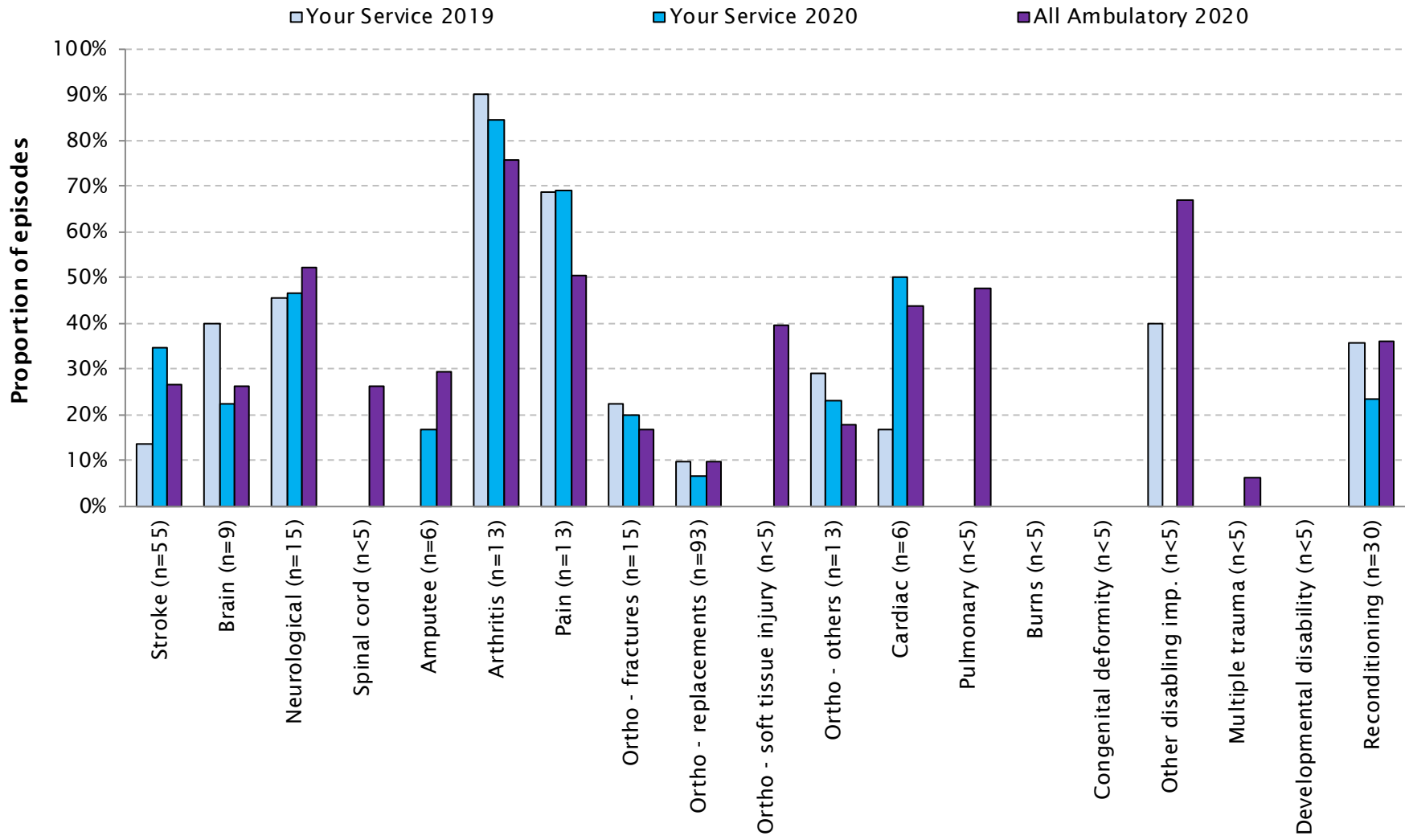


Impairment group	Your Service 2019		Your Service 2020		All Ambulatory 2020	
	No.	Avg. Lawton's change	No.	Avg. Lawton's change	No.	Avg. Lawton's change
Stroke	37	4.2	55	2.8	1,470	3.1
Brain	10	4.2	9	4.2	345	3.2
Neurological	22	2.6	15	1.9	591	1.2
Spinal cord	3	1.0	2	1.0	95	2.3
Amputee	3	3.7	6	2.7	123	2.2
Arthritis	10	-0.1	13	0.1	304	0.3
Pain	16	0.6	13	0.6	490	1.3
Ortho - fractures	18	4.2	15	3.8	470	4.1
Ortho - replacements	135	6.0	93	6.1	3,409	6.1
Ortho - soft tissue injury	4	3.8	1	5.0	48	2.7
Ortho - others	24	3.0	13	1.8	417	4.0
Cardiac	6	3.3	6	1.2	116	2.4
Pulmonary	1	0.0	2	2.0	69	1.0
Burns	0	—	0	—	3	—
Congenital deformity	0	—	0	—	4	—
Other disabling imp.	5	0.8	3	0.7	143	0.7
Multiple trauma	3	2.7	1	11.0	32	5.0
Developmental disability	0	—	0	—	2	—
Reconditioning	42	2.5	30	2.6	975	2.2
Missing or excluded	23		27		710	
<b>All episodes</b>	<b>362</b>	<b>4.1</b>	<b>304</b>	<b>3.6</b>	<b>9,816</b>	<b>3.8</b>

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



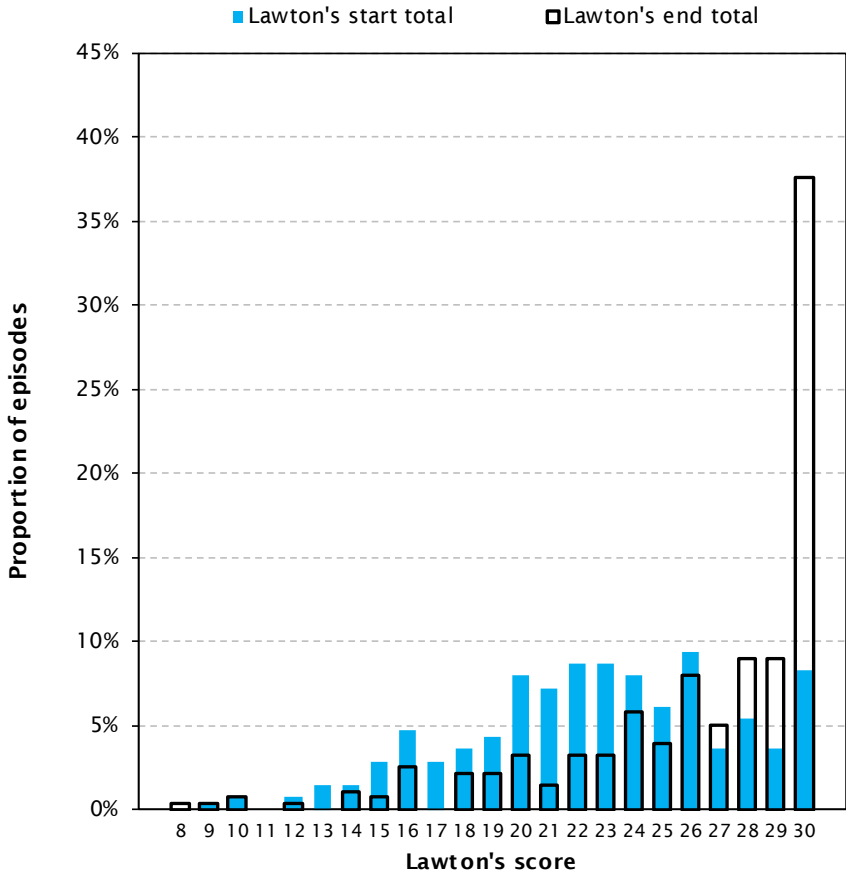
# Episodes with no change in Lawton's score by impairment group



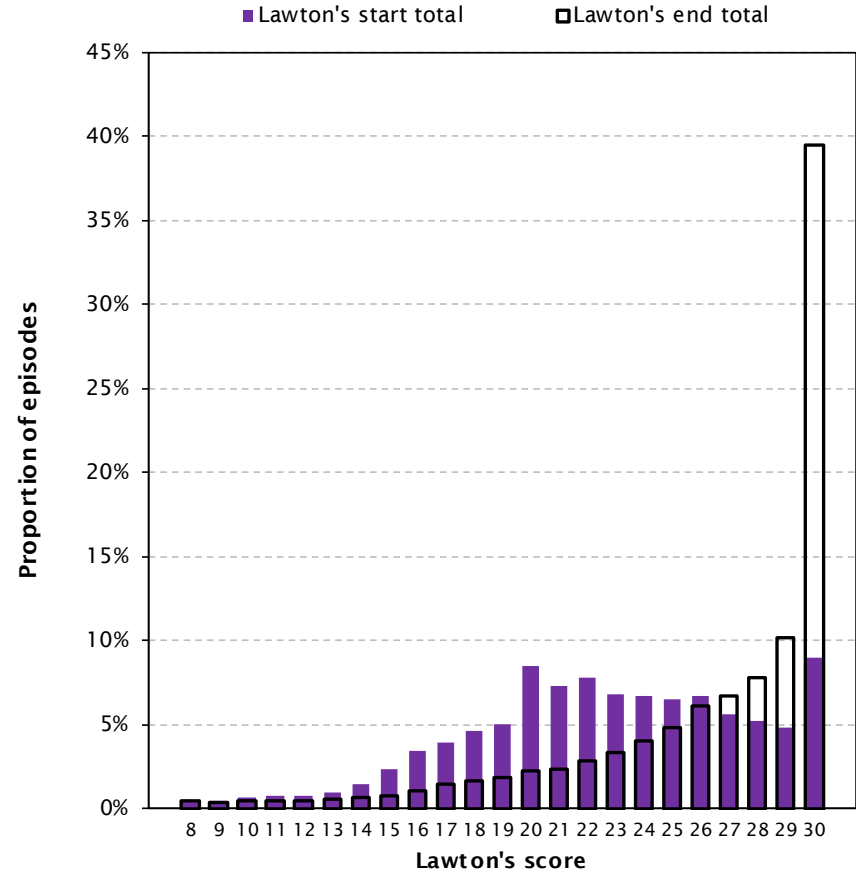
# Lawton's start and end total - all episodes



Your Service 2020 (n=277)



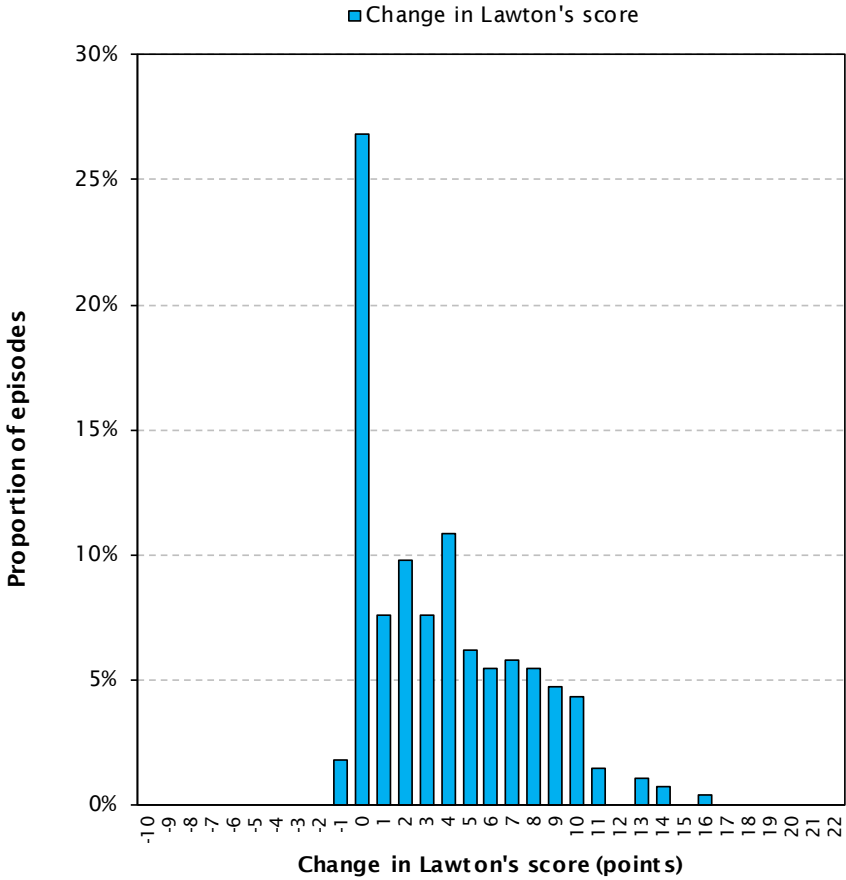
All Ambulatory 2020 (n=9,116)



# Change in Lawton's score – all episodes

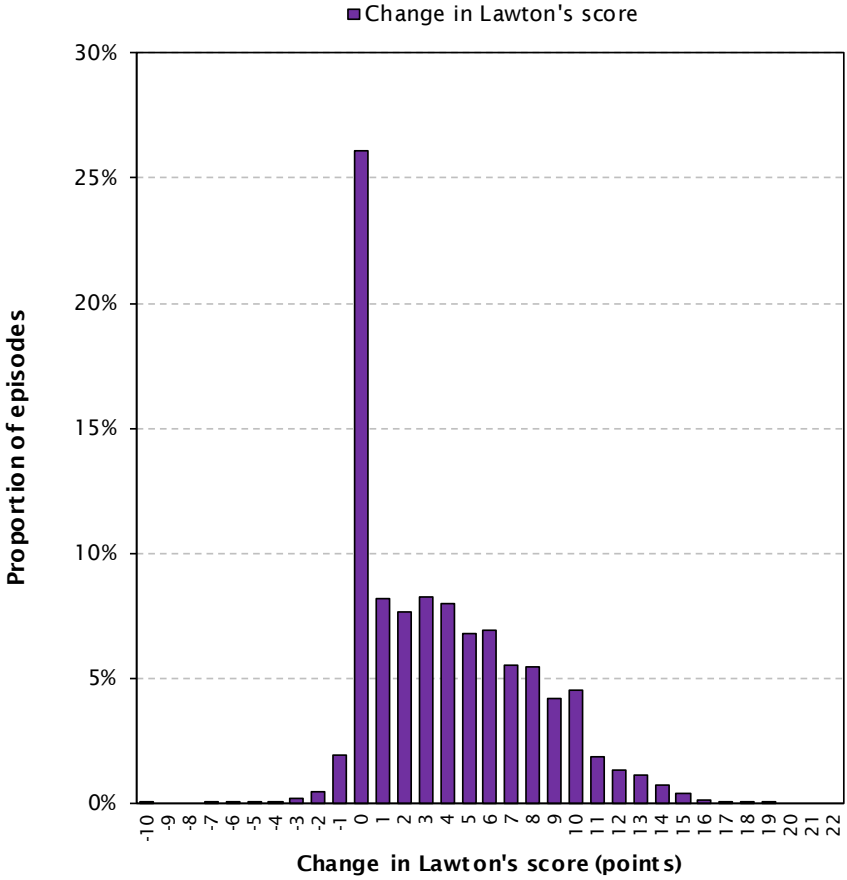


Your Service 2020 (n=276)



Note: 1 episodes had a Lawton's change score < -10.

All Ambulatory 2020 (n=9,100)

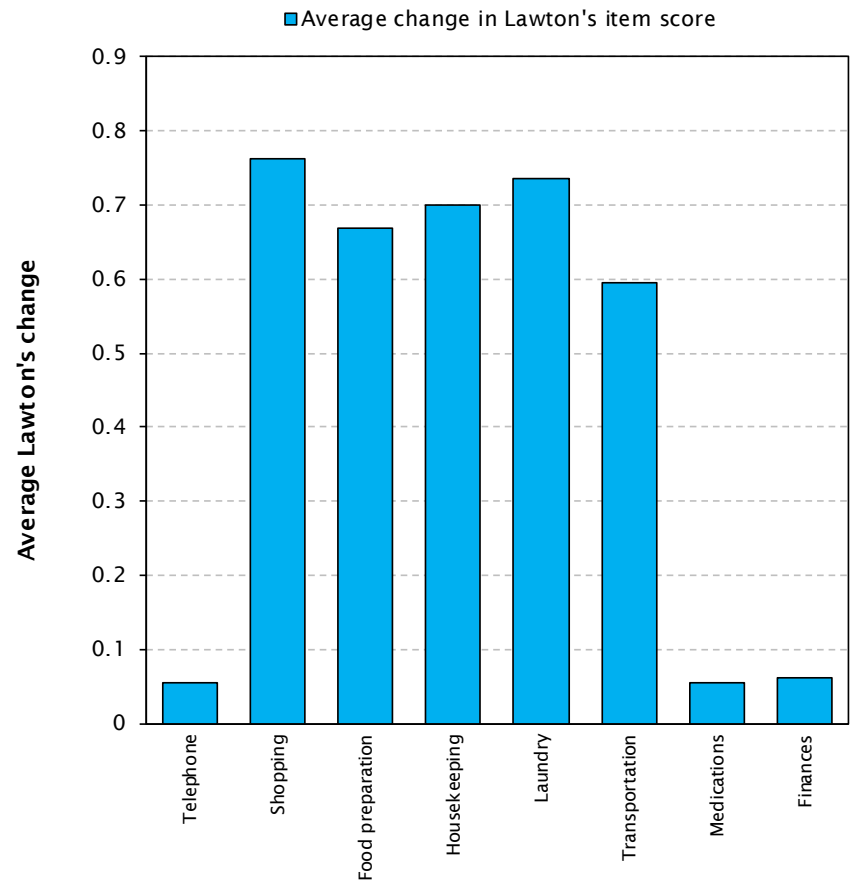


Note: 16 episode(s) had a Lawton's change score < -10.

# Change in Lawton's item scores – all episodes

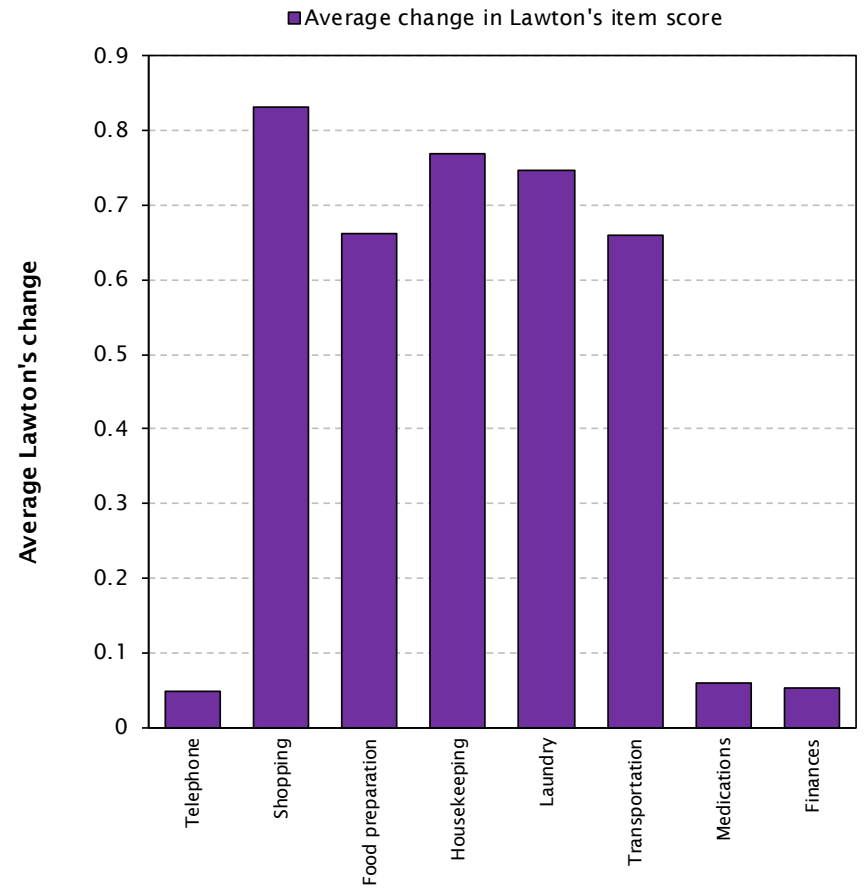


Your Service 2020 (n=276)



Note: 1 episodes had a Lawton's change score < -10.

All Ambulatory 2020 (n=9,100)

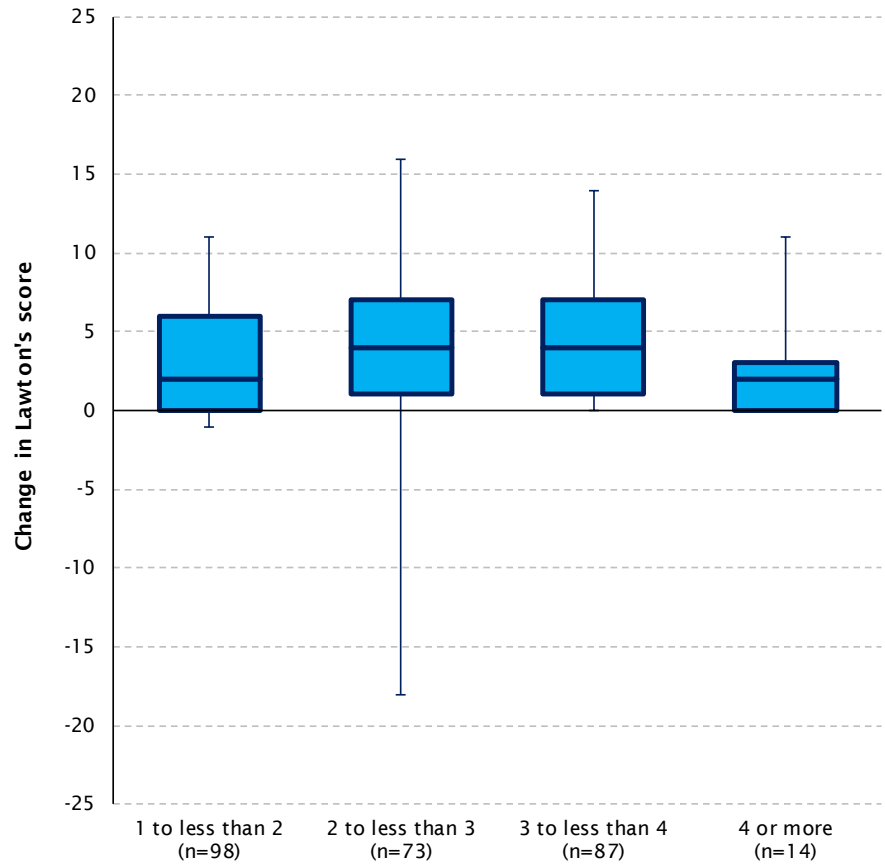


Note: 16 episode(s) had a Lawton's change score < -10.

