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**Improving Transitions in Care Through Early Discharge Planning:
A Quality Improvement Initiative**

by

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Paper submitted in partial fulfillment of the
requirements for the degree of

Doctor of Nursing Practice

School of Nursing, University of Louisville

July 16, 2024

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Dedication

This DNP project is dedicated to my parents, Joan and Ken Heitzman, for always believing in me. I would also like to dedicate this project to Peter Markgraf, whose unwavering love and support have motivated me every step of the way.

Abstract

Background: A substantial body of evidence has shown transitions in care are one of the weakest links in healthcare networks, especially for older adults with complex comorbidities. Residents receiving short-term rehabilitation (i.e., rehab) transitioning to home from a skilled nursing facility (SNF) are the most vulnerable in the first 30 days post-discharge for adverse resident events, including avoidable rehospitalization. Avoidable rehospitalizations cost Medicare billions of dollars annually and lead to poor resident outcomes. Early discharge planning in SNFs for short-term stay rehabilitation has decreased rates of avoidable rehospitalizations, improved quality of life in geriatric residents, and improved care partners' perceived readiness.

Purpose: This quality improvement project aimed to improve the transition in care from rehab at a SNF to home by implementing an early discharge planning program that included regimented checklists and the involvement of residents, care partners, and the interdisciplinary care team.

Setting: A 66-bed skilled nursing facility in Louisville, KY, focusing on older adults receiving rehabilitation following hospitalization.

Methods: The discharge program consisted of a discharge planning checklist for social work and nursing staff with a supplemental discharge booklet. Data regarding compliance with the checklists, proof of documentation of early discharge planning, staff perception of the discharge program, and care partner perceived readiness was collected and analyzed.

Results: The discharge program showed improving compliance with early discharge planning and improved care partner confidence in taking on the home care of their loved one following discharge. We did not see a change in the documented need for community referrals upon admission in the Minimum Data Set (MDS). Care partners reported the Center for Medicare and Medicaid Services' discharge planning resource chosen for this project was not valuable.

Keywords: transitions in care, rehabilitation, early discharge planning, caregiver, care partner

Improving Transitions in Care through Early Discharge Planning

Background

Medical advancements have contributed to the longevity of our aging population, leaving a greater demand for specialized medical care in acute care, skilled nursing facilities (SNFs), and community settings. SNFs provide long-term care in a more palliative sense, or as rehab with intention of strengthening before returning home. Older adults often require short-term rehabilitation in SNFs post-hospitalization due to resident immunosenescence, delayed immune response, functional debility, frailty, and a higher prevalence of synergistic and complex comorbidities (Gupta et al., 2019). Adverse resident outcomes may occur at times of care transitions due to these contributing health factors. Per the Society of Hospital Medicine (2023), poor care-transition processes lead to avoidable emergency department visits, readmissions, and adverse resident outcomes, which can result in financial penalties from insurance carriers.

Following discharge from SNFs, older adults require health maintenance and support to regain health and the ability to self-manage their medications and care at home, often aided by a care partner. A care partner is a caregiver, frequently a family member (e.g., spouse or adult child), who assists in their health management. Care partner involvement can range from minimal assistance to the resident having total dependence on them. Therefore, it is vital that both the resident and their home care partner feel knowledgeable and prepared for the transition home. The transition in care from rehab to home is crucial to the projected outcomes of the older adult's health. In 2017 alone, Medicare accounted for \$33.7 billion in expenses for hospital readmissions (McDermott & Jiang, 2020). An ill-prepared resident and care partner may contribute to poorly managed health conditions and these unintended consequences—many of which can be ameliorated or prevented. Preparing both residents and their care partners is vital in

ensuring ideal outcomes. The perceived readiness of residents and their care partners may be subjective, but providing an individualized plan with thorough education warrants better results.

Meeting the resident needs as they transition from rehab to home care and ensuring education to fulfill knowledge gaps can help improve home health management and warrant a smooth transition. However, as straightforward as it may seem, there are sweeping deficits noted when investigated. Greater than 85% of the home care partners of persons with Alzheimer's disease and related dementia residents did not have needs met by healthcare providers regarding community referrals or adequate education for home care of the resident (Black et al., 2013). These researchers also noted that minority residents and low-income residents transitioning home reported more unmet needs from their healthcare providers than non-minority residents or residents of higher socioeconomic statuses (Black et al., 2013). Healthcare bias could further contribute to adverse outcomes for residents with existing health disparities during care transitions.

Centers for Medicare and Medicaid Services (CMS) created the Minimum Data Set (MDS) to be completed for residents in SNFs to identify potential health risks, safety concerns, and promote person-centered care (PCC) (CMS, 2023). The admission MDS provides an initial assessment of the resident's health status, which is repeated every three months or sooner if applicable, for status changes (CMS, 2023). The SNF registered nurse completing the admission MDS documents an anticipated need for community referrals upon discharge in the admission MDS based on their admission diagnosis and complexity of care (CMS, 2023; Thomas et al., 2017). If used effectively, documentation of this need may trigger the care team to include community referrals in their early discharge planning process.

Though the MDS is a federally required assessment to be completed in all SNFs, nationwide, only 18 sites are participating in government-funded transition programs. CMS created the

Community-based Care Transition Program (CCTP) as part of the Affordable Care Act (CMS, 2022). This resource provides funding for transition improvement programs that support the effective care transitions of Medicare residents, thus intending to improve the quality of care and health management (CMS, 2022). No transition process regulations are in place that ensure favorable health outcomes. Therefore, there is room for improvement in this area to establish new standards of care. Enhancing the transition in care from SNFs to home could improve care partner readiness, health management, and rates of avoidable readmissions in older adults.

Literature Review

This writer completed an extensive and comprehensive review of the literature to investigate transitions in care and the effects of utilizing early, resident-specific discharge planning. The writer used the Cincinnati Children's LEGEND Evidence Evaluation Tool (Appendix D) to evaluate the literature selected for this synthesis (Appendix C).

The current literature supports early discharge planning and involvement of the resident and their family and/or care partner throughout the discharge process. A substantial body of evidence suggests the significance in improving resident outcomes by including care partners in discharge planning (Rodakowski et al., 2017, Ia; Provencher et al., 2021, Ia; Topham et al., 2022, IIb; Abramsohn et al., 2022, IIa; Gupta et al., 2019, Ib; Rasmussen et al., 2021, Ia). Care partners' involvement in discharge planning was explicitly found to decrease readmission rates by 25% (Rodakowski et al., 2017, Ia). Further evidence was noted in reducing readmission rates through implementing individualized, resident-specific discharge planning (Fox et al., 2013, Ia; Gonçalves-Bradley et al., 2022, Ia; McMartin, 2013, Ia; Provencher et al., 2020, IIa).

Person-centered, individualized discharge planning refers to holistic discharge planning, which accounts for comorbidities, ability to complete activities of daily living (ADLs), support at home, and the resident's specific care needs. Discharge planning often includes community

referrals, home health, and other relevant resources to the resident's complex comorbidities. Resident feedback has been taken into consideration regarding the standard discharge process. Residents with lower satisfaction scores following their medical stays reported receiving vague discharge education and felt unprepared to transition home (Chia & Ekladius, 2021, IIIb). Residents also reported that they wanted thorough education both during their medical stays and at discharge, and to receive resources in the community for after the transition home (Ådnanes et al., 2020, IIa).

Researchers showed the inclusion of community referrals with resident discharge education promotes positive behavior change and improves care partner confidence (Tung et al., 2019, IIIa; Abramssohn et al., 2022, IIa). Person-centered discharge planning enhanced quality of life in two studies (Fox et al., 2013, Ia; Nunes & Quierós, 2016, Ib). Other researchers noted a reduction in the average length of stay without adverse sequelae, promoting a more rapid and efficient discharge (Kutz et al., 2022, IIIa; Gonçalves-Bradley et al., 2022, Ia; McMartin, 2013, Ia). Beginning discharge planning early—upon admission at the SNF—allows more time for an individualized discharge plan with resident and care partner involvement, thus eliciting positive effects (Holland et al., 2012, IVa; Fox et al., 2013, Ia).

Investigators noted deficits in the process of discharge planning, including the nursing staff's lack of knowledge of residents' discharge plans and adequate time to perform a thorough discharge education (Hayajneh et al., 2020, Ib). A shift in focus to interdisciplinary involvement in discharge planning and consistent resident and care partner education may help improve these deficits.

This writer also noted gaps in the literature. The components of standard, pre-intervention discharge plans were rarely elaborated. Limited studies focused on the specific transition in care from rehab within a SNF to home, in which the proposed project will be taking place (Gupta et

al., 2019, Ib; Rodakowski et al., 2017, Ia). However, the collective literature does provide the evidence needed to justify the intervention at hand. Early discharge planning with individualized, person-centered detail has been found to improve readmission rates and quality of life. The Agency for Healthcare Research and Quality (AHRQ) created the IDEAL Discharge Planning tool (Agency for Healthcare Research and Quality [AHRQ], 2017). This tool ensures resident, family, and care partner involvement in the discharge planning process and begins at admission with an initial nursing assessment of person-centered care needs (AHRQ, 2017). AHRQ suggested a checklist to ensure no components of the plan are missed and to promote the involvement of all stakeholders in the progress of the discharge plan. This aspect addresses the identified nursing gaps in the discharge process (Hayajneh et al., 2020).

This writer found substantive support in the literature reviewed that early discharge planning allows time for a more personalized discharge plan for person-centered needs, thus resulting in improved outcomes (Holland et al., 2012, IVa; Fox et al., 2013, Ia). AHRQ's checklist is a nationally recognized tool to improve the transition home from SNFs and was the threshold for the practice change of this quality improvement project (AHRQ, 2017).

