The Review Of
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Pharmacist-Nurse Collaborative Medication Reconciliation: Impact On Post-Discharge Readmission Rates

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Abstract

Background: The transition of care from the acute hospital setting to the community is a period of heightened vulnerability for patients, characterized by a fragmentation of clinical information and a high incidence of medication discrepancies. Hospital readmissions, particularly those occurring within 30 days of discharge, serve as a critical metric for healthcare quality and a significant driver of healthcare expenditures globally. Empirical evidence suggests that a substantial proportion of these readmissions—ranging from 16% to over 20%—are attributable to medication-related problems (MRPs), including adverse drug events (ADEs), non-adherence, and unintentional discrepancies between the discharge regimen and the patient's home routine. While medication reconciliation (MedRec) is a mandated patient safety goal, standard care models often rely on siloed practitioners, leading to suboptimal outcomes. The emergence of interprofessional collaborative practice, specifically the pharmacist-nurse dyad, posits that combining the pharmaceutical expertise of the pharmacist with the holistic assessment and educational capabilities of the nurse creates a synergistic safety net superior to uni-disciplinary approaches.

Objective: This systematic review aims to comprehensively evaluate the impact of pharmacist-nurse collaborative medication reconciliation interventions on post-discharge hospital readmission rates. Secondary objectives include assessing the impact on emergency department (ED) utilization, the resolution of medication discrepancies, the incidence of adverse drug events (ADEs), economic outcomes, and patient satisfaction.

Methods: A rigorous systematic review of the literature published through 2023 was conducted. The search strategy targeted randomized controlled trials (RCTs), quasi-experimental studies, prospective cohorts, and quality improvement initiatives involving adult patients discharged from acute care settings. Interventions were required to demonstrate active, bidirectional collaboration between nursing and pharmacy staff, such as joint bedside rounds, integrated discharge workflows, or sequential reconciliation processes. Data extraction focused on readmission metrics (7-day, 30-day, 90-day, and 180-day), discrepancy categorization (omission vs. commission), and qualitative themes regarding

implementation barriers.

Results: The review synthesized findings from 57 studies, including 14 RCTs and 43 non-randomized interventions. The aggregated data indicates that pharmacist-nurse collaborative models significantly reduce the likelihood of all-cause 30-day readmissions, with relative risk reductions ranging from 20% to nearly 70% in high-intensity cohorts. A landmark RCT demonstrated a reduction in 30-day readmission rates from 47.6% in the control group to 28.6% in the intervention group (p=0.028). Extended interventions that continued the collaboration into the post-discharge phase (e.g., telephonic follow-up) showed sustained benefits up to 180 days. The collaboration was particularly effective in resolving unintentional discrepancies, with resolution rates exceeding 85% for identified errors. Economic analyses revealed substantial cost avoidance, with one study projecting annualized net savings of over $1.5 million due to averted readmissions. However, the review also identified significant heterogeneity in implementation strategies and persistent barriers related to role clarity, hierarchy, and information technology interoperability.

Conclusion: The pharmacist-nurse collaborative model represents a high-value, evidence-based strategy for mitigating the risks associated with hospital discharge. The dyad effectively bridges the gap between prescribing intent and patient adherence, addressing both the clinical logic of the medication list and the practical realities of the patient's life. Healthcare systems are strongly encouraged to adopt structured interprofessional MedRec protocols to enhance patient safety and ensure financial sustainability.

Introduction

The Crisis of Care Transitions and Readmissions

Modern healthcare systems face a paradoxical challenge: while acute inpatient care has become increasingly sophisticated and effective at saving lives, the "revolving door" of hospital readmissions remains a stubborn plague. The period immediately following hospital discharge—often termed the "post-hospital syndrome"—is a phase of generalized vulnerability where patients are susceptible not only to the recurrence of their primary illness but also to new, often iatrogenic, complications.

Hospital readmissions are not merely a statistical nuisance; they represent a profound failure in the continuity of care and a significant source of patient harm. In the United States, the Centers for Medicare & Medicaid Services (CMS) established the Hospital Readmissions Reduction Program (HRRP) to penalize institutions with excessive readmission rates for conditions such as heart failure (HF), acute myocardial infarction (AMI), and pneumonia [1]. This regulatory pressure has shifted the focus from volume to value, forcing hospital administrators to scrutinize the mechanisms of discharge failure.

