Insert clinic logo
Contact info

[SAMPLE]

PHYSICAL THERAPY DISCHARGE NOTE

Date:

Re: **DOB:**

Diagnosis:

Dear Dr.

Thank you for your referral. Your patient [or patient's name] has completed a [insert type of program/intervention. E.g. A 6-week group exercise program consisting of range of motion, stretching and strengthening exercises, gait re-training, and functional activities.] At discharge, changes in functional status were as follows:

Self-reported and performance-based function

	Admission	Discharge	% change
Lower Extremity Functional Scale (LEFS)	/80	/80	
30-sec Chair-Stands Test	reps	reps	
10 m Walking Speed (self paced)	m/sec	m/sec	

The change in LEFS score is/is not clinically important as it exceeds/does not exceed the minimal clinically important difference (MCID) value of 9 points.

The number of stands in 30 secs is within/greater than/less than the age and gender-matched normative range (25th-75th percentile).

His/her/their self-selected walking speed is within/greater than/less than the age and gender-matched normative range and suggests the patient is/is not at increased risk for physical and cognitive decline over the next 5 years.

[Name] is discharged from the program and has been provided with a comprehensive home exercise program and guidance on remaining physically active.

Additional Comments:

Thank you for your referral.

Sincerely,

[Your name]
Registered Physical Therapist

Appendix A
An inventory of phrases for interpreting results of outcome measures

The purpose of this appendix is to provide PTs with examples of phrases that can be copy and pasted (or modified as you wish) into discharge or transfer of care letters.

Performance-based tests

Self-paced walking (gait) speed (4mWT, 10mWT)
His/her/their self-selected 4m/10m walking speed is within/greater than/less than the age and sex-matched normative range and suggests the patient is/is not at increased risk for physical and cognitive decline over the next 5 years. [See Appendix C]

The change in 10m self-selected walking speed is/is not clinically important as it exceeds/does not exceed the minimal clinically important difference (MCID) value of 0.18 m/sec. [See interactive PDF]

Fast-paced walking (gait) speed (40mFPWT)
The change in fast-paced walking speed is/is not clinically important as it exceeds/does not exceed the minimal detectable change (MDC) value of 0.19 m/sec. [Hip/knee OA and TJA patients]

30sec-Chair Stand Test (CST)
The number of stands in 30 secs is within/greater than/less than the age and sex-matched normative range (25th-75th percentile). [Use table in Appendix C]

The change in number of stands is/is not clinically important as it exceeds/does not exceed the minimal clinically important difference (MCID) value of 3 reps. [See interactive PDF]

Timed up-and-go (TUG, TUAG)
The change in TUG value is/is not clinically important as it exceeds/does not exceed the minimal detectable change (MDC_{90}) value of 2.49 seconds. [Hip/knee OA pre-op]

The change in TUG value is/is not clinically important as it exceeds/does not exceed the minimal detectable change (MDC_{95}) value of 2.27 seconds [TKA] / 1.62 secs [THA]

The change in TUG value is within/greater than/less than the range (≥ 0.8-1.4 secs) associated with a major improvement in older adults with hip OA. [Hip OA patients – pre-op phase]

The time to perform the TUG test is within/greater than/less than the age-matched normative range (± 95% confidence intervals). [Use table in Appendix C]

The discharge TUG value exceeds/meets/does not meet the patient acceptable symptom state (PASS) for individuals with hip OA after a course of physiotherapy. [See Appendix C]

To assist in interpretation, TUG values of < 20 secs typically indicate independence in most activities of daily living and outdoor mobility while values of 20-29 secs indicate probable need for a gait aid and supervision for outdoor mobility.

Stair Climb Test (SCT)
The change in time to ascend and descend 9 stairs is/is not clinically important as it exceeds/does not exceed the minimal detectable change (MDC) value of 5.5 seconds established in patients with advanced hip and knee OA. [Advanced hip and knee OA using 9 steps only – pre-op phase]

The change in time to ascend and descend 11 stairs is/is not clinically important as it exceeds/does not exceed the minimal detectable change (MDC) value of 2.6 seconds established in patients after TKA. [Post-TKA using 11 steps only – post-op phase]

6-Minute Walk Test (6MWT)

The change in distance walked in 6 minutes is/is not clinically important as it exceeds/does not exceed the minimal detectable change (MDC$_{90}$) value of 61 metres established in patients after TKA/THA. [See interactive PDF]

The change in distance walked in 6 minutes is/is not clinically important as it exceeds/does not exceed the minimal detectable change (MDC$_{95}$) value of 79 metres established in patients waiting for TKA. [See interactive PDF]

