

**Barriers and facilitators to mobility of patients hospitalised on an acute medical ward:  
a systematic review**

**SUPPLEMENTARY INFORMATION**

**List of content**

**Supplementary Text S1.** Complete list of included articles

**Supplementary Table S1.** Search strategy

**Supplementary Table S2.** Quality appraisal

**Supplementary Table S3.** Thematic analysis of barriers and facilitators to mobility of hospitalised patients

## Supplementary Text S1. Complete list of included articles<sup>1-26</sup>

1. Andreasen J, Soendergaard LN, Holst M. Factors affecting patient and nursing staff adherence to an integrated physical activity and nutritional intervention targeting functional decline on an acute medical ward: a qualitative study. *Patient Prefer Adherence* 2018;12:1425-35.
2. Brown CJ, Friedkin RJ. Prevalence and outcomes of low mobility in hospitalized older patients. *J Am Geriatr Soc* 2004.
3. Brown CJ, Williams BR, Woodby LL, Davis LL, Allman RM. Barriers to mobility during hospitalization from the perspectives of older patients and their nurses and physicians. *J Hosp Med* 2007;2:305-13.
4. Cattanach N, Sheedy R, Gill S, Hughes A. Physical activity levels and patients' expectations of physical activity during acute general medical admission. *Intern Med J* 2014;44:501-4.
5. Chan EY, Hong MLI, Tan MYG, Chua WL. Older patients' participation in physical activity during hospitalization: A qualitative study of ward nurses' perceptions in an Asian context. *Geriatric Nursing* 2019;40:91-8.
6. De Klein K, Valkenet K, Veenhof C. Perspectives of patients and health-care professionals on physical activity of hospitalized patients. *Physiother* 2021;37:307-14.
7. Dermody G, Kovach CR. Nurses' Experience With and Perception of Barriers to Promoting Mobility in Hospitalized Older Adults: A Descriptive Study. *J Gerontol Nurs* 2017;43:22-9.
8. Dermody G, Kovach CR. Barriers to Promoting Mobility in Hospitalized Older Adults. *Res* 2018;11:17-27.
9. Doherty-King B, Bowers B. How nurses decide to ambulate hospitalized older adults: development of a conceptual model. *Gerontologist* 2011;51:786-97.
10. Doherty-King B, Bowers BJ. Attributing the responsibility for ambulating patients: a qualitative study. *Int J Nurs Stud* 2013;50:1240-6.
11. Geelen SJG, Giele BM, Engelbert RHH, et al. Barriers to and solutions for improving physical activity in adults during hospital stay: a mixed-methods study among healthcare professionals. *Disabil Rehabil* 2021:1-10.
12. Holst M HP, Pedersen L, Paulsen S, Valentinsen C, Kohler M. . Physical activity in hospitalized old medical patients; how active are they, and what. *J Aging Res Clin Pract*. 2015;4(2).
13. Hoyer EH, Brotman DJ, Chan K. Barriers to early mobility of hospitalized general medicine patients: survey development and results: [ncbi.nlm.nih.gov](https://ncbi.nlm.nih.gov); 2015.
14. King B, Bodden J, Steege L, Brown CJ. Older adults experiences with ambulation during a hospital stay: A qualitative study. *Geriatric Nursing* 2021;42:225-32.
15. Lim S, Ibrahim K, Dodds R, et al. Physical activity in hospitalised older people: the feasibility and acceptability of a volunteer-led mobility intervention in the SoMoVe TM study. *Age Ageing* 2020;49:283-91.
16. Lim SH, Ang SY, Ong HK, et al. Promotion of mobility among hospitalised older adults: An exploratory study on perceptions of patients, carers and nurses. *Geriatric Nursing* 2020;41:608-14.
17. Meesters J, Conijn D, Vermeulen HM, Vliet Vlieland T. Physical activity during hospitalization: Activities and preferences of adults versus older adults. *Physiother* 2019;35:975-85.
18. Moore JE, Mascarenhas A, Marquez C, et al. Mapping barriers and intervention activities to behaviour change theory for Mobilization of Vulnerable Elders in Ontario (MOVE

ON), a multi-site implementation intervention in acute care hospitals. *Implement Sci* 2014;9:160.

19. Nease B, Chen K, Hash PL. Interdisciplinary perceived barriers to exercise and mobility in acute care medical patients. *Nurs Manage* 2021;52:48-54.