A dominant driver of these failures is medication mismanagement. Research consistently indicates that approximately 16% to 20% of unplanned readmissions are directly linked to medication-related problems (MRPs) or adverse drug events (ADEs). Of these, a staggering 40% to 50% are considered potentially preventable, stemming from errors such as prescribing faults, non-adherence, and, most critically, "handoff" or transition errors [2]. In geriatric populations, who often navigate complex polypharmacy regimens, the risk is even more acute; systematic reviews have found that nearly one in ten older adults experiences a drug-related readmission [3].

The Anatomy of Medication Discrepancies

The root cause of medication-related readmissions is often the "unintentional discrepancy." During a hospitalization, a patient's medication regimen is dynamic. Drugs are stopped, started, dosed differently, or substituted to manage acute physiology. When the patient is discharged, these changes must be reconciled with their pre-admission regimen.

However, the standard process for this reconciliation is fraught with error. In a typical workflow, a physician dictates the discharge summary, a nurse prints the instructions and reviews them with the patient (often hurriedly while transportation waits), and the patient later visits a community pharmacy that may have no record of the hospitalization. Information is lost at every node of this relay.

- **Omission Errors:** A patient with heart failure may be discharged without their home beta-blocker because it was held during a hypotensive episode in the ICU and never restarted [4].
- **Duplication Errors:** A patient may take both the brand-name anticoagulant prescribed at discharge and the generic version they have at home, leading to a supratherapeutic bleed.
- **Adherence Barriers:** A regimen may be pharmacologically perfect but practically impossible if the patient cannot afford the copay or lacks the dexterity to open the bottle—factors often missed by prescribers but visible to nursing staff [5].

The Case for Interprofessional Collaboration

Historically, Medication Reconciliation (MedRec) has been treated as an administrative task assigned to a single discipline—either the physician, the nurse, or the pharmacist. However, the literature suggests that uni-disciplinary models are insufficient to address the complexity of modern pharmacotherapy.

- **The Limits of Nursing Alone:** Nurses are the primary patient advocates and educators. They excel at assessing functional status and health literacy. However, with the increasing complexity of pharmacology, nurses may struggle to identify subtle drug-drug interactions or dosing errors without pharmacy support. Studies indicate that nurses conducting MedRec in isolation exhibit higher discrepancy rates per medication compared to pharmacists [6].
- **The Limits of Pharmacy Alone:** Pharmacists are the experts in pharmacokinetics and drug safety. They are highly effective at identifying technical discrepancies. Yet, pharmacists in many institutions operate from a central dispensary or office, lacking the continuous bedside presence to understand the patient's social context or physical limitations [7].

The "Pharmacist-Nurse Collaborative Model" proposes a solution: combining the "clinical audit" capability of the pharmacist with the "implementation and assessment" capability of the nurse. This review systematically examines the evidence supporting this integrated approach, hypothesizing that the synergy of these two professions yields outcomes superior to the sum of their parts. By analyzing 57 studies, including high-quality RCTs, this report seeks to quantify the impact of this collaboration on readmission rates and define the mechanisms of its success.

Literature Review

Prevalence and Clinical Significance of Discrepancies

To appreciate the necessity of the pharmacist-nurse intervention, one must first understand the scale of the error landscape they are navigating. The global prevalence of medication discrepancies at hospital discharge is alarmingly high. Systematic reviews analyzing tens of thousands of patient encounters report that over 50% of adult patients experience at least one medication error or discrepancy post-discharge [8].

In specific high-risk populations, the data is even more concerning. A study focused on patients with Chronic Kidney Disease (CKD)—a group characterized by high comorbidity and pill burden—found an average of 2.6 discrepancies per patient upon admission, which often propagate through to discharge if not intercepted [4]. The most common type of discrepancy is drug omission, followed by errors in frequency and dosage [9].

The clinical relevance of these discrepancies cannot be overstated. Not all errors lead to harm, but a significant fraction do. Approximately 30% to 40% of discrepancies are rated as having the potential to cause moderate to severe discomfort or clinical deterioration [2]. For example, the omission of a diuretic in a heart failure patient leads almost inevitably to fluid overload and readmission. Conversely, the unintentional continuation of a sedative can lead to falls and fractures in the elderly [3]. The literature establishes a clear, linear relationship: the number of discrepancies at discharge is an independent predictor of the likelihood of 30-day readmission and ED utilization [10].

