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Decreasing Readmissions in Medically Complex Children

Colleen Bartlett
University of St. Augustine for Health Sciences, c.bartlett@usa.edu

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Decreasing Readmissions in Medically Complex Children

Colleen Bartlett MSN, CPNP, FNP-C

School of Nursing, University of St. Augustine for Health Sciences

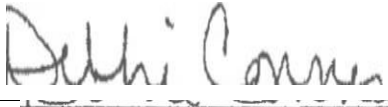This Manuscript Partially Fulfills the Requirements for the
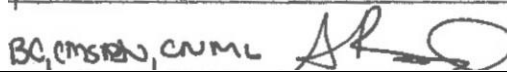
Doctor of Nursing Practice Program and is Approved by:

Debbie Conner, Ph.D., MSN, ANP/FNP-BC, FAANP

Sarah Perron, Ph.D., RN, NPD-BC, CMSRN, CNML

November 16, 2020

University of St. Augustine for Health Sciences
DNP Scholarly Project
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Student Last Name: Bartlett	First Name: Colleen	Middle Initial: E

E-mail: c.bartlett@usa.edu		
Title of DNP Project: Decreasing Hospital Readmissions in Medically Complex Children		
My signature confirms have reviewed and approved this final mitten DNP Scholarly Project. DocuSign electronic signature or wet signature required.		

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DNP Project Primary Faculty: Debbie Conner PhD MSN FAANP	*Debbi Conner*	11/21/2020
DNP Project Preceptor: Sarah Perron, PhD, RN, BC, CMSRN, CNML		11/30/2020
DNP Project Preceptor:		

Abstract

Practice Problem: There was a report of an existing practice problem of increased 30-day readmission rates in medically complex children at an outpatient clinic within an extensive hospital system. Hospital readmissions can cause clinical, social, and financial burdens to the patients and their families and thus reflected a need for interventions to reduce readmissions.

PICOT: The PICOT question that guided this change project: In medically complex pediatric patients ages 0-17, what is the effect of a discharge intervention bundle in reducing all-cause 30-day hospital readmissions compared to current practice within an 8-week timeframe?

Evidence: The literature revealed 18 pertinent studies that fit the inclusion and exclusion criteria that promoted a discharge intervention bundle. The themes within the evidence included post-discharge telephone calls, follow-up appointments, medication reconciliation, and education with teach-back to reduce overall readmission rates.

Intervention: The evidence-based intervention utilized the bundle of post-discharge telephone calls within 72 hours, follow up appointments within 7 days, and medication reconciliation with education and teach-back through in-person and virtual care. The clinic nurses championed the intervention and tracked all the data using a check sheet.

Outcome: Evaluation of the outcome measures confirmed a decrease in all-cause 30-day readmissions from 23% to 14.5% within the project timeframe. Implications of the findings support the existing evidence for implementing a multifaceted bundle to decrease readmissions.

Conclusion: The evidence-based change project decreased all-cause 30-day readmissions rates. The results of the project proved that implementing consistent discharge standards in medically complex children helped guide medical staff, improved patient outcomes, saved costs to the organization, and reduced 30-day all-cause hospital readmissions.

Decreasing Readmissions in Medically Complex Children

All-cause hospital readmissions are considered a measure of quality in organizations across the country (Shermont et al., 2016). In the United States, the Affordable Care Act (ACA) was established to improve quality of care by supporting transitional care services, decreasing preventable hospital readmissions, and improving healthcare savings (Verhaegh et al., 2014). One program that supports the ACA is the Hospital Readmissions Reduction Program (HRRP), a value-based purchasing program that links the quality of care to payment based on readmission rates (CMS, n.d.). The program focuses on adult patients who are readmitted to the hospital with specific diagnoses such as myocardial infarction, heart failure, and chronic obstructive pulmonary disease. In recent years there has been an increased effort to reduce readmissions not only in adults, but also in medically complex children by implementing discharge interventions post hospitalization (Brittan et al., 2015; Coller et al., 2015; Coller et al., 2017; Finlayson et al.,2018).

According to Coller et al. (2017), medically complex children were only 1% of the pediatric population but used a consumed third of all child healthcare spending (p. 381). Children with medical complexity often have multiple medical problems which require specialists, equipment, and high acuity of care (Stephens et al., 2017). This puts them at a greater risk of hospitalization, readmission and undesirable outcomes (Brittan et al., 2015). The purpose of this project was to implement a post-hospitalization discharge bundle that includes telephonic follow-up, outpatient or virtual follow-up appointments, medication reconciliation, and the teach-back method with patients and families to reduce all-cause 30-day hospital readmissions. The Department of Health and Human Services (HHS, 2020) has made policy changes during the COVID-19 emergency to allow health care providers the opportunity to use HIPAA-compliant

video communication such as Doxy.me to perform virtual visits for patients who cannot be seen in person. These virtual visits were utilized for the project as needed.

Significance of the Practice Problem

According to Bailey et al. (2019), the national rate of 30-day all-cause readmissions of patients older than one year of age in 2016 was 12.3% for Medicaid, 10.8% for private insurance, and 7.9% for uninsured (p.3). The average cost of all-cause 30-day hospital readmissions for all diagnoses was $12,500 (p.7), while the average cost for children with congenital malformations was as high as $19,000 per readmission (p.8). Furthermore, at the facility this project was conducted, the 2019 overall all-age, all-cause 30-day readmission rate was 15.3% (Hospital Care Data, n.d.). This was consistent with the national average of 15% (Robert Wood Johnson Foundation [RWJF], 2013). Based on data from the Children's Hospital Association, the organization pediatric overall 30-day, all-cause readmission rate from 2019 was 10%, slightly lower than the national average of 11% (J. Mahla, personal communication, January 31, 2020). The Chronic Complex Clinics (CCC) overall 30-day, all-cause readmission rate from 2019 was 23%, much higher than the national average of 11% (B. Bavinger, personal communication, February 11, 2020). Though these statistics do not show the full impact of readmissions on the organization, clients, and their families, they revealed the need for further implementation of interventions to reduce overall hospital readmissions.

Hospital readmissions cause clinical, social and financial burdens that are significant to the patient and family due to the cost of care, lost time at work and school, developmental effects for chronically ill children, and increased potential for hospital-acquired infections (Nakamura et al., 2014). Comorbidities, race, socioeconomic factors, access to healthcare, and chronic conditions are all factors that increase the risk of readmission (Flanagan et al., 2017). Some legal

and ethical factors considered were how prolonged hospitalizations and readmissions link to

patient stress, poor results, and increased mortality (Mindru et al., 2016; Rosman et al., 2015).

Initiation of discharge interventions to improve transitions and prevent pediatric hospital

readmissions were essential for medically complex children and their families.

<div style="text-align:center">PICOT Question</div>

In medically complex pediatric patients ages 0-17, what is the effect of a discharge

intervention bundle in reducing all-cause 30-day hospital readmissions compared to current

practices in eight-weeks?

Population

The population for this project was medically complex pediatric patients ranging from

infants to 17-year-olds who were readmitted to the children's hospital for any cause within 30

days of discharge. The children came from diverse backgrounds and situations. The patients had

a variety of background diagnoses such as congenital heart disease, feeding problems,

developmental delays, genetic disorders, endocrine disorders, hematologic disorders, and

immunologic disorders.

Intervention

The evidence-based discharge intervention bundle was implemented post hospitalization

and include: a telephonic follow-up, medication reconciliation, outpatient or virtual follow-up

visits, and by incorporating the teach-back method with patients and caregivers (Coller et al.,

2017; Flippo et al., 2015; Shermont et al., 2016) The intervention began by establishing a project

team and determining their roles. The team was comprised of the unit secretary, care

coordinators, a nurse practitioner, a medical director, and the registered nurses (RN) of the clinic.

The RNs were the champions of the intervention bundle, being that they received daily updates

on recent discharges from the hospital and conducted post discharge telephone calls within 48 to

72 hours. The literature findings suggest post discharge telephone calls reduce 30-day hospital

readmission rates (Flippo et al., 2015).

Medication reconciliation and outpatient follow-ups were also key components to the

health of the patients. Medication reconciliation was completed by RNs to assess medication

updates and the patients' supply needs. Any new medications were put in the patients' electronic

health record (EHR) to check for interactions. Outpatient or virtual follow-ups with the office

were scheduled by the unit secretary and made within seven days of a patient's hospital

discharge. Early outpatient follow-up along with medication reconciliation have been used to

reduce hospital readmissions in children with medical complexity (Brittan et al., 2015; Coller et

al., 2017).

To ensure patient and caregiver understanding, the teach-back method was implemented

at follow-up appointments and during telephone calls. Teach-back methodology is used to

provide simple and clear information to patients (Shermont et al., 2016). It involved reviewing

the patient's personal medical information, while correcting any inaccuracies, thus improving

communication between caregivers and the health care team (Shermont et al., 2016).

Comparison

Pediatric hospital readmissions continue to be a problem throughout the country (Agency

for Healthcare Research and Quality, 2014). The previous state was that the facility did not have

protocols on post hospitalization discharge interventions. The current state included an evidence-

based discharge intervention bundle, which has shown to reduce 30-day all-cause hospital

readmissions in medically complex children.

Outcome

The intended outcome of this project was a decrease in hospital readmissions of medically complex children over the eight-week project timeframe. The nurse champions were taught about discharge interventions, and their knowledge was tested using a pre- and post-confidence test within two weeks of the start of the project. A script for the nurses was provided for them to use while speaking with patients, to ensure that the calls were uniform and all pertinent information was gathered. Additionally, a telephone call and other interventions in the discharge bundle were added as part of the electronic health record to track data and assist in standardizing the intervention process.

This work was important because annually pediatric hospital readmissions accounted for 18.8% of all admissions, which lead to more than 3.4 billion of all annual inpatient charges (Shermont et al., 2016). The 2019 CCC readmission rate was 23% (B. Bavinger, personal communication, February 11, 2020). The desired outcome of this project was to reduce the rate in the population that receives the discharge bundle, helping it meet the national average of 11%.

Timeframe

The duration of this project was eight weeks. Implementation of the project started after the University Evidence-Based Practice Review Council (EPRC) and the facility Institutional Review Board (IRB) approved the project. The project took place within the CCC. Once completed, a review of the pre- and post-discharge intervention bundle was conducted.

Evidence Based Framework and Change Theory

Healthcare is constantly changing, and nurse leaders play integral roles in promoting change by innovating and implementing new evidence into practice. Hospital readmissions are considered a measure of quality in organizations across the country, and interventions should be

taken to prevent readmissions (Shermont et al., 2016). The literature supported implementing

discharge interventions post hospitalization to reduce readmissions (Brittan et al., 2015; Coller et

al., 2015; Coller et al., 2017). Nurses used the Plan, Do, Study, Act (PDSA) framework

(Knudsen et al., 2019) and Lewin's Change Theory (Batras et al., 2016) to identify possible

resistance and strengths prior to implementing interventions to reduce hospital readmissions in

medically complex children.

Evidence Based Framework

According to Knudsen et al. (2019), the PDSA framework has been used in evidence-

based projects to identify weaknesses and plan changes to correct those weaknesses. The PDSA

framework was chosen to guide this project which aimed to decrease hospital readmissions in

medically complex children. The "plan" step was the first in the framework and was used to

identify problems and to propose a change (Sylvia & Terhaar, 2018). Typically, this step is

accomplished by forming a project team and by setting roles, timelines and measures for

successful completion. Next, to fulfill the "do" step, the intervention was carried out and

evaluated to determine whether the response was successful (Sylvia & Terhaar, 2018).

Furthermore, the "study" step could be used during the intervention to make rapid adjustments

(Sylvia & Terhaar, 2018). This could also occur after the intervention has been carried out; the

team worked together to understand the results and to determine if the objectives to improve

outcomes were met. The final step is the "act step," wherein a decision was made to sustain the

changes or to develop a new plan (Sylvia & Terhaar, 2018).

Change Theory

Lewin's Change Theory was used to guide the organizational changes to reduce 30-day

all-cause pediatric hospital readmissions in medically complex children. Hussain et al. (2018)

reported that Lewin's Change Theory identified three stages an organization must go through to make change become part of a system: unfreezing, moving, and refreezing. The three stages focus on making permanent changes to reach desired outcomes (Hussain et al., 2018). The goals of this theory are to identify the problem, collaborate on the best solutions, plan a change, and implement that change into practice (Hussain et al., 2018).

Batras et al. (2016) noted that Lewin's unfreezing stage interrupts the status quo of an organization, identifies a problem, and weighs the benefits of change against the negatives of the process. Nurses can lead the change initiative by strengthening driving forces, obtaining support, and getting buy-in from fellow nurses to reinforce change (Hussain et al., 2018). Movement, the second phase of Lewin's Change Theory, occurs when interventions take place. Once the benefits of the change are realized and doubts are removed, then the organization and staff can support the change. The movement phase allows the organization to implement the change while making improvements along the way to best serve the organization (Batras et al., 2016). Refreezing, the final phase, occurs when the intervention has transformed the organization in the areas where it was implemented, forcing accommodation. The change will become the new routine and should reinforce behaviors to promote sustainability (Batras et al., 2016).

