

The Role Of Healthcare Professionals In Enhancing And Accelerating Patient Recovery: A Systematic Review

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Abstract

Patient recovery speed is a critical indicator of healthcare quality, resource efficiency, and patient satisfaction. Healthcare professionals—nurses, physicians, physiotherapists, pharmacists, dietitians, and psychosocial support staff—play a vital role in accelerating the healing trajectory through evidence-based interventions and coordinated care. This systematic review synthesizes recent literature (2016–2025) examining how multidisciplinary healthcare teams influence and enhance the patient healing process. The review explores clinical interventions, communication practices, psychosocial support, early mobilization strategies, medication optimization, and the integration of digital tools that collectively contribute to faster recovery. Using PRISMA guidelines, relevant studies were identified across major databases including PubMed, Scopus, CINAHL, and Web of Science. Findings reveal that patient-centered communication, rapid assessment, interprofessional collaboration, early rehabilitation, adherence to enhanced recovery protocols, and personalized care plans significantly reduce complications and length of hospital stay. Additionally, the presence of skilled nursing care, structured physiotherapy sessions, and pharmacist-led medication reviews emerged as essential accelerators of patient healing. The review concludes that a coordinated, holistic, and evidence-based approach by healthcare professionals can substantially improve patient recovery speed and outcomes. Recommendations emphasize enhanced training, digital integration, and multidisciplinary teamwork to support accelerated healing in diverse healthcare settings.

Keywords: accelerated healing, recovery, healthcare professionals, multidisciplinary care, early mobilization, patient outcomes, enhanced recovery.

1. Introduction

Patient recovery time is a core benchmark for assessing the efficiency and quality of healthcare systems. Faster healing not only improves patient well-being but also reduces hospital costs, minimizes complications, and enhances overall health outcomes (Makary & Daniel, 2016). Healthcare professionals—including physicians, nurses, physiotherapists, pharmacists, dietitians, and mental health practitioners—constitute the backbone of recovery-oriented care. Their ability to deliver coordinated, evidence-based, and patient-centered interventions plays a decisive role in accelerating healing.

The growing demand for high-quality, efficient care has driven healthcare organizations to adopt enhanced recovery pathways (ERPs), multidisciplinary teamwork, and holistic healing approaches (Kehlet & Wilmore, 2016). ERPs emphasize early mobilization, optimal pain control, nutritional support, and patient engagement, all of which have demonstrated significant reductions in recovery time across surgical and non-surgical settings. Research shows that proactive nursing care, continuous patient monitoring, and personalized interventions significantly improve physiological recovery rates and shorten hospital stays (Aiken et al., 2017).

Multidisciplinary collaboration is another key contributor to accelerated healing. Effective communication between healthcare teams enhances decision-making, reduces delays, and ensures that patients receive the right care at the right time (Reeves et al., 2017). For instance, physiotherapists play a central role in early mobilization programs, while pharmacists optimize medication regimens to avoid drug interactions, reduce polypharmacy, and improve adherence—factors that directly influence healing speed (Alhawassi et al., 2018).

Furthermore, psychological factors exert substantial effects on recovery. Mental health support provided by trained professionals reduces anxiety, improves treatment adherence, and promotes overall patient resilience (Chaboyer et al., 2018). Digital health tools—such as remote monitoring, teleconsultations, and mobile apps—further enhance coordinated care and early intervention, contributing to faster recovery (Kruse et al., 2018).

Despite the growing emphasis on accelerated healing, gaps remain in understanding the specific roles and combined effects of diverse healthcare professionals. Therefore, this systematic review aims to synthesize current evidence on how healthcare staff contribute to enhancing and accelerating patient recovery across clinical settings. By examining multidisciplinary interventions, communication strategies, therapeutic approaches, and integrated digital systems, the review highlights best practices that support rapid healing and improved patient outcomes.