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

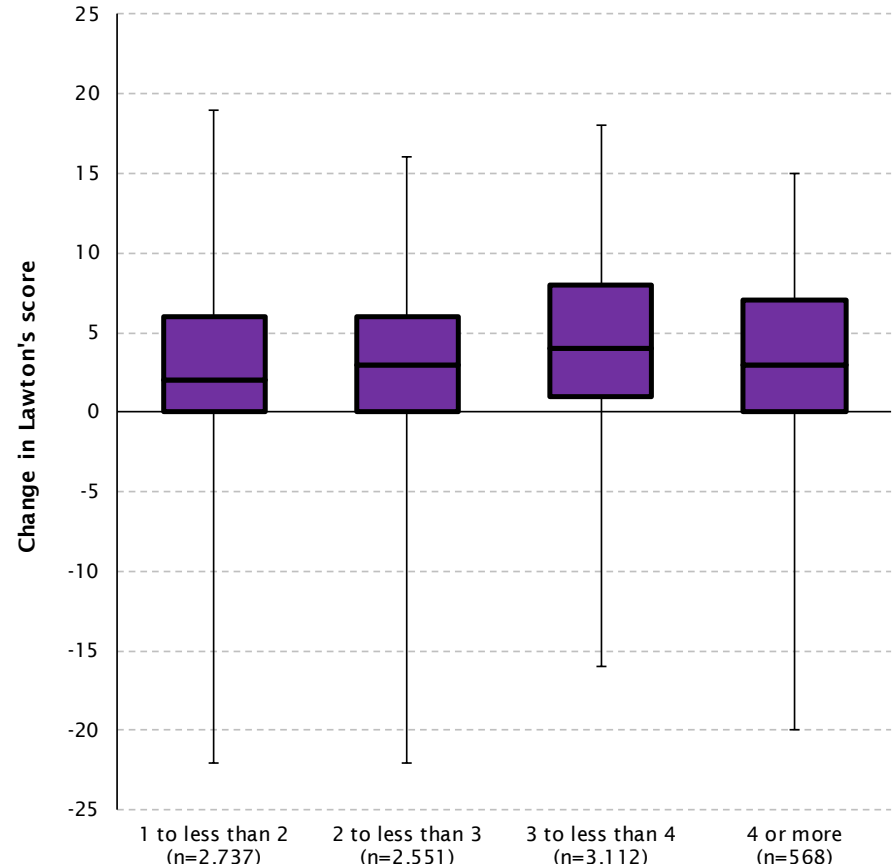


Your Service 2020



Mean occasions of service per day seen

All Ambulatory 2020



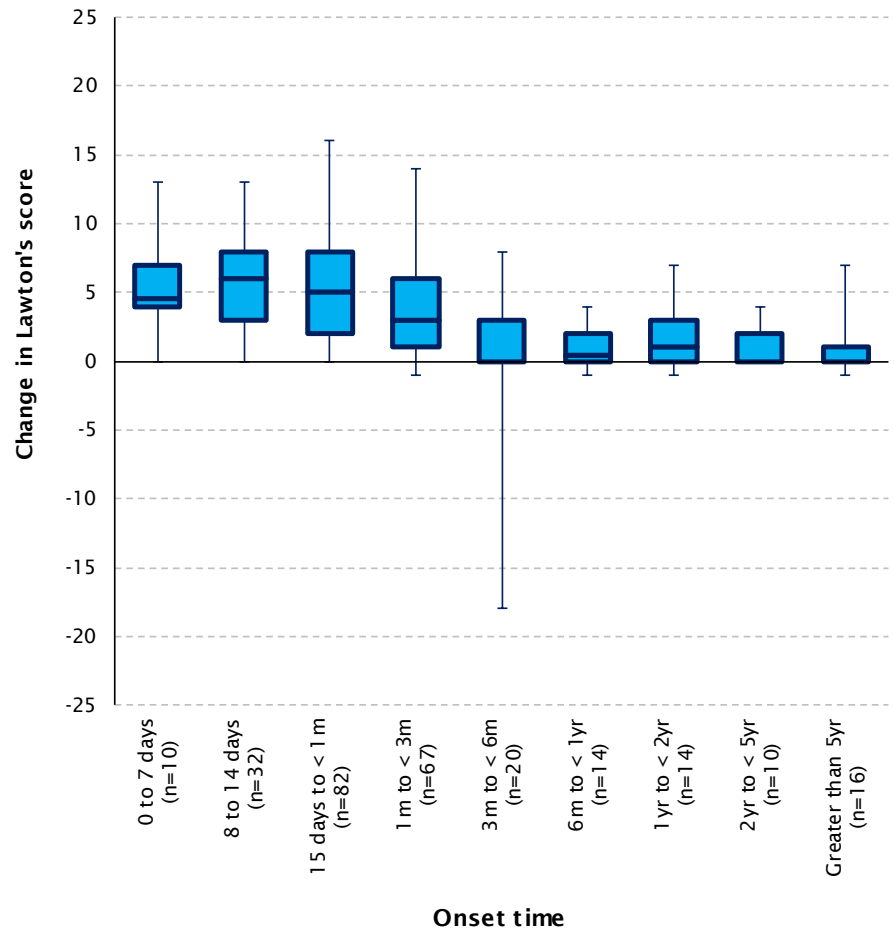
Mean occasions of service per day seen



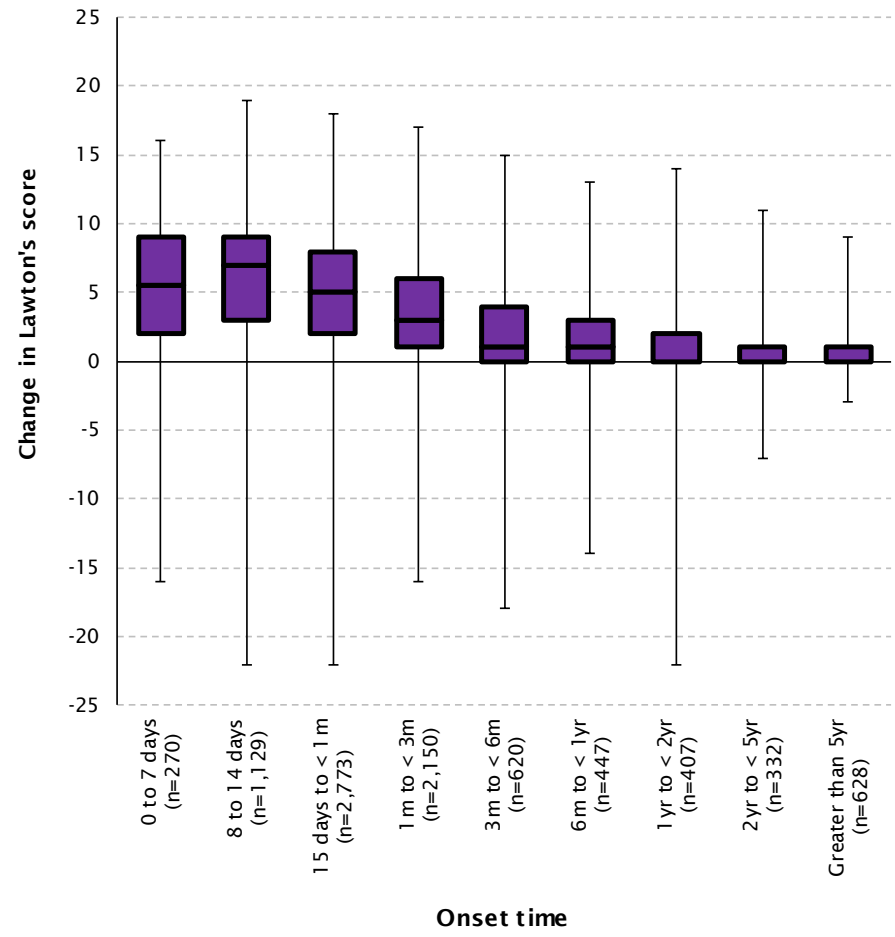
# Change in Lawton's score by onset time – all episodes



Your Service 2020



All Ambulatory 2020



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)



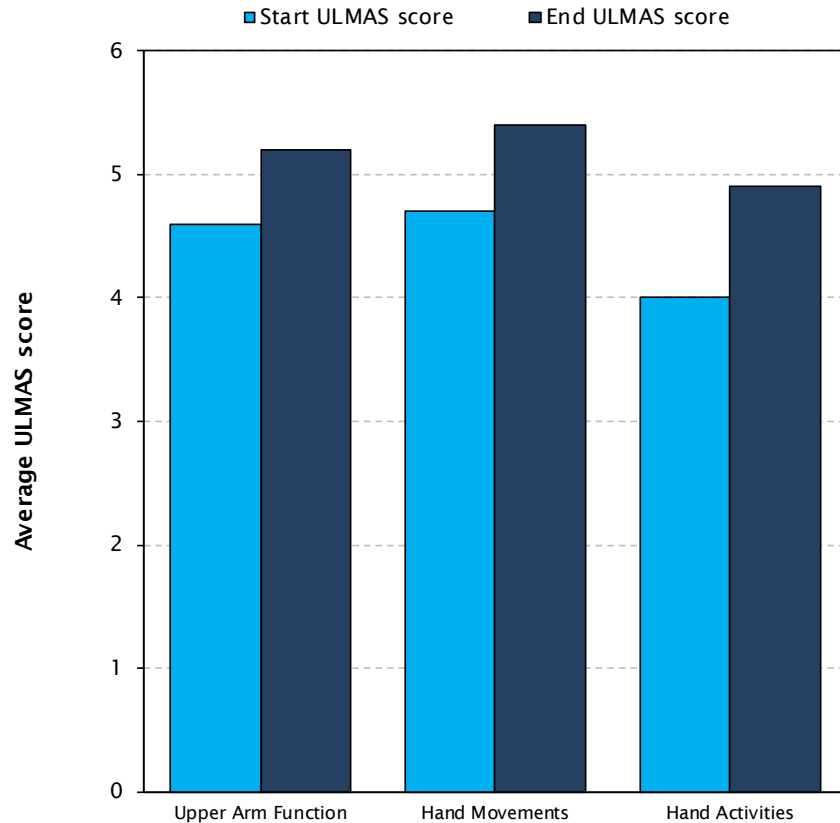
- This data item is collected in addition to the Australian Modified Lawton's IADL Scale for patients who have sustained upper limb impairment following a stroke.
- The UL-MAS is used to assess everyday upper limb motor function in adults following stroke.

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

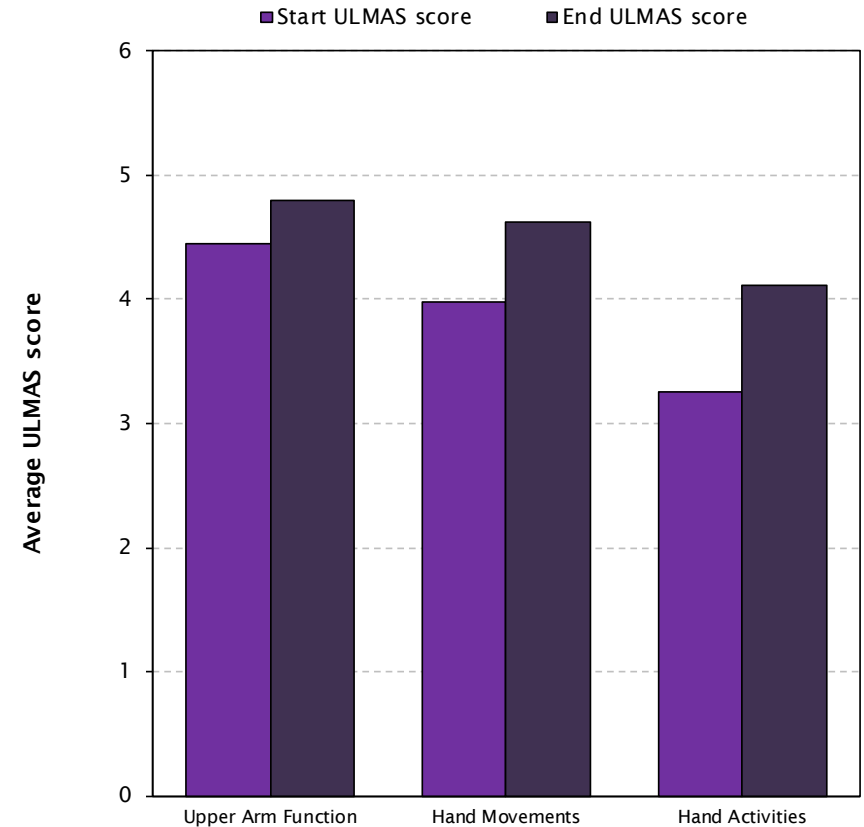
# Average ULMAS start and end score by sub-group



Your Service 2020 (n=10)



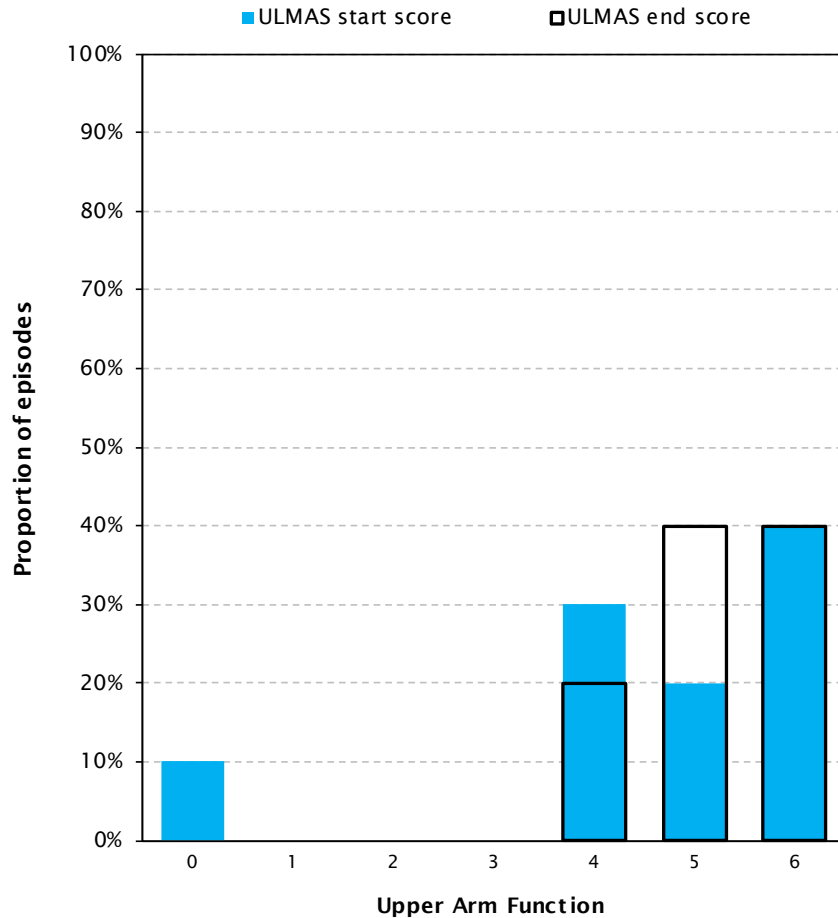
All Ambulatory 2020 (n=270)



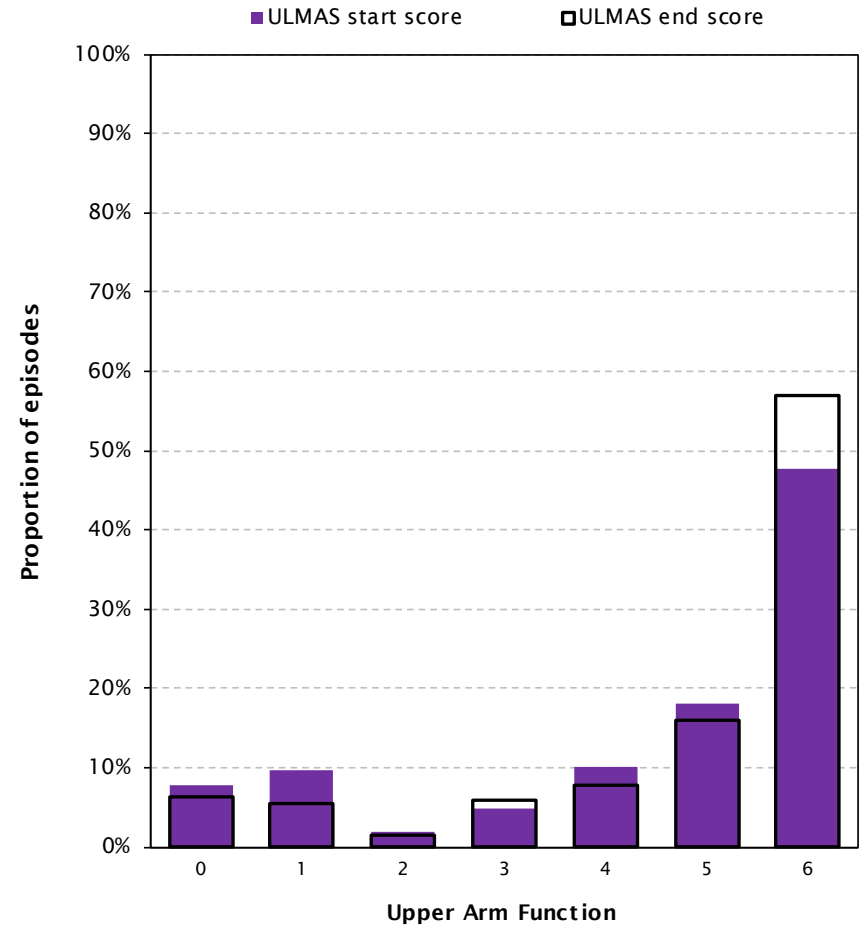
# ULMAS start and end total – Upper arm function



Your Service 2020 (n=10)



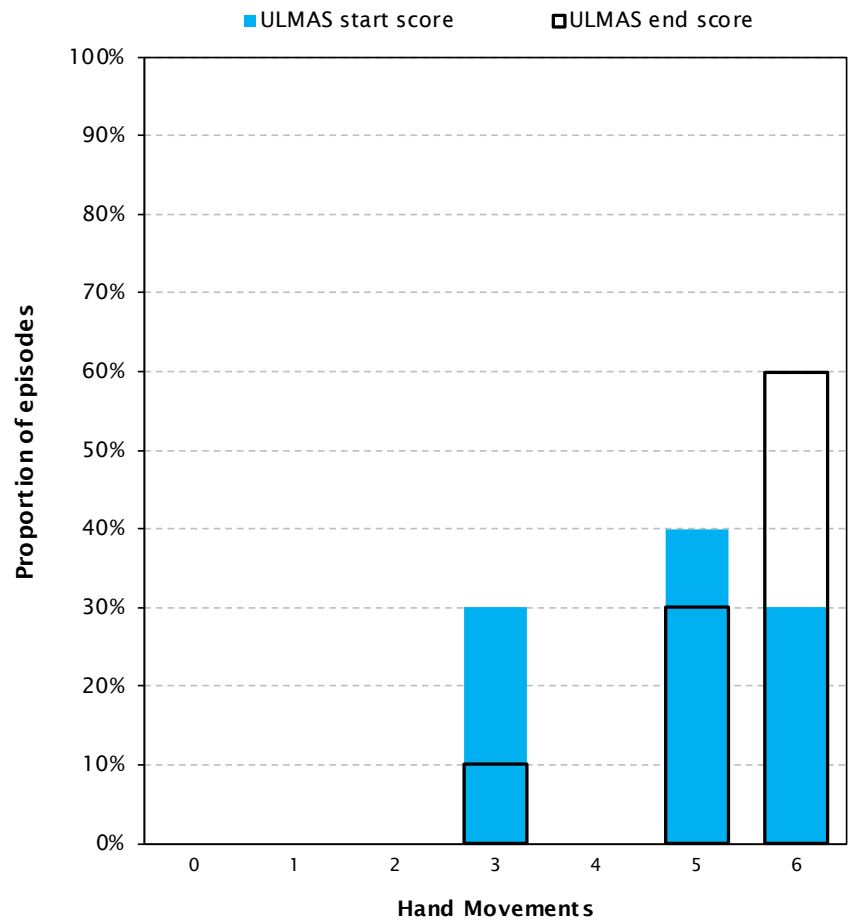
All Ambulatory 2020 (n=270)