20. O'Hare L, Savage E, McCullagh R, Bantry White E, Fitzgerald E, Timmons S. Frail older adults' perceptions of an in-hospital structured exercise intervention. *Physiotherapy* 2017;103:478-84.

21. Pavon JM, Fish LJ, Colon-Emeric CS, et al. Towards "mobility is medicine": Socioecological factors and hospital mobility in older adults. *J Am Geriatr Soc* 2021;69:1846-55.

22. Rasmussen RL, Holst M, Nielsen L, Villumsen M, Andreasen J. The perspectives of health professionals in Denmark on physical exercise and nutritional interventions for acutely admitted frail older people during and after hospitalisation. *Health Soc Care Community* 2020;28:2140-9.

23. Scheerman K, Mesters JW, Borger JN, Meskers CGM, Maier AB. Tasks and responsibilities in physical activity promotion of older patients during hospitalization: A nurse perspective. *Nurs* 2020;7:1966-77.

24. So C, Pierluissi E. Attitudes and expectations regarding exercise in the hospital of hospitalized older adults: a qualitative study. *J Am Geriatr Soc* 2012;60:713-8.

25. Stefansdottir N, Pedersen MM, Tjornhoj-Thomsen T, Kirk JW. Older medical patients' experiences with mobility during hospitalization and the WALK-Copenhagen (WALK-Cph) intervention: A qualitative study in Denmark. *Geriatric Nursing* 2021;42:46-56.

26. Zisberg A, Agmon M, Gur-Yaish N, et al. No one size fits all-the development of a theory-driven intervention to increase in-hospital mobility: the "WALK-FOR" study. *BMC geriatr* 2018;18:91.

## Supplementary Table S1. Search strategy

### Medline (Ovid)

| # | Query   |
|---|---|
| 1 | patient preference/ or attitude/ or attitude of health personnel/ or attitude to health/ or health knowledge, attitudes, practice/ or physician-patient relations/ or patient acceptance of healthcare/ or motivation/ or (barrier* or issues or issue or problems or problem or hinder* or facilitat* or enabl* or solution* or ease or easy or easier or difficult or difficulty or willingness or willing or belief* or believe* or preference* or dialog* or conversation* or decision* or decide* or deciding or motivat* or acceptance or acceptabilit* or perceptions or perception or perceive* or behav* or attitud* or input or inputs or experien* or value or values or perspectiv* or expectation* or choice or choices or opinion* or empower* or choose* or choosing or knowledge* or motivat* or adhere* or intention* or involv* or engag* or consult* or interact* or satisfaction or satisfied or discuss* or explor*).ti. |
| 2 | exercise movement techniques/ or exercise/ or exercise therapy/ or movement/ or locomotion/ or walking/ or motor activity/ or early ambulation/ or rehabilitation/ or "activities of daily living"/ or recovery of function/ or Physical Therapy Modalities/ or "Physical Therapy (Specialty)"/ or Physical Therapists/ or (mobil* or move or movement or movements or mouvement or mouvements or moving or mouving or exercis* or rehab* or physiotherap* or physical therap* or physical activit* or activity or activities or walk* or ambulate* or ambulation* or ambulating* or deambulat* or semi-recumb* or "out of bed" or bedside or in-bed or sitting or standing).ti.  |
| 3 | Hospitals/ or Hospitalization/ or Inpatients/ or Patient Care/ or Internal Medicine/ or (hospital* or inpatient* or in-patient or "non-ICU patient*" or "medical patient*" or "internal medicine" or ward*).ti.   |
| 4 | 1 and 2 and 3   |
| 5 | 4 not ((exp infant/ or exp child/ or adolescent/) not exp adult/) not (exp animals/ not humans/) not (letter or news or comment or editorial or congress).pt. not ("intensive care unit*" or "icu*").ti.  |
| 6 | limit 5 to english  |

