Standardized Telephone Follow-Up Calls for New Ventricular Assist Device Patients

Natalie M. Babola

Problem & Purpose: The transition from hospital to home is a vulnerable period that poses significant challenges for complex patient populations such as those with ventricular assist devices (VADs). At the organization of interest, approximately 40% of VAD patients were readmitted within 30 days following their implant hospitalization which exceeded the national readmission rate. Many readmissions are preventable if effective discharge planning and timely follow-up occurs. The purpose of this project was to develop and implement a standardized telephone follow-up (TFU) script based on recommendations from the American Heart Association (AHA) and the Agency for Healthcare Research and Quality (AHRQ) to ensure new VAD patients were receiving discharge follow-up calls that addressed their unique post-discharge needs.
Methods: The TFU script included questions about symptoms of heart failure, device alarms, follow-up appointments, medications, home health care, and dressing supplies and contained instructions for the caller based on patient responses. Unit nursing staff were educated on the use of the script and asked to make calls between 48-72 hours after discharge. Weekly discussions were held to facilitate the change in practice. The project tracked compliance with the TFU script and descriptive data were analyzed to measure the impact of the standardized call.
Results: Over the 12-week implementation period, 7 of 7 eligible patients received a follow-up call for a 100% compliance rate. Two scripts had uncompleted questions, making the overall script completion rate 96%. The average time of call after discharge was 91 hours. Two patients (33%) did not have follow-up appointments and were transferred to the scheduling line. One patient (17%) did not receive medications on discharge, and five patients (83%) required additional transitional care coordination communicated to the VAD coordinator or heart failure nurse practitioner. An 8th patient was readmitted within 24 hours of discharge and could not receive a call.
Conclusion: The use of a standardized TFU script can be successfully implemented by RN staff to help identify critical post-discharge needs and ensure compliance with recommended timely follow-up. Follow-up calls should address the specific needs of complex patient populations to facilitate successful transitions of care and reduce preventable readmissions.

Clinician Perceptions of a Mobile Electronic Health Record Application

Stacian A. Davis

Problem and Purpose: Due to healthcare technology advancements, increasing patient acuity, and patient safety efforts, the Informatics Department at a research hospital is undertaking an initiative to provide remote access of the organization's Electronic Health Record (EHR) system to clinicians via a mobile application. The purpose of this quality improvement project was to test the prototype EHR mobile application to ascertain clinicians' perceptions of the system, evaluate potential usability, and gauge overall satisfaction prior to implementation.
Methods: Clinicians (N=10) who have been working at the hospital for at least 6 months were randomly recruited. Usability testing was completed using the EHR mobile application testing environment. Clinicians completed a pre-test survey regarding their perceptions of the utility of having mobile EHR access prior to reviewing the application. The clinicians were then instructed to navigate the system on their own for a few minutes, and were provided with a script with instructions for order entry and results review. Once done with the application, the clinicians completed the post-test survey, a usability questionnaire, and answered several open-ended questions. The responses were captured using Microsoft Forms and Microsoft Excel.
Results: The pre-test data indicated that 60% of clinicians strongly agree that having access to the mobile application will be clinically useful. This increased to 80% after the clinicians viewed and used the application. The pre-test data also revealed that 70% of the clinicians agreed that the mobile application would improve patient care. After using the application, this increased to 100%. Prior to using the application, 80% of clinicians agreed that that the application would increase clinicians' productivity. After viewing the application, there was an increase to 100%. Additionally, a paired sample t-test indicated that there was a significant difference ($p<0.005$) in the mean score between the pre and post-test, suggesting that there was a significant change in the clinicians' perception of the mobile application after using it. The usability survey revealed that at least 70% of clinicians strongly agreed and 30% agreed that they would use the mobile application frequently, with 100% confidence in its utilization. About 90% thought it was easy to use. Based on the overall responses from the clinicians, the application is viewed as intuitive and user friendly.
Conclusions*:* The goal of this quality improvement project was to determine the usability and usefulness of an EHR mobile application. Findings from surveyed clinicians indicated that the mobile EHR application is user friendly and that it will allow increased access in order to provide a high-level of patient care.