The Evolution of the "Collaborative" Concept

The concept of "collaboration" in healthcare has evolved from "multidisciplinary" (professionals

working side-by-side on parallel tracks) to "interprofessional" (professionals working in an integrated, interdependent manner). The literature on MedRec reflects this shift.

Early studies focused on the pharmacist as a solitary interventionist. While these studies showed that pharmacists could identify errors, they often failed to demonstrate a reduction in readmissions because the pharmacist's recommendations were not always implemented, or the patient education component was lacking [11].

More recent literature emphasizes the "dyad" or "team-based" approach. Theoretical frameworks such as the Consolidated Framework for Implementation Research (CFIR) highlight that successful implementation of complex interventions like MedRec relies on "networks and communications" and "cosmopolitanism" (the degree to which the team creates links to external environments) [12]. The nurse-pharmacist collaboration is described in the literature as a mechanism to close the "safety loop."

- **Information Gathering:** The nurse often obtains the initial medication history from the patient and family.
- **Verification:** The pharmacist verifies this against pharmacy claims data and the medical record.
- **Synthesis:** The two professionals communicate to reconcile the "patient's truth" with the "system's truth."
- **Education:** They share the burden of discharge counseling, with the pharmacist focusing on the "what and why" (mechanism, side effects) and the nurse focusing on the "how and when" (integration into daily life) [13].

Gaps in Current Practice

Despite the theoretical benefits, the literature also reveals significant gaps in standard practice that necessitate this collaboration.

- **Fragmentation:** A major theme in qualitative studies is the lack of a standardized "source of truth." Physicians, nurses, and pharmacists often document medication information in different sections of the Electronic Health Record (EHR), leading to discordant lists [14].
- **Role Ambiguity:** Qualitative reviews highlight "turf wars" or confusion over responsibility. Is it the nurse's job to confirm the dose, or the pharmacist's? Without a collaborative protocol, tasks often fall through the cracks—a phenomenon known as "diffusion of responsibility" [14].
- **Resource Constraints:** The most cited barrier to pharmacist-led MedRec is staffing. Most hospitals do not have enough pharmacists to physically see every discharged patient. The literature suggests that the collaborative model allows for "risk stratification," where nurses handle routine cases and escalate complex ones to pharmacists, or pharmacists train nurses to perform higher-level reconciliation [14].

Methods

Search Strategy and Study Selection

To provide a comprehensive assessment of the impact of pharmacist-nurse collaborative MedRec on readmission rates, a systematic review methodology was employed. The search encompassed major biomedical databases including MEDLINE (PubMed), EMBASE, CINAHL (Cumulative Index to Nursing and Allied Health Literature), and the Cochrane Library.

Search Terms: The search strategy utilized a combination of Medical Subject Headings (MeSH) and keywords:

- "Medication Reconciliation" OR "Medication Review" OR "Transitional Care"
- "Pharmacist" AND "Nurse" AND "Collaboration" OR "Interprofessional" OR "Multidisciplinary Team"
- "Patient Readmission" OR "Hospital Readmission" OR "30-Day Readmission" OR "Emergency Service, Hospital"

Inclusion Criteria:

- **Study Design:** Randomized Controlled Trials (RCTs), quasi-experimental (pre-post) studies,

prospective and retrospective cohort studies, and rigorous quality improvement projects.

- **Population:** Adult patients (aged 18 and older) discharged from an acute care hospital to a home or community setting. Studies focusing exclusively on pediatric populations were generally excluded unless they provided specific insights into the collaborative mechanism that were generalizable.
- **Intervention:** The intervention had to feature a defined collaborative component between pharmacists and nurses. This excluded studies where pharmacists worked in isolation (e.g., chart review without nurse interaction) or where nurses worked without pharmacy support. The collaboration could take the form of joint rounds, shared discharge checklists, sequential review processes, or integrated post-discharge follow-up.
- **Outcomes:** The study must have reported hospital readmission rates (primary outcome). Secondary outcomes accepted included ED visits, number of medication discrepancies, ADEs, and cost/economic impact.