Needs Assessment

The QI team audited 72 admission MDS assessments from 2021-2022 in two SNFs found that 97% (n = 32) and 80% (n = 40) of residents planned to return to the community, yet no admission MDS records indicated a need for referrals to community agencies. This care gap stressed the necessity of a structured program to improve rates of early discharge planning that includes a more detailed assessment of each resident. The implementation of the early discharge planning program was intended to allow for more individualization of discharge planning and ensure that community referrals were being included. These gaps were identified as an area of opportunity for this quality improvement project. Both the needs assessment and literature

review suggested the facility would benefit from a structured, early discharge planning practice change that would allow time for resident-specific detail and community resources to be provided to the resident and care partner for the transition home.

Rationale

Following a needs assessment at the rehab SNF of choice, we found a gap in documenting and communicating the need community referrals at discharge upon admission. This writer conducted a chart audit that was performed at this facility and found a major deficit in documentation for a resident need for community referrals at discharge within their admission MDS. The writer also noted inconsistencies in efforts for early discharge planning. The Director of Social Work expressed a need for a more structured, interdisciplinary system for discharge planning that would ensure early discharge planning is occurring, involving the inclusion of community referrals, and involving both resident and family considerations.

Theory-Based Care Transitions

Meleis et al. (2000) generated the middle-range theory of transitions that helped to guide this project. The work of Meleis et al. (2000) is crucial in understanding the foundational aspects of transitions and how they can be applied to each transitional situation. Many factors come into play for residents transitioning from the rehab facility to home. Meleis et al. (2000) described transitions into three core factors: the nature of transitions, transition conditions, and response patterns. They then considered how nursing therapeutics affect each of these. The time of a care transition creates a vulnerability that could portray adverse outcomes in resident health (Meleis et al., 2000). The transition home may be the first time the resident is out of direct medical care since the change in health status. The health change may be a burden and cause uncertainty in health management for both the resident and whoever assumes the role of the home care partner.

According to Meleis et al. (2000), engagement with stakeholders was vital to successful transitions. It is complex and requires awareness to coincide. Engagement is defined as “the degree to which a person demonstrates involvement in the processes inherent in the transition” (Meleis et al., 2000). This relates to the project's selected transition in care for both the resident and the care partner. Successful transitions from SNF to home require the care dyad being equally engaged. Otherwise, the care partner may be less successful in providing quality care during this transition.

Engagement of all stakeholders in the discharge planning care processes and workflows are critical; therefore, the facility requested my team implement an early discharge planning program that tested the best evidence from CMS and AHRQ (AHRQ, 2017; CMS, 2019). The program included community referrals and thorough education during discharge home from SNFs. The theory of understanding transitions conceived by Meleis et al. (2000) informed what factors are involved in discharge planning and aided in developing the discharge program using a quality improvement implementation framework.

Instruments

The DNP student used five instruments to implement and evaluate the discharge program for the skilled nursing facility.

Discharge Planning Checklists

The discharge planning checklists were the primary instruments of the discharge program. The DNP student and the facility staff adapted AHRQ's IDEAL Discharge Planning Checklist (2017) to meet the facility's needs and resident population, and the facility's workflow and culture. We created a role specific checklist for the nursing staff and social worker. The nursing checklist contains daily tasks, including the resident and care partner education of the resident's condition, progress and goal discussion with the resident and care partner, medication

education to the resident and care partner, and a free space to write other involvement of the resident and care partner in daily care practices (Appendix A, Form I). The social work checklist includes tasks to be completed at the initial resident assessment, prior to the discharge planning meeting, during the discharge planning meeting, and on the day of discharge (Appendix A, Form II). As the nurse or social worker completed checklist tasks, they initialed and dated next to the task. The checklists were measured as nominal variables through compliance in completing each individual task of both checklists. Full completion was marked "yes" and scored 1, while partial or incompleteness was marked "no" and scored 0. Checklist compliance was measured as percentage of change between Week 4 of the implementation period (the completion of Cycle I) and Week 8 of the implementation period (the completion of Cycle II). The checklists were measured in conjunction with the admission MDS audits to determine whether early discharge planning took place.

Admission MDS

The admission MDS is a form to be filled out by healthcare professionals via the electronic health record (EHR) upon resident admission to the SNF. It contains multiple sections evaluating the resident's physical abilities, potential health and safety risks, and desires regarding PCC. Question Q0610 was used to evaluate change for this project. Q0610 states, "Has a referral been made to the Local Contract Agency (LCA)?" with options "no" [0] or "yes" [1]. LCA refers to community referrals appropriate for the resident upon discharge. We performed admission MDS chart audits measuring "no" [0] or "yes" [1] for our data collection, with a "yes" indicating that a need for community referrals upon discharge was identified upon resident admission.

Take-home Discharge Planning Booklet

CMS (2019) created a discharge booklet called "Your Discharge Planning Checklist" to be given to residents and their care partners as the resident is discharged home (Appendix E).

The booklet did not take the place of printed instructions at the time of discharge. The booklet contains resources for general community services, blank spaces to write in upcoming appointments and prescribed medications, and "action items," consisting of questions to ask the SNF providers and tasks to do prior to discharge. Value of the CMS discharge booklet was measured through a survey question asking, "Was the booklet given to you a helpful resource?" (Appendix F, Form II, #6). This question had options to answer: *Not at all* [0], *Somewhat* [1], or *Very helpful* [2], and created ordinal data to measure the satisfaction and usefulness of this instrument.

Family and Care Partner Perceived Readiness Surveys

A survey was created with the following five questions to best accommodate the facility's resident population:

1. How prepared do you feel to monitor your loved one's health conditions?
2. How prepared do you feel to monitor for side effects of their medications?
3. How prepared do you feel to make sure their medications are taken correctly and on time?
4. How prepared do you feel to make sure follow-up appointments are made and attended?
5. How prepared do you feel *overall* to assist in your loved one's health management after they are discharged home?

Answer options included: *Not at all* [0], *Somewhat* [1], or *Very prepared* [2]. Survey data was collected pre-implementation of the discharge program and during the implementation period and compared through positive percentage of change. These five questions were included in both Form I and Form II of the Family and Care Partner Survey (Appendix F).

Staff Evaluation Survey

A survey was created for facility staff and leaders that contained one question, "Has the discharge checklist created a positive improvement in our facility?" with options "no" [0] or "yes" [1] (Appendix G). This created a facility satisfaction rate following project completion.

Purpose and Specific Aims

The purpose of this quality improvement discharge program was to improve the transition in care from rehab at a SNF to home by implementing an early discharge planning practice change that included a regimented checklist and involvement of resident, care partners, and the interdisciplinary care team. By improving the process of early discharge planning, we anticipated an increased rate of community referrals at discharge and a more individualized discharge plan. We aimed to improve resident and care partner perceived readiness at the time of discharge thus improving resident outcomes and quality of life as they adjust back to life at home. A long-term goal was the outcome of decreased avoidable rehospitalizations within 30 days of facility discharge due to increased preparedness in the transition home.

Specific, Measurable, Achievable, Relevant, and Timely (SMART) Goals

Three SMART goals were set for this quality improvement project by the project lead.

- 1) Documentation of early discharge planning will increase 20% from pre-implementation within eight weeks as measured by compliance of utilizing the discharge checklist.
- 2) There will be a 20 percentage of change in the documentation of a need for community referrals in the admission MDS at the completion of the implementation period as compared to the pre-implementation chart audit that has been performed.
- 3) The perception by staff that the early discharge program resulted in a positive change will be 80% at the completion of the eight-week implementation period.

Environment

The quality improvement practice change took place at a 66-bed SNF in Louisville, KY, focusing on the residents receiving rehabilitation following hospitalization. Residents typically stayed in rehab at this facility for approximately one month but are covered by Medicare for 100 days. From the 12-bed rehab hallway, we anticipated 40 residents during the two-month implementation period. The environment of the study included rehab residents ≥ 65 years of age, residing at the selected facility during the two-month implementation period. Exclusion criteria included residents that were not being discharged to the community, but rather to long-term care or return to the hospital. The practice change involved and affected the residents, their family and/or care partners, and facility staff including social workers, bedside care staff, and facility leadership. The project team was led by a Doctor of Nursing Practice (DNP) student. The project team included the organization's Chief Nursing Officer (CNO), and the facility's Executive Director, Director of Health Services (DHS), Director of Social Work, and bedside care staff.

We identified the root cause of the facility's discharge inconsistencies were due to the lack of a reliable, structured system. The discharge program related to the organization's goal of improving resident outcomes by enhancing their current discharge process.

Stakeholders

The key stakeholders included the CNO over the facility's organization, the Executive Director of the specific facility in which the project took place, the Director of Social Work at the project site, the nursing staff, and social work staff at the project site. The stakeholders were invested in the project and expected improvement at their facility in return. Stakeholder feedback drove changes and improvements prior and during implementation cycles. Training for the practice change was given to all actively involved parties including nursing staff and social work

staff. The social workers led the resident discharge planning process, and the nursing staff led the resident care education aspect.

Facilitators and Barriers

Facilitators of the project included support from the project team prior to implementation, the expected benefit to both the facility and residents, and a positive rapport between the staff and its residents.

Barriers to project implementation included staff willingness to change current practice, time constraints of the involved parties, lack of electronic health record (EHR) integration, and staff turnover. The lack of a present a care partner for the resident and a quicker than anticipated discharge due to affordability also became a barrier.

