Reducing Preventable Readmissions for Patients with Diabetes on the Parkland Inpatient Hospitalist Units

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Background

High rates of 30-day readmission are both costly for the hospital and detrimental for the patient, and diabetes remain one of the greatest risk factors for increased 30-day readmissions. Previous studies have shown that the following best practices can significantly reduce 30-day all-cause readmission rates for patients with diabetes:

1. Nursing-Provided Diabetes Inpatient Education in accordance to the American Diabetes Association (ADA) Guidelines
2. 12 Step Standardized Discharge Procedures from Project Re-Engineered Discharge (RED)

Setting and Local Problem

Parkland Hospital and Health System is a safety-net hospital serving Dallas and surrounding counties with over 36,000 inpatient adult discharges annually. The latest available benchmark, reflecting the 2010 data, for 30-day all-cause readmission rate for patients with diabetes was 19.8%. The 30-day all-cause readmission rate for patients with diabetes within the Parkland hospitalist units is 18.7%. The 6-year difference in benchmark data and project collection periods suggests there are additional opportunities to reduce preventable readmissions for patients with diabetes at Parkland Hospital.

Define Phase

Based on literature reviews and interviews with nurses, physicians, and patients, we created a CTQ diagram to determine the drivers for reducing preventable readmissions among patients with diabetes.

Measurement and Quality Gap Analysis

Quality Gaps in Diabetes Inpatient Care Process:

- High-level process maps of the inpatient discharge procedures (A) and the nursing provided diabetes care (B) on the Parkland hospitalist units were made from close observations of the healthcare staff and stakeholder interviews. The maps allowed for the identification of problem steps (in yellow) that do not adhere to best practice. Preliminary observations also show that the compliance rate for using the teach-back method on providing patient diabetes survival skill education is close to 0%.

Benchmarking Data:

According to the Healthcare Cost and Utilization Project (HCUP) conducted by the Agency for Healthcare Research and Quality (AHRQ), the national benchmark 30-day all-cause readmission rate for patients with diabetes is 19.8%. The diagnosis criteria was based on ICD-9 codes, and the data was collected from January through November of 2010. The 30-day all-cause readmission rate for patients with diabetes on the Parkland hospitalist units is 18.7%. The diagnosis criteria was based on ICD-10 codes, and the data was collected from August 2015, the opening of the new Parkland Hospital, through May 2016.

Conclusion

Even though the 30-day all-cause readmission rate for patients with diabetes on the Parkland hospitalist units is lower than the national benchmark rate, our measurements and quality gap analysis show that the Parkland diabetes care process, hospital policy, staff training, and the EPIC EMR do not fully adhere to the critical-to-quality best practices for reducing 30-day all-cause readmissions for patients with diabetes. Thus, there exist a need and opportunities to further reduce preventable readmissions for patients with diabetes admitted at Parkland Hospital.

Aim Statement

The primary aim of this project is to reduce the 30-day all-cause readmission rate for patients with diabetes from the Parkland hospitalist units by 10% at the end of the project in January 2019.

Project Design

The DMAIC methodology was used for this project. We first defined the project with stakeholders from Parkland Hospital. Next, by interviewing and shadowing all personnel contributing to diabetes care, we constructed a detailed process map of inpatient diabetes care on the Parkland hospitalist units. Through the use of literature review and expert opinions, we also identified multiple critical-to-quality (CTQ) best practices that are essential for reducing preventable readmissions among patients with diabetes. Finally, by using quality gap analysis, we identified certain predefined CTQ elements that are missing in diabetes care process, discharge procedures, hospital policy, staff education, and the EPIC electronic medical record (EMR) at Parkland.

Next Steps:

Improvement and Control Phase: Changes to the Parkland policy, nursing orientation process, and the EPIC EMR in regards to diabetes inpatient care are currently being drafted. We hope to use hospital policy, staff training, and EMR documentation to increase compliance to best practices and close the quality gaps revealed by our analysis. Once a full pilot intervention has been developed, we will conduct an FMEA to determine the efficacy of the pilot interventions. Data from the implementation will be collected over a span of at least 6 months.