

2018 DOM HealthCare Quality Symposium – Poster Session

Winner - Outstanding Faculty Project

Author – Hillary Lum, MD, Faculty

Division/Department – Geriatric Medicine / Department of Medicine

Title

UCHealth Patient use of a Medical Power of Attorney via My Health Connection

Abstract

Problem Statement: Will patients use advance care planning tools through a patient portal to appoint a health care decision maker?

Approach: Using input from stakeholders, this project implemented patient portal-based advance care planning tools, including a first-of-its-kind Medical Durable Power of Attorney (MDPOA) form in the UCHealth electronic health record. The tools, which are available to more than 290,000 patients with a patient portal account, were introduced in three phases in 2017. Phase 1 included patient education, links to external resources, and an online message to a centralized support team. Phase 2 included the MDPOA form. Phase 3 provided patients with the ability to view and print all advance directive documents stored in the electronic health record through the patient portal. We conducted a multi-method evaluation of patient characteristics, patterns of use, and details related to healthcare decision maker documentation during the first 8 months of implementations. A subset of patients (n=46) participated in interviews on usability, experiences, and reasons for use. We used thematic analysis to identify key patient perspectives.

Outcomes: Without promoting the tools, 1,160 patients used the tools (median age 45 years, range 18 - 98 years). Patients were mostly female (68%) and received primary care through the health system (60%). 1033 (89%) users completed an MDPOA form, 23 (2%) called or sent online messages, and 98 (8%) viewed the MDPOA form but did not complete it. Of those who completed an MDPOA form, 60% had no prior documentation of a decision maker, 29% had only an orally appointed decision maker, and 7% had a prior MDPOA form on file. Patients described the tools as accessible and time efficient to use, especially for choosing a health care decision maker. Patients described multiple reasons for completing the MDPOA form, including prior experiences relating to decision making; living with chronic illness; wanting to simplify plans for family; and wanting to prepare for unexpected situations.

Next steps: Given that patients were motivated to complete MDPOA forms based on personal experiences and desires to plan for future situations, next steps include coordinated strategies for patient outreach and integration into clinical practice.

2018 DOM HealthCare Quality Symposium – Poster Session

Winner - Outstanding InPatient Project

Authors – Nicole Huntley, CNS, Nurse Educator

Division/Department – Hospital Medicine, UC Hospital Professional Development

Title

Conquering Sepsis: Using Interprofessional Quality Improvement to Reduce Sepsis Mortality

Abstract

Background: The CDC reports approximately 250,000 Americans die from sepsis each year, and sepsis is the most expensive condition treated in U.S. hospitals, costing \$24 billion in 2013. At our tertiary, academic medical center, in 2016 we found that 30 percent of patients diagnosed with sepsis in the hospital died. For septic inpatients the average time from sepsis recognition to provision of evidence-based antibiotic therapy was 5 hours.

Purpose: We sought to reduce sepsis mortality at our hospital by 10%, by reducing the average time from sepsis recognition to antibiotic infusion to less than 60 minutes.

Method: We developed an interprofessional team, including nurses, physicians, pharmacists, and nurse educators. We developed a detailed process map of sepsis care and gathered baseline data on the average time required to complete key activities included in the sepsis bundle outlined by the Centers for Medicare and Medicaid Services. We convened a rapid improvement event to determine root causes of delays in care, brainstorm ideas for improvement, and identify key interventions. Over a 8-month period, we tested 3 interventions on 4 pilot units at our hospital: 1) Create a more reliable alert system using the electronic health record (EHR) to signal sepsis is possible/likely; 2) create a new team-based response, in which a bedside RN, resource nurse, provider, and pharmacist collaborate to evaluate the patient at the bedside and place key orders for evidence-based care; and 3) create a standard workflow (checklist) to clarify roles, responsibilities, and compliance with evidence-based care, to be completed by the response team.

Results/Outcomes: Between January and August 2017, the time necessary to administer antibiotics following a formal sepsis alert in the EHR dropped from 5 hours to 73 minutes on pilot units. The hospital-wide sepsis mortality index declined from 0.95 during the 12 months prior to the intervention to 0.81 during the intervention period, resulting in 39 lives saved in our hospital.

Implications for Practice: Collaboration amongst an interprofessional team, combined with disciplined utilization of quality improvement tools, can result in dramatic reductions in sepsis mortality.

2018 DOM HealthCare Quality Symposium – Poster Session

Winner - Outstanding Ambulatory Project

Author – Geoffroy Fauchet, MD

Division/Department – General Internal Medicine, Department of Medicine

Title

Knocking Out Naloxone

Abstract

Statement of the Problem: The opioid overdose epidemic in the United States killed more than 42,000 people in 2016. Veterans are twice as likely to develop an accidental opioid overdose compared to the general population. Reversing opioid overdose with naloxone is known to prevent opioid related mortality, yet most veterans on chronic opioids at the Denver Veterans Administration (VA) do not have an active naloxone prescription.

QI Approach: This project aimed to increase the number of naloxone prescriptions dispensed to patients on long-term opiates at the Denver VA Firm A clinic by 50% by April 2018. This resident-led quality improvement project involved developing a run chart to track the monthly number of naloxone prescriptions dispensed, which was the primary outcome of the study. The baseline data showed that an average of two naloxone prescription were dispensed each month during 2017. A check-list intervention for patients on long-term opioid therapy was implemented for providers. This list included various recommended risk mitigation strategies required by the VA with one item dedicated specifically to prompting providers to review the chart for an active naloxone prescription. If the patient did not have an active naloxone prescription, providers could write for one and have the nursing staff and pharmacists reach out to the patient to provide education on proper naloxone use.

