

## Additional file

**Table A. Sociodemographic and clinical characteristics for the subsample\* (n=386) at the first visit (T1).**

Variable	Total n = 386	Acute n = 69 (18%)	Post-Acute n = 91 (24%)	Extended n = 164 (42%)	Long-Term n = 62 (16%)
Age (years), median (P25-P75)	79 (72–84)	78 (73–84)	81 (73–86)	77 (71–82)	79 (72–84)
Sex: females, n (%)	246 (64)	49 (71)	57 (63)	102 (62)	38 (61)
Living alone, n (%)	170 (44)	31 (45)	46 (51)	65 (40)	28 (45)
Residence, n (%):					
Apartment	197 (51)	32 (46)	44 (48)	95 (58)	26 (42)
House	179 (46)	36 (52)	45 (49)	65 (40)	33 (53)
Others	10 (3)	1 (2)	2 (3)	4 (2)	3 (5)
Recruitment site, n (%):					
Norway	182 (47)	63 (91)	26 (29)	70 (43)	23 (37)
Germany	182 (47)	5 (7)	64 (70)	80 (49)	33 (53)
France	22 (6)	1 (1)	1 (1)	14 (9)	6 (10)
Days since surgery, median (P25-P75)	62 (24–140)	4 (3–5)	28 (23–35)	98 (65–134)	332 (244–353)
Fracture Type, n (%):					
Femoral neck fracture	271 (70)	62 (90)	60 (66)	106 (65)	43 (69)
Extracapsular fracture	115 (30)	7 (10)	31 (34)	58 (35)	19 (31)
Use of walking aids, n (%):					
Indoor	193 (61)	-	83 (91)	90 (55)	20 (32)
Outdoor	229 (72)	-	85 (93)	113 (69)	31 (50)

\*The subsample includes only participants with clinical and DMO data at T1 and T2. Variables are shown for the total subsample and stratified by recovery phase groups. Recovery phase groups were stratified by the number of days from surgery to first visit: Acute ( $\leq 14$  days), Post-Acute (15-42 days), Extended (43-182 days), Long-Term (183-365 days).

**Table B. Clinical- and patient-reported outcomes for the subsample\* (n=386) at the first visit (T1).**

Variable	Total n = 386	Acute n = 69 (18%)	Post-Acute n = 91 (24%)	Extended n = 164 (42%)	Long-Term n = 62 (16%)
6MinWT <sup>a</sup> distance (m), mean (SD)	295 (126)	- <sup>b</sup>	236 (107)	312 (126)	335 (126)
SPPB <sup>c</sup> total score [0-12], median (P25-P75)	6 (4–9)	3 (2–5) <sup>d</sup>	5.0 (4–8)	8 (6–10)	9 (6–11)
Gait speed (4MWT <sup>e</sup> ) (m/s), mean (SD)	0.71 (0.34)	0.37 (0.21)	0.65 (0.22)	0.81 (0.32)	0.92 (0.35)
TUG <sup>f</sup> (s), median (P25-P75)	16 (11–23)	- <sup>b</sup>	21 (15–31)	15 (11–19)	12 (10–20)
LLFDI-FC <sup>g</sup> [0-100], median (P25-P75)	51 (43–60)	- <sup>b</sup>	44 (40–54)	52 (47–60)	60 (49–70)
WB step count (number per day) <sup>h</sup> , median (P25-P75)	2216 (925–4740)	530 (271–1116)	1733 (709–3071)	3206 (1638–5898)	4452 (2178–7328)
Systolic Blood Pressure (mmHg), mean (SD)	135 (22)	134 (23)	133 (18)	135 (22)	140 (22)

\*The subsample includes only participants with clinical and DMO data at T1 and T2. The variables are shown for the total subsample and stratified by recovery phase groups. Recovery phase groups were stratified by the number of days from surgery to first visit: Acute ( $\leq 14$  days), Post-Acute (15-42 days), Extended (43-182 days), Long-Term (183-365 days).