The distance walked in 6 minutes is within/greater than/less than the age and gender-matched normative range. [Use table in Appendix C]

Single Leg Stance (SLS)

The change in SLS time is/is not clinically important as it exceeds/does not exceed the minimal detectable change (MDC$_{95}$) value of 19.6 seconds established in patients after TKA. [See interactive PDF]

The change in SLS time is/is not clinically important as it exceeds/does not exceed the minimal detectable change (MDC$_{90}$) value of 10.8 seconds established in patients with hip OA. [See interactive PDF]

The discharge SLS value is within/greater than/less than the aged and gender-matched normative range. [Use table in Appendix C]

To assist in interpretation, a SLS value of less than 5 secs means an individual is at a 2.1 times greater risk of having an injurious fall.

Functional Reach Test (FRT)

The change in FRT distance is/is not clinically important as it exceeds/does not exceed the minimal detectable change (MDC$_{95}$) value of 4.95 cm established in patients 6 months after TKA. [See interactive PDF]

The change in FRT distance is/is not clinically important as it exceeds/does not exceed the minimal clinically important difference (MDC$_{90}$) value of 8 cm established in patients with hip OA. [See interactive PDF]

To assist in interpretation, a FRT value of < 17.5 cm suggests limited mobility skills, inability to leave the neighborhood without help, and restriction in day-to-day activities for community-dwelling elderly persons.

The discharge FRT value is within/greater than/less than the age and gender-matched normative range. [Use table in Appendix C]

To assist in interpretation, the median FRT value among 2305 elderly individuals without cognitive impairment in the Canadian Study of Health and Aging is 29 cm (interquartile range 23 to 34 cm). [See interactive PDF]

Berg Balance Scale (BBS)

The change in the Berg Balance Scale is/is not clinically important as it exceeds/does not exceed the minimal clinically important difference (MCID) value of 5 points established in patients after TKA. [See interactive PDF]

To assist in interpretation, a BBS score between 21-40 suggests a person will need some type of walking aid, such as a cane or a walker.

BEST tests (BriefBEST and MiniBEST)

The change in the BESTest is/is not clinically important as it exceeds/does not exceed the minimal clinically important difference (MCID) value of 8 points established in patients after TKA. [See interactive PDF]

The discharge BESTest score is within/greater than/less than the age and gender-matched normative range for a health Canadian population. [Use table in Appendix C]

Patient-reported outcome measures (PROMs)

Pain Visual Analogue Scale (Pain VAS)

Based on the patient's initial pain level on the visual analogue scale, the change in pain is/is not clinically important as it exceeds/does not exceed the minimal clinically important difference (MCID) value of [13 mm if initial VAS ≤34 mm; 28 mm if initial VAS ≥67 mm]. [See interactive PDF]

Numeric Pain Rating Scale (NPRS)

Based on the patient's initial pain level on the NPRS, the change in pain is/is not clinically important as it exceeds/does not exceed the minimal clinically important difference (MCID) value of [   ] points. [See interactive PDF]

Lower Extremity Functional Scale (LEFS)

The change in LEFS score is/is not clinically important as it exceeds/does not exceed the minimal clinically important difference (MCID) value of 9 points. [See interactive PDF]

The discharge LEFS value is within/greater than/less than the age and gender-matched normative values based on Dutch data for healthy adults. [Use table in Appendix C]

Knee injury and Osteoarthritis Outcome Score (KOOS)

The change in the [pain, symptoms, ADL, sports and recreation, quality of life] subscale(s) is/is not clinically important as it exceeds/does not exceed the minimal detectable change (MDC) value of [insert appropriate value] points. [Use table in Appendix C]

The discharge value(s) in the [pain, symptoms, ADL, sports and recreation, quality of life] subscale(s) is/are within/greater than/less than the age and gender-matched normative range(s) based on Swedish data for healthy adults. [Use table in Appendix C]

Hip disability and Osteoarthritis Outcome Score (HOOS)

The change in the [pain, quality of life] subscale score(s) is/is not clinically important as it exceeds/does not exceed the minimal clinically important improvement (MCII) value of [insert value] for [values available for pain and QoL] reported in patients 1 year after THA surgery. [See interactive PDF]

The discharge scores on the [pain, quality of life] subscale(s) exceeds/meets/does not meet the patient acceptable symptom state (PASS) for individuals 1 year after THA surgery. [See interactive PDF]