Implementing Necesidades Paliativas and Chronic Liver Disease Tools within the Transplant Unit

Susanne Gaines

Problem & Purpose: Liver disease is often associated with high symptom burden and long hospital course, subsequently leading to decreased quality of life. For patients considered unsuitable for transplantation, the alternative treatment options are supportive management and palliative care (PC). The most significant barrier to early PC is the failure to identify patients who may benefit. Currently, transplant health care professionals have limited PC education, as well as understanding of primary PC and PC service flow. The purpose of this quality improvement (QI) project is to identify non-transplantable liver disease patients' unidentified unmet PC needs, utilizing two validated tools (Necesidades Paliativas [Palliative. Needs]) (NECPAL) and Chronic Liver Disease Questionnaire (CLDQ), and integrate them within routine nursing care activities in the transplant unit.

Method: This quality improvement project was guided by the Mobilize-Assess-Plan-Implement-Track process model. Over a 12-week period, nurses and nurse practitioners (NPs completed the tools for every non-transplantable liver disease patients. The NECPAL screening tool was used to identify patients in need of PC, and was completed by the NPs. The CLDQ tool was completed by the bedside nurse and was used to assist with identifying symptoms and quality of life.

Results: A total of five NPs and ten staff nurses received education and training on the NECPAL and CLDQ tools from the DNP student project leader. Sixteen non-transplant liver disease patients ages ranging 29 to 68, median age 52, majority (69%) female participated. Percentage of patients who completed the CLDQ and reported symptoms of unmet needs an average of 80%. The most symptoms reported were abdominal bloating and discomfort, worry, and family impact. The percentage of both screening tools goal 100% average (50%, n=9) were completed by the nurses and NPs. The percentage of patients completing the NECPAL an average of 60%, indicated a need for integration of palliative care. The unintended barriers included change in medical director, nurses completing one of the two screening tools, and patients deeming non-transplantable on the transplant service admitted to other units.

Conclusions: Implementation of NECPAL and CLDQ tools identified multiple unmet PC needs in non-transplantable liver disease patients. Nurses and nurse practitioners voiced confidence and ease in use of the tools identifying symptoms and clinical indicators for the identification of unmet palliative care needs and to promote incorporation into routine nursing care in liver disease patients who were deemed non-transplantable.

A Team Approach to Improve Wound Care Quality in Long-Term Care

Jillian E. Haney

Problem and Purpose: Elderly long-term care residents are vulnerable to developing chronic wounds as a result of multiple factors related to aging, immobility, nutritional deficits, and medical comorbidities. Chronic wounds may result in uncontrolled pain, infection, hospitalization, amputation, and increased mortality. On one long-term care unit, lack of adequate wound surveillance and treatment has resulted in delayed healing rates. The purpose of this quality improvement project was to implement a wound care team, consisting of a nurse practitioner and licensed practical nurse to provide direct wound care surveillance and treatment for all residents of one long-term care unit, and collaborate with the inter-professional team to improve outcomes.

Methods: On a weekly basis, the team assessed all active wounds, collecting measurements (length, width, depth in centimeters), and data on wound quality (tissue type, drainage, and etiology); and reviewed current treatment modalities. This data was recorded by the licensed practical nurse in the unit wound book, and presented weekly during inter-professional safety meetings, including physical therapy, social work, nutrition, and unit management, with the goal of developing a collaborative, resident-centered plan of care.

Results: Over the 13-week implementation period, weekly data analysis revealed no overall change in wound incidence or prevalence, however, the accuracy and completion of nursing documentation improved from nearly 50% at the start of the project, to nearly 90% in the final weeks of data collection. Improved data accuracy allowed better inter-professional team decision-making. Changes facilitated by the inter-professional team process included enhancing the use of offloading devices, nutritional interventions, increasing access to high-quality wound supplies, and clarifying resident and family goals of care.

Conclusion: A team approach is a feasible way to improve wound care quality in the long-term care setting. This process allows increased inter-professional communication and collaboration through enhanced data sharing, and enables needed changes made with group decision-making. Longer term studies could provide more insight into the effect of this process on wound incidence, prevalence, and healing rates.

