The Review Of
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Advancing Patient Recovery Through Nursing and Physiotherapy: Functional Assessment, Rehabilitation, Pain Management, and Long-Term Outcomes

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Abstract

Background: Recovery after hospitalization depends on how well patients regain daily function and resume meaningful activities. Nursing and physiotherapy contribute at different points in the day, making a shared assessment and treatment plan central to continuity of rehabilitation. Methods: This critical narrative review drew on targeted searches for peer-reviewed adult studies, evidence syntheses, and guidelines available through November 16, 2026. Stroke, hip fracture, critical illness, and heart failure were selected to compare rehabilitation from admission through follow-up. Results: Structured assessment can distinguish pre-existing dependence from new functional loss and identify barriers to activity. Organized stroke care improves independence, and multidisciplinary inpatient rehabilitation after hip fracture probably reduces the combined risk of death or deterioration in residential status. Trials in acute stroke and mechanical ventilation did not support routine increases in early mobilization intensity. Tailored rehabilitation after hospitalization for heart failure improved physical performance without establishing a reduction in readmissions. Assessing pain during movement helps clinicians balance analgesia with alertness and safe participation. Evidence for sustained benefit varies by setting and outcome. Conclusion: Nursing and physiotherapy teams can coordinate recovery around a documented functional baseline, a task the patient values, and a mobility plan adjusted to clinical tolerance. Discharge planning should connect that plan to follow-up measures of independence, pain interference, and participation.

Keywords: nursing; physiotherapy; rehabilitation; mobility limitation; pain management; activities of daily living

1. Introduction

A patient may enter hospital walking independently and leave needing help to reach the bathroom despite successful treatment of the admitting illness. This loss of independence can reflect the acute disease, pre-existing vulnerability, treatment restrictions, or reduced opportunities to move. It is particularly consequential in older adults because a new need for help with a basic activity may determine whether discharge home is feasible. Trials of exercise in older medical inpatients support the possibility of improving function before discharge, but an improved performance score at that point does not establish lasting independence. [1, 2]

Nurses observe what the patient actually does during routine care and across shifts. Physiotherapists assess movement capacity, identify modifiable limitations, and prescribe progression, aids, and levels of

assistance. The two observations are complementary: a patient who can transfer with a therapist may remain dependent in practice if the ward team does not have the equipment, staffing, or instructions to repeat the transfer safely. The purpose of this review was to examine how functional assessment, therapeutic rehabilitation, and pain management can be coordinated across the hospital-to-home transition and to identify which outcomes are supported by comparative evidence. [3, 4]

2. Methods

Targeted literature searches on November 16, 2026, used combinations of terms for functional assessment and hospital mobility; stroke, hip fracture, critical illness, and heart failure rehabilitation; movement-evoked pain; and caregiver training, discharge, and follow-up. Publication details were checked against PubMed records. English-language journal articles addressing adult hospital, post-acute, or community recovery were eligible for consideration. The review prioritized randomized trials, systematic reviews, clinical practice guidelines, and original measurement studies. Landmark studies were included regardless of publication year. Pediatric rehabilitation, primary prevention in healthy adults, and isolated modalities without a relevant functional or symptom outcome were outside the scope.

Evidence was organized by care phase and interpreted according to the enrolled population, intervention actually delivered, comparator, and follow-up interval. Trial findings were distinguished from associations in implementation studies and from recommendations based on professional consensus. The review did not use exhaustive screening, independent risk-of-bias assessment, or a new quantitative synthesis. It draws on published literature and contains no original patient data.

