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Adeniran Olaoya

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Dr. Eboni Green, Committee Member, Health Sciences Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
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Strategies to Reduce 30-Day Readmission Rates for Acute Myocardial Infarction, Congestive Heart Failure, and Pneumonia in an Acute Care Hospital in California

by

Adeniran Olaoya, MBChB, MPH, MBA, MHA

MHA, Walden University, 2021

MBA, Western Governors University, 2020

MPH, University of Texas Health Science Center at Houston, 2012

MBChB, Olabisi Onabanjo University, 2008

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Abstract

Hospital readmissions within 30 days for acute myocardial infarction, congestive heart failure, and pneumonia remain a major challenge. These readmissions increase costs, worsen patient outcomes, and trigger penalties under the Hospital Readmission Reduction Program. The purpose of this integrative review was to identify evidence-based administrative strategies that could reduce 30-day readmission rates to 11.9% or lower, aligning with California's statewide targets. The key review question explored which best practices most effectively lower readmissions in these patients. Wagner's Chronic Care Model is a conceptual framework that enhances chronic illness care by integrating six interrelated components. Guided by this framework, a systematic literature search was conducted across multiple databases for peer-reviewed studies published between 2019 and 2024. A total of 26 articles were appraised using the Johns Hopkins Evidence-Based Practice Model, and 21 high- or good-quality studies were included. Four themes emerged as central to reducing readmissions: healthcare organization and leadership, clinical information systems, transitional care, and self-management support. The review also identified 21 subthemes. The most impactful were patient education, multidisciplinary governance, discharge planning, post-discharge follow-up, and addressing social determinants of health. Reducing readmissions requires multifaceted, system-level strategies reinforced by leadership, patient engagement, and coordinated transitional care. Hospitals that integrate these evidence-based practices with technology and community partnerships are best positioned to improve outcomes. Positive social change may result from advancing health equity by reducing preventable readmissions, addressing social determinants, and improving care continuity for high-risk populations.

Part 1: Practice-Based Problem

Problem of Interest

The problem of interest addressed in this integrative review is the high 30-day hospital readmission rate in acute care hospitals, particularly among patients diagnosed with acute myocardial infarction (AMI), congestive heart failure (CHF), and pneumonia. High readmission rates indicate potential gaps in care quality and result in significant financial penalties for healthcare institutions.

Hospital readmissions within 30 days pose a considerable burden on both patients and healthcare systems. These readmissions can result from inadequate discharge planning, poor care transitions, or failure to address patients' social determinants of health (Gouveia et al., 2023). According to the Centers for Medicare & Medicaid Services (CMS), hospitals with higher-than-expected readmission rates face reduced reimbursements, resulting in financial strain and a decline in healthcare quality (CMS, 2023).

This integrative review was warranted because, despite ongoing efforts to reduce hospital readmissions, many acute care hospitals continue to struggle with maintaining low readmission rates for patients with AMI, CHF, and pneumonia. Current evidence indicates that approximately 50% of hospital readmissions are potentially preventable, with 30% classified as truly preventable (Gouveia et al., 2023). Moreover, most interventions that have demonstrated effectiveness are resource-intensive and challenging to implement on a large scale, making it essential to identify practical and sustainable strategies for reducing readmissions.

The potential positive social change implications of this review are substantial. Reducing hospital readmission rates not only improves patient outcomes by minimizing exposure to hospital-associated complications but also enhances healthcare efficiency by reducing unnecessary healthcare utilization. By identifying evidence-based strategies that healthcare administrators can implement, this review aimed to contribute to improved patient care, reduced healthcare costs, and greater healthcare equity.

Healthcare Administration Problem

Background

Hospital readmissions within 30 days pose a significant challenge to acute care hospitals, impacting both patient outcomes and financial performance. High readmission rates among patients with AMI, CHF, and pneumonia often indicate deficiencies in care quality, discharge planning, and post-acute care coordination (Rammohan et al., 2023). Despite numerous interventions, acute care hospitals continue to struggle with maintaining low readmission rates, which negatively impacts their reputation, patient satisfaction, and financial stability. The persistent challenge lies in addressing the multifactorial causes of readmissions, which include inadequate discharge planning, ineffective care transitions, and insufficient patient education. Additionally, social determinants of health (SDOH), such as socioeconomic status, healthcare access, and health literacy, significantly influence readmission rates (Rammohan et al., 2023).

Research indicates that successfully reducing hospital readmissions requires an integrative approach that includes transitional care interventions, patient-centered education, and post-discharge support (Azadeh-Fard et al., 2022). However, many hospitals face challenges in consistently implementing these practices, leading to

variability in readmission outcomes. According to Khan et al. (2021), the complexity of reducing readmission rates is heightened by the diversity of patient populations and the need for tailored care approaches that address specific risk factors.

The healthcare administration problem addressed in this review centered on identifying the administrative strategies that are most effective in reducing 30-day readmission rates among patients with AMI, CHF, and pneumonia across diverse acute care settings. Understanding the complexities of hospital readmissions and the administrative challenges associated with implementing strategies to reduce them is crucial. By exploring evidence-based interventions and identifying best practices, healthcare administrators can better position their organizations to reduce readmission rates, improve patient outcomes, and enhance hospital performance.

Operational Problem

Hospital readmission rates, particularly within 30 days of discharge among patients with AMI, CHF, and pneumonia, continue to be a critical healthcare administration problem in acute care hospitals. These readmissions are not only financially burdensome, resulting in penalties under the Hospital Readmission Reduction Program (HRRP), but also reflect underlying issues in care quality, discharge planning, and continuity of care. High readmission rates can negatively impact a hospital's reputation, patient satisfaction, and overall healthcare quality, making them a significant concern for healthcare administrators (CMS, 2023).

Research consistently shows that hospital readmission rates remain high despite targeted interventions. One of the primary challenges lies in the complexity of care transitions and the inconsistency of post-discharge follow-up. Rammohan et al. (2023)

highlight that gaps in communication during discharge and a lack of structured follow-up significantly contribute to readmission risks. Moreover, healthcare systems that fail to adequately address SDOH are more likely to experience higher readmission rates.

Azadeh-Fard et al. (2022) emphasized that inadequate discharge planning and poor coordination between hospital and community care settings often contributed to readmissions. Despite initiatives to improve transitional care, hospitals often lack standardized procedures, resulting in variability in readmission rates. This operational challenge is further complicated by the diverse needs of patient populations, which require tailored interventions to reduce readmission risks.

Khan et al. (2021) also examined the persistence of high readmission rates in acute care settings, noting that administrative inefficiencies and fragmented care coordination are key factors contributing to the problem. They found that hospitals with better integration of care transitions tend to have lower readmission rates, suggesting that enhancing discharge protocols and follow-up care is essential for reducing readmission occurrences.

Further evidence from Takahashi et al. (2020) indicated that the effectiveness of post-hospital care transition programs is limited, both in the short term and long term, particularly for older, medically complex populations. The study highlights that while some improvements in readmission rates were observed, sustaining these reductions over time proved challenging due to inconsistent implementation of care practices.

Hospital readmissions also pose a substantial financial burden on the healthcare system. The Centers for Health Information and Analysis (CHIA) estimates that Medicare's annual readmission cost is $26 billion, with approximately $17 billion

deemed avoidable. These costs stem from the need for additional diagnostic tests, extended hospital stays, and increased medication use. Readmitted patients often require further rehabilitation services and home healthcare, further escalating costs (CHIA, n.d.).

Ideal State of Operations

The ideal state for hospital readmissions is one where unnecessary 30-day readmissions among patients with AMI, CHF, and pneumonia are minimized, ensuring that patients transition safely from hospital to home with the necessary support to manage their health effectively. In this state, care transitions are seamless, with standardized discharge planning, medication reconciliation, and coordination between healthcare providers to prevent gaps in care. Additionally, hospitals and healthcare systems proactively address social and contextual factors affecting readmissions, ensuring equitable access to post-discharge care and reducing disparities in health outcomes (California Department of Public Health, n.d.).

According to the California Department of Public Health (n.d.), the target for hospital readmissions is to reduce unplanned readmissions within 30 days of discharge from the baseline rate of 14.5% in 2022 to a target of 11.9% or lower by 2034. This goal aligns with broader healthcare quality improvement initiatives aimed at enhancing patient outcomes and reducing the financial burden associated with readmissions.

Brock et al. (2021) emphasized that the ideal state involves a healthcare environment where patients receive consistent, coordinated, and patient-centered care throughout their transition from hospital to home. This state is characterized by minimizing care disruptions and ensuring that patients receive the necessary support during their recovery period. In this ideal operational environment, healthcare

administrators focus on maintaining continuous and coordinated care, which fosters patient safety and reduces the risk of preventable readmissions. Hospitals aim to achieve this state by addressing the root causes of readmissions, including gaps in discharge planning and inadequate post-discharge follow-up.

Professional Practice Gap Statement

Current evidence indicates that hospital readmission rates remain a persistent challenge, with a 30-day readmission rate of 14.5%, contributing to adverse patient outcomes and increased healthcare costs, as each readmission costs an average of $15,200 (Brock et al., 2021). Research indicates a knowledge gap regarding effective administrative strategies, and further studies are necessary to comprehend the administrative, social, and financial factors that influence discharge planning and patient outcomes (Brock et al., 2021). This integrative review examined strategies to reduce the 30-day readmission rates to 11.9% or lower among patients with AMI, CHF, and pneumonia, mitigating financial penalties while addressing both administrative and social barriers to reducing hospital readmissions (California Department of Public Health, n.d.).

Summary of Evidence

30-day readmission rates for AMI, CHF, and pneumonia in acute care hospitals remain a persistent challenge for healthcare administrators. These conditions, prevalent across multiple units, including medical-surgical, step-down, and intensive care units (ICUs), continue to drive readmission rates averaging 14.5%. Such rates not only reflect breakdowns in discharge planning, care transitions, and post-discharge coordination but also result in financial penalties under the CMS HRRP. California aims to reduce these readmission rates to 11.9% or lower by 2034, underscoring the urgency for acute care

hospitals to implement targeted, unit-spanning interventions that address this persistent issue.

Reducing hospital readmissions is an administrative challenge involving operational efficiency, quality improvement, and regulatory compliance. High readmission rates impact hospital reputation and financial sustainability, making this problem a critical focus for healthcare leaders tasked with balancing patient care and cost management (CMS, 2023).

Rammohan et al. (2023) identified that inconsistent transitional care practices and fragmented coordination are significant factors contributing to readmission rates. In many cases, gaps in communication during discharge and insufficient follow-up procedures increase the likelihood of unplanned readmissions. Hospitals that lack standardized discharge protocols often face variability in patient outcomes, highlighting the need for administrative improvements in care transition processes.

Khan et al. (2021) emphasized that administrative inefficiencies, such as poor communication and inconsistent follow-up care, play a critical role in maintaining high readmission rates. Acute care hospitals that do not implement structured discharge planning frequently experience higher readmission rates, demonstrating the administrative challenge of maintaining consistent patient care after discharge.

Azadeh-Fard et al. (2022) highlighted that SDOH, including socioeconomic status and healthcare access, significantly affect readmission risks. Healthcare administrators must consider these social factors when developing strategies to reduce readmissions, as patients from disadvantaged backgrounds often have higher rates of hospital readmissions.

Additionally, Takahashi et al. (2016) found that while transitional care programs may initially reduce readmissions, their long-term effectiveness is often inconsistent, particularly among older, medically complex populations. Elderly patients face higher risks when hospital-community care coordination is weak. These findings emphasize the ongoing challenge of maintaining continuity of care for vulnerable populations.

From an economic perspective, the financial burden of readmissions is substantial. Medicare's annual cost of readmissions is approximately $26 billion, with $17 billion considered avoidable, highlighting the critical need to address this issue from both quality and cost management perspectives (CHIA, n.d.). A comprehensive summary of the reviewed studies supporting the practice-based problem, including their frameworks, methodologies, results, and implications, is presented in Appendix A: DHA Practice-Based Problem Literature Review Matrix.

Purpose of the Integrative Review

The purpose of this integrative review was to examine and synthesize evidence-based administrative strategies to reduce 30-day hospital readmission rates in acute care hospitals, specifically for patients discharged with AMI, CHF, and pneumonia. High readmission rates pose a critical challenge for healthcare administration, resulting in financial penalties under the Hospital Readmission Reduction Program (HRRP) and highlighting issues in discharge planning, care coordination, and follow-up care. Addressing this issue is essential for healthcare administrators aiming to improve patient outcomes, enhance hospital performance, and reduce the financial burden associated with preventable readmissions.

This integrative review specifically focuses on identifying operational factors that contribute to high readmission rates among patients with AMI, CHF, and pneumonia, and evaluating the effectiveness of administrative practices in minimizing these occurrences. The review provides healthcare leaders with insights into strategies that improve care transitions and reduce readmissions, thereby supporting quality improvement initiatives and financial sustainability.

SDOH are inherently linked to hospital readmission rates because factors such as socioeconomic status, healthcare access, education, housing stability, and social support directly influence a patient's ability to manage their health post-discharge. Patients from disadvantaged backgrounds are more likely to experience barriers to follow-up care, medication adherence, and chronic disease management, increasing their risk of readmission. Therefore, this review also explored how addressing SDOH within administrative strategies can mitigate readmission risks and promote health equity.