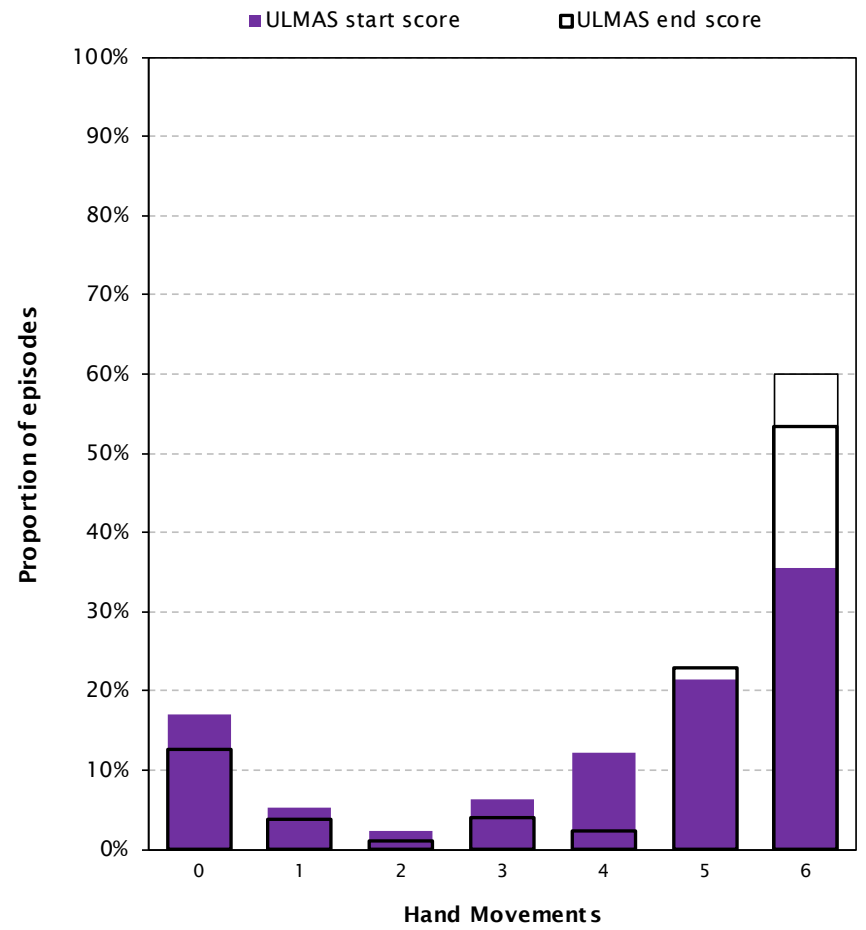
# ULMAS start and end total – Hand movements



Your Service 2020 (n=10)



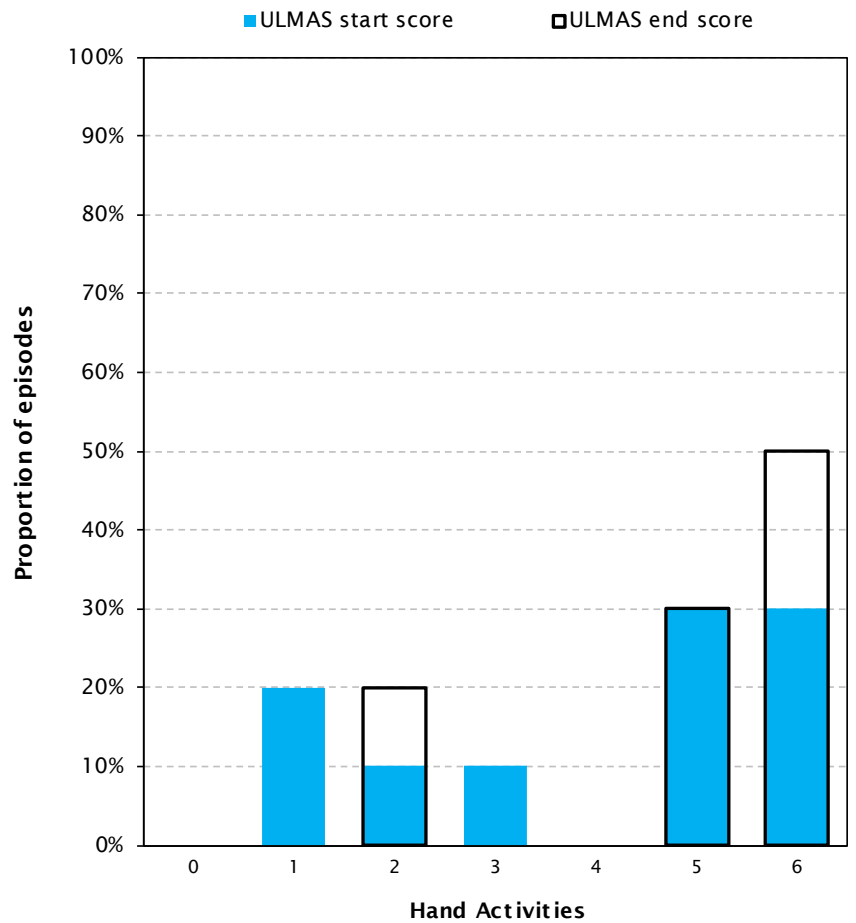
All Ambulatory 2020 (n=270)



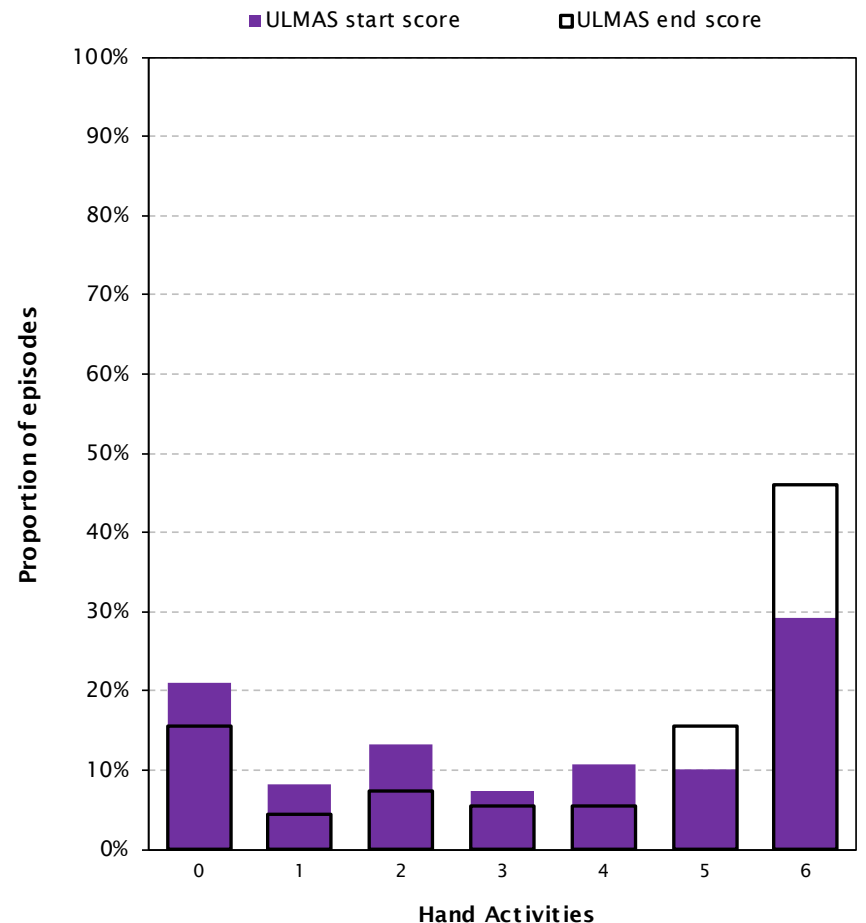
# ULMAS start and end total – Hand activities



Your Service 2020 (n=10)



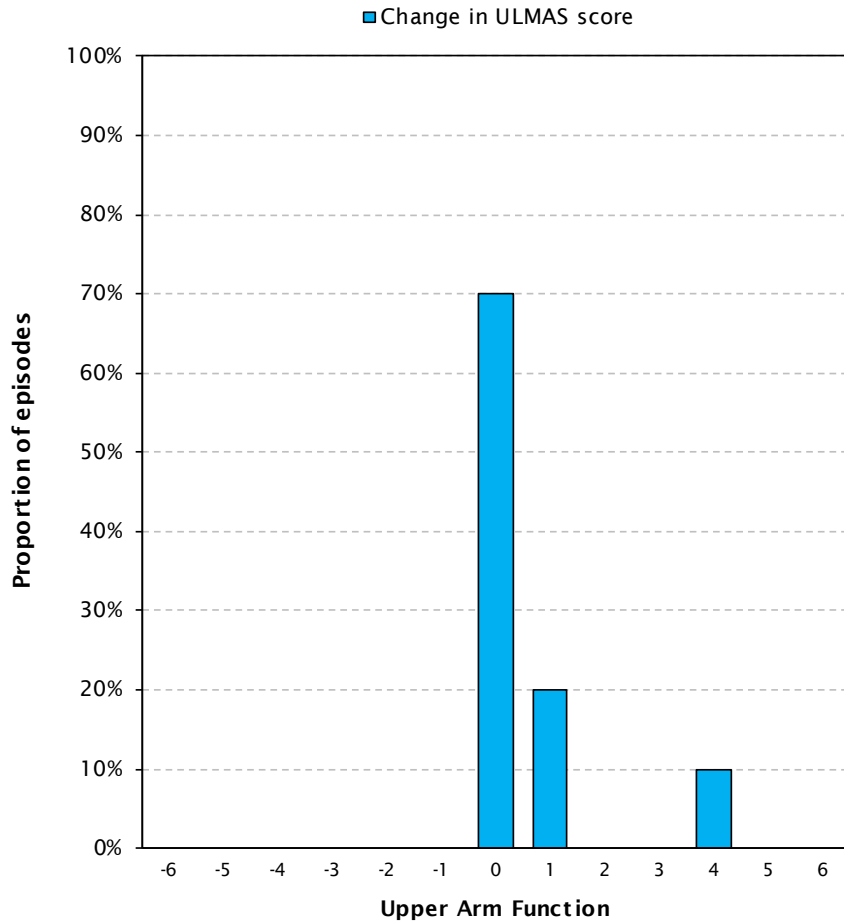
All Ambulatory 2020 (n=270)



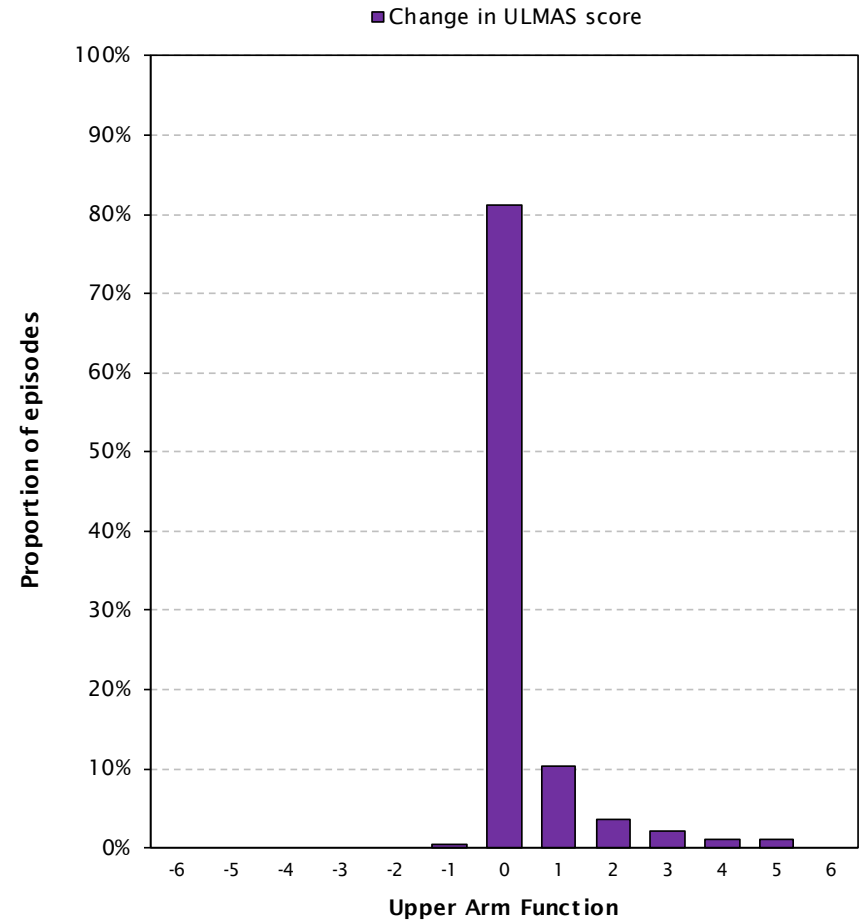
# Change in ULMAS score – Upper arm function



Your Service 2020 (n=10)



All Ambulatory 2020 (n=270)

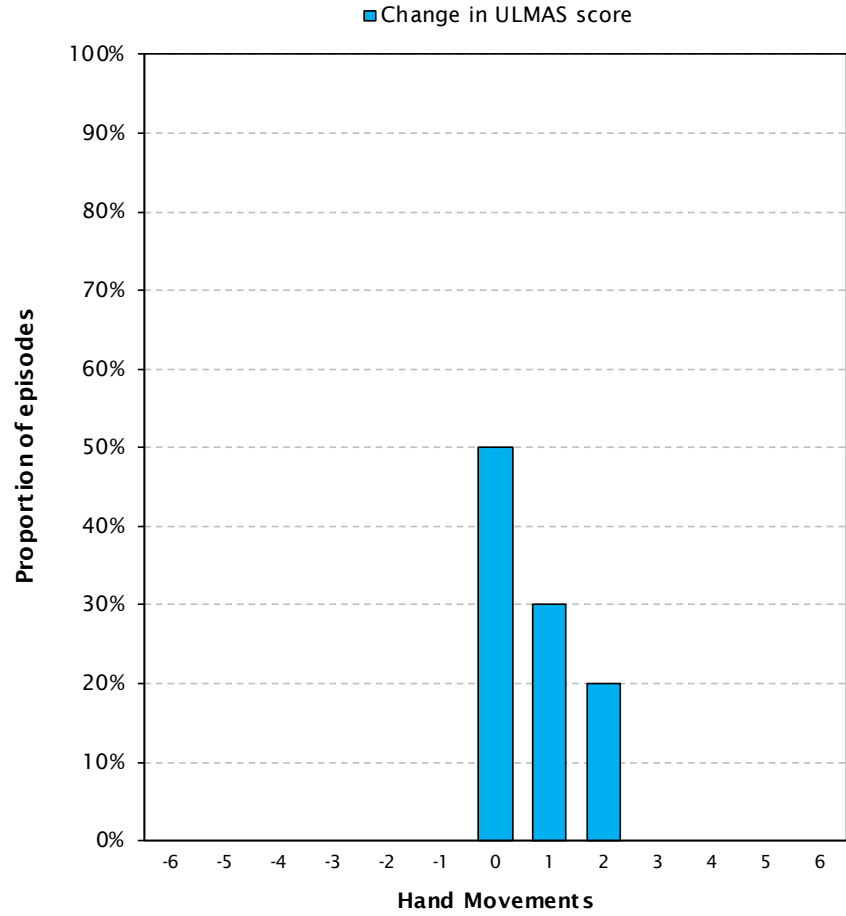




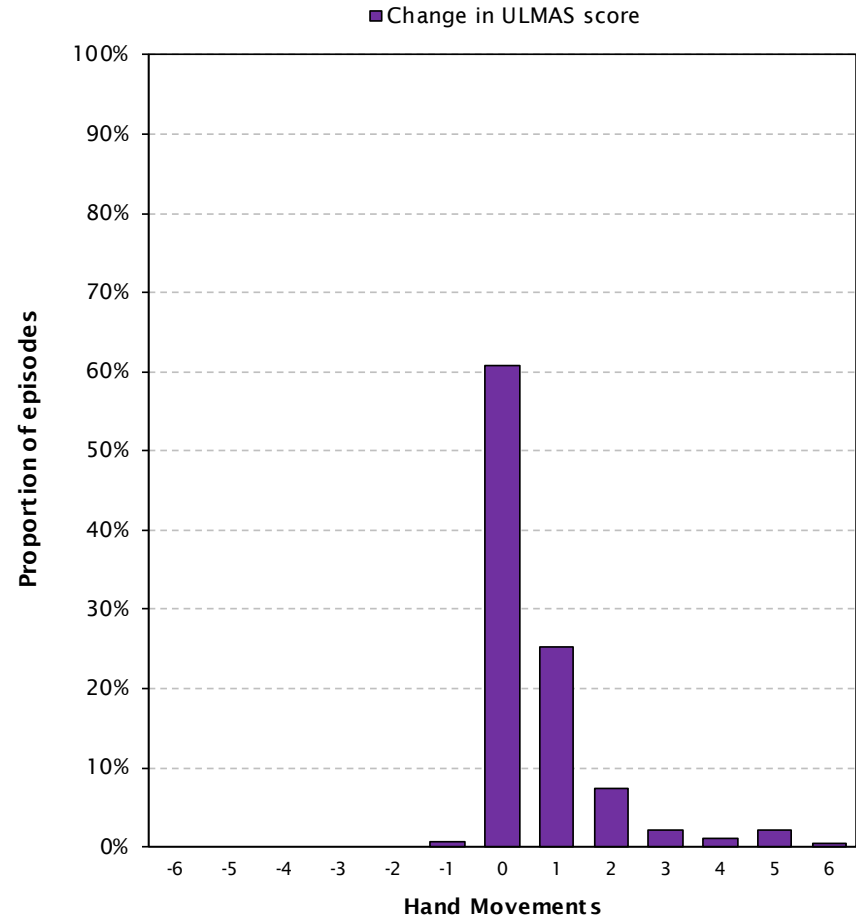
# Change in ULMAS score – Hand movements



Your Service 2020 (n=10)



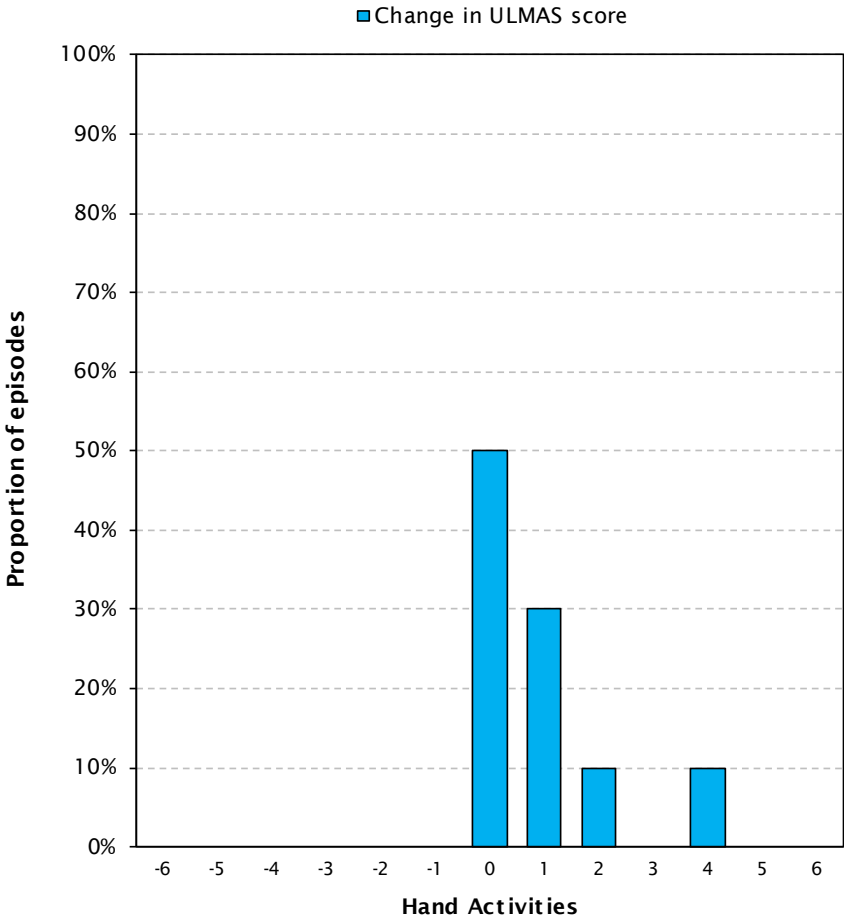
All Ambulatory 2020 (n=270)



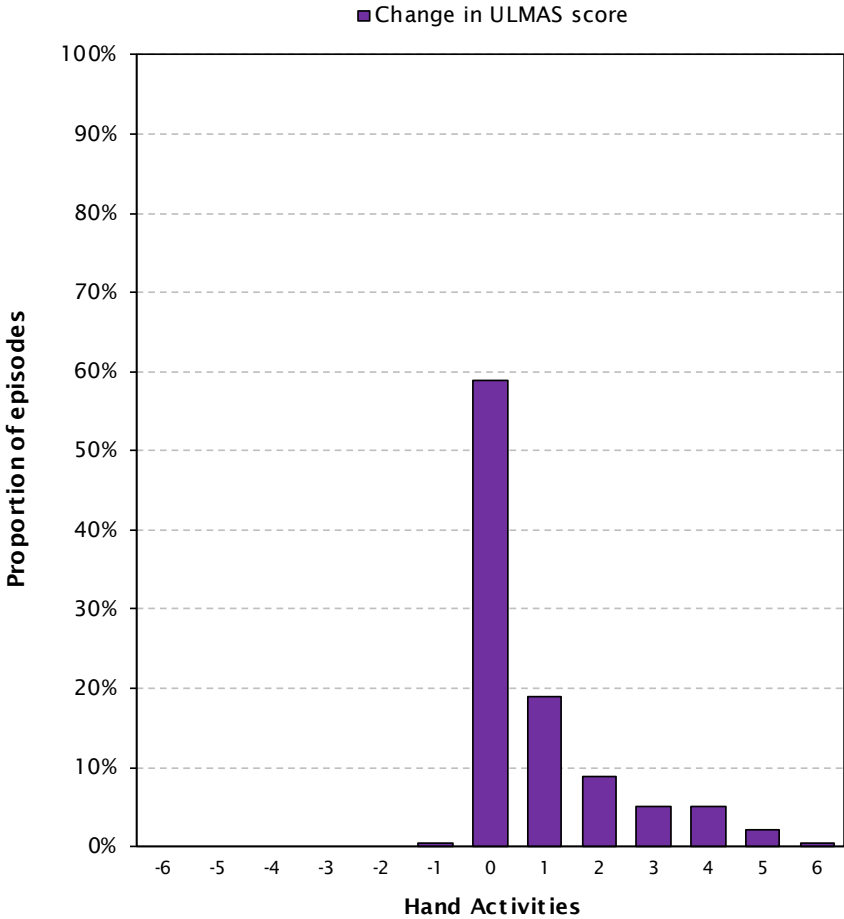
# Change in ULMAS score – Hand activities



