

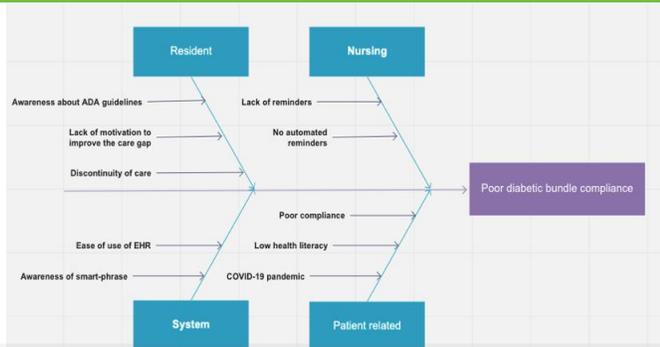
INTRODUCTION: Background

- ❖ Diabetes mellitus has a prevalence of 9.4% in USA and associated with major comorbidities.
- ❖ Multiple randomized clinical trials including the UK-PDS and ADVANCE have established that lowering A1C and LDL of patients with DM decreases the risk of adverse cardiovascular events
- ❖ American Diabetes Association (ADA) sets forth annual guidelines on preventative measures (mentioned in metrics) to prevent the onset of severe complications
- ❖ Residents are at the front-line in underserved areas like Sayre, PA
- ❖ Previous studies have demonstrated poor diabetes care in resident clinics vs attendings and found significant decrease in patient satisfaction (56.5% vs. 71.3%) as well as lower diabetic preventative evaluations (43.3% vs. 69.1%)
- ❖ Alliance of American Medical Centers created a national initiative to develop material for teaching quality improvement in residency curriculums and ACGME has emphasized on patient safety and quality improvement

AIM: OBJECTIVE

The purpose of our study was to improve diabetic care bundle in resident clinics by >7.5% in 7 months (from 46.9% to 54.60% from August 10 2020 to April 5 2021) through QI project, with A1C value as primary outcome and other ADA guidelines as secondary outcomes

DESIGN: ROOT CAUSE ANALYSIS



RCA demonstrated A1C bundle compliance rates were 46.1% with residents, compared to 62.5% for the attendings, with other variables like nursing, system and population being constant. Therefore, it was determined to be more successful to target resident education and build awareness during intervention. The least compliance was A1C (49.3%) when compared to other scores (>80%), therefore focus was to improve A1C

METHODS: PDSA CYCLE



METHODS: INTERVENTION

- I. Care team formation**
-Consisted of clinic director, care coordinator, nurse, Resident, faculty
- II. Pre-visit planning/ chart audit**
-To identify deficiency and labs done before visit to be addressed
- III. At Visit planning/Huddles**
-Early morning Huddles and notify and address gaps at multiple levels.
- IV. Nurse outreach calls**
-For gaps not addressed during clinic visit
- V. Resident workshops**
- VI. Removing non diabetics from registry**

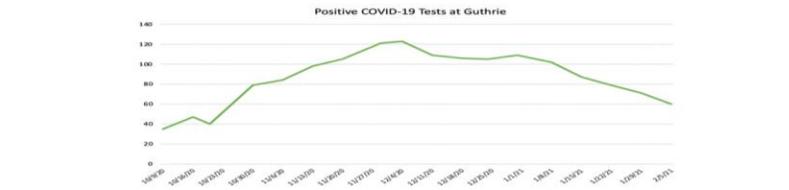
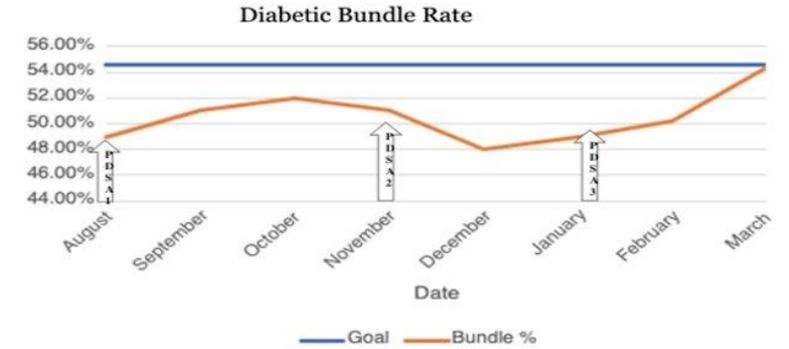
This study utilized PDSA framework. We performed 3 cycles 3 monthly. It had 2 stages. Planning stage had resident education in October 2020 and intervention with workshops in February and March 2021.

METHODS: Metrics

The data collection was from Research Director. An electronic medical record query set weekly

- ✓ A1C check every 6 months if A1c is below 8 and every 3 months if A1C is above 8.
- ✓ Annual check of fasting lipid profile <70 or on high intensity statins in age 40-75
- ✓ Urine microalbumin/creatinine check or has seen Nephrologist in last 1 year.

OUTCOMES: RESULTS



DISCUSSION

PDSA-1 identified non-compliance / low health literacy. PDSA-2 identified patients' hesitation during the COVID-19 pandemic. The graph above shows effect of high COVID-19 cases (bottom chart) on the bundle score (top chart). PDSA-3 found that residents had difficulty in accessing EHR dashboards and therefore intervention was addressed with many workshops. In conclusion of the QI project, among all, PDSA 3 was most beneficial. During pandemic, the workshops were limited to online platform only. With remote guidance to all the residents, we were able to target most of the residents. We were able to guide them, troubleshoot problems and thereby meet all care gaps. This improved the goal A1C level from baseline 49.3% to 58.5% (+9.2%). Since inception, for the first time in 3 years, post intervention data suggests we were able to reach the goal of 54.6% and provide guidance for future studies.

REFERENCES

- Centers for Disease Control and Prevention. National Diabetes Statistics Report, 2017. Atlanta: Centers for Disease Control and Prevention, U.S. Dept of Health and Human Services; 2017.
- Fleming BB, Greenfield S, Engelgau MM, Pogach LM, Clauser SB, Parrott MA. The Diabetes Quality Improvement Project: moving science into health policy to gain an edge on the diabetes epidemic.