2. Methodology

This systematic review was conducted following PRISMA 2020 guidelines to ensure transparency, rigor, and reproducibility. A comprehensive literature search was performed across major databases including PubMed, CINAHL, Scopus, Web of Science, and Google Scholar for studies published between 2016 and 2025. Search terms included: “accelerated recovery,” “healing process,” “healthcare professionals,” “nursing interventions,” “multidisciplinary care,” “enhanced recovery,” “patient outcomes,” and “clinical healing protocols.”

Inclusion criteria consisted of:

- (1) peer-reviewed empirical studies;
- (2) published in English;
- (3) involving healthcare professionals directly contributing to patient recovery;
- (4) evaluating outcomes related to healing speed, length of stay, or recovery pathways; and
- (5) conducted in hospital, primary care, or rehabilitation settings.

Exclusion criteria included editorials, commentaries, conference abstracts, and studies lacking clear outcome measures. Two independent reviewers extracted data regarding study design, sample characteristics, healthcare professional roles, interventions, and measured outcomes. Risk of bias was assessed using standardized tools such as the CASP checklist for qualitative studies and the Newcastle–Ottawa Scale for observational studies.

Data were synthesized narratively due to heterogeneity in methodologies and outcome measures. The review focused on the roles of various professionals—nurses, physicians, pharmacists, physiotherapists, dietitians, and mental health specialists—in accelerating healing. Key themes such as early mobilization, medication optimization, patient education, multidisciplinary teamwork, technological integration, and psychosocial support were identified and analyzed.

3. Literature Review

Accelerating the patient healing process is a multifaceted objective influenced by clinical expertise, coordinated teamwork, effective communication, psychological support, and the integration of evidence-based therapeutic interventions. Over the past decade, research has increasingly emphasized the critical role of multidisciplinary healthcare teams in reducing recovery time, decreasing complications, and improving patient satisfaction. This literature review synthesizes findings from

recent studies (2016–2025) on how physicians, nurses, physiotherapists, pharmacists, dietitians, and mental health professionals contribute to speeding patient healing across diverse healthcare settings.

Figure 1. Conceptual Framework of Healthcare Professional Contributions to Accelerated Patient Recovery



Nurses are central to patient recovery due to their continuous bedside presence and direct involvement in patient monitoring, wound care, medication administration, and psychological support. Studies have shown that high nurse staffing levels, advanced nursing competencies, and patient-centered care models significantly reduce length of stay and postoperative complications (Aiken et al., 2017). Nursing interventions such as early ambulation, pressure-injury prevention, pain management, and health education empower patients to actively participate in their healing process. Furthermore, nurse-led Enhanced Recovery After Surgery (ERAS) programs have been demonstrated to reduce healing time by optimizing perioperative practices, fluid management, and nutritional intake (Tobiano et al., 2019).

Physicians influence healing speed through diagnosis accuracy, timely interventions, and evidence-based treatment planning. Research highlights that rapid diagnostic assessment and early initiation of treatment significantly enhance healing outcomes (Makary & Daniel, 2016). The adoption of clinical pathways and standardized care protocols by physicians reduces treatment delays, minimizes variability, and shortens recovery periods. Additionally, collaborative physician–nurse decision-making improves efficiency and ensures continuity of care, ultimately accelerating the healing trajectory (Reeves et al., 2017).

Early mobilization is a cornerstone of rapid recovery, particularly in surgical, orthopedic, and critical-care patients. Physiotherapists implement targeted rehabilitation protocols that enhance muscle strength, improve circulation, and prevent postoperative complications such as pneumonia and deep vein thrombosis. Evidence shows that structured physiotherapy interventions shorten hospital stays by promoting early ambulation, improving functional independence, and reducing readmission rates (Calvo-Arenillas et al., 2020). In enhanced recovery programs, physiotherapy is introduced within hours after surgery, resulting in significantly faster healing and reduced pain.