The discharge value(s) in the [pain, symptoms, ADL, sports and recreation, quality of life] subscale(s) is/are within/greater than/less than the age and gender-matched normative range(s) based on Swedish data for healthy adults. [Use table in Appendix C]

Oxford Hip Score (OHS)

The OHS value is within/greater than/less than the age and gender-matched pre-op/6-month post-op/12-month post-op reference values based on a US patient population. [Use table in Appendix C]

Oxford Knee Score (OKS)

The OKS value is within/greater than/less than the age and gender-matched pre-op/6-month post-op/12-month post-op reference values based on a US patient population. [Use table in Appendix C]

EeuroQoL-5D-5L (EQ-5D-5L)

The change in the EQ-5D-5L index score is/is not clinically important as it exceeds/does not exceed the minimal clinically important difference (MCID) value of [0.40 reported for patients after THA; 0.30 reported for patients after TKA]. [See interactive PDF]

The EQ-5D-5L values/utility score is within/greater than/less than the age and gender-matched normative values for a healthy Canadian population. [Use table in Appendix C]

Patient Specific Functional Scale (PSFS)

The change in the PSFS score is/is not clinically important as it exceeds/does not exceed the minimal clinically important difference (MCID) value of 2 points reported in patients with knee dysfunction. [See interactive PDF]

Appendix B
Optional *formats* for phrases interpreting results of outcome measures

There are several ways you can format the phrases to assist in the interpretation outcome measure results. Some of the options require more space than others so in recognition of the need to keep the letter to one page, we used the *"circle the correct response" format* in the sample discharge letter template. We provide examples of alternative formats below:

Circle the correct response

The change in LEFS score is/~~is not~~ clinically important as it exceeds/~~does not~~ exceed the minimal clinically important difference (MCID) value of 9 points.

The number of stands in 30 secs is ⓦithin/greater than/less than the age and gender-matched normative range (25th-75th percentile).

Fill in the blank

The number of stands in 30 secs (_____ reps) is _____ the age and gender-matched normative range (25th-75th percentile).

Check the box

Self-selected walking speed over 10 metres is:
☐ within the age and gender-matched normative range
☐ greater than the age and gender-matched normative range
☐ less than the age and gender-matched normative range

Descriptive sentence

The change in LEFS score is clinically important as it exceeds the minimal clinically important difference (MCID) value of 9 points.

Appendix C
Normative and reference values to assist interpretation of outcome measures

PERFORMANCE-BASED TESTS

Self-paced walking (gait) speed (varied distances)

Results of meta-analysis.

Strata gender (age in years)	Source articles (n)	Subjects (n)	Gait speed (cm/second)
Men (20 to 29)	10	155	135.8 (127.0 to 144.7)
Men (30 to 39)	5	83	14303 (131.6 to 155.0)
Men (40 to 49)	4	96	143.4 (135.3 to 151.4)
Men (50 to 59)	6	436	143.3 (137.9 to 148.8)
Men (60 to 69)	12	941	133.9 (126.6 to 141.2)
Men (70 to 79)	18	3671	126.2 (121.0 to 132.2)
Men (80 to 99)	10	1091	96.8 (83.4 to 110.1)
Women (20 to 29)	11	180	134.1 (123.9 to 144.3)
Women (30 to 39)	5	104	133.7 (119.3 to 148.2)
Women (40 to 49)	7	142	139.0　(133.9 to 141.1)
Women (50 to 59)	10	456	131.3 (122.2 to 140.5)
Women (60 to 69)	17	5013	124.1 (118.3 to 130.0)
Women (70 to 79)	29	8591	113.2 (107.2 to 119.2)
Women (80 to 99)	17	2152	94.3 (85.2 to 103.4)

Source: Bohannon RW, Andrews AW. Normal walking speed: a descriptive meta-analysis. Physiotherapy 2011;97:182-9.
(*Note*: Gait speeds in cm/sec, convert to m/sec e.g. 135.8 cm = 1.358 m)

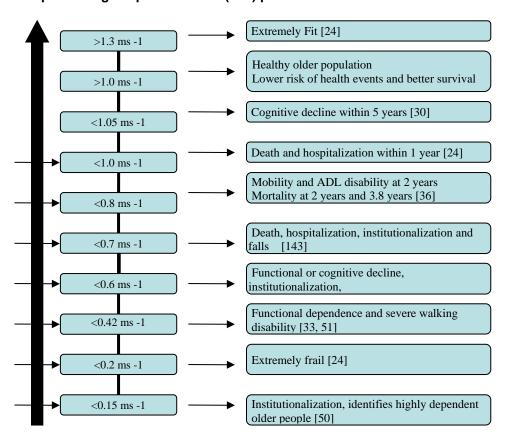### 4 metre self-paced and fast-paced walking speed

Table 1.