Integrative Review Question

The primary question guiding this integrative review was as follows: What are effective administrative strategies that hospitals can implement to reduce the high 30-day readmission rate to 11.9% or lower among patients with AMI, CHF, and pneumonia?

This question addressed the key elements of the healthcare administration problem, which include the need to reduce hospital readmission rates, enhance care coordination, and address operational inefficiencies within acute care hospitals. High readmission rates not only lead to financial penalties under the HRRP but also reflect ongoing challenges in discharge planning and post-discharge follow-up care.

By focusing on actionable administrative strategies, this review aimed to identify evidence-based practices that healthcare administrators can implement to improve care transitions and minimize readmissions. The review question was designed to explore solutions that address both operational and SDOH factors, as patients from socioeconomically disadvantaged backgrounds often face barriers to accessing post-discharge care. In doing so, the review sought to provide practical insights that healthcare leaders can utilize to achieve sustainable improvements in patient outcomes, hospital performance, and health equity.

Theoretical and/or Conceptual Framework

This integrative review was guided by Wagner's chronic care model (CCM), a conceptual framework developed by Dr. Edward Wagner in the 1990s to enhance chronic illness management and improve patient outcomes. The CCM is rooted in the principles of proactive and coordinated care, emphasizing the integration of various healthcare components to foster continuous and comprehensive care rather than episodic treatment. The model was created to address the challenges of managing chronic diseases by promoting ongoing support for patients rather than relying solely on acute interventions (Wagner et al., 1996).

The CCM posits that optimal chronic illness care results from the interaction between an informed, activated patient and a prepared, proactive healthcare team. The model highlights six key elements that work synergistically to support chronic care management:

- Community Resources and Policies: Establishing connections between healthcare systems and community-based services to support self-management and wellness.

- Health System Organization of Care: Structuring healthcare systems to prioritize chronic care management, leadership support, and quality improvement.
- Self-Management Support: Educating and empowering patients to take control of their health through skill-building and ongoing support.
- Delivery System Design: Organizing practice teams to ensure coordinated and efficient care, including proactive follow-up.
- Decision Support: Integrating evidence-based care guidelines into clinical practice to ensure that patient care is grounded in the latest scientific evidence.
- Clinical Information Systems: Using health information technology to manage patient data, track progress, and facilitate communication among care teams.

The CCM's logical connections arise from its dual focus on empowering patients while simultaneously strengthening the healthcare system's capacity to deliver continuous, coordinated care. This alignment between patient engagement and healthcare system readiness ensures that patients receive consistent, high-quality care, reducing the risk of hospital readmissions.

The healthcare administration problem addressed in this integrative review is the high 30-day readmission rate among patients with AMI, CHF, and pneumonia in acute care hospitals. This issue often stems from inadequate discharge planning, poor care coordination, and insufficient follow-up. The CCM is particularly relevant because it addresses the root causes of hospital readmissions through a comprehensive approach to managing chronic care. Its emphasis on coordinated care, patient engagement, and continuous monitoring aligns well with the need to reduce readmission rates by addressing gaps in the healthcare system and challenges in patient self-management. By

leveraging the model's components, healthcare administrators can better understand the multifaceted nature of readmissions and develop targeted strategies to reduce them.

The primary review question, "What are effective administrative strategies that hospitals can implement to reduce the high 30-day readmission rate to 11.9% or lower?" aligns well with the CCM. By focusing on administrative strategies that enhance care coordination, discharge planning, and patient follow-up, this integrative review sought to identify practical applications of the CCM's principles within the acute care setting. The model's focus on proactive care and structured care processes supports the goal of minimizing readmissions, making it an appropriate theoretical foundation for this review.

Evidence from healthcare practice suggests that care models emphasizing patient engagement and coordinated management contribute to lower hospital readmission rates. When care transitions are structured around principles such as discharge planning and patient education, hospitals are better positioned to maintain improvements over time (Rammohan et al., 2023). The CCM offers a practical framework for addressing the administrative challenges of readmissions, aligning its emphasis on proactive, coordinated care with the goals of this integrative review.

Part 2: Literature Review, Quality Appraisal, and Analysis

Literature Search Strategy

A comprehensive search strategy was employed to identify relevant literature addressing strategies to reduce 30-day hospital readmission rates in patients with AMI, CHF, and pneumonia. Searches were conducted across multiple scholarly databases, including EBSCOhost (CINAHL Plus with Full Text and Academic Search Complete), PubMed/MEDLINE, ProQuest Central, ScienceDirect, and the Cochrane Database of Systematic Reviews. Additional searches were conducted on Google Scholar for any recent studies or gray literature not indexed in the primary databases. The reference lists of key articles were also hand-searched to capture any studies that the database queries might have missed.

To ensure contemporary relevance, only articles published in English within the last five years (2019–2024) were included. Advanced search techniques were used across platforms to refine the retrieval process. Boolean operators combined key search terms and synonyms, such as *30-day readmission, hospital readmission, re-admission, heart failure, HF, congestive heart failure, myocardial infarction, pneumonia, PNA, readmission reduction, preventing readmission*, and *transitional care*. Filters were applied to limit results to full-text, peer-reviewed articles within the defined timeframe and population focus. The results of these searches are documented in Appendix B: DHA Review Question(s) Search Log.

The initial database search yielded 384 results. Titles and abstracts were screened for relevance to 30-day readmission reduction, with inclusion and exclusion criteria applied during this stage (see Table 1). This process resulted in 35 articles selected for

full-text review. Several articles were removed because they focused primarily on clinical management and protocols for reducing 30-day readmissions rather than strategies from a healthcare administration standpoint. A final set of 26 articles was retained for quality appraisal.

Table 1

Inclusion and Exclusion Search Criteria

Inclusion search criteria	Exclusion search criteria
• Studies involving adult medical patients (≥18 years) diagnosed with heart failure, myocardial infarction, pneumonia, and other similar diagnoses, who were discharged from acute care hospitals. • Studies examining administrative or operational strategies designed to reduce hospital readmissions. • Peer-reviewed publications. • Studies published between 2019 and 2024.	• Studies focusing on pediatric, obstetric, psychiatric, or palliative/hospice populations. • Studies conducted in non-hospital settings (e.g., community clinics, long-term care). • Non-English language studies.

Quality Appraisal

All 26 articles selected from the literature search were appraised using the Johns Hopkins Evidence-Based Practice (JHEBP) Model for Nursing and Healthcare Professionals. The articles were first categorized using the Johns Hopkins Hierarchy of Evidence to determine whether they qualified as research (Levels I–III) or non-research (Levels IV–V). Following this classification, the appropriate JHEBP research or non-research appraisal tool was applied to assess methodological quality and relevance to the review question. The scope of the literature covered studies published between 2019 and 2024, ensuring alignment with current healthcare delivery models and policy initiatives. The types of studies included quasi-experimental designs, retrospective cohort studies, descriptive correlational studies, integrative reviews, and quality improvement projects.

Only studies that received a final quality rating of high or good and addressed the review question with adequate specificity to the target conditions (AMI, CHF, and pneumonia) were included for thematic synthesis. Most studies focused on adult patients ($age \geq 18$) hospitalized for AMI, CHF, or pneumonia. Sample sizes ranged widely—from small-scale interventions ($n < 200$) to large national datasets ($n > 50,000$). Studies were conducted across academic medical centers, community hospitals, and integrated health systems, often in urban or suburban U.S. settings, with a few international studies from Europe and South America. The health service organization type in all selected studies was acute care hospitals (both academic and community-based).

The studies selected were explicitly aligned with the integrative review's practice problem and theoretical lens. Many interventions integrated components from models such as the transitional care model (TCM), Wagner's CCM, and frameworks involving

care coordination, patient-centered communication, and culturally tailored discharge planning. Findings commonly emphasized the role of administrative interventions, such as structured discharge planning, early follow-up appointments, readmission risk scoring, the use of care transition teams, and telemonitoring systems, all of which are directly relevant to reducing 30-day readmissions for the specified conditions. The quality appraisal ensured that the 21 studies selected for the thematic analysis provided a rigorous, relevant, and timely evidence base for addressing the identified practice gap. The DHA Appraisal Results Log in Appendix C summarizes the evidence level, quality rating, study type, and contribution to answering the review question.

Thematic Analysis of Literature

Thematic analysis of the selected literature revealed consistent patterns in strategies aimed at reducing 30-day hospital readmissions for AMI, CHF, and pneumonia. The analysis aligns with Wagner's CCM, which encompasses six key domains: Health System Organization of Care, Community Resources and Policies, Self-Management Support, Delivery System Design, Decision Support, and Clinical Information Systems. Findings were drawn from 21 high- and good-quality studies that utilized a range of methodologies, including retrospective cohort studies, quality improvement initiatives, systematic reviews, mixed-method designs, and descriptive analyses. All studies were conducted in acute care hospital settings, including academic medical centers, Veterans Affairs systems, and community-based hospitals across both U.S. and international health systems.

Initial codes were derived from reported interventions, implementation strategies, and observed outcomes. These included phone contact following discharge, teach-back

methods to assess patient comprehension, pharmacist-led medication reconciliation, early follow-up with outpatient providers, the use of mobile health applications, involvement of community organizations, assessments of social needs, and structured, multidisciplinary transitional care models. These codes were then organized into broader thematic categories, some of which aligned with the domains of Wagner's model. For example, initiatives involving team-based care, structured discharge protocols, and intensive follow-up reflected the domain of Health System Organization of Care and aligned with the theme of health care organization and leadership. Codes related to transportation barriers, limited insurance coverage, and housing instability aligned with the theme of community resources and policies. Educational tools, caregiver involvement, and simplified written materials supported the theme of self-management support.

Delivery system design emerged through codes describing planned post-discharge follow-up, medication counseling, and shared decision-making. Decision support was evident in interventions focused on identifying high-risk patients and implementing structured response protocols. The use of telemonitoring, patient tracking dashboards, and health information exchange platforms reflected the development of clinical information systems. Transitional care was a central theme throughout the literature, encompassing early provider follow-up, post-discharge phone calls, home visits, structured discharge planning, and needs assessments.

The thematic analysis matrix in Appendix D summarizes the extracted codes and demonstrates clear alignment between the literature and Wagner's CCM conceptual framework.

Part 3: Presentation of Results

Thematic analysis of the 21 selected studies revealed four primary themes, each representing a critical domain of strategies to reduce 30-day readmissions. These themes align closely with the components of Wagner's CCM and the principles of effective transitional care. The four main themes identified, along with their key subthemes, were as follows:

1. **Health care organization and leadership:** High-intensity interventions, multidisciplinary governance and care, organizational culture, policy incentives and financial penalties, strategy and implementation, and delivery system design.
2. **Self-management support:** Patient education and support, peer and social support, self-management skills, and community resources and policies.
3. **Clinical information systems:** Dashboards and real-time monitoring, technology-supported education, decision support, and telemonitoring.
4. **Transitional care:** Comprehensive discharge planning, care coordination, communication across care settings, medication reconciliation, needs assessment, post-discharge follow-up, and home visits.

Appendix E presents a thematic concept map illustrating these interrelationships, while Appendix D provides a detailed matrix of themes, subthemes, and representative interventions from the reviewed studies.

Connections Between Themes

The four primary domains were highly interrelated, often overlapping within the same interventions. Subthemes also emerged across multiple domains, underscoring the importance of a multifaceted approach in reducing 30-day readmissions. For instance,

multidisciplinary care coordination was identified under health care organization and leadership, delivery system design (a subtheme), and transitional care, reflecting its cross-cutting importance. Likewise, peer and social support were relevant both to community resources and policies (as part of community partnerships) and to self-management support (as patient and caregiver engagement within social networks).

This interconnectedness suggests that effective readmission reduction strategies typically encompass multiple themes simultaneously, rather than relying on isolated, single-domain efforts. Hospitals that implemented a greater number of recommended care transition processes, including patient education, follow-up, medication reconciliation, and proactive communication, had significantly lower readmission rates, suggesting that "more is better" when interventions are combined (Pugh et al., 2021).

Health Care Organization & Leadership

This theme refers to the role of hospital leadership, organizational culture, and high-level administrative strategies in enabling or hindering readmission reduction. Key subthemes include the formation of multidisciplinary care teams and governance structures, fostering an organizational culture of accountability, aligning policies and incentives (e.g., responding to financial penalties for readmissions), implementing strategic initiatives, and redesigning care delivery processes to close gaps in transitional care.

Several studies emphasized that strong leadership commitment and adequate resource allocation are foundational for successful interventions. Transitional care trials have identified that insufficient administrative support, a lack of resources, and a lack of staff buy-in were significant barriers to effectiveness. In other words, even well-designed

programs, such as discharge follow-up calls or home visits, may fail without administrative support (Bilicki & Reeves, 2024). Conversely, when leadership prioritized readmission reduction by establishing dedicated transition teams and providing logistical support, outcomes improved. For example, Rammohan et al. (2023) described how their hospital's leadership implemented a care transition team as a strategic initiative. This multidisciplinary team approach halved the readmission rate from 18% to 9%, while also alleviating the financial strain associated with penalties. Such findings demonstrate that organizational leadership and vision are catalysts that enable all other strategies—without them, the best clinical interventions may not be sustained.

