

MOBILITY PROMOTION IN INPATIENTS

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QUESTION

What is the current best practice for the promotion of mobility in hospitalised adults?

RESULTS

ONLINE RESOURCES (GREY LITERATURE)

Alison Mudge. (2024). **Eat Walk Engage**. [Link](#)

EAT WALK ENGAGE™ is a multi-disciplinary program that improves care for older people in hospital, prevents delirium and promotes faster recovery. EAT WALK ENGAGE™ supports hospitals to be older-person friendly through engaging older consumers and carers, improving team communication, empowering local leadership, supporting education and training, and advocating for environmental redesign.

John Hopkins Medicine. (n.d.). **AMP: Activity & Mobility Promotion – Hospital**. [Link](#)

The Activity & Mobility Promotion (AMP) - Hospital multidisciplinary program aims to specifically support acute hospitals and other health care facilities that want to change the culture of patient immobility. AMP - Hospital provides frontline caregivers and hospital leaders with the tools and support needed to design and implement structured quality improvement processes to successfully increase patient activity and mobility.

John Hopkins Medicine. (n.d.). **Activity & Mobility Promotion (AMP): Patient-centred programs to promote a culture of mobility**. [Link](#)

The AMP inter-professional program aims to support health care providers that want to change the culture of patient immobility. AMP provides frontline caregivers and hospital leaders with the tools and support needed to design and implement structured quality improvement processes to successfully increase patient activity and mobility.

Massachusetts Nurses Association. (2021). **Safe Patient Handling and Mobility Toolkit 2021 Edition**. [Link](#)

The Massachusetts Nurses Association (MNA) believes we need to provide education to promote the importance of safe patient handling equipment to move patients and facilitate early mobility. Page 22 details 'Benefits of Early Mobility' and 'Potential Complications of Bedrest'.

PEER-REVIEWED LITERATURE – MOST RECENT FIRST

Articles are grouped by theme:

- Mobility Promotion Programs
- Walking Programs
- Post-Surgical Mobility
- Mobility Measures
- Mobility Technicians
- Clinician and Patient Perspectives

Each article summary contains excerpts from the abstract and an online link.

MOBILITY PROMOTION PROGRAMS

Aronson, J. H., et al. (2023). **Benefits of an Early Mobility Program for Hospitalized Patients With Cancer.** *JCO oncology practice*, 19(7), 421–426. [Click for full-text.](#)

Use of this mobility program resulted in a significant decrease in readmissions and maintained or improved patients' mobility. This demonstrates that non-PT professionals can effectively mobilize hospitalized patients with cancer, thereby decreasing the burden on PT and nursing resources.

McLaughlin, K. H., et al. (2023). **The Johns Hopkins Activity and Mobility Promotion Program: A Framework to Increase Activity and Mobility Among Hospitalized Patients.** *Journal of nursing care quality*, 38(2), 164–170. [Click for full-text.](#)

JH-AMP is a systematic approach that includes 8 steps, described in this article: (1) organizational prioritization; (2) systematic measurement and daily mobility goal; (3) barrier mitigation; (4) local interdisciplinary roles; (5) sustainable education and training; (6) workflow integration; (7) data feedback; and (8) promotion and awareness.

Pan, Y., et al. (2023). **The effects of nurse driven mobility intervention (NDMI) on activities of daily living, mobility, fear of falling, and balance performance in hospitalized older patients: A pilot study.** *Geriatric nursing*, 49, 193–198. [Click for full-text.](#)

The purpose of this pilot study was to examine the feasibility of Nurse Driven Mobility Intervention (NDMI) in improving activities of daily living, mobility, fear of falling, balance performance, and maladaptive fall risk appraisal using a one-group pretest-posttest design. NDMI incorporates a multidisciplinary care team, early assessment, timely and frequent mobilization, and constant encouragement. The result shows a significant improvement in balance performance.