Your Service 2020 (n=10)



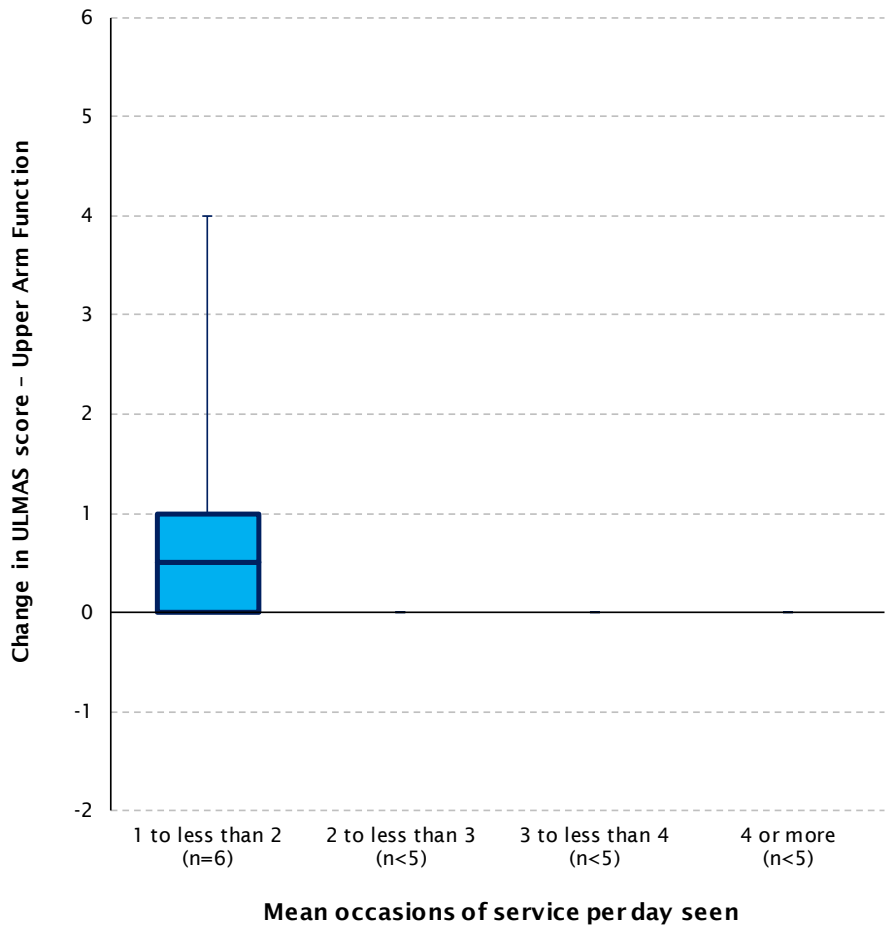
All Ambulatory 2020 (n=270)



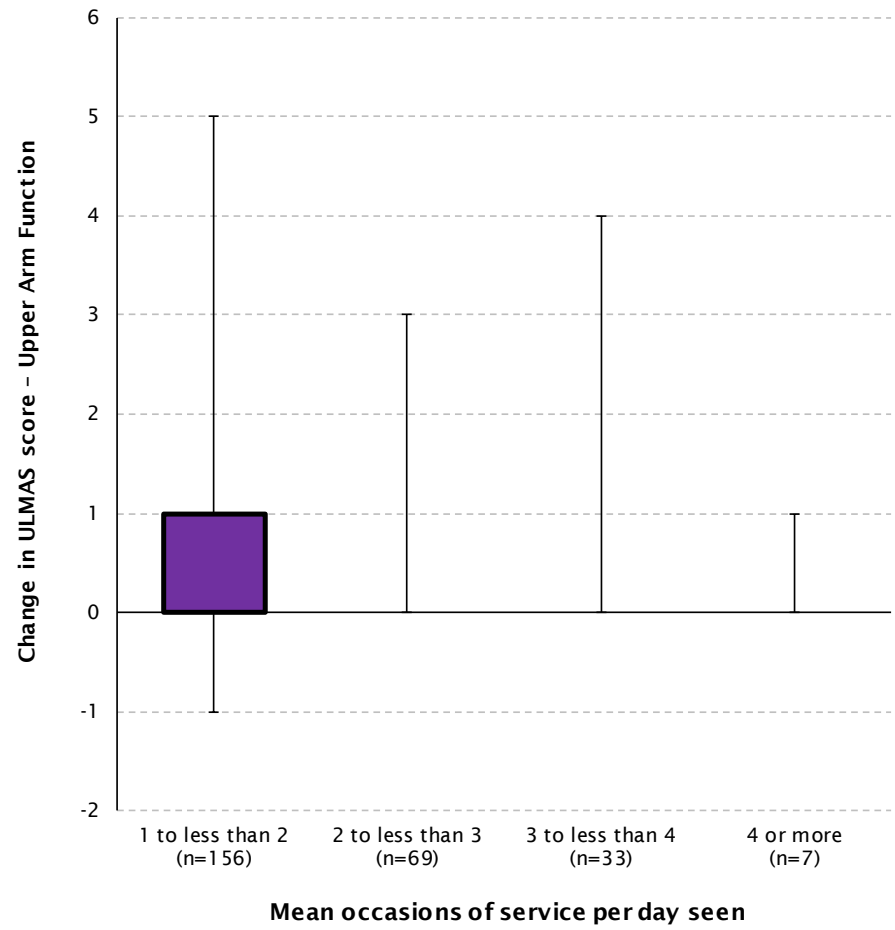
# Change in ULMAS score by OOS/day seen - Upper arm function



Your Service 2020



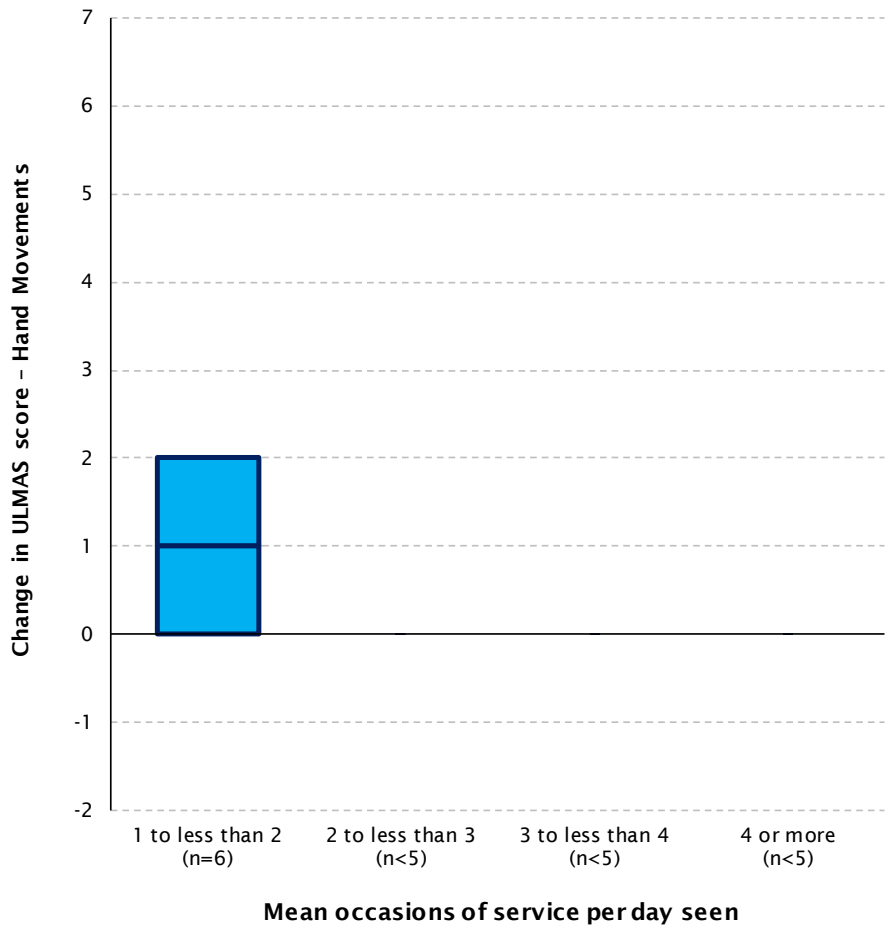
All Ambulatory 2020



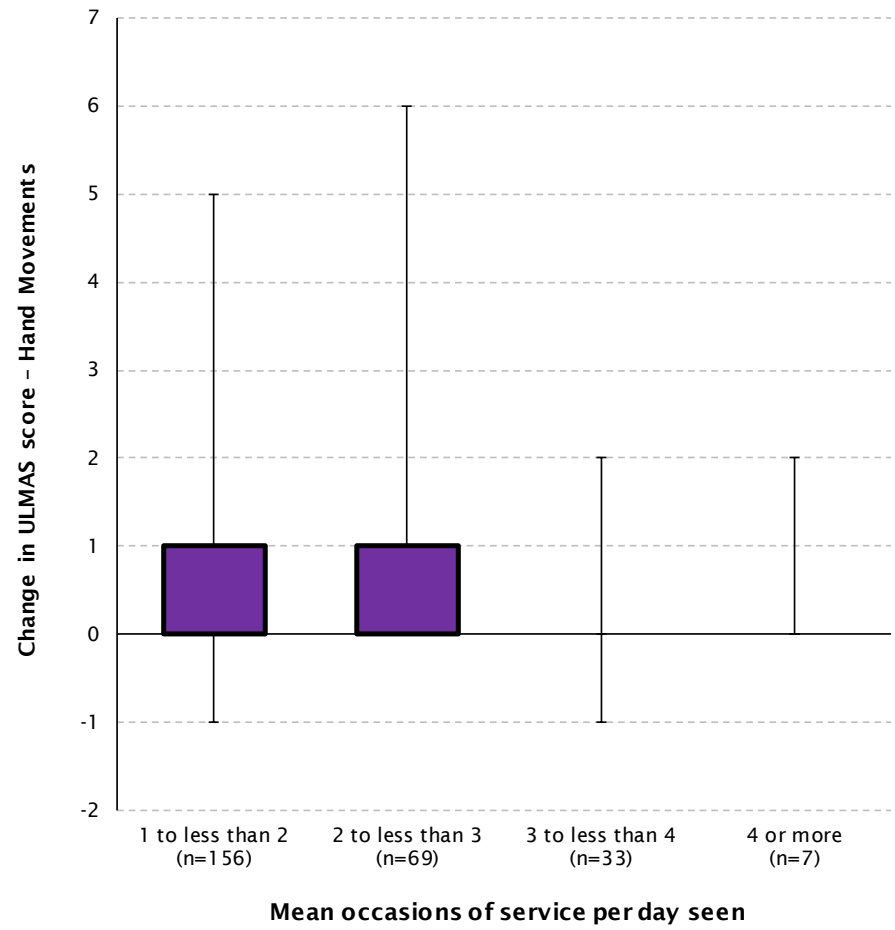
# Change in ULMAS score by OOS/day seen - Hand movements



Your Service 2020



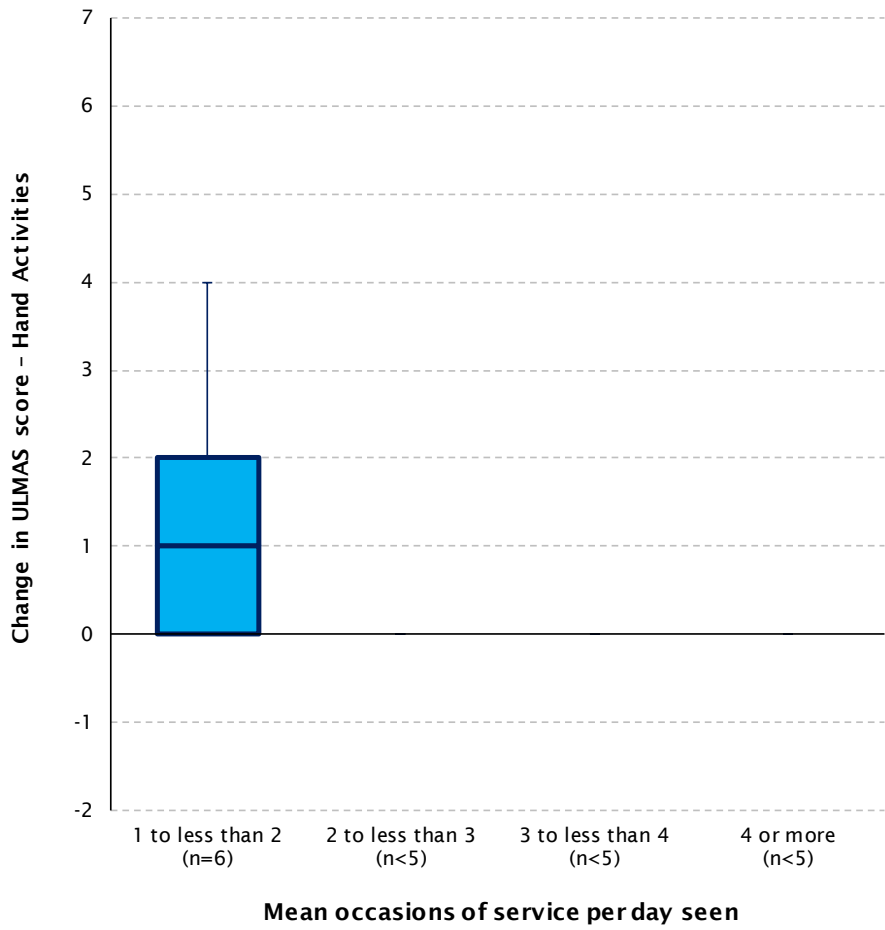
All Ambulatory 2020



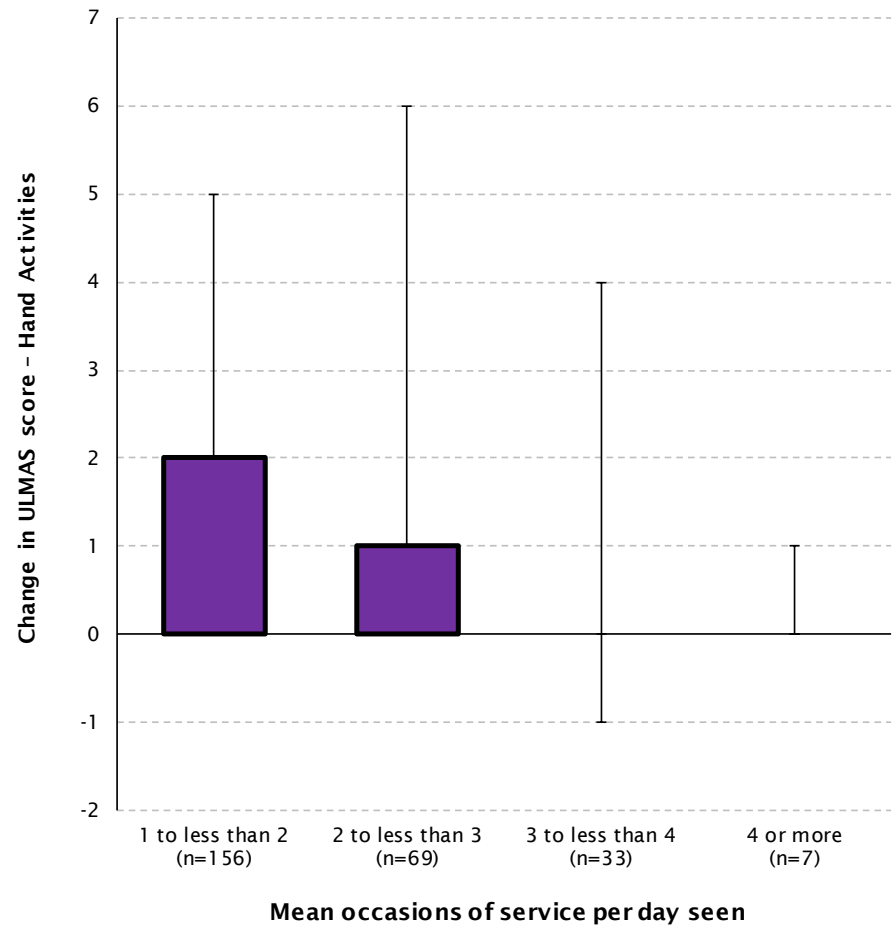
# Change in ULMAS score by OOS/day seen - Hand activities



Your Service 2020



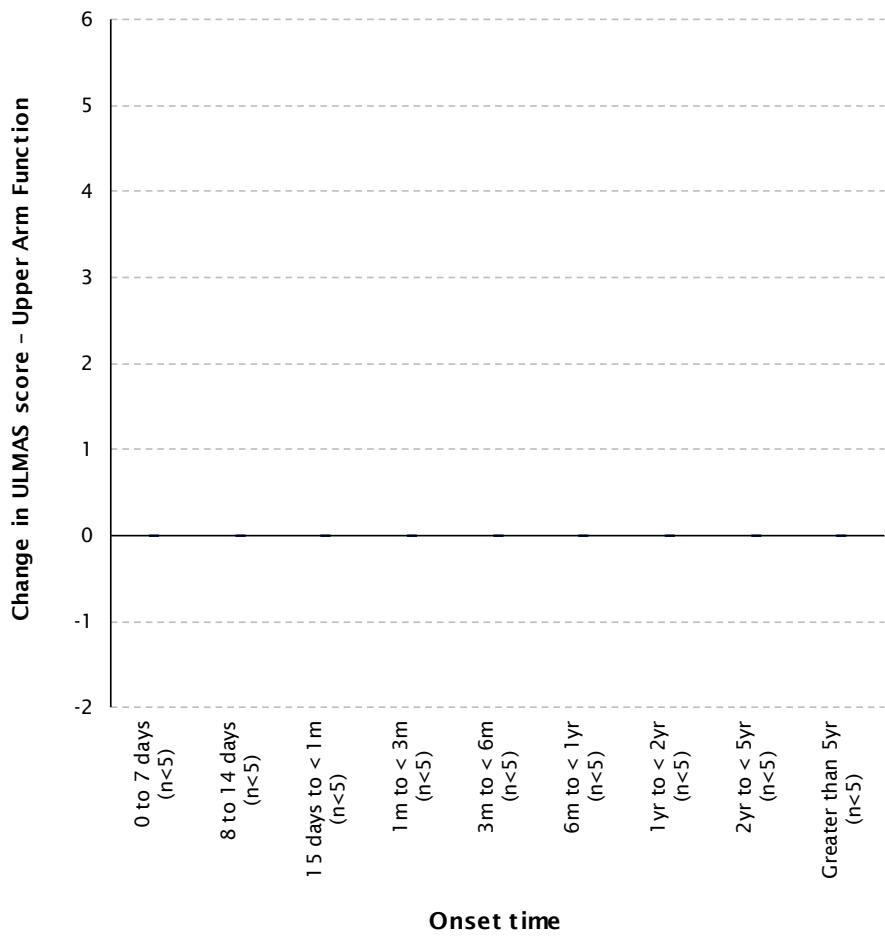
All Ambulatory 2020



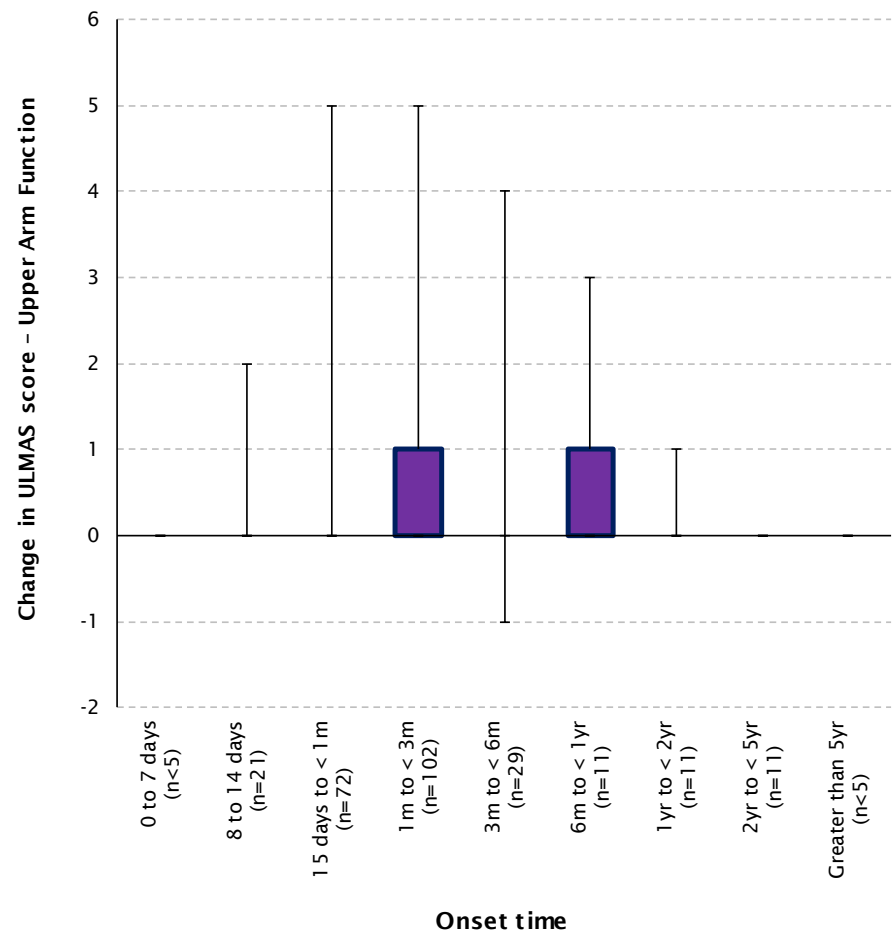
# Change in ULMAS score by onset time - Upper arm function