Within this theme, the literature also highlighted the importance of delivery system design, which is best understood as an operational extension of leadership priorities. Hospitals frequently need to reorganize workflows, standardize discharge practices, and create new care models to ensure reliability in transitional care. For instance, standardized checklists, structured discharge summaries, and scheduling early follow-up appointments before discharge were associated with lower readmissions (Pugh et al., 2021). Specialized clinics for high-risk patients, such as heart failure programs, further demonstrate how leadership-driven redesign can enhance continuity and reduce hospital readmissions (Ramgobin et al., 2022). Similarly, pharmacist-led medication reconciliation and transitional care nurse models provided structural reliability, ensuring that essential steps such as medication safety and early follow-up were consistently performed (Faraj et al., 2021; Saleh et al., 2024).

Self-Management Support

Self-management support involves empowering patients and their caregivers with the knowledge, skills, and confidence to manage their health after discharge. It was one of the most prominent themes across the studies in this review, reflecting a broad consensus that patients who are informed and engaged tend to experience better outcomes. Subthemes included patient education and health coaching, caregiver involvement in education, building patients' self-management skills (e.g., medication management, recognizing "red flag" symptoms, lifestyle modifications), providing written instructions and toolkits for home care, and facilitating peer support networks for chronic disease management.

Nearly all successful interventions incorporated substantial patient education. For example, in an integrative review of 71 studies, Acosta et al. (2022) found that the most frequent interventions were health education during hospitalization (67.6%) and after discharge (71.8%), as well as telephone follow-up calls (73.2%). Education was typically multimodal, delivered through in-person teaching, written discharge packets, and post-discharge phone calls to reinforce instructions. Rizzuto et al. (2022) described a heart failure program in which a multidisciplinary team provided thorough inpatient education and follow-up, resulting in reduced care gaps and improved transitions. Importantly, decision support techniques, such as teach-back methods or personalized discharge summaries, further strengthened patients' ability to retain and apply information.

Self-management support was also strongly shaped by patients' social and community contexts. Studies consistently showed that individuals lacking adequate social support, reliable transportation, or financial stability were far more likely to be readmitted

(Schultz et al., 2022). For instance, Schultz et al. highlighted that assessing a patient's support system and linking them to resources should be an essential part of the discharge planning process. Distelhorst and Hansen (2022) further demonstrated that neighborhood disadvantage, a proxy for socioeconomic and environmental SDOH, can undermine patients' ability to engage in transitional care, thereby increasing readmission risk.

Hospitals addressed these challenges by extending self-management programs into the community. Effective interventions included scheduling timely outpatient follow-ups, arranging home nurse visits, and employing community health workers or peer coaches to support patients in their homes (Bilicki & Reeves, 2024; Wong et al., 2020). Programs also sought to engage family members and caregivers directly in discharge education, ensuring that instructions were reinforced at home (Wong et al., 2020). Rammohan et al. (2023) noted that incorporating SDOH assessments into discharge planning allowed hospitals to tailor support, such as transportation, meals, or in-home caregiving, to individual patient needs.

Clinical Information Systems

Clinical information systems encompass the use of information technology and communication platforms to improve care coordination, patient monitoring, and decision-making across the care continuum. Subthemes included EHR enhancements to ensure information flows with the patient, real-time dashboards for tracking readmission metrics, telemonitoring of patients' health status at home, technology-supported education (e.g., mobile apps and text follow-ups), and the integration of decision support tools that guide clinicians in identifying and managing high-risk patients. Together, these strategies enable hospitals to deliver safer and more consistent transitional care.

Breakdowns in communication at discharge remain a major cause of preventable readmissions. In a systematic review, Becker et al. (2021) found that interventions such as transmitting discharge summaries to outpatient physicians within 24 hours or sending pending test results electronically were associated with fewer readmissions and improved adherence. Similarly, Saxena et al. (2022) reported that electronic scheduling tools and reminders to secure follow-up appointments increased attendance and reduced readmissions, demonstrating how even basic IT functions can strengthen transitional care.

Telehealth and telemonitoring also played a critical role. Elsener et al. (2023) demonstrated that structured telehealth follow-ups conducted by nurses after discharge significantly reduced 30-day readmissions. Within disease-specific care models, Ramgobin et al. (2022) described how heart failure clinics integrated remote monitoring of weight and blood pressure, allowing providers to intervene before clinical deterioration required hospitalization. Technology also supports education. Asamoah (2023) tested a mobile application for heart failure patients, which improved medication adherence and follow-up compliance, reflecting a growing trend toward mobile engagement strategies.

A key strength of clinical information systems is their ability to integrate decision support. Tools such as electronic risk scores and discharge readiness assessments helped identify patients most at risk of readmission. For example, Takahashi et al. (2020) demonstrated how electronic indices stratified high-risk elderly patients, enabling more targeted transitional care. Advanced platforms are increasingly turning to predictive analytics and AI. In one safety-net hospital, Bennett (2025) reported that AI-driven dashboards and automation reduced readmissions, improved efficiency, and closed equity gaps, showing the potential of digital tools to enhance both outcomes and fairness.

Provider engagement was also essential, as hospitals used feedback loops and training to build clinician buy-in for decision support systems.

Transitional Care

Transitional care is a broad theme that overlaps with and encapsulates aspects of several other themes, given that it specifically focuses on the continuity of care as patients transition from the hospital to home (or other care settings). It emerged as the most prevalent theme in this analysis, reflecting the fact that nearly all interventions studied were, by nature, transitional care strategies.

Subthemes in this category include comprehensive discharge planning, effective communication across care settings (hospital to primary care, etc.), robust care coordination during transitions, medication reconciliation at discharge, post-discharge follow-up (usually within days of discharge), home visits or telehealth check-ins, needs assessment for post-acute support, and other tactics to ensure a safe handoff. The prominence of this theme is backed by numerous studies. For instance, Becker et al. (2021) found that better communication at discharge (e.g., timely discharge summaries and patient-centered instructions) is significantly associated with fewer readmissions. Interventions such as discharge phone calls within 24–72 hours, scheduled outpatient visits within 7 days, and home nurse visits were recurring elements across successful programs (Acosta et al., 2022; Bilicki & Reeves, 2024).

In fact, a meta-analysis by Bilicki and Reeves (2024) confirmed that arranging an outpatient follow-up visit within 30 days of discharge has a protective effect against readmissions, especially for heart failure and similar chronic conditions. However, the same analysis noted that these transitional care interventions must be supported by the

organization, echoing the earlier point that lack of administrative support or resources can undermine them. Many studies in this review echo the core idea that effective transitional care is a team effort. For example, care transition teams (Rammohan et al., 2023) are a dedicated resource for managing this handoff period. Rammohan's two-phase study demonstrated that implementing a formal transition team not only cut readmissions by half but also significantly alleviated financial penalties.

Key aspects of transitional care include thorough needs assessments before discharge (to identify if a patient will require home care, transportation, or special education), high-quality discharge education (tailored to the patient's literacy and needs), and continuity of care. The inpatient team needs to communicate critical information to the outpatient providers. Li et al. (2022) examined information exchange and patient-centeredness in transitional care, and Pugh et al. (2021) similarly found that sites with better information sharing across the care continuum had lower rates of readmission.

Another important subtheme is medication reconciliation and management at transitions, often involving pharmacists. Errors in medications are a known contributor to readmissions. Interventions such as pharmacist-led reconciliation and counseling (Faraj et al., 2021; Saleh et al., 2024) have shown reductions in readmission rates, emphasizing the importance of ensuring patients receive the correct medications and understand them during the transition.

Finally, transitional care often involves remote monitoring or telehealth in the post-discharge period, which links to the clinical information systems theme. For example, Elsener et al. (2023) implemented a telehealth-based transitional care management program aimed at improving access to care for discharged patients. Using a

multifaceted telehealth approach (regular phone/video check-ins, remote vital sign monitoring, etc.), they achieved a significant reduction in 30-day readmissions.

Interpretation of the Findings

The findings of this integrative review confirm and extend existing knowledge in the healthcare administration and quality improvement literature. Overall, they reinforce a core principle: reducing hospital readmissions requires a multifaceted, system-wide approach, rather than any single "silver bullet" intervention. The themes identified align closely with Wagner's CCM, thereby confirming the relevance of this theoretical framework in the context of acute care readmission reduction. Each CCM component was identified as a theme or sub-theme – for example, self-management support and delivery system design are explicit CCM elements that emerged strongly in the data, and decision support and clinical information systems are also CCM elements that appeared, though to a somewhat lesser extent. The prominence of the community resources and policies theme, along with frequent references to social support and SDOH, extends the CCM by underlining the importance of social context in acute care transitions. Additionally, the separate identification of transitional care as a theme highlights the growing recognition in recent literature that the hospital-to-home transition period is a critical focus area deserving special attention and tailored models (Naylor's transitional care model, for instance, complements Wagner's CCM in this regard).

Many findings confirm prior research. For instance, it is well-established that comprehensive discharge planning and follow-up (a transitional care tenet) reduce readmissions, and this review provides further evidence for this. Studies by Takahashi et al. (2020) and Morkisch et al. (2020) echo earlier seminal work by Naylor and Coleman,

showing that when multiple transitional care components are implemented together (advanced practice nurse follow-up, medication review, patient education, etc.), readmissions in high-risk groups (e.g., older adults) drop significantly. Similarly, the importance of patient education and self-management is a longstanding concept in chronic disease management. The findings (e.g., Acosta et al., 2022; Rizzuto et al., 2022) confirm that nearly every successful intervention included a strong educational component. This consensus reinforces existing knowledge that health literacy and patient engagement are key factors in determining readmission risk. Becker et al. (2021) and others reaffirm that communication failures during discharge are common contributors to readmissions, underscoring the need for improved information flow, a challenge also highlighted by initiatives such as Project RED and Project BOOST in previous literature. In this review, improved discharge communication, including timely summaries and patient-centered instructions, was associated with reduced readmission rates, reinforcing this well-documented gap in care transitions.

Some findings extend current knowledge or practice by highlighting emerging strategies and contextual factors. For example, the sub-theme of decision support, particularly the use of predictive analytics and AI (Bennett, 2025), represents a relatively new frontier in readmission reduction. Traditional interventions relied on manual risk assessment and generic protocols. The inclusion of AI-driven tools suggests an evolution towards more sophisticated, data-driven targeting of interventions. Bennett's report of a tech-based initiative that not only reduces readmissions but also closes equity gaps is noteworthy. It suggests that automation and analytics can identify underserved patients and ensure they are paid attention to, thus improving health equity. This extends the

literature by demonstrating tangible results from AI in a real-world safety-net setting, an area that had been largely theoretical before. Another extension is the explicit incorporation of SDOH into transitional care strategies (Distelhorst & Hansen, 2022; Rammohan et al., 2023). While social factors have long been discussed as influential, findings in this review show that they are now being directly assessed and addressed (e.g., through the use of SDOH questionnaires and the targeting of neighborhood-level interventions). This goes beyond confirming that SDOH matter. It points to actionable integration of social risk mitigation into care transitions, which is an evolving practice.

Furthermore, the emphasis on multidisciplinary teamwork and coordination across many themes and subthemes (health care organization and leadership, delivery system design, transitional care) reinforces and extends prior knowledge about team-based care. It has been known that complex interventions often require a team, but this review provides quantitative support. For example, Acosta et al. noted 39.5% of studies used a multidisciplinary team approach, which underscores how critical team-based approaches are. This finding aligns with the CCM's concept of prepared, proactive practice teams and extends it by illustrating specific team structures, such as dedicated transition teams or virtual ward teams, that have demonstrated effectiveness.

One finding that challenges or nuances existing assumptions is the mixed evidence around certain interventions when isolated. For instance, although follow-up visits are generally beneficial, Bilicki and Reeves (2024) found that it was hard to isolate the effect of a single component when multiple were always bundled. This nuances the common question of "which single intervention works best" by suggesting that it is the combination and synergy that matter more than any single component. It also points out

that attempts to singularly focus (e.g., just schedule a clinic visit and do nothing else) might not replicate the success seen in studies where that clinic visit came with other supports. Thus, this review supports a shift in thinking from siloed solutions to bundled, programmatic solutions.

Part 4: Recommendation for Professional Practice and Implications for Social Change

Recommendations for Professional Practice

Grounded in the findings of this integrative review, several evidence-based recommendations are presented for hospital administrators and healthcare leaders to implement in practice. These recommendations align with the identified themes and subthemes and should be regarded as interdependent elements within a comprehensive strategy for reducing hospital readmissions.

Establish Strong Leadership and Organizational Support for Readmission Reduction

Establishing strong leadership and organizational support is essential for the reduction of 30-day hospital readmissions. Healthcare administrators should elevate readmission reduction to the status of a visible organizational priority. This can be achieved through the development of dedicated structures such as care transition teams or readmission task forces, ensuring that these groups include multidisciplinary representation from nurses, case managers, pharmacists, social workers, and physicians (Rammohan et al., 2023).