Methods and Procedures

Conceptual Framework: IHI Model for Improvement

This quality improvement project involved research-guided data to help improve residents' transitions in care from a SNF to their homes through an emphasis on the discharge process. The Institute for Healthcare Improvement (IHI) created a model for improvement that was adopted as the framework for this project. The IHI Model for Improvement entails three questions to ask in order to develop a project (Institute for Healthcare Improvement [IHI], 2023). The third question leads to completing a Plan, Do, Study, Act (PDSA) cycle, the model of quality improvement in which this project was influenced. The IHI Model as interpreted for this project is illustrated below in Figure 1.

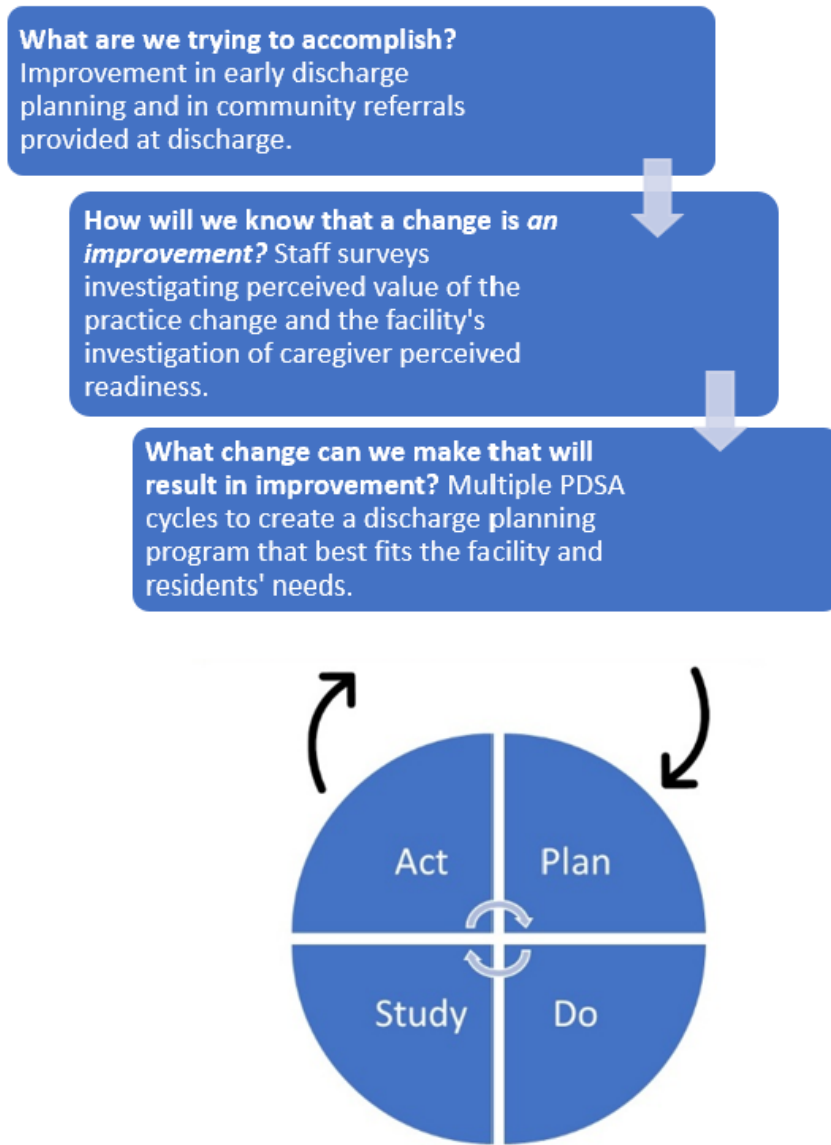


Figure 1

Question 1: What are we trying to accomplish?

This project aimed to accomplish an improvement in early discharge planning and in community referrals provided at discharge. We did this through implementing the discharge program which included two discharge checklists and the supplemental CMS discharge booklet.

Question 2: How will we know that a change is an improvement?

This project monitored for change resulting in improvement through multiple factors. First, we assessed change through measuring compliance with the discharge checklists and through the auditing of admission MDS forms for documentation of a need for community referrals. A positive improvement to the facility was assessed through staff perception surveys following the completion of the implementation period, and through the facility-driven evaluation of care partner perceived readiness at discharge.

Question 3: What change can we make that will result in improvement?

We completed two PDSA cycles to ensure that the program was catered to fit the individual needs of the facility, its residents, and its staff. Question 3 of the IHI Improvement Model is answered through completing a PDSA cycle, revisiting Question 3, and making adjustments in another PDSA cycle. This sequence occurred twice, and continues now past project completion as the facility takes over the program.

Quality Improvement Model

The well-known PDSA cycle was utilized to achieve on-going advancement in quality outcomes. The purpose of using a PDSA cycle approach was to ensure that change towards best practice was always continuous. It allowed for analysis of data and feedback following the practice change implementation to examine the need for adjustments. By completing PDSA cycles, we were able to answer the third question of the IHI Model for Improvement: "What change can we make that will result in improvement?" (IHI, 2023). The "change" addressed in this question led to completing a PDSA cycle, and then revisiting this question again. This process explains the need for multiple PDSA cycles in a quality improvement project to best accommodate to findings and feedback during the implementation process. A visual representation of the PDSA cycle is shown below in Figure 2.

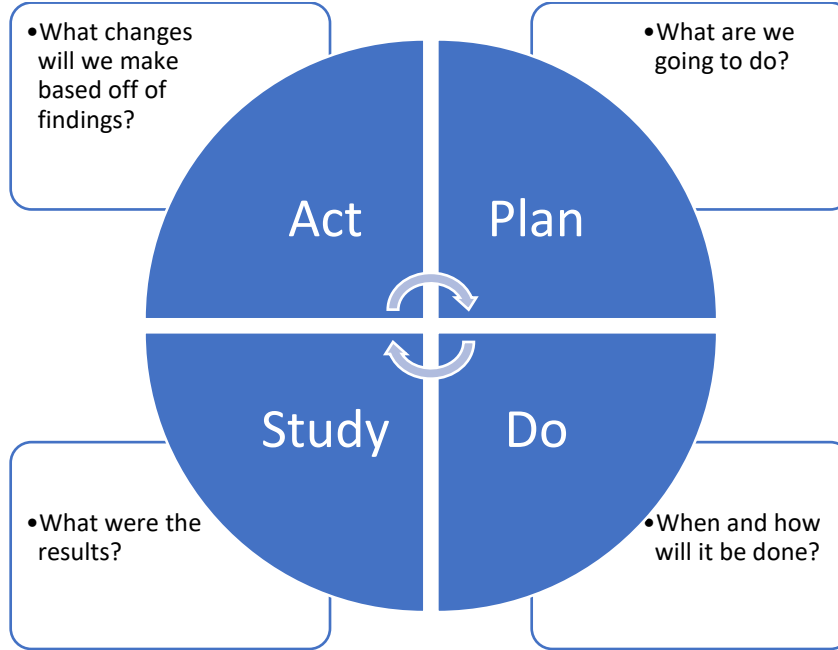


Figure 2

This quality improvement project underwent two PDSA cycles (Appendix H). The cycles are as follows:

Cycle I

Plan

Background evidence and facility details were gathered through the literature synthesis and the needs assessment to identify opportunity for the quality improvement project and begin planning the details. The proposed idea of a discharge planning checklist with discharge planning booklets for the residents was presented to the facility. The leaders of the nursing facility expressed favor to AHRQ's IDEAL Discharge Plan as a basis for practice change while having input for facility-specific changes and additions. Feedback was received and facility-specific checklists were created based off this feedback. The letter of support was obtained (Appendix B).

The checklists were printed and kept in separate binders according to discipline and were reviewed by the care team daily. One binder included the nursing checklists for each resident and

was kept at the nurses' station, and the other binder included the social work checklists for each resident and was kept in the social work office. These checklists were tailored for the needs of the project site and the residents it serves (Appendix A).

In addition to the checklists, we also measured early discharge planning through auditing the admission MDS of each resident for documentation of the need for community referrals upon discharge from the facility. The admission MDS was previously reviewed in a recent audit that provided data for project rationale. A further audit of the admission MDS during the pre-implementation period was performed to collect an immediate baseline prior to implementation.

The CMS (2019) discharge planning booklets were printed and bound into folders, to be given to the resident and family member assuming the role of care partner upon admission (Appendix E). We created and printed the staff evaluation survey to answer #2 of the IHI Model of Improvement, assessing the perceived improvement to the facility by the involved facility staff (Appendix G). We created and printed the care partner perceived readiness surveys with input from the facility. Form I was created for pre-implementation use, and Form II was created for the implementation period (Appendix F).

Do

Baseline Family and Care Partner surveys were distributed (Appendix F, Form I). Survey data was collected, as was pre-implementation admission MDS audit data. Preparation and training of the project team members took place in multiple sessions occurring over the two months prior to project implementation. Staff training included education regarding the project, the checklists, and delegation of responsibilities to complete the tasks of the checklist. The original implementation date was set for January 8th, 2024; however, minimal baseline data for care partner surveys had been obtained. The baseline data period was extended to allow for a

more sufficient data collection. The practice change was implemented on February 5th, 2024. Cycle I of the implementation period lasted until March 3rd, 2024.

During this time, staff began filling out resident checklists, and CMS discharge booklets were distributed at the time of admission to the facility. At the time of resident discharge during the eight-week implementation period, the care partners were given a survey (Appendix F, Form II). This form of the Family and Care Partner survey contained questions regarding their perceived readiness in aiding in home care and the additional question regarding the value of the CMS booklet. This writer performed weekly check-ins with the facility to provide support and collect completed checklists.