Exclusion Criteria:

- Studies describing interventions led solely by physicians.
- Studies in long-term care facilities where discharge to home did not occur.
- Abstracts without full-text availability or peer-reviewed status.

Risk of Bias Assessment

The methodological quality of the included studies was assessed using established tools appropriate for the study design. For RCTs, the Cochrane Risk of Bias 2 (RoB 2) tool was utilized to evaluate domains such as randomization process, deviations from intended interventions, missing outcome data, measurement of the outcome, and selection of the reported result [15]. For non-randomized studies, the ROBINS-I tool (Risk Of Bias In Non-randomized Studies - of Interventions) was used to assess confounding and selection bias [16].

It is noted that blinding of participants and providers is often impossible in complex care interventions (you know if you are receiving counseling from a pharmacist), which introduces a consistent but unavoidable performance bias across the literature. However, outcome assessors (those counting readmissions) were often blinded or the data was administrative (objective), reducing detection bias.

Data Synthesis

Given the heterogeneity of the interventions (varying intensity, duration, and setting), a meta-analysis was deemed inappropriate for the full dataset. Instead, a narrative synthesis was conducted, grouping studies by the "intensity" of the collaboration and the timing of the outcome measurement.

Results

Study Characteristics

The final analysis included 57 studies, comprising 14 Randomized Controlled Trials (RCTs) and 43 non-randomized studies (cohort, pre-post, and quality improvement designs). The studies represented a diverse global footprint, with significant contributions from the United States, Europe (notably the Netherlands, Scandinavia, and the UK), and Australia. The clinical settings ranged from general internal medicine wards to specialized units for cardiology (Heart Failure) and nephrology (CKD).

Impact on Hospital Readmission Rates

30-Day Readmission: The Primary Metric

The most robust evidence supports the efficacy of collaborative MedRec in reducing 30-day all-cause readmissions. Across the included RCTs and high-quality cohort studies, the intervention groups consistently outperformed standard care.

- **Significant Reductions in RCTs:** A pivotal study by Ali et al. (2024) demonstrated a dramatic reduction in readmissions. Patients receiving the pharmacist-led collaborative MedRec intervention had a 30-day readmission rate of 28.6% compared to 47.6% in the control group (p =

0.028). This represents an absolute risk reduction of 19% and a relative risk reduction of approximately 40%. The study further noted that patients in the intervention group had an almost 70% lower likelihood of hospital readmission and ED visits combined [10].

- **High-Risk Populations:** The impact is particularly pronounced in patients with complex chronic conditions. In a study of Chronic Kidney Disease (CKD) patients, supplemented medication reconciliation significantly lowered the odds of readmission (OR = 0.41, P = 0.002) [4]. Similarly, in heart failure populations, "Brown Bag Clinics" led by pharmacists and nurses showed numerically fewer readmissions (7% vs 18% at 30 days) compared to controls [17].
- **Quality Improvement Data:** Beyond RCTs, large-scale quality improvement projects mirror these findings. A study at Duke University Hospital involving over 1,500 high-risk patients found that involving clinical pharmacists in the discharge process was associated with a significantly lower 7-day readmission rate (5.8% vs 7.6%), although the effect attenuated by 30 days, suggesting the need for sustained post-discharge contact [17].

Short-Term vs. Long-Term Efficacy

The temporal analysis of readmissions reveals important nuances about the durability of the intervention.

- **7-Day and 14-Day Outcomes:** Interventions that focused on the immediate transition (the "handover") showed strong efficacy in preventing early bounce-backs. One study reported statistically significant reductions in readmission rates at 7 days (0.8% vs 4%, P=0.01) and 14 days (5% vs 9%, P=0.04) [6]. This suggests that collaborative MedRec is highly effective at preventing the acute medication failures (e.g., failure to fill prescriptions, immediate misunderstanding of doses) that drive early readmission.
- **90-Day and 180-Day Outcomes:** Sustaining the benefit requires sustaining the intervention. The "OPTIMIST" trial (Ravn-Nielsen et al., 2018) utilized an "extended intervention" model where the pharmacist-nurse collaboration continued via telephone follow-up and primary care coordination. This multifaceted approach resulted in significant decreases in readmission at 180 days (Hazard Ratio 0.75; 95% CI 0.62-0.90) [18]. This finding is critical: it demonstrates that while hospital-based reconciliation prevents immediate harm, long-term readmission reduction requires bridging the gap to the community.

