CARE TRANSITIONS: ARE HEALTHCARE ORGANIZATIONS MEETING THE NEEDS OF THEIR PATIENTS?

by

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Abstract

Acute care healthcare organizations struggle to identify and implement interventions to support the transition of care between hospital and home settings. One organization piloted a quality improvement (QI) project using nurse-led post-discharge telephone consultations to determine their feasibility and effect as a transition of care intervention. The QI pilot was designed to answer the clinical question: does the receipt of nurse-led post-discharge telephone consultations improve patient satisfaction and 30-day readmission rate outcomes? The goals of the pilot were to investigate the feasibility of conducting the intervention, identify transition of care gaps, and evaluate the effect on 30-day readmissions and patient satisfaction. Prior to implementation of the pilot, patient satisfaction scores associated with care transitions ranged from 29.9-58.3%; they rose to 65.7 and 65.5% 30 and 60 days respectively after the intervention was initiated. 30-day readmission rates on the pilot unit ranged from 0.1238-0.1354 in the months preceding the pilot; they fell to 0.1153 and 0.0615 30 and 60 days respectively after the intervention was initiated. The intervention uncovered opportunities to better support patients in the community, which is possibly more important than small improvements in patient satisfaction scores and readmission rates. The intervention can be an invaluable tool as acute care organizations strive to better care for people within their communities.

Key Words: transition of care intervention, nurse-led, post-discharge telephone consultations
Care Transitions: Are Healthcare Organizations Meeting the Needs of Their Patients?

Patients expect the highest quality healthcare possible. However, with the current healthcare delivery model, many patients do not receive reliable, high quality care (Institute of Medicine [IOM], 2001). An increase in the pervasiveness of chronic conditions experienced by people seeking healthcare and the increase in the complexity of the healthcare environment are barriers that hinder the provision of high quality care (IOM, 2001). Because of a variety of barriers with the current healthcare delivery model, many organizations are not meeting transition of care (TOC) needs of their patients (IOM, 2001; Joint Commission, 2012; Silow-Carroll, Edwards, & Lashbrook, 2011).

Healthcare organizations are being driven to improve the quality of healthcare provided by identifying and bridging gaps in care delivery (American Association of Colleges of Nursing, 2006; Centers for Medicare & Medicaid Services [CMS], 2013; Silow-Carroll et al., 2011). Within the rapidly evolving and increasingly complex healthcare atmosphere, healthcare organizations must be prepared and able to reform care delivery and care delivery processes (IOM, 2001). By focusing on clinical excellence and striving to provide consistent, high quality care, organizations are able to reform care delivery processes and improve outcomes (Silow-Carroll et al., 2011).

The ability to effectively reform care delivery processes is dependent on an organization’s ability to identify care gaps then develop and implement evidence-based solutions (IOM, 2001; Silow-Carroll et al., 2011). The use of evidence-based practice (EBP) and evidence-based quality improvement (EBQI) has become widely accepted as an essential component of successfully reforming and improving healthcare processes and outcomes (Melnyk
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& Fineout-Overholt, 2015). High performing organizations use EBP and EBQI to identify gaps and implement evidence-based solutions.

**Problem Description**

Clinicians practicing in a community hospital identified a gap in TOC from the inpatient to home setting. Within the organization, there were few interventions that addressed TOC from the inpatient setting. Post-discharge telephone consultations were and continue to be conducted in the outpatient surgical and heart-failure settings. In addition to the outpatient consultations, unit clerks completed post-discharge satisfaction calls. These inpatient calls focused on satisfaction with the hospital experience but did not address TOC.

Four of ten acute care areas within the organization were not meeting patient satisfaction targets associated with communication with nurses and transition of care. Additionally, the organization was not meeting the 30-day readmission target of 11.1%. A bedside clinician, who was familiar with the TOC gap, questioned the possibility that the gap was contributing to the less than ideal patient satisfaction and 30-day readmission rates. The clinician sought to identify a process or intervention that could address the TOC gap.

The organization has been awarded national recognition for nursing excellence. Consequently, clinicians practicing in the organization are well versed in the development and implementation of EBP and EBQI. The clinician began the process of addressing the TOC gap using a well-defined EBP/EBQI process (Melnyk & Fineout-Overholt, 2015). After a thorough literature and evidence search, nurse-led post-discharge telephone consultations were identified as an intervention that could possibly address the TOC gap.
Available Knowledge

Inadequate or lack of care coordination during the transition from inpatient to home or community settings results in poor outcomes (Costantino, Frey, Hall, & Painter, 2013; Harrison, Auerbach, Quinn, & Mourad, 2014; IOM, 2001; Silow-Carroll et al., 2011). Poor outcomes related to inadequate TOC are expressed in a variety of ways including, but not limited to, less than ideal patient satisfaction scores and readmissions rates. Poor care transitions lead to caregiver and patient dissatisfaction (Allen, Hutchinson, Brown, & Livingston, 2014; Arora et al., 2010; Strong & Bettin, 2015). Poor TOC has also been shown to lead to increased preventable 30-day readmission rates (CMS, 2014; Costantino et al., 2013; Harrison et al., 2014; Silow-Carroll et al., 2011).

