# PRAGMATIC LEARNING: INTERPROFESSIONAL QUALITY IMPROVEMENT CURRICULUM FOR HEALTHCARE STUDENTS

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**Background:** Quality Improvement (QI) improves patient outcomes by providing tools to apply evidence-based knowledge towards patient care. Many professional societies endorse teaching QI to health professions students to prepare them to utilize this skill in their future clinical practice. In hospital (or inpatient) settings, QI is increasingly an interprofessional endeavor; however, there is little research on the feasibility of bringing together interprofessional groups of health professions students to learn about and apply QI as part of their clinical education.

**Objectives:**

1. Improve students' confidence in QI skills as measured by quality improvement confidence instrument (QICI)
2. Improve students' interprofessional teamwork perceptions as measured by Student Perceptions of Interprofessional Clinical Education-Revised (SPICE-R) instrument.
3. Improve students' QI knowledge and skills as measured by Revised Quality Improvement Knowledge Application Tool (QIKAT-R)

**Methods:** The interprofessional QI curriculum involved second-year medical, second-year physician assistant (PA), and fourth-year pharmacy students rotating on general internal medicine inpatient teams at Duke Regional Hospital (DRH). The curriculum involved student's participation in 4 concurrent sets of weekly QI activities, integrated into their clinical learning and expanding over 4 weeks duration of the rotation. QI activities included didactic sessions, small group learning, QI assignments, and reflective writing. In order to have consistency across sites for medical student rotation, we had to drop off reflective writing, small group activities, and weekly QI assignments from the curriculum. From 4/2017 to 7