Study

At a weekly check-in the following week, reeducation was performed due to noncompliance of the checklists. At the fourth week of implementation, the first session of data was collected and analyzed. Feedback from the project team, residents, and families identified strengths and weaknesses in the practice change. We noted that staff began performing home phone calls to recently discharged residents to check in, answer any questions, and reeducate as needed, indicating that there were improved efforts in education and follow-up.

Early discharge planning, as measured through compliance with the discharge program checklists, was assessed at the completion of Cycle I. Of the 11 residents from Cycle I, 2f residents' checklists were completed in full and deemed compliant (18.2%).

Chart audits were performed at the completion of Cycle I of Q0610 in the admission MDS, which addresses the resident's need for community referral upon their discharge. At the completion of Cycle I, 0 the 11 residents' charts stated, "yes" to this question (0%).

Act

Appropriate adjustments in response to findings and feedback were made. More education was required specifically regarding thorough education with both the resident and care partner throughout the entire rehab visit to best prepare them for discharge. Continued reeducation took place during weekly check-ins. The number of data was lower than predicted. The Director of Social Work reported low census for the rehab hallway at this time.

Cycle II***Plan***

Reeducation was performed along with restocking of the checklists and CMS booklets. No further modifications were necessary.

Do

Cycle II of the implementation period began on March 4th, 2024. The discharge program continued, including checklists completion by staff, CMS booklet distribution, and Family and Care Partner survey completion. Weekly check-ins continued, with reeducation as needed. Cycle II ended on April 1st, 2024.

We created a staff evaluation survey, to answer #2 of the IHI Model of Improvement (Appendix G). This one-question survey was given to all involved team members of the facility. By measuring the staff's perception of the project following implementation, we were able to note whether they felt the discharge program created a substantial improvement in the facility. The results of this survey investigated whether the post-implementation change was a positive contribution, and if it was deemed as valuable to the facility. The post-implementation staff surveys were distributed and collected over the following two weeks.

We performed a final audit of the admission MDS post-implementation at the completion of Cycle II. This data was collected to assess improvement in documented indication for resident

need of community referrals at discharge, thus measuring for rate change in early discharge planning. The descriptive data was analyzed using central tendencies based on data normality and distribution.

Study

All implementation period data was collected including early discharge checklist compliance, MDS data, care partner survey data, and staff survey data.

Early discharge planning, as measured through compliance with the discharge program checklists, was assessed at the completion of Cycle II. Of the 13 residents from Cycle II, 5 residents' checklists were completed in full and deemed compliant (38.5%).

Chart audits were performed at the completion of Cycle II for Q0610 of the admission MDS, which addresses the resident's need for community referral upon their discharge. At the completion of Cycle II, 0 of the 13 residents' charts stated, "yes" to this question (0%).

Final data analysis was performed of the collective data, and exit interviews were performed individually with the facility staff that provided summative data for interpretation. Staff reported they learned the significance of education to best prepare the residents and their families for discharge and had shifted their focus to this. It was also recognized that checklist content was duplicative of EHR changes the facility made in their adoption of this program during the implementation period. This contributed to increased workload for staff and elucidated the staff satisfaction survey data results, but also highlights the collective integration in their adoption of the discharge program.

Act

This writer analyzed and reported the data and feedback to the organization's CNO. Handoff of the project occurred at this time. We recommended anticipatory planning education for staff highlighting the impact of documenting the need for community referral upon discharge

in the admission MDS. Furthermore, we recommended that they incorporate a process to report a positive Brief Interview for Mental Status (BIMS) score so that the SNF providers are notified prior to the discharge planning meeting of the resident, as an unaddressed positive BIMS score can greatly hinder a safe discharge.

Budget

This project received grant funding via the Gerontological Advanced Practice Nurses Association Foundation, Inc. (GAPNA). \$605 was allocated for the completion of the project. \$105 was designated to lab coats, as the facility required all outside clinical visitors to wear lab coats for security and infectious disease prevention. \$500 was designated to the printing and preparation of the discharge planning checklist and resident booklets.

Ethical Considerations and Permissions

This project was granted approval by the University of Louisville's Institutional Review Board (IRB) (23.0955). The project also received authorization by the facility's CNO and Executive Director (see Appendix B).

The project required the viewing of personal, identifiable information that was deidentified for data collection. The residents' medical record numbers (MRNs) were documented until the data collection was complete, and once deidentified, were deleted. A codebook was developed so that each resident's MRN was assigned a four-digit code involving both numbers and letters in order to deidentify. The data was collected in a password protected Excell spreadsheet and only accessible by the project lead (DNP student) and the DNP student's project chair.

Measures and Data Collection

Three key measurements were conducted to measure the SMART goals, plus additional measurements were utilized to fully capture the impact of the discharge program. The first

SMART goal stated, "Documentation of early discharge planning will increase 20% from pre-implementation within eight weeks as measured by compliance of utilizing the discharge checklists." To account for checklist compliance, we audited the checklist binders for nursing staff and for social work and checked for completion. If each checklist was filled out in completion by the time of the resident's discharge, this equated to a "yes" and equals 1. Failure to complete the checklist or gaps in compliance equated to a "no" and equals 0. These dichotomous results were recorded with a goal of 20% compliance.

The second SMART goal stated, "There will be a 20 percentage of change in the documentation of a need for community referrals in the admission MDS at the completion of the implementation period as compared to the pre-implementation chart audit that has been performed." The MDS chart audits provided dichotomous answers to the question: Was there a documented need for community referrals in the resident's admission MDS? Documentation of community referral need in the MDS equated to a "yes" [1]. No documentation of community referral need in the MDS equated to a "no" [0]. These dichotomous results were recorded with a goal of 20% increase from the chart audit that was performed for the needs assessment.

The third SMART goal stated, "The perception by staff that the early discharge program resulted in a positive change will be 80% at the completion of the eight-week implementation period." This was measured through the staff perception survey that was administered following completion of the implementation period. The one-question survey asked, "Has the discharge checklist created a positive improvement?" (Appendix G). This provided dichotomous answers of "yes" [1] and "no" [0]. These results demonstrated if the project was deemed valuable to the facility following completion. Each of the data collections mentioned thus far provided nominal data for analysis.

Other measurements were collected to gain perspective of the full impact of the discharge program. For supplemental resources to care partners, we provided the CMS booklet to help care partners organize significant information at discharge and get crucial questions answered. In order to measure if this resource added additional value to the discharge program, care partners were asked in a final survey, "Was the booklet given to you a helpful resource?" (Appendix F, Form II). This question had options to answer: "Not at all" [0], "Somewhat" [1], or "Very helpful" [2], allowing for a minimum summation score of 0 and a maximum summation score of 2. This question is #6 of the care partner survey and created ordinal data to measure the satisfaction and usefulness of this instrument.

Additionally, the facility investigated the perceived readiness of care partners upon resident discharge. In the final care partner survey, questions #1-5 contained Likert Scale questions regarding care partner readiness. The family or care partner could answer "Not at all" [0], "Somewhat" [1], or "Very prepared" [2], allowing for a minimum summation score of 0 and maximum summation score of 10. The care partner survey was given to care partners prior to the implementation period in order to obtain baseline perceived care partner readiness (Appendix F, Form I). These results were then compared to the results of this survey answered by care partners of and after the implementation period (Appendix F, Form II) to evaluate for improvement in perceived readiness of care partners who received the discharge planning practice change.

Demographic data included the resident's admitting diagnosis, year of birth, ethnicity, race, biological sex, marital status, and BIMS score. The significance of including the BIMS score in our data collection was due to the presence of cognitive impairment being a potential barrier to the resident being able to discharge home. Data was collected, deidentified, and stored in a password locked Excell spreadsheet.

Results

31 total residents resided in the rehab hallway during February 5th and April 1st. Of these 31 residents, 7 were excluded from data collection. Exclusion reasons included expiration during stay (n = 2), hospital readmission (n = 2), discharged to long-term nursing home care (n = 2) and transfer to a rehab hospital due to insurance delegation (n = 1). This left 24 residents for data analysis.

Early discharge planning, as measured through compliance with the discharge program checklists, was assessed at the completion of Cycle I (Week 4 of implementation) and at the completion of Cycle II (Week 8 of implementation). Of the 11 residents from Cycle I, 2 residents' checklists were completed in full and deemed compliant (18.2%). Of the 13 residents from Cycle II, 5 residents' checklists were completed in full and deemed compliant (38.5%). This resulted in a 111.5% positive percentage of change in compliance by the end of the implementation period.

Table 1

Checklist Compliance

	Cycle I	Cycle II	Percentage of Change
Rate of Compliance	18.2%	38.5%	111.5%

Chart audits were performed at the completion of Cycle I and Cycle II for Q0610 of the admission MDS, which addresses the resident's need for community referral upon their discharge. Pre-implementation data was at 0% of residents' charts stating, "yes" to this question. At the completion of Cycle I, 0 of the 11 residents' charts stated, "yes" to this question. At the completion of Cycle II, 0 of the 13 residents' charts stated, "yes" to this question. There was a 0% change in the documentation of a need for community referral at discharge in the admission MDS forms.

Table 2*Admission MDS Documentation of Resident Need for Community Referral at Discharge*

	Yes	No	Rate of Compliance
Cycle I	0	11	0%
Cycle II	0	13	0%

There were 9 care partners who agreed to take the Family and Care Partner survey at the time of discharge. Questions #1-5 of the Family and Care Partner survey addressed their perceived readiness in assisting in the home care of their loved one following discharge. This was compared to surveys asking the same questions prior to the implementation of the discharge program. Baseline data showed 83% overall self-perceived readiness level of care partners at the time of discharge. During the implementation of the discharge program overall self-perceived readiness increased to 94%. The positive percentage of change utilizing central tendencies shows 13.3% positive change in care partner perceived readiness from the discharge program. #6 of this survey addressed if the supplemental CMS booklet was a helpful resource. 22.2% answered, "Not at all" (n = 2), 44.4% answered, "Somewhat" (n = 4), and 33.3% answered, "Very helpful" (n = 3).