This project targeted the implementation of an evidence-based discharge intervention bundle to reduce hospital readmissions. For the interventions to be successful, the organization and providers must change the way they handle hospital discharges. The PDSA framework (Knudsen et al., 2019) and Lewin's Change Theory (Batras et al., 2016) guided the implementation of interventions to promote successful change within the organization.

Evidence Search Strategy

A literature review was performed to identify the evidence supporting the following PICOT: In medically complex pediatric patients ages 0-17, what is the effect of a discharge intervention bundle in reducing all-cause 30-day hospital readmissions compared to current practices in eight weeks?

An electronic search of digital databases was completed that included the Cumulative Index to Nursing and Allied Health Literature (CINAHL), PubMed, and ProQuest. The headings and keywords for all searches included two primary constructs: (a) reducing readmissions [(reducing) AND (readmissions)] and (b) discharge interventions [(discharge interventions) OR (telephone calls) OR (medication reconciliation) OR (outpatient follow-up) OR (teach back)]. Furthermore, a hand search was conducted using reference lists in several related articles. All the searches included were peer-reviewed, academic journals, published within the last five years, in the English language. All the searches used 2015-2020 as the time frame for inclusion criteria.

Literature Search Results and Evaluation

The initial search yielded 22,526 citations as follows: CINAHL, 81 citations; ProQuest, 18,732 citations; and PubMed, 3,713 citations. The following inclusion criteria were added: (a) interventions to reduce readmissions to an acute care hospital; (b) and discharge interventions post hospitalization. Duplicates were merged, and articles excluded included editorials, periodicals, and commentaries. After inclusion and exclusion were applied, 374 citations remained as follows: CINAHL, 49 citations; ProQuest, 281 citations; and PubMed, 44 citations. The titles and abstracts of the 374 articles were reviewed for relevance to PICOT. All studies were screened, and if they met eligibility criteria, the full text was retrieved and evaluated to determine final admissibility. Ultimately, a total of 18 articles were selected to identify the main

themes within the literature to reduce 30-day all-cause readmissions in medically complex

children.

The final literature review included a thorough evaluation and comparison of the 18

articles to identify evidence-based interventions for reducing hospital readmissions in medically

complex pediatric patients. Synthesis of the literature identified consistent evidence-based

support of four main interventions: post discharge telephone calls, post discharge outpatient

follow-up, medication reconciliation, and education with the teach-back method. A summary of

primary articles (see Appendix A) and systematic reviews (see Appendix B) includes the

evidence-based bundle interventions to reduce readmissions which will be reviewed below.

The evaluation of the 18 articles retrieved from the literature review utilized grading from

the Strength of Recommendation Taxonomy (SORT) to assess the quality of the entire body of

evidence. The review of literature finds multiple experimental and non-experimental studies that

are consistent with SORT Level 1, a high level of evidence, with good quality findings. There

were some Level 2 articles as well due to small sample sizes, non-blinding, and no statistical

significance. The overall grade of the body of evidence was a B, which has a moderately strong

recommendation for practice (SORT, 2020).

Themes from the Evidence

The literature was evaluated for similar ideas and results. Synthesis of the literature

identified consistent, evidence-based support of four main interventions to support a discharge

bundle, including post discharge telephone calls, post discharge outpatient follow-up, medication

reconciliation, and education with the teach-back method.

Post Discharge Phone Calls

In the literature, the most frequently cited intervention for reducing hospital readmissions in medically complex children is a post discharge telephone call. Multiple articles agreed that the recommendation to provide a post discharge telephone call should be completed shortly after hospitalization (Auger et al., 2018; Branowicki et al., 2017; Coller et al., 2018; Flippo et al., 2015; Hoyer et al., 2018; Oscalices et al., 2019; Phatak et al., 2016; Yiadom et al., 2018).

Several approaches regarding the right time to deliver post discharge phone calls are presented in the literature, including a phone call within 48 to 72 hours after discharge to reduce readmissions and reinforce discharge teaching (Auger et al., 2018; Flippo et al., 2015; Hoyer et al., 2015; Phatak et al., 2016; Yiadom et al., 2018). Oscalices et al. (2019) suggested a phone call within seven days of discharge, conversely Branowicki et al. (2017), and Coller et al. (2018) did not discuss a specific time frame for the intervention. These studies provide precise, significant efforts of post discharge telephone call recommendations to reduce hospital readmissions despite the differences noted in the time frames.

Recommendations from the Agency for Healthcare Research and Quality (AHRQ, 2013) supported the Re-Engineered Discharge (RED) tool, which was aimed at improving patient discharges from the hospital by increasing patient and family satisfaction and decreasing hospital readmission rates. According to RED, the phone call should take place two to three days after discharge by clinical staff and should review patient's health status, medicines, appointments, home services and plans for protocols in the case that problems arise (AHRQ, 2013). The clinician making the call should become familiar with the patient by thoroughly reviewing all information about the hospital stay and provide education with the teach-back technique to ensure that the patient understood what was explained (AHRQ, 2017).

Education with Teach-back

In addition to post discharge telephone calls, patient and family education with the teach-back method is used in the hospital and after the patient is discharged to reinforce care and reduce readmissions (Almkuist, 2017; Coller et al., 2018; Hamline et al., 2018; Shermont et al., 2016; Yiadom et al., 2018). Shermont et al. (2016) suggested that the teach-back methodology be implemented by all staff to support the improvement of patient education. Furthermore, Coller et al. (2018) suggested using the teach-back method on patients that receive action plans and during post discharge phone calls to identify any gaps that could lead to future hospitalization. Rice et al. (2018) recommended a nurse-led patient education program that provided written and verbal education to patients either in person or on post discharge telephone calls to reduce readmissions without mentioning the use of the teach-back methodology. While the studies above used several approaches to implement the teach-back methodology, it has proven successful to patient care and aids in reducing readmissions.

A group of experts created the Seamless Transitions and Readmissions Network (STARNet), a consensus document that focuses and informs about transitions from hospital to home for children with medical complexity (Auger et al., 2015). The consensus reported that for pediatric populations, discharge interventions such as inpatient tailoring and education with teach-back methods were proven to prevent subsequent hospital utilization. The expert panel consensus also supported the interventions of medication reconciliation, care coordination, and primary care follow-up visits despite contradictory evidence in preventing 30-day readmissions. Furthermore, the panel suggested further research in the future for the medically complex pediatric patients in reducing readmissions (Auger et al., 2015).

Outpatient Follow-up

Outpatient follow-ups after hospitalization were a common theme in the literature for reducing hospital readmissions (Brittan et al., 2015; Christensen & Payne, 2016; Coller et al., 2018; Hamline et al., 2018; Hoyer et al., 2018; Kamermayer et al., 2017; Shermont et al., 2016). Brittan et al. (2015) conducted a study specifically on follow-up visits and readmissions in medically complex children. The study had a positive association with early post discharge outpatient follow-up between four to 29 days after discharge. Conversely, children who followed up within three days were more likely to be admitted. Some of the literature focused on discharge bundles, which included outpatient follow-up to reduce readmissions (Coller et al.,2018; Hamline et al., 2018; Kamermayer et al., 2017; Shermont et al., 2016). These studies evaluated outpatient follow-up along with medication reconciliation and discharge education with the teach-back method. While none of the studies listed a time interval for outpatient follow-ups, they all showed improvement in reducing readmissions (Coller et al., 2018; Hamline et al., 2018; Kamermayer et al., 2017; Shermont et al., 2016). Another study used transition guides for patients at high risk for readmission. This was accomplished using individualized care by reinforcing discharge instructions, performing medication reconciliation, ensuring provider follow-up as well as arranging transportation if needed, which resulted in reduced readmissions (Hoyer et al., 2018).

Medication Reconciliation

Medication reconciliation and management were frequently brought up in the literature within discharge bundles and care transitions to help reduce 30-day readmissions (Coller et al., 2018; Hoyer et al., 2018; Phatak et al., 2016; Shermont et al., 2016). Most of the literature supported the use of bundles that included medication reconciliation and management post

discharge along with other interventions to reduce 30-day readmissions (Coller et al., 2018;

Hoyer et al., 2018; Shermont et al., 2016). One study used pharmacists to provide patients with

face-to-face medication reconciliation, pharmaceutical care plans, discharge education

counseling, and post discharge telephone calls, which also showed positive results in decreasing

30-day readmissions to the hospital (Phatak et al., 2016).

Discharge Bundles

Evidence from the literature supported the implementation of multifaceted discharge

bundles for the use of reducing hospital readmissions (Coller et al., 2018; Kamermayer et al.,

2017; Shermont et al., 2016; Stephens et al., 2017; Zhu et al., 2015). The majority of these

studies which focused on discharge bundles used four interventions to reduce 30-day

readmissions: medication reconciliation, patient education with teach-back, timely outpatient

follow-up, and post discharge telephone calls (Coller et al., 2018; Kamermayer et al., 2017;

Stephens et al., 2017). Shermont et al. (2016) also used these interventions but left out the post

discharge telephone call, while Zhu et al. (2015) recommended home visits be added to the

intervention bundles.

A key driver framework developed by experts introduced strategies to reduce

hospitalization of children with medical complexity (Coller et al., 2017). The panel determined

four intervention strategies to have the highest effectiveness rating for reducing hospitalization:

(a) enhanced provider access such as 24/7 phone coverage and easy access to follow-up care, (b)

early recognition and contingency plans made at outpatient and inpatient visits, (c) caregiver

knowledge and skill enhanced with intensive coaching and education with teach-back, and (d)

care transitions of standardized discharge plans, follow-up plans, post discharge telephone calls,

and home visits (Coller et al., 2017). This framework supported the use of discharge bundles to reduce hospital readmissions in medically complex children.

Practice Recommendations

The literature review sought to answer the PICOT question by determining that the implementation of a discharge bundle was effective in reducing 30-day all-cause hospital readmissions in medically complex children. Based upon the results of the evidence found in the literature review, the practice change recommendation included implementing a discharge bundle with the following interventions: (a) post discharge telephone calls, (b) post discharge outpatient follow-up, (c) medication reconciliation, and (d) education with the teach-back method (Coller et al., 2018; Kamermayer et al., 2017; Shermont et al., 2016; Stephens et al., 2017; Zhu et al., 2015).

The primary evidence review revealed six randomized control trials, two cohort studies, and one exploratory, observational, and quasi-experimental study. The review of these studies found multiple experimental and non-experimental studies that are consistent with SORT level one, a high level of evidence, with good quality findings. There were some level two studies, and the overall grade of the body of evidence is a B, which represented a moderately strong recommendation for practice recommendation (SORT, 2020).

Supporting evidence, including a key driver framework, expert consensus, and the AHRQ RED toolkit, which validated the recommendation of discharge bundle interventions to reduce all-cause 30-day readmissions in medically complex children (AHRQ, 2013; Auger et al., 2018; Coller et al., 2017). The Institute for Healthcare Improvement (IHI, 2017) recommended the use of the SMART Discharge Protocol (Signs, Medications, Appointments, Results, and Talk with me) to improve care for patients and their families regarding discharge procedures. The use of

the protocol improved transition processes including care coordination, enhanced coaching with education, and self-management, which aligned with the discharge intervention bundle to make a strong practice recommendation based upon the evidence (IHI, 2017).

Project Setting

The CCC is a pediatric primary care office located within a large hospital-based health system for medically complex children and provides primary and acute care services, serving as a medical home for approximately 1,000 patients (BayCare, n.d.-c). The patient population is children 0-17-years of age. Primary staffing for the clinic included an office manager, RNs, licensed practical nurses, physicians, nurse practitioners, a unit secretary, a care coordinator, a social worker, a child life specialist, a counselor, and a behavior specialist. Additionally, secondary staff included: housekeeping, pharmacy, facilities and lab personnel. The clinic is part of a leading not-for-profit health care system with over 15 hospitals and 380 medical locations within a four-county area (BayCare, n.d.-c).

Organizational Structure

The CCC is located within a nonprofit corporation that operates a $2.6 billion-integrated health care delivery system in a four-county region (BayCare, n.d.-b)The organization has five clinical divisions and is the largest hospital division in the region. Additionally, the organization includes acute care hospitals, long-term care facilities, free-standing rehabilitation centers, urgent care centers, imaging facilities, ambulatory surgery centers, wellness centers, a physician network, retail pharmacy, and comprehensive home health agency (BayCare, n.d.-b). Its organizational structure is different compared to many other health care organizations, being that it is organized by divisions rather than individuals, including hospital, physician, ambulatory,

behavioral health, clinical integrated network, supply chain division, and system office (BayCare, n.d.-b).