3. Results

3.1 Functional assessment that changes care

Assessment should begin by establishing what the patient did before the illness, what the patient can do now under observation, and how much help is used in routine care. Pre-illness walking, transfers, toileting, and stair use may require corroboration from a caregiver or earlier records. In hospital, record the task completed, device, physical assistance, cueing, and limiting symptom. Record a task deferred for instability separately from one attempted and failed. The Barthel Index describes dependence in basic activities; the Activity Measure for Post-Acute Care (AM-PAC) short forms assess basic mobility and daily activity separately. AM-PAC scores have predicted discharge destination in cohorts, but housing, caregiver capacity, and available services remain essential to the individual decision. [1, 5-7]

The Intensive Care Unit (ICU) Mobility Scale records the highest mobility milestone achieved and permits a common description across nursing and physiotherapy staff. When standing and walking are feasible, the Short Physical Performance Battery measures standing balance, gait speed, and repeated chair rises. Neither scale captures all the activities a patient needs at home. A rise in mobility score should therefore be interpreted alongside the assistance required and the task the patient wants to resume. Table 1 matches measures to clinical decisions and identifies common limits. [8, 9]

Table 1. Selecting functional and pain measures for adult recovery

Measure	What it captures	Use and limitation
Barthel Index	Dependence in basic daily activities	Track assistance with self-care and mobility; may miss more demanding home activities. [5]
AM-PAC 6-Clicks	Separate short forms for mobility and daily activity	Record inpatient limitations; use alongside clinical and home assessment for discharge. [6, 7]
ICU Mobility Scale	Highest observed ICU mobility level	Communicate mobility milestones; also document why activity was limited. [8]
Short Physical Performance Battery	Balance, gait speed, and chair rises	Track lower-limb performance when safe; does not directly measure home participation. [9]
Critical-Care Pain Observation Tool	Pain-related behavior when self-report is unavailable	Reassess during care when behavior is observable; use self-report when feasible. [10, 11]

A shared daily goal can turn the assessment into care. For example, the physiotherapist establishes whether a patient can reach the toilet with a walker and one trained assistant; the nurse records whether that task is repeated during the shift and whether dizziness, pain, or fatigue limits it. A multisite mobility program increased documentation and goal achievement, though its implementation design could not isolate the effect of documenting goals. In a stepped-wedge trial in Veterans Affairs hospitals, implementation of a supervised walking program was associated with fewer discharges to skilled nursing facilities; direct program reach was low, and length of stay did not change. Figure 1 presents a proposed workflow for using the bedside assessment to plan and adjust activity. [3, 4]

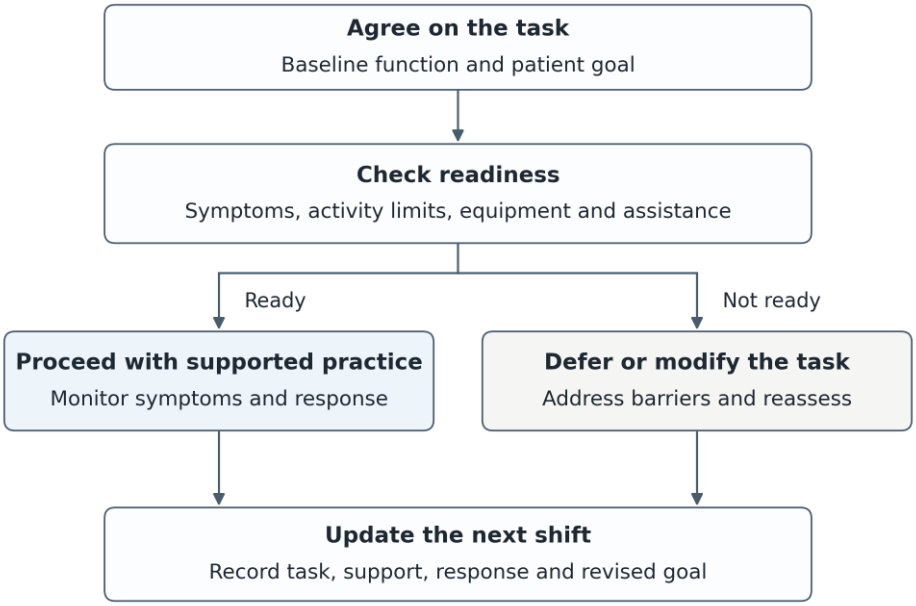


Figure 1. Shared bedside decision process for mobility. This proposed workflow links a patient goal to clinical readiness, assistance, and symptom response. Readiness criteria depend on the diagnosis and local protocols. [4, 12, 25, 28]