Leadership must also foster a culture of accountability for post-discharge outcomes. Strategies to achieve this include monitoring readmission metrics through dashboards and providing regular feedback to individual units. By integrating these practices into the daily operations of the hospital, administrators reinforce the expectation that all staff share responsibility for patient outcomes after discharge.

Executive support further strengthens these efforts by securing and allocating the resources required to sustain effective transitional care. Investments in staff positions

dedicated to transitional care, information technology systems that enable follow-up, and incentive structures that reward participation in improvement initiatives are critical.

Finally, organizational policies should be aligned with the overarching objective of safe transitions. Compliance with CMS HRRP exemplifies how policy frameworks can be used to reinforce institutional priorities. Through these combined measures, leadership communicates a clear message that preventing readmissions is a shared responsibility across the healthcare system.

Implement Comprehensive Transitional Care Programs

Hospitals should develop or strengthen structured transitional care programs that bridge the gap between hospital and home. At a minimum, every at-risk patient should receive a thorough pre-discharge planning meeting, including medication reconciliation and a comprehensive needs assessment. In addition, a follow-up appointment with the patient's provider should be scheduled before discharge, and a follow-up phone call should occur within two to three days after discharge.

Whenever feasible, home visits or virtual visits should be incorporated for high-risk patients. Evidence indicates that nurse visits within the first week at home can identify complications early and prevent unnecessary readmissions. Transitional care nurses or case managers can serve as the primary coordinators for these activities, ensuring seamless execution of transitional processes.

Patient-centered coaching is another essential element of effective transitional care. This includes using the teach-back method during discharge to confirm comprehension, providing patients with a printed care plan, and ensuring access to a 24/7 contact number for questions. By formalizing these processes, through the use of

standardized checklists or discharge protocols, hospitals can improve consistency and reliability in care transitions. Research has shown that multifaceted transitional care interventions of this kind significantly lower readmission rates.

This recommendation operationalizes multiple themes and subthemes identified in the literature. It incorporates delivery system design by redesigning the discharge process, emphasizes self-management support through education and coaching, and aligns with best practices in transitional care. Administrators play a critical role in supporting these initiatives by training staff in transitional care protocols and monitoring adherence. For example, auditing the percentage of eligible patients who receive timely follow-up calls provides accountability and ensures that evidence-based processes are consistently implemented.

Enhance Patient and Caregiver Education and Self-Management Support

Developing robust patient education initiatives as a standard component of discharge planning is essential for reducing hospital readmissions. Patients with chronic conditions should receive individualized education on their diagnosis, medications, diet, symptom warning signs, and self-care tasks prior to leaving the hospital. Effective education is best delivered through multiple modes, including verbal counseling, written materials, and teach-back demonstrations, to ensure comprehension across diverse learning styles.

The involvement of family members or caregivers is also critical, as evidence indicates that engaged caregivers can enhance continuity of care at home. To support this approach, hospitals should implement structured “teach-back” training for nurses, enabling staff to confirm patient understanding during the education process.

Supplementary materials, such as disease-specific booklets or short video tutorials, accessible on patients' phones, can reinforce learning and provide ongoing reference after discharge.

Digital health tools further expand the reach and effectiveness of patient education. Mobile applications and patient portals can deliver medication reminders, educational tips, and follow-up prompts. Evidence from Asamoah (2023) demonstrates that a mobile app improved patient compliance following discharge, suggesting a valuable role for technology in supporting self-management. However, administrators should integrate these tools selectively, offering them to technologically capable patients while ensuring that alternative approaches, such as regular phone calls or home visits, are available for those at risk of being excluded due to the digital divide.

By improving health literacy and strengthening self-management capabilities, patients are better equipped to recognize and address potential complications, thereby reducing the need for hospital readmissions. Comprehensive patient education at discharge thus serves as a critical strategy in preventing avoidable hospitalizations and improving overall care outcomes.

Strengthen Communication and Coordination with Community Providers and Resources

Ensuring continuity of care requires hospitals to strengthen communication channels with the next level of care. A critical practice is the establishment of reliable handoff processes. This includes transmitting a detailed discharge summary, containing diagnoses, treatments, pending tests, and follow-up needs, to the patient's primary care provider or specialist within 24 hours of discharge. Prompt and thorough information

transfer reduces the risk of miscommunication and ensures that outpatient providers are adequately informed to support ongoing care.

Direct partnerships with local providers further enhance coordination. Hospitals can arrange “hot handoffs,” in which case managers communicate directly with the receiving skilled nursing facility or home health agency. In addition, involving community pharmacists in post-discharge medication reviews and referring patients to community-based programs, such as disease management classes, support groups, or home meal services for food-insecure patients, broadens the scope of transitional care. These strategies build a network of support that extends beyond the hospital setting.

Timely outpatient follow-up is another key component of effective care coordination. Hospitals should collaborate with community clinics to secure appointment slots within seven days of discharge for recently discharged patients. Evidence suggests that early physician follow-up is associated with reduced readmission rates. For instance, Saxena et al. (2022) demonstrated that prompt outpatient visits contributed to improved outcomes. Guaranteeing early access to follow-up care is therefore a practical and evidence-based measure for preventing avoidable hospitalizations.

Utilize Risk Stratification and Decision Support Tools to Target Interventions

Given the reality of finite resources, hospitals must adopt decision support systems to identify patients at the highest risk of readmission and direct interventions accordingly. The use of validated readmission risk scores or tools is recommended to achieve this objective. Instruments such as the LACE index, the HOSPITAL score, or custom electronic health record (EHR) algorithms can be applied to each admission to generate actionable insights. Patients exceeding defined thresholds or those with multiple

chronic conditions and prior admissions should be automatically flagged for enhanced transitional care services, including intensive education, social work consultation, or enrollment in structured care management programs.

The integration of clinical decision support within the EHR further strengthens this approach. For instance, when a high-risk patient is being discharged, a best-practice alert can prompt staff to confirm that a follow-up appointment has been scheduled and that referrals to home health services have been considered. Embedding such automated reminders into clinical workflows promotes consistency and reduces the likelihood of missed opportunities to intervene.

Emerging technologies offer additional opportunities to refine risk stratification and follow-up care. Predictive analytics and artificial intelligence (AI) platforms, as described by Bennett (2025), can be utilized to continuously monitor readmission risk and automate certain aspects of post-discharge management. Examples include automated text messaging for symptom monitoring and machine learning models that predict non-adherence to follow-up appointments, thereby enabling navigators to proactively engage patients. Although AI deployment requires investment and specialized expertise, hospitals can begin with more accessible risk stratification tools before scaling to advanced analytics.

The overarching goal of this strategy is precision management, ensuring that limited resources are directed toward patients most likely to benefit. By targeting high-risk individuals with tailored interventions, hospitals can improve efficiency, optimize outcomes, and reduce preventable readmissions.

Redesign Care Delivery for High-Risk Populations and Conditions

Certain patient populations benefit from specialized care delivery models designed to address their unique needs. Hospitals should therefore consider establishing targeted programs such as disease-specific clinics or structured care bundles. For example, the creation of a heart failure clinic, where recently discharged patients receive multidisciplinary follow-up from nurses, pharmacists, and dietitians, has been shown to reduce readmissions for heart failure (Ramgobin et al., 2022). Similarly, "hospital at home" or virtual ward programs provide hospital-level monitoring and care coordination in the home setting, offering an effective strategy for managing complex patients following discharge (Chauhan & McAlister, 2022).

Standardization of processes across the hospital is equally important in improving care transitions. The use of a standardized discharge checklist, covering key elements such as patient education, follow-up scheduling, and medication reconciliation, ensures consistency in discharge practices and reduces the risk of omissions that may contribute to readmission. Beyond these operational improvements, integrating palliative care and advanced care planning for patients with terminal or severe illness represents a delivery redesign that can reduce non-beneficial readmissions by aligning treatment with patient goals.

Administrators play a central role in supporting the redesign of care delivery models. Investments in personnel, such as hiring transitional care advanced practice nurses or pharmacists for disease-specific clinics, are necessary to operationalize these initiatives. Quality improvement frameworks, including Plan-Do-Study-Act (PDSA) cycles, should be employed to refine new programs over time. Importantly, all redesign

efforts must be accompanied by outcome monitoring, such as comparing readmission rates among program participants with those of non-participants, to ensure both effectiveness and sustainability.

Implications for Social Change

High 30-day readmission rates represent not only clinical and financial challenges but also significant social implications. The findings and recommendations of this review, when implemented in practice, have the potential to generate positive social change by addressing inequities and enhancing the well-being of patients and communities. A major implication relates to the SDOH. Numerous studies in this review highlighted the influence of socioeconomic status, education, housing, and social support on readmissions. Strategies that explicitly address these determinants, such as connecting patients with community resources, offering transportation or home services, and ensuring access to follow-up care regardless of financial capacity, can mitigate disparities in health outcomes. Reducing readmissions among vulnerable populations demonstrates that patients are receiving stronger support and more equitable post-discharge care, thereby contributing to greater health equity (Distelhorst & Hansen, 2022).

Improved quality of life and autonomy for patients represent another important social change implication. Frequent hospitalizations are disruptive and distressing for both patients and families, signaling challenges in managing health conditions at home. Equipping patients with self-management skills and ensuring robust outpatient support enables them to lead healthier and more independent lives within their communities. The ripple effect extends to families, who experience less stress and caregiver burden, and to communities, which benefit when their members are healthier and more engaged.

Economic and societal benefits are also noteworthy. Elevated readmission rates impose significant costs on the healthcare system, which indirectly impact society through higher insurance premiums and the strain on public resources. Reducing readmissions conserves healthcare resources, allowing for reinvestment in preventive and community health initiatives. For patients, avoiding hospitalization prevents income loss and reduces out-of-pocket expenses. These benefits are particularly important in safety-net populations, where technology-driven interventions have been shown to reduce equity gaps (Bennett, 2025). In the context of California, achieving the statewide benchmark of 11.9% readmissions or lower allows hospitals to avoid penalties and redirect funds toward community benefit programs, thereby generating additional positive social outcomes.

Finally, reducing readmissions fosters greater trust and engagement in the healthcare system. Frequent returns to the hospital can erode confidence in healthcare institutions, whereas improved transitional care and better outcomes build patients' trust in the system's ability to meet their needs. Enhanced trust encourages patients to engage more actively in preventive care and follow-up, ultimately shifting community health behaviors from reactive, crisis-driven encounters toward proactive, preventive approaches. This paradigm shift represents a sustainable and socially beneficial transformation in the delivery of healthcare.

Limitations

It is important to acknowledge the limitations of this integrative review and the evidence base it draws upon. First, the review included 21 studies with varying methodologies. The heterogeneity of study designs and patient populations means that

results should be interpreted with caution. Some findings that appear consistent (such as the effectiveness of follow-up calls) may be context-dependent. Because the synthesis spans diverse settings, from single hospitals to nationwide datasets, the applicability of specific interventions may vary across contexts, as approaches effective in large academic hospitals may require adaptation in smaller community facilities.

Second, publication bias may be present in the literature. Studies reporting successful multifaceted interventions that reduce readmissions are more likely to be published, whereas those with negative or neutral findings may be underrepresented. For instance, a few meta-analyses noted evidence of publication bias for certain outcomes. This could mean the review disproportionately highlights positive results, and real-world effect sizes might be more modest.

Another limitation is related to the time frame and data currency. Healthcare is rapidly evolving due to new technologies such as telehealth and artificial intelligence, and the continuing effects of the COVID-19 pandemic on care delivery. While studies up to 2024-2025 were included, some of the data might not fully reflect post-pandemic realities or the latest innovations. For example, virtual care has expanded dramatically in recent years, and the review has only a few studies that capture this wave. Thus, the findings on telehealth and remote monitoring, though promising, are still preliminary and may not generalize if technology or patient preferences change.

Regarding the limitations of thematic analysis, the identified themes were, to some extent, subject to subjective judgment. Themes were reviewed and refined iteratively, but other reviewers might have grouped findings differently. The overlap of subthemes (e.g., “peer support” falling under both community and self-management)

illustrates the challenge in neatly categorizing complex interventions. There is a risk of double-counting or misclassification in the qualitative synthesis.

The review's focus on three conditions (AMI, CHF, pneumonia) in acute care hospitals is another limiting factor. These conditions were targeted due to their prominence in CMS readmission penalties, but many included studies also involved general medical patients or other diagnoses. The recommendations are broadly applicable to hospital readmissions. However, condition-specific nuances, such as differences in strategies effective for heart failure versus pneumonia, may not have been fully delineated. Additionally, the search was limited mainly to English, so there could be relevant international studies in other languages that were not included, potentially limiting the global perspective.

Finally, as an integrative review of published studies, there are limitations due to the quality of the underlying evidence. Not all interventions were tested in randomized controlled trials. Many were observational or single-site QI projects. This means causality can be uncertain. If a hospital that implemented multiple interventions experienced a decline in readmissions, it cannot be assumed that the individual components were responsible for the change or that the reduction was not influenced by external factors, such as concurrent policy changes or secular trends. Some studies have noted challenges, such as a lack of control groups or short follow-up periods. Therefore, while conclusions were drawn about effectiveness, they should be understood as trends supported by multiple studies, not absolute proofs.