Organizational Culture

The organization's mission statement is, "Our Health System will improve the health of all we serve through community-owned health care services that set the standard for high-quality, compassionate care" (BayCare, n.d.-b). A major part of the organization's culture is that they do not have a hierarchy within the system. Instead, they have a leadership team available to all employees who are considered valuable, regardless of their job title (BayCare, n.d.-b).

Organizational Need

An organizational needs assessment was performed, and it identified a high readmission rate in medically complex pediatric patients that were statistically much higher than the national average (B. Bavinger, personal communication, February 11, 2020). The Five Why's Tool was used to address the issue of a lack of discharge interventions to reduce hospital readmissions (American Society of Quality [ASQ], n.d.). The results showed a lack of knowledge by the organization, providers and families, along with costs associated with the interventions, and a lack of time to perform interventions. Furthermore, organizational and quality tools from the ASQ, (n.d.) were instrumental in planning the evidence-based practice change. The tool was used to identify gaps such as the knowledge deficit in the facility, in order to address and facilitate the discharge intervention bundle and improve hospital readmissions for medically complex pediatric patients.

Stakeholders and Support

Key stakeholders interested in the project to reduce all-cause 30-day hospital readmissions included the hospital's leadership team, the medical director of the CCC, the

director of the children's hospital, and the chief nursing officer who all supported the project.

Additional stakeholders included the patients, their families and the clinic staff. The staff in the

CCC consisted of a physician, nurse practitioner, RNs, a licensed practical nurse, a social

worker, care coordinators, a unit secretary, and a child life specialist. Furthermore, a preceptor

sponsored this project.

Sustainability

Sustainability is an important aspect of any successful project and is often associated with

organizational success. Some factors that can facilitate sustainability in healthcare organizations

include funding, political environment/context, organizational capacity, leadership, staff training,

and adaptability (Crespo-Gonzalez et al., 2020). Educational reinforcement with continuing

education and evaluations on the discharge bundle helped to sustain the project. Adding the

interventions into the existing electronic medical record provided easy access to patient

readmission rates and past hospitalization information to aid the project.

Interprofessional Collaboration

Interprofessional collaboration was an integral part of discharge bundle to reduce 30-day

all-cause readmissions in medically complex children. The clinic's team was educated on the

project and worked cohesively together. The team involved in the project implementation was

comprised of a physician, nurse practitioner, RNs, care coordinator, and unit secretary.

Interprofessional education for the team on the evidence-based project was done to increase their

knowledge of why and how the coordination of post hospitalization interventions should run.

Strengths, Weaknesses, Opportunity, and Threat Analysis

A Strengths, Weaknesses, Opportunities, and Threats (SWOT) tool has been used as a

form of analysis to examine industries, organizations, products, and individuals (Ojala, 2017).

Strengths and weaknesses often exist internally within a company or organization, while opportunities and threats happened outside of the facility (Ojala, 2017). Ultimately, a SWOT analysis was completed to determine the organization's ability to implement change (see Appendix C).

First, an identified strength was that leadership and the staff of the facility were committed to the change. Additionally, excellent communication by the staff and resources for the project were available. However, an identified weakness was resistance from patients after hospitalization to follow-up and answer phone calls. A further challenge was scheduling time to educate staff on the interventions and to incorporate them into daily routines. A potential significant weakness could have been the lack of bilingual staff to converse with our Spanish speaking patients, though this did not end up being a problem. This project created the opportunity to reduce readmissions and decrease costs while improving satisfaction and overall care. Factors that could have threatened the interventions would have been staff turnover, poor discharge planning, and non-compliance. The knowledgeable CCC staff managed all threats.

<div align="center">**Project Overview**</div>

The vision, mission and objectives of the evidence-based practice change conveyed its intent and purpose. The mission defined the organizations purpose, while the vision focused on the goals and aspirations of the project. The primary objective of the project was to reduce all-cause 30-day hospital readmissions in medically complex children. It was accomplished through a variety of short-and long-term goals. Unintended consequences and risks were evaluated for the project to promote success and sustainability.

Project Vision and Mission

The vision for this evidence-based project was to reduce the all-cause 30-day hospital readmission rates of medically complex children from 23% to 11%, to meet the national average (J. Mahla, personal communication, January 31, 2020). The mission of this project was to implement a multifaceted discharge bundle within the CCC. It was anticipated that a decrease in hospital readmissions would result in improved patient quality of care and outcomes. The project's vision and mission were congruent with those of the hospital to "improve the health of all we serve by providing high quality, compassionate care" (BayCare, n.d.-b). The objectives of the project are discussed in more detail below.

Objectives

The objective of this project was to reduce the all-cause 30-day hospital readmission rates in medically complex children. In 2019, the 30-day readmission rate for pediatrics at the Children's Hospital was 10%. The rate for the CCC was 23%, and the objective was to lower this number toward the national average, which is 11% (J. Mahla, personal communication, January 31, 2020). Short- and long-term goals are discussed in more depth below.

Short-Term Goals

There were two short-term goals identified for this project. The first was to collaborate with all stakeholders prior to the implementation of the discharge bundle intervention. The second short-term goal was to educate and train all CCC staff on the elements of the discharge bundle within the first two weeks of the project. These goals were met as planned and the team was able to reiterate and demonstrate all aspects of the discharge bundle. A post-education confidence test was given to staff to evaluate whether the education was effective. Additionally,

the team was trained for and able to use the RED toolkit for post discharge telephone calls to aid

effective communication with families within the project's eight weeks (AHRQ, 2013).

Long-Term Goals

The long-term goal of this evidence-based change project was to reduce the CCC all-

cause 30-day hospital readmission rates in medically complex children from the current rate of

23% to 11%, the current national standard identified by the Children's Hospital Association (J.

Mahla, personal communication, January 31, 2020). Another long-term goal was for clinic staff

to continue annual education related to the discharge bundle to sustain the change. Once the

project was completed, a long-term goal would be to implement the bundle across the

organization to promote a facility-wide quality change and reduce hospital readmissions in

pediatric patients.

Unintended Consequences and Risks

While this evidence-based project was intended to benefit the organization, operations

were still vulnerable to minimal risks and had to be evaluated. Some barriers and risks associated

with this evidence-based project included resistance to change from staff and patients, ineffective

communication between staff and patients, challenges in scheduling follow-up appointments,

problems with post-discharge phone calls, and ineffective interprofessional collaboration among

specialists. Recognizing these risks early provided the opportunity to develop a staff

communication system that gave frequent project updates (Kogon et al., 2015). Another strategy

to mitigate miscommunication was to inform all patients who attended an appointment at the

CCC within the allotted time frame of the discharge bundle and associated expectations.

Ultimately, being proactive with staff and patients helped to minimize the risk associated with

the project.

Furthermore, some unintended consequences related to this project could have been decreased ED utilization, increased primary care utilization, and increased patient and family satisfaction. While most unintended consequences could be viewed as unfavorable, these were positive consequences to be considered.

Project Plan

Lewin's Change Model guided the planning for this evidence-based change project. It was chosen because it is a logical model to promote successful change within organizations (Batras et al., 2016). Additionally, the PDSA model was used successfully in a QI initiative with similar interventions that reduced pediatric readmissions using a discharge bundle combined with teach-back methodology, which indicated using change models such as Lewin's and the PDSA model could effectively promote practice change (Shermont et al., 2016). This project plan included the steps of the change model and the sequencing of steps designed to implement change. The model also allowed the project manager and stakeholders to identify barriers and facilitators to the project. The project's schedule, needed resources, and budget were considered and reported. Discharge intervention bundle steps will be systematically described using the PDSA model. Lastly, the role of the project manager, leadership skills, and interprofessional collaboration were essential to the success of the change project.

Lewin's Change Model

Lewin's Change Theory was used for this project, since it has been proven to be successful in guiding organizational change (Batras et al., 2016). Lewin's model included three steps: unfreezing, moving, and refreezing (Hussain et al., 2018). The following section explains how each step was used to promote the implementation of the discharge intervention bundle.

Unfreezing

The initial "unfreezing" stage consists of identifying of the problem and weighing the

benefits of the change against the risks of the process (Batras et al., 2016). In this stage, all key

stakeholders in the implementation were identified. Nurses, administrators, a unit secretary, and

the care coordinators were identified. Baseline data from the practice were used to demonstrate

the need for change. Nurses led the change initiative while support was obtained by getting buy-

in from other stakeholders with open communication to reinforce the ability and need for change

(Hussain et al., 2018).

Moving

The second step of Lewin's model is the "moving" stage (Hussain et al., 2018). This is

when interventions take place and the change process takes hold. Once the benefits of the project

are realized and staff can support the change, the "moving" stage initiates. In this step, staff

education and implementation workflow of the project occurred within the allotted timeline. This

allowed the organization to implement the change, measure results, and evaluate progress.

Ongoing data collection supported making necessary improvements along the way (Batras et al.,

2016). Throughout the "moving" stage, staff were updated on a weekly basis on the progress of

the evidence-based project.

Refreezing

The last step of the change model is the "refreezing" stage which occurs after the

intervention bundle has transformed the organization in the areas where it was implemented to

sustain the change (Batras et al., 2016). To effectively support the practice change, it must

become part of the routine of the facility and weaved into the daily operations. Furthermore,

continuing education will occur annually to ensure continued improvement.

Intervention

The hospital leadership and CCC had determined reducing readmission to be a priority for change within the organization. The PDSA model was used to guide the implementation of the associated evidence-based project (Sylvia & Terhaar, 2018).

The "plan" phase began with creating an interdisciplinary team. Members consisted of a physician, nurse practitioner, unit secretary, care coordinator and nurses. Additionally, a project charter was created to explain the project plan and establish each team members role and responsibility within the project (Kogon et al., 2015). The establishment of a team was imperative since interprofessional collaboration is a large part of successful evidence-based change within organizations (Greene et al., 2019). Once the team was assembled, a deep dive assessment was conducted to establish the urgency and need for implementing the discharge bundle to reduce readmissions in medically complex patients. The deep dive methodology enabled the team to engross themselves in the project, understand the problem and gain insight into the solution of a new discharge intervention bundle process (Horton-Jones et al., 2019). Baseline practice data as well as organizational and national benchmarks were used to demonstrate the problem.

The discharge intervention bundle of early outpatient or virtual follow-up, post discharge telephone call, medication reconciliation, and education with teach-back was shared with stakeholders to create interest and enthusiasm about improving their current practices while reducing readmissions (Coller et al., 2018; Kamermayer et al., 2017; Shermont et al., 2016; Stephens et al., 2017; Zhu et al., 2015). The vision was shared in the first weekly huddle and a fishbone diagram was posted in the employee office to get input from staff and increase

involvement in the project. Furthermore, weekly huddles and emails were used for ongoing

communication with the team throughout the project.

The evidence-based project began with two training seminars to educate staff about

proposed discharge bundle interventions. Following the "do" phase of the PDSA model, this was

when efforts to carry out the planned changes began (Sylvia & Terhaar, 2018). Clinic staff were

encouraged to participate in educational training, and a conviction and confidence scale was used

pre- and post-education. Staff also participated in a teach-back observation tool for inter-rater

reliability to determine use of teach-back and competency on the discharge bundle interventions

(IHI, 2019).

The steps for implementing the bundle included: (a) the unit secretary entered all

discharged patients into shared drive for the staff to visualize, (b) the unit secretary called the

patients within 24 to 48 hours to schedule a timely outpatient or virtual follow-up within seven

days, (c) the unit secretary flagged discharged patient charts and assigned them to the care

coordinators and nurses on the day of discharge, (d) the care coordinators and nurses updated the

patient charts to reflect the most recent hospitalization diagnoses and medications within 48

hours of discharge, and (e) the lead clinic nurse of the day called patients 48 to 72 hours after

discharge using the AHRQ RED toolkit post discharge follow-up phone call script (2013) to

provide education with teach-back, do medication reconciliation, answer all questions regarding

hospitalization, and verify follow-up appointments.

Once the interventions were complete, the "study" step of the PDSA was done. The

project manager brought staff involved in the project together to understand the results of the

project and to determine if the objective of reducing 30-day readmissions was met (Sylvia &

Terhaar, 2018). Post-intervention data were collected and analyzed. Summative and formative

evaluations were conducted and are described in more detail in the "Project Evaluation and Results" sections.

The final step of the PDSA cycle was the "act" phase in which the data were analyzed to determine whether the primary objective was met to reduce 30-day all-cause readmissions in the medically complex pediatric patients, and if the project had a positive impact on the organization to support sustainability (Sylvia & Terhaar, 2018).