Your Service 2020



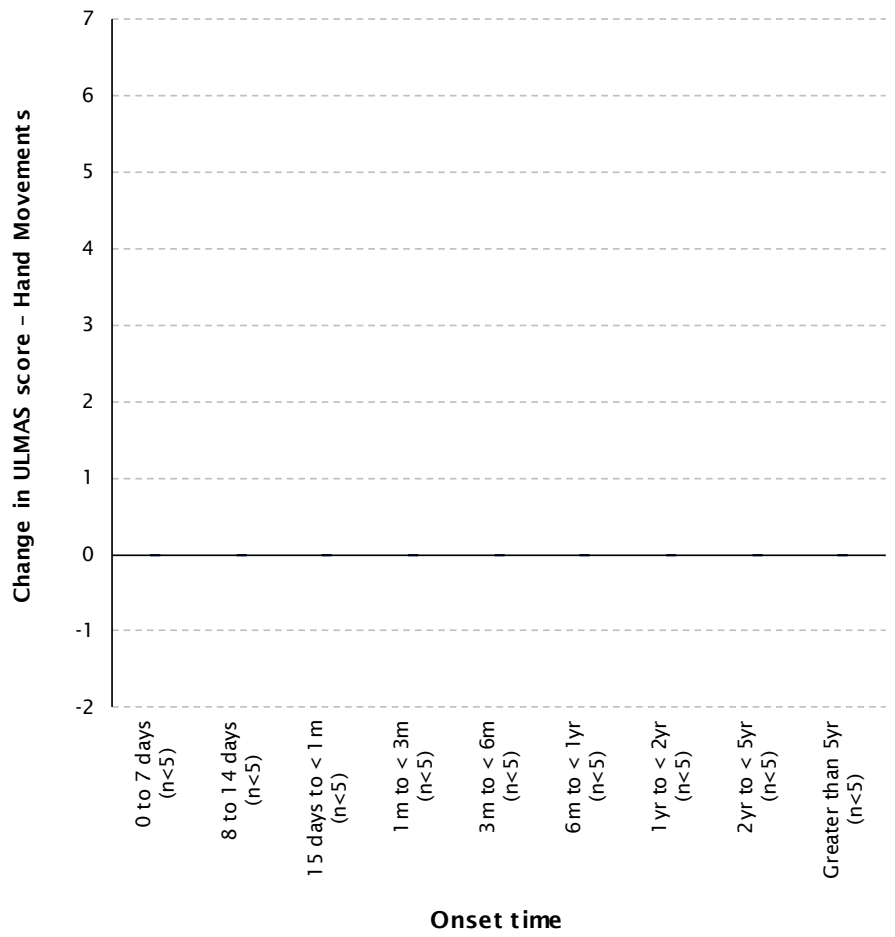
All Ambulatory 2020



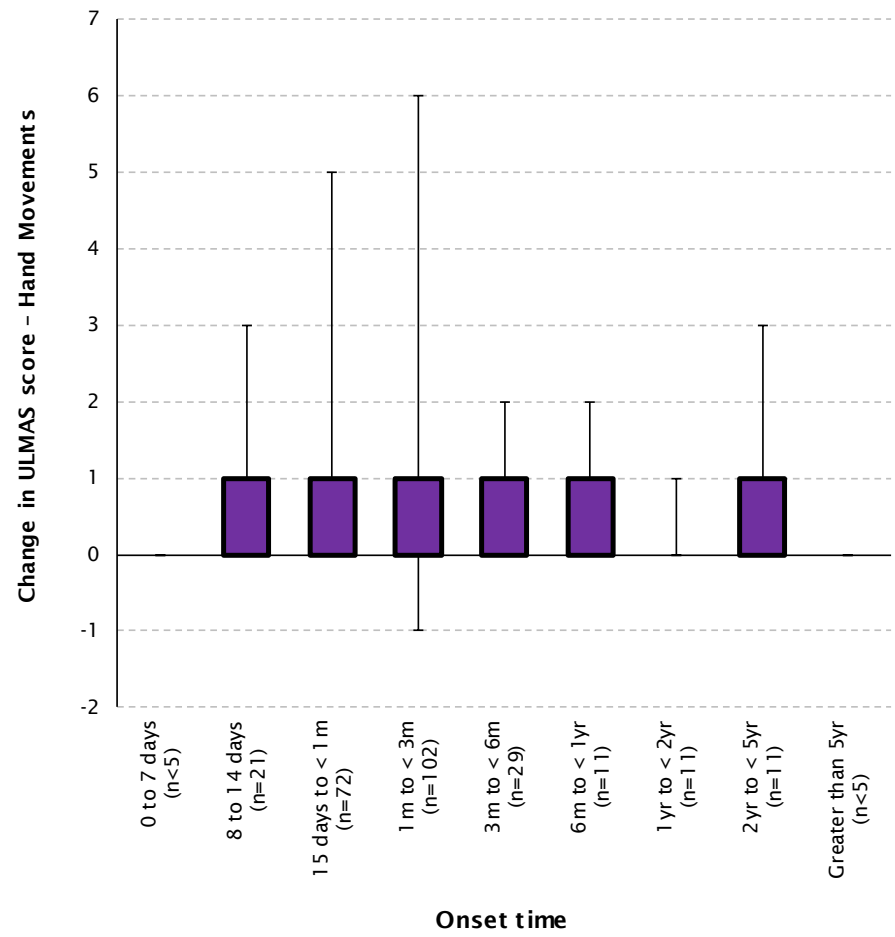
# Change in ULMAS score by onset time - Hand movements



Your Service 2020



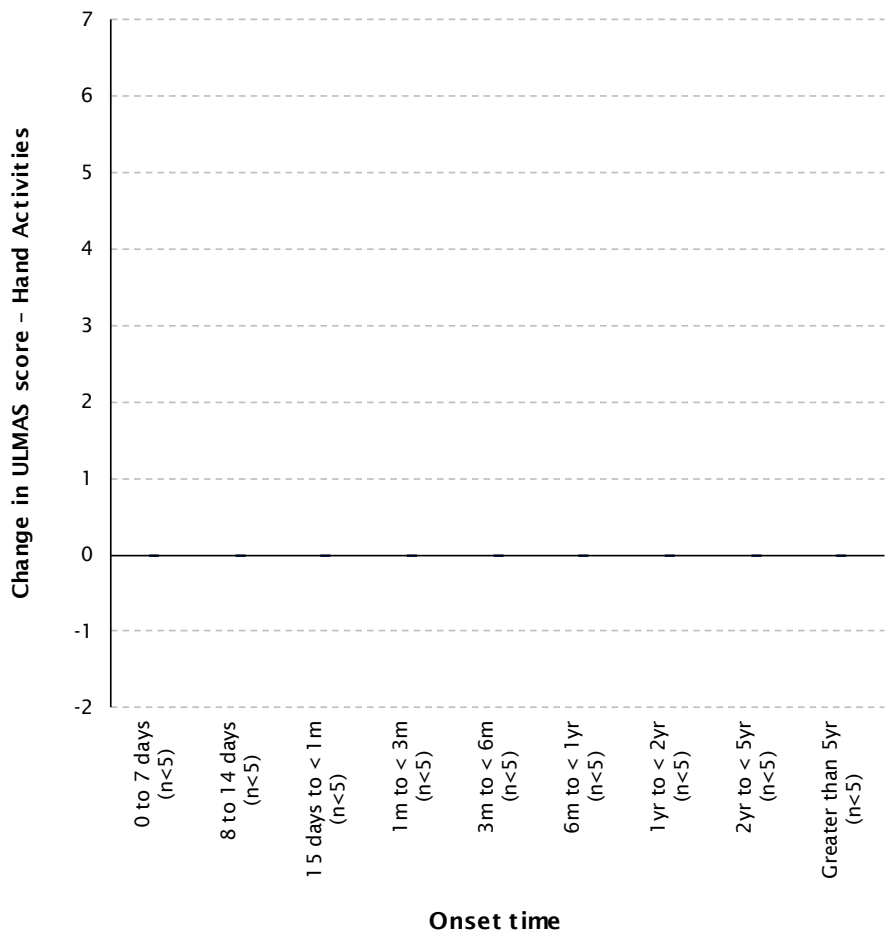
All Ambulatory 2020



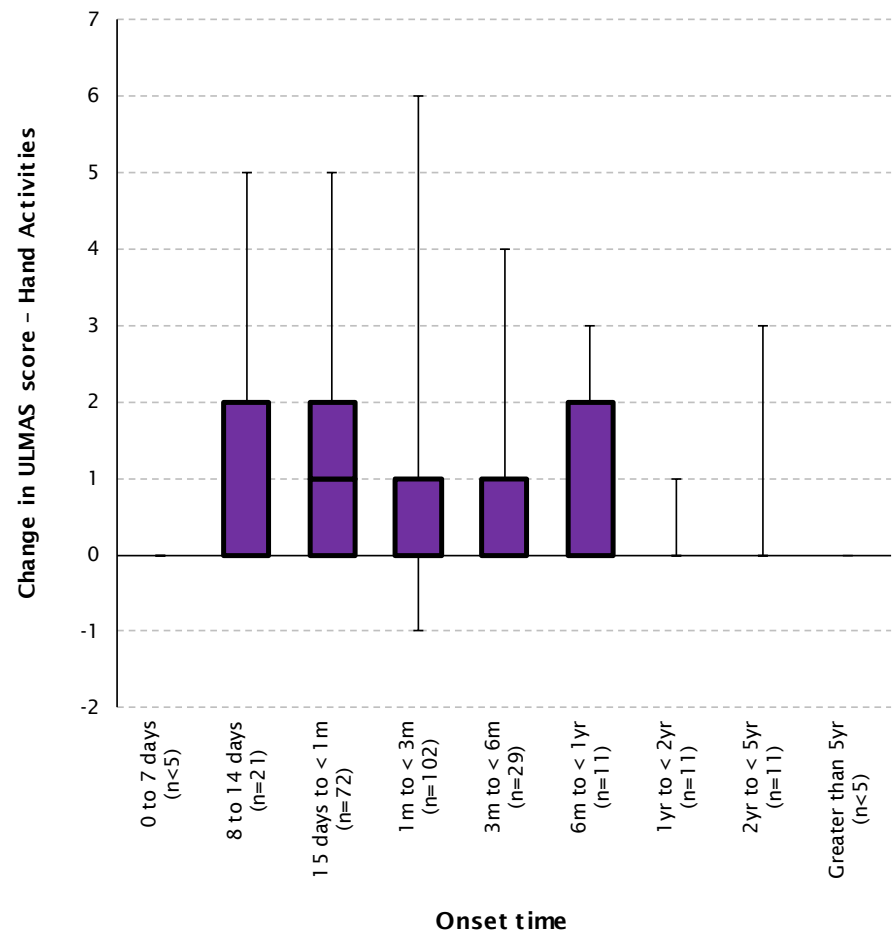
# Change in ULMAS score by onset time - Hand activities



Your Service 2020



All Ambulatory 2020





# 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:

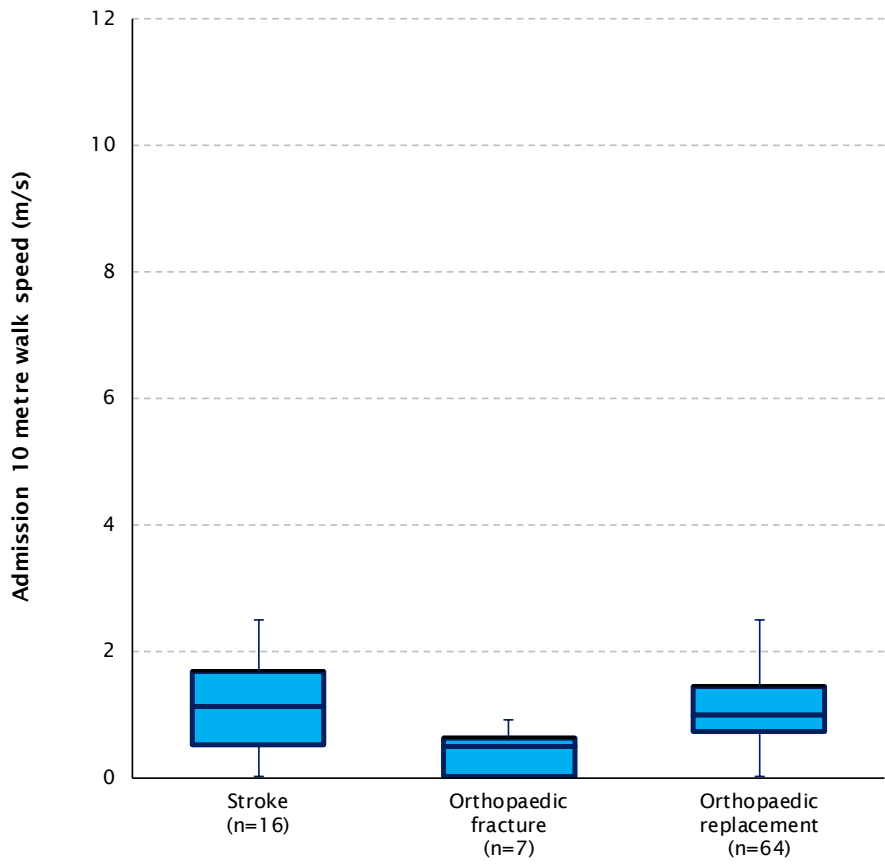
- Stroke
- Lower limb orthopaedic injury or joint replacement
- Amputation of lower limb (optional measure)

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

# Admission timed 10 metre walk test speed by impairment

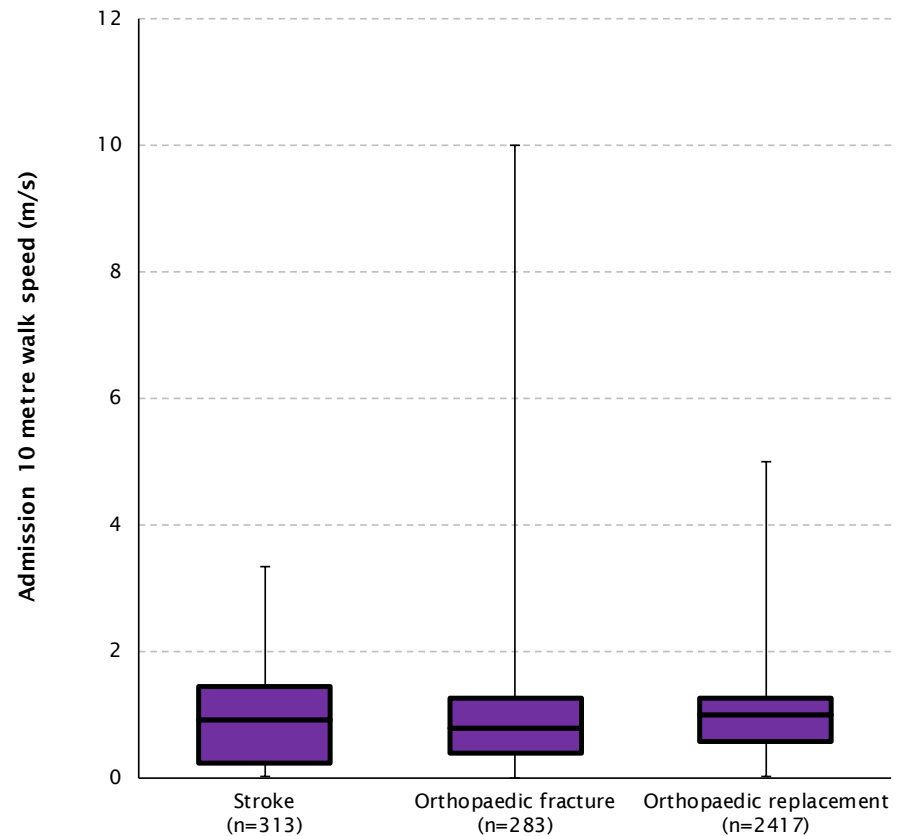


### Your Service 2020



Note: All admissions.

### All Ambulatory 2020

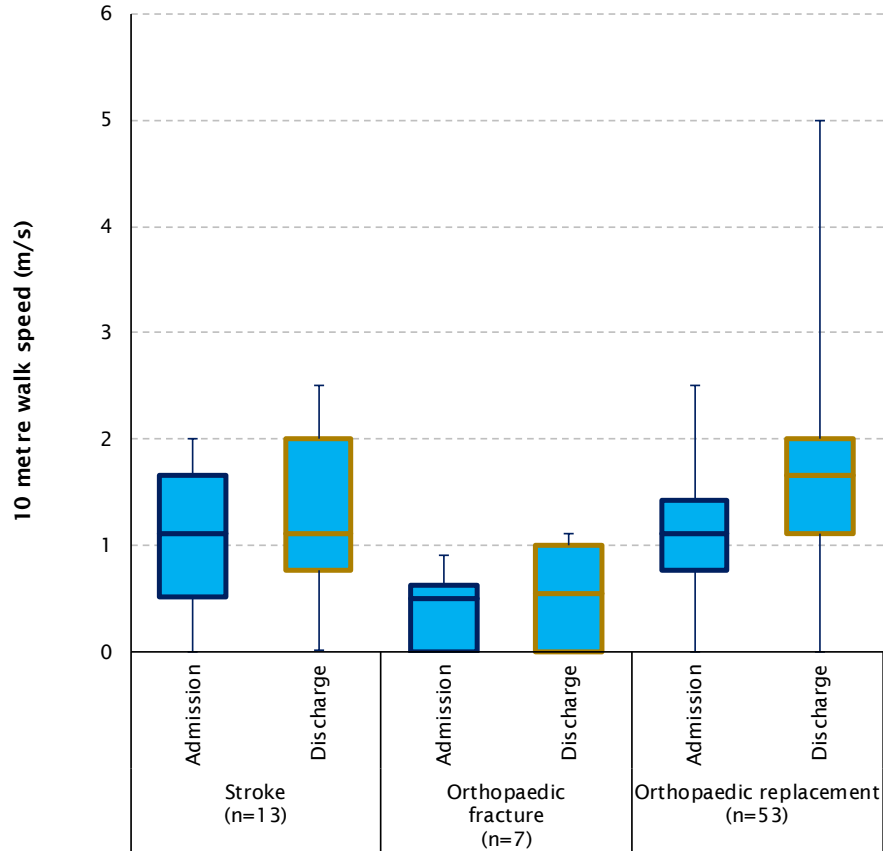


Note: All admissions.

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

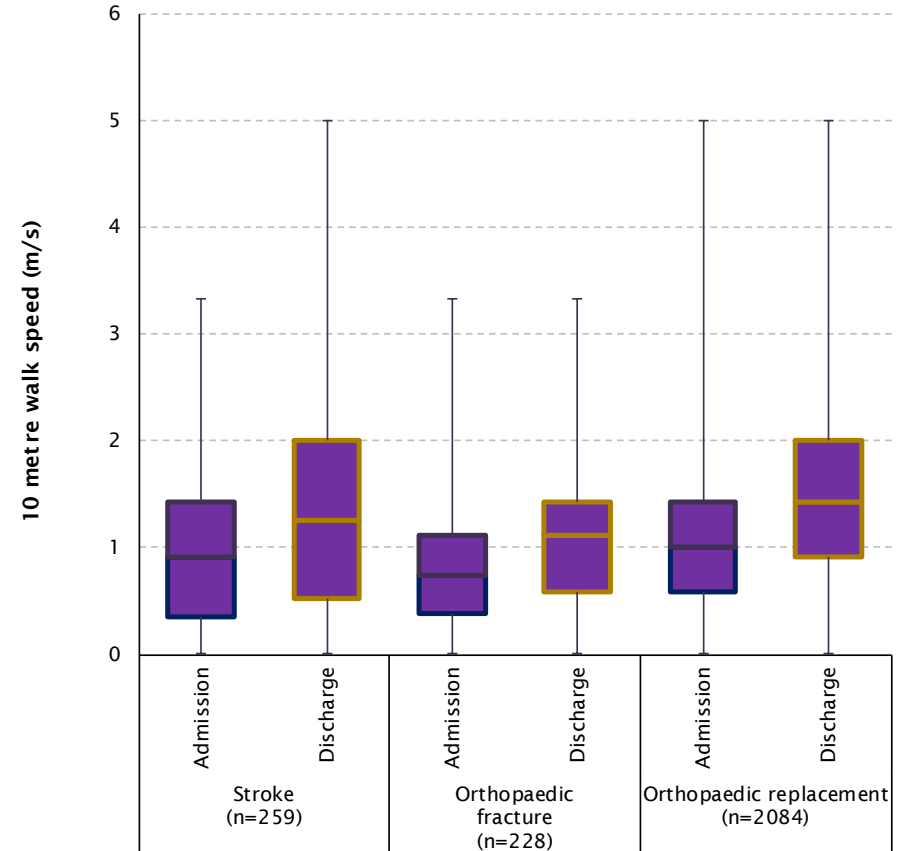


Your Service 2020



Note: Completed episodes only.