Hartley, P., et al. (2022). **Exercise for acutely hospitalised older medical patients.** *The Cochrane database of systematic reviews*, 11(11), CD005955. [Click for full-text.](#)

Exercise may make little difference to independence in activities of daily living or QoL, but probably does not result in more falls in older medical inpatients. We are uncertain about the effect of exercise on functional mobility, incidence of delirium and medical deterioration.

Caba, L. W., et al. (2022). **Promoting Nurse-Led Mobility Protocols for Hospitalized Older Adults: A Systematic Review.** *Journal of gerontological nursing*, 48(7), 24–30. [Click for full-text.](#)

The literature supports mobility programs as interventions that can have significant impacts on mobilization for medical surgical patients and reduce hospital LOS.



Goldfarb, M., et al. (2021). **Early Mobilization in Older Adults with Acute Cardiovascular Disease.** *Age and ageing*, 50(4), 1166–1172. [Click for full-text.](#)

EM is safe in older adults in the CICU and is associated with reduced discharge to healthcare facility and in-hospital mortality.

Wheatley, T., et al. (2021). **Increased Mobility and Fall Reduction: An Interdisciplinary Approach on a Hematology-Oncology and Stem Cell Transplantation Unit.** *Clinical journal of oncology nursing*, 25(3), 329–332. [Click for full-text.](#)

After the introduction of the unit-based gym program, early mobility increased and falls decreased to 2.57 per 1,000 patient days.

WALKING PROGRAMS

Gallardo-Gómez, D., et al. (2023). **Optimal dose and type of physical activity to improve functional capacity and minimise adverse events in acutely hospitalised older adults: a systematic review with dose-response network meta-analysis of randomised controlled trials.** *British journal of sports medicine*, 57(19), 1272–1278. [Click for full-text.](#)

This meta-analysis yielded low to moderate evidence supporting the use of in-hospital supervised physical activity programmes in acutely hospitalised older adults. As little as ~25 min/day of slow-paced walking is sufficient to improve functional capacity and minimise adverse events in this population.

Hastings, S. N., et al. (2023). **Effects of Implementation of a Supervised Walking Program in Veterans Affairs Hospitals: A Stepped-Wedge, Cluster Randomized Trial.** *Annals of internal medicine*, 176(6), 743–750. [Click for full-text.](#)

Although the reach was limited and variable, hospitalisations occurring during the STRIDE hospital walking program implementation period had lower odds of discharge to a skilled-nursing facility, with no change in hospital LOS or inpatient falls.

Loyd, C., et al. (2023). **A systematic review and meta-analysis: Assessment of hospital walking programs among older patients.** *Nursing open*, 10(4), 1942–1953. [Click for full-text.](#)

Hospital walking dose was reported in 6 studies and commonly as steps/24 hr. Length of stay was a common outcome reported. Difference in combined mean LOS between walking and control groups was -5.89 days. Heterogeneity across studies was considerable suggesting poor precision of estimates. Additional, high-quality trials examining hospital walking and patient outcomes of older patients is needed.

Gazineo, D., et al. (2021). **Assisted Walking Program on Walking Ability in In-Hospital Geriatric Patients: A Randomized Trial.** *Journal of the American Geriatrics Society*, 69(3), 637–643. [Request full-text.](#)

In in-hospital patients aged 65 and older, an individualized assisted walking program improves walking ability at discharge.

POST-SURGICAL MOBILITY

Yuan, W. X., et al. (2023). **Application of a standardized early activity program on enhanced recovery after surgery in patients after surgery for pulmonary nodules.** *Technology and health care*, 31(6), 2135–2143. [Request full-text.](#)

A standardized early activity program is a safe and effective nursing measure for ERAS for patients after surgery for pulmonary nodules, which can promote earlier off-bed activity, shorten the postoperative indwelling time of the closed chest drainage tube, shorten the postoperative hospital stay, improve patient satisfaction, and promote rapid recovery.