Barriers and Facilitators

Barriers and facilitators were essential in considering whether it was worth trying to implement a practice change within an organization. Facilitators of the project were those working to move the project forward, such as the DNP student, clinic staff, and nurses. Organization and administration support were important facilitators of the project's mission, being that they worked to ensure staff participation and assist with education. One possible barrier to the project was patient non-compliance. To anticipate barriers, staff was involved early with the project to address any obstacles and ensure necessary training, staffing and comfort with the project.

Project Schedule

The University of St. Augustine for Health Sciences EPRC approved of the project before efforts to begin commenced. Once this was completed, the hospital required Institutional Review Board approval. Initial steps included proposals to the EPRC and IRB for approval. Once both approvals were received, the interprofessional team was developed, and project details and education were prepared. All baseline data was collected, and education training on the discharge bundle was completed. Staff knowledge was tested using a post-education conviction and a

confidence scale. Once implementation of the eight-week project began, data was collected,

analyzed, and compared to baseline data. Please see Appendix D for a detailed project timeline.

Resources and Budget

The interprofessional team that supported and helped carry out the interventions were a

key resource for this project. Another resource was a space for education training provided by

the facility. Lastly, the RED toolkit was utilized during post discharge telephone calls for

uniformity (AHRQ, 2013). Funding and budget for the project, although minimal, were

presented to hospital administration for approval. The benefits of reducing hospital readmissions

for medically complex pediatric patients were disclosed.

There were costs associated with training staff involved in the project.

These consisted of two one-hour trainings for (a) three staff nurses and one nurse practitioner

(average wage of $30 an hour), (b) two care coordinators (average wage of $26 an hour), (c) one-

unit secretary (average wage of $19 an hour), and (d) the medical director (average wage of $100

an hour) for a total of $582.00. There were additional costs of $300 for educational materials for

staff and flyers for the clinic explaining the new discharge bundle intervention. There were also

indirect costs to the facility of approximately $125. Please see Table 1 for a full breakdown.

Project Management Leadership

Strong leadership skills are essential in an organization when beginning a change as the

project manager. According to Strand et al., (2016), one possibility for managing and mentorship

is forming a partnership with team members to set clear goals for change projects and to agree on

objectives. Leaders are more successful when they promote mentorship and coaching for team

members by setting expectations, developing effective communication, building relationships,

and setting timelines to support the change (Rihal, 2017).

The project manager provided coaching by supplying tools to guide team members through the steps of change processes, progress tracking and goals. Adding these mentoring and coaching strategies contributed to successful leadership and organizational success when implementing change (Strand et al., 2016).

Project Evaluation Results

The purpose of a project plan evaluation is to measure success while also identifying any problems (Kogan et al., 2015). During the process of evaluation for this evidence-based project, a detailed exploration of the project's outcomes, impacts and goals were completed. The evaluation was completed to determine whether the implementation of a discharge intervention bundle reduced 30-day hospital readmissions within an eight-week timeframe. The selection of participants is discussed in more detail below, along with the data, reliability, measures, and data collection tools. Formative evaluations were completed throughout the project and summative evaluations were conducted at project completion.

Selection of Participants

Participants were selected for the project based on the inclusion criteria. Participants included CCC patients from 0-17 years-old, who were discharged from the hospital within the project timeframe. Patients of the CCC had two or more chronic pre-existing conditions. The exclusion criteria eliminated patients who were admitted to an outside facility since they could not be easily tracked. No identifiable patient information was collected to protect human rights and healthcare privacy.

Data Details

The plan evaluated the measures associated with the project to answer the PICOT. The data collected included outcome measures: (a) all-cause 30-day hospital readmissions, (b) post

discharge telephone calls, (c) post discharge follow-up, and (d) medication reconciliation with education and teach back. Other useful data in analyzing project success included staff, patient and family satisfaction. All data measures are described in the "Categories of Measures" section.

Validity, Reliability, and Data Collection

Validity and reliability were essential in project evaluation (Sylvia & Terhaar, 2018). For project evaluation, validity described whether what was intended to be measured was measured. Reliability was used to determine the competence of data collection mechanisms to measure what was planned (Sylvia & Terhaar, 2018). Then, quantitative data collection determined the outcomes related to the variables (Sylvia and Terhaar, 2018). Cerner is a reliable and valid electronic medical record and was used for collection of discharge and admission data (CMS, 2020).

Microsoft Excel was used to organize and analyze the pre- and post-intervention data. The data were entered and double-checked for accuracy. Pre-intervention data were collected using CCC patients discharged from the hospital the eight weeks before intervention implementation. Post-intervention data were collected by using the number of CCC patients who were readmitted to the hospital for any cause within 30-days of discharge throughout the project timeline. The pre-intervention data was then compared to post-intervention data for analysis to determine if objectives were met. To do so, descriptive statistics were used, which were simple summaries of the samples and measures (Sylvia & Terhaar, 2018). Secondary outcome data were collected at 30 and 60 days from the check sheet. The process measure data of patient and staff satisfaction with the bundle were collected by the DNP student at the end of the project. All data were then entered into Microsoft Excel for analysis.

Data Analysis

  The project manager consulted with a statistician to analyze and interpret the data related to the evidence-based project. A combination of tests were used to analyze collected data. Data was entered into Excel initially, double checked, and then entered into SPSS program before computing outcomes using a standard 0.05 p-value. An unpaired t-test was used to compare pre- and post-implementation of 30-day readmissions. As seen in Table 2, there was a statistically significant difference between the score of pre (M=24.81, SD=1.65) and post (M=14.63, SD=1.09) results. The t-value was 35.709, which was significant at alpha= 0.05, resulting in statistically significant differences between the participants' results of pre- and post-implementation. This proved that the intervention was effective to decrease readmissions in medically complex children.

  A paired t-test was used to compare pre- and post-implementation in staff competency on the discharge bundle. As seen in Table 3, there was a statistically significant difference between the scores of pre- (M=30.38, SD=1.06) and post (M=35.25, SD=0.46) results. The t-value was 12.246, which was significant at alpha= 0.05, resulting in a statistically significant differences between the participants' results pre- and post-education. This proved that the intervention bundle training to the staff was effective and they were competent in the discharge bundle.

  Statistical significance is often determined by assigning a p-value, which is common to determine significant differences between groupings in evidence-based projects (Sylvia & Terhaar, 2018). For this project p -value was <0.05 making the project statistically significant. However, for evidence-based change projects it is imperative to show clinical significance, which will be discussed in more detail below.

Missing Data and Storage

The initial steps of discharge bundle interventions were well documented and tracked throughout the project's timeline. All measures and outcomes were rolled into documented statistics until the end of the project. Unintended and intended consequences as well as details from any missing data were disclosed in the results. Missing data can occur due to no value entered for specific variables (Sylvia & Terhaar, 2018). This can happen from poor compliance or absences of the staff. Missing data can significantly affect the conclusion drawn from the data. The team was well educated on the project and the importance of accurately documenting data in the electronic health record to limit missing data.

Only the implementation team had access to the secure CCC shared drive and check sheet. There were safeguards for all information stored on the student's computer, and everything was password protected. All data on the check sheet data collection tool were numerically coded without identifiers.

Human Rights Protection

Human rights protection was a priority and was consistently monitored throughout the project. Initially, the project was presented to the University EPRC committee and facility IRB for approval. The human subjects' names and personal information were not included in any documentation. There was minimal risk to the subjects of this project. All human rights and ethical practices were reviewed with all stakeholders to ensure compliance and maintain privacy.

Formative/ Summative Evaluation

Evaluations are conducted on projects to assess the effectiveness and efficiency of project management and success (Nelson & Staggers, 2018). Formative evaluations were used in the project's implementation phase as feedback for continuous improvement and to identify whether

changes were needed. Additionally, staff were involved in formative evaluations to assess the

need for improvement, and to further ensure there were no gaps in communication. Meetings

took place weekly during morning huddles. The team was able to address problems they had, and

their suggestions to improve the project were considered. These meetings facilitated finding any

weaknesses associated with the project and developing solutions to manage them. It was noted

early on that the staff were having trouble getting patients to make their follow-up appointments,

so a suggestion was made to send email reminders. When families received email reminders, the

team noticed that they were more likely to call the clinic and make their appointments.

Nelson and Staggers (2018) suggested the use of summative evaluations to assess the

outcomes and impact of a project. Summative evaluations were done within a week after the

project was completed. The pre- and post-intervention data was collected, compared and

evaluated to assess the discharge intervention bundle's effectiveness on 30-day hospital

readmissions in medically complex children. Furthermore, summative evaluations revealed the

intervention of implementing a discharge bundle considerably reduced the percentage of all-

cause, 30-day hospital readmissions in medically complex children.

Categories of Measures

Measurement, according to the IHI (2020), was critical in implementing change and

leading improvement. The purpose of establishing measures was to bring new knowledge into

current practice to further improve the facility's quality of healthcare. For this project, the

independent variable was the implementation of a discharge intervention bundle. According to

the IHI (2020) it was recommended that all evidence-based projects use a balanced set of

measures for improvement that include; outcome measures, process measures, and balancing

measures. Financial measures were also considered.

Outcome Measures

The IHI (2020) described outcome measures as the results of a process and their comparison with the intended results. This project's primary outcome was to reduce the 30-day all-cause hospital readmissions rate closer to the national average of 11% for CCC patients. Readmission rates were ratio data and were collected at baseline and every 30 days throughout the project. This data was established pre- and post-project intervention through chart review audits of all clinic patients discharged from the hospital within the project's timeline. The student had access to the CCC shared drive that holds this information for the organization. Information on readmissions at surrounding hospitals was not obtained. The eight-week baseline pre intervention data showed a 24% readmission rate, while the post implementation eight-week data showed a 14.5% readmission rate. After analyzing the data there was a 10% difference from pre- and post-implementation data. This reduction in readmissions indicated an improvement in hospital readmissions using the evidence-based discharge bundle.

Secondary outcome measures included the percentage of patients who completed their post discharge outpatient or virtual follow-up appointments within seven days. Out of 41 discharged patients, 95% of them attended their follow-up within seven days. There were a few patients who did not show up to their scheduled appointments. The percentage of patients who received post discharge phone calls with education within 48-72 hours was 98%. The percentage of patients who received the teach-back method and medication reconciliation by the clinic nurses during the post discharge phone call was also 98%. Lastly, the percentage of patients whose charts were updated by the care coordinator prior to the post discharge follow-up was 100%. Data was shared with the team monthly throughout the project timeline.

I collected the readmission data by doing chart audits on discharged patients and filling

out a check sheet. The ASQ (n.d.) suggested several valid and reliable tools for data collection

and evaluation. One tool used was the check sheet, a structured form that could be adapted for a

wide variety of data collection. It should be used when data can be observed and collected by the

same person in the same location repeatedly and adapted for a wide variety of purposes (ASQ,

n.d.). The document was a useful and reliable quality management tool widely used in healthcare

to improve quality and care (Niñerola et al., 2020). The check sheet included the bundle

interventions of post discharge phone calls, post discharge outpatient or virtual follow-up,

education with teach-back, and medication reconciliation. The check sheet that was used for the

project can be seen in Appendix E.

Process Measures

Process measures are the steps within the project that determine whether the project was

performing as intended for practice improvement (IHI, 2020). Project process measures included

the percent of the staff that received education on the discharge intervention bundle, and the

percent of staff competent in the interventions using a pre- and post-evaluation tool. The process

measure of the percentage of staff that received education on the discharge intervention bundle

was determined by the total number of staff divided by the number of staff who signed in as

having attended the training seminars. It was found that the percentage of staff that participated

in the training was 100%.

The second process measure of the percent of staff competent in implementing the

discharge bundle was measured by completing a conviction and confidence scale before and

after the training seminar (IHI, 2019). The percentage of staff that showed confidence after

training in being able to utilize teach-back within the bundle was 100%. A teach-back

observation tool was also used for inter-rater reliability. Peers in the clinic were able to audit each other using the observation tool with patients.

Balancing Measures

Balancing measures often assessed whether improving one part of a system would cause new problems in other parts of the plan (IHI, 2020). The balancing measure for staff satisfaction with the new discharge bundle intervention was examined because it could affect staff satisfaction with their jobs. The project manager monitored staff satisfaction through individual conversations and observation and spoke to each team member weekly throughout the project's timeline to ensure staff satisfaction of the implementation process. Satisfaction was measured using a yes/no survey after the project was complete, and it showed 100% of staff reported satisfaction.

The balancing measure for patient satisfaction with the new discharge bundle was also examined as this intervention bundle affects their care. Family and patient satisfaction was measured using a yes/no survey given at their follow-up appointment and were deposited anonymously after patients were seen for their follow-up visits. They were instructed to place the survey in a patient survey box at the front of the office to be collected throughout the project. A response rate of 71% (29 of the 41 surveys were returned) reaped 100% satisfaction of the discharge intervention bundle.