Summary of demographic and gait speed (m/s) performance of men and women 18–85 years

Strata	Age n (y)	Height (m)	Mass (kg)	Usual Gait Speed		Maximum Gait Speed	
Gender (age group [y]) n	Mean(SD)	Height (m) Mean(SD)	Mean(SD)	Mean(SD)	95% CI	Mean(SD)	95% CI
Men (18–29) 80	23.9(3.6)	1.79(0.08)	82.3(17.1)	1.18(0.20)	1.13–1.22	1.85(0.31)	1.78–1.92
Men (30–39) 76	34.9(3.0)	1.76(0.06)	92.2(19.8)	1.21(0.21)	1.16–1.26	1.75(0.30)	1.68–1.82
Men (40–49) 87	44.0(2.9)	1.75(0.07)	90.9(19.1)	1.21(0.24)	1.16–1.26	1.75(0.44)	1.66–1.85
Men (50–59) 74	53.7(2.6)	1.78(0.08)	93.0(18.0)	1.16(0.20)	1.12–1.21	1.63(0.30)	1.56–1.70
Men (60–69) 62	64.2(2.8)	1.76(0.08)	87.2(15.1)	1.16 (0.22)	1.10–1.22	1.67(0.37)	1.57–1.76
Men (70–79) 61	73.8(2.9	1.75(0.08)	87.2(17.0)	1.07(0.24)	1.01–1.14	1.57(0.42)	1.47–1.68
Men (80–85) 40	81.8(1.8)	1.74(0.07)	78.3(12.1)	0.97(0.20)	0.90–1.03	1.39(0.33)	1.29–1.50
Women (18–29) 179	25.4(3.0)	1.62(0.07)	72.9(19.9)	1.11(0.20)	1.09–1.14	1.57(0.29)	1.52–1.61
Women (30–39) 223	34.2(2.9)	1.63(0.07)	76.6(20.2)	1.15(0.20)	1.12–1.18	1.66(0.35)	1.61–1.71
Women (40–49) 153	43.9(2.9)	1.63(0.07)	78.3(19.9)	1.14(0.23)	1.10–1.18	1.64(0.35)	1.58–1.69
Women (50–59) 100	53.6(2.7)	1.62(0.07)	75.4(16.4)	1.15(0.22)	1.10–1.19	1.60(0.29)	1.54–1.65
Women (60–69) 82	63.7(2.7)	1.62(0.07)	75.9(18.2)	1.05(0.22)	1.04–1.02	1.51(0.43)	1.41–1.60
Women (70–79) 61	73.2(2.7)	1.60(0.07)	75.1(18.2)	0.99(0.22)	0.94–1.05	1.29(0.28)	1.22–1.36
Women (80–85) 42	81.9(1.5)	1.61(0.06)	69.7(10.4)	0.95(0.24)	0.88–1.02	1.28(0.24)	1.20–1.35

Source: Bohannon RW, Wang YC. Four-meter gait speed: Normative values and reliability determined for adults participating in the NIH Toolbox study. Arch Phys Med Rehabil. 2019;100(3):509–13.

Cut-points of gait speed at usual (self) pace and risk of adverse outcomes found in literature

Cut-point	Outcome
>1.3 ms -1	Extremely Fit [24]
>1.0 ms -1	Healthy older population. Lower risk of health events and better survival
<1.05 ms -1	Cognitive decline within 5 years [30]
<1.0 ms -1	Death and hospitalization within 1 year [24]
<0.8 ms -1	Mobility and ADL disability at 2 years. Mortality at 2 years and 3.8 years [36]
<0.7 ms -1	Death, hospitalization, institutionalization and falls [143]
<0.6 ms -1	Functional or cognitive decline, institutionalization,
<0.42 ms -1	Functional dependence and severe walking disability [33, 51]
<0.2 ms -1	Extremely frail [24]
<0.15 ms -1	Institutionalization, identifies highly dependent older people [50]

Example: If the patient had a self/usual pace walking speed of 0.92 m/sec, he/she is at increased risk of cognitive and functional decline within 5 years.

Source: Abellan van Kan G, et al. Gait speed at usual pace as a predictor of adverse outcomes in community-dwelling older people. J Nutr Health Aging 2009;13(10):881-9.