### Embase (Ovid)

| # | Query  |
|---|--|
| 1 | patient preference/ or patient attitude/ or attitude/ or health personnel attitude/ or attitude to health/ or motivation/ or (barrier* or issues or issue or problems or problem or hinder* or facilitat* or enabl* or solution* or ease or easy or easier or difficult or difficulty or willingness or willing or belief* or believe* or preference* or dialog* or conversation* or decision* or decide* or deciding or motivat* or acceptance or acceptabilit* or perceptions or perception or perceive* or behav* or attitud* or input or inputs or experien* or value or values or perspectiv* or expectation* or choice or choices or opinion* or empower* or choose* or choosing or knowledge* or motivat* or adhere* or intention* or involv* or engag* or consult* or interact* or satisfaction or satisfied or discuss* or explor*).ti. |
| 2 | *exercise/ or exp kinesiotherapy/ or "movement (physiology)"/ or locomotion/ or exp walking/ or gait/ or walking difficulty/ or motor activity/ or mobilization/ or rehabilitation/ or daily life activity/ or physical activity/ or convalescence/ or physiotherapy/ or physiotherapist/ or (mobil* or move or movement or movements or mouvement or mouvements or moving or mouving or exercis* or rehab* or physiotherap* or physical therap* or physical activit* or activity or activities or walk* or ambulate* or ambulation* or ambulating* or deambulat* or semi-recumb* or "out of bed" or bedside or in-bed or sitting or standing).ti.   |
| 3 | *hospital/ or *hospitalization/ or ward/ or hospital patient/ or aged hospital patient/ or internal medicine/ or (hospital* or inpatient* or in-patient or "non-ICU patient*" or "medical patient*" or "internal medicine" or ward*).ti.   |
| 4 | 1 and 2 and 3  |
| 5 | 4 not (exp juvenile/ not exp adult/) not ((exp animal/ or nonhuman/) not exp human/) not (letter OR note OR editorial OR conference).pt. not ("intensive care unit*" or "icu*" or pediatric* or paediatric*).ti.   |
| 6 | limit 5 to english   |

### PsycINFO (Ovid)

| # | Query |
|---|-------|
|---|-------|

|   |   |
|---|---|
| 1 | client attitudes/ or attitudes/ or health personnel attitudes/ or health attitudes/ or doctor patient relationship/ or therapist attitudes/ or "Expectations"/ or motivation/ or (barrier* or issues or issue or problems or problem or hinder* or facilitat* or enabl* or solution* or ease or easy or easier or difficult or difficulty or willingness or willing or belief* or believe* or preference* or dialog* or decision* or decide* or deciding or motivat* or conversation or acceptance or acceptabilit* or perceptions or perception or perceive* or behav* or attitud* or input or inputs or experien* or value or values or perspectiv* or expectation* or choice or choices or opinion* or empower* or choose* or choosing or knowledge* or motivat* or adhere* or intention* or involv* or engag* or consult* or interact* or satisfaction or satisfied or discuss* or explor*).ti. |
| 2 | *exercise/ or exp physical mobility/ or movement therapy/ or locomotion/ or exp walking/ or gait/ or exp motor processes/ or rehabilitation/ or "activities of daily living"/ or daily activities/ or physical activity/ or physical therapy/ or physical therapists/ or (mobil* or move or movement or movements or mouvement or mouvements or moving or mouving or exercis* or rehab* or physiotherap* or physical therap* or physical activit* or activity or activities or walk* or ambulate* or ambulation* or ambulating* or deambulat* or semi-recumb* or "out of bed" or bedside or in-bed or sitting or standing).ti.  |
| 3 | hospitals/ or hospitalization/ or hospitalized patients/ or internal medicine/ or (hospital* or inpatient* or in-patient or "non-ICU patient*" or "medical patient*" or "internal medicine" or ward*).ti.   |
| 4 | 1 and 2 and 3   |
| 5 | 4 not (exp animals/ not humans/) not (letter or news or comment or editorial or congress).pt. not ("intensive care unit*" or "icu*" or pediatric* or paediatric* or child or children).ti.  |
| 6 | limit 5 to english  |