Financial Measures

Financial measures were used to look at the projected direct and indirect costs associated with the project. This required creating a budget that was approved by the organization before implementation. Financial measures included the cost of training for the intervention bundle and indirect costs to the facility. The personnel involved in the project were RNs, a nurse

practitioner, a care coordinator, a unit secretary and the CCC physician. The project did not

exceed the cost projections. The estimated cost per medically complex pediatric readmission was

$4,878 dollars for one day; $2,053 for ER visit with admission, and $2,825 for pediatric ICU stay

(BayCare, n.d.-a). While this project did not include length of stay in its outcome measures, upon

review it appeared the average length of stay was three days. The realized savings to the

organization in the eight-week project timeframe was approximately $63,168. The projected

savings over a one-year time frame was $379,008 for an average length of stay of three days.

The potential savings could be much greater if emergency room visits and length of stay are

considered in the future of this evidence-based practice change.

Impact

This evidence-based practice change project's primary outcome was the reduction of all-

cause 30-day hospital readmissions in medically complex children. The project outcome was

comparable to outcomes identified in the literature that demonstrated decreased hospital

readmissions using discharge intervention bundles (Coller et al., 2018; Kamermayer et al., 2017;

Stephens et al., 2017). The outcome of decreasing 30-day readmissions in medically complex

children pre- and post-implementation data showed a decrease from 24% to 14.5%. While the

sample size was not large, a decrease in overall readmissions was identified. Every prevented

readmission was clinically meaningful as it decreased costs to the facility and reduced clinical,

social and financial burdens for the patient and family (Coller et al., 2017). The evidence-based

practice change project was implemented consistently as planned. Secondary outcome measures

were the discharge bundle interventions of follow-up within seven days, phone calls within 48 to

72 hours, medication reconciliation with teach-back, and chart updates documented in the

electronic medical record. These interventions were crucial to the project's success and the

results from the process measures of patient and staff satisfaction were overwhelmingly positive

for the discharge intervention bundle and vital to the organization's potential sustainability.

A limitation of the project was difficulty in contacting patients early on. Some patients

did not answer phone calls, which made it difficult to schedule outpatient follow-up

appointments. Once email reminders were sent out, families acknowledged the clinic's attempts

and called for their follow-up appointments. Another limitation to the project included patients

who did not show up to their follow-up appointments. Follow-up appointments were a key

intervention within the bundle and helped ensure sufficient education and teach-back to the

family to reduce readmissions. Lastly, the global COVID-19 pandemic limited the project's

timeline and the potential to gain a more robust patient sample size and demonstrate the

significance of the project's outcome.

Suggestions for the next steps are implanting this evidence-based practice change into

new employee orientation for the clinic and into annual training programs for current staff. To

ensure ongoing evaluation of effectiveness, hospital readmissions should be monitored monthly

and analyzed at the end of each year. Implications for the future include a recommendation for

further evidence-based research to determine any continuing education and interventions related

to discharge intervention bundles to reduce 30-day readmission rates. The practice change

project altered the process of discharges for medically complex children in the CCC. There is a

continued opportunity to provide patients with improved transitions and quality of care. In all, to

answer the PICOT, the takeaway from this evidence-based project is that the utilization of a

discharge intervention bundle can reduce 30-day all-cause readmissions in medically complex

children.

Plans for Dissemination

At the end of the project, an analysis of the results were completed before dissemination. The AHRQ (2016) described the purpose of dissemination is to raise awareness, inform and educate the professional community, engage, get feedback from the community, and promote the results. A Microsoft PowerPoint presentation was created for the facility to share the project's findings. Key stakeholders including pediatric hospital leadership, clinical leadership, director of patient care, director of outpatient specialty clinics, medical director of children's hospital, quality, and risk management, CCC personnel, and the project team will be included in the original presentation. It is imperative to have key stakeholders present to obtain the buy-in of project success. This buy-in will promote project sustainability and implementation in other areas of the organization. The project manager is scheduled to disseminate the project findings at the case management, pediatric hospitalist and CCC staff meetings. Appropriate hospital leadership and key stakeholders have been invited.

With approval, local presentations will be accomplished through individual unit staff meetings while more extensive presentations can be given at grand rounds or town hall meetings. Poster presentations can be used for local outreach to community practices with data to support the practice change. Additionally, poster presentations can be planned for local and national pediatric medicine conferences, such as the National Association for Pediatric Nurse Practitioners Conference. The publication of project findings will be another way to disseminate the results. Before submission of the publication, the proposal will need to be prepared according to journal specifications and be peer-reviewed. Submission to a journal that would best fit the project's setting, population and findings will increase the chance of acceptance. Therefore, the *Journal of Pediatric Healthcare* or the *Complex Care Journal* would be an ideal choice for

publication due to its focus on evidence-based practices to improve patient care. Publishing in

this journal would provide a wide range of dissemination to support the use of a discharge

intervention bundle in medically complex children to reduce all-cause 30-day hospital

readmissions. The final dissemination will be to upload the completed project to the institutional

repository SOAR to publicly showcase the results of this evidence-based change project.

Conclusion

Children with medical complexity often have multiple medical problems which require

specialists, equipment, and high acuity of care, leading to an increased rate of hospitalization and

readmissions (Stephens et al., 2017). Literature supports the implementation of an evidence-

based discharge intervention bundle to reduce readmission rates that includes post discharge

telephone calls, post discharge outpatient follow-up, medication reconciliation, and education

with the teach-back method (Coller et al., 2018; Kamermayer et al., 2017; Shermont et al., 2016;

Stephens et al., 2017; Zhu et al., 2015). Implementing consistent discharge standards in

medically complex children will guide medical staff, improve patient outcomes, save costs for

the organization, and reduce 30-day all-cause hospital readmission rates.

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Table 1

Budget

Expenses	Cost	Miscellaneous
Educational materials/resources	$150.00	Discharge bundle brochures
Staff training	$582.00	Medical director, staff nurses, secretary, and care coordination training
Printing /handouts	$150.00	Posters, flyers, care plans
Indirect expenses	$125.00	Electricity, office expenses
Projected Revenue	$0.00	Potential cost savings to hospital due to reduced readmissions averaging between $12,500-19,000 savings per patient readmission (Bailey et al., 2019).

Table 2

Statistical Analysis Pre- and Post- implementation unpaired t-test

Variables	N	Readmission rate	Mean	SD	Df	t-value	p-value
Pre-Implementation	37	24%	24. 81	1.65	76	35.709	.000
Post Implementation	41	15%	14.63	1.09			

Significant at the 0.05 level (2-tailed).

Table 3

Statistical Analysis Pre- and Post-staff competent on the discharge bundle, paired T-test

Variables	N	Mean	SD	Df	t-value	p-value
Pre-Implementation	8	30.38	1.06	7	12.246	.000
Post Implementation	8	35.25	0.46			

Significant at the 0.05 level (2-tailed)

Appendix A

Summary of Primary Research Evidence

Citation	Question/ Hypothesis	Sample Size	Design/Level/Quality Grade	Intervention & Comparison Definitions	Outcome Definition/Data Analysis	Results-Key Findings
Auger, K. A., Shah, S. S., Tubbs-Cooley, H. L. (2018). Effects of a 1-time nurse-led telephone call after pediatric discharge: The H2O II randomized clinical trial. *JAMA Pediatrics172(9),*https://doi.org/10.1001/jamapediatrics.2018.1482	Does a single nurse-led telephone call after pediatric discharge decrease the 30-day reutilization rate for urgent care services and enhanced overall transition success?	966 children under18 years of age admitted to general medicine services at a free-standing children's hospital; Cincinnati Children's Hospital .	Randomized Clinical Trial Level 1 Quality Grade B	The intervention is a post discharge phone call within 4 days of discharge. Phone calls are used to assess patients and, when needed, reassure the parent of the child's recovery. The calls reinforced teaching instructions and provided families with a list of red flags of the child's diagnosis that, when present, would indicate the need to seek further medical care.	The primary outcome was unplanned 30-day use of acute health care services, defined as a composite measure that included unplanned readmissions, ED visits, and urgent care visits (reutilization rate). Data analysis was done using SAS version 9.4 and Stata software. Reutilization rates were analyzed using logistic regression.	In the RCT of children admitted to pediatric hospital , a 1-time nurse-led phone call after discharge did not affect reutilization rates for health care. The high adherence rate in the intervention group indicates excellent acceptability of a post discharge telephone call from a nurse.
Brittan, M. S., Sills, M. R., Fox, D., Campagna, E. J., Shmueli, D., Feinstein, J. A., & Kempe, A. (2015). Outpatient follow-up visits and readmission in medically complex children	What is the association between post discharge outpatient	2415 children under 18 years of age with complex,	Retrospective Cohort analysis Level 3 Quality Grade B	Using multivariable logistic regression , the association between early post	Outcome definition is outpatient hospital follow-up within 3 days of	Children with an outpatient visit between 4-29 days after discharge had

enrolled in Medicaid. *The Journal of Pediatrics, 166*(4), 998–1005. https://doi.org/10.1016/j.jpeds.2014.12.022	follow-up and 30-day readmissions in Medicaid enrolled children with complex, chronic conditions?	chronic conditions		discharge outpatient visits <3 days and readmission was examined as well as outpatient follow-up 4-29 days after discharge. Data was obtained on children 6 months to 18 years via Medicaid fee for service, and primary case management clients to reliably capture data.	discharge to reduce all cause readmissions, as well as outpatient hospital follow-up between 4 and 29 days after discharge.

Data analysis was done using SAS version 9.4 using descriptive statistics reported by readmission status for all covariates and for presence of outpatient visit post discharge. | lower odds of readmission than those without visits. Conversely children with at least 1 outpatient visit within 3 days of discharge had greater odds of readmission. Overall, in medically complex children , there is a positive association between early post discharge outpatient follow-up and readmission. Future research is needed in this population and post discharge follow-up. |
| Christensen, E. W., & Payne, N. R. (2016). Pediatric inpatient readmissions in an accountable care organization. *The Journal of Pediatrics*, 170, 113–119. https://doi.org/10.1016/j.jpeds.2015.11.022 | What is the association between the length of consistent primary care as part of an accountable care organization and population level and same | 28,794 unique pediatric patients attributed to a single children's hospital between September 2013 and May 2015. | Retrospective Cohort analysis of Medicaid claims data Level 3 Quality Grade B | The intervention in this study is being in a healthcare home or receiving the plurality of their primary care at the facility where the study took place. Inference was used that this represents | Primary outcome is 30- day hospital readmissions. The impact of attribution length (consistent primary care) on readmission cost and days. Data analysis was done using Stata 14.0 for all | Consistent primary care may be able to reduce 30-day pediatric Medicaid readmissions. Readmissions decreased from 8.9% to 6.2% in the intervention period and |

	hospital readmissions?			consistent primary care as well as care management for medically complex patients.	calculations. Multivariate logistic regression to estimate relationships between attribution length. and readmissions.	occurred primarily in readmissions to hospitals other than the discharging hospital. There was no decrease in the rate of same-hospital readmissions.
Coller, R. J., Klitzner, T. S., Lerner, C. F., Nelson, B. B., Thompson, L. R., Zhao, Q., Saenz, A. A, Ia, S., Flores-Vazquez, J., & Chung, P. J. (2018). Complex care hospital use and post discharge coaching: A randomized controlled trial. *Pediatrics*, *142*(2), 1–9. https://doi.org/10.1542/peds.2017-4278	What is the effect of a caregiver coaching intervention, plans for action and care transitions on hospital use among children with medical complexity within a complex care medical home at an urban tertiary medical center?	147 children with medical complexity are given the Plan for Action and Care Transitions coaching (PACT) (n=77) Usual care (n=70)	Randomized Controlled Trial Level 1 Quality Grade B	PACT-customized written plans used to identify and address patient- and family-centered triggers of hospital use (action plans) and care transition coaching around hospital discharge. Actions plans were developed at scheduled outpatient visits and the teach back method was used once presented to patient and family. Care transition involves medication management, patient centered record owned by patient, phone calls after discharge, timely	Study outcomes were the number of hospitalizations and readmissions identified through administrative records. Data analysis was done using Stata version 14.0. Differences in baseline groups were assessed using t-tests or Wilcoxon rank tests for continuous variables, and Chi Squared or Fishers Exact for categorical variables. Study was approved by the UCLA IRB.	Children with medical complexity who received the health coaching PACT intervention from Dec 2014-Sept 2016 showed lower hospitalizations, readmissions, and charges. The results of the log rank test (P=.04). Future research should confirm findings in a larger population with medical complexity.

				follow-up with primary care, a list of "red flags" and instructions how to respond to them.		
Finlayson, K., Chang, A. M., Courtney, M. D., Edwards, H. E., Parker, A. W., Hamilton, K., Pham, T. D. X., & O'Brien, J. (2018). Transitional care interventions reduce unplanned hospital readmissions in high-risk older adults. *BMC Health Services Research, 18*(1), 956. https://doi.org/10.1186/s12913-018-3771-9	What is the comparative effectiveness of transitional care interventions on reducing unplanned hospital readmissions and health service use, functional ability, psychosocial well-being, and cost-effectiveness of care?	All patients were admitted to a medical ward in two tertiary hospitals. They were over age 65 and had risk factors for readmission. More women than men participated 162 women and 60 men.	Randomized Controlled Trial Level 1 Quality A	After consent was obtained pts were randomized to one of four groups with interventions of usual care, and exercise program, nurse home visits and telephone follow-ups, or exercise and telephone follow-up. The control group received routine hospital and follow-up care by the health services.	The primary outcome was unplanned 28-day hospital readmission. Data analysis was done using descriptive statistics for all variables. All data analyses were conducted based on intention to treat. Chi Square, ANPVA, and Kruskal-Wallis tests were used for bivariate analysis between groups.	In the 28 days following discharge the control group had a 25% readmission rate. The exercise group had a 14% readmission rate, nurse home visit and telephone follow-up had a 10% readmission rate, and the exercise and nurse home visit and telephone follow-up group had an 8% readmission rate. These results suggest that multifaceted transitional interventions can significantly reduce hospital readmission within 28-days.