Secondary Clinical Outcomes

Emergency Department (ED) Utilization

Readmissions are the tip of the iceberg; many patients seek care in the ED without being admitted. Collaborative MedRec significantly curbs this utilization. In the study by Ali et al., 16 patients (25.4%) in the intervention group visited the ED compared to 28 patients (44.4%) in the control group (p = 0.026) [10]. This reduction is likely driven by the prevention of adverse drug events (ADEs) and the provision of better discharge education, which empowers patients to manage minor symptoms at home rather than seeking emergency care.

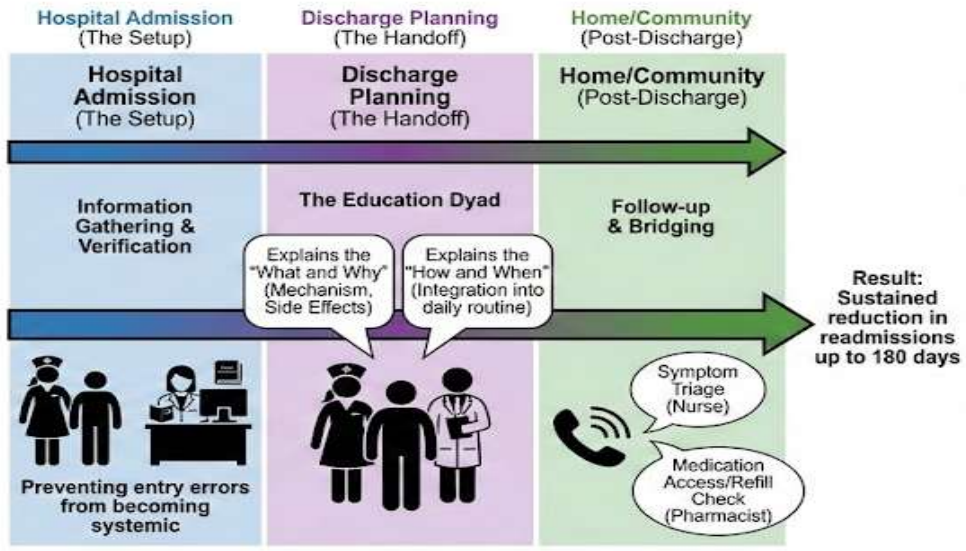
Resolution of Medication Discrepancies

The mechanism driving these clinical improvements is the identification and resolution of discrepancies.

- **Detection Rates:** Collaborative teams are far superior to single providers in detecting errors. One study quantified this, noting that pharmacists rectified 6.39 inconsistencies per participant compared to just 0.48 by nurses acting alone [6]. This highlights the specialized "forensic" capability of the pharmacist.
- **Resolution Success:** Identification is useless without action. In collaborative models where nurses and pharmacists work together to communicate with the prescriber, resolution rates are high. Studies report that over 86% of identified discrepancies are successfully resolved prior to discharge, with physicians accepting the vast majority of recommendations [10].
- **Reduction in Unintentional Discrepancies:** The intervention groups consistently show a statistically significant reduction in the number of unintentional discrepancies at discharge

compared to controls ($p < 0.001$) [10].

Figure 2: The Longitudinal Collaborative Workflow



Adverse Drug Events (ADEs)

While some studies lacked the statistical power to detect differences in rare severe ADEs, the trends are positive. Control group patients were frequently reported to experience preventable ADEs such as uncontrolled blood pressure, hypoglycemia, or bradycardia—events that were significantly less common in patients who received collaborative reconciliation [10]. By catching dosing errors (e.g., renal adjustments) and omissions (e.g., resumption of maintenance meds), the team prevents the physiological derangements that lead to ADEs.

Economic Impact Analysis

The implementation of collaborative MedRec requires an investment in personnel, but the return on investment (ROI) is compelling.