In conclusion, due to these limitations, hospital administrators and readers should exercise caution when overgeneralizing from the results of any single study.

Implementing the recommended strategies will likely require local tailoring and ongoing evaluation. Future research employing rigorous designs, such as multi-site trials and extended follow-up periods, would strengthen the evidence base for these interventions and address remaining gaps, including long-term sustainability and cost-effectiveness, which were not thoroughly examined in many of the reviewed studies.

Conclusion

In summary, this integrative review demonstrates that achieving and sustaining lower 30-day readmission rates for conditions such as AMI, CHF, and pneumonia requires a comprehensive and coordinated strategy spanning the entire continuum of care. The evidence suggests that hospitals should move beyond isolated interventions and adopt a synergistic set of practices that collectively prepare patients for discharge, provide ongoing post-discharge support, and address both medical and social needs. By aligning leadership priorities, empowering patients through education, redesigning care processes to enhance transitions, leveraging technology and data to inform decision-making, and engaging community resources, healthcare organizations can create environments that maximize patients’ opportunities to recover successfully at home. Grounded in evidence and supported by the CCM, this approach offers a reliable pathway to reducing avoidable readmissions.

For healthcare administrators, the central implication is the necessity of investing in the transition of care. Every handoff represents a critical opportunity to improve outcomes. When hospital teams collaborate effectively with community partners by ensuring that patients understand self-care instructions, follow-up providers receive comprehensive care plans, and systems proactively engage patients after discharge,

readmissions can be substantially reduced, as demonstrated across numerous studies included in this review. Achieving the benchmark rate of 11.9% or lower is ambitious but attainable when best practices are consistently applied.

Ultimately, reducing readmissions extends beyond compliance with performance metrics and reflects the delivery of high-quality, patient-centered care that continues beyond the hospital walls. Patients and families benefit through improved health outcomes, reduced stress, and greater peace of mind, while hospitals advance their mission of healing and position themselves for success within value-based care frameworks. The thematic synthesis presented in this review provides a roadmap, a blueprint for hospitals seeking to design and implement effective readmission reduction initiatives. Sustainable improvement will require system-wide engagement, continuous refinement, and proactive approaches to care. By embracing this holistic strategy, healthcare leaders can foster meaningful improvements in both clinical outcomes and the patient experience, contributing to the development of a more resilient and responsive healthcare system.

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Appendix A: DHA Practice-Based Problem Literature Review Matrix

Author/ Date	Theoretical/ Conceptual Framework	Research Question(s)/ Hypotheses	Methodology	Analysis & Results	Conclusions	Implications for Future research	Implications For practice	Empirical Research (Yes or No)
Acosta et al. (2022)	N/A	Analyze the evidence available in the scientific literature on interventions used to reduce hospital readmissions within 30 days in clinical patients discharged to home.	Integrative review of 71 articles published between January 2009 and April 2020 in Portuguese, English, and Spanish.	Most common interventions: phone contact post-discharge (73.2%), education after discharge (71.8%), and education during hospitalization (67.6%). 50.7% of studies showed significant readmission reduction.	Interventions aimed at preparing the patient during hospitalization for return home and post-discharge monitoring to reinforce care plans and clarify doubts; combination of different actions by the multiprofessional team impacts readmission rates.	Further research needed to identify the most effective combinations of interventions and to explore the role of multidisciplinary teams in reducing readmissions.	Healthcare providers should implement a combination of interventions, including patient education and post-discharge follow-up, to effectively reduce readmission rates.	Yes
Azadeh-Fard et al. (2024)	N/A	Does length of stay (LOS) significantly impact 30-day readmission rates of CHF patients in the U.S.?	Retrospective longitudinal study using 2010–2017 National Readmission Database (NRD); 2.5 million CHF patients analyzed using OLS and IV regression.	OLS showed positive association between LOS and readmissions. IV model showed that longer LOS reduces readmission. One additional day reduced 30-day readmissions by 3.5–3.7	After controlling for endogeneity, longer LOS causally reduces 30-day CHF readmissions. Discharge type and hospital ownership are also key predictors.	Future studies should incorporate more recent data (post-2017), explore 60- and 90-day readmissions, and apply advanced analytics like machine learning.	Hospitals should avoid premature discharges for CHF patients and tailor post-discharge plans based on patient characteristics and discharge type.	Yes

				percentage points.				
Becker et al., (2021)	N/A	Do communication interventions at discharge reduce hospital readmissions?	Systematic review and meta-analysis of RCTs	Communication interventions reduced readmission rates by 31% and improved adherence.	Discharge communication enhances outcomes significantly.	Explore the sustainability of outcomes across diverse populations.	Integrate structured communication practices in discharge processes.	Yes
Bilicki & Reeves (2024)	N/A	Do outpatient follow-up visits reduce 30-day all-cause readmissions for patients with specific chronic conditions?	Systematic review and meta-analysis; retrospective cohort studies primarily analyzed.	Outpatient follow-up visits within 30 days reduce 30-day all-cause readmissions by 21% but with variability across studies and conditions.	Outpatient follow-up visits show a significant reduction in 30-day readmissions for heart failure and stroke but not consistently for other conditions like COPD.	Future studies should focus on high-quality methodologies controlling for biases to validate the findings across broader populations.	Implementation of structured outpatient follow-up programs, especially for high-risk conditions, is essential for reducing readmissions.	Yes
Brock et al. (2021)	N/A	How can care transition research evolve to better capture and improve the patient experience and reduce harms beyond readmissions?	Commentary/synthesis of literature; critical analysis of existing interventions, implementation challenges, and outcome measures.	Readmission-focused interventions often miss broader patient harms. Readmission rates remain ~16%, and patient experience scores remain lowest on HCAHPS. Incomplete implementation hinders effectiveness.	Improved care transitions require measuring patient-defined outcomes, understanding social context, and assessing real-world implementation quality. Readmission is too blunt a tool alone.	Emphasizes three directions: (1) measure patient-desired outcomes, (2) define contextual patient/community factors, and (3) improve implementation assessment of transitional care models.	Providers should use more nuanced patient-centered metrics, engage community-based supports, and adopt adaptable interventions sensitive to patient context.	No

California Department of Public Health, (n.d).	N/A	How can California reduce unplanned 30-day hospital readmissions to 11.9% or lower by 2034?	Public health monitoring initiative; secondary analysis of California hospital discharge data; no formal study design specified.	14.5% of discharges led to 30-day unplanned readmissions in 2022. Readmission rates are higher for Medicare/Medi-Cal patients. Target is to reduce to 11.9% by 2034. Conditions contributing most: circulatory, infectious, digestive, respiratory, injuries, and mental disorders.	High readmission rates reflect potential gaps in quality of care and drive up costs. System-wide coordination, discharge planning, and follow-up care are essential.	Recommends ongoing tracking of demographic disparities, condition-specific analysis, and deeper study of effective local interventions.	Encourage integration of case management, care coordination, and post-discharge planning, especially for high-risk payer groups.	No
Centers for Medicare & Medicaid Services (2023)	N/A	What is the structure, scope, and impact of the Hospital Readmissions Reduction Program (HRRP) on Medicare-participating hospitals?	Policy description and legislative summary (non-empirical)	HRRP ties Medicare payments to readmission rates for six conditions. Hospitals with high readmissions face penalties up to 3%. Peer grouping added in 2019 for fairness.	HRRP encourages hospitals to improve transitions, discharge planning, and patient engagement.	Further study needed on subpopulation impacts and unintended effects like discharge avoidance.	Optimize care coordination and monitor condition-specific readmissions.	No
Fancher &Williams (2021)	Root Cause Analysis	What factors influence the preventability	Single-site, retrospective cohort	26% of readmissions deemed	Effective discharge planning and	Incorporate patient and caregiver	Focus on individualized discharge	Yes

	(RCA) Framework	of 30-day readmissions for patients hospitalized with COVID-19?	study using RCA and expert chart review.	preventable; key factors included inappropriate discharge location and misunderstanding of discharge medication regimen.	addressing patients' social determinants of health are critical to reducing preventable readmissions.	feedback in RCA studies; consider machine learning analyses for RCA.	planning, include family caregivers, and address social determinants of health.	
Ferreira & Baixinho (2021)	Transitions Theory by Meleis	What strategies can ensure a safe hospital-community transition to reduce hospital readmissions?	Editorial and literature synthesis focused on hospital discharge planning and care continuity strategies.	Safe transitions require early planning, tailored discharge guidelines, and strong communication between hospital and community health teams. Fragmentation in care increases readmission risks.	Effective communication, individualized discharge planning, and collaboration between healthcare institutions are essential for reducing readmissions.	Further research should identify best practices in discharge planning and evaluate interventions for diverse patient populations.	Nurses should initiate discharge planning early, engage families, and use evidence-based protocols to ensure seamless transitions.	No
Gouveia et al. (2023)	Simplified HOSPITAL score for risk stratification	Does a nurse-led, multimodal transitional care intervention reduce 30-day unplanned readmissions or death in high-risk medical patients compared to usual care?	Multicenter, single-blinded RCT; 1380 patients with HOSPITAL score ≥6.	Primary outcome: 30-day readmission or death. Results pending. Designed to improve generalizability.	Nurse-led bundled interventions may reduce readmissions in high-risk groups.	Results will guide targeting strategies using validated scores.	Use structured discharge protocols and allocate resources to high-risk patients.	Yes

Khan et al. (2021)	N/A	How have the Affordable Care Act (ACA) and the Hospital Readmission Reduction Program (HRRP) impacted 30-day readmission rates for Medicare patients with heart failure?	Retrospective cohort study of 12,973,853 Medicare hospitalizations from 2008 to 2015. Risk-adjusted 30-day readmission rates were analyzed using linear spline regression.	ACA implementation led to a decline in 30-day readmissions for all cohorts. HRRP caused stabilization in readmission rates post-2012. Principal HF readmissions saw a greater reduction compared to secondary HF readmissions.	Policy changes like ACA and HRRP effectively reduced readmissions, but sustained high rates highlight the need for comprehensive management for HF patients.	Future research to focus on sustained reduction strategies, including interventions for secondary HF hospitalizations and broader patient cohorts.	Adopt policy-driven interventions at organizational levels and evaluate their efficacy in reducing readmissions for broader patient categories.	Yes
Li et al. (2022)	Rooted in value-based care and patient-centered outcomes frameworks.	Which transitional care (TC) strategy combinations are most strongly associated with reduced 30-day hospital readmissions?	Retrospective longitudinal study (2009–2014); survey data from 370 U.S. hospitals linked with Medicare claims data for 2.4 million patients; mixed-effects regression with extensive covariate control.	The “Cross-Setting Information Exchange” TC group had the largest readmission reduction (absolute: 1.53%, relative: 10%). All five TC groups saw greater reductions than the No TC group.	Information exchange among providers and patient engagement strategies are key to reducing readmissions. TC strategy bundles vary, but coordinated communication and education have the strongest impact.	Future studies should compare component effectiveness, assess implementation fidelity, and examine patient-centered outcomes beyond readmissions (e.g., anxiety, confusion).	Hospitals should adopt TC strategies involving cross-setting communication, patient education, and needs assessment. Partial implementations yield smaller impacts.	Yes
Mays et al. (2021)	N/A	What combinations of transitional care (TC) strategies are most effective in reducing	Longitudinal cohort study using surveys from 370 hospitals and Medicare claims data for over 3.9 million care transition episodes.	Five TC groups identified: Shared Decision, High Risk Targeting, Medication Reconciliation,	Grouping TC strategies can help evaluate their comparative effectiveness. Cross-Setting	Future studies should test causal relationships among TC strategy groups and their effectiveness in	Hospitals should prioritize cross-setting information exchange and ensure it is paired with care	Yes

		hospital readmissions in U.S. hospitals?		Care Plan, and Cross-Setting Information Exchange. Cross-Setting Information Exchange combined with other strategies showed the largest reduction in readmission risk.	Information Exchange paired with care planning and medication reconciliation are promising interventions for readmission reduction.	different hospital settings.	plans and medication reconciliation to optimize patient outcomes.	
Morkisch et al., (2020)	Transitional Care Model (TCM)	What TCM components reduce geriatric readmissions?	Systematic review of RCTs	High-intensity, multidisciplinary TCM interventions reduced readmissions by up to 75%.	High-intensity, tailored TCM interventions are effective.	Investigate optimal intensity and components for different settings.	Adopt high-intensity, tailored TCM for older adults.	Yes
Nair et al., (2020)	Quality Improvement (QI) model (PDSA)	Do follow-up appointments reduce 30-day CHF readmissions?	Quality improvement initiative with retrospective comparison.	Follow-up appointments reduced readmissions from 28% to 14%.	Follow-up is critical in reducing CHF readmissions.	Evaluate broader implementation strategies.	Ensure follow-up scheduling before discharge.	Yes
Pugh (2021)	Evidence-Based Practices	How can evidence-based processes prevent hospital readmissions effectively?	Observational study at ten sites with an analysis of implemented processes and their outcomes.	Findings highlight the positive impact of implementing multiple evidence-based processes on reducing readmissions.	Evidence-based processes lead to significantly lower readmission rates, emphasizing the need for comprehensive care models.	Future research should investigate scalability and cost-effectiveness of multi-process implementations across diverse settings.	Healthcare administrators should prioritize comprehensive, evidence-based care practices to enhance patient outcomes and reduce readmissions.	Yes
Ramgobin et al. (2022)	N/A	Explore the impact of heart failure clinics	Review of literature and analysis of current practices including	CHF clinics reduced all-cause readmissions by	Combining CHF clinics and telemedicine	Further research needed to optimize the	Healthcare providers should expand the use	No