All Ambulatory 2020

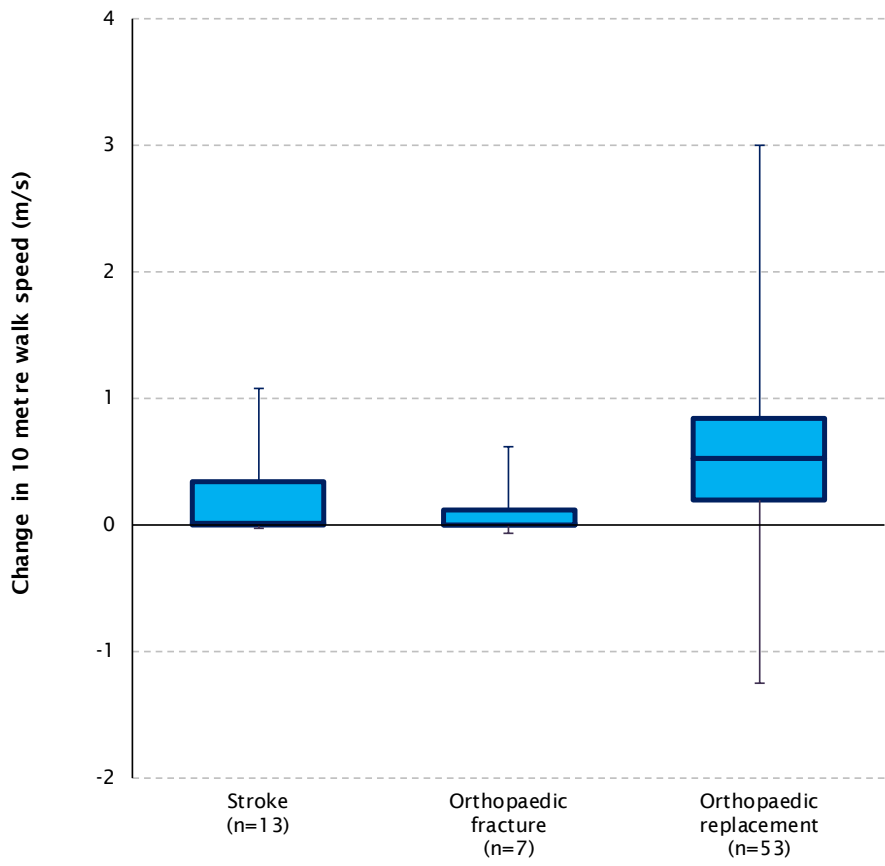


Note: Completed episodes only.

# Change in 10 metre walk speed by impairment

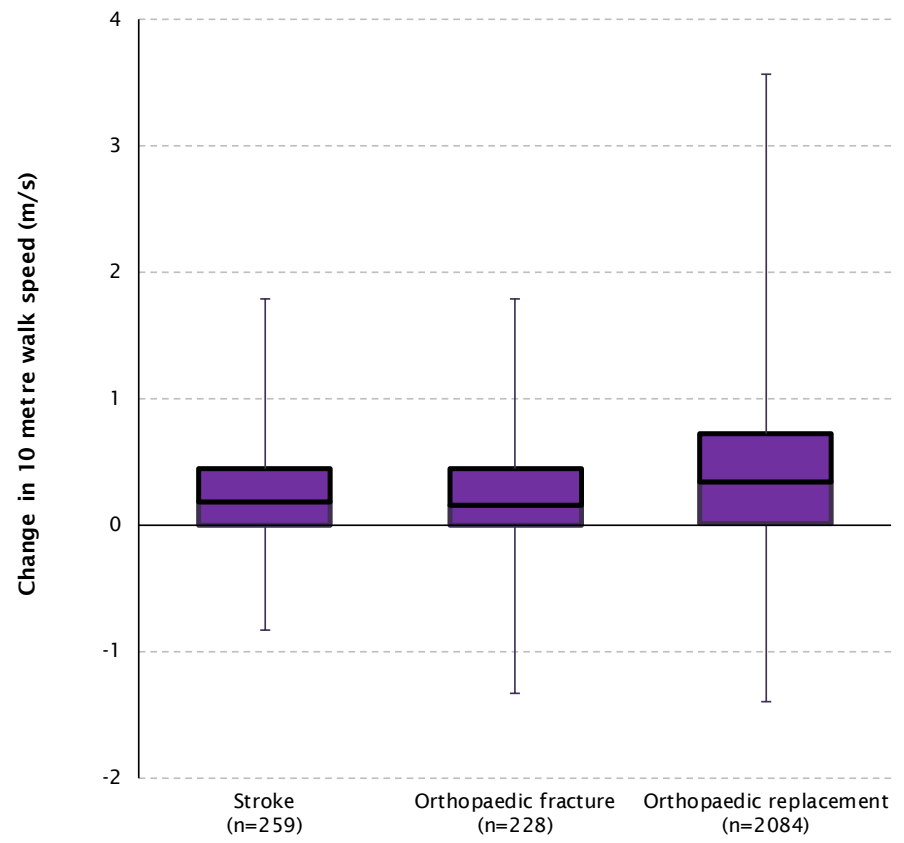


Your Service 2020



Note: Completed episodes only.

All Ambulatory 2020

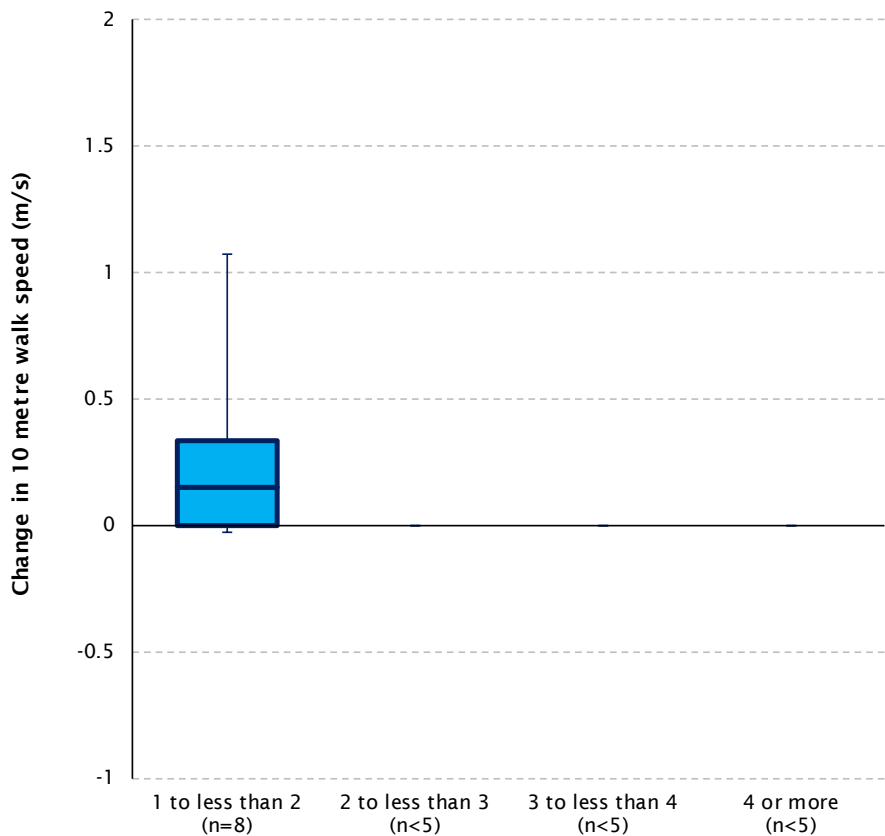


Note: Completed episodes only.

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

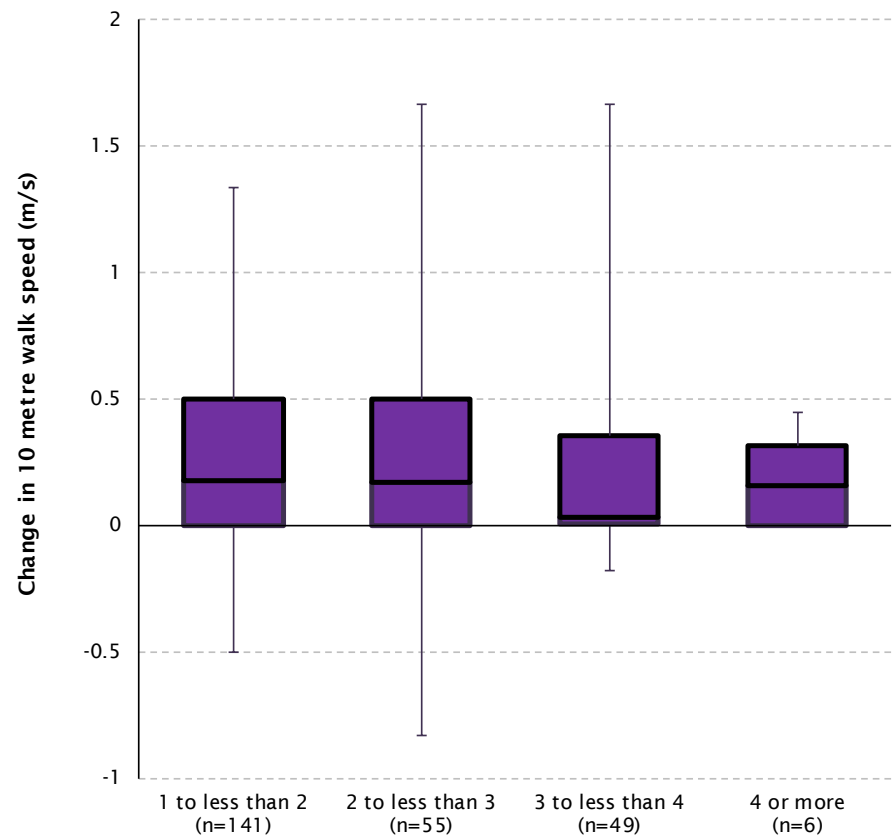


Your Service 2020



Mean occasions of service per day seen

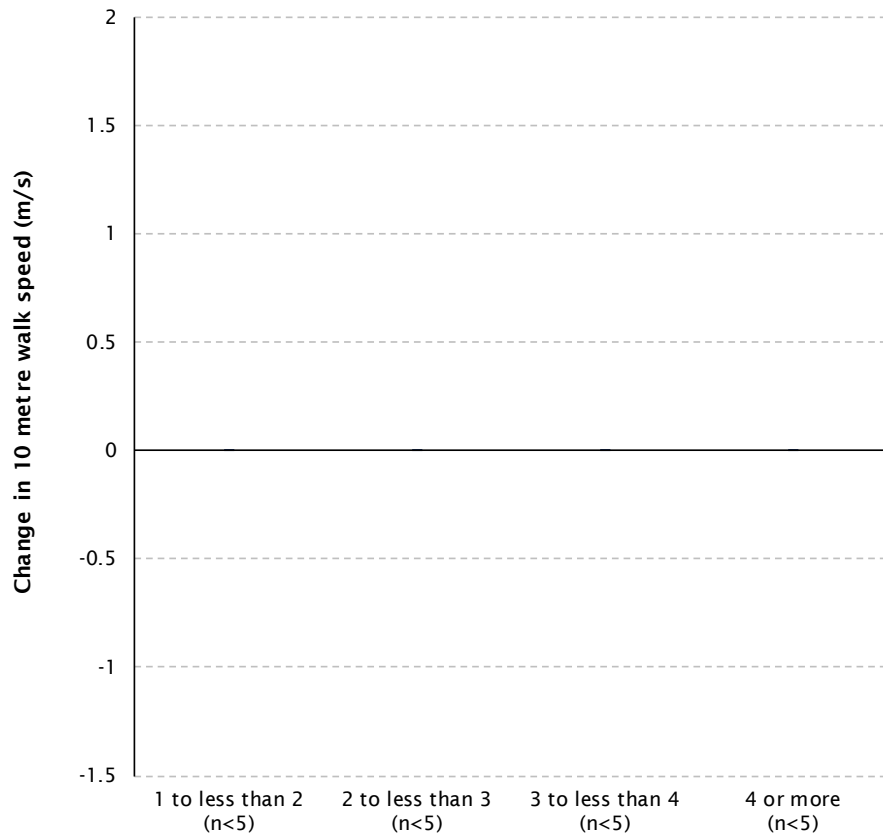
All Ambulatory 2020



Mean occasions of service per day seen

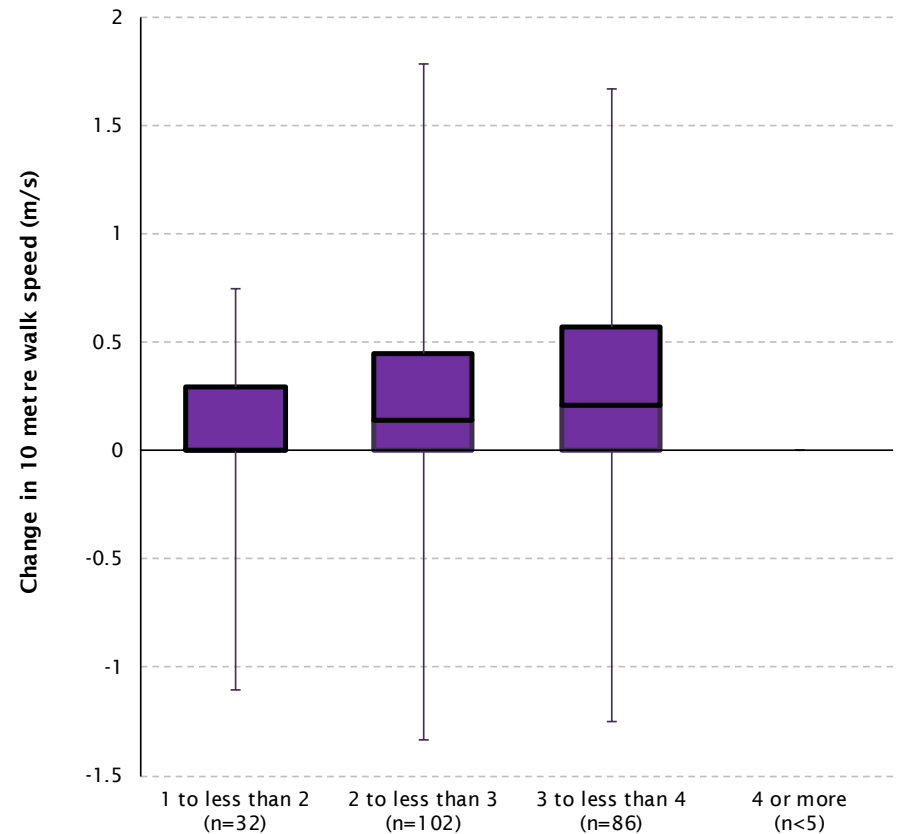
# Change in 10 metre walk speed by OOS/day seen – Orthopaedic fractures

Your Service 2020



Mean occasions of service per day seen

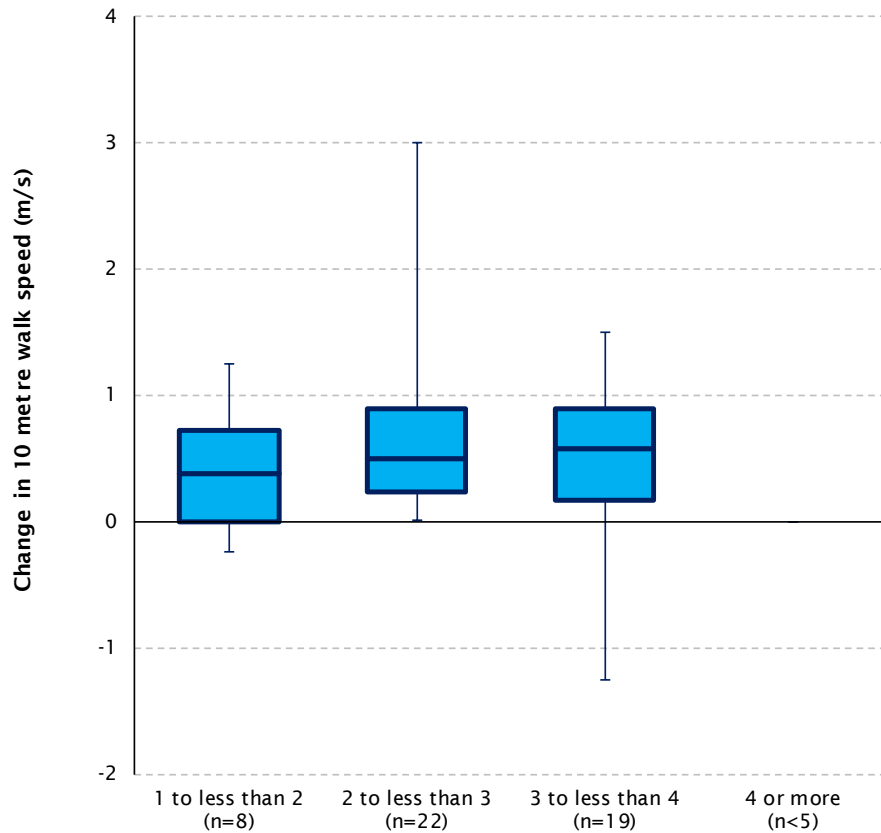
All Ambulatory 2020



Mean occasions of service per day seen

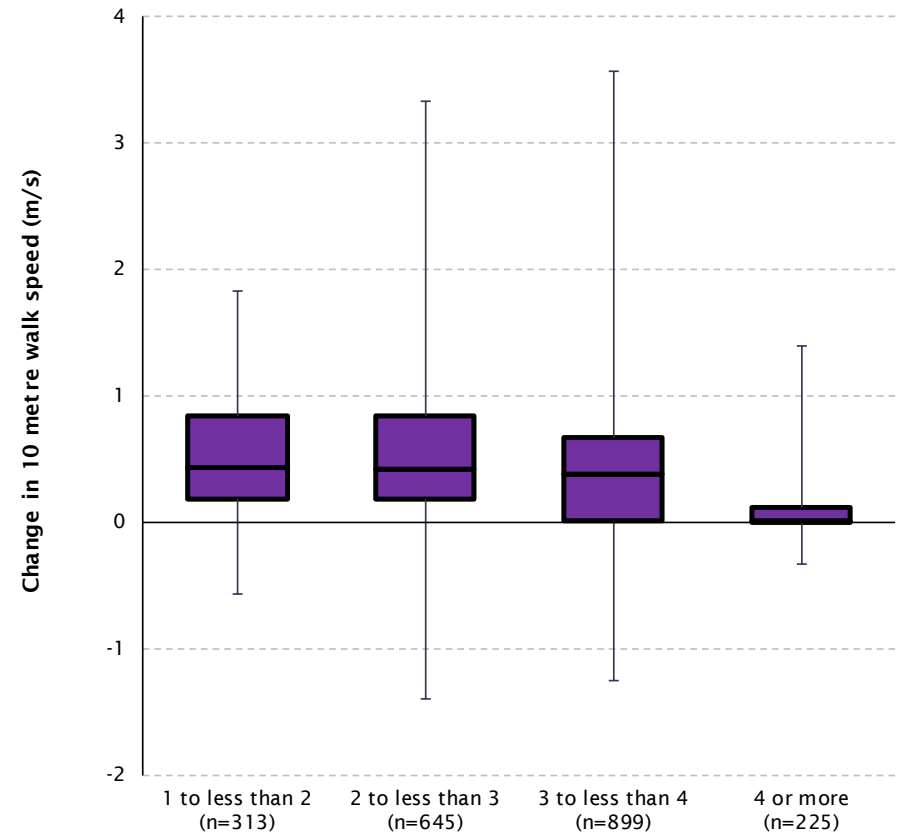
# Change in 10 metre walk speed by OOS/day seen – Orthopaedic replacements

Your Service 2020



Mean occasions of service per day seen

All Ambulatory 2020



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

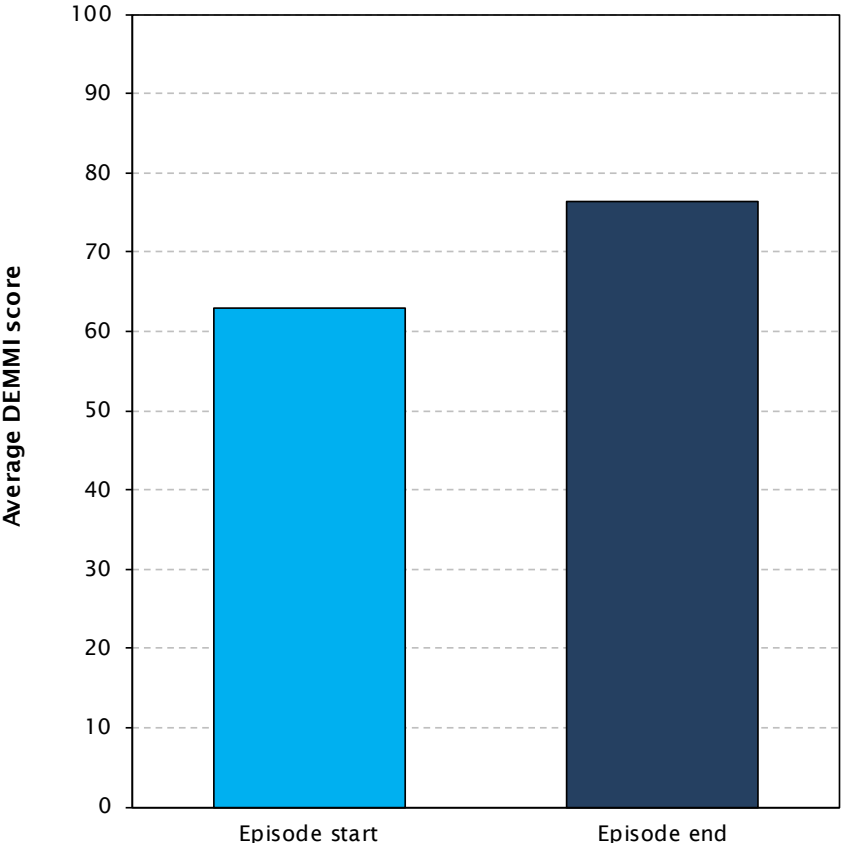
For further information refer to the AROC Ambulatory Data Dictionary V4.1 for Clinicians.