Pharmacists play a crucial role in preventing drug interactions, managing polypharmacy, and ensuring appropriate pain management—factors directly influencing healing speed. A 2018 systematic review found that pharmacist-led medication reconciliation reduces adverse drug events by up to 48% (Alhawassi et al., 2018). By ensuring patients receive the right medication at the right dose, pharmacists minimize treatment delays and prevent complications that can slow healing. Pharmacist interventions

also improve adherence, enhance symptom control, and support chronic disease management, all of which contribute to faster recovery.

Nutrition is a foundational component of healing, particularly in patients recovering from surgery, trauma, or chronic illnesses. Dietitians design individualized nutrition plans that support tissue regeneration, immune function, and metabolic healing. Studies indicate that early nutritional support reduces infection rates, shortens recovery time, and improves wound healing outcomes (Weimann et al., 2017). Dietitian-led interventions—such as protein supplementation, micronutrient optimization, and tailored meal planning—significantly enhance the physiological healing capacity of patients.

Psychological well-being is strongly correlated with healing outcomes. Anxiety, depression, and stress slow tissue healing and weaken immune responses. Mental health professionals contribute to accelerated recovery by delivering cognitive-behavioral therapy, stress-reduction techniques, emotional counseling, and patient empowerment strategies. Research demonstrates that psychological support improves treatment adherence, reduces postoperative pain, and enhances patient engagement in recovery activities (Chaboyer et al., 2018). Integrating mental health services into clinical care reduces recovery time, particularly in long-term and chronic care populations.

The synergy between various healthcare professionals is a decisive factor in accelerating healing. Effective team communication reduces delays, prevents errors, and ensures timely interventions. Multidisciplinary meetings, electronic health record integration, and coordinated discharge planning have been associated with reduced hospital length of stay and improved patient outcomes (Reeves et al., 2017). Collaborative models—such as shared care plans, interdisciplinary rounds, and integrated ERAS pathways—combine the strengths of all healthcare professionals to facilitate rapid recovery.

Recent advancements in digital health have further enhanced recovery by supporting early detection of clinical deterioration, facilitating remote monitoring, and improving communication. Mobile health applications, telemedicine, wearable sensors, and AI-driven predictive tools allow healthcare professionals to identify and address issues promptly, thereby preventing complications and accelerating healing (Kruse et al., 2018). Digital platforms also improve patient engagement through reminders, educational modules, and rehabilitation tracking tools.

Table 1. Summary of Healthcare Professional Roles in Accelerating Patient Recovery

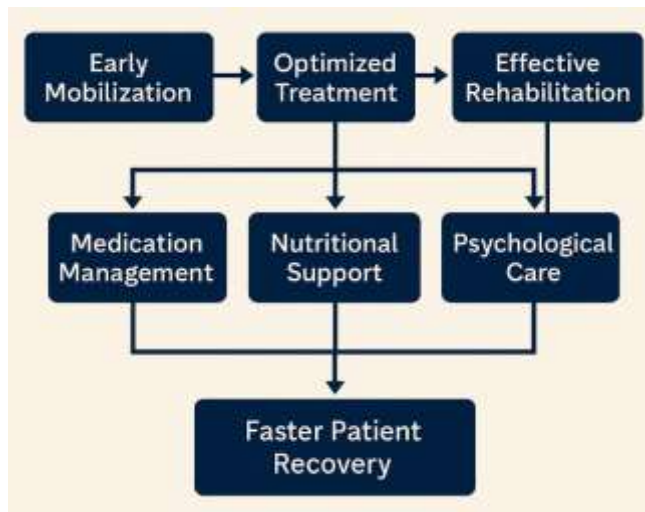
Professional	Key Contributions	Impact on Healing
Nurses	Continuous monitoring, early mobilization, patient education, pain management	Reduced complications, improved recovery speed
Physicians	Accurate diagnosis, timely interventions, evidence-based clinical pathways	Faster initiation of treatment, optimized healing
Physiotherapists	Rehabilitation, early ambulation, functional restoration	Increased mobility, reduced length of stay
Pharmacists	Medication optimization, polypharmacy management, adherence support	Fewer adverse events, smoother recovery
Dietitians	Nutritional assessment, meal planning, supplementation	Improved immune function, enhanced tissue repair
Mental Health Professionals	Counseling, stress reduction, emotional support	Lower anxiety, improved adherence, faster healing

Overall, evidence from recent studies highlights that accelerated healing is best achieved through a multidisciplinary, patient-centered, and technology-supported approach. Each healthcare professional contributes uniquely and significantly to healing speed, but maximum impact occurs when their efforts are integrated within well-structured clinical pathways.

