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STANDARDIZING HOSPITAL DISCHARGE PROCESSES TO REDUCE 30-DAY READMISSIONS IN HEART FAILURE PATIENTS: A QUALITY IMPROVEMENT PROJECT

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Abstract

Background: Heart failure (HF) remains a leading cause of hospital admissions and 30-day readmissions worldwide, often driven by inadequate discharge preparation and poor patient understanding of post-hospital care. Variability in discharge practices, including inconsistent patient education and follow-up planning, contributes significantly to adverse outcomes. This project aimed to address these gaps by implementing a standardized, evidence-based discharge process in a cardiology unit.

Methods and Materials: A quality improvement capstone project was conducted at S Hospital involving HF patients admitted to the cardiology unit. The intervention included the development and implementation of a standardized discharge toolkit consisting of a structured checklist, patient education materials, medication reconciliation templates, symptom-monitoring guides, and follow-up communication scripts. The project was executed in six phases: initial assessment, toolkit development, staff training, pilot implementation over six weeks, monitoring, and evaluation. Data were collected through chart audits, staff feedback surveys, and patient teach-back assessments.

Results: Implementation of the standardized discharge process resulted in significant improvements in discharge consistency and patient comprehension. Checklist adherence reached 87% by the end of the pilot period. Patients demonstrated improved understanding of medication regimens, dietary recommendations, and symptom recognition. Staff reported enhanced workflow efficiency and interdisciplinary coordination. Additionally, a 10% reduction in 30-day HF readmission rates was observed during the pilot phase.

Conclusion: The implementation of a standardized discharge workflow for HF patients significantly improved the quality and consistency of discharge education, patient self-management capacity, and early readmission outcomes. These findings support the adoption of

structured, checklist-based discharge protocols as an effective strategy for improving transitional care. Future efforts should focus on long-term evaluation, integration into electronic health systems, and expansion to other high-risk patient populations.

Keywords: *Heart Failure (HF), Hospital Discharge Process, Readmission Reduction, Quality Improvement, Patient Education*

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Introduction

Heart failure (HF) represents a major public health challenge, characterized by high rates of hospital admission, readmission, mortality, and healthcare costs (Heidenreich et al., 2022). A critical juncture in the care continuum for HF patients is the transition from hospital to home. Inconsistent or incomplete discharge processes—including fragmented education on medications, diet, weight monitoring, and symptom recognition—can leave patients and families unprepared, leading to non-adherence, clinical deterioration, and avoidable rehospitalizations (American Heart Association, 2022). These readmissions not only signify poor patient outcomes but also expose hospitals to financial penalties under value-based payment models, such as the Centers for Medicare & Medicaid Services (CMS) Hospital Readmissions Reduction Program (2023).

Within the cardiology unit at S Hospital, a quality improvement review identified significant variation in discharge practices for HF patients. Education content, depth, and documentation were largely dependent on individual nurse or provider preference, leading to gaps in communication and follow-up coordination. This lack of a standardized protocol contributed to patient confusion and was believed to be a contributing factor to the unit's elevated 30-day HF readmission rate, which mirrored national challenges.

Evidence strongly supports structured, checklist-driven interventions to improve the reliability and comprehensiveness of hospital discharge. Standardized workflows reduce cognitive load, minimize practice variation, and ensure adherence to evidence-based guidelines (Pronovost et al., 2022). For HF specifically, research indicates that comprehensive discharge planning, including patient education, medication reconciliation, and scheduled follow-up, can reduce readmissions by 12-23% (Heidenreich et al., 2022).

To address the identified gaps and leverage established evidence, this capstone project aimed to design, implement, and evaluate a standardized patient discharge process for HF patients in the cardiology unit. The project sought to create a unified, evidence-based workflow to ensure every patient received consistent, high-quality discharge education and follow-up planning. The primary goals were to improve patient comprehension and self-management confidence, enhance interdisciplinary coordination and nursing workflow efficiency, and ultimately reduce avoidable

30-day readmissions. This report details the project's development, implementation phases, evaluation results, and recommendations for sustainability and expansion.

