QUALITY IMPROVEMENT

**The Role of a Quality Improvement Board Position in Improving Care at a Student-Run Free Clinic Through the Plan-Do-Study-Act Model**

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**Introduction:**

KNIGHTS (Keeping Neighbors in Good Health Through Service) Clinic is a medical student-run free clinic that provides free, quality healthcare to uninsured, underserved patients in Orlando, Florida with emphasis on preventative care to reduce morbidity and mortality in this at-risk population. In 2017, KNIGHTS clinic created a Quality Improvement (QI) board position and completed a Plan-Do-Study-Act cycle from October 2017 – February 2018. We used reports from our electronic medical records to identify patients missing recommended preventative services and fourth year medical student (MS-4) volunteers contacted patients to provide education and schedule these services. The study showed a measurable increase in preventative service rates, but a subsequent decline occurred from February – August 2018. This decline was attributed to the addition of several new patients to the clinic roster as well as issues with long-term implementation of the MS-4 volunteer program.

**Objective:**

To perform another Plan-Do-Study-Act cycle with the goal of achieving a sustainable increase in preventative service rates.

**Methods:**

Plan – We performed a needs assessment by reviewing patient charts and collecting feedback from other board positions. Needs identified were: a shorter learning period for the new QI board member, avoidance of a gap in volunteers following graduation, coordination between the MS-4 volunteers and the care coordination team, and consistency in providing preventative services at routine office visits.

Do – Several interventions were implemented: improved documentation for the yearly board transition, earlier recruitment of rising MS-4 volunteers, a shared waitlist for primary care appointments to coordinate scheduling, and use of the patient education team for preventative services at routine visits.

Study – Monitoring a panel of electronic clinical quality measures (eCQM) will quantify the effect of these implementations.

Act – Depending on the study results, the interventions will be integrated into the clinic, altered, or replaced.

**Results:**

Preliminary results from August – October 2018 showed an increase for cervical cancer screening (77% to 83%), colorectal cancer screening (54% to 60%), tobacco cessation counseling (50% to 100%), and yearly lipid screening (61% to 66%). A decrease was found for controlled hypertension (73% to 67%), HbA1C testing every 3 months for diabetics (67% to 33%), and nephropathy screening yearly for diabetics (100% to 67%). eCQMs with less than 5% change (a preliminary limit for significance) included uncontrolled diabetic HbA1C >9.0%, yearly eye exams for diabetics, yearly foot exams for diabetics, depression screening, and breast cancer screening. Limitations to the data include the short time period of the preliminary results and a patient population of 43 (with 3 diabetics and 2 tobacco users). Final data will be available in February 2019, including a McNemar Test to evaluate statistical significance.

**Conclusion:**

Creation of the QI board position resulted in a measurable improvement in quality of care at KNIGHTS clinic. Continued use of the Plan-Do-Study-Act model is underway to achieve sustainable implementation of this improvement, largely by addressing issues related to the frequent turnover of student leaders and volunteers. This model for a QI student leader can be adopted by other student-run free clinics to improve quality of care.