Preventable 30-day readmissions pose a serious risk to patients and healthcare organizations. Nearly 20% of all Medicare beneficiaries experience a 30-day readmission after hospitalization (Naylor, 2012). Risk of readmission increases when patients have comorbid conditions; this risk is especially significant considering half of all Medicare beneficiaries have comorbid conditions (Naylor, 2012). In addition to poor quality indicator scores, organizations with high readmission rates face financial risk. Reimbursement for healthcare is linked to readmission quality indicators; organizations with high readmission rates will not receive full reimbursement for care related to preventable readmissions (CMS, 2013; Silow-Carroll et al., 2011).

The significance of patient dissatisfaction cannot be underestimated. Patient satisfaction scores are published for public review and consumers use this information to determine where to seek care (CMS, 2013). Poor patient satisfaction is tied to quality indicator scores as well as reimbursement and value-based purchasing (CMS, 2013).
Research has shown that improving care transitions with TOC interventions increases patient satisfaction, increases reimbursement, and decreases overall healthcare costs (Naylor, 2012; Silow-Carroll et al., 2011). Evidence has also shown that improving care transitions with appropriate TOC interventions mitigates the effects of chronic disease progression, increases quality of life, and reduces readmission rates (Harrison et al., 2014; Naylor, 2012; Stamp, Machado, & Allen, 2014). Additionally, TOC interventions can identify and bridge gaps in care transitions (Dusek, Pearce, Harripaul, & Lloyd, 2015; Horwitz et al., 2013; Mottram, 2011; Strong & Bettin, 2015).

Nurse-led TOC interventions can effectively address problems with care transitions (Allen et al., 2014; Arora et al., 2010; Burch & Taylor, 2012; Burke, Guo, Prochazka, & Misky, 2014; Chow & Wong, 2014; Costantino et al., 2013; Darcy, Murphy, & DeSanto-Madeya, 2014; Dusek et al., 2015; Furuya et al., 2013; Hand & Cunningham, 2014; Harrison et al., 2014; Horwitz et al., 2013; Kind et al., 2012; Li et al., 2014a; Li et al., 2014b; Naylor, 2012; Stamp et al., 2014; Strong & Bettin, 2015; Zhang, Wong, You, & Zheng, 2012). Specifically, nurse-led post-discharge telephone consultations reduce readmission rates (Allen et al., 2014; Burke et al., 2014; Chow & Wong, 2014; Costantino et al., 2013; Harrison et al., 2014; Kind et al., 2012; Naylor, 2012; Stamp et al., 2014; Zhang et al., 2012). Nurse-led post-discharge telephone consultations also improve patient satisfaction (Allen et al., 2014; Kimman et al., 2011; Li et al., 2014a; Motttram, 2011; Naylor, 2012; Strong & Bettin, 2015).

**Rationale**

Within the organization, acute care unit clerks were completing post-discharge telephone consultations. Unit clerks and nurses questioned the efficacy of this intervention because information gathered from the calls was often not actionable. The clinician spearheading the
improvement project took this into consideration when selecting a TOC intervention. The clinician proposed the concept that nurse-led post-discharge telephone consultations would provide actionable information that could be used to modify discharge processes and identify TOC gaps.

Nurses within the organization are very competent change agents who routinely develop and implement evidence-based solutions. They use EBP models and Plan-Do-Study-Act (PDSA) cycles to implement change. The clinician approached the chief nursing officer (CNO) and discussed the possibility of implementing a pilot nurse-led post-discharge telephone consultation intervention. The CNO was supportive of the project and approved its development and implementation. The clinician developed an EBQI project using an EBP model and PDSA concepts. Using reliable, current evidence, the clinician developed a project that would pilot nurse-led post-discharge telephone consultations on one specific unit. The pilot unit was selected after careful consideration by the CNO and clinician.