<sup>a</sup> 6MinWT: 6-minute walk test

<sup>b</sup> Not applicable in the acute setting

<sup>c</sup> SPPB: Short Physical Performance Battery

<sup>d</sup> Due to the recency of the hip fracture surgery, acute patients did not perform the 5 chair-rise test of the SPPB and could therefore achieve a maximum of 8 points instead of 12

<sup>e</sup> 4MWT: 4-meter walk test

<sup>f</sup> TUG: Timed-Up and Go test

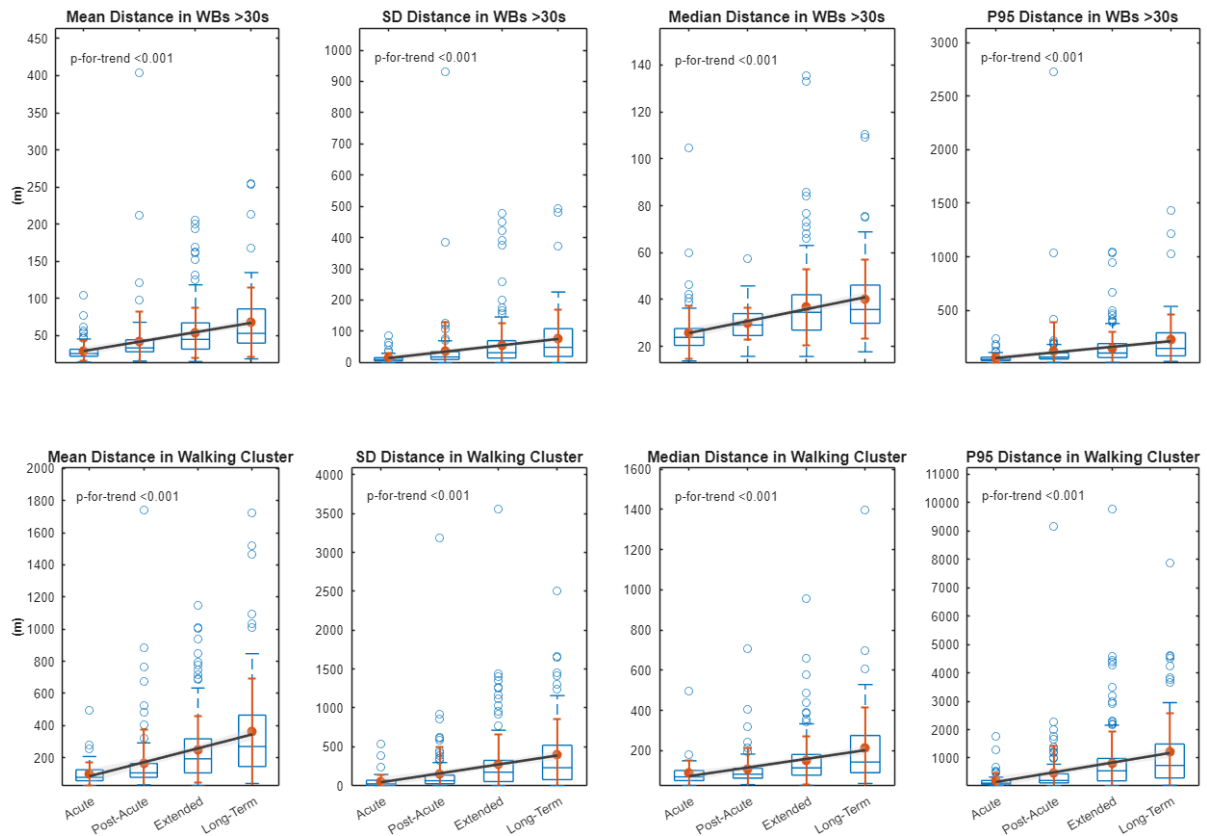
<sup>g</sup> LLFDI-FC: Late Life Function and Disability Instrument – Function Component – total score