Fairhall, N. J., Dyer, S. M., Mak, J. C., Diong, J., Kwok, W. S., & Sherrington, C. (2022). **Interventions for improving mobility after hip fracture surgery in adults.** *The Cochrane database of systematic reviews*, 9(9), CD001704. [Click for full-text.](#)

Interventions targeting improvement in mobility after hip fracture may cause clinically meaningful improvement in mobility and walking speed in hospital and post-hospital settings, compared with conventional care. Interventions that include training of gait, balance and functional tasks are particularly effective.

MOBILITY MEASURES

Hoyer, E. H., et al. (2023). **A unit-based, multi-center evaluation of adopting mobility measures and daily mobility goals in the hospital setting.** *Applied nursing research*, 70, 151655. [Click for full-text.](#)

Units significantly improved documentation compliance to mobility measures and achieving daily mobility goals. Units with the highest documentation compliance rates had higher rates of daily mobility goal achievement, especially for longer distance ambulation goals.

Moyse, T., et al. (2023). **Effect of a Hospital-Acquired Pressure Injury (HAPI) Risk Score on HAPI Rates in Patients With Vascular Diseases.** *Journal of wound, ostomy, and continence nursing*, 50(1), 13–18. [Click for full-text.](#)

Despite higher patient acuity during the intervention period, HAPI rate decreased after HAPI nomogram and nurse-led mobility intervention implementation.

McLaughlin, K. H., et al. (2022). **An interprofessional examination of the Johns Hopkins Mobility Goal Calculator among hospitalized postsurgical patients.** *Nursing & health sciences*, 24(3), 735–741. [Request full-text.](#)

Individualized mobility goals created using a goal calculator have been shown to increase patient mobility on medical nursing units, but have not been studied among postoperative populations. Each patient's highest level of mobility was recorded and providers completed surveys on the appropriateness of calculated goals. Overall, 94% of patients achieved calculated goals. Patients with more pain achieved goals significantly less often than those with less pain. Those with higher mobility achieved their goals similarly with either provider. Providers reported 47% of goals were appropriate, with goals being set too low as the primary reason for goals being inappropriate. We conclude that the automated goal calculator can be used on postoperative nursing units to set realistic goals for patients after surgery.

Montgomery, C. D., et al. (2021). **Improving the assessment and documentation of patient mobility using a quality improvement framework.** *Geriatric nursing*, 42(2), 325–330. [Click for full-text.](#)

A quality improvement framework may be used to improve mobility assessment and documentation in a geriatric unit without increasing patient falls or nursing burden.

MOBILITY TECHNICIANS

Wells, C. (2024). **The Impact of Mobility Technicians on Mobility Rates for Hospitalized Adults in a Large Academic Medical Center.** *Journal of Acute Care Physical Therapy*, 15(2), 48-54. [Request full-text.](#)

There was a significant improvement in activity rates associated with MT hire that declined over time. These results may be contributed to a nonstructured MT utilization, variability with nursing education on the role of the MT, and staffing challenges that diverted the use of the MT to nonmobility activities.

Novack, T. A., et al. (2022). **Providing Inpatient Mobilization with a Mobility Technician Constrains Cost in Primary Total Knee Arthroplasty.** *The journal of knee surgery*, 35(7), 750–756. [Request full-text.](#)

The ability of MTs to increase patient discharge to home without negatively impacting LOS suggest MTs are valuable both clinically to patients, and economically to the institution. Cost analysis highlighted the substantial cost savings that MTs may create in a bundled payment system. With the well-documented benefits of early ambulation following TKA, we demonstrate how MTs can be an asset to optimizing the care pathway of TKA patients.

CLINICIAN AND PATIENT PERSPECTIVES

Herzog, P. J., et al. (2023). **Perspectives of patients and clinicians on older patient mobility on acute medical wards: a qualitative study.** *BMC geriatrics*, 23(1), 558. [Click for full-text.](#)

We identified four themes of barriers and facilitators to mobility: 1) patient-related factors; 2) clinician-related factors; 3) social interactions; and 4) non-human factors. Clinician-related factors were only mentioned in clinician focus groups (FGs). Otherwise, subthemes identified from patient and clinician FGs were similar and codes broadly overlapped. Subthemes included motivation, knowledge, expectations, mental and physical state; process, knowledge - skills, mental state - motivation; interpersonal relationships, support; hospital setting - organization.