**Specific Aims**

The purpose and goals of the project were to identify existing TOC gaps, investigate the feasibility of conducting the nurse-led intervention, and evaluate the effect of the intervention on patient satisfaction scores and 30-day readmission rates. While improved patient satisfaction scores and 30-day readmission rates would be an ideal result, the clinician/project developer realized that these improvements may not be seen during the pilot of the intervention. The project developer considered identification of TOC gaps a more significant outcome of the pilot.

As discovered in the literature and evidence, identification of TOC gaps would lead to improvements on care delivery processes that would eventually lead to improvements in readmission rates and patient satisfaction. Therefore, identification of TOC gaps was the main
goal of the intervention. The following discussion will describe the pilot intervention and results.

Methods

The organizationally accepted and approved EBP model was developed and has been widely described by Melnyk and Fineout-Overholt (2015). Use of a consistent model helps ensure success of initiatives (Melnyk & Fineout-Overholt, 2015). Additionally, the organization encourages use of rapid cycle PDSA to modify processes that are identified while implementing EBP and EBQI projects. The PDSA cycle is a scientifically proven method used to test change and determine its impact on outcomes (Maxworthy, 2010; Melnyk & Fineout-Overholt, 2015). Team members from all disciplines are familiar with the processes that were used during the development and implementation of the pilot intervention.

Intervention

The intervention was nurse-led post-discharge telephone consultations. The intervention was completed on all patients discharged to the home setting. Patients discharged to another level of care or assisted living were excluded.

Study of the Intervention

The success of initiatives and the ability to achieve desired outcomes are maximized through the use of existing, validated evidence-based guidelines (Holly, 2014; Melnyk & Fineout-Overholt, 2015). An Agency for Healthcare Research and Quality (AHRQ) guideline, the Project RED (Re-Engineered Discharge) program, was discovered by project developers while researching TOC initiatives (AHRQ, 2016). The guideline was developed to help organizations reengineer processes to improve outcomes associated with care transitions (AHRQ, 2016). The RED Toolkit includes telephone consultation scripts and documentation
tools (AHRQ, 2013). These tools were used for the nurse-led post-discharge telephone consultations.

Research showed that the efficacy of the intervention is dependent on structured call content (Burch & Taylor, 2012; Burke et al., 2014; Chow & Wong, 2014; Cochran, Blair, Wssinger, & Nuss, 2012; Furuya et al., 2013; Hand & Cunningham, 2014; Naylor, 2012). Timing of the calls also has a direct impact on efficacy (Costantino et al., 2013; Darcy et al., 2014; Furuya et al., 2013; Hand & Cunningham, 2014; Harrison et al., 2014; Stamp et al., 2014). To ensure fidelity of the intervention during the pilot, one nurse completed and documented the consultations.

Per recommendations in the literature, consultations occurred between 48 and 72 hours after discharge (Hand & Cunningham, 2014; Harrison et al., 2014; Li et al., 2014b; Stamp et al., 2014). The intervention was completed Monday through Friday from 1600-1800. Consultations were completed on Saturday depending on call volume. Consultation content was recorded and tracked; reports were delivered to pilot unit leadership on a weekly basis. The clinician completing the consultations collaborated with unit leadership, physicians, and Care Managers to meet immediate needs discovered during the consultations.

Measures

Project outcome measures were patient satisfaction scores, 30-day readmission rates, and consultation trends. Patient satisfaction was measured by HCAHPS (the Hospital Consumer Assessment of Healthcare Providers and Systems) scores. These scores are widely accepted as valid and reliable. 30-day readmission rates were and are tracked at the organizational and unit level. These rates were used as measures and are considered valid. Gaps in care transitions were measured by trends identified when tracking consultation content.
Analysis

Patient satisfaction and 30-day readmission data were analyzed by the project manager and a statistician. Readmission rates were analyzed using a two-tailed t test. Patient satisfaction scores were analyzed using Chi-Square and Fischer’s Exact tests. Consultation content was analyzed using qualitative methods by identifying trends in consultation content documentation.

Ethical Considerations

Within the organization, it is common practice to consult the institution review board (IRB) for recommendations regarding EBP and EBQI projects. This project was approved by the organizational IRB through expedited review. Because the project was deemed to be EBQI by the IRB, patient consent was not indicated or required. That being said, upon admission, all patients are asked if they consent to contact after discharge. Patients who declined contact after discharge were excluded from this project. IRB review and approval along with attention to patient preference helped ensure project patients were protected and their rights were not violated.

Patients were also protected during data collection and analysis by blinding all information collected. Project data was and will continue to be stored in locked cabinets and in password protected computer files. The potential for researcher bias and conflict of interest was evaluated during project development and implementation. No bias or conflict of interest was identified. These measures were undertaken to ensure the highest level of protection was afforded to patients affected by the pilot and intervention.