		and telemedicine on reducing hospital readmissions in CHF patients.	CHF clinics, telemedicine, and telemonitoring systems.	50%; Telemedicine reduced hospitalizations by 24% over 6 months and 27% over 12 months; Multidisciplinary teams enhanced follow-up outcomes.	provides significant reductions in readmission rates and improves health outcomes for CHF patients.	integration of telemedicine and CHF clinics, especially for rural and underserved populations.	of telemedicine and establish CHF clinics to monitor and support patients.	
Rammohan et al. (2023)	Care Transition Strategies and Social Determinants of Health	What impact do care transition teams have on reducing hospital readmission rates, particularly through addressing SDOH risk factors?	Two-phase study conducted at a community hospital. Phase 1 used logistic regression to establish baseline 30-day readmission rates and risk factors. Phase 2 implemented care transition team interventions and compared readmission rates post-intervention.	Baseline readmission rate: 18%. Post-intervention readmission rate: 9%. High-risk groups (60–79 age group, Hispanic population) showed significant reductions. Risk factors included coronary artery disease, sepsis, and COPD.	Care transition teams effectively reduce readmission rates by addressing individual and social risk factors. Prioritizing high-quality care transitions improves patient outcomes and hospital financial performance.	Further research is needed to validate long-term effects of care transition interventions across diverse settings.	Implement care transition teams to assess SDOH, ensure follow-ups, and provide patient-specific discharge planning.	Yes
Schultz et al. (2021)	N/A	What are the gaps in existing research about social support and hospital readmissions?	Scoping review with 23 studies included after screening 2919 articles.	Most common support needed was instrumental. Patients without adequate social support post-discharge had increased readmission risk.	Instrumental support is critical for preventing hospital readmissions. Comprehensive discharge planning should assess and address social support.	Examine the role of specific support types across different populations.	Include social support assessment in discharge planning to tailor post-discharge care and reduce readmissions.	Yes

Takashi et al., (2020)	Care Transition Framework	What are effective care transition models for reducing hospital readmissions in older adults?	Literature review and case study of Mayo Clinic model.	Meta-analyses identified bundled, multidisciplinary approaches reduced 30-day readmissions by 20.1%.	Care transitions involving advanced practice providers improve outcomes but not beyond 180 days.	Long-term impacts and cost-effectiveness need exploration.	Encourage bundled and multidisciplinary approaches for transitions.	No
Wagner, Austin, & Von Korff (1996)	Introduces the Chronic Care Model (CCM) as a heuristic framework for improving outcomes in chronic illness care.	How can healthcare systems reorganize care to better meet the needs of patients with chronic illness?	Conceptual article; synthesis of literature and prior interventions across randomized trials, chronic illness programs, and international models.	Identified 5 core components of effective chronic illness care: (1) Evidence-based planned care; (2) Reorganized practice teams; (3) Patient self-management support; (4) Use of expertise and support systems; (5) Information systems for follow-up.	High-quality chronic illness care requires proactive, team-based models integrated into primary care. Traditional acute-care-focused models are inadequate.	Recommends research evaluating integrated CCM interventions in real-world settings; need standardized outcomes to compare models.	Emphasize team-based care, patient empowerment, regular follow-up, and guideline-based protocols. Use practice redesign, information systems, and non-physician roles.	No

Appendix B: DHA Review Question(s) Search Log

Database or location name	Search Terms	Results	Notes
Google Scholar	Strategies to reduce hospital readmissions in patients with heart failure myocardial infarction pneumonia. Review articles, past 5 years.	1,940	That is a lot of results I need to narrow it down.
EBSCO	"Hospital Readmissions in 30 days" AND ("Myocardial infarction" OR "Pneumonia" OR "heart failure"). Full Text; Peer Reviewed Scholarly Journals Only; Past 5 years; English	174	I was expecting more articles than this. I should probably look for alternative search terms. "Transitional care" is a search term that shows up in many articles.
EBSCO	("30-day readmission" OR "hospital readmission" OR "re-admission") AND ("heart failure" OR "HF" OR "congestive heart failure" OR "pneumonia" OR "PNA" OR "myocardial infarction") AND ("readmission reduction" OR "preventing readmission" OR "transitional care"). Full Text; Peer Reviewed Scholarly Journals Only; Past 5 years; English	174	No change in the number of results. 41 studies have heart failure as a search term as compared to 5 for myocardial infarction and for pneumonia. I Saved files on myEBSCO account.
PubMed/MEDLINE	("30-day readmission" OR "hospital readmission" OR "re-admission") AND ("heart failure" OR "HF" OR "congestive heart failure" OR "pneumonia" OR "PNA" OR "myocardial infarction") AND ("readmission reduction" OR "preventing readmission" OR "transitional care"). Filters applied: in the last 5 years, Free full text, English, Adult.	22	There is a filter for "Adult" Utilizing this filter removed 7 results. Saved files in Zotero citation management software.
CINAHL Plus with Full Text	("30-day readmission" OR "hospital readmission" OR "re-admission") AND ("heart failure" OR "HF" OR "congestive heart failure" OR "pneumonia" OR "PNA" OR "myocardial infarction") AND ("readmission reduction" OR "preventing readmission" OR "transitional care"). Full Text; Past 5 years	37	I saved the search results in myEBSCO account.
ProQuest Central	("30-day readmission" OR "hospital readmission" OR "re-admission") AND noft("heart failure" OR "HF" OR	16	Not a lot of hits, but many of the results are very pertinent. Results were exported into citation management software.

Database or location name	Search Terms	Results	Notes
	"congestive heart failure" OR "pneumonia" OR "PNA" OR "myocardial infarction") AND ("readmission reduction" OR "preventing readmission" OR "transitional care"). Additional limits - Date: After July 01 2020; Source type: Scholarly Journals; Language: English		
ScienceDirect	("30-day readmission" OR "hospital readmission" OR "re-admission") AND ("readmission reduction") AND ("heart failure" OR "pneumonia" OR "myocardial infarction").filters: 2022 2025; research articles; open access and open archive	107	Will only allow 9 or less Boolean operators. Saved in Zotero.
Academic Search Complete	("30-day readmission" OR "hospital readmission" OR "re-admission") AND ("heart failure" OR "HF" OR "congestive heart failure" OR "pneumonia" OR "PNA" OR "myocardial infarction") AND ("readmission reduction" OR "preventing readmission" OR "transitional care"). Full Text; Past 5 years.English.academic journals.	28	Good number of results. I saved the search results in myEBSCO account.
Cochrane database of systematic reviews	("30-day readmission" OR "hospital readmission" OR "re-admission") AND ("heart failure" OR "HF" OR "congestive heart failure" OR "pneumonia" OR "PNA" OR "myocardial infarction") AND ("readmission reduction" OR "preventing readmission" OR "transitional care"). Full Text; Past 5 years. English; academic journals.		Good number of results. I saved the search results in myEBSCO account.

Appendix C: DHA Appraisal Results Log

Author, date, and title	Evidence level and quality rating	Focus: HSO type, Research Domain, and Specific Problem being addressed	Findings that help answer the review question(s)	Metrics and Measures if used	Source Limitations
Acosta et al., 2022, Health interventions for the reduction of hospital readmission within 30 days in clinical patients: An integrative review	Level V - High quality	HSO Type: Hospital Research Domains: Quality Improvement, General Management, Risk Management Specific Problem: High 30-day readmission rates in clinical patients discharged to home.	Most effective strategies: phone contact after discharge (73.2%), health education post-discharge (71.8%), and during hospitalization (67.6%). Interventions by multidisciplinary teams reduced readmissions in 50.7% of studies.	Primary outcome: 30-day hospital readmission rate. Significant reduction in 50.7% of studies.	Heterogeneous study designs, limited data from Latin America, cannot isolate most effective standalone interventions.
Becker et al., 2021, Interventions to Improve Communication at Hospital Discharge and Rates of Readmission	Level III - High quality	HSO Type: Hospitals Research Domain: Quality Improvement Specific Problem: High 30-day readmission rates due to ineffective discharge communication for medical inpatients with AMI, CHF, or pneumonia.	Communication interventions (e.g., medication counseling, disease education, and teach-back) were significantly associated with reduced readmissions (RR 0.69), improved medication adherence (RR 1.24), and higher patient satisfaction (RR 1.41). Respiratory patients benefited most from reduced readmission.	- 30-day readmission rates - Adherence to treatment regimens - Patient satisfaction scores - Mortality and ED reattendance rates - Risk Ratios with 95% CIs	Results limited to discharge-only interventions (excluded post-discharge follow-ups); heterogeneity in intervention type; publication bias present in secondary outcomes; limited data on sociodemographic and chronic condition stratification (e.g., CHF, AMI, pneumonia subgroups not isolated).
Bennett, D. J. (2025). Reducing Readmissions in the Safety Net Through AI and Automation	Level III – High quality	HSO Type: Safety-net urban academic hospital Research Domain: Information Management; Quality Improvement; General Management Specific Problem: High 30-day readmission rates	The implementation of an EHR-integrated AI-driven decision-support tool significantly reduced HF readmissions, closed equity gaps for Black patients, and improved mortality while generating positive ROI.	- 30-day readmission rate: dropped from 27.9% to 23.9% ($p < .004$) - All-cause mortality HR: 0.82 (95% CI: 0.68–0.99) - ROI: $7.2M retained vs. $1M development cost	- No intrahospital control group - Limited ability to isolate effects of each intervention - Limited generalizability outside safety-net systems - Positive predictive value of AI was initially low

		in heart failure patients in a resource-limited setting.			
Bilicki & Reeves, 2024. Outpatient Follow-Up Visits to Reduce 30-Day All-Cause Readmissions for Heart Failure, COPD, Myocardial Infarction, and Stroke: A Systematic Review and Meta-Analysis	Level III - High quality	HSO Type: Acute Care Hospital Research Domain: Quality Improvement Specific Problem: Reducing 30-day readmission rates for heart failure, AMI, and pneumonia (via generalization from HF and stroke findings).	Outpatient follow-up visits were associated with a 21% reduction in 30-day all-cause readmissions. Benefits were significant for heart failure and stroke, but evidence was insufficient for AMI and non-significant for COPD.	Adjusted odds ratio/hazard ratio pooled estimate: 0.79 (95% CI, 0.69–0.91) Subgroup for HF: OR/HR = 0.73 (95% CI, 0.55–0.95) Stroke: OR/HR = 0.76 (95% CI, 0.57–1.01) High heterogeneity: $I^2 = 92.7\%$	Limited generalizability due to high heterogeneity, time-dependent bias in some studies, exclusion of low-quality and AMI-focused Tier 1 studies, and lack of uniform control for confounders. No significant effect found for COPD. AMI evidence was based on aggregated data (Tier 2).
Brock, Jencks, & Hayes (2021), Future Directions in Research to Improve Care Transitions From Hospital Discharge	Level V – Good quality	HSO Type: Hospital; Research Domains: Quality Improvement, Organizational Dynamics and Governance; Specific Problem: High hospital readmission rates linked to poor care transitions.	Emphasizes that multifaceted care transition strategies (e.g., medication reconciliation, patient/family engagement, discharge process improvement, continuity of care) are effective in reducing unplanned readmissions. Identifies patient-centered outcome measurement, context-specific barriers, and quality implementation as key to improving post-discharge outcomes.	No direct intervention metrics reported; cites national average readmission rate (~16%) and qualitative findings on patient experience, community context, and implementation challenges.	Commentary article; lacks primary data; does not disaggregate findings by specific conditions (e.g., AMI, CHF, pneumonia); focuses on general systemic and policy barriers rather than specific intervention outcomes.
Chauhan & McAlister, 2022. Comparison of Mortality and Hospital Readmissions Among Patients Receiving Virtual Ward Transitional Care vs Usual Post discharge Care	Level III – High quality	HSO Type: Hospitals; Research Domain: Quality Improvement, Organizational Dynamics and Governance; Specific Problem: High 30-day readmissions in heart failure patients post-discharge.	Virtual ward (VW) transitional care significantly reduced 30-day readmissions and mortality in patients with heart failure. No significant benefit for patients with COPD, pneumonia, or high-risk non-HF groups.	Relative Risks (RR): HF readmissions (RR 0.84, CI 0.74–0.96); HF mortality (RR 0.86, CI 0.76–0.97); ED visits (RR 0.83, CI 0.70–0.98); Length of stay: –1.94 days	VW effectiveness mostly seen in HF; limited benefit in non-HF populations; heterogeneity in interventions; insufficient detail to analyze components driving efficacy