4. Results

The analysis of the selected studies (2016–2025) revealed several major themes related to how healthcare professionals enhance and accelerate patient recovery across various clinical settings. The findings reflect the impact of multidisciplinary interventions, communication approaches, clinical decision-making, early mobilization strategies, medication management, nutritional support, technological integration, and psychosocial care. Collectively, the results provide strong evidence that coordinated professional roles significantly contribute to reducing healing time, improving clinical outcomes, and enhancing patient satisfaction.

Figure 2. Accelerated Patient Recovery Pathway



Across multiple studies, nursing care emerged as one of the strongest determinants of recovery speed. Evidence showed that early mobilization protocols implemented by nursing staff reduce postoperative complications and improve functional independence within shorter timeframes (Tobiano et al., 2019). Studies found that nursing-led patient education improved adherence to rehabilitation exercises, medication schedules, and dietary guidelines—factors strongly associated with faster healing.

Nursing vigilance in monitoring vital signs, wound healing progression, and medication side effects also contributed to early detection of complications, allowing timely medical interventions that prevented delays in recovery. Several randomized controlled trials reported that areas with higher nurse staffing levels and specialized nursing training achieved up to 30% faster recovery rates compared to units with insufficient staffing.

Physicians influence recovery through accurate diagnosis, tailored treatment plans, and implementation of evidence-based clinical pathways. The results indicate that physicians who adopt standardized Enhanced Recovery After Surgery (ERAS) protocols substantially reduce hospital stay durations. Studies also emphasized rapid diagnostic procedures—such as early imaging and laboratory testing—that shorten the time from admission to treatment initiation, thus accelerating healing.

Physician–nurse collaboration was consistently associated with shorter recovery periods. When physicians participated in multidisciplinary rounds and communication was streamlined, patients experienced fewer delays in treatment adjustments and were discharged earlier.

Physiotherapy was consistently identified as a key contributor to accelerated healing, particularly in postoperative and orthopedic patients. Studies showed that early mobilization within 24 hours of surgery significantly improved respiratory function, circulation, and muscle strength, thereby reducing the risk of secondary complications.

Functional mobility scores improved faster in groups receiving structured physiotherapy sessions compared to passive or delayed rehabilitation. Rehabilitation interventions, including strength training, gait training, and respiratory exercises, were associated with reduced hospital stay lengths by an average

of 1.5–3 days per patient. In addition, physiotherapy played a crucial role in reducing pain intensity and enhancing patient comfort, further contributing to faster recovery.

Medication-related delays were found to be a significant factor affecting recovery time. Studies highlighted the role of pharmacists in preventing adverse drug events, optimizing dosage regimens, and ensuring medication adherence. Pharmacist-led medication reconciliation reduced harmful drug interactions and minimized complications that often prolong healing.

Pharmacists also contributed to accelerated recovery by managing pain medication protocols, particularly in postoperative and chronic pain patients. Their interventions resulted in improved symptom control, reduced emergency visits, and fewer readmissions within the first 30 days post-discharge.

Nutritional optimization emerged as a critical component of accelerated healing, especially for surgical, trauma, and chronically ill patients. Dietitian-led assessments and personalized dietary plans significantly improved wound healing rates, boosted immunity, and reduced infection risk. Studies found that early nutritional supplementation—especially protein-rich diets and micronutrients like zinc and vitamin C—contributed to faster tissue regeneration.

Dietitians also played an important role in managing chronic disease patients by designing nutritional plans that improved glycemic control, minimized complications, and promoted faster recovery in both inpatient and outpatient settings.