Project Definition

The purpose of this capstone project was to design, implement, and evaluate a standardized patient discharge process for heart failure (HF) patients admitted to the cardiology unit at S Hospital. The project aimed to address longstanding inconsistencies in discharge communication, education, and follow-up planning that contributed to avoidable complications and elevated 30-day readmission rates. HF patients face a particularly high risk of poor outcomes without structured discharge support, including medication misunderstandings, dietary confusion, or inability to identify early symptoms of decompensation. This project sought to introduce an evidence-based, structured workflow to ensure every patient receives complete, accurate, and comprehensible discharge instructions aligned with best practices and regulatory expectations. The new workflow incorporates a standardized checklist, a patient-centred education packet, a symptom monitoring guide, and a follow-up communication script. In addition to improving patient outcomes, this project aimed to strengthen interdisciplinary collaboration, enhance nursing workflow efficiency, and support the hospital's quality improvement and Centers for Medicare & Medicaid Services (CMS) readmission-reduction goals. Through systematic implementation and evaluation, the project aimed to develop a sustainable, transferable model for discharge standardization.

Final Project Overview

The final project evolved from an initial assessment that revealed significant variation in how HF patients were being discharged from the cardiology unit. While S Hospital maintains high standards of clinical care, the lack of a unified discharge protocol led patients to receive varying levels and types of information, depending on the nurse, provider, or shift. This inconsistency led to confusion among patients and families, gaps in follow-up coordination, and avoidable readmissions.

To address these issues, the project included several major components. First, a thorough workflow mapping process was conducted to understand the actual steps taken during patient discharge, identify gaps, and document the challenges staff experienced. This included direct observation, staff interviews, and electronic health record (EHR) review. Second, the project

involved designing a standardized discharge toolkit that incorporated evidence-based materials, including a nurse-facing discharge checklist, medication and diet teaching sheets, symptom-monitoring instructions, and a scripted follow-up call template.

Staff training played a crucial role in ensuring successful implementation. All cardiology unit nurses participated in structured education sessions that included demonstrations, case examples, and guided practice using toolkit materials. Nurses were given opportunities to provide feedback before the pilot officially began, ensuring usability and clarity.

The standardized workflow was then implemented during a 6-week pilot period. During this time, all patients admitted with HF received the standardized discharge bundle. Nurses used the checklist to ensure thorough education, applied teach-back strategies to assess comprehension, and consistently documented discharge instructions. Case managers ensured follow-up appointments were scheduled before the patient left the hospital, addressing a commonly identified gap in transitional care.

The final stage of the project involved evaluating outcomes, including staff satisfaction, patient comprehension, and early readmission trends. Preliminary results demonstrated strong compliance, improved communication, and positive feedback from both patients and staff. These outcomes confirmed the feasibility, effectiveness, and sustainability of a standardized discharge workflow.

Updated Research Summary

A comprehensive review of the literature found strong evidence supporting the use of standardized discharge protocols for patients with HF. Research consistently shows that structured education significantly reduces hospital readmissions and improves patient outcomes (American Heart Association [AHA], 2022). The AHA emphasizes that clear communication about medication changes, sodium restriction, fluid management, daily weight monitoring, and early recognition of symptoms is essential to preventing clinical deterioration after discharge. Studies indicate that when patients receive consistent and comprehensive education, they are more likely to adhere to their care plans and less likely to return to the hospital.

Evidence also strongly supports checklist-driven workflows in healthcare settings. According to research published in the Journal of the American Medical Association, checklists reduce variability among providers, decrease cognitive load, and improve adherence to evidence-based

practices (Pronovost et al., 2022). Within the context of HF, checklists ensure that all essential elements of discharge—such as medication reconciliation, follow-up scheduling, and patient comprehension assessments—are addressed before the patient leaves the hospital.

CMS guidelines highlight HF as a high-risk condition due to its high national readmission rate (Centers for Medicare & Medicaid Services, 2023). Hospitals with inconsistent discharge practices struggle to meet CMS benchmarks, which can result in financial penalties. Internal data from the Quality Improvement Department at S Hospital reflected similar challenges, demonstrating variation in documentation and poor consistency in post-discharge follow-up.

Interviews conducted with interdisciplinary team members provided critical direction. Cardiology providers emphasized the importance of medication accuracy and reinforced the need for teaching regarding diuretics, beta blockers, ACE inhibitors, and lifestyle modifications. Pharmacy staff confirmed frequent medication discrepancies during transitions. Case managers found that patients often left the hospital without understanding their follow-up plan, leading to missed appointments. Nurses expressed the need for a more structured process that could be easily integrated into their workflow.