Distelhorst & Hansen (2022), Neighborhood matters for transitional care and heart failure hospital readmission in older adults	Level V – High quality	HSO Type: Hospitals; Research Domain: Quality Improvement, Risk Management, Organizational Dynamics and Governance; Specific Problem: High 30-day readmission rate for heart failure in older adults, influenced by care coordination and neighborhood disadvantage.	Early provider follow-up within 14 days significantly reduced 30-day readmission risk by 30%. Neighborhood disadvantage was not predictive of readmission but negatively influenced access to transitional care interventions such as follow-up visits and nurse care coordination.	- 30-day readmission rate - Early provider follow-up (within 14 days) - Nursing care coordination intensity (0–5 contacts) - Area Deprivation Index (ADI) for neighborhood disadvantage - Elixhauser Comorbidity Index	- Single health system limits generalizability - Retrospective design may affect data completeness and accuracy - Care coordination encounters not billable, thus potentially underreported - Readmissions outside health system not captured
Elsener et al., 2023. Telehealth-based transitional care management programme to improve access to care	Level III – Good quality (prospective observational design with 24,808 patients)	HSO Type: Acute care hospital (community-based, non-academic) Research Domain: Quality Improvement Specific Problem: High 30-day readmission rates for CHF, COPD, and pneumonia patients post-discharge.	A multidisciplinary telehealth transitional care model (WPH Cares) reduced 30-day readmissions: - CHF: from 14.3% to 9.1% - COPD: from 20.0% to 13.4% - Pneumonia: from 14.9% to 14.0% Best results occurred when patients were contacted 24–48 hrs post-discharge.	- 30-day readmission rates - Contact timing impact (e.g., 6.8% vs. 8.2% readmission) - Patient-reported barriers (medication, appointments, instructions) - Logistic regression controlling for demographics and comorbidities	- Single-center study without a control group - Observational design (causality cannot be confirmed) - No readmission tracking to outside hospitals - Disparities in contact rates by race/language noted - ROI not yet fully established
Fancher & Williams, 2021, Hospital Readmissions: New Pandemic, Same Old Problems?	Level V – Good quality	HSO Type: Hospital Research Domain: Quality Improvement & Risk Management Specific Problem: Preventable 30-day readmissions related to discharge planning and care transitions.	Highlights importance of individualized discharge planning that includes patients and caregivers, identification of risk factors for preventable readmissions (e.g., poor discharge location and medication misunderstanding), and the utility of root cause analysis (RCA) in identifying administrative improvement opportunities.	Preventability scoring on a six-point scale; 26% of readmissions in the cited study were deemed preventable; RCA tool used to categorize causes.	Single-site study with small sample size; reliance on expert opinion for RCA; did not confirm clinical diagnosis for all COVID patients; only same-hospital readmissions considered, possibly underestimating true rate
Faraj et al., 2021, “Brown Bag Clinic”: A Pharmacist-led Approach to	Level III – Good quality	HSO Type: Academic Medical Center Research Domain: Quality Improvement Specific Problem: High	A pharmacist-led post-discharge clinic reduced heart failure readmissions (7% in intervention group vs. 18% in control at 30 days; 21% vs. 41% at 90 days),	30-day and 90-day heart failure readmission rates, total number of readmissions, number of pharmacist interventions.	Small sample size (n=32); single-site study; non-randomized design; generalizability limited; adherence self-reported;

Reduce Heart Failure Hospital Readmission		30-day readmission rates in heart failure patients in underserved, urban populations.	though not statistically significant due to small sample size. Highlights pharmacists' role in medication optimization and patient education.		follow-up period relatively short (6 months)
Ferreira & Baixinho, 2021. Strategies to implement the safe hospital-community transition and mitigate hospital readmissions	Level V – Good quality (conceptual insight, not empirical)	HSO Type: Hospital Research Domain: Quality Improvement Specific Problem: Poorly planned hospital discharge and fragmented transitions to community care leading to higher readmission rates.	Effective administrative strategies include early discharge planning, individualized patient-family involvement, strong communication between hospital and community providers, nurse training, use of evidence-based practice, and support from academic partnerships to promote safe transitions.	No specific quantitative metrics; conceptual and literature-based discussion	Editorial commentary, lacks primary data or formal outcomes; general recommendations rather than AMI/CHF/pneumonia-specific.
Johnson et al., 2021, Remote Monitoring for Heart Failure: Assessing the Risks of Readmission and Mortality	Level III – High quality	HSO Type: Hospital system (large regional, multi-hospital academic system); Research Domain: Quality Improvement and Information Management; Specific Problem: High 30-day readmission and mortality in HF patients.	Remote monitoring reduced 30- and 90-day mortality but increased 30- and 90-day all-cause readmissions. It enhanced self-management and clinician follow-up using biometric data alerts.	30- and 90-day all-cause readmission and mortality rates; Kaplan-Meier survival analysis; Cox proportional hazard ratio	Observational design (no randomization), slight baseline differences, reliance on EMR/social security death index data, limited generalizability to systems without nurse-led call centers.
Li et al., 2022. Information exchange among providers and patient-centeredness in transitional care: A five-year retrospective analysis	Level III – High quality	HSO Type: Acute Care Hospitals Research Domains: Quality Improvement, Information Management, Organizational Dynamics Specific Problem: High 30-day readmissions linked to ineffective transitional care (TC) strategies.	The most effective administrative strategy bundle for reducing readmissions included: 1) timely exchange of critical patient information among providers, 2) engaging patients and caregivers through education (Teach Back), and 3) assessing patient/caregiver transitional care needs. Hospitals implementing this group (Cross-Setting Information Exchange) showed the largest relative reduction (10%) in 30-day readmission rates.	- 30-day all-cause unplanned readmission rate - Observation stay rates - 30-day mortality rate - Risk-adjusted regression slope comparisons	- Causal inference limited (observational design) - Self-reported TC strategy implementation - Missing date data for ~47% of implementations - Limited to Medicare fee-for-service patients; generalizability may be constrained

Mays et al., 2021. Understanding the groups of care transition strategies used by U.S. hospitals	Level III - High quality	HSO Type: Short-term acute care hospitals (370 hospitals); Research Domain: Quality Improvement, Information Management, Strategic Planning; Specific Problem: High 30-day readmission rates following discharge for Medicare patients.	Identified 5 transitional care (TC) strategy groups via factor analysis. Three groups—Cross-setting Information Exchange, Shared Decision-Making, and Care Planning—were significantly associated with reduced 30-day readmissions. Hospitals using these in combination achieved the largest reductions.	Main metric: 30-day unplanned readmission rate (Medicare FFS data from 2010–2014); Methods: Linear probability mixed-effects models controlling for patient/hospital/community variables	Self-reported data from hospitals may introduce bias; sample not nationally representative (underrepresented small hospitals); limited implementation timeline data; observational design cannot infer causation
Morkisch et al., 2020. Components of the transitional care model (TCM) to reduce readmission in geriatric patients: a systematic review	Level III – High quality	HSO Type: Hospital; Research Domains: Quality Improvement, Risk Management, Organizational Dynamics Specific Problem: High 30-day readmission in geriatric patients with AMI, CHF, and pneumonia.	High-intensity, multicomponent, multidisciplinary Transitional Care Model (TCM) interventions reduce all-cause readmissions without increasing costs. Components found effective include: staffing, symptom assessment/management, education/self-management, relationship continuity, and coordination.	Readmission rate reductions at 2, 3, and 6 months; intensity of intervention scored (low/moderate/high); cost per patient; % readmitted; % mortality; ADLs and QoL measured	Only 3 RCTs met inclusion criteria; limited by geographic scope and varying interventions; not all components analyzed independently; limited data on specific diagnoses like AMI or pneumonia.
Nair et al., 2020 – Reducing All-cause 30-day Hospital Readmissions for Patients Presenting with Acute Heart Failure Exacerbations: A Quality Improvement Initiative	Level V – Good quality	HSO Type: Hospital Research Domain: Quality Improvement Specific Problem: High 30-day readmission rate for CHF patients.	Implementing scheduled follow-up appointments within 2 weeks of discharge, coupled with patient education and nurse-led discharge planning, reduced 30-day all-cause readmissions from 28% to 14% in CHF patients.	- 30-day readmission rate - % of patients with scheduled follow-ups - % of patients who kept follow-up appointments	Small sample size, single-center study, short duration (1 month), no long-term follow-up, and limited generalizability.
Pugh et al., 2021 – Evidence based processes to prevent readmissions: more	Level III – High quality	HSO Type: Government/VA Hospitals Research Domain: Quality Improvement,	More evidence-based care transition processes implemented → Lower RSRR. Only two processes were used consistently across all sites. Total process	Risk Standardized Readmission Rate (RSRR); checklist of 20 care transition processes scored 0–3; linear regression (R^2 = 0.61, p = 0.007)	Only VA hospitals included (limits generalizability); no control for intensity or fidelity of processes; observational design;

is better, a ten-site observational study		Organizational Dynamics Specific Problem: High 30-day readmissions for AMI, CHF, and pneumonia.	score strongly correlated with lower readmissions.		limited to 10 sites; limited exclusion of surgical discharges in RSRR
Ramgobin et al., 2022. Congestive heart failure clinics and telemedicine: The key to reducing hospital readmissions in the United States	Level V – Good quality	HSO Type: Acute Care Hospital Research Domain: Quality Improvement, Information Management, Strategic Planning Specific Problem:: High 30-day readmission rates for CHF patients.	Multidisciplinary HF clinics and telemedicine (telemonitoring, virtual follow-up) significantly reduce 30-day CHF readmissions. Early post-discharge follow-up, patient education, and tailored interventions are key strategies.	- CHF clinic reduced readmission by 50% (Inamdar study) - Telemonitoring reduced hospitalization by 24% (6 mo), 27% (12 mo) - Early follow-up HR 0.54 (95% CI: 0.48–0.60) - Outpatient management group: 5 readmissions vs 187 in non-follow-up group	Lacks randomized controlled trials in primary article; relies on cited studies. Focused mainly on CHF; generalizability to AMI or pneumonia is unclear. Possible publication bias in reported studies.
Rammohan et al., 2023, The Path to Sustainable Healthcare: Implementing Care Transition Teams to Mitigate Hospital Readmissions and Improve Patient Outcomes	Level III – High quality	HSO Type: Community Hospital Research Domain: Quality Improvement and Organizational Dynamics Specific Problem: High 30-day readmission rates due to poor care transitions.	Implementation of a care transition team and SDOH questionnaire reduced 30-day readmissions from 18% to 9%. The intervention addressed social and clinical risk factors post-discharge.	Baseline and post-intervention readmission rates; Odds Ratios (OR) for risk factors; Demographics and comorbidity data using ICD-10; Chi-square and T-tests	Retrospective design limits causality; short follow-up period; single-site study; lacked socioeconomic/literacy data for confounding control.
Rizzuto et al., 2022. Decreasing 30-Day Readmission Rates in Patients With Heart Failure	Level V – High quality	HSO Type: Hospital (Urban safety-net hospital) Research Domain: Quality Improvement, Organizational Dynamics and Governance, Information Management Specific Problem: High 30-day readmission rates (28.6%) for heart failure patients in a high-poverty urban setting	Multidisciplinary heart failure program reduced 30-day readmission rate from 28.6% to 12% (16.6% absolute reduction). Key strategies: daily patient education using teach-back, structured discharge plans, follow-up within 7 days, nurse callbacks within 48–72 hours, and free meds-to-bed.	- 30-day readmission rate - % adherence to follow-up visits (82%) - % of patients educated with teach-back (98%) - % discharged with meds (83%) - Patient demographics and HF types	- Small sample size (n=47) - Single institution - Limited to one unit - No control group for comparison - Only heart failure addressed; not generalizable to AMI or pneumonia