30sec – CST normative values

Age	Number of Stands-Women	Number of Stands-Men
60-64	12-17	14-19
64-69	11-16	12-18
70-74	10-15	12-17
75-79	10-15	11-17
80-84	9-14	10-15
85-89	8-13	8-14
90-94	4-11	7-12

Based on 7183 moderately active older community-dwelling adults. Range of scores between 25-75th percentiles.

Source: Rikli RE, Jones CJ. Functional fitness normative scores for community-residing older adults, ages 60-94. J Aging Phys Act. 1999;7:162-81

Risk zone for falls: Scores <8 stands for women and men. (Jones CJ et al. 2002)

Timed Up & Go (TUG, TUAG)

Normative values for TUG (based on systematic review of 21 studies)

Age group	Total sample (n)	Mean TUG (secs) (95% CI)
60 – 69 years	176	8.1 (7.1 – 9.0)
70 - 79 years	798	9.2 (8.2 – 10.2)
80 - 99 years	1102	11.3 (10.0 – 12.7)

Example: If a 67-year old patient's TUG score is 8.8 secs, it would be within the age-matched normative range as it falls within the 95% confidence intervals.

Source: Bohannon RW. Reference values for the Timed Up and Go Test: A descriptive meta-analysis.
J Geriatric Phys Ther 2006;29(2):64-8.

Stair Climb Test (SCT)

Normative scores available only for the *12-step Stair Test*

	Men			Women		
	Mean (s)	SD(s)	n	Mean (s)	SD (s)	n
Healthy	8.72	2.58	27	10.22	2.61	38
Moderate OA	11.78	4.70	71	19.48	9.30	72
End-stage OA	17.43	8.35	77	23.59	9.81	67
1 month post TKR	23.53	10.82	104	30.58	12.56	91
3 month post TKR	12.33	4.87	100	15.50	4.85	83
6 months post TKR	11.64	3.85	118	15.27	6.10	101
12 months post TKR	11.17	3.85	139	15.04	6.17	66
24 months post TKR	11.70	4.09	87	15.48	6.18	138

Data obtained from the OA Profile website, maintained by the Department of Physical Therapy at the University of Delaware. TKR = total knee replacement

Reference values for small sample of patients pre- and post-TKA therefore large standard deviations.

Source:
https://oarsi.org/sites/oarsi/files/docs/2013/manual.pdf

6 Minute Walk Test (6MWT)

Community-dwelling Elderly:
(Steffen et al, 2002; *n* = 96; community dwelling elderly people with independent function who were non smokers with no history of dizziness; > 60 yo and did not use assistive devices)

Mean Distance in Meters by Age & Gender		
Age	Male	Female
60 – 69 yrs	572 m	538 m
70 – 79 yrs	527 m	471 m
80 – 89 yrs	417 m	392 m

Source: http://www.rehabmeasures.org/Lists/RehabMeasures/PrintView.aspx?ID=895

1000 healthy Australian individuals

Age	Males	Females
20 - 59 years	736 m (88.3)	674 m (76.8)
60+ years	599 m (125.4)	550 m (115)

Source: McKay MJ et al. Reference values for developing responsive functional outcome measures across the lifespan. Neurology. 2017;88:1512-9.

Single Leg Stance (SLS)

Normative values
Unipedal Stance Test Time by Age Group and Gender for Eyes Open and Closed