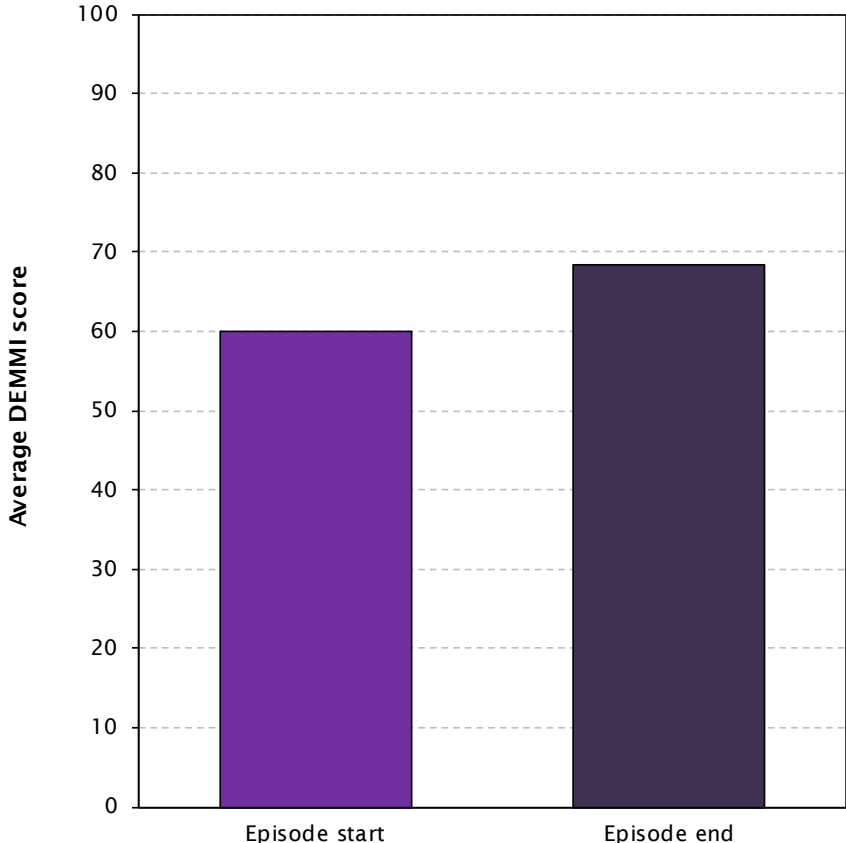
# Average DEMMI start and end score



Your Service 2020 (n=21)



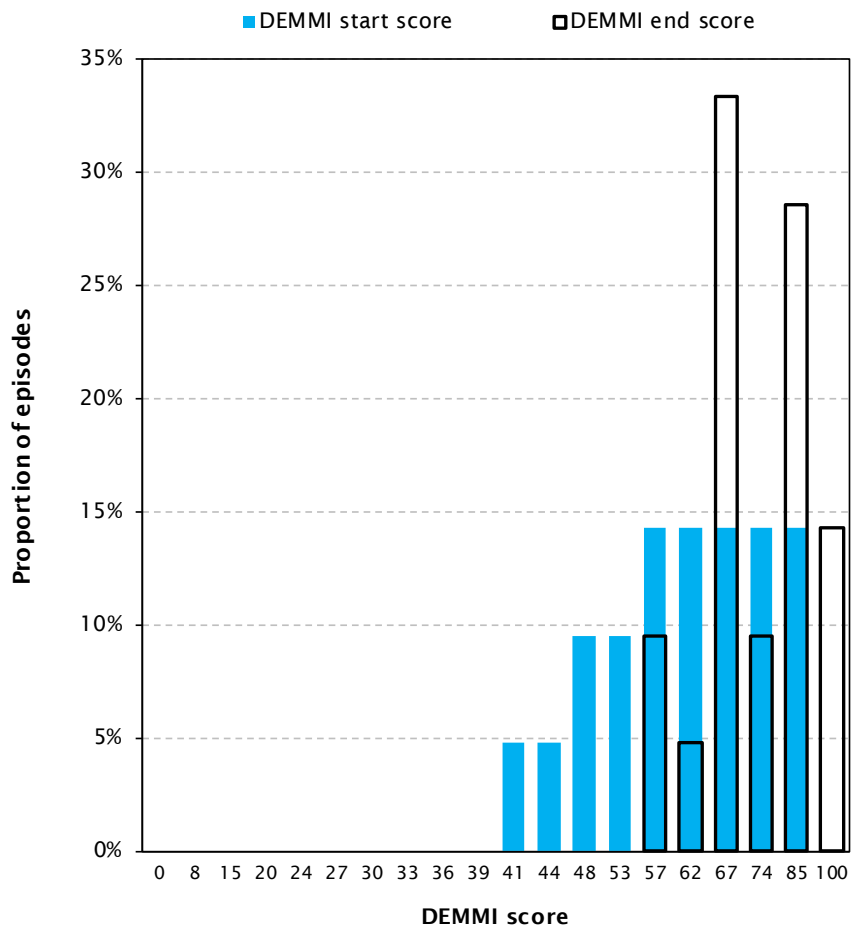
All Ambulatory 2020 (n=641)



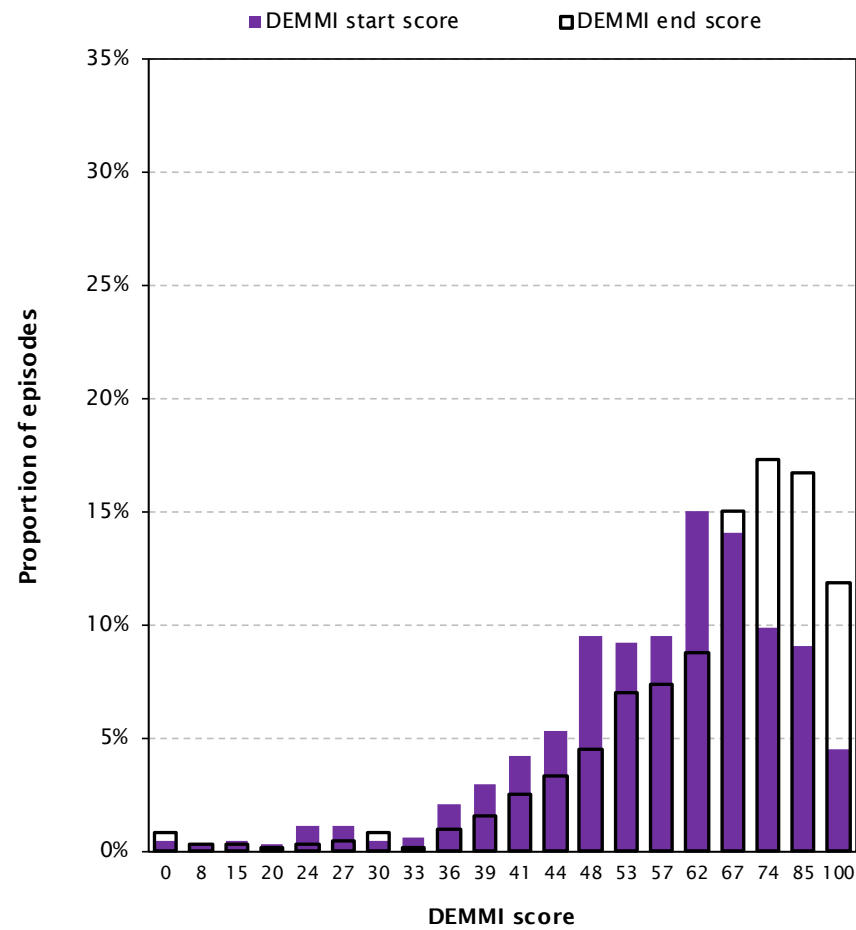
# DEMMI start and end total - all episodes



Your Service 2020 (n=21)



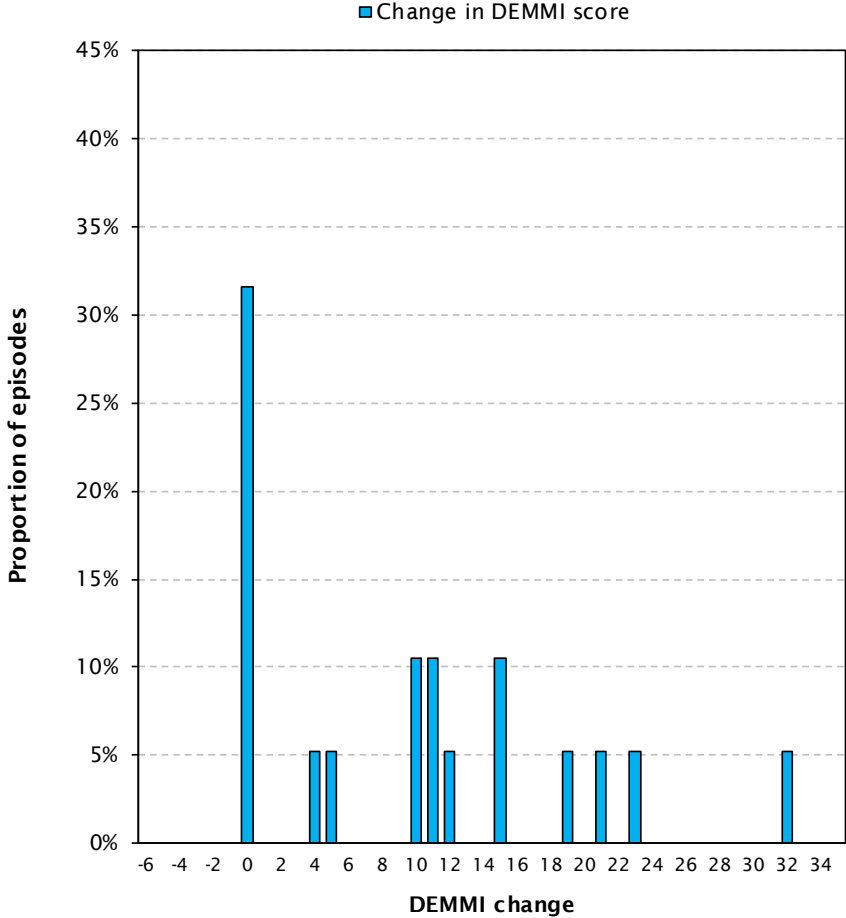
All Ambulatory 2020 (n=641)



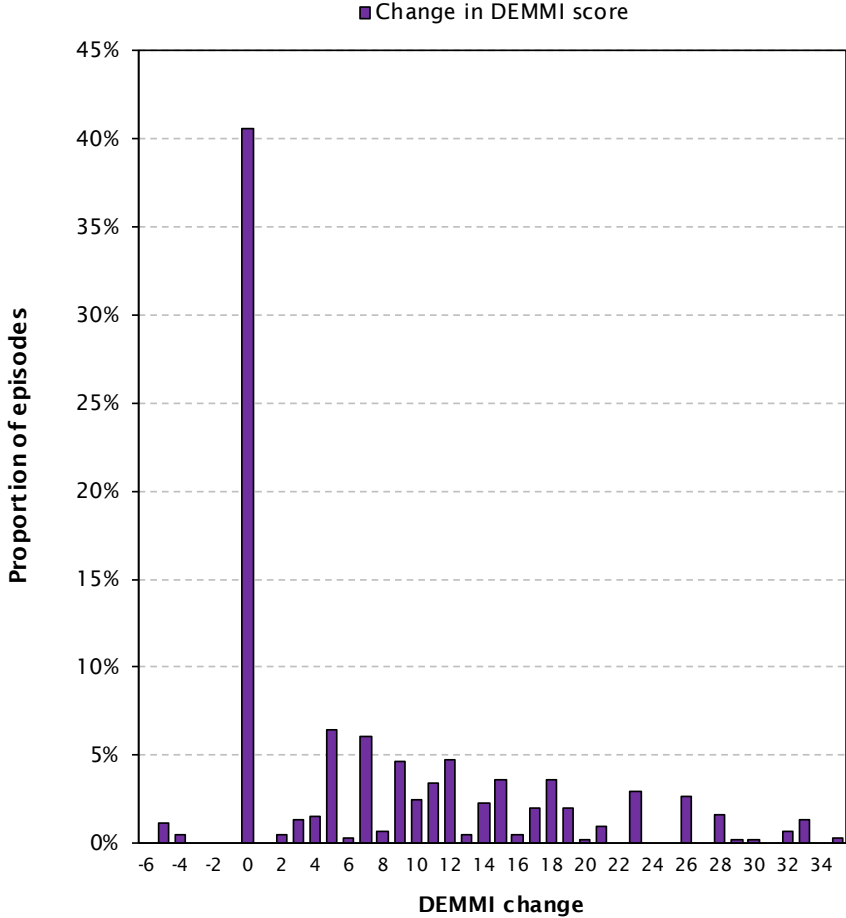
# Change in DEMMI score – all episodes



Your Service 2020 (n=21)

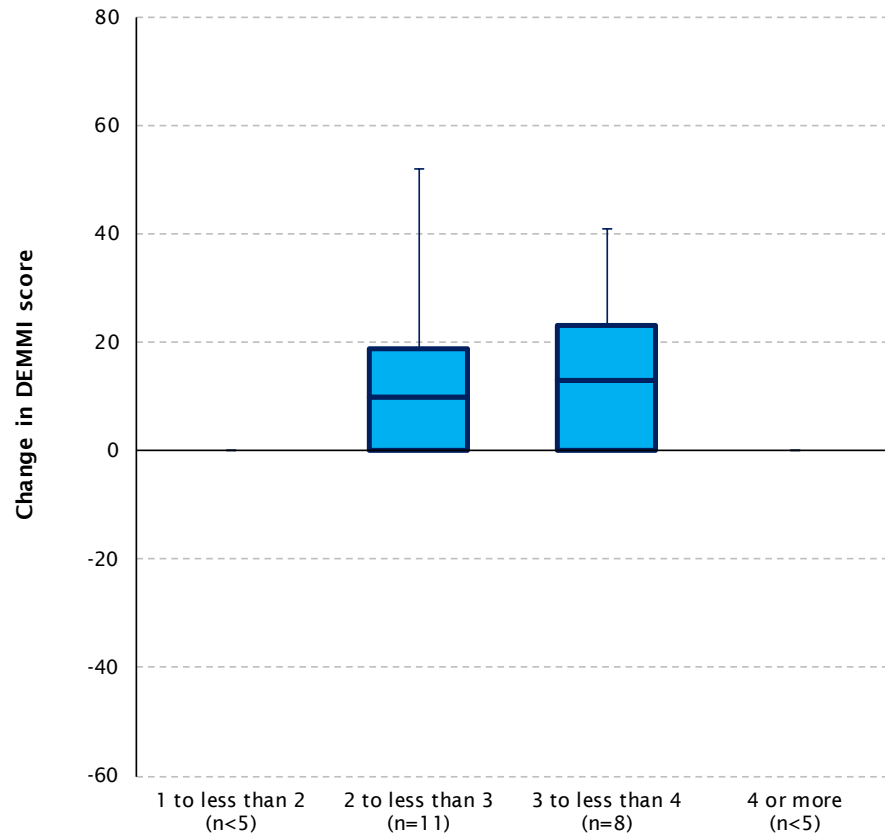


All Ambulatory 2020 (n=641)



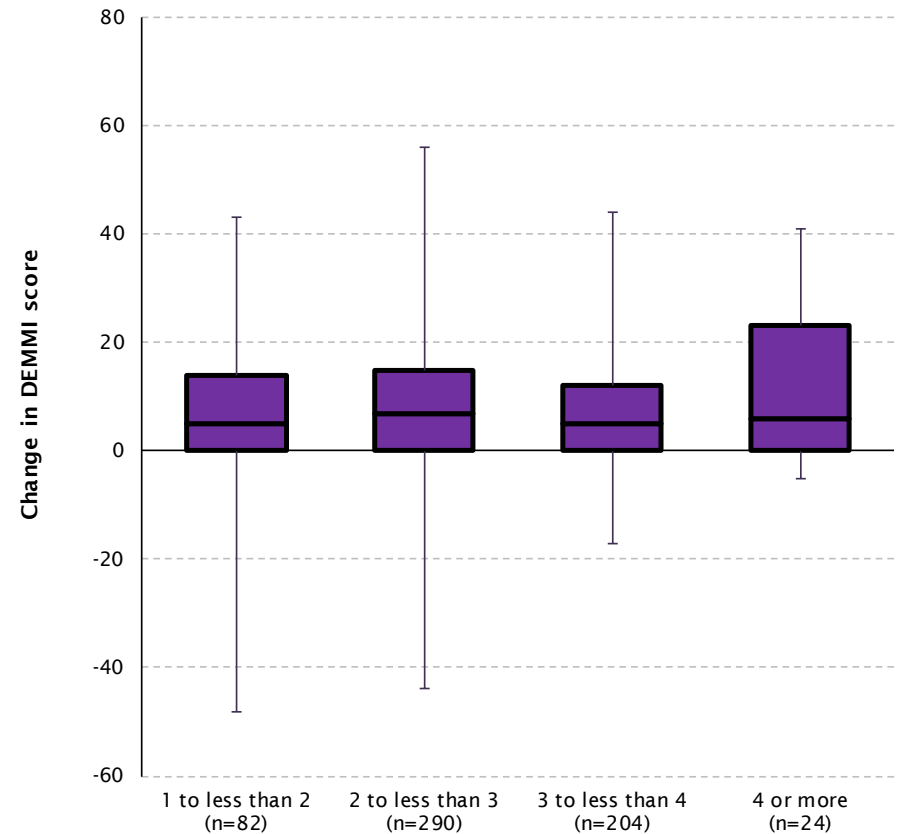
# Change in DEMMI score by OOS/day seen - all episodes

Your Service 2020



Mean occasions of service per day seen

All Ambulatory 2020

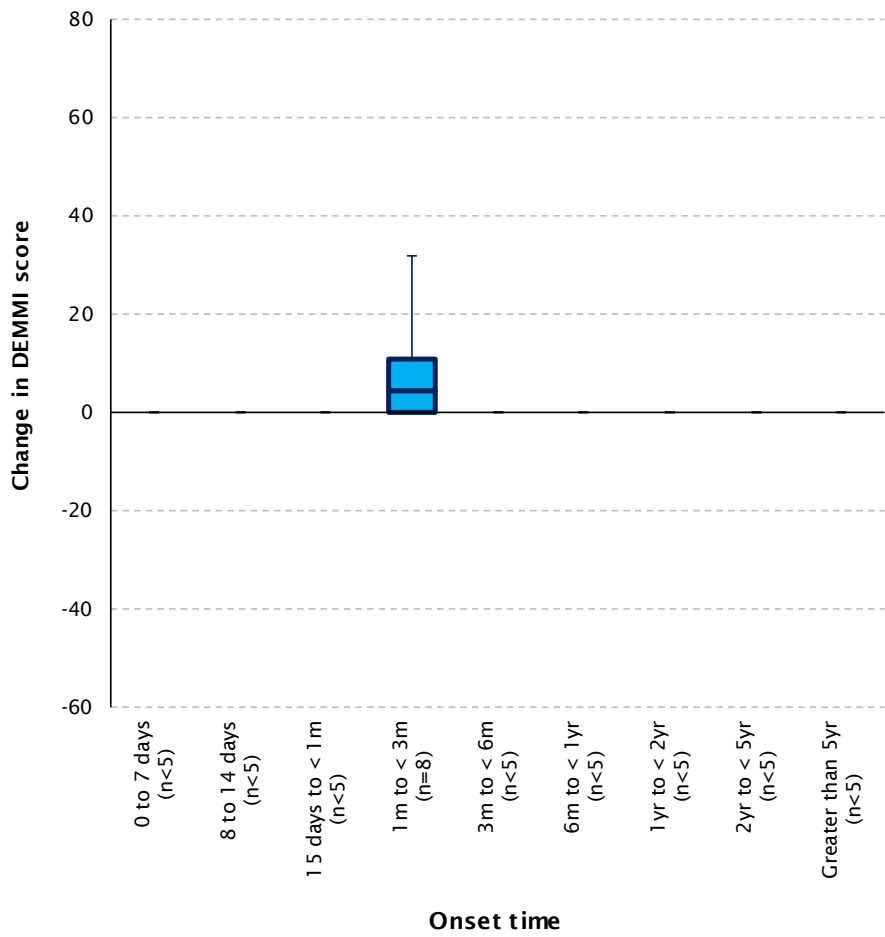


Mean occasions of service per day seen

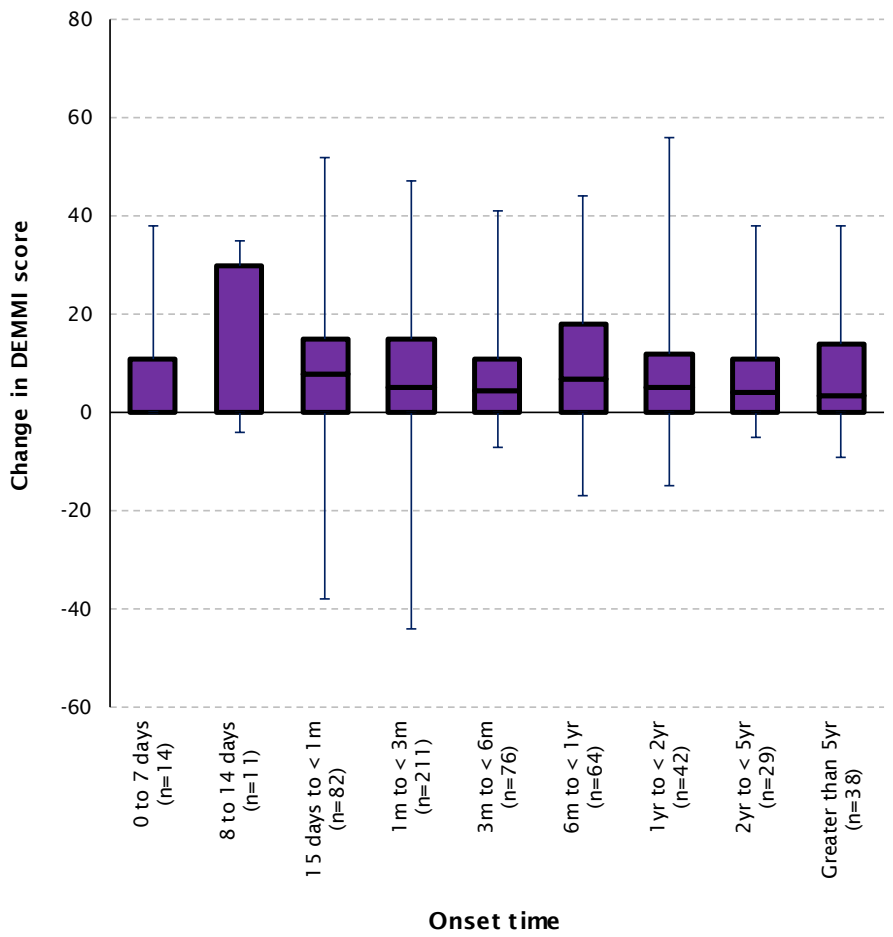
# Change in DEMMI score by onset time - all episodes