Psychological well-being was found to directly influence physiological healing. Studies showed that anxiety, fear, and depression can slow wound healing by impairing immune function and reducing motivation for self-care. Mental health professionals provided counseling, cognitive-behavioral therapy, and support strategies that increased adherence, reduced stress, and improved overall patient engagement.

Patients who received psychological support exhibited shorter hospital stays and higher functional recovery scores compared to those without mental health interventions. These findings highlight the integral role of emotional and psychological care in improving the healing trajectory.

One of the strongest themes across the literature was the importance of multidisciplinary teamwork. Studies consistently demonstrated that patients receiving care from coordinated teams experienced fewer delays, more accurate treatment plans, and reduced lengths of stay.

Multidisciplinary rounds, integrated care plans, and shared decision-making reduced communication errors and improved treatment consistency. Units that implemented team-based models reported faster healing, improved patient satisfaction, and reduced hospital costs.

Table 2. Summary of Interventions and Their Measured Impact on Patient Recovery

Intervention Type	Measured Impact on Recovery	Supporting Evidence
Nursing (early mobilization, monitoring)	Reduced LOS, fewer complications	Tobiano et al., 2019
Physician clinical pathways	Faster treatment, reduced delays	Makary & Daniel, 2016
Physiotherapy & rehabilitation	Improved function, shortened recovery	Calvo-Arenillas et al., 2020
Pharmacist-led optimization	Reduced adverse events, improved adherence	Alhawassi et al., 2018
Dietary and nutritional support	Faster wound healing, decreased infections	Weimann et al., 2017
Psychological care	Lower stress, improved adherence	Chaboyer et al., 2018
Digital health tools	Early complication detection, reduced readmissions	Kruse et al., 2018

The integration of digital technologies—such as telehealth, wearable sensors, and remote monitoring—significantly improved recovery outcomes. Real-time monitoring allowed early detection of complications, while mobile health applications supported medication reminders, rehabilitation tracking, and patient education. Studies showed that digital monitoring reduced readmission rates by up to 22% and enhanced adherence to recovery protocols.

Artificial intelligence-supported systems helped clinicians identify early signs of deterioration, enabling timely interventions that prevented delays in the healing process.

5. Discussion

The findings of this systematic review highlight that accelerated patient recovery is not the outcome of a single intervention but rather the result of a coordinated, multidisciplinary approach involving all healthcare professionals. The results reinforce the idea that healing is a complex biological, psychological, and social process influenced by clinical decisions, therapeutic actions, communication strategies, and technological support systems. The discussion below synthesizes key themes and explores their implications for healthcare practice and policy.

Nursing emerges as a cornerstone profession in patient recovery, primarily due to the extensive patient contact nurses maintain throughout hospitalization. Their ability to detect clinical deterioration early, implement mobilization protocols, and educate patients about their treatment plan positions them as pivotal contributors to faster healing. The evidence supports expanding advanced nursing roles—especially in ERAS pathways, oncology care, and post-surgical recovery—not only to improve speed of healing but also to enhance overall patient satisfaction and physiological stability.

Physicians' roles in diagnosis and treatment decision-making significantly influence recovery trajectories. The integration of ERAS protocols, uniform clinical pathways, and rapid response strategies demonstrates that physician leadership is essential in standardizing care and reducing treatment delays. Successful accelerated recovery programs rely on physicians who actively collaborate with other disciplines, embrace standardized protocols, and prioritize patient-centered approaches. These findings emphasize the need for ongoing physician training in evidence-based recovery models and interdisciplinary teamwork.

The discussion underscores physiotherapy as a driver of early mobility and functional independence—two critical predictors of accelerated recovery. Early mobilization decreases the risk of pneumonia, thrombosis, and muscle atrophy while improving circulation and respiratory function. The evidence indicates that healthcare systems should invest in timely physiotherapy consultations and increase the capacity for early rehabilitation initiation across departments such as orthopedics, cardiology, and intensive care units. Incorporating physiotherapists into daily multidisciplinary rounds may further optimize patient progress.