Table 3*Mean Care Partner Readiness Scores Per Question*

	Pre- implementation Readiness	Implementation Period Readiness	Percentage of Change
How prepared do you feel to monitor your loved one's health conditions?	85%	94%	10.6%
How prepared do you feel to monitor for side effects of their medications?	69%	94%	36.2%
How prepared do you feel to make sure the medications are taken correctly and on time?	88%	94%	6.8%
How prepared do you feel to make sure follow-up appointments are made and attended?	92%	94%	2.2%
How prepared do you feel overall to assist in your loved one's health management after they are discharged home?	81%	94%	16.0%
Overall Readiness	83%	94%	13.3%

8 involved staff members completed anonymous surveys assessing if they perceived the discharge program as creating a positive change in the facility. 37.5% (n = 3) reported that the discharge program created a positive change. 62.5% (n = 5) did not feel that the discharge program created a positive change at the facility.

Table 4*Staff Perception of a Positive Change at Facility*

	Yes	No
Staff Response Rate	37.5% (n = 3)	62.5% (n = 5)

Discussion

The discharge program's key sign of success is the change in perception of education at the facility. Aside from the required tasks of the discharge program, staff began calling residents a couple days following discharge to check on them and answer any home health questions. Staff also reported in exit interviews that the discharge program influenced them to perform a more thorough education with an emphasis on family involvement. Not only did we improve staff perception of the weight a quality education to the resident and care partner holds, but we also improved the care partner perception of education, as evident in their increased perceived readiness scores.

We warranted further success through the facility's adoption of the program. The Director of Social Work reported duplicate charting was created from the checklists after the facility's own EHR system changes since our PDSA Cycle I began. The facility made various changes within their EHR incorporating checklist tasks, PCC, and improved resident and care partner education. The CNO further elaborated on this, reporting a streamlined discharge summary that pre-populates reports and new discharge planning compliance pushes. It is then implied that the discharge program was fully adopted and integrated into their system's EHR, though certain aspects of the program did not work for the facility—primarily the paper charting of the checklists. Due to the duplicative tasks the checklists created once the facility's EHR updates were made, staff satisfaction scores do not necessarily reflect feelings towards the program, but

to the checklists themselves. While the checklist concept was not realistic long-term, the discharge program had successful adoption.

Our data also merits success. The first SMART goal states, "Documentation of early discharge planning will increase 20% from pre-implementation within eight weeks as measured by compliance of utilizing the discharge checklist." This was accomplished as compliance of utilizing the discharge checklist was at 38.5% by the end of the eight-week implementation period, jumping from just 18.2% compliance at the four-week mark. This 111.5% positive percentage of change greatly surpassed the SMART goal of 20%.

The second SMART goal states, "There will be a 20% percentage of change in the documentation of a need for community referrals in the admission MDS at the completion of the implementation period as compared to the pre-implementation chart audit that has been performed." This goal was not met, however, being that the 0% pre-implementation completion rate remained unaffected by the discharge program despite education at weekly check-ins. It was noted that community referrals were occurring, though, with many residents to receive home health services following discharge. However, indicating this in the admission MDS was neglected to be priority throughout the duration of the project. The stagnation of admission MDS documentation of a need for community referrals prompted further education and recommendations in our handoff to the facility. We recommended anticipatory planning education for staff, highlighting how the impact of this documentation would provide more insight of resident needs, thus valuing PCC and likely warranting improved resident outcomes.

The third SMART goal states, "The perception by staff that the early discharge program resulted in a positive change will be 80% at the completion of the eight-week implementation period." This goal was not met, due to just a 37.5% consensus by staff that the discharge program resulted in a positive change at the facility. However, as previously mentioned, this may be

skewed due to the facility's adoption and EHR integration during the project timeline, reflecting barriers of the discharge program that were noted in exit interviews.

Furthermore, this quality improvement project did fulfill the facility's need of a structured, individualized, and early discharge planning program. Improvement in the compliance of the discharge checklists indicates improvement in the consistency of early discharge planning. The characteristics of the discharge planning program that emphasized family involvement and were individualized to specific resident needs are expected to produce further improved outcomes as the program continues following handoff. Family and care partners benefitted from the early, thorough, and individualized discharge planning as evidenced through the improvement in their preparedness in aiding in the home care of their loved one following discharge. This is significant to note as care partner involvement in the discharge process further improves outcomes of the residents (Rodakowski et al., 2017, Ia; Provencher et al., 2021, Ia; Topham et al., 2022, IIb; Abramssohn et al., 2022, IIa; Gupta et al., 2019, Ib; Rasmussen et al., 2021, Ia).

From the Family and Care Partner Survey results, we further evaluated which areas the care partners felt most and least confident in. Pre-implementation, the most prepared area in health management was in ensuring the resident's follow-up appointments were made and attended. This question improved from 92% prepared pre-implementation to 94% at the completion of Cycle II, showing consistent confidence in this area with a 2% positive percentage of change. The least prepared area in health management pre-implementation was in monitoring for side effects of medications. This question alone improved from 69% to 94% care partner perceived readiness by the completion of Cycle II. This 36% positive percentage of change highlights the value of care partner involvement in the discharge process and education

throughout the rehab stay, and is evidence in the success of improved education quantity and quality from the discharge program.

An unexpected finding of the discharge program was discovered in the collection of demographic information that identifies further care transition barriers. We recorded BIMS scores in data collection due to the potential barrier the presence of cognitive impairment has on the resident's ability to safely discharge home. Of 24 residents in the implementation period, 17 had a positive BIMS score indicating moderate or severe cognitive impairment, yet only 4 had a correlating ICD-10 diagnosis indicating cognitive impairment. The lack of acknowledgement to the identified cognitive impairment unravels more complex issues. Improper discharge may be occurring if cognitive impairment is not considered in the discharge planning. Cognitive impairment invites opportunity for adverse events and outcomes while at home. A positive BIMS score requires a community referral for a safe and successful discharge home and more intricate planning for the care transition. In handoff, we recommended that they incorporate a process for reporting a positive BIMS score so that the SNF providers and discharge planners are notified and aware prior to the discharge planning meeting of the resident so that proper considerations can be made.

Limitations and Barriers

Low rehab resident volumes contributed to small sample size and limited data complexity. As can be expected in QI, nursing feedback reported that the program became an extra work burden to do for each resident on top of usual tasks and the lack of EHR incorporation became an organizational barrier. Staff turnover became a major yet unexpected barrier, as the facility's leadership team was inconsistent throughout both PDSA cycles. Exit interviews reported the Director of Health Services and the Lead Administrator positions each had two turnovers during the duration of the discharge program. Contact with leadership was lost

almost entirely throughout the duration of this project due to the barrier of leadership inconsistency.

Implications

EHR incorporation has been found to be a driving factor in practice change compliance and is suggested for further discharge program implementation at other facilities. Individualized, early discharge planning is a successful factor of improved resident outcomes, while care partner involvement in discharge planning is a compelling indicator of care partner confidence thus the likelihood of decreased hospital readmissions. Future projects are needed with larger resident populations and longer implementation periods to further delve into the direct benefits of early, individualized discharge planning with family and care partner involvement on hospital readmission rates and resident outcomes.

Conclusion

Rates of early discharge planning improved as a result of the discharge program, as did family and care partner perceived readiness. There is still room for improvement in the documentation of a need for community referrals within the admission MDS. We know the AHRQ discharge program is flawed, though providing modified checklists specific to facility needs does improve care partner readiness. The supplemental discharge booklets were not deemed useful for family and care partners. The facility will not be continuing this aspect of the discharge program following hand-off, nor the paper checklists. Staff did not feel that the implementation of the discharge program made a positive improvement at the facility due to task duplication and the burden of paper charting, though the facility fully adopted the program and incorporated the discharge program into their system's EHR. Improved resident and care partner education and a facility focus on PCC were major outcomes of this program.

References

- Abramsohn, E., Paradise, K., Glover, C., Benjamins, M., Douglas, L., Jerome, J., Kim, M., Kostas, T., Mata, D., Padron, F., Shah, R., & Lindau, S. (2022). CommunityRx: Optimizing a community resource referral intervention for minority dementia caregivers. *Journal of Applied Gerontology, 41*(1), 113-123. <https://doi.org/10.1177/07334648211005594>
- Ådnanes, M., Cresswell-Smith, J., Melby, L., Westerlund, H., Šprah, L., Sfetcu, R., Straßmayr, C., & Donis, V. (2020). Discharge planning, self-management, and community support: Strategies to avoid psychiatric rehospitalization from a service user perspective. *Patient Education and Counseling, 103*, 1033-1030. <https://doi.org/10.1016/j.pec.2019.12.002>
- Agency for Healthcare Research and Quality (AHRQ). (2017, December). *Care transitions from hospital to home: IDEAL discharge planning, implementation handbook*. <https://www.ahrq.gov/patient-safety/patientsfamilies/engagingfamilies/strategy4/index.html>
- Black, B., Johnston, D., Rabins, P., Morrison, A., Lyketsos, C., & Samus, Q. (2013). Unmet needs of community-residing persons with dementia and their informal caregivers: Findings from the maximizing independence at home study. *Journal of the American Geriatrics Society, 61*(12), 2065-2270. <https://doi.org/10.1111/jgs.12549>
- Centers for Medicare and Medicaid Services (CMS). (2019). *Your discharge planning checklist brochure*. <https://www.medicare.gov/publications/11376-discharge-planning-checklist.pdf>
- Centers for Medicare and Medicaid Services (CMS). (2022, March 24). *Community-based care transitions program*. <https://innovation.cms.gov/innovation-models/cctp>
- Centers for Medicare and Medicaid Services (CMS). (2023, September 12). *Minimum Data Set*

(MDS) 3.0 for nursing homes and swing bed providers.