- **Cost Savings from Averted Readmissions:** The most direct financial benefit is the avoidance of non-reimbursable readmission costs. One study calculated the annualized net cost savings of a pharmacist-led intervention to be $1,518,600 [6]. Another European study estimated a cost-benefit ratio of 59.50:1, with a total cost avoidance of €107.45 per intervention [19].
- **Efficiency Gains:** Beyond readmissions, collaborative MedRec can reduce length of stay (LOS). By identifying issues early in the hospitalization (e.g., admission reconciliation), the team prevents delays at the point of discharge. One analysis suggested that hiring pharmacy staff to take pre-admission histories could save an institution over $1,000,000 per year by reducing ADE rates alone [20].

Patient Satisfaction and Adherence

- **Satisfaction:** Patients perceive the value of the collaboration. In studies measuring the "patient experience," intervention groups reported significantly higher satisfaction scores (94% vs 76%, $p < 0.001$) [21]. Patients reported feeling more "cared for" and less confused when they witnessed the nurse and pharmacist communicating about their care.
- **Adherence:** Collaboration simplifies regimens. By de-prescribing unnecessary medications and synchronizing dosing schedules, the team makes adherence easier. Adherence rates in intervention groups have been reported as high as 91%, compared to 82% in controls [12].

Discussion

The "Safety Net" Mechanism: Why Collaboration Works

The data synthesizes into a clear narrative: the Pharmacist-Nurse dyad is effective because it creates a

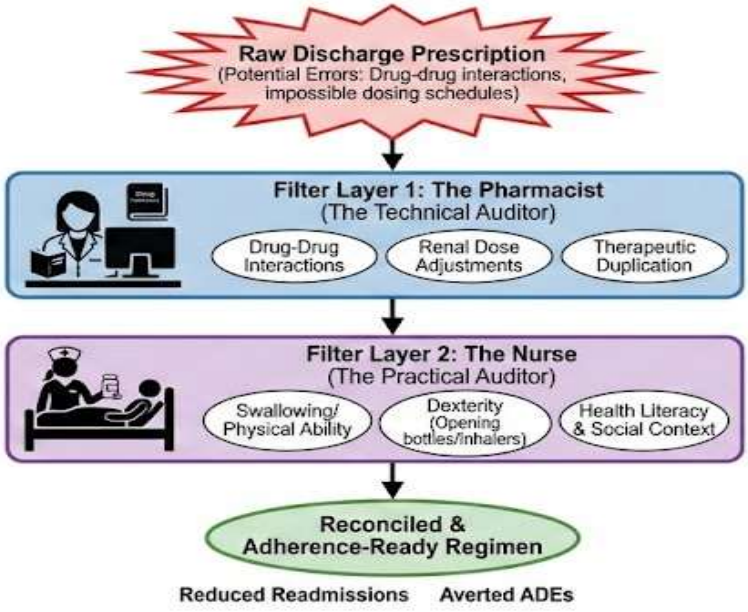
redundant, complementary safety system that addresses the "Swiss Cheese" model of medical error.

1. Complementary Cognitive Domains:
The nurse and the pharmacist approach the medication list from different cognitive frameworks.

- **The Pharmacist (The Technical Auditor):** The pharmacist reviews the list for pharmacological validity. They ask: Is this dose renally adjusted? Is there a drug-drug interaction? Is this therapeutic duplication? They are the "technical quality assurance" of the prescribing process [22].
- **The Nurse (The Practical Auditor):** The nurse reviews the list for functional feasibility. They ask: Can the patient swallow this pill? Do they have the dexterity to use this inhaler? Is the dosing schedule compatible with their sleep/wake cycle? Nurses also have the most frequent contact with the patient, allowing them to gather the "Brown Bag" truth—what the patient actually takes, rather than what the computer says they take [5].

2. Offloading Cognitive Burden:
Physicians at the time of discharge are often overwhelmed with administrative tasks and "alert fatigue" from the EHR. By delegating the reconciliation process to the pharmacist-nurse team, the physician's cognitive load is reduced. The physician is presented with a "scrubbed" and validated list to sign, rather than having to reconstruct the history themselves from fragmented notes. This "cognitive offloading" reduces the likelihood of the physician clicking through safety alerts or missing an omission error [14].

Figure 1: The "Dual-Filter" Safety Mechanism



The Importance of the "Transitional" Mindset
A critical finding of this review is that the most successful interventions treat MedRec not as a discrete task performed at the exit door, but as a longitudinal process.