### Web of Science (Core Collection)

| # | Query  |
|---|--|
| 1 | TI=(barrier* or issues or issue or problems or problem or hinder* or facilitat* or enabl* or solution* or ease or easy or easier or difficult or difficulty or willingness or willing or belief* or believe* or preference* or dialog* or conversation* or decision* or decide* or deciding or motivat* or acceptance or acceptabilit* or perceptions or perception or perceive* or behav* or attitud* or input or inputs or experien* or value or values or perspectiv* or expectation* or choice or choices or opinion* or empower* or choose* or choosing or knowledge* or motivat* or adhere* or intention* or involv* or engag* or consult* or interact* or satisfaction or satisfied or discuss* or explor*) |
| 2 | TI=(mobil* or move or movement or movements or mouvement or mouvements or moving or mouving or exercis* or rehab* or physiotherap* or "physical therap*" or "physical activit*" or activity or activities or walk* or ambulate* or ambulation* or ambulating* or deambulat* or semi-recumb* or "out of bed" or bedside or in-bed or sitting or standing)   |
| 3 | TI=(hospital* or inpatient* or "in-patient" or "non-ICU patient*" or "medical patient*" or "internal medicine" or ward*)   |
| 4 | #1 and #2 and #3   |
| 5 | TI=("intensive care unit*" or "icu*" or pediatric* or paediatric* or child or children)  |
| 6 | #4 NOT #5  |
| 7 | TS=((animal OR mouse OR mice OR rat OR rats OR murine OR primate* OR monkey*) NOT (human* OR patient*))  |
| 8 | #6 NOT #7  |
| 9 | #6 NOT #7<br>Refined by: DOCUMENT TYPES: (ARTICLE OR EARLY ACCESS OR REVIEW OR RETRACTION )  |

### Cochrane Central Register of Controlled Trials (CENTRAL)

| # | Query   |
|---|---|
| 1 | (barrier* or issues or issue or problems or problem or hinder* or facilitat* or enabl* or solution* or ease or easy or easier or difficult or difficulty or willingness or willing or belief* or believe* or preference* or dialog* or conversation* or decision* or decide* or deciding or motivat* or acceptance or acceptabilit* or perceptions or perception or perceive* or behav* or attitud* or input or inputs or experien* or value or values or perspectiv* or expectation* or choice or choices or opinion* or |

|   |  |
|---|--|
|   | empower* or choose* or choosing or knowledge* or motivat* or adhere* or intention* or involv* or engag* or consult* or interact* or satisfaction or satisfied or discuss* or explor*):ti   |
| 2 | (mobil* or move or movement or movements or mouvement or mouvements or moving or mouving or exercis* or rehab* or physiotherap* or physical NEXT therap* or physical NEXT activit* or activity or activities or walk* or ambulate* or ambulation* or ambulating* or deambulat* or semi-recumb* or "out of bed" or bedside or in-bed or sitting or standing):ti |
| 3 | (hospital* or inpatient* or "in-patient" or non-ICU NEXT patient* or medical NEXT patient* or "internal medicine" or ward*):ti   |
| 4 | #1 and #2 and #3   |
| 5 | (intensive NEXT care NEXT unit* or icu* or pediatric* or paediatric* or child or children):ti  |
| 6 | #4 NOT #5  |

### CINAHL (EBSCOhost)

| # | Query   |
|---|---|
| 1 | TI (barrier* or issues or issue or problems or problem or hinder* or facilitat* or enable* or solution* or ease or easy or easier or difficult or difficulty or willingness or willing or belief* or believe* or preference* or dialog* or conversation* or decision* or decide* or deciding or motivat* or conversation or acceptance or acceptabilit* or perceptions or perception or perceive* or behav* or attitud* or input or inputs or experien* or value or values or perspectiv* or expectation* or choice or choices or opinion* or empower* or choose* or choosing or acceptance or knowledge* or preference* or motivat* or adhere* or intention* or involv* or engag* or consult* or interact* or satisfaction or satisfied or discuss* or discussion* or explor*) |
| 2 | TI (mobil* or move or movement or movements or mouvement or mouvements or moving or mouving or exercis* or rehab* or physiotherap* or "physical therap*" or "physical activit*" or activity or activities or walk* or ambulate* or ambulation* or ambulating* or deambulat* or semi-recumb* or "out of bed" or bedside or "in-bed" or sitting or standing)  |
| 3 | TI (hospital* or inpatient* or "in-patient" or "non-ICU patient*" or "medical patient*" or "internal medicine" or ward*)  |
| 4 | S1 and S2 and S3  |
| 5 | S4 not TI ("intensive care unit*" or "icu*" or pediatric* or paediatric* or child or children)  |
| 6 | S5 not PT (letter or news or comment or editorial or congress)  |
| 7 | S6 not (MH animals+ not MH humans+)   |
| 8 | Narrow by Language: - english   |
| 9 | Limiters - Exclude MEDLINE records  |

### Google scholar

First 200 records (relevancy ranking) out of 2'860'000 results

| # | Query   |
|---|---|
| 1 | barriers facilitators motivators enablers preferences attitudes acceptance perceptions expectations<br>mobilisation mobilicity mobilization exercise "physical activity" ambulation walking<br>hospital hospitalized hospitalised hospitalization |

Note: Search field allows only 252 characters, therefore search string is shortened.