Outcomes: Following implementation of the intervention, there has been an average of 7.3 naloxone prescriptions dispensed per month with 14 prescriptions dispensed after the first month the check list was distributed. This is a 100% increase for the total number of active scripts from baseline and is 3.7 times greater than the average monthly rate in 2017.

Next Steps: Addressing the opioid epidemic at the Denver VA is a multidisciplinary approach that requires a coordinated engagement of patients, providers, pharmacists, and nursing staff in the outpatient and inpatient setting. While adding a single item to an established checklist was a successful intervention that standardized the prescription of opioids and naloxone, further interventions are needed to ensure the appropriate prescriptions of opioids and naloxone to help mitigate further morbidity and mortality associated with opioid use.

2018 DOM HealthCare Quality Symposium – Poster Session

Winner - Outstanding HealthCare Partners Project

Authors - Christan Bartsch MSHS PA-C MPH, Shannon Haas BSN RN CMSRN, Angela Hill MSN RN CMSRN

Division/Department – UCH Hospital, Advanced Practice Providers and Registered Nurses

Title

Improving outcomes after pancreatic surgery: a multidisciplinary approach to decreasing LOS, reducing morbidity and readmissions

Abstract

Introduction: Enhanced Recovery Protocols after surgery have become increasingly utilized across a variety of surgical specialties. Pancreatic surgery, including pancreaticoduodenectomy, is associated with a 40-60% morbidity rate and length of stay (LOS) ranging from 14-20 days. Using ERAS protocols to improve outcomes after pancreatic surgery can have substantial improvements on patient outcomes and decreasing financial costs.

Methods: A care team led by a Physician Assistant (PA), a Nurse Manager and Nurse Educator attended the 1-year program through the IHQSE Program. We recruited physicians and RNs from STICU and Pre-Procedure Services to be involved in these initiatives. Baseline data on length of stay (LOS), return to ICU, return to OR, post-operative complications, and readmissions were tracked beginning in Jan 2016. In July 2016, a focus on pre-operative nutritional optimization pathway, intra-operative and post-operative fluid directed management, standardized pre-operative antibiotic pathway and standardized post-operative care pathway were implemented. Additionally, an emphasis on education was made common practice for patients, residents and RNs. A monthly Pancreatic Surgical interdisciplinary meeting was led by the PA and RN to discuss current practice and QI initiatives.

Results: Baseline data between January – June 2016 showed an average LOS of 10 days, ICU LOS of 3 days, 24% readmission rate, 0% mortality rate, 6% return to the OR and 12% return to STICU. There was a 22% rate of post-operative complications. Between July 2016-February 2017, the LOS decreased to 8.9 days, ICU LOS to 2.2 days, readmission rate to 13%, OR return rate to 3% and return to the ICU to 4%. Post-operative complications decreased to 7% among patients within the first 30 days. This translated to over a \$400,000 savings for the institution over this time frame. Following Voice of the Patient interviews, education packets and outreach have also been implemented and created.

Conclusion: APPs and RNs offer a unique opportunity to spear head quality improvements at large academic hospital institutions and dramatically improve patient management. Given the special relationship with attending physician, RN staff and residents, APPs and RNs serve as the optimal link between current practices and improving overall outcomes, especially after complex abdominal surgeries.

2018 DOM HealthCare Quality Symposium – Poster Session

Winner - Outstanding Physician Trainee Project

Author – Kelsi Deaver, MD, Fellow

Division/Department – Endocrine, Metabolism, and Diabetes / Department of Medicine

Title

Strategies to Reduce Readmissions for Hyponatremia after Transsphenoidal Surgery for Pituitary Adenomas

Abstract

Purpose: Disorders of water balance from altered antidiuretic hormone (ADH) secretion are a common post-operative complication of transsphenoidal surgery (TSS). Hyponatremia from isolated syndrome of antidiuretic hormone secretion (SIADH) occurs in upwards of 25% of TSS cases (1). Hyponatremia most frequently occurs on post-operative days 6-10 and is the most common cause for rehospitalizations, occurring in 3-15% of patients (2-5). Despite the prevalence of this problem, standard guidelines for post-operative care, beyond a post-operative sodium measurement, have not been developed (6). We present our results from implementation of a two-week 1.5 liter/daily fluid restriction on readmission rates for hyponatremia.

QI Approach: A retrospective chart review was performed on 295 patients that underwent TSS for pituitary adenomas at the University of Colorado, between March 2014 and March 2017. Groups were divided into those before and after the implementation of a two-week, 1.5 liter daily fluid restriction and measurement of a serum sodium level 7 days (+/- 2 days) after discharge. A standard-of-care approach for variable degrees of hyponatremia was also utilized to guide hyponatremia management. Patient demographics, hospital course, post-operative complication rates, and rates of hospital admissions for hyponatremia were then evaluated.

Outcomes: Readmissions for symptomatic hyponatremia within 30 days of TSS occurred in 9 of 118 (7.6%) of patients prior to fluid restriction implementation and in 4 of 169 (2.4%) of patients in the post-implementation, fluid-restricted group (p-value=0.04): a 70% reduction in hospitalizations. The two groups were similarly matched for pituitary tumor sub-type, age and gender. None of these factors were predictive for hyponatremia. Importantly, the mild fluid restriction did not result in any hospital readmissions for hypernatremia.

Next Steps: Our implementation of a mild fluid restriction (to 1.5 liters daily), in addition to a single post-operative serum sodium level, is an effective approach to preventing readmission for hyponatremia after TSS for pituitary adenomas. This has become our standardized approach to post-TSS management and we are sharing our results with other Neurosurgical Institutes.