- **Admission is Key:** Errors committed at admission (e.g., failing to record a home medication) propagate through the hospital stay and are often enshrined in the discharge orders if not caught. Collaborative teams that perform Admission MedRec prevent these errors from becoming systemic [4].
- **Post-Discharge Extension:** The 30-day readmission window is influenced heavily by what happens after the patient leaves. The studies showing the greatest impact (e.g., OPTIMIST) involved follow-up. In these models, the nurse might call to triage symptoms ("Are you gaining weight?"), while the pharmacist calls to manage the regimen ("Did you pick up your Lasix?"). This cross-disciplinary coverage ensures that both medical and logistical failures are caught early [23].

Implementation Barriers and Facilitators
Despite the evidence, implementing this model is not without challenges.

- **Hierarchy and "Turf":** Successful collaboration requires a flattening of the traditional medical hierarchy. Qualitative data suggests that in some settings, nurses may feel that MedRec is "dumped" on them, or pharmacists may feel their recommendations are ignored by physicians. Clear "Collaborative Practice Agreements" (CPAs) and protocols that define who does what are essential to prevent friction [12].
- **Resource Allocation:** High-intensity MedRec is labor-intensive. Many hospitals lack the pharmacy FTEs to touch every patient. The data supports a "Risk Stratification" approach: prioritizing the collaborative team for patients with high-risk features (polypharmacy >10 meds, Heart Failure, prior readmissions) yields the highest ROI and makes the workload manageable [24].
- **Technology:** Disconnected IT systems remain a major threat. If the hospital EHR does not "talk" to the community pharmacy system, the perfectly reconciled list may never reach the point of dispensing.

Conclusion
The convergence of nursing assessment and pharmaceutical expertise creates a powerful defense against the fragmentation of care that plagues hospital discharge. This systematic review concludes that Pharmacist-Nurse Collaborative Medication Reconciliation is a superior strategy for reducing post-discharge hospital readmission rates, ED utilization, and medication discrepancies compared to standard, uni-disciplinary care.

Key Takeaways:
1. **Efficacy:** The model significantly reduces 30-day readmissions (up to 70% reduction in high-intensity bundles) and ED visits.
2. **Mechanism:** Success drives from the combination of "technical" (pharmacist) and "functional" (nurse) reconciliation, ensuring the regimen is both safe and doable.
3. **Economics:** The financial savings from averted readmissions and ADEs far outweigh the personnel costs, presenting a strong business case for hospital administrators.
4. **Sustainability:** Long-term benefits depend on extending the collaboration beyond the hospital walls into the post-discharge period.

Recommendations:
Healthcare institutions should move to formalize the pharmacist-nurse dyad in discharge workflows. This involves investing in pharmacy staffing to allow for bedside rounding, training nurses in medication history-taking, and utilizing risk-stratification tools to target the most vulnerable patients. Furthermore, policy-makers should support reimbursement models that pay for "transitional care services" provided by these interprofessional teams, acknowledging that the work of preventing a readmission is as valuable as treating the acute admission itself.

Comparative Analysis of Intervention Types
To aid administrators and clinicians in selecting an implementation model, the following table synthesizes the relative efficacy and resource intensity of the various collaborative models identified in the literature.

Intervention Model	Description	Impact on Readmission	Resource Intensity	Best Application
Admission-Only MedRec	Pharmacist/Nurse reconcile history at entry.	Low/Moderate. Reduces inpatient errors; effect fades by discharge.	Moderate	Baseline safety standard for all patients.

Discharge-Only MedRec	Reconciliation occurs only at the point of exit.	Moderate. Catches discharge errors but misses admission discrepancies.	High (bottleneck risk)	Fast-track discharges; lower-risk patients.
Transitional Care (Admission + Discharge)	Reconciliation at both ends of the stay (Bookend Model).	High. Significantly reduces 30-day readmissions.	High	Standard of care for general medicine wards.
Extended Intervention (Hospital + Post-Discharge)	Includes follow-up calls/visits (e.g., OPTIMIST trial).	Very High. Sustains benefits up to 180 days.	Very High	Complex chronic disease (HF, COPD, CKD).
High-Intensity Bundle	MedRec + Education + Teach-back + Follow-up + PCP Handoff.	Highest. Can reduce readmission odds by ~70%.	Extremely High	"Super-utilizers" and high-risk readmission cohorts.

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