**Supplementary Table S2. Quality appraisal**

| First author, year                | <b>QUALITATIVE STUDIES</b>   |   |  |  |   |
|-----------------------------------|--|---|--|--|---|
|                                   | Is the qualitative approach appropriate to answer the research question? | Are the qualitative data collection methods adequate to address the research question?  | Are the findings adequately derived from the data? | Is the interpretation of results sufficiently substantiated by data? | Is there coherence between qualitative data sources, collection, analysis and interpretation? |
| Andreasen, 2018 <sup>1</sup>      | Yes  | Yes   | Yes  | Yes  | Yes   |
| Brown, 2007 <sup>3</sup>          | Yes  | Yes   | Yes  | Yes  | Yes   |
| Chan, 2019 <sup>5</sup>           | Yes  | Yes   | Yes  | Yes  | Yes   |
| De Klein, 2021 <sup>6</sup>       | Yes  | Yes   | Yes  | Yes  | Yes   |
| Doherty-King, 2011 <sup>9</sup>   | Yes  | Yes   | Yes  | Yes  | Yes   |
| Doherty-King, 2013 <sup>10</sup>  | Yes  | Yes   | Yes  | Yes  | Yes   |
| Holst, 2015 <sup>12</sup>         | Yes  | Yes   | Yes  | Yes  | Yes   |
| King, 2021 <sup>14</sup>          | Yes  | Yes   | Yes  | Yes  | Yes   |
| Lim, 2020 <sup>15</sup>           | Yes  | Yes   | Yes  | Yes  | Yes   |
| Lim, 2020 <sup>16</sup>           | Yes  | Yes   | Yes  | Yes  | Yes   |
| Moore, 2014 <sup>18</sup>         | Yes  | Yes   | Yes  | Yes  | Yes   |
| O'Hare, 2017 <sup>20</sup>        | Yes  | Yes   | Yes  | Yes  | Yes   |
| Pavon, 2021 <sup>21</sup>         | Yes  | Yes   | Yes  | Yes  | Yes   |
| Rasmussen, 2020 <sup>22</sup>     | Yes  | Yes   | Yes  | Yes  | Yes   |
| So, 2012 <sup>24</sup>            | Yes  | Yes   | Yes  | Yes  | Yes   |
| Stefansdottir, 2021 <sup>25</sup> | Yes  | Yes   | Yes  | Yes  | Yes   |
|                                   | <b>NON-RANDOMISED STUDIES</b>  |   |  |  |   |
|                                   | Are the participants representative of the target population?            | Are measurements appropriate regarding both the outcome and intervention (or exposure)? | Are there complete outcome data?                   | Are the confounders accounted for in the design and analysis?        | During the study period, is the intervention administered (or exposure occurred) as intended? |
| Brown, 2004 <sup>2</sup>          | Yes  | Yes   | Can't tell   | Yes  | Yes   |
| Dermody, 2018 <sup>8</sup>        | Yes  | Yes   | Yes  | No   | Yes   |
|                                   | <b>QUANTITATIVE DESCRIPTIVE STUDIES</b>                                  |   |  |  |   |
|                                   | Is the sampling strategy relevant to address the research question?      | Is the sample representative of the target population?                                  | Are the measurements appropriate?                  | Is the risk of nonresponse bias low?                                 | Is the statistical analysis appropriate to answer the research question?                      |
| Cattanach, 2014 <sup>4</sup>      | Yes  | No (first 24 who accept)  | Not completely (questionnaire not validated)       | Yes  | Yes   |
| Dermody, 2017 <sup>7</sup>        | Yes  | No (only those interested)  | Yes  | Yes  | Yes   |
| Hoyer, 2015 <sup>13</sup>         | Yes  | No (only those interested)  | Not completely (survey not validated)              | Yes  | Yes   |
| Meesters, 2019 <sup>17</sup>      | Yes  | No (only those interested)  | Yes  | Yes  | Yes   |
| Nease, 2021 <sup>19</sup>         | Yes  | No (only those interested)  | Yes  | Yes  | Yes   |

