SUPPLEMENTARY MATERIALS

Supplementary Tables

Supplementary Table 1. Daily mobility goals as indicated on the patient communication boards (in German, English translation below).[*]

Stufe	Tages-Ziel (mindestens 3 x/Tag)
8	**≥ 75 m gehen (30 min oder Treppe) & keine Bettruhe**
7	**≥ 75 m gehen**
6	**≥ 7,5 m gehen**
5	**≥ 10 Schritte gehen**
4	**≥ 1 Minute stehen**
3	**Transfer auf den Stuhl / Nachtstuhl**
2	**An die Bettkante sitzen**
1	**Aktivitäten im Bett / unselbständiger Transfer**

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[*] English translations: Daily mobility goal (at least 3x daily); 8, Walk ≥ 75 m (30 min or stairs) & no bed rest; 7, Walk ≥ 75 m; 6, Walk ≥ 7,5 m; 5, Walk ≥ 10 steps; 4, Wtand ≥ 1 minute; 3, Transfer to a chair or commode; 2, Sit at the edge of the bed; 1 Bed activity / dependent transfer out of the bed

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Supplementary Table 2. Baseline characteristics of participants.

	Standard of Care (N = 81)	Goal-directed Mobilization (N = 81)
Living status		
Single	41 (50.6%)	26 (32.1%)
With other persons (partner, family, shared flat)	32 (39.5%)	50 (61.7%)
Highest education		
Mandatory school	16 (19.8%)	13 (16.2%)
Professional school	53 (65.4%)	45 (56.2%)
Matura	0 (0.0%)	4 (5.0%)
College / University	12 (14.8%)	18 (22.5%)
Reason for admission		
Elective	7 (8.6%)	5 (6.2%)
Emergency	74 (91.4%)	76 (93.8%)
Intensive care	5 (6.2%)	10 (12.3%)
Smoking	12 (14.8%)	9 (11.1%)
Self-reported health conditions[#]		
Cardiac disease	33 (40.7%)	41 (50.6%)
Hypertension	33 (40.7%)	46 (56.8%)
Pulmonary disease	35 (43.2%)	32 (39.5%)
Diabetes	18 (22.2%)	19 (23.5%)
Ulcer	12 (14.8%)	12 (14.8%)
Renal disease	25 (30.9%)	13 (16.0%)
Liver disease	12 (14.8%)	10 (12.3%)
Anemia and other hematological diseases	21 (25.9%)	19 (23.5%)
Cancer	27 (33.3%)	20 (24.7%)
Depression	13 (16.0%)	23 (28.4%)
Osteoarthritis	38 (46.9%)	34 (42.0%)
Rheumatoid arthritis	11 (13.6%)	7 (8.6%)
Back pain	36 (44.4%)	44 (54.3%)

[#] According to discharge letters; Self-Administered Comorbidity Questionnaire[46]

Supplementary Table 3. Hospital parameters.

	Standard of Care (N = 81)	Goal-directed Mobilization (N = 81)	*P* value
Comorbidities[†]			
Cardiac disease	52 (64.2%)	56 (69.1%)	0.62
Hypertension	50 (61.7%)	55 (67.9%)	0.51
Pulmonary disease	40 (49.4%)	39 (48.1%)	1.00
Diabetes	26 (32.1%)	20 (24.7%)	0.38
Ulcer	11 (13.6%)	17 (21.0%)	0.30
Renal disease	47 (58.0%)	39 (48.1%)	0.27
Liver disease	14 (17.3%)	18 (22.2%)	0.55
Anaemia and other haematological diseases	46 (56.8%)	46 (56.8%)	1.00
Cancer	30 (37.0%)	23 (28.4%)	0.32
Depression	17 (21.0%)	12 (14.8%)	0.41
Osteoarthritis	15 (18.5%)	10 (12.3%)	0.38
Rheumatoid arthritis	4 (4.9%)	1 (1.2%)	0.37
Back pain	10 (12.3%)	16 (19.8%)	0.28

[†] According to discharge letters structured by the Self-Administered Comorbidity Questionnaire[46]

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Supplementary Table 4. Number of patients who had some protocol deviations (some patients may have several protocol deviations). [‡]