Your Service 2020



All Ambulatory 2020



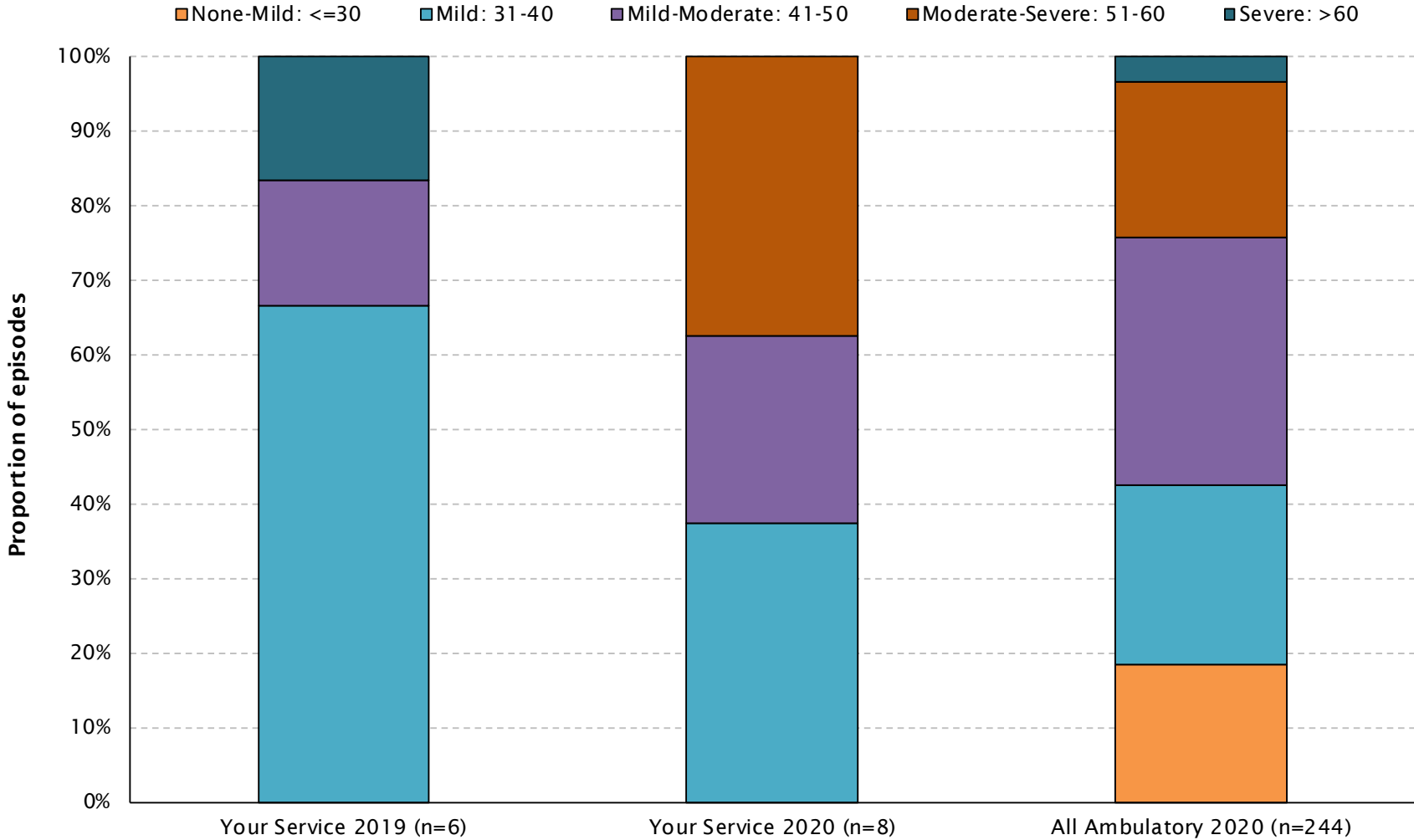
# Mayo-Portland Adaptability Index-4 (MPAI-4)



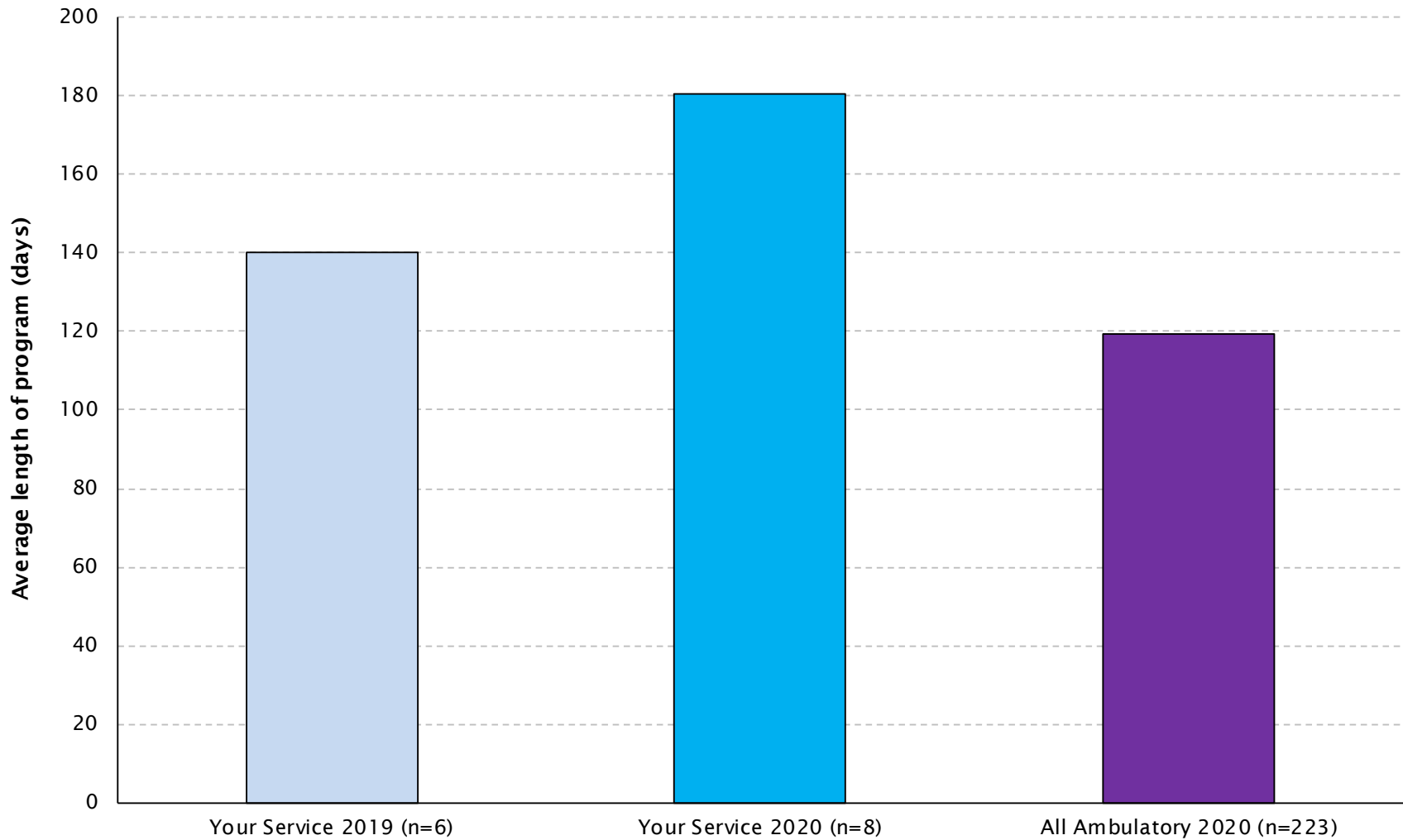
- This data item is collected in addition to the Australian Modified Lawton's IADL Scale for patients who may have functional impairment as a result of brain injury.
- The MPAI-4 was specifically designed for the evaluation of individuals during the post-acute period following ABI.
- The MPAI-4 consists 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

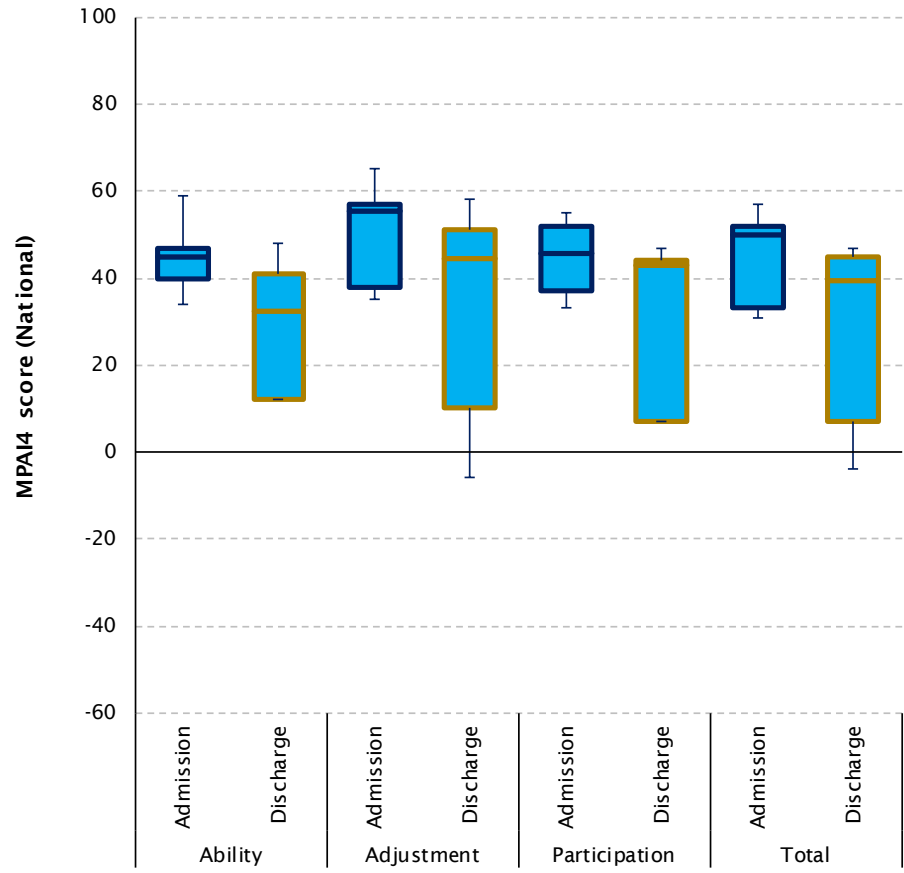




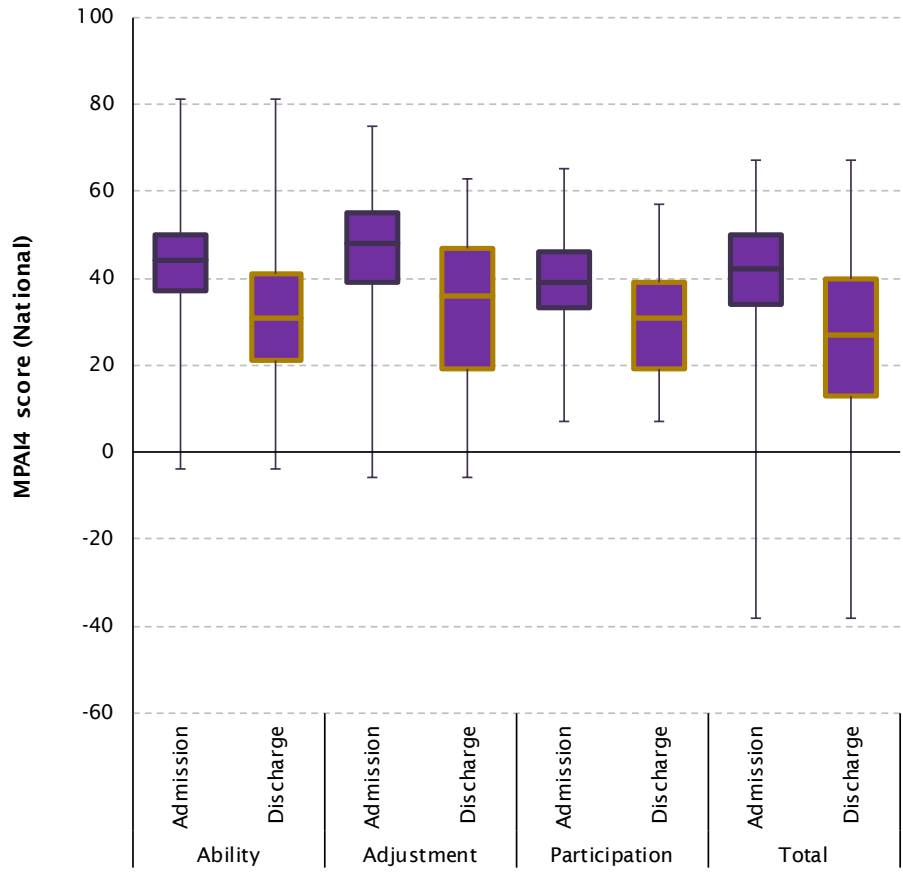
# Admission and discharge T score distribution of spread by MPAI-4 index



Your Service 2020 (n=8)



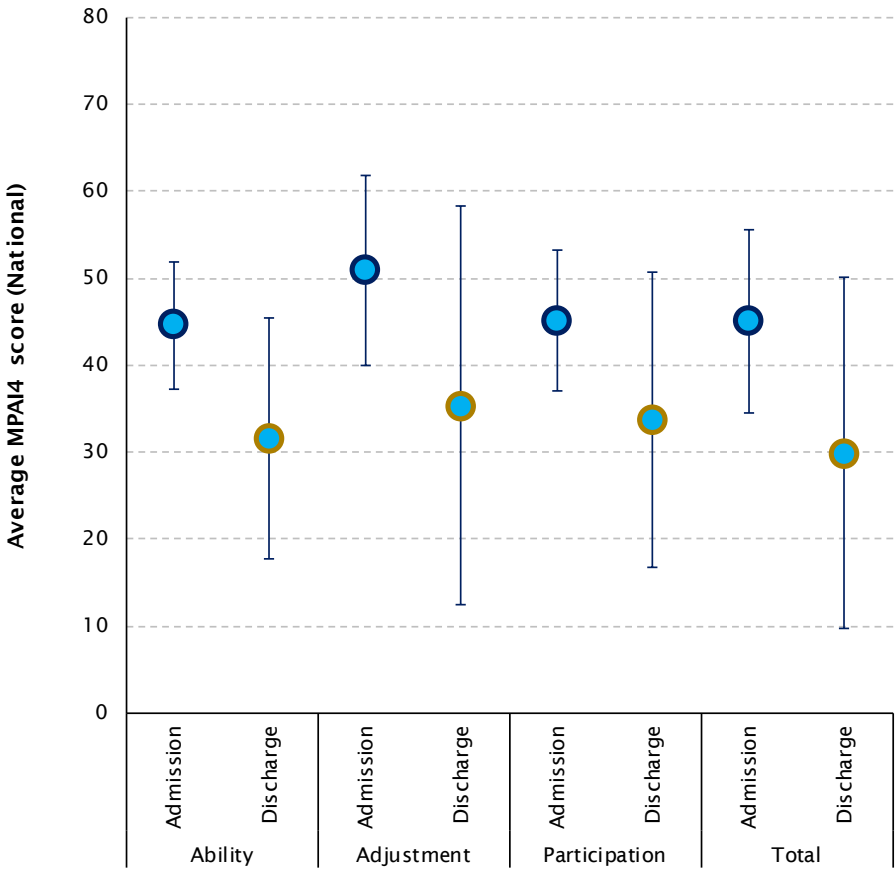
All Ambulatory 2020 (n=223)



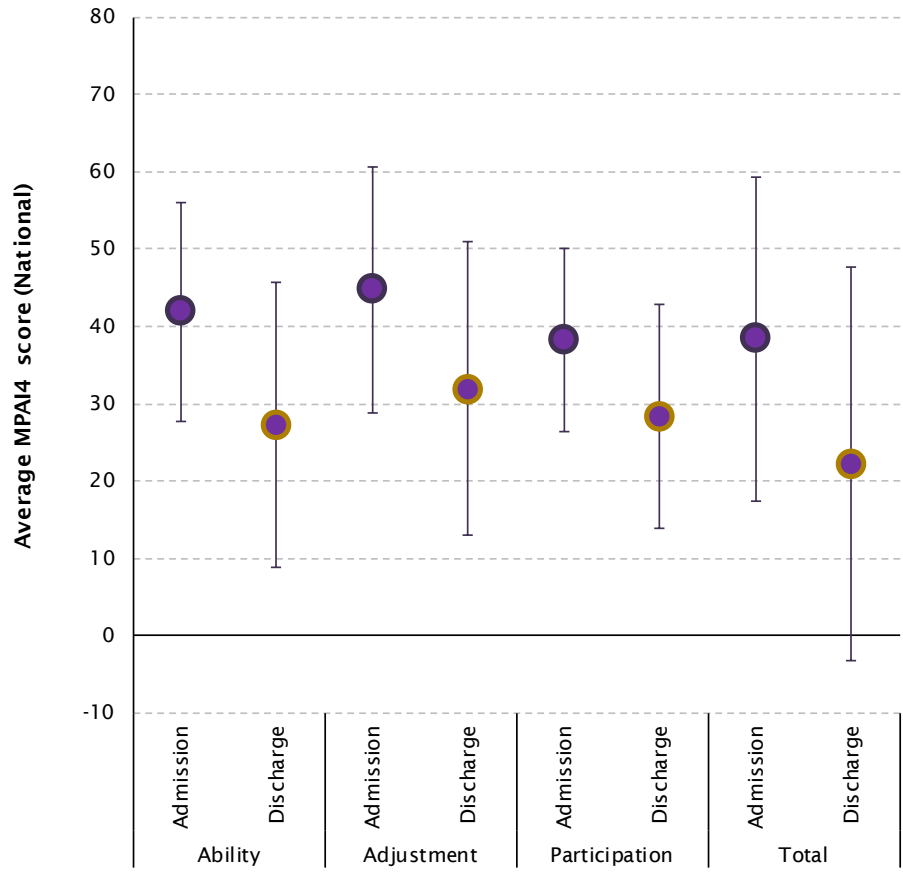
# Admission and discharge average T score by MPAl-4 index



Your Service 2020 (n=8)



All Ambulatory 2020 (n=223)



# 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.

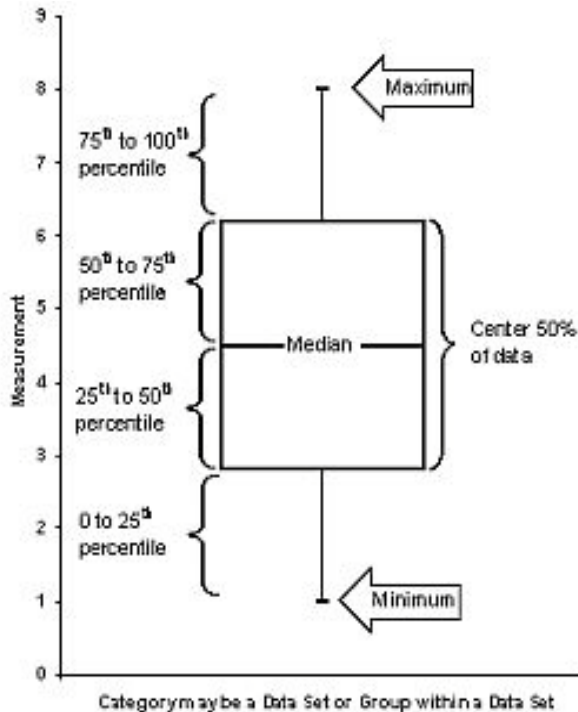
## **Outcome Measure change**

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



- **AROC wish to acknowledge the valuable contributions made by:**
  - Members of the Management Advisory Group of the Australasian Rehabilitation Outcomes Centre.
  - Members of the Scientific and Clinical Advisory Committee of the Australasian Rehabilitation Outcomes Centre.
  - The many staff from the rehabilitation services who have spent a great deal of time and care to collect, collate and correct the data, without whose considerable effort these reports would not be possible.
- **Disclaimer**

AROC has made every effort to ensure that the data used in these reports are accurate. Data submitted to AROC are checked for anomalies and facilities are asked to re-submit data prior to the production of AROC reports. We have provided general guidelines on the interpretation of the information reported but would advise readers to use their professional judgement in considering all information contained in this report.
- **Copyright**

This work is copyright. It may be produced in whole or in part for study or training purposes subject to the inclusion of an acknowledgment of the source and no commercial usage or sale. Reproduction for purposes other than those above requires the written permission of AROC.
- **Suggested acknowledgement**

Anywhere Hospital AROC Ambulatory Report, July 2019 – June 2020. Australasian Rehabilitation Outcomes Centre (2020)

**A**ustralasian **R**ehabilitation **O**utcomes **C**entre  
Australian Health Services Research Institute  
iC Enterprise 1, Innovation Campus  
University of Wollongong NSW 2522  
Phone: +61 2 4221 4411  
Email: [aroc@uow.edu.au](mailto:aroc@uow.edu.au)  
Web: [aroc.org.au](http://aroc.org.au)