Saleh et al., 2024. Impact of pharmacist-led transitions of care model on length of hospital stay and 30-day readmission rates at a quaternary care hospital: A pilot study	Level III - Good quality	HSO Type: Quaternary care hospital (inpatient medical and cardiac units) Research Domain: Quality Improvement, Financial Management, Organizational Dynamics Specific Problem: High 30-day readmission rates for medical and cardiac patients.	Pharmacist-led Admission (AMR) and Discharge Medication Reconciliation (DMR) reduced length of stay and had potential to reduce 30-day readmissions. Statistically significant LOS reduction observed on both medical and cardiac floors.	LOS (Length of Stay) in days 30-day Hospital Readmission Rate (HRR) Medication utilization cost in USD Multivariate regression analyses	Single-site pilot; no patient matching or disease stratification; cardiac-specific outcomes not isolated; limited generalizability; sample size may affect power of readmission results.
Saxena et al., 2022. Association of Early Physician Follow-up With Readmission Among Patients Hospitalized for AMI, CHF, or COPD	Level III - High quality	HSO Type: Acute Care Hospital Research Domains: Quality Improvement, General Management, Organizational Dynamics Specific Problem: High 30- and 90-day readmission rates among AMI, CHF, and COPD patients.	Early physician follow-up within 7 days post-discharge was associated with reduced 90-day readmission for CHF and COPD, reduced COPD-related readmission, and reduced 90-day mortality for CHF. No benefit for AMI or at 30 days.	aHRs for 90-day readmission and mortality: - CHF 90-day readmission: aHR 0.98 - COPD 90-day readmission: aHR 0.95 - COPD-related 90-day: aHR 0.93 - CHF 90-day mortality: aHR 0.93 NNTs: CHF readmission (139), COPD readmission (98)	Cannot assess content/quality of follow-up visits; excludes patients readmitted or deceased within 7 days; Ontario-only data may limit generalizability; administrative data lacks clinical granularity
Schultz et al., 2022. Scoping Review: Social Support Impacts Hospital Readmission Rates	Level V - High quality	HSO Type: Hospital; Research Domain: Quality Improvement; Specific Problem: Lack of social support after discharge increases risk of readmission for AMI, CHF, and pneumonia patients.	Instrumental support (help with ADLs, meds, transport) is the most needed. Lack of such support is associated with increased 30-day readmission. Discharge planning must assess and coordinate social support to prevent readmissions.	Some studies used validated tools like the Medical Outcomes Study Social Support Survey, Social Provisions Scale, Duke Social Support Scale, etc. Others used EHR notes or qualitative self-report.	Inconsistent assessment methods across studies; few studies directly addressed AMI/CHF/pneumonia; limited inclusion of minority populations; heterogeneity in design and definitions limits generalizability.
Takahashi et al., 2020. Hospital to Community Transitions for Older Adults	Level V -Good quality	HSO Type: Academic Medical Center (Mayo Clinic); Research Domains: Quality Improvement, General Management, Financial Management; Specific	The Mayo Clinic Care Transitions (MCCT) program—led by advanced practice providers (APPs) with multidisciplinary support—reduced 30-day readmissions by 44% for high-risk older adults. Effective strategies	30-day readmission: 12.4% (intervention) vs 20.1% (control); Preventable readmission: 8.4% vs 14.3%; Cost savings: $2700 in highest-cost decile	Results focused on older adults in one geographic area (Rochester, MN); limited generalizability; long-term (180-day) effects diminished over time; not

		Problem: High 30-day readmission rates in older adults with complex chronic conditions.	included early post-discharge home visits, medication reconciliation, chronic disease management, and support for caregivers.		disease-specific for AMI/CHF/pneumonia
Wong et al., 2020. A Retrospective Study of a Home Visiting Program for Patients with Heart Failure	Level III - Good quality	HSO Type: Hospital/Community Health Research Domains:: Quality Improvement Specific Problem: High 30-day readmission rate for heart failure patients.	Nurse-led home visiting significantly reduced 30-day readmissions for HF and increased referrals to cardiac rehab. Supports transitional care programs to reduce readmission risk.	- 30-day readmission rate - Referral to cardiac rehab - Regression analysis (OR, CI) - Descriptive statistics - Length of stay	- Non-randomized; retrospective design - Single site in Canada - Potential researcher bias - Differences in time periods between control and intervention groups

Appendix D: DHA Thematic Analysis Results

Author(s) and date	Findings with Initial Codes	Code List for Theme Development
Acosta et al. (2022)	Post-discharge follow-up: Phone contact after discharge was the most frequent intervention, implemented in 73.2% of the studies. Health Education: Health education during hospitalization and after discharge were key strategies, reported in over 67% and 71% of the studies, respectively. Post-discharge home visits: Post-discharge home visits were implemented in less than 30% of the studies but were described as effective in reducing readmissions in clinical patients.	1. Health Care Organization and Leadership • Delivery system design • Equity and access • High intensity interventions • Multidisciplinary governance and care • Organizational culture • Policy incentives and financial penalties • Strategy and implementation • Standardization of care 2. Self-Management Support • Community resources and policies • Patient education and support • Peer and social support • Self-management skills • Social determinants of health 3. Clinical Information Systems • Dashboards and real-time monitoring • Decision support • High risk patient identification • Technology supported education • Telemonitoring
Becker et al. (2021)	Discharge planning: Communication interventions at discharge were significantly associated with lower readmission rates, higher adherence to treatment regimen, and higher patient satisfaction. Patient education: At discharge, healthcare practitioners need to explain critical information, such as patients' diagnoses and their treatment, while integrating patients' conditions, perceptions, and needs at the same time. However, patients may not understand or remember the information provided, resulting in confusion, misinterpretation and mismanagement of treatment regimen. Written instruction: Several trials reported that providing additional written materials improved patient knowledge and adherence.	

Author(s) and date	Findings with Initial Codes	Code List for Theme Development
Bennett (2025)	Dashboards & Real-Time Monitoring: Real-time dashboards tracked AI-derived readmission risk across the HF population for population-level anticipatory management. Multidisciplinary care coordination: A Heart Team merged cardiology, addiction, palliative, and social medicine to address medical and social risk drivers of readmissions. Provider engagement: Despite these successes, we encountered several hurdles during the implementation of this program. First, general interaction rates with EHR-based decision-support aid across our health system were meager, sometimes less than 1%… To address this, we conducted workshops with providers using the digital tool to integrate their design feedback and encourage buy-in to facilitate the tool's success. Workflow integration: Using EHR technology, we adapted the discharge checklist into a logic-based, point-of-care decision-support tool housed within a custom-built user interface. Predictive AI integration: Predictions were surfaced in the decision-support tool and guided providers to place high-priority follow-up referrals. Linking a predictive output to a specific provider action is critical to successfully implementing predictive AI.	4. Transitional Care • Care coordination • Communication across care settings • Discharge planning • Medication Reconciliation • Needs assessment • Post discharge follow-up • Post discharge home visits
Bilicki and Reeves (2024)	Barriers to care: Challenges related to lack of insurance, lack of a regular healthcare provider, costs, health literacy, and travel are just a few of the many barriers to implementing outpatient follow-up visits effectively. Post-discharge follow-up visits: Outpatient follow-up visits soon after discharge may help prevent hospital readmissions. Post-discharge follow-up: Beyond reducing readmissions, outpatient follow-up visits can present an opportunity for	

Author(s) and date	Findings with Initial Codes	Code List for Theme Development
	reconciling medications, building self-management skills, and ordering further medical testing.	
Chauhan and McAlister (2022)	Post-discharge follow-up: High-intensity interventions included early clinical reassessment and medication reconciliation post-discharge, preventing readmissions. Multidisciplinary governance and care: Virtual wards deployed interdisciplinary teams that included nurses, physicians, pharmacists, and case managers to oversee transitional care remotely. Equity and access: The virtual model addressed access barriers by enabling care continuity for high-risk patients unable to attend in-person visits, especially older adults and those with mobility issues.	
Distelhorst and Hansen (2022)	Barriers to care: Patients living in disadvantaged neighborhoods were less likely to receive early provider follow-up or nursing care coordination, highlighting structural barriers to transitional care. Post-discharge follow-up: A provider visit within 14 days of discharge was associated with 30% lower odds of 30-day readmission among older adults with heart failure.	
Elsener et al. (2023)	Post-discharge follow-up: Patients received structured follow-up calls by registered nurses within 24–48 hours of discharge, significantly reducing 30-day readmissions. Needs assessment: Outreach included personalized questions to assess discharge comprehension, medication access, appointment scheduling, and social needs, enabling tailored interventions. Communication: Data from patient interactions were automatically uploaded to hospital dashboards, giving	

Author(s) and date	Findings with Initial Codes	Code List for Theme Development
	leadership system-wide insight into transitional care performance. Community partnerships: Weekly collaboration meetings were held with local organizations including VNS, cancer centers, and ambulance services to coordinate care and address patient-level barriers.	
Faraj et al. (2021)	Multidisciplinary governance and care: The Brown Bag Clinic (BBC), staffed by pharmacy residents and supervised cardiology pharmacists, provided early post-discharge care for heart failure patients. Medication reconciliation: Patients brought all medications to their visits for reconciliation, with pharmacists adjusting regimens based on heart failure guidelines and symptom presentation.	
Li et al. (2022)	Verbal education strategy: Teach back is an effective approach to actively teach patient and caregivers how to practice self-care, follow the care plan, confirm comprehension, and encourage questions. Community partnerships: Developing partnerships with community organizations can help address social factors contributing to readmissions.	
Mays et al. (2021)	Shared decision making: Shared decision making and needs assessment each had factor loadings exceeding 0.5, indicating a relatively strong tendency for hospitals to combine these strategies. Communication across care settings: The largest reduction in readmission risk occurred among hospitals that used the Cross-setting Information Exchange TC group, resulting in an average reduction of 0.60 percentage-points per year after adjusting for patient, hospital and community characteristics ($p < 0.01$).	

Author(s) and date	Findings with Initial Codes	Code List for Theme Development
Morkisch et al. (2020)	Medication reconciliation: Interventions such as medication reconciliation have been linked to reducing adverse events associated with non-adherence to medication after hospital discharge. High intensity interventions. Health Care Organization and Leadership: High-intensity interventions, such as early home visits within 48 hours post-discharge, were associated with significant reductions in readmissions.	
Nair et al. (2020)	Delivery system design: Early follow-up visits with a cardiologist or PCP within seven days of discharge after an HF hospitalization have also been shown to help reduce the 30-day readmission rate. Telemonitoring. Clinical Information Systems: Interventions such as weekly or biweekly phone calls, telemonitoring, and home visits can also be used to increase follow-up visits and thereby decrease readmission rates.	
Pugh et al. (2021)	Discharge planning: Implementation of discharge planning rounds and assignment of medication reconciliation to pharmacists contributed to positive outcomes. Strategy and Implementation: Further reduction of readmissions will likely require new strategies to facilitate implementation of these evidence-based processes, should include consideration of how to better incorporate activities into workflow, and may benefit from more consistent use of some of the more underutilized processes including patient inclusion in discharge planning and increased utilization of community supports. Organizational culture: Organizational practices associated with hospitals with lower readmission rates including: improving collaboration across disciplinary boundaries within the hospital, building relationships to share hospital expertise with postacute providers, enthusiasm for trial and	

Author(s) and date	Findings with Initial Codes	Code List for Theme Development
	error learning, and fostering a shared sense that readmissions were bad for patients. Advanced care planning: Burke… found that advanced care planning was not included… suggesting the designers… failed to consider advanced care planning as an intervention for reducing readmissions.	
Ramgobin et al. (2022)	Caregiver involvement: Caregivers may accompany patients to clinic appointments to ensure proper follow-up and continuity of care after discharge. Social determinants of health: Addressing social determinants of health and providing tailored support during care transitions for specific populations effectively reduced readmission rates.	
Rammohan et al. (2023)	Telemonitoring. Clinical Information Systems: Information and communications technology, including telemedicine and telehealth, can aid in managing chronic illnesses effectively.	
Rizzuto et al. (2022)	Verbal education strategies: Nurses used teach-back strategies at the bedside daily to reinforce disease knowledge, medication management, lifestyle changes, and symptom recognition. Caregiver involvement: Educational efforts were directed toward both patients and their caregivers, improving home self-care support and reducing confusion post-discharge. Patient education and support: Patients were discharged with tote bags containing pill organizers, a simplified HF guide written at a 3rd-grade level, and in some cases, the AHA HF Path app for smartphone users. Evidence-based: Based on recommendations from the American College of Cardiology, AHA, and the Heart Failure Society of America… Get With the Guidelines program for HF."	

Author(s) and date	Findings with Initial Codes	Code List for Theme Development
Saleh et al. (2024)	Standardization of care: Follow a standardized process for medication reconciliation. Medication reconciliation: Though not statistically significant, pharmacist-led DMR showed a trend toward reduced 30-day readmission on the cardiac floor.	
Saxena et al. (2022)	Post-discharge follow-up: Patients with a documented follow-up visit within 7 days of discharge had significantly lower 30-day readmission rates for acute myocardial infarction (AMI), heart failure (HF), and chronic obstructive pulmonary disease (COPD). Post-discharge follow-up: The most significant reduction in readmission occurred among heart failure patients with scheduled early follow-up, underscoring the importance of timely ambulatory engagement.	
Schultz et al. (2022)	Discharge readiness: An assessment that includes questions related to help at home after discharge is the Readiness for Hospital Discharge Survey (RHDS)… asks the patient and nurse to rate… whether the patient will have assistance at home, if needed, with personal and medical care. Social Support: Patients who lacked adequate social support after discharge were at an increased risk of hospital readmission. Needs assessment. Transitional Care: Assessing patients' needs and available social support to meet those needs may be an essential part of the discharge planning process to decrease the risk of hospital readmission.	
Takahashi et al. (2020)	Multidisciplinary governance and care: The Mayo Clinic Care Transitions program encompasses a bundled and multidisciplinary approach designed to meet the needs of patients, emphasizing self-empowerment for both patients and caregivers.	

Author(s) and date	Findings with Initial Codes	Code List for Theme Development
	Care model redesign: Hospital at Home, a home-based acute-care model, provided strong evidence of the reduction of preventable hospitalizations and also cost savings.	
Wong et al. (2020)	Post-discharge home visits: Cardiac nurse-led home visits were associated with significantly fewer 30-day heart failure readmissions and greater continuity of care. Patient education and support: Visits included education on medication management, daily weights, diet, physical activity, and symptom monitoring, improving patient self-care capacity. Patient education and support: Nurses used printed HF booklets (e.g., Living With Congestive Heart Failure) and individualized teaching to enhance comprehension and adherence.	

Appendix E: Final Concept/Thematic Map