<https://www.cms.gov/medicare/quality/nursing-home-improvement/minimum-data-sets-swing-bed-providers>

Chia, Y.Y.P. & Ekladius, A. (2021). Australian public hospital inpatient satisfaction related to early patient involvement and shared decision-making in discharge planning. *Internal Medicine Journal*, 51: 891-895. <https://doi.org/10.1111/imj.14872>

Cincinnati Children's. (2012, March 26). *LEGEND: Table of evidence levels*. [Infographic]. <https://www.cincinnatichildrens.org/research/divisions/j/anderson-center/evidence-based-care/legend>

Fox, M.T., Persaud, M., Maimets, I., Brooks, D., O'Brien, K., & Tregunno, D. (2013). Effectiveness of early discharge planning in acutely ill or injured hospitalized older adults: A systematic review and meta-analysis. *BMC Geriatrics*, 13, 70. <https://doi.org/10.1186/1471-2318-13-70>

Gonçalves-Bradley, D.C., Lannin, N.A., Clemson, L., Cameron, I.D., & Shepperd, S. (2022). Discharge planning from hospital (Review). *Cochrane Database of Systematic Reviews*, 2022(2), CD000313. <https://doi.org/10.1002/14651858.CD000313.pub6>

Gupta, S., Perry, J., & Kozar, R. (2019). Transitions of care in geriatric medicine. *Clinics in Geriatric Medicine*, (35)1, 45-52. <https://doi.org/10.1016/j.cger.2018.08.005>

Hayajneh, A.A., Hweidi, I.M., & Dieh, M.W.A. (2020). Nurses' knowledge, perception and practice toward discharge planning in acute care settings: A systematic review. *Nursing Open*, 7, 1313-1320. <https://doi.org/10.1002/nop2.547>

Holland, D.E., Knafel, G.J., & Bowles, K.H. (2012). Targeting hospitalized patients for early discharge planning intervention. *Journal of Clinical Nursing*, 22, 2696-2703. <https://doi.org/10.1111/j.1365-2702.2012.04221.x>

Institute for Healthcare Improvement. (2023). *How to Improve*.

<https://www.ihl.org/resources/how-to-improve>

Kutz, A., Koch, D., Haubitz, S., Conca, A., Baechli, C., Regez, K., Gregoriano, C., Ebrahimi, F., Bassetti, S., Eckstein, J., Beer, J., Egloff, M., Kaeppli, A., Ehmann, T., Hoess, C., Schaad, H., Wharam, J.F., Lieberherr, A., Wagner, U., De Geest, S., Schuetz, P., & Mueller, B. (2022). Association of interprofessional discharge planning using an electronic health record tool with hospital length of stay among patients with multimorbidity: A nonrandomized controlled trial. *JAMA Network Open*, 5(9), e2233667.

<https://doi.org/10.1001/jamanetworkopen.2022.33667>

McDermott, K. W. & Jiang, H. J. (2020, June 12). Characteristics and costs of potentially preventable inpatient stays, 2017. *Agency for Healthcare Research and Quality: Healthcare Cost and Utilization Project*.

[https://hcup-](https://hcup-us.ahrq.gov/reports/statbriefs/sb259-Potentially-Preventable-Hospitalizations-2017.jsp)

[us.ahrq.gov/reports/statbriefs/sb259-Potentially-Preventable-Hospitalizations-2017.jsp](https://hcup-us.ahrq.gov/reports/statbriefs/sb259-Potentially-Preventable-Hospitalizations-2017.jsp)

McMartin, K. (2013). Discharge planning in chronic conditions: An evidence-based analysis.

Ontario Health Technology Assessment Series, 13(4), 1-72.

Meleis, A. I., Sawyer, L. M., Im, E., Messias, D. K. H., & Schumacher, K. (2000). Experiencing transitions: An emerging middle-range theory. *Advances in Nursing Science*, 23(1), 12-

28. <https://doi.org/10.1097/00012272-200009000-00006>

Nunes, H.J.M. & Queirós, P.J.P. (2016). Patient with stroke: Hospital discharge planning, functionality and quality of life. *Revista Brasileira de Enfermagem*, 70(2), 415-423.

<http://doi.org/10.1590/0034-7167-2016-0166>

Provencher, V., Clemson, L., Wales, K., Cameron, I.D., Gitlin, L.N., Grenier, A., & Lannin, N.A. (2020). Supporting at-risk older adults transitioning from hospital to home: Who benefits from an evidence-based patient-centered discharge planning intervention? Post-hoc

- analysis from a randomized trial. *BMC Geriatrics*, 20(84), 1-10.
<https://doi.org/10.1186/s12877-020-1494-3>
- Provencher, V., D'Amours, M., Menear, M., Obradovic, N., Veillette, N., Sirois, M.J., & Kergoat, M.J. (2021). Understanding the positive outcomes of discharge planning interventions for older adults hospitalized following a fall: A realist synthesis. *BMC Geriatrics*, 21(84), 1-18. <https://doi.org/10.1186/s12877-020-01980-3>
- Rasmussen, L., Grode, L., Lange, J., Barat, I., & Gregersen, M. (2021). Impact of transitional care interventions on hospital readmissions in older medical patients: A systematic review. *BMJ Open*, 11(1), 1-13. <https://doi.org/10.1136/bmjopen-2020-040057>
- Rodakowski, J., Rocca, P.B., Ortiz, M., Folb, B., Schulz, R., Morton, S.C., Leathers, S.C., Hu, L., & James III, A.E. (2017). Caregiver integration during discharge planning for older adults to reduce resource use: A meta-analysis. *Journal of the American Geriatrics Society*, 65, 1748-1755. <https://doi.org/10.1111/jgs.14873>
- Society of Hospital Medicine (SHM). (2023). *Advancing successful care transitions to improve outcomes*. <https://www.hospitalmedicine.org/clinical-topics/care-transitions/>
- Strohm, J.B., Kramer, D.B., Wang, Y., Shen, C., Wasfy, J.H., Landon, B.E., Wilker, E.H., & Yeh, R.W. (2017). Short-term rehospitalization across the spectrum of age and insurance types in the United States. *PLoS One*, 12(7), e0180767.
<https://doi.org/10.1371/journal.pone.0180767>
- Thomas, K. S., Dosa, D., Wysocki, A., & Mor, V. (2017). The Minimum Data Set 3.0 Cognitive Function Scale. *Medical Care*, 55(9), e68–e72.
<https://doi.org/10.1097/MLR.0000000000000334>
- Topham, E.W., Bristol, A., Luther, B., Elmore, C.E., Johnson, E., & Wallace, A.S. (2022). Caregiver inclusion in IDEAL discharge teaching: Implications for transition from

hospital to home. *Professional Case Management*, 27(4), 181-193.

<https://doi.org/10.1097/NCM.0000000000000563>

Tung, E., Abramsohn, E., Boyd, K., Makelarski, J., Beiser, D., Chou, C., Huang, E., Ozik, J.,

Kaligotla, C., & Lindau, S. (2019). Impact of a low-intensity resource referral

intervention on patient knowledge, beliefs, and use of community resources: Results from the CommunityRx trial. *Journal of General Internal Medicine*, 35, 815-823.

<https://doi.org/10.1007/s11606-019-05530-5>

Appendix A: Discharge Planning Checklists

Form I: Nursing Checklist

DAILY CHECKLIST

Fill in, initial, and date next to each task as completed.

Resident Name: _____

Date: _____	Date: _____	Date: _____	Date: _____
<p>_____ Educated resident and family about condition and used Teach Back method</p> <p>_____ Discussed progress toward resident, family, and care team goals</p> <p>_____ Explained medications to resident and family</p> <p> ___ Morning ___ Afternoon ___ Evening ___ Bedtime ___ Other</p> <p>_____ Involved resident and family in care practices, such as:</p>	<p>_____ Educated resident and family about condition and used Teach Back method</p> <p>_____ Discussed progress toward resident, family, and care team goals</p> <p>_____ Explained medications to resident and family</p> <p> ___ Morning ___ Afternoon ___ Evening ___ Bedtime ___ Other</p> <p>_____ Involved resident and family in care practices, such as:</p>	<p>_____ Educated resident and family about condition and used Teach Back method</p> <p>_____ Discussed progress toward resident, family, and care team goals</p> <p>_____ Explained medications to resident and family</p> <p> ___ Morning ___ Afternoon ___ Evening ___ Bedtime ___ Other</p> <p>_____ Involved resident and family in care practices, such as:</p>	<p>_____ Educated resident and family about condition and used Teach Back method</p> <p>_____ Discussed progress toward resident, family, and care team goals</p> <p>_____ Explained medications to resident and family</p> <p> ___ Morning ___ Afternoon ___ Evening ___ Bedtime ___ Other</p> <p>_____ Involved resident and family in care practices, such as:</p>

Notes:

Form II: Social Work Checklist

DISCHARGE PLANNING CHECKLIST

Fill in, initial, and date next to each task as completed.