Additional research revealed that hospitals successfully implementing standardized discharge bundles achieved readmission reductions of 12% to 23% (Heidenreich et al., 2022). These findings reinforced the importance of developing a comprehensive, replicable toolkit for HF patients. Collectively, the research strongly supported the design of this project and provided justification for a rigorous, structured intervention.

Project Implementation Summary (Action Steps Taken)

Project implementation occurred in six deliberate phases to ensure a systematic, evidence-informed process.

Phase 1, Initial Assessment: This phase involved direct observation of discharge practices, interviews with nurses and case managers, and review of documentation patterns in the EHR. The assessment found that nurses inconsistently provided discharge education, and some essential elements—such as symptom-monitoring instructions and weight-tracking guidance—were omitted in a significant proportion of discharges.

Phase 2, Toolkit Development: Using evidence-based guidelines and interdisciplinary input, a complete discharge toolkit was created. The toolkit included a structured discharge checklist,

patient-friendly HF education materials, medication reconciliation templates, a symptom-monitoring guide, a follow-up call script, and workflow diagrams showing responsibilities.

Phase 3, Staff Training: All nursing staff on the cardiology unit received training through presentations, hands-on practice, and case simulations. Training sessions emphasized key concepts, including teach-back education, documentation consistency, and the importance of scheduling follow-up appointments before patient discharge.

Phase 4, Pilot Implementation: Over 6 weeks, the standardized discharge workflow was piloted for all eligible HF patients. Nurses were required to use the discharge checklist, complete all education components, document patient comprehension, and ensure follow-up appointments were scheduled.

Phase 5, Monitoring and Evaluation: Weekly audits evaluated checklist adherence, documentation quality, and staff feedback. Patient follow-up calls provided insight into comprehension and self-management confidence. A mid-pilot staff survey showed improved clarity, satisfaction, and perception of discharge effectiveness.

Phase 6, Final Review: All data were compiled into an implementation analysis. The pilot demonstrated strong adoption of the toolkit, improved patient outcomes, and increased staff confidence, confirming the feasibility and sustainability of the standardized discharge workflow.

Project Analysis, Evaluation, and Recommendations

The project's results demonstrated substantial improvements in discharge quality, patient understanding, and staff experience. Adherence to the standardized discharge checklist reached 87% by the end of the pilot. This represents a significant improvement from pre-project rates, where discharge processes varied widely and lacked consistent documentation.

Patient teach-back scores improved notably, with most patients able to accurately restate medication steps, dietary modifications, and early symptoms of worsening HF. This improvement strongly correlates with evidence that structured education reduces rehospitalizations. Staff feedback was overwhelmingly positive. Nurses reported that the checklist provided clarity, reduced confusion, and made the discharge process more efficient. Case managers indicated that the standardized workflow improved coordination and reduced follow-up appointment errors.

Preliminary analysis of readmission trends showed a 10% decline in 30-day HF readmissions during the pilot period. While this short window cannot establish long-term impact, it aligns with reported outcomes of similar interventions in the literature.

Recommendations

1. Full hospital adoption of the standardized discharge workflow.
2. Integration of the checklist into the EHR for automated prompts and documentation.
3. Quarterly training sessions to maintain knowledge, consistency, and staff confidence.
4. Expansion to other diagnoses, including chronic obstructive pulmonary disease and pneumonia.
5. Creation of a discharge quality dashboard to support continuous monitoring.
6. Inclusion of patient and family feedback in future revisions of educational materials.

Overall, evaluation results strongly indicate that the standardized workflow should be adopted permanently and expanded hospital-wide.

Materials Delivered

This project produced a full suite of deliverables, including:

- Standardized discharge checklist
- Comprehensive patient education packet
- Symptom monitoring and weight-tracking guides
- Medication reconciliation template
- Scripted follow-up call instructions
- Staff training slide deck and handouts
- Workflow maps and implementation diagrams
- Audit tools for monitoring future compliance
- Patient feedback survey
- Final implementation report for leadership

These materials collectively form a sustainable and adaptable model for improving transitional care for HF patients at S Hospital.

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