Results

During the pilot period, 149 patients were discharged but only 82 of those discharges were eligible for the intervention. Of the eligible discharges, the consultation was completed
with 59 patients; the consultant was unable to contact 23 eligible patients. The average time to prepare for and complete the consultation was 33 minutes.

Patient satisfaction scores associated with care transitions prior to implementation of the pilot ranged from 29.9-58.3%. These scores rose to 65.7 and 65.5% 30 and 60 days respectively after the intervention was initiated. The mean 30-day readmission rate on the pilot unit was 0.1139 before the pilot with rates ranging from 0.1238-0.1354 in the months preceding the pilot. Readmission rates fell to 0.1153 and 0.0615 30 and 60 days respectively after the intervention was initiated. Despite these improvements, statistical analysis could not prove them to be statistically significant. The statistician strongly believed the lack of statistical significance was a result of the small sample size and insufficient post-intervention data. The statistician recommended continued statistical analysis of patient satisfaction and 30-day readmission data. While the improvements did not achieve statistical significance, they were considered significant and actionable for this project.

Consultation content analysis did not find evidence that supported the need to improve nursing discharge processes. During project development, it was hypothesized that the consultation content analysis would identify the need to modify and improve nursing discharge processes. Analysis showed that overall nursing discharge processes were strong but did find other gaps in care transitions and opportunities for improvement. Three trends were identified: patients discharged from the hospital medicine service need more support until they are able to see their primary care provider, patients need long-term support when discharged into the community, and the organization has no structures in place to support the most vulnerable patients who are discharged to different levels of care.
After completing the intervention for a six-week period, project developers concluded that continued completion of the intervention would only be feasible if the task was assigned to a transition nurse or other dedicated nurse. Within the organization, it would not be feasible for bedside clinicians or nursing leaders to add the consultations to current workloads and/or workflow. Sustaining the intervention past a pilot period would likely require the addition of manpower resources.

**Discussion**

While patient satisfaction and 30-day readmission rates associated with the pilot did not achieve statistical significance, improvements were seen. A particular strength of the nurse-led post-discharge telephone consultation pilot was that it successfully identified significant care transition gaps. These gaps can be addressed to improve outcomes associated with care transitions. Solutions for the identified gaps are currently being developed or implemented.

The hospital medicine service (HMS) is currently developing a process to better support patients discharged from their service. One solution the HMS is considering is conducting post-discharge telephone consultations to provide support to patients after discharge until they can be seen by or find a primary care provider. The organization and HMS are committed to better serve and support patients discharged into the community and will implement this or another solution.

Initiatives are underway to collaborate with local post-acute care organizations to improve care and communication between levels of care. Physician and nurse-led teams are collaborating with several post-acute care organizations that accept many patients who are discharged from the organization but have sub-acute needs. Teams are developing solutions including better communication tools and care guidelines.
The organization is developing a Faith Community Nursing (FCN) Program intervention that will support vulnerable patients in the community. The FCN program intervention will offer much-needed long-term support to some of the most vulnerable community members. The intention of this intervention is to mitigate chronic disease progression, thereby limiting readmissions and improving the quality of life of community members.

**Interpretation**

The project findings highlight how the nurse-led transition of care intervention successfully identified gaps in care transitions and the organization’s commitment and ability to rapidly respond and develop successful solutions. Nurse-led post-discharge consultations could be implemented in any setting to identify care gaps and guide the development of solutions. Use of the nurse-led TOC intervention has the potential to improve a variety of patient and organizational outcomes.

Findings from this project are consistent with many findings in current literature. Lack of statistical significance of project outcomes was identified in the literature but, similarly, did not inhibit improved outcomes. Consistent with the literature, findings indicate that replication of the pilot project and intervention is possible in a variety of settings.

**Limitations**

A major limitation of this project was the small sample of patient satisfaction data and the limited amount of post-intervention data. These limitations possibly contributed to the failure to achieve statistical significance of outcome data. In an effort to minimize the risk of bias associated with documentation and transcription of consultation content, exact wording of call content was documented. Despite this precaution, bias surrounding consultation content trend identification could exist.
Conclusion

As the healthcare environment becomes more complex and patients are required to perform more healthcare activities in the community, transition of care is becoming a crucial element of care. Organizations must be able to identify and address gaps in care transitions. This project demonstrated the ability of a healthcare organization to identify gaps in care and create solutions to bridge those gaps in care. Nurses can support patients during care transitions from hospital to home settings. The project supports findings in the literature that nurse-led transition of care interventions are effective and can improve a variety of patient and health care outcomes.
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