	Standard of Care (N = 81)	Goal-directed Mobilization (N = 81)	Total (N = 162)
Protocol deviation	22 (27.2%)	18 (22.2%)	40 (24.7%)
Not eligible	0 (0.0%)	2 (2.5%)	2 (1.2%)
Not receiving allocated intervention (cross-overs)	1 (1.2%)	0 (0.0%)	1 (0.6%)
Intervention lasted less than 3 days	17 (21.0%)	10 (12.3%)	27 (16.7%)
Primary outcome not assessed at day 5 (±2 days)	20 (24.7%)	16 (19.8%)	36 (22.2%)

[‡] In particular, two patients were enrolled two times in the study. Both were in the Standard of Care group in the first randomization, and in the other arm in the second randomization. Their second entry is a protocol violation, but is still considered in the ITT analysis.
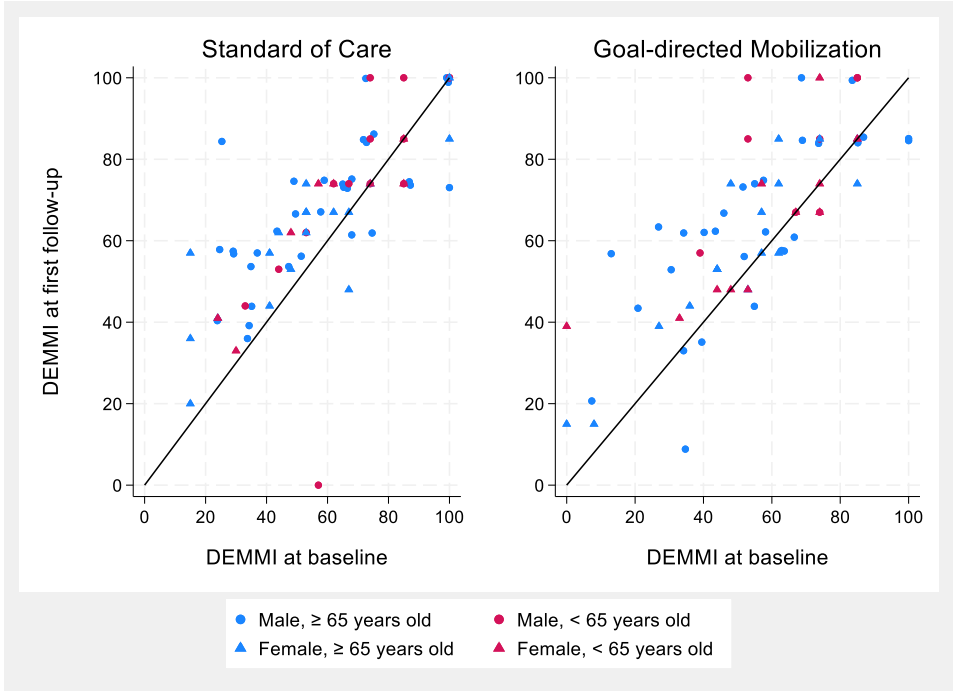
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Supplementary Table 5. Subgroup analyses of the primary outcome (change in DEMMI score, day 5
- admission) according to age, initial DEMMI score and pre-hospital mobility.[§]

	Adjusted difference (95% CI)	*P* value
Age		
Younger than 65 years old (N = 46)	5.0 (-4.5 to 14.5)	0.29
At least 65 years old (N = 116)	-1.5 (-6.4 to 3.4)	0.55
DEMMI at baseline		
≤ 40 points (N = 38)	-3.7 (-14.5 to 7.1)	0.49
> 40 points (N = 124)	1.5 (-3.4 to 6.4)	0.53
Mobility aid at baseline		
No (N = 89)	4.0 (-2.5 to 10.4)	0.22
Yes (N = 73)	-3.1 (-9.2 to 3.0)	0.32
Abbreviations: DEMMI, De Morton Mobility Index.		

[§] Differences are adjusted for stratification factors (DEMMI ≤ 40 vs DEMMI > 40 and age < 65 years vs ≥ 65
years); changes from baseline are additionally adjusted for the baseline value.

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Supplementary Figures

Supplementary Figure 1. De Morton Mobility Index (DEMMI) scores of patients receiving standard of care or goal-directed mobilization at baseline and the first follow-up (day 5). Data points above the diagonal line indicate participants with improvements in DEMMI scores.

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Supplementary Figure 2. Participants' individual tracks of DEMMI score during hospitalization.

Days indicate effective measurement of DEMMI scores in the study participants by allocation.