Resident Name: _____

Initial Nursing Assessment	Prior to Discharge Planning Meeting	During Discharge Planning Meeting	Day of Discharge
<p>_____ Identified the caregiver at home and backups</p> <p>_____ Established resident and family goals for Rehab stay</p> <p>_____ Informed resident and family about steps to discharge</p> <p>_____ Booklet distributed to resident and family with explanation</p>	<p>_____ Scheduled discharge planning meeting</p> <p style="padding-left: 20px;">Scheduled for:</p> <p style="padding-left: 40px;">____/____/____</p> <p style="padding-left: 20px;">at _____ (time)</p> <p style="padding-left: 20px;">with expected attendees:</p> <p>_____ Therapist home evaluation discussed</p> <p>_____ Therapist home evaluation scheduled (if applicable)</p> <p style="padding-left: 20px;">Scheduled for:</p> <p style="padding-left: 40px;">____/____/____</p> <p style="padding-left: 20px;">at _____ (time)</p>	<p>_____ Discussed resident and family questions</p> <p>_____ Reviewed discharge instructions</p> <p>_____ Used Teach Back method to resident and family</p> <p>_____ Discussed option of "Almost Home" respite stay in Personal Care following Rehab discharge</p> <p>_____ Discussed ability to return to Rehab within 30 days if needed</p> <p>_____ Discussed Meds-To-Home</p> <p>_____ Offered to schedule follow-up appointments with providers</p> <p>PCP: _____</p> <p>Specialists: _____</p>	<p style="text-align: center;"><u>Medications</u></p> <p>_____ Reconciled medication list</p> <p>_____ Reviewed medication list with resident and family with Teach Back method</p> <p style="text-align: center;"><u>Appointments and Contact Information</u></p> <p>_____ Scheduled follow-up appointments:</p> <p style="padding-left: 40px;">1) With: _____</p> <p style="padding-left: 80px;">on ____/____/____</p> <p style="padding-left: 80px;">at _____ (time)</p> <p style="padding-left: 40px;">2) With: _____</p> <p style="padding-left: 80px;">on ____/____/____</p> <p style="padding-left: 80px;">at _____ (time)</p> <p>_____ Wrote down and gave appointments to resident and family</p> <p>_____ Arranged any home care needed</p> <p>_____ Wrote down and gave contact information for follow-up person after discharge</p>

Appendix B: Letter of Support

April 20, 2023

Candace C. Harrington, PhD, DNP, APRN, AGPCNP-BC, CNE, FAAN
Assistant Professor
Gerontology NP Professor
University of Louisville, School of Nursing
555 South Floyd Street
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Louisville, KY 40202

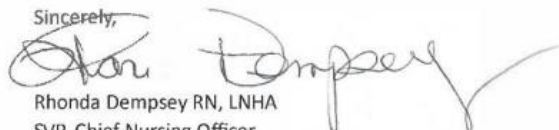
Re: Letter of Support

Dear Dr. Harrington,

Thank you for sharing the results of your research on our residents with heart failure and cognitive impairment. The data helped us identify an opportunity to improve our discharge planning process and documentation upon admission.

We value our ongoing collaborative efforts to improve care quality and our residents' health outcomes. Please accept this letter as documentation of our support for the research and associated Doctor of Nursing Practice scholarly project to improve the discharge planning process (for residents and family caregivers) upon admission at our Trilogy Health Services' Willows of Springhurst facility.

You have our full support and agreement to participate in the process to improve the identification of and implementation of a community referral process for discharge upon admission and adopt the evidence-based practice changes.

Sincerely,

Rhonda Dempsey RN, LNHA
SVP, Chief Nursing Officer
Trilogy Health Services, LLC

Kristin Trehas BSN, RN, RAC-CT, DNS-CT
AVP, Clinical Quality and Regulatory
Trilogy Health Services, LLC

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Appendix C: Evidence Grading

Study Design	Evaluation Method Level (LEGEND)	Quality	Authors	Title
Qualitative study	II	a	Abramsohn et al., 2022	Community Rx: Optimizing a community resource referral intervention for minority dementia caregivers
Qualitative study	II	a	Ådnanes et al., 2020	Discharge planning, self-management, and community support: Strategies to avoid psychiatric rehospitalization from a service user perspective
Cohort prospective	III	b	Chia & Ekladios, 2021	Australian public hospital inpatient satisfaction related to early patient involvement and shared decision-making in discharge planning
Systematic review + meta-analysis	I	a	Fox et al., 2013	Effectiveness of early discharge planning in acutely ill or injured hospitalized older adults: A systematic review and meta-analysis
Systematic review	I	a	Gonçalves-Bradley et al., 2022	Discharge planning from hospital (Review)
Meta-analysis	I	b	Gupta et al., 2019	Transitions of care in geriatric medicine
Systematic review	I	b	Hayajneh et al., 2020	Nurses' knowledge, perception, and practice toward discharge planning in acute care settings: A systematic review.
Cross-sectional	IV	a	Holland et al., 2012	Targeting hospitalized patients for early discharge planning intervention
CCT	III	a	Kutz et al., 2022	Association of interprofessional discharge planning using an electronic health record tool with hospital length of stay among patients with multimorbidity: A nonrandomized controlled trial
Systematic review	I	a	McMartin, 2013	Discharge planning in chronic conditions: An evidence-based analysis
Systematic review	I	b	Nunes & Queirós, 2016	Patient with stroke: Hospital discharge planning, functionality and quality of life

RCT	II	a	Provencher et al., 2020	Supporting at-risk older adults transitioning from hospital to home: Who benefits from an evidence-based patient-centered discharge planning intervention? Post-hoc analysis from a randomized trial
Meta-synthesis	I	a	Provencher et al., 2021	Understanding the positive outcomes of discharge planning interventions for older adults hospitalized following a fall: A realist synthesis
Systematic review	I	a	Rasmussen et al., 2021	Impact of transitional care interventions on hospital readmissions in older medical patients: A systematic review
Meta-analysis	I	a	Rodakowski et al., 2017	Caregiver integration during discharge planning for older adults to reduce resource use: A meta-analysis
Qualitative study	II	b	Topham et al., 2022	Caregiver inclusion in IDEAL discharge teaching: Implications for transition from
CCT	III	a	Tung et al., 2019	Impact of a low-intensity resource referral intervention on patient knowledge, beliefs, and use of community resources: Results from the CommunityRx trial

Appendix D: Cincinnati Children's LEGEND Evidence Levels Reference Guide



LEGEND
Let Evidence Guide Every New Decision
Table of Evidence Levels

TABLE OF EVIDENCE LEVELS: Levels of Individual Studies by Domain, Study Design, & Quality

DOMAIN OF CLINICAL QUESTION	TYPE OF STUDY / STUDY DESIGN																			
	Systematic Review Meta-Analysis	Meta-Synthesis	RCT ⁺	CCT ⁺	Psychometric Study	Qualitative Study	Cohort - Prospective	Cohort - Retrospective	Case - Control	Longitudinal (Before/After, Time Series)	Cross - Sectional	Descriptive Study Epidemiology Case Series	Quality Improvement (PDSA)	Mixed Methods Study	Decision Analysis Economic Analysis Computer Simulation	Guidelines	Case Reports N-of-1 Study	Bench Study	Published Expert Opinion	Local Consensus Published Abstracts
Intervention <i>Treatment, Therapy, Prevention, Harm, Quality Improvement</i>	1a* 1b*		2a 2b	3a 3b		4a 4b	3a 3b	4a 4b	4a 4b	4a 4b	4a 4b	4a 4b	4a 4b	2a/2b 3a/3b 4a/4b	5a 5b	5a 5b	5a 5b	5a 5b	5a 5b	5
Diagnosis / Assessment	1a 1b			2a 2b	2a 2b		3a 3b	4a 4b			4a 4b	4a 4b		2a/2b 3a/3b 4a/4b	5a 5b	5a 5b	5a 5b	5a 5b	5a 5b	5
Prognosis	1a 1b						2a 2b	3a 3b	4a 4b		4a 4b	4a 4b		2/3/4 a/b	5a 5b	5a 5b	5a 5b	5a 5b	5a 5b	5
Etiology / Risk Factors	1a 1b		2a 2b	3a 3b			3a 3b	4a 4b	4a 4b		4a 4b	4a 4b		2/3/4 a/b	5a 5b	5a 5b	5a 5b	5a 5b	5a 5b	5
Incidence	1a 1b						2a 2b	3a 3b				4a 4b				5a 5b	5a 5b	5a 5b	5a 5b	5
Prevalence	1a 1b								2a 2b		3a 3b	4a 4b				5a 5b	5a 5b	5a 5b	5a 5b	5
Meaning / KAB⁺		1a 1b			2a 2b									2/3/4 a/b		5a 5b	5a 5b	5a 5b	5a 5b	5

* a = good quality study b = lesser quality study
⁺ CCT = Controlled Clinical Trial KAB = Knowledge, Attitudes, and Beliefs RCT = Randomized Controlled Trial

Shaded boxes indicate study design may not be appropriate or commonly used for the domain of the clinical question.

Development for this table is based on:
 1. Phillips, et al: Oxford Centre for Evidence-based Medicine Levels of Evidence, 2001. Last accessed Nov 14, 2007 from <http://www.cebm.net/index.aspx?o=1025>.
 2. Fineout-Overholt and Johnston: Teaching EBP: asking searchable, answerable clinical questions. *Worldviews Evid Based Nurs*, 2(3): 157-60, 2005.

(Cincinnati Children's, 2012)

Appendix E: CMS Booklet for Resident and Family

Your Discharge Planning Checklist:

For patients and their caregivers preparing to leave a hospital, nursing home, or other care setting



Name: _____

Reason for admission: _____

During your stay, your doctor and the staff will work with you to plan for your discharge. You and your caregiver (a family member or friend who may be helping you) are important members of the planning team. You and your caregiver can use this checklist to prepare for your discharge.

