

Medical & Nursing Case Study: When Pain Scores Stayed High, but Healing Improved

Nursing-Led Mobility Coaching After Total Knee Replacement

Executive Summary

This case study examines a postoperative total knee replacement patient whose reported pain scores remained consistently high despite measurable functional improvement. Traditional pain-focused care failed to explain the disconnect between subjective pain reports and objective recovery markers. A nursing-led mobility coaching approach reframed care priorities toward movement confidence, patient education, and functional goals. The intervention improved ambulation, reduced length of stay, and increased patient engagement without escalating pharmacologic pain management.

Background & Context

The patient, identified as P.L., was a 67-year-old individual admitted for elective total knee arthroplasty due to advanced osteoarthritis. Preoperative assessment showed limited mobility, moderate pain tolerance, and anxiety related to postoperative recovery. Standard postoperative protocols emphasized pain score reduction as a primary indicator of recovery readiness. On postoperative day two, P.L. reported persistent pain levels rated 7–8 on a 10-point scale, which triggered concern among the care team despite stable vitals and intact surgical healing.

Problem Identification (The Challenge)

The central challenge involved conflicting indicators of recovery. Pain scores remained elevated, yet physical therapy reports showed improving range of motion and weight-bearing tolerance. Nursing staff observed that P.L. avoided movement not due to physical limitation but fear of worsening pain. Escalating analgesics risked side effects without addressing the underlying barrier to recovery. The care team needed an approach that balanced patient-reported pain with functional progress.

Assessment & Data Collection

Assessment included routine pain scoring, mobility tracking, nursing observations, and physical therapy notes. Nurses documented hesitation during transfers, guarded movements, and repeated reassurance-seeking behaviors. Functional data included gait distance, stair navigation attempts, and assistance level required. No signs of surgical complications or infection appeared in clinical data. The pattern suggested a psychological component influencing pain perception and recovery behavior.

Analysis & Clinical Evaluation

Evaluation focused on the mismatch between pain perception and healing trajectory. Literature on postoperative recovery highlights that fear-avoidance and pain catastrophizing can slow functional progress. Nursing observations revealed that P.L. associated movement with harm rather than healing. Pain scores functioned as a distress signal rather than a reliable recovery metric. This reframing shifted the focus from pain elimination to safe movement engagement.

Nursing Intervention & Care Plan

The nursing-led intervention prioritized mobility coaching over pain score suppression. Nurses introduced short, supervised movement sessions paired with clear explanations of expected discomfort versus injury pain. Education emphasized the role of movement in healing and normalized postoperative pain during activity. Nurses collaborated with physical therapy to align language and goals, reinforcing consistency across care interactions.

Implementation

The care plan unfolded over four days. Nurses coached P.L. through transfers, walking, and basic self-care tasks while reinforcing functional milestones rather than pain ratings. Analgesics remained stable, avoiding escalation. Daily goals focused on distance walked and independence level. Nursing documentation tracked confidence, participation, and patient-reported understanding of recovery.

Results & Recommendations

By discharge, P.L. continued to report pain levels of 6–7, yet ambulation distance doubled and independence increased. Length of stay shortened by one day compared to unit average. The patient expressed greater confidence and satisfaction with recovery progress. This case suggests that nursing-led mobility coaching can improve outcomes even when pain scores remain elevated. Future care plans should integrate functional indicators alongside pain assessments to guide postoperative decisions.

References & Appendices



Supporting materials include nursing notes, mobility logs, and patient education tools used during care. Appendices contain anonymized documentation samples for instructional review.

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