**MIXED METHODS STUDIES**

|                               | Is there an adequate rationale for using a mixed methods design to address the research question? | Are the different components of the study effectively integrated to answer the research question? | Are the outputs of the integration of qualitative and quantitative components adequately interpreted? | Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? | Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? |
|-------------------------------|---|---|---|--|--|
| Geelen, 2021 <sup>11</sup>    | Yes   | Yes   | Yes   | No   | Yes  |
| Scheerman, 2020 <sup>23</sup> | Yes   | Yes   | Yes   | No   | Yes  |
| Zisberg, 2018 <sup>26</sup>   | Yes   | Yes   | Yes   | No   | Yes  |



**Supplementary Table S3.** Thematic analysis of barriers and facilitators to mobility of hospitalised patients

| Theme             | Subtheme                   | Patient-related factors   | HCP-related factors   | Environment-/system-related factors |
|-------------------|----------------------------|---|---|-------------------------------------|
| Patient situation | Characteristics            | <b>High age, tallness, high weight</b><br><b>Impaired cognitive status</b><br><b>Impaired physical status, fall risk, needing assistance</b><br><b>Dependent / inactive before hospitalisation</b>  | <i>Knowing patient's mobility status</i>  |                                     |
|                   | Culture - behavior         | Background / culture / <b>language</b>  | <b>Language barrier</b>   |                                     |
|                   | Symptoms – signs – illness | <b>Weakness, fatigue, stiffness, pain, dyspnea, dizziness, gastrointestinal problems</b><br><b>Acute illness/confusion/dementia/delirium</b>  |   |                                     |
| Knowledge         | Importance                 | <i>Knowing / being informed about the &amp; outcomes of immobility</i>  | <i>Knowing the importance &amp; outcomes of immobility, and the indications to mobilise</i>   |                                     |
|                   | Skills – how to            | <i>Knowing how to handle devices</i><br><i>Knowing if, when, where to move &amp; who to ask for help</i>  | <i>Mobilisation techniques</i><br><i>Skills to advice patients</i><br><i>High grade / training</i>  |                                     |
|                   | Definitions                |   | <i>Knowing the definition of mobility &amp; the meaning of a mobility order</i>   |                                     |
| Beliefs           | Mindset - expectations     | <b>Bedrest culture - not expecting to move in hospital / at older age - “Sick role” behavior</b><br><b>HCPs should do everything (patients pay for that)</b><br><i>Mobility as a mean for recovery</i>  | <b>Bedrest culture</b><br><b>Fall prevention more important</b><br><b>Other ways to prevent complications</b><br><i>Promotion of mobility considered a priority</i> |                                     |
|                   | Labelling                  | <b>Labelling family as not trained to ensure safety regarding mobility</b>  | Patient labelling: <b>nursing home / too sick to mobilise; community-living / active</b>  |                                     |
| Experiences       | Past experiences           | <b>Experienced falls / Adverse consequences of bedrest</b>  |   |                                     |
|                   | Effects of mobility        | <i>Positive effects of mobility – higher self-confidence</i><br><i>Improvement during mobility tests</i>  |   |                                     |
| Intentions        | Initiative                 | <b>Not motivated, not cooperating, not wanting to move</b><br><i>Taking initiative – self-determination – motivation</i>  | <i>Not waiting for PT / mobility order</i><br><i>Questioning mobility order</i>   |                                     |
|                   | Goals                      | <i>Needing to care for self, return to independence</i><br><i>Concrete activities / goals within or outside the hospital</i><br><i>Being discharged / return home / avoid nursing home</i>  | <i>Agreeing on defined goals with patients -</i><br><i>Goal individualisation</i><br><i>Monitor progress / prevent complications</i>                                |                                     |
|                   | Prioritisation             |   | <b>Other tasks more important than mobility</b>   |                                     |
|                   | Workload                   |   | <b>Bedrest/assisting = less work/saving time</b>  |                                     |
| Emotions          | Anxiety - fears            | <b>Fearing injury, falling, heart attack, not being able to get back/call for help, getting lost, dislodging devices</b><br><b>Relatives' concerns about safety</b><br><b>Worries about situation/illness</b><br><i>Fearing complications of bedrest/immobility</i> | <b>Fearing injury (of patients / HCPs), complaints, complications of immobility</b><br><i>HCP feeling confident &amp; strong</i>                                    |                                     |
|                   | Empathy                    | <b>Not wanting to bother staff / empathy for staff</b>  | <b>Sorry for patients =&gt; doing everything</b>  |                                     |
|                   | Other negative feelings    | <b>Fatalism/Self-pity; lonely, sad; bored to stay in bed</b><br><b>Shame: Not wanting to be perceived as sick / draw attention with hospital gown/catheters</b><br><b>Boring hospital environment</b>   |   |                                     |