3.2 Pain management that supports movement

A pain assessment intended to guide rehabilitation should capture intensity at rest, intensity during the target maneuver, and the effect on function. A low resting score can coexist with pain severe enough to prevent rolling, weight bearing, or deep breathing. For patients unable to self-report, the Critical-Care Pain Observation Tool can support behavioral assessment when behaviors are observable. It does not quantify the subjective experience of pain on the same scale as self-report; changes in vital signs should prompt assessment and should not be used alone to diagnose pain. The treatment response is best reassessed on the same task when it is safe to repeat. [10-12]

For postoperative patients, nurses and physiotherapists can coordinate activity with the prescribed analgesic plan and communicate whether relief is sufficient for the next task. Positioning, physical support, and pacing complement procedure-specific multimodal analgesia. Sedation, respiratory status, dizziness, and motor weakness matter as much as the pain score when deciding whether to progress. A Cochrane review of peripheral nerve blocks for hip fracture found less movement pain shortly after block placement and probable earlier first mobilization; it did not establish a mortality benefit. When a block is used, the team should know whether expected motor or sensory effects change transfer assistance. Persistent or disproportionate new pain warrants clinical reassessment before progression. [12-14]

After discharge, pain may continue to limit activity even when the initial analgesic plan worked in hospital. Reassessment should identify the movement that provokes symptoms, how long the symptoms last, and whether changing the task or degree of support restores participation. New or worsening pain that is inconsistent with expected recovery needs investigation before exercise is intensified. For expected symptoms, a graded return to activity can be paired with review of medication harms and clear instructions

about whom to contact. The goal is to restore a useful activity while monitoring the pain and treatment effects that restrict it. [12, 13]

3.3 Therapeutic rehabilitation across clinical settings

Stroke. Organized stroke unit care improves the likelihood of survival, independence, and living at home at about one year. The trials evaluated a service that combined specialized care, coordinated rehabilitation, and supervision, so they cannot assign benefit to one profession or exercise technique. Current stroke recommendations support assessment of rehabilitation needs, goal setting with the patient, and task-specific practice once clinically appropriate. A Very Early Rehabilitation Trial (AVERT) found that higher-dose out-of-bed mobilization within 24 hours reduced the likelihood of a favorable three-month outcome. The comparison was with usual stroke unit care, which also included early activity for many patients. An as-treated dose analysis suggested an association with shorter, more frequent sessions, but did not randomize patients to different session schedules. [15-19]

Hip fracture. After surgical repair, the care team needs a clear weight-bearing order, pain plan, and assessment of transfers before advancing gait or stair practice. Inpatient multidisciplinary rehabilitation probably reduces death or deterioration in residential status as a composite over six to twelve months (risk ratio, 0.88; 95% confidence interval, 0.80–0.98); the estimate does not establish a mortality benefit alone. Evidence supports exercise that includes gait, balance, and functional tasks. Postdischarge findings vary: a program of functional exercise after completion of standard rehabilitation produced modest gains in physical performance in one trial, while the 2025 Fracture in the Elderly Multidisciplinary Rehabilitation trial found no improvement in extended daily activity at one year. Limited delivery of the planned intervention during the pandemic complicates interpretation of that result. [20-24]

Critical illness. Screening before each mobilization attempt should include respiratory and circulatory status, alertness, device security, and restrictions from the treating team. In selected previously independent ventilated adults, early physical and occupational therapy integrated with daily sedation interruption improved independence at discharge in a small trial. In the larger TEAM trial, increased early active mobilization during ventilation did not improve days alive and out of hospital through six months and produced more potentially mobilization-related adverse events. The 2025 critical care guideline conditionally favors enhanced mobilization or rehabilitation over usual care; this leaves room for selecting the patient, session length, and level of activity rather than applying the TEAM regimen to all ventilated patients. [25-28]

Heart failure. Frailty after acute decompensation may limit a patient's ability to begin conventional endurance training. The REHAB-HF trial used progressive training across strength, balance, mobility, and endurance, started in hospital or soon afterward and continued as an outpatient. Physical performance improved at three months, but the trial did not establish a reduction in rehospitalization. Broader evidence for exercise-based cardiac rehabilitation in heart failure supports fewer admissions and better disease-specific quality of life in studied populations. These estimates reflect a different mix of settings and patients; they cannot be substituted for the result of an acute transitional program. Table 2 gives the comparative estimates for selected inpatient and transitional interventions. [29, 30]