Pavon, J. M., et al. (2021). **Towards "mobility is medicine": Socioecological factors and hospital mobility in older adults.** *Journal of the American Geriatrics Society*, 69(7), 1846–1855. [Click for full-text.](#)

A consistent theme among patients and providers was that "mobility is medicine." Categories of factors reported to influence hospital walking activity included intrapersonal factors (patients' health status, fear of falls), interpersonal factors (patient-provider communication about mobility), organizational factors (clarity about provider roles and responsibilities, knowledge of safe patient handling, reliance on physical therapy for mobility), and environmental factors (falls as a never event, patient geographical locations on hospital units).

Stutzbach, J., et al. (2021). **Systems Approach Is Needed for In-Hospital Mobility: A Qualitative Metasynthesis of Patient and Clinician Perspectives.** *Archives of physical medicine and rehabilitation*, 102(5), 984–998. [Click for full-text.](#)

Studies suggested that while mobility is an essential construct in the professional role of clinicians and in the personal identity of patients, the ability of stakeholders to realize their role in mobility is highly dependent on the hospital physical and cultural environment, administrative support, clarity in professional roles, and teamwork.

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APPENDIX

SEARCH METHODOLOGY

A systematic search was conducted for literature. The results were screened by librarians using [Covidence](#).

SEARCH LIMITS

- English-language
- Published within the last 3 years

DATABASES SEARCHED

- Medline – index of peer reviewed articles across health sciences and medicine.
- Embase – index of biomed and pharmacological peer reviewed journal articles.
- Emcare – index of nursing, allied health, critical-care medicine and more.
- Cochrane Library – collection of databases containing high-quality independent evidence.
- ProQuest Nursing & Allied Health – scholarly journals, theses, and books for nursing & AH.
- Grey literature – Google, Google Scholar, Trip database, Biomed Central Proceedings.

SEARCH TERMS

Concept	MeSH headings	Keywords
Adult	Exp Adult	Adult*
Nursing	exp Nursing Care; Nursing Staff, Hospital	Nurs*
Inpatients	Hospital patient; Hospitalization; Inpatients	Hospitali(s)(z)ed; Hospital setting; Hospital environment; In(-)hospital; In(-)patient General [within 1 word of] Medicine; Admission In(-)patient(s); Hospitali(s)(z)ed [within 1 word of] Patient(s) Hospital [within 1 word of] Patient