|                                 |                               |   |  |   |
|---------------------------------|-------------------------------|---|--|---|
| Social influences               | HCPs                          | <i>Relationship with HCP on a personal level</i>  | <b>Active discouragement to move</b><br><b>Opposite messages from different HCPs</b><br><b>Rushing (showing lack of time)</b><br><i>Interprofessionalism – multidisciplinary</i><br><i>PT present, coaching/teaching</i><br><i>Behavior towards patients: encouraging, patient, persevering, authoritative, explaining</i><br><i>Incentives for patients</i> |   |
|                                 | Patients/other                | <i>Family / visitor / volunteer support</i>   | <i>Asking family / volunteers for help</i>   | <i>Competition between patients / group therapy</i>   |
| Role and identity               | Responsibility                | <i>Feeling responsible for own mobility</i>   | <b>Attributing mobility responsibility to other HCPs – staff/patient role unclear</b><br><b>Not role to force patients (they are self-responsible)</b><br><b>Mobility not role of acute setting</b><br><b>Responsible to mobilise only if ordered</b>  |   |
| Implementation and organisation | Organisation                  | <b>Lack of sleep</b>  | <b>Lack of standardised approach</b><br><i>Assigning same patients to same staff</i><br><i>Planning between staff members</i>  | <b>Patients distributed through hospital</b><br><b>Patient having to be in room for visit / drink for exam - Medical exam postponed</b><br><i>Meaningful activities – activity program</i>              |
|                                 | Communication – collaboration |   | <i>Communication – documentation</i><br><i>Easy access to question / specialists</i>   |   |
|                                 | Orders                        |   | <b>Bedrest orders – Unclear mobility order</b><br><b>Systematical PT orders for independent patients (not efficient) – PT order</b>  | <b>Permission needed to go for a walk</b><br><b>Mobility aid available only when ordered</b>  |
|                                 | Expectations – surveillance   |   | <i>Unit expectations / goal formulation</i><br><i>Unit performance visible</i>   | <b>Mobilisation not part of HCP workflow</b><br><i>Documentation / monitoring system</i><br><i>Unit manager - chart audit – unit rounds</i><br><i>Consequences for not mobilising</i>                   |
| Environment and resources       | Time – Staffing               | <b>Visitors not letting time to patients to move</b><br><b>Missing personal mobility aids from home</b> | <b>Lack of time</b><br><b>More than one person needed to mobilise</b>  | <b>Staff shortage - No PTs on weekends</b><br><i>Mobility volunteers when staff lacking time</i>  |
|                                 | Support                       | <i>Assistance from family, visitor, volunteer</i>   | <i>Providing information and assistance</i><br><i>Assistance from other HCPs (with more expertise)</i>   | <b>No monitoring system (for mobility/aids)</b><br><i>Equipment, material (e.g., job aids, visual reminders, videos, flyers)</i>  |
|                                 | Room                          |   | <b>Using motion sensor alarm / bed barriers</b><br><b>Clutter in patients' rooms</b>   | <b>No / inappropriate / uncomfortable chair</b><br><b>Danger zones (where unable to get help)</b><br><i>Room attractive, comfortable, big enough</i>  |
|                                 | Hospital                      |   | <b>Clutter in hallways</b>   | <b>Unfamiliar environment</b><br><b>Danger zones / lack of seats / resting spots</b><br><i>Bike on the ward</i><br><i>Rooms for physical activity - shared rooms</i><br><i>Marked ambulation routes</i> |
|                                 | Medical devices               |   | <i>Reducing the number of medical devices</i><br><i>Orders to cap IV line / remove catheters</i>   | <i>IV poles with handles / to lean against</i>  |

**Legend:** Barriers are in bold, facilitators in italics. **Abbreviations:** HCP, healthcare professional; IV, intravenous; PT, physical therapist.