Fall Prevention Tailored Approach to Decrease Patient Falls

Christina M. Kontogeorgos

Problem & Purpose: Hospitalized patients are at risk for falling by being in an unfamiliar environment, compounded by their disease process and pharmacologic influences. The number of inpatient falls within the organization has gradually increased over the last two years, specifically on the Progressive Care Unit (PCU). The PCU experienced a 16% increase in falls from calendar year 2017 to calendar year 2018. Implementation of a quality improvement project to improve identification of patient individual fall risks, increase compliance of fall risk screening documentation and decrease the amount of inpatient falls on the PCU.
Methods: All registered nurses on the PCU (n=37) attended education sessions on implementing patient specific fall interventions and performed a competency that demonstrate correct documentation of Johns Hopkins Fall Risk Assessment Tool (JHFRAT). A standardized fall sign was placed in all patients rooms located on the PCU displaying notification of the patients fall risk and provide information on the individual's risk for falling. All patients admitted and transferred to the PCU were included in this quality improvement project. Data collected included compliance of accurate JHFRAT documentation, fall signage compliance and patient verbalizing fall risk while in the hospital setting. The fall rate on the PCU was measures by unit falls per 1,000 occupied bed days, the number of falls was compared pre-intervention vs. post-intervention.
Results: The project was implemented on the PCU and data was collected starting on September 30 and continued until November 24, 2019. JHFRAT documentation compliance average was 95% during intervention period. Standardized fall poster compliance average was 83% during intervention period. Patient verbalized fall risk while in the hospital setting compliance average was 75% during intervention period. The same number of falls occurred during the pre-intervention period and the intervention period, the pre-intervention had the highest occurring in a one month period (October 2018).
Conclusion: Utilization of the JHFRAT identifies patients risk for falling while in the hospital setting. A visual aid at the patient's bedside assist the patient in identifying their individual risk for falling while in the hospital setting.

Reducing Inappropriate Selection of Penicillin Alternatives in Outpatient Surgery Patients

Robert Mitchell

Problems and Purpose: Current recommendations suggest cefazolin, a first-generation cephalosporin, as the first line choice for perioperative surgical prophylaxis. Providers refrain from its administration due to suspected cross sensitivity reactions in patients with penicillin allergies. Penicillin alternatives cause an increased risk of surgical site infection, an increase in adverse/anaphylactic reactions, and higher rates of patient complications. The purpose of this project is to formulate strategies to reduce the rate of erroneous penicillin alternative administration.

Methods: A retrospective quality improvement project was conducted at a large Level-1 Trauma Center in the Mid-Atlantic Region. The data elements collected were specifically focused on outpatients undergoing colorectal surgery over the course of a two-year period (2017-2019). Descriptive statistics were measured using frequencies and percentages regarding the patient's collective information. One-on-one interviews were also conducted with staff members. The interviews were focused on understanding the barriers to protocol adherence.

Results: Over the course of two years, 454 patients underwent colorectal surgery with 5.7% (n=26) reporting an allergy to penicillin. There were 34% (n=9) of patients who had no allergic reactions appropriately charted in their EHR. Out of those patients, 69.2% (n=18) received some form of penicillin alternative for antibiotic prophylaxis prior to surgery. Finally, only 7% (n=2) of patients had a true indication for alternative antibiotic administration based on the institutions protocol. Common themes found in interviews included: lack of communication, lack of accountability, and relying on the "other" provider to document the allergy.

Conclusion: Utilization of a standardized preoperative assessment, staff education, and increased pharmacy collaboration could lead to a significant decrease in the use of penicillin alternatives. The next steps of the project would be continued surveillance of recommendations and further analysis for possible areas of project sustainability and improvement.

Improving Primary Care Engagement by Clients in an Outpatient Behavioral Health Setting

Mariel V. Otter

Problem & Purpose: People with a serious mental illness (SMI) or who have other behavioral health (BH) needs suffer a 10-25 year reduction in life expectancy as compared to the general population. In Maryland, the mortality rate is three and a half times higher for persons with SMI; and chronic, preventable illnesses are the leading cause of death for this population. The purpose of this quality improvement project is fourfold: 1) to implement and evaluate a program for the assessment of behavioral health clients' primary care status; 2) individualized treatment planning to address their primary care needs; 3) to implement a referral tracking system to ensure that their primary care needs are met; and 4) to integrate the primary care records into the behavioral health chart to improve coordinated care and health outcomes.
Methods: A primary care utilization tracking protocol was implemented for all BHOC clients over a 12-week period. The care coordinator initiated the following: 1) assessment of all patients for a current primary care provider (PCP) and need for a PCP appointment; 2) provision of needed PCP appointments; 3) tracking protocol for PCP appointment attendance; and 4) request and tracking receipt of medical records from the PCP. During implementation, an Excel spreadsheet was used to track data at each visit, including dates of the care coordinator assessments, referrals made, appointments kept, dates that PC records were requested, and PC records received. Data were analyzed using pseudo-identifiers to maintain client's privacy.
Results: Of 452 clients, 81 percent were assessed for having a PCP. Of these, 92 percent (n=414) had a PCP at the time of assessment. There was no significant difference for patients with PC records between the baseline and implementation periods $X^2(1, N=977)=0.3599$, $p=.5485$). Of 24 patients who needed an appointment, 22 (92%) received an appointment and PCR was requested for 16 (67%). All records were received within 24 hours of request.
Conclusion: A high percentage of clients had a PCP, and recent PCP visit at baseline only allowed for a modest improvement in PC engagement over the short implementation period. The majority of clients found to have an appointment need (92%) were given a PCP appointment. Client PCP appointment follow-up was strong (67%), considering the short implementation period. Care coordinators reported that screening for PC appointment needs at each BHOC visit was a sustainable practice change that improved interdisciplinary collaboration and improved timely receipt of PCP records.