Instructions:

- Use this checklist early and often during your stay.
- Talk to your doctor and the staff (like a discharge planner, social worker, or nurse) about the items on this checklist.
- Check the box next to each item when you and your caregiver complete it.
- Use the notes column to write down important information (like names and phone numbers).
- Skip any items that don't apply to you.

Action items	Notes
What's ahead?	
<input type="checkbox"/> Ask where you'll get care after you leave (after you're discharged). Do you have options (like home health care)? Be sure you tell the staff what you prefer.	_____
<input type="checkbox"/> If a caregiver will be helping you after discharge, write down their name and phone number.	_____
Your health	
<input type="checkbox"/> Ask the staff about your health condition and what you can do to help yourself get better.	_____
<input type="checkbox"/> Ask about problems to watch for and what to do about them. Write down a name and phone number of a person to call if you have problems.	_____

Action items	Notes
<input type="checkbox"/> Use “My drug list” on page 5 to write down your prescription drugs, over-the-counter drugs, vitamins, and herbal supplements.	_____
<input type="checkbox"/> Review the list with the staff.	_____
<input type="checkbox"/> Tell the staff what drugs, vitamins, or supplements you took before you were admitted. Ask if you should still take these after you leave.	_____
<input type="checkbox"/> Write down a name and phone number of a person to call if you have questions.	_____
Recovery & support	
<input type="checkbox"/> Ask if you’ll need medical equipment (like a walker). Who will arrange for this? Write down a name and phone number of a person you can call if you have questions about equipment.	_____
<input type="checkbox"/> Ask if you’re ready to do the activities below. Circle the ones you need help with, and tell the staff:	_____
<ul style="list-style-type: none"> • Bathing, dressing, using the bathroom, climbing stairs • Cooking, food shopping, house cleaning, paying bills • Getting to doctors’ appointments, picking up prescription drugs 	_____
<input type="checkbox"/> Make sure you have support (like a caregiver) in place that can help you. See “Resources” on page 6 for more information.	_____
<input type="checkbox"/> Ask the staff to show you and your caregiver any other tasks that require special skills (like changing a bandage or giving a shot). Then, show them you can do these tasks. Write down a name and phone number of a person you can call if you need help.	_____
<input type="checkbox"/> Ask to speak to a social worker if you’re concerned about how you and your family are coping with your illness. Write down information about support groups and other resources.	_____
<input type="checkbox"/> Talk to a social worker or your health plan if you have questions about what your insurance will cover, and how much you’ll have to pay. Ask about possible ways to get help with your costs.	_____

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Action items	Notes
<input type="checkbox"/> Ask for written discharge instructions (that you can read and understand) and a summary of your current health status. Bring this information and your completed “My drug list” to your follow-up appointments.	_____
<input type="checkbox"/> Use “My appointments” on page 5 to write down any appointments and tests you’ll need in the next several weeks.	_____
For the caregiver	
<input type="checkbox"/> Do you have any questions about the items on this checklist or on the discharge instructions? Write them down, and discuss them with the staff.	_____
<input type="checkbox"/> Can you give the patient the help he or she needs?	_____
<input type="checkbox"/> What tasks do you need help with?	_____
<input type="checkbox"/> Do you need any education or training?	_____
<input type="checkbox"/> Talk to the staff about getting the help you need before discharge.	_____
<input type="checkbox"/> Write down a name and phone number of a person you can call if you have questions.	_____
<input type="checkbox"/> Get prescriptions and any special diet instructions early, so you won’t have to make extra trips after discharge.	_____

More information for people with Medicare

If you need help choosing a home health agency or nursing home:

- Talk to the staff.
- Visit Medicare.gov to compare the quality of home health agencies, nursing homes, dialysis facilities, and hospitals in your area.
- Call **1-800-MEDICARE** (1-800-633-4227). TTY users should call 1-877-486-2048.

If you think you’re being asked to leave a hospital or other health care setting (discharged) too soon: You may have the right to ask for a review of the discharge decision by the Beneficiary and Family Centered Care Quality Improvement Organization (BFCC-QIO) before you leave. A BFCC-QIO is a type of quality improvement organization (a group of doctors and other health care experts under contract with Medicare) that reviews complaints and quality of care for people with Medicare. To get the phone number for your BFCC-QIO, visit Medicare.gov/contacts, or call **1-800-MEDICARE**. You can also ask the staff for this information. If you’re in a hospital, the staff should give you a notice called “Important Message from Medicare,” which contains information on your BFCC-QIO. If you don’t get this notice, ask for it.

For more information on your right to appeal, visit Medicare.gov/appeals, or visit Medicare.gov/publications to view the booklet “Medicare Appeals.”

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Appendix F: Family and Care Partner Survey

Form I

Form I will be given to family and/or care partners during the pre-implementation period.

Family and Care Partner Survey

All answers are confidential.

Please circle one of the following options for each question below.

<p>1. How prepared do you feel to monitor your loved one’s health conditions?</p>	<p>Not at all Somewhat Very Prepared</p>
<p>2. How prepared do you feel to monitor for side effects of their medications?</p>	<p>Not at all Somewhat Very Prepared</p>
<p>3. How prepared do you feel to make sure their medications are taken correctly and on time?</p>	<p>Not at all Somewhat Very Prepared</p>
<p>4. How prepared do you feel to make sure follow-up appointments are made and attended?</p>	<p>Not at all Somewhat Very Prepared</p>
<p>5. How prepared do you feel <i>overall</i> to assist in your loved one’s health management after they are discharged home?</p>	<p>Not at all Somewhat Very Prepared</p>

Form II

Form II includes questions #1-5 of Form I, plus an additional question (#6) which addresses usefulness of the CMS booklet. Form II will be utilized during the implementation period.

Family and Care Partner Survey

All answers are confidential.

Please circle one of the following options for each question below.

<p>1. How prepared do you feel to monitor your loved one’s health conditions?</p>	<p>Not at all Somewhat Very Prepared</p>
<p>2. How prepared do you feel to monitor for side effects of their medications?</p>	<p>Not at all Somewhat Very Prepared</p>
<p>3. How prepared do you feel to make sure their medications are taken correctly and on time?</p>	<p>Not at all Somewhat Very Prepared</p>
<p>4. How prepared do you feel to make sure follow-up appointments are made and attended?</p>	<p>Not at all Somewhat Very Prepared</p>
<p>5. How prepared do you feel <i>overall</i> to assist in your loved one’s health management after they are discharged home?</p>	<p>Not at all Somewhat Very Prepared</p>
<p>6. Was the booklet given to you a helpful resource?</p>	<p>Not at all Somewhat Very Helpful</p>

Appendix G: Staff Evaluation Survey

Staff Evaluation Survey of Discharge Planning Project

The following question is for research purposes only. Your answers are anonymous.

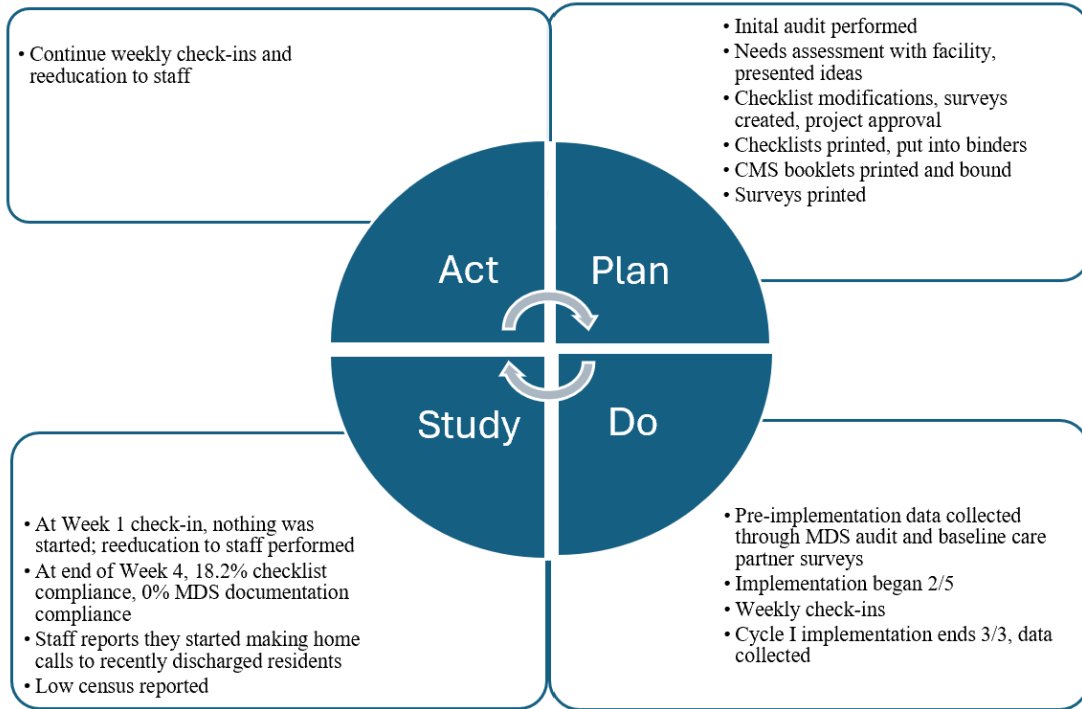
Has the discharge checklist created a positive improvement in our facility? Please circle one of the following:

Yes

No

Appendix H: PDSA Cycle Diagrams

Cycle I



Cycle II