Flippo, R., NeSmith, E., Stark, N., Joshua, T., & Hoehn, M. (2015). Reduction of 30-day preventable pediatric readmission rates with post discharge phone calls utilizing a patient- and family-centered care approach. *Journal of Pediatric Health Care, 29*(6), 492–500. https://doi.org/10.1016/j.pedhc.2015.01.010	What is the effectiveness of post-discharge phone calls on 30-day preventable readmission rates within the pediatric hospital setting?	30 patients were selected before and after the intervention, and medical records were reviewed from a 154-bed pediatric hospital.	Exploratory design with record review Level-3 Quality Grade- C	The intervention is a post discharge phone call completed within 48-72 hours after discharge by trained unit nursing staff , comparted with regular discharge care.	The primary outcome is preventable pediatric readmissions within 30 days to the hospital. Data analysis was not mentioned in this study.	The results showed a 20% decrease in readmissions in the study population; however, the sample was too small to prove statistical significance. The authors of the study recommend future research be done with larger sample sizes to prove significance.
Hoyer, E. H., Brotman, D. J., Apfel, A., Leung, C., Boonyasai, R. T., Richardson, M., Lepley, D., & Deutschendorf, A. (2018). Improving Outcomes After Hospitalization: A Prospective Observational Multicenter Evaluation of Care Coordination Strategies for Reducing 30-Day Readmissions to Maryland Hospitals. *Journal of General Internal Medicine*, 5, 621. https://doi.org/10.1007/s11606-017-4218-4	What is the effects of two care coordination interventions on 30-day readmission rates?	A total of 25,628 patients hospitalized in medicine, neurosciences , or surgical sciences unit who were discharged home and deemed to be high risk.	Prospective multicenter observational study Level-2 Quality Grade A	The intervention is done on patients discharged home and deemed to be at high risk for readmission were assigned a nurse transition guide for 30 days post discharge. This includes a nurse to monitor, communicate and visit the patient up to 30 days post discharge. All other patients were assigned the patient access line which provided a post discharge	The primary outcome is unplanned rehospitalization to any acute-care hospital in Maryland within 30 days of discharge. Data analysis was done using R 3.1. Descriptive statistics were calculated for patient characteristics.	The results showed that assigning high risk patients to intensive care transition interventions can reduce 30-day readmissions to the hospital. The caveat to this is the patients who were deemed not at risk were not like to receive care coordination interventions.

				phone call from a registered nurse within 48 hours of discharge using a structured survey tool.		
Oscalices, M. I. L., Okuno, M. F. P., Lopes, M. C. B. T., Campanharo, C. R. V., & Batista, R. E. A. (2019). Discharge guidance and telephone follow-up in the therapeutic adherence of heart failure: randomized clinical trial. *Revista Latino-Americana De Enfermagem*, 27, e3159. https://doi.org/10.1590/1518-8345.2484.3159	What is the effectiveness of the behavioral intervention of discharge guidance and telephone follow-up in the in the therapeutic adherence, and re-admission in heart failure patients?	201 patients diagnosed with heart failure admitted to the hospital. There were 100 patients in the intervention group and 101 patients in the control group.	Randomized Clinical Trial Level-1 Quality Grade B	The intervention encompassed specific and individualized discharge guidance for patients with heart failure on the verge of discharge. The control group received an explanatory brochure with common discharge guidelines	The primary outcome is to improve medication adherence and lower readmission rates in patients with heart failure. Data analysis was done using descriptive statistics, but the program used was not listed.	The results showed an increase in drug adherence in the intervention group. There was also a lower amount of 90-day re-hospitalization in the intervention group. The research concluded that the dual educational intervention with telephone follow-up in patients with heart failure is effective.

Phatak, A., Prusi, R., Ward, B., Hansen, L. O., Williams, M. V., Vetter, E., Chapman, N., & Postelnick, M. (2016). Impact of pharmacist involvement in the transitional care of high-risk patients through medication reconciliation, medication education, and post discharge call-backs (IPITCH Study). *Journal of Hospital Medicine,* 1, 39. https://doi.org/10.1002/jhm.2493	What is the impact of pharmacist involvement in transitions of care as measured by decreased medication errors, and readmissions?	341 patients were enrolled , 189 in the control and 152 in the study group. All patients admitted to hospitalist-based internal medicine units at Northwestern Memorial Hospital in Chicago, Il.	Prospective, Randomized, Single-period Longitudinal Study Level-1 Quality Grade A	The control group received the usual hospital standard of care while the study group received face to face medication reconciliation, a patient specific pharmaceutical care plan, discharge counseling, and post-discharge phone calls on days 3-14, and 30 to provide education and assess study endpoints.	The primary outcome is hospital readmission within 30 days of discharge, patient knowledge of medication and care, emergency room visits after discharge. Data analysis was done using SAS 9.4 Data were analyzed utilizing Fischer exact, Chi Square, and Student *t* tests.	The results showed that 39% of patients in the control group experience readmission or ED visit within 30 days while 24.8% in the study group. The study demonstrated that pharmacist involvement in hospital discharge transitions of care had positive impact on decreasing inpatient readmissions and ED visits.
Shermont, H., Pignataro, S., Humphrey, K., & Bukoye, B. (2016). Reducing pediatric readmissions: Using a discharge bundle combined with teach-back methodology. *Journal of Nursing Care Quality, 31*(3), 224–232. https://doi.org/10.1097/NCQ.0000000000 0000176	Will implementing a discharge bundle combined with teach back and standardized handoff associated with a reduction in unplanned readmissions within7 and 30 days in an academic,	All hospital inpatients discharged from the medical facility from June 2013-December 2013	A pre- and post-quasi-experimental Quality Improvement Initiative. Level 2 Quality Grade B	A discharge bundle was initiated and including pretested questions for families, structured handoff, teach back methodology training for nurses to use at each discharge, and medication reconciliation.	The outcome definition is the total number of patients readmitted within 7 and 30 days of discharge pre- and post-intervention. Data analysis was completed using SAS version 9.4 using segmented regression analysis of interrupted time series to evaluate	The implementation of a nursing discharge bundle with teach-back methodology and structured handoff communication was effective in reducing unplanned readmission sin pediatric patients. The intervention was associated with a

					the impact of discharge intervention and teach back methodology on readmission rates.	reduction of 8.72% and 10.96% in unplanned 7- and 30-day readmission over 16 months. Standardization of discharge and interventions can be successful in reducing readmissions.
urban, tertiary institution?						
Yiadom, M. Y. A. B., Domenico, H., Byrne, D., Hasselblad, M. M., Gatto, C. L., Kripalani, S., Choma, N., Tucker, S., Wang, L., Bhatia, M. C., Morrison, J., Harrell, F. E., Hartert, T., & Bernard, G. (2018). Randomized controlled pragmatic clinical trial evaluating the effectiveness of a discharge follow-up phone call on 30-day hospital readmissions: balancing pragmatic and explanatory design considerations. *BMJ Open, 8*(2), e019600. https://doi.org/10.1136/bmjopen-2017-019600	What is the effect of a discharge follow-up phone call to reduce 30-day inpatient readmissions?	Target 2234 all hospital inpatients discharged home from a general medicine service.	Single center randomized controlled clinical trial Level 1 Quality Grade In print but likely A when published	Semi structured phone call post discharge by an RN with health coaching training. The first call attempt is within 72 hours of discharge compared with usual care.	Primary endpoint is inpatient readmission within 30 days of hospital discharge censored for death. Data analysis has not been completed yet. All data for this study are either documented by the phone call RN or sourced directly from the EHR data repository. A de-identified version of the study database will be made available to other investigators on request for IRB approved clinical research.	Outcomes not determined as study is not completed for publishing (will update when results available)

Appendix B

Summary of Systematic Reviews

Citation	Quality Grade	Question	Search Strategy	Inclusion/ Exclusion Criteria	Data Extraction and Analysis	Key Findings	Usefulness/Recommendation/ Implications
Almkuist, K. D. (2017). Using teach-back method to prevent 30-day readmissions in patients with heart failure: A systematic review. *MEDSURG Nursing, 26*(5), 309–351. https://www.semanticscholar.org/paper/Using-Teach-Back-Method-to-Prevent-30-Day-in-with-%3A-Lowe/be4131d5d6f333dd98ca2bb86fa189c5de9bb250	Level 2 Quality Grade B	Does teach-back during patient education prevent 30-day readmissions among patients with diagnosed heart failure?	Systematic search using PubMed, CINAHL, and Scopus during the time of 2011-2016. Search terms included teach-back, hospital readmissions, heart failure, and patient education.	The search was limited to include only articles in English that included patients over 18 years of age. Articles were excluded if they did not involve use of teach-back in chronic disease management and its role in the reduction of hospital readmission.	Data was extracted from the articles and focused on data sources, study design, interventions, comparisons, outcomes, and results . The findings were analyzed, and differences were noted. The results were listed in an evidence table which examined five articles. An electronic data collection tool was not used for this study.	All reviewed studies showed positive patient outcomes with teach back method as a tool to use when assessing patient knowledge of a chronic condition. The use of teach-back can prepare patients for self-care once discharged and can improve adherence and understanding of complex disease processes.	The review recommends further large evidence studies be done to confirm teach-back role in readmissions. While some studies showed a reduction in readmissions using teach-back, it should be combined with other initiative to reduce readmissions. It does however have a positive effect on health outcomes, self-care, and increased knowledge.
Branowicki, P. M., Vessey, J. A., Graham, D. A., McCabe, M. A., Clapp, A. L., Blaine, K., & O'Neill, M. R. (2017). Meta-Analysis	Level 1 Quality Grade A	Does Hospital Initiated Post-Discharge Interventio	The electronic healthcare databases Medline, PsycINFO, and CINAHL were	Inclusion: Randomized Control Trials or other intervention research designs comparing results	Using PRISMA criteria, standardized data abstraction from the 20 selected articles occurred	Seven of the twenty articles reviewed reported a statistically significant	HiPDI that include multiple home visits and or follow-up phone calls may have the greatest impact on

of clinical trials that evaluate the effectiveness of hospital-initiated post discharge interventions on hospital readmission. *Journal for Healthcare Quality*, 6, 354. https://doi.org/10.1097/JHQ.0000000000000057	ns (HiPDI) reduce hospital readmissions?	searched by a health care librarian using terms: remote consultation, telephone call, home nursing, home visit, patient discharge, readmission, or transitions.	of interventions initiated by hospital-based personnel to improve the transition from hospital to home. Exclusion: Interventions that were not specific to discharge transition home, insufficient data to conduct meta-analysis, study design or case report only, commentary only, or dissertations.	following a pilot test with five randomly selected studies. Each of the articles were assigned to two reviewers for data extraction. Disagreements were arbitrated with a third reviewer. No assumptions were made and no data for meta-analysis was missing. SAS 9.3 was used for analysis. Meta-analysis of aggregated data across the selected RCTs was conducted. Univariable analysis was pooled to generate an overall odds ratio and corresponding 95% CI of hospital readmission for patient exposed to HIPDI in the intervention groups.	reduction in hospital readmissions in patients exposed to HiPDI. Home visits lowered readmission from 24% in patients with 2 home visits compared to 36% without a visit. Phone calls after discharging lowered readmission from 23% compared to 31%. Discharge Education lowered readmission from 27% compared to 34% with no intervention	hospital readmission. More research should be done to evaluate which hospital staff is best suited to carry out discharge interventions.