Implementation of a Standardized Screening Tool and Referral Process for Sports Physicals

Chelsea Schafer

Problem & Purpose: Sudden cardiac death (SCD) from hypertrophic cardiomyopathy is the leading cause of death in student athletes 12-25 years of age in the United States. To decrease the risk of SCD, the American Heart Association (AHA) recommends preparticipation cardiac screenings with a 14-element cardiac screening tool for all student athletes. The purpose of this project is to implement a standardized screening tool and referral process for sports physicals in an urgent care center.

Methods: During implementation of this quality improvement project, the urgent care's preparticipation sports physical form was updated to include the recommendations from the AHA. Education on these updates and when to refer a patient to cardiology prior to athletic clearance were provided via a voice-over PowerPoint that was emailed from the Chief Medical Officer to all staff. This information was also displayed at the site for providers' reference on laminated notecards and a trifold poster board.

Results: Over the 14-week implementation period, there were a total of 70 student athletes who presented for preparticipation sports physicals at this urgent care center and 24 (34%) of those athletes were screened utilizing the updated screening tool. Of the 70 total athletes screened, four screened "at-risk" based on the recommendations from the AHA, 0/4 (0%) at-risk athletes were referred for cardiovascular evaluation and were cleared for sports activity.

Conclusion: The overall recommendation is to spread this implementation to other urgent care locations within this organization. Future recommendations also include having the preparticipation sports physical form incorporated into the electronic health record. To improve referral compliance, it is recommended to have pop-up alerts for a cardiology referral for any student who screens positive in any component that puts them at risk for heart disease.

Palliative Care Screening Implementation within the Medical Intensive Care Unit

Nicole Troiani

Problem & Purpose: There are over 5 million intensive care unit (ICU) admissions each year with a mortality rate up to 29% and $108 billion dollar cost of care (SCCM, 2018). Palliative care is an essential part of comprehensive care in the ICU, however, it is underutilized in the medical intensive care unit (MICU) of a large urban academic medical center despite the unit reporting the highest mortality rate in the hospital. The purpose of the quality improvement (QI) project is to increase palliative care utilization in the MICU through the integration of nurse driven screening criteria that, when met, suggests the need for a palliative care consult.
Methods: The QI project took place over a 13-week period. All patients admitted to the MICU during the implementation phase received a validated palliative care screening completed by the bedside nurse (George et al., 2015). Positive screenings were then discussed and plan of care documented by the interdisciplinary team on daily rounds. Completed screening tools were reviewed every other day to determine screening completion, documentation of family meeting notes, palliative care consults placed, and reason for not consulting palliative care despite positive screening.
Results: Compliance with palliative care screening ranged from 79-100% (average 92%). Percentage of positive screenings ranged 18-50% (average 29%). Percentage of positive screenings with a consult ranged 0-60% (average 20%). The most common reason for lack of palliative consult was a planned "family meeting" (42%), however, less than 50% of these patients had a family meeting note documented. Comparing data 8 months pre-implementation to 13 weeks of implementation: average length of stay (LOS) for patients with palliative care consult decreased from 68.61 to 11.75 days; admission to consult mean decreased from 22.69 to 9.16 days; Palliative care consultation rate decreased from 13.86% to 10.39%.
Conclusion: Despite utilization of a validated screening tool, palliative care consultation rates decreased. Physician preference greatly impacted consultation rates and highlighted the need to change knowledge and opinions related to palliative care. Finally, results support that screening leads to earlier palliative care consult, decreased LOS, and likely associated cost.