Mobility Promotion	Mobility Limitation; Physical Functional Performance; Accidental Falls	Promot(ing)(ion)(ions)(es)(ed); Program(me)(mes)(ming)(med); Framework(s) [within 3 words of] Mobility; Activity; Ambulation; Walking; Movement
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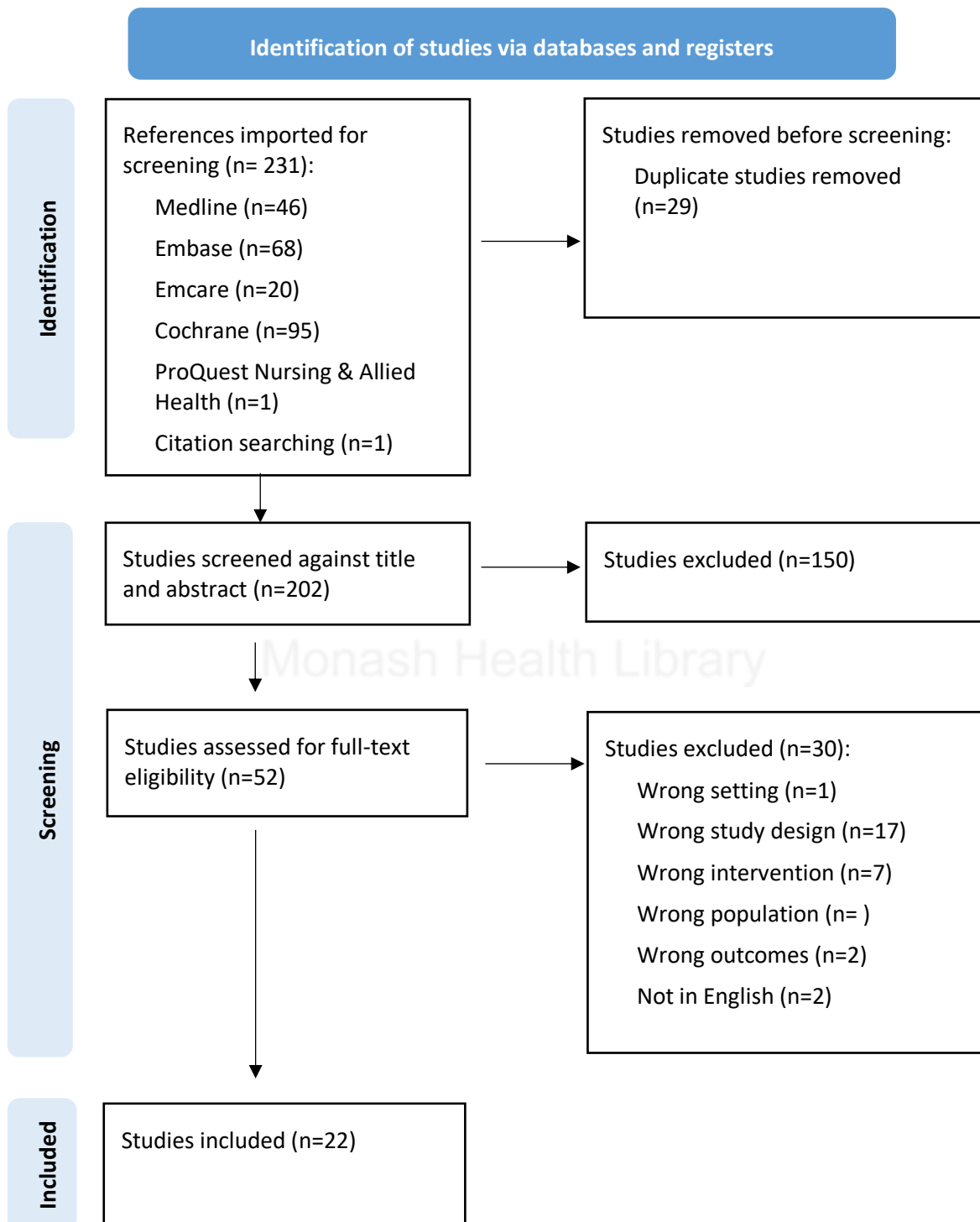
MEDLINE SEARCH STRATEGY

Ovid MEDLINE(R) ALL <1946 to April 30, 2024>

- 1 ((promot* or program* or framework) adj3 (mobility or activity or ambulation or walking or movement)).ti,ab,kf. 67938
- 2 Mobility Limitation/ or *Physical Functional Performance/ or Accidental Falls/pc [Prevention & Control] 17014
- 3 1 or 2 84601
- 4 (hospitali?ed or hospital setting or hospital environment or in?hospital or in?patient).mp. 283040
- 5 (general adj (medicine or admission)).mp. 6046
- 6 (in?patient* or (hospitali?ed adj patient*) or (hospital adj patient*)).mp. 206864
- 7 hospital patient/ or hospitalization/ or Inpatients/ 166682
- 8 4 or 5 or 6 or 7 424476
- 9 Nurs*.mp. 832012
- 10 exp Nursing Care/ or Nursing Staff, Hospital/ 181642
- 11 9 or 10 832571
- 12 adult*.mp. 6582842
- 13 exp adult/ 8051323
- 14 12 or 13 8828696
- 15 3 and 8 and 11 and 14 459
- 16 limit 15 to (english language and last 3 years) 46



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