Hamline, M. Y., Speier, R. L., Vu, P. D., Tancredi, D., Broman, A. R., Rasmussen, L. N., Tullius, B. P., Shaikh, U., & T. Li, S.-T. (2018). Hospital-to-home interventions, use, and satisfaction: A meta-analysis. *Pediatrics*, *142* (5), 1–49. https://doi.org/10.1542/peds.2018-0442	Level 2 Quality Grade B	Which pediatric hospital discharge interventions affect subsequent healthcare use and poor patient satisfaction?	PRISMA guidelines were followed and electronic databases searched include Ovid, Medline, Embase, Cochrane Database of Systematic Reviews, Cochrane Central Register of Controlled Trials, Joanna Briggs Institute database, Scopus, and CINHAL. The authors reviewed all titles and abstracts published in five pediatric journals within the past five years.	Inclusion: Available in English, focused on children less than eighteen years old or pediatric results reported separately from adult data, not focused on normal healthy newborns, not focused on pregnancy, or not review articles, case studies, or commentaries. Other inclusion criteria were a hospital discharge process intervention, outcomes related to subsequent health care use or patient and family satisfaction.	A modified Cochrane collaboration data collection form for data extraction from two articles to ensure uniformity of the review, then independently extracted data from each article using collection form. Any disagreements were resolved through consensus. Data analysis the relative risk and 95% confidence interval for each study was plotted by using Excel version 16.13.	The systematic review and meta-analysis revealed that the effectiveness of interventions improved parental satisfaction . The meta-analysis revealed that pooling of care coordination interventions and family engagement interventions in chronically ill and neonatal patient populations was associated with a decrease in readmissions.	Bundling of family engagement interventions and care coordination interventions such as early follow-up care, focused discharge planning, inpatient based teach back education, and contingency planning should be incorporated into discharge improvement bundles to aid in reducing readmission. Future large multicenter trials would be helpful for evaluation of discharge interventions and how they affect readmission.
Kamermayer, A. K., Leasure, A. R., & Anderson, L. (2017). The effectiveness of transitions-of-care interventions in reducing hospital readmissions and mortality: A systematic	Level 2 Quality Grade B	What is the effect of select evidence-based transitions of care interventions on	Prisma guidelines formed the framework and Electronic databases Medline, CINHAL, Cochrane	Inclusion: Articles available in English language, research articles with interventions aimed at reducing hospital readmissions,	Reviewers first reviewed and extracted data independently, then a Qualitative appraisal was conducted using the Critical Appraisal Skills	Findings demonstrated that multiple transition of care interventions outcomes varied depending on	Multiple interventions implemented with a team-based approach are likely to reduce readmissions then single interventions.

review. *Dimensions of Critical Care Nursing*, *36*(6), 311–316. https://doi.org/10.1097/ DCC.0000000000000266		reducing 30-day readmission rates, reducing emergency room visits and reducing mortality rates?	Library for Register Controlled Trials, Web of Science, and Embase were used. Search terms included: patient discharge, patient readmission, patient education, discharge planning, and follow-up phone calls.	adults who would be discharged to home, skilled nursing, or long-term acute care. Exclusion: pediatrics, obstetrics, psychiatric conditions, or disease specific populations.	Programme tool. This tool provides a framework for systematically evaluating study quality by addressing threats to design validity which can vary between designs. Then a second review was done to compare for consistency. Two RCT represented 1450 inpatients. The remaining thirteen articles included cohort studies and represented multiple interventions.	interventions. Post discharge provider appointment, medication reconciliation, and telephone follow-up interventions showed statistically significant reduction in 30-day readmission rate. Other transition of care interventions did not demonstrate a statistically significant difference in 30-day readmission, 30-day mortality, or Emergency room visit reduction.	Further research and evidence-based quality improvement studies should be done to further examine transition of care interventions on reducing hospital readmissions.
Rice, H., Say, R., & Betihavas, V. (2018). The effect of nurse-led education on hospitalization, readmission, quality of life and cost in adults with heart failure. A	Level 1 Quality Grade A	What is the effect of nurse led patient education sessions on quality of life,	Comprehensiv e literature search was conducted with a research librarian. The electronic databases	Inclusion: Randomized Controlled Trials, Adults over 18 years of age, diagnosis of heart failure, nurse led education that	The Clinical Appraisal Skills Programme tool was used to assess the quality, quantity, and consistency of study designs.	The key findings identified that nurse-led patient education reduced hospital	The review suggests that nurse-led patient education can lead to improved quality of life, fewer hospital admissions and

systematic review. *Patient Education and Counseling*, *101*(3), 363–374. https://doi.org/10.1016/j.pec.2017.10.002		readmission rates, and healthcare costs for adults with heart failure?	included CINAHL, PubMed, and Google Scholar for RCTs. Only English language articles were used. Keywords included were education, nurse, heart failure, readmissions, rehospitalization, economic burden, cost, expenditure, and quality of life.	took place in the community. Exclusion: Pediatric population, multidisciplinary team approach, in hospital education, patients living in care facilities.	Total of 7 RCTs were included in this review with a total of 3549 patients. Data from RCTs were extracted and collated in tables. Headings and data collection topics were discussed and agreed on between authors. An electronic data collection tool was not used.	readmission, reduction in hospitalization, improved quality of life, and was cost effective. The interventions of education were different in each study and some comprised on phone calls, education packets, and home visits.	readmissions in adult patients with heart failure. Some future study is required to establish the optimal education content, delivery method, intensity, and timing. Nurses are in key positions to deliver healthcare solution and enhance health in patients with heart failure.

Stephens, J. R., Kimple, K. S., Steiner, M. J., & Berry, J. G. (2017). Discharge interventions and modifiable risk factors for preventing hospital readmissions in children with medical complexity. *Reviews on Recent Clinical Trials*, *12*(4), 290–297. https://doi.org/10.2174/1574887112666170816144455	Level V Quality Grade C	What discharge interventions can prevent hospital readmissions in children with medical complexity?	PubMed search was performed using search terms; child OR pediatric AND readmission OR transition OR discharge in combination with complex, teach back, home visit, phone call, medication reconciliation, and telemedicine. Search was limited to the past five years and in the English language.	Inclusion: described an intervention or modifiable risk factor around the time of discharge transition from an acute hospitalization. If studies were conducted using patients with medical complexity, reported subsequent utilization, studies focused on improving discharge efficiency and reducing readmissions. Exclusion : reviews and purely qualitative studies, as well as international studies.	Ten studies were identified using the inclusion/exclusion criteria. The studies included a variety of patient populations, types of medical complexity study designs, and specific interventions or risk factors. The Study designs include observational, quasi-experimental, retrospective cohorts, prospective cohorts, and one randomized controlled trial. An electronic data collection tool was not used for this study.	Multifaceted discharge bundle including medication review, discharge education, follow-up appointments, and post discharge phone calls correlate with a decrease in hospital readmissions in medically complex children.	Evidence for discharge care interventions for children with medical complexity is still limited and needs future research to solidify interventions for this population. Overall, there does seem to be a correlation with using discharge bundles to reduce readmissions.
Zhu, Q.-M., Liu, J., Hu, H.-Y., & Wang, S. (2015). Effectiveness of nurse-led early discharge planning programmes for hospital in patients with chronic disease or rehabilitation needs: a systematic review and meta-	Level 1 Quality Grade A	What is the effect of nurse-led early discharge planning programmes compared to standard care for in	Electronic databases PubMed, Medline, Embase, CINAHL, and Cochrane library were searched for RCTs	Inclusion: Randomized Control Trials. Studies were required to include at least one primary outcome such as hospital readmissions or at	Two reviewers independently extracted relevant data from each study and completed the data extraction form. Standard techniques based on the Cochrane	10 RCT were selected for meta-analysis with 3438 participants and 1709 receiving discharge interventions.	Compared to standard care nurse led early discharge planning programs have a positive impact on care. Interventions are shown to reduce readmissions, reduce readmission

analysis. *Journal of Clinical Nursing*, *19–20*, 2993. https://doi.org/10.1111/jocn.12895		patients with chronic disease or rehabilitation needs?	assessing nurse directed discharge planning for in patients with chronic disease or rehabilitation needs. Keywords used were discharge planning, hospital discharge, patient discharge, patient care planning continuity of care, nurse specialists, chronic disease, and rehabilitation.	least one secondary outcome, cost, quality of life. Exclusion: Any language other than English, studies that assessed patients with acute, critical illness, or social admissions, Programs not directed by nursing staff, and studies focusing on post discharge care were excluded.	Collaboration Handbook for Systematic Reviews of Interventions was used to assess for bias with independent assessment by two reviewers. Disagreements were settled by consensus. Meta-analysis was conducted for eligible studies using REVMAN 5.2.6. Data was pooled using a fixed effect model and in studies where meta-analysis was not possible, narrative analysis was reported.	Results showed no improvement in length of stay with discharge planning programs. The Patients who received discharge program planning had significantly fewer all cause hospital readmissions when compared to standard care. All-cause mortality was also reduced when discharge program planning was included. The analysis also showed an increase in quality of life and higher satisfaction in patients who received discharge planning programs.	length of stay, reduce mortality, and improve quality of life.

Appendix C

Strengths, Weaknesses, Opportunities, & Threats analysis

Strengths	Opportunities
• Leadership commitment to change • Good communication between staff • Organizational and staff support to improve processes, skills, and knowledge to reduce readmissions • All required resources for project readily available	• To decrease overall readmissions and potentially network to opportunity to other medical homes • Opportunity to reduce costs with readmission and improve satisfaction • Opportunity to catch near misses and treat the patient outside of the hospital so they can be in the comfort of their home
Weaknesses	**Threats**
• Potential resistance from patients to change in procedure after hospitalization • Challenge to find time to educate staff and incorporate new interventions into daily routines • Limited number of bilingual staff to call patients who speak Spanish	• Any staff turnover would be a threat to have to educate and may create a gap in intervention plan • Negative experiences that still require hospital readmissions • Poor inpatient discharge planning could be a threat to readmissions despite intervention plan

Appendix D

Project Schedule

Activity	NUR7802								NUR7803							
	Week 1-2	Week 3-4	Week 5-6	Week 7-8	Week 9-10	Week 11-12	Week 13-14	Week 15	Week 1-2	Week 3-4	Week 5-6	Week 7-8	Week 9-10	Week 11-12	Week 13-14	Week 15
Preceptor collaboration as needed	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Team collaboration/ monthly updates	X		X		X		X		X		X		X		X	
Develop project proposal	X															
Review process for EBPC and IRB submission	X															
Submit proposal to USA EBPC	X															
Once approved Submit to BayCare IRB		X														
IRB committee review		X	X													
Once approved develop and implementation team			X													
Create teach-back template and phone call implementation into EMR		X	X													
Staff and stakeholder education on discharge intervention bundle				X												
Nurse training on post discharge telephone calls using RED toolkit script with post testing				X												
Create and print patient education pamphlets on discharge bundle interventions			X													
Collect all baseline data prior to implementation			X													
Project implementation start				X												
Evaluate and modify processes as needed				X	X	X	X									
Ongoing data collection of clinic patients who are readmitted to the hospital within 30 days of discharge				X	X	X	X	X	X							
Final data collection											X					
Data analysis with Excel											X					
Compare baseline data to post implementation outcomes											X					
Project closure											X					