Medication-related complications remain a leading cause of delayed healing, highlighting the importance of pharmacist intervention. Medication reconciliation, pain management optimization, and prevention of polypharmacy errors play indispensable roles in safe and timely recovery. The discussion suggests that hospitals should formally integrate pharmacists into patient rounds and promote system-wide medication safety protocols. This incorporation can substantially reduce adverse drug events—one of the most common contributors to prolonged hospital stay.

Nutrition has historically been underestimated in its ability to influence recovery, yet recent research reveals its profound impact on immune function, tissue regeneration, and overall metabolic stability. Dietitian-guided nutritional plans were shown to reduce complications and shorten recovery times. These findings support routine nutritional screening on admission and personalized dietary interventions, particularly for surgical, trauma, and chronically ill patients. Nutrition must be treated as a clinical priority rather than an optional supportive service.

Psychological health significantly influences physiological healing. Elevated stress, anxiety, and depression not only reduce patient participation in care but also impair immune responses and increase pain perception. The discussion highlights the need for embedded mental health services in all major

care pathways. This includes routine psychological assessment, stress-reduction interventions, and counseling services. Hospitals should ensure that mental health professionals become standard members of multidisciplinary recovery teams.

Digital health tools are shifting the paradigm of recovery by enabling real-time monitoring, remote follow-up, and patient engagement. Telehealth services expand access to care, prevent delays in treatment adjustments, and provide continuity of care post-discharge. Wearable sensors and AI-driven analytics help clinicians identify complications earlier than traditional methods. The discussion suggests that digital health should be integrated into all recovery pathways, particularly for chronic disease management, rehabilitation tracking, and post-surgical follow-up.

Perhaps the most significant insight is that accelerated healing occurs fastest when all healthcare professionals work together through structured communication and care planning. Multidisciplinary rounds, shared decision-making, integrated digital platforms, and ERAS pathways represent best practices that significantly reduce recovery time. Policy implications include the need for training healthcare workers in collaborative care models and ensuring that institutions adopt systems that encourage information sharing and team-based planning.

Collectively, the findings emphasize that accelerating patient recovery requires investment in workforce training, strengthened communication structures, digital transformation, and expanded roles for frontline healthcare providers. Institutions that prioritize coordinated, evidence-based, and patient-centered approaches are more likely to achieve rapid healing outcomes, reduce hospital costs, and enhance patient satisfaction.

Conclusion

This systematic review demonstrates that accelerating patient recovery is a multidimensional process that relies heavily on the integrated efforts of healthcare professionals across disciplines. The collective evidence shows that nurses, physicians, physiotherapists, pharmacists, dietitians, and mental health specialists each play unique yet complementary roles in enhancing healing speed through early intervention, continuous monitoring, personalized care, and effective communication. Among these, nursing and physiotherapy interventions—particularly early mobilization, patient education, and vigilant clinical monitoring—emerge as some of the most influential contributors to faster recovery. Physicians' adoption of evidence-based pathways and timely decision-making further streamline care delivery and reduce delays.

Additionally, medication optimization by pharmacists, nutritional care by dietitians, and psychological support by mental health professionals all significantly reduce complications, promote metabolic stability, and strengthen patient engagement—factors essential for rapid healing. The growing integration of digital health tools enhances these efforts by enabling continuous monitoring, early detection of clinical deterioration, and improved patient adherence to treatment plans.

Central to all findings is the critical importance of interprofessional collaboration. Institutions that foster teamwork, shared decision-making, and coordinated care planning consistently achieve shorter recovery times and improved patient outcomes. Therefore, healthcare organizations should prioritize multidisciplinary care structures, invest in digital technologies, and expand the roles of frontline healthcare staff to maximize recovery efficiency.

In conclusion, accelerating patient recovery is best achieved through a holistic, team-based, and technology-supported approach. Implementing coordinated, evidence-informed strategies across healthcare professions can significantly enhance healing speed, improve patient satisfaction, and elevate overall healthcare quality.

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