Table 2. Selected comparative trials of rehabilitation across settings

Study and setting	Intervention and outcome	Main comparison
Martínez-Velilla et al., older medical inpatients	Individualized exercise; Short Physical Performance Battery at discharge	Between-group difference, +2.2 points (95% CI, 1.7–2.6). [2]
AVERT, acute stroke	Higher-dose very early mobilization; modified Rankin Scale 0–2 at three months	46% vs 50%; adjusted odds ratio, 0.73 (95% CI, 0.59–0.90). [18]
FEMuR III, hip fracture	Enhanced community rehabilitation; extended daily activities at 52 weeks	No clear difference at 52 weeks. Longitudinal estimate accounting for missing data: +0.1 points (95% CI, −1.1 to 1.3). [24]
Schweickert et al., mechanical ventilation	Early physical and occupational therapy with sedation interruption; discharge independence	59% vs 35%; odds ratio, 2.7 (95% CI, 1.2–6.1). [26]
TEAM, mechanical ventilation	Increased early mobilization; days alive and out of hospital by day 180	Median 143 vs 145 days; difference, −2 days (95% CI, −10 to 6). Potentially related adverse events: 9.2% vs 4.1%. [27]
REHAB-HF, older adults admitted with heart failure	Transitional rehabilitation; Short Physical Performance Battery at three months	Adjusted difference, +1.5 points (95% CI, 0.9–2.0). [29]

CI, confidence interval. Comparisons are intervention versus usual care where applicable. Different endpoints and time points preclude direct comparison of effect sizes.

3.3 Discharge and function after hospitalization

Transferring care requires communicating the assistance needed for specific tasks and confirming that the patient or caregiver can carry out the plan in the receiving setting. A mobility status such as "walks with assistance" is insufficient if a patient faces stairs at home or lacks help overnight. Early supported discharge after stroke can reduce death or dependency in selected patients when a coordinated team delivers rehabilitation at home. A cluster trial of a structured inpatient caregiver training program found no difference in extended daily activities or caregiver burden, illustrating that the content of teaching, its timing, and service availability matter. Demonstration and patient or caregiver teach-back help clarify readiness but do not substitute for follow-up. [16, 31, 32]

In heart failure, an early trial of nurse-directed discharge planning and home follow-up reduced rehospitalizations; a later pragmatic transitional care trial did not improve its acute-care use and mortality composites. The programs and health systems differed, so the findings neither guarantee a reduction in readmissions nor invalidate a handoff that meets an individual patient's needs. Remote therapy can reduce travel when the target task is suitable: a trial of dose-matched home telerehabilitation after stroke found noninferior arm motor gains to clinic-based therapy in selected participants. That finding does not establish equivalence for gait, falls, or people who lack reliable technical or caregiver support. Figure 2 links discharge verification with follow-up action. [33-35]