Appendix E

Check Sheet for Data Collection

CHECKSHEET FOR DATA COLLECTION

PT CODE	DISCHARGE DATE	FOLLOW-UP APPT WITHIN 7 BUISNESS DAYS?	PHONE CALL WITHIN 48-72 BUISNESS HOURS AFTER D/C	D/C UPDATES DOCUMENTED IN PT CHART	MED REC WITH EDUCATION AND TEACH BACK DURING CALL	HOSPITAL READMISSION WITHIN 30 DAYS
101	6/29/2020	YES-06/30/20	YES-07/01/20- JM	YES-06/30/20-JM	YES-JM	
102	7/5/2020	YES-07/08/20	YES-07/07/20- LM	YES 07/08/20 LM	YES-LM	
103	7/2/2020	YES- 07/10/20	YES- 07/06/20- LM	YES 07/6/20 LM	YES- LM	Yes-07/15/20
104	7/2/2020	YES- 07/08/20	YES- 07/06/20- LM	YES 07/6/20 LM	YES- LM	
105	7/2/2020	YES- 07/08/20	YES- 07/06/20- LM	YES 07/6/20 LM	YES- LM	
106	7/16/2020	YES-07/20/20	YES-07/20/20-JM	YES O7/20/20 JM	YES- JM	
107	7/18/2020	YES-07/22/20	YES-07/20/20-LM	YES 07/20/20 JM	YES-JM	YES-07/21/20
108	7/9/2020	YES-07/13/20	YES-07/13/20-JM	YES 07/13/20 JM	YES- LM	
109	7/9/2020	07/14/20-no show	YES-07/13/20-LM	YES -O7/14/20 CE	YES- LM	
110	7/13/2020	YES- 07/17/20	YES-07/15/20 LM	YES-07/15/20 LM	YES-LM	
111	7/14/2020	YES- 07/20/20	YES-07/16/20 CE	YES-07/16/20 CE	YES-CE	
112	7/14/2020	YES-07/20/20	YES-07/16/20 CE	YES-07/16/20 CE	YES-CE	
37	7/19/2020	YES-07/23/20	YES- 07/22/20-LM	YES-07/22/20 LM	YES- LM	YES-08/08/20
114	7/20/2020	YES-07/24/20	YES-07/22/20-LM	YES-07/22/20 LM	YES- LM	
115	7/18/2020	YES-07/22/20	YES-07/20/20-JM	YES O7/20/20 LM	YES- JM	
116	7/17/2020	YES-07/21/20	YES-07/20/20-LM	YES O7/20/20 LM	YES- LM	
117	7/21/2020	YES-07/24/20	YES-07/23/20-LM	YES-07/23/20-LM	YES- LM	
118	7/5/2020	YES- 07/08/20	YES-07/07/20- LM	YES-07/07/20-LM	YES- LM	
119	7/17/2020	YES- 07/20/20	YES- 07/22/20-LM	YES-07/22/20 LM	YES- LM	
120	7/20/2020	YES-07/23/20	YES- 07/22/20-LM	YES-07/22/20 LM	YES- LM	
121	7/24/2020	YES-07/27/20	Yes-07/27/20-LM	YES-07/27/20-LM	YES-LM	
122	7/23/2020	YES-07/31/20	YES-07/27/20-JM	YES-07/27/20-JM	YES-JM	
123	07/25.20	YES-07/31/20	YES-07/27/20-JM	YES-O7/27/20-JM	YES-JM	
124	8/4/2020	YES-08/05/20	No- pt seen 08/05/20	YES-08/05/20-LM	No	YES- 08/12/20
125	8/3/2020	YES-08/05/20	YES-08/05/20-CN	YES-08/05/20-CN	YES-CN	
126	8/4/2020	YES-08/06/20	YES-08/06/20-CE	Yes-08/06/20-CE	YES-CE	
104	8/5/2020	YES-08/10/20	YES-08/07/20-LM	YES-08/07/20-LM	YES-LM	
127	8/9/2020	8/11/20- no show	YES-08/11/20-LM	YES-08/11/20-LM	YES-LM	
113	8/12/2020	YES-08/17/20	YES-08/14/20-JM	YES-08/14/20-JM	YES-JM	
124	8/12/2020	YES-08/18/20	YES-08/14/20-CE	YES-08/14/20-CE	YES-CE	YES-09/06/29
128	8/11/2020	YES-08/19/20	YES-08/14/20-LM	YES-08/14/20-LM	YES-LM	
129	8/11/2020	YES-08/19/20	YES-08/14/20-LM	YES-08/14/20-LM	YES-LM	
107	8/3/2020	YES-08/07/20	YES-08/05/20-JM	YES-08/05/20-JM	YES-JM	YES-08/08/20
105	8/17/2020	YES-08/21/20	YES-08/19/20-LM	Yes-08/19/20-LM	YES-LM	
130	8/11/2020	YES-08/11/20	YES-08/13/20-LM	YES-08/13/20-LM	YES-LM	
131	8/17/2020	YES-08/19/20	YES-08/19/20-LM	YES-08/19/20-LM	YES-LM	
132	8/20/2020	YES-08/26/20	YES-08/24/20-CE	YES-08/24/20-CE	YES-CE	
103	8/20/2020	YES-08/25/20	YES-08/24/20-LM	YES-08/24/20-LM	YES-LM	
133	8/19/2020	YES-08/24/20	YES-08/21/20-CE	YES-08/21/20-CE	YES-CE	
134	8/4/2020	YES-08/07/20	YES-08/06/20-CE	YES-08/06/20-CE	YES-CE	
107	8/13/2020	YES-08/18/20	YES-08/17/20-LM	YES-08/17/20-LM	YES-LM	

Appendix F

AHRQ Post-Discharge Follow-up Phone Call Script

CALLER: Hello Mr./Ms. _____. I am [caller's name], a [type of clinician] from [name of hospital]. You may remember that when you left, the [hospital name] discharge educator, [DE name], mentioned you would receive a call checking in on things. I am hoping to talk to you about your medical issues, see how you are doing, and see if there is anything, I can do to help you. Do you mind if I ask you a few questions so I can see if there is anything, I can help you with? Is this a good time to talk? It will probably take about 15 to 20 minutes, depending on the number of medicines you are taking.

If yes, continue.
If no, CALLER: Is there a better time that I can call you back?

CALLER: Before you left the hospital, [DE name] spoke to you about your main problem during your hospital stay. This is also called your "primary discharge diagnosis." Using your own words, can you explain to me what your main problem or diagnosis is?

If yes, confirm the patient's knowledge of the discharge diagnosis using the "teach-back" method. After the patient describes his or her diagnosis, clarify any misconceptions or misunderstandings using a question and answer format to keep the patient engaged.

If no, use this opportunity to provide patient education about the discharge diagnosis. Then conduct teach-back to confirm the patient understood.

CALLER: What did the medical team at the hospital tell you to watch out for to make sure you're o.k.?

Review specific symptoms to watch out for/things to do for this diagnosis (e.g., weigh self, check blood sugar, check blood pressure, create peak flow chart).

Measure patient's understanding of disease-related symptoms or symptoms of relapse (e.g., review diagnosis pages from AHCP).

CALLER: Do you have any questions for me about your main problem [diagnosis]? Is there anything I can better explain for you?

If yes, explain, using plain language (no jargon or medical terms). **If no,** continue.

CALLER: Since you left the hospital, do *you* feel your main problem, [diagnosis], has improved, worsened, or not changed? What does your family or caregiver think?

If improved or no change, continue below. **If primary condition has worsened,**

CALLER: I'm sorry to hear that. How has it gotten worse? Have you spoken to or seen any doctors or nurses about this since you left the hospital?

If yes, CALLER: Who have you spoken with/seen? And what did they suggest you do? Have you done that?

Using clinical judgment, use this conversation to determine if further recommendations, teaching, or interventions are necessary.

Record any action patient/caregiver has taken and your recommendations on the documentation sheet.

CALLER: Have any new medical problems come up since you left the hospital? **If yes:**

CALLER: What has happened?
CALLER: Is there anyone else involved in your care that I should talk to?

If yes, Name: _____ Phone number: _____

CALLER: Have you spoken to anyone about this problem? Prompt if necessary: Has anyone:

Contacted or seen PCP?
Gone to the ER/urgent care? Gone to another hospital/provider? Spoken with visiting nurse? Other?

Following the conversation about the current state of the patient's medical condition, consider recommendations to make to the caregiver, such as calling PCP, going to emergency department, etc. Record any actions and recommendations on documentation sheet.

104. B. Medicines

Can you bring all your medicines to the phone, please? We will review them during this call. Bring both prescription medicines and over-the-counter medicines, the ones you can buy at a drugstore without a prescription. Also, bring any supplements or traditional medicines, such as herbs, you are taking. Finally, could you also please bring to the phone the care plan that we gave you before you left the hospital?

CALLER: Do you have all your medicines in front of you now?
CALLER: I'm going to ask you a few questions about each one of your medicines to see if there

is anything I can help you with. We will go through your medicines one by one.

First, I want to make sure that the medicines you were given were the right ones. Then we'll discuss how often you've been able to take them and any problems or questions you might have about any of them.

Choose one of your medicines to start with.

What is the name of this medicine? The name of it should be on the label. **If the patient is using a generic,** check that he or she understands that the brand and generic names are two names for the same medicine.

At what times during the day do you take this medicine? How much do you take each time?

If the patient answers in terms of how many pills, lozenges, suppositories, etc. What is the strength of the medicine? It should say a number and a unit such as mg or mcg.

How do you take this medicine? **If there are special instructions** (e.g., take with food), probe as to whether the patient knows the instructions and whether he or she is taking the medicine as instructed.

What do you take this medicine for?

Have you had any concerns or problems taking this medicine? Has anything gotten in the way of your being able to take it? Have you ever missed taking this medicine when you were supposed to? Why?

Do you think you are experiencing any side effects from the medicine?

If yes, could you please describe these side effects?
Are you taking any other medicines? Repeat list of questions for each medicine.

After patient has described all medicines, ask: Are you taking any additional medicines that you haven't already told me about, including other prescription medicines, over-the-counter medicines, that is, medicines you can get without a prescription, or herbal medicines, vitamins, or supplements?

If patient has been prescribed medicines that the patient hasn't mentioned, ask whether he or she is taking that medicine.

If yes, go through the list of medicine questions.

If not, probe as to why not. **If patient is unaware of the medicine,** make a note to check with discharge physician as to whether patient is supposed to be taking it, whether a prescription was issued, etc.

CALLER: Have you been using the medicine calendar (in your care plan) that was given to you when you left the hospital?

If yes, provide positive reinforcement of this tool.
If no, suggest using this tool to help remember to take the medicines as directed. **If patient has**

lost care plan offer to send a new copy of AHCP by mail or email.

CALLER: Do you use a pill box?

If yes, provide positive reinforcement of using this tool.

If no, suggest using this tool to help remember to take the medicines as ordered.

CALLER: What questions do you have today regarding your medicines and medicine calendar (if using)?

CALLER: Does your family or caregiver have any questions or concerns about your medicines?

Please note on the documentation sheet any recommendation you made to the patient and follow-up actions you took.

105. C. Clarification of Appointments

CALLER: Now, I'm going to make sure you and I have the same information about your appointments and tests that are coming up. You were given appointments with your doctors [and for lab tests] when you left the hospital. Can you please tell me?

What is the next appointment you have scheduled? Who is your appointment with?
What is your appointment for?
When is this appointment?

What is your plan for getting to your appointment?

Are you going to be able to make it to your appointment? Is there anything that might get in the way of your getting to this appointment?

If yes, Let's talk about how we can work around these difficulties.
If patient plans to keep appointment, ask, do you have the phone number to call if something

unexpectedly comes up and you can't make the appointment?

If patient can't keep appointment, get the patient to reschedule: As soon as we hang up, can you call to reschedule your appointment? **If patient is unable or unwilling to make the call to reschedule,** offer to make the call: I can reschedule that appointment for you. What days and times would you be able to make an appointment? **After you get several times, say,** Thanks. I'll call you back when I've been able to set up the appointment. **If patient refuses to cooperate,** consult the DE and hospital team.

Do you have any other appointments scheduled? **If yes,** repeat the set of questions. **If no,** but other appointments are scheduled, ask, are you looking at the care plan? Are there any other appointments listed there? Review these appointments.

107. E. What to Do If a Problem Arises

CALLER: Before we hang up, I want to make sure that if a medical problem arises, you know what to do. If you're having an emergency, for example [give disease-specific examples, e.g., chest pain, trouble breathing], what would you do?

If patient does not say, "Call 911," explain the need to get an ambulance so he or she can see a doctor right away and confirm patient understanding.

CALLER: And what about if you [give example of urgent but not emergent problem] in the evening? What would you do then? Check if patient knows how to reach the doctor after hours. **If DE help line operates after hours,** check that the patient knows that and can find the number on the AHCP. Confirm understanding.

CALLER: And what about if you are having a medical problem that is not an emergency, such as [give disease-specific examples] and want to be seen by your doctor before your next scheduled appointment, what would you do?

If patient does not know, instruct: You can call your doctor's office directly and ask for an earlier appointment. Sometimes your doctor is very busy, so if you are having difficulty obtaining an appointment, ask if you can be seen by someone else in the office, such as a nurse, nurse practitioner, or physician's assistant. Confirm understanding.

CALLER: Just to make sure we're on the same page, can you tell me what you'd do if [create nonemergent scenario]?

If patient answers incorrectly, ask: Do you have your doctor's phone number handy? It should be on the care plan on the appointments page. **If patient can't tell you the number, say,** let me give you the phone number for your primary care doctor just in case. Do you have a pen and paper to write this down? Do you need me to mail or email you another copy of your care plan? **If yes,** confirm address or email.
CALLER: Do your caregivers have these numbers also?
If no, ask: Would you like me to email or mail a copy of your care plan to them? **If yes,** confirm address or email.

CALLER: That's all I needed to talk to you about. We've covered a lot of information. What questions can I answer for you?

If none, CALLER: Thank you and have a good day. If you must follow-up with patient on anything, remind him or her that you will be calling back.

Reference: Agency for Healthcare Research Quality. (2013). *How to conduct a post discharge follow-up phone call.* Retrieved from
https://www.ahrq.gov/patient-safety/settings/hospital/hai/red/toolkit/redtool5.html