<sup>h</sup> Weekly mean of daily sum of steps taken within all WBs

**Table C. Participants with a Walking Period at each assessment\*, overall and for each recovery phase group.**

Walking Period	Assessment	Group	Participants having the Walking Period		Number of Walking Periods per valid day, Median (P25-P75)
			n	%	
WBs >30s	T1	Total	449	89	1.0 (0.3–2.0)
		Acute	69	70	0.2 (0.0–0.6)
		Post-Acute	110	93	1.0 (0.4–1.7)
		Extended	188	94	1.3 (0.5–2.6)
		Long-Term	82	93	1.5 (0.6–3.1)
	T2	Total	351	91	1.6 (0.7–2.7)
		Acute	64	93	1.6 (0.6–2.4)
		Post-Acute	78	86	1.4 (0.5–2.8)
		Extended	150	91	1.7 (0.7–2.9)
		Long-Term	59	95	1.5 (0.9–2.4)
	T3	Total	220	90	1.6 (0.7–2.6)
		Acute	53	98	1.8 (1.1–2.3)
		Post-Acute	42	75	1.0 (0.1–2.1)
		Extended	82	93	1.7 (1.0–3.0)
		Long-Term	43	91	1.6 (0.9–2.4)
Walking Clusters	T1	Total	421	83	1.3 (0.3–2.6)
		Acute	62	63	0.3 (0.0–0.8)
		Post-Acute	102	86	1.3 (0.6–2.5)
		Extended	177	88	1.7 (0.6–2.9)
		Long-Term	80	91	2.0 (0.7–3.4)
	T2	Total	345	89	2.0 (0.9–3.4)
		Acute	63	91	1.9 (0.9–2.9)
		Post-Acute	78	86	1.9 (0.6–3.4)
		Extended	146	89	2.1 (0.9–3.6)
		Long-Term	58	94	2.1 (1.1–3.4)
	T3	Total	210	86	2.0 (1.0–3.4)
		Acute	52	96	2.3 (1.4–3.3)
		Post-Acute	40	71	1.4 (0.0–2.5)
		Extended	78	89	2.0 (1.0–4.0)
		Long-Term	40	85	1.8 (1.1–3.0)

\*Three assessments: The first visit (T1, N = 505), 6-month (T2, n = 386) and 12-month follow-up (T3, n = 245). Recovery phase groups were stratified by the number of days from surgery to first visit: Acute ( $\leq 14$  days), Post-Acute (15–42 days), Extended (43–182 days), Long-Term (183–365 days).



**Figure A.** Known-groups validity of Walking Period Distance DMOs between the four hip fracture recovery phase groups.

**Table D.** Real-world Walking Period Distances at the first visit (T1) stratified by recovery phase group (N=505).

DMO	Acute n = 99 (20%)	Post-Acute n = 118 (23%)	Extended n = 200 (40%)	Long-Term n = 88 (17%)
Distance in WBs >30s (m)				
Mean	26 (22–32)	34 (28–45)	45 (32–67)	53 (40–86)
SD	9 (5–16)	18 (10–35)	31 (14–70)	49 (19–108)
Median	24 (20–28)	29 (25–34)	35 (27–42)	36 (30–46)
P95	43 (32–63)	64 (47–103)	102 (61–190)	146 (76–291)
Distance in Walking Cluster (m)				
Mean	78 (57–125)	105 (78–164)	193 (105–318)	269 (145–465)
SD	23 (1–69)	63 (25–134)	174 (52–325)	231 (78–520)
Median	70 (51–101)	83 (63–112)	114 (78–181)	144 (90–275)
P95	112 (68–207)	208 (123–443)	549 (196–983)	738 (297–1492)

Values are shown as median (P25–P75). Recovery phase groups were stratified by the number of days from surgery to first visit: Acute ( $\leq 14$  days), Post-Acute (15–42 days), Extended (43–182 days), Long-Term (183–365 days).