Age & Gender Groups	Eyes Open Best of 3	Eyes Open Mean	Eyes Closed Best	Eyes Closed Mean
18 – 39 **Female (*n* = 44)** **Male (*n* = 54)** **Total (*n* = 98)**	45.1 (0.1) 44.4 (4.1) 44.7 (3.1)	43.5 (3.8) 43.2 (6.0) 43.3 (5.1)	13.1 (12.3) 16.9 (13.9) 15.2 (13.3)	8.5 (9.1) 10.2 (9.6) 9.4 (9.4)
40 – 49 **Female (*n* = 47)** **Male (*n* = 51)** **Total (*n* = 98)**	42.1 (9.5) 41.6 (10.2) 41.9 (9.9)	40.4 (10.1) 40.1 (11.5) 40.3 (10.8)	13.5 (12.4) 12.0 (13.5) 12.7 (12.9)	7.4 (6.7) 7.3 (7.4) 7.3 (7.0)
50 – 59 **Female (*n* = 50)** **Male (*n* = 48)** **Total (*n* = 98)**	40.9 (10.0) 41.5 (10.5) 41.2 (10.2)	36.0 (12.8) 38.1 (12.4) 37.0 (12.6)	7.9 (8.0) 8.6 (8.8) 8.3 (8.4)	5.0 (5.6) 4.5 (3.8) 4.8 (4.8)
60 – 69 **Female (*n* = 50)** **Male (*n* = 51)** **Total (*n* = 101)**	30.4 (16.4) 33.8 (16.0) 32.1 (16.2)	25.1 (16.5) 28.7 (16.7) 26.9 (16.6)	3.6 (2.3) 5.1 (6.8) 4.4 (5.1)	2.5 (1.5) 3.1 (2.7) 2.8 (2.2)
70 – 79 **Female (*n* = 45)** **Male (*n* = 50)** **Total (*n* = 95)**	16.7 (15.0) 25.9 (18.1) 21.5 (17.3)	11.3 (11.2) 18.3 (15.3) 15.0 (13.9)	3.7 (6.2) 2.6 (1.7) 3.1 (4.5)	2.2 (2.1) 1.9 (0.9) 2.0 (1.6)
80 – 89 **Female (*n* = 22)** **Male (*n* = 37)** **Total (*n* = 59**	10.6 (13.2) 8.7 (12.6) 9.4 (12.8)	7.4 (10.7) 5.6 (8.4) 6.2 (9.3)	2.1 (1.1) 1.8 (0.9) 1.9 (1.0)	1.4 (0.6) 1.3 (0.6) 1.3 (0.6)
Total (all ages) **Female (*n* = 258)** **Male (*n* = 291)** **Total (*n* = 549)**	33.0 (16.8) 33.8 (17.1) 33.4 (16.9)	29.2 (17.4) 30.2 (17.7) 29.8 (17.5)	7.7 (9.6) 8.2 (10.8) 8.0 (10.3)	4.7 (6.0) 4.9 (6.4) 4.9 (6.2)

Example: If a 58-year old female's SLS score (eyes open) is 32.5 secs, it would be within the age-matched normative range as it falls within 1 standard deviation of the mean value for that age group (40.9 +/- 10 secs).

Source: Springer BA, Marin R, et al. Normative values for the unipedal stance test with eyes open and closed. J Geriatric Phys Ther 2007; 30(1):8-15. Accessed from http://www.rehabmeasures.org/Lists/RehabMeasures/PrintView.aspx?ID=1150

Functional Reach Test (FRT)

Normative values for community-dwelling adults established based on a 128 subjects in North Carolina.

Normative Functional Reach Test Scores	
Males: means (SD) 20-40 years = 42.49 cm (4.93) 41-69 years = 38.05 cm (5.61) 70-87 years = 33.43 cm (3.94)	**Females: means (SD)** 20-40 years = 37.49 cm (5.54) 41-69 years = 35.10 cm (5.59) 70-87 years = 26.60 cm (8.97)

Source: Duncan PW, et al. Functional reach: new clinical measure of balance. J Gerontol 1990;45(6):M192-7.

Median values based on 2,305 elderly persons (mean age 78 years, range 69-104) who completed the Canadian Study of Health and Aging.

Median Functional Reach Test Scores (Canadian population)	
Cognitively unimpaired individuals: means (25-75th % or interquartile range)	**Cognitively impaired individuals:** means (25-75th % or interquartile range)
29.0 cm (23 – 34)	25.0 cm (19 – 30)

Source: Rockwood K, et al. Feasibility and measurement properties of the Functional Reach and the Timed Up and Go Tests in the Canadian Study of Health and Aging. J Gerontol 2000;55A(2):M70-73.

Berg Balance Scale (BBS)

US-based normative values available for 96 community-dwelling sample aged 60 years and older by biological sex.

Table 3.

Berg Balance Scale Scores[a]: Means, Standard Deviations, and Confidence Intervals by Age and Gender

Age (y)	Gender	N	$\overline{X}$	SD	CI[b]
60–69	Male	15	55	1	55–56
	Female	22	55	2	54–56
70–79	Male	14	54	3	52–56
	Female	22	53	4	52–55
80–89	Male	8	53	2	51–54
	Female	15	50	3	49–52

[a] Total score possible=56.
[b] 95% confidence intervals.

Source: Steffen TM, et al. Age- and gender-related test performance in community-dwelling elderly people: Six-Minute Walk Test, Berg Balance Scale, Timed Up & Go Test, and gait speeds. Phys Ther. 2002;82:128–37.

BEST Tests (BESTTest, Brief-BESTest, Mini-BESTest)

Healthy Canadian Adults aged 50-89 years

Age group	BESTest (SD)	Mini-BEST (SD)	Brief-BEST (SD)
50-59 years	95.7 (2.9)	26.3 (1.1)	22.7 (1.7)
60-69 years	91.4 (3.4)	24.7 (2.2)	20.5 (2.2)
70-79 years	85.4 (6.0)	21.0 (3.1)	18.8 (3.3)
80-89 years	79.4 (10.6)	19.6 (4.2)	15.0 (4.7)

Source: O'Hoski S, et al. Increasing the clinical utility of the BESTest, Mini-BESTest, and Brief-BESTest: normative values in Canadian adults who are healthy and aged 50 years or older. Phys Ther. 2014;94:334–42.

PATIENT-REPORTED OUTCOME MEASURES

Pain - VAS
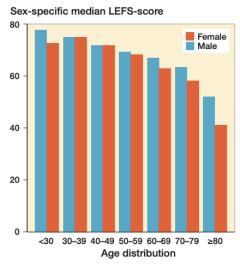*No normative or reference values available*

Pain - NPRS
No normative or reference values available

Lower Extremity Functional Scale (LEFS)

Netherlands-based normative values for 1014 adults aged Dutch adults: median score = 76 for women, 78 for men

Sex-specific median LEFS scores for each age category.

Source: Dingemans SA, et al. Normative data for the lower extremity functional scale (LEFS). Acta Orthop. 2017;88(4):422-6.

Knee injury and Osteoarthritis Outcome Score (KOOS)

Normative values based on random sample of 539 adults in Southern Sweden

Age-specific KOOS scores given as mean, standard deviation, median, (95%CI of the mean) for men (M) and women (W).

KOOS subscales   Mean score, SD, median (95%CI of the mean) in different groups

KOOS subscales	18 – 34 yrs		35 – 54 yrs		55 – 74 yrs		75 – 84 yrs	
	M	W	M	W	M	W	M	W
Pain	N = 60	N = 74	N = 78	N = 80	N = 88	N = 85	N = 34	N = 33
	92.2	92.1	87.4	88.8	87.7	78.6	83.5	87.1
	11.2	14.0	17.9	18.7	17.4	25.5	23.3	18.2
	97.2	97.2	97.2	97.2	97.2	91.7	94.4	96.9
	(89.8-95.6)	(88.8-95.3)	(83.4-91.5)	(84.6-93.0)	(84.0-91.4)	(73.1-84.1)	(75.3-91.6)	(80.6-93.5)
Symptoms	N = 60	N = 74	N = 78	N = 82	N = 88	N = 85	N = 36	N = 34
	87.2	89.1	86.5	89.5	88.4	77.1	83.7	88.1
	13.9	13.5	16.7	14.6	17.3	24.8	19.0	14.2
	92.9	92.9	92.9	95.8	96.4	85.7	87.5	94.6
	(83.6-90.8)	(86.0-92.2)	(82.7-90.2)	(86.2-92.7)	(84.8-92.1)	(71.7-82.4)	(77.3-90.1)	(83.1-93.0)
ADL	N = 60	N = 74	N = 78	N = 80	N = 88	N = 85	N = 36	N = 34
	94.2	95.2	89.1	88.6	86.3	77.4	76.1	82.7
	10.0	11.6	17.6	19.7	18.8	26.2	24.8	19.5
	100	100	100	98.5	97.1	91.2	83.1	91.9
	(91.6-96.7)	(92.5-97.8)	(85.1-93.1)	(84.2-92.9)	(82.3-90.3)	(78.8-83.1)	(67.7-84.5)	(75.9-89.6)
SPORT/ REC	N = 60	N = 74	N = 76	N = 80	N = 87	N = 84	N = 35	N = 34
	85.1	86.4	76.0	79.3	72.6	61.0	56.3	55.9
	20.8	21.1	29.5	27.7	29.9	36.9	34.7	37.3
	92.5	95.0	87.5	90.0	80	70.0	55.0	62.5
	(79.7-90.5)	(81.5-91.3)	(69.2-82.7)	(73.1-85.4)	(66.2-78.9)	(53.0-69.0)	(44.4-68.3)	(42.9-68.9)
QOL	N = 59	N = 74	N = 78	N = 80	N = 88	N = 85	N = 35	N = 33
	85.3	83.6	77.7	83.4	78.9	68.6	71.1	75.4
	19.2	20.2	25.4	22.0	25.4	31.4	29.0	83.3
	93.8	87.5	87.5	93.8	87.5	75.0	75.0	83.3

Note: Use the mean value and 95% confidence interval as reference values. If patient's score falls within the 95% CI, then you can interpret it as being within age and sex-matched normative range.

Source: Paradowski PT et al. Knee complaints vary with age and gender in the adult population. Population-based reference data for the Knee injury and Osteoarthritis Outcome Score (KOOS). BMC Musculoskeletal Disorders 2006;7:38

Hip disability and Osteoarthritis Outcome Score (HOOS)

Normative values based on random sample of 840 adults in Southern Sweden

Table 1 Age-specific HOOS scores given as mean, standard deviation (SD), 95% confidence interval (CI) of the mean, and median, for woman (W)) and men (M) in the different age groups

Age group	18–34	35–54	55–74	75–84
ADL				
Wn	64	77	80	34
MeanSD	93.4 ± 14.6	87.7 ± 22.2	81.5 ± 24	68.9 ± 32
95%CL	89.8–97	82.8–92.7	76.3–86.6	58.1–79.6
Median	100	100	95.8	75
Mn	50	71	75	38
MeanSD	98 ± 7.4	98.7 ± 19.5	82.6 ± 24.4	80.4 ± 28.7
95%CL	95.7–99.8	85.2–94.2	77.1–88.1	71.2–89.5
Median	100	100	95.2	98.8

Full list of normative values for other HOOS subscales available at: Sundén A, et al. Hip complaints differ across age and sex: a population-based reference data for the Hip disability and Osteoarthritis Outcome Score (HOOS). Health Qual Life Outcomes. 2018;16:200.

Oxford Hip Score (OHS)

Reference values based on single orthopaedic teaching hospital in the US (mean values)

Age group	Biological sex	Pre-THR	6 mo post-THR	12 mo post-THR
<60 years	Male	21	43	44
	Female	17	40	41
60-70 years	Male	21	42	44
	Female	17	40	42
70-80 years	Male	21	41	43
	Female	18	40	41
>80 years	Male	20	40	41
	Female	15	37	38

Source: Hamilton DF, et al. Making the Oxford Hip and Knee Scores meaningful at the patient level through normative scoring and registry data. Bone Joint Res. 2015;4:137-44.

Oxford Knee Score (OKS)

Reference values based on single orthopaedic teaching hospital in the US (mean values)

Age group	Biological sex	Pre-TKR	6 mo post-TKR	12 mo post-TKR
<60 years	Male	17	30	34
	Female	15	32	34
60-70 years	Male	20	35	37
	Female	18	35	37
70-80 years	Male	21	37	39
	Female	18	34	37
>80 years	Male	23	38	39
	Female	17	33	34

Source: Hamilton DF, et al. Making the Oxford Hip and Knee Scores meaningful at the patient level through normative scoring and registry data. Bone Joint Res. 2015;4:137-44.

EuroQoL-5D-5L (EQ-5D-5L)

Normative values available for EQ-5D dimensions for Canadian population

Canada population norms for the EQ-5D-5L   151

Table 2 Distributions of responses to EQ-5D-5L by age groups

	Age group							Total
	18–24	25–34	35–44	45–54	55–64	65–74	75+	
No problems in all 5 dimensions	56 (37.6)	82 (40.8)	58 (36.2)	70 (31.8)	66 (26.0)	50 (31.6)	17 (26.2)	399 (33.1)
Reported problems in any dimension	93 (62.4)	119 (59.2)	102 (63.7)	150 (68.2)	188 (74.0)	108 (68.4)	48 (73.8)	808 (66.9)
EQ-5D-5L Dimension								
Mobility								
No problems	131 (87.9)	176 (87.6)	128 (80)	160 (72.7)	173 (68.1)	109 (69.0)	39 (60.0)	916 (75.9)
Slight	14 (9.4)	20 (10.0)	27 (16.9)	42 (19.1)	48 (18.9)	35 (22.2)	18 (27.7)	204 (16.9)
Moderate	2 (1.3)	3 (1.5)	5 (3.1)	14 (6.4)	25 (9.8)	11 (7.0)	6 (9.2)	66 (5.5)
Severe	0	1 (0.5)	0	4 (1.8)	7 (2.8)	3 (1.9)	2 (3.1)	17 (1.4)
Extreme	2 (1.3)	1 (0.5)	0	0	1 (0.4)	0	0	4 (0.3)

Full list of normative values for other EQ-5D-5L dimensions and utility scores available at: Yan J et al. Canada population norms for the EQ-5D-5L. European J Health Econ. 2024;25:147–55.

Patient Specific Functional Scale (PSFS)

No normative or reference values available