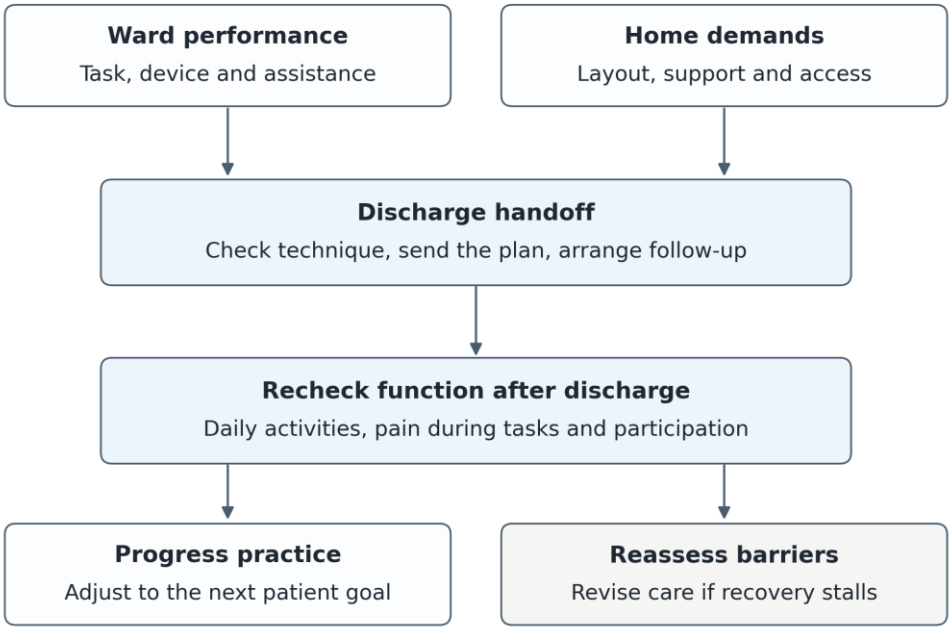


Figure 2. Transition from ward performance to recovery at home. The proposed handoff connects observed function with home demands and a planned reassessment of assistance, pain during activity, and participation. [16, 31, 33, 34, 40]

4. Discussion

The clearest evidence supports organized care for defined populations and rehabilitation tailored to a measurable deficit. Coordinated stroke care and inpatient hip fracture pathways provide a setting in which patients can receive repeated, clinically appropriate practice. The larger early mobilization trials show why that principle should not be converted into a fixed quota. The onset-to-activity interval, activity practiced, assistance and monitoring, cumulative dose, and comparator all matter. Programs can increase the amount of therapy delivered without improving the outcome patients value, especially when usual care already includes active rehabilitation. [15, 18, 20, 27, 28]

Bundle and implementation studies require similar care in interpretation. Better adherence to a bundle for pain, sedation, delirium, mobility, and family engagement was associated with favorable ICU outcomes in a large cohort. A 2026 single-center randomized trial of that bundle did not demonstrate lower delirium incidence or better function at ICU discharge; fidelity was incomplete. Differences in design, baseline care, and exposure prevent attributing outcomes to any one component. In the RECOVER trial, adding rehabilitation and information after ICU discharge improved aspects of satisfaction but did not improve mobility or quality of life compared with usual care. Patient experience remains important, although it measures a different outcome from regained independence. [36-38]

Recovery measurement should continue after discharge. Persistent exercise limitation was documented years after acute respiratory distress syndrome, and a recent consensus set for critical illness rehabilitation recommends measuring function alongside daily activities, survival, quality of life, exercise capacity, cognition, emotional health, and frailty. A feasible service evaluation might repeat one validated functional measure and one patient-reported measure at discharge and at a prespecified follow-up, with a concrete participation goal such as walking to a shop or returning to work. The analysis should report deaths and loss to follow-up separately; gains among surviving respondents alone can overstate population recovery. In Saudi services, measures and instructions should be available in the patient's preferred language. The Arabic Stroke-Specific Quality of Life scale has validation data in people with mild to moderate stroke, an example of matching the measure to its validated population. [39-41]

The evidence is strongest for specific services and patient groups, with fewer direct comparisons of how

nursing and physiotherapy divide tasks or communicate across shifts. This review applies those findings to concrete care decisions, but narrative selection is susceptible to omissions, and differences in baseline dependence, comparator care, and outcome instruments preclude a single pooled estimate. Long-term pain interference and participation were less consistently captured than early mobility. Pragmatic studies should describe what care each group actually received, verify whether prescribed activity occurred, and measure falls, treatment interruptions, patient-reported function, and caregiver workload. Testing a shared, documented plan against existing practice would help distinguish the contribution of coordination from that of additional therapy time. [4, 20, 40]

5. Conclusion

Nursing and physiotherapy can support recovery by agreeing on a functional baseline, a task the patient values, and explicit instructions for assistance and progression. Pain relief should be judged by whether the patient can perform that task safely, with attention to sedation and other treatment effects. Evidence supports selected multidisciplinary programs, while the optimal timing and dose of activity depend on the clinical setting. A handoff that records what the patient can actually do and a follow-up assessment of daily function and participation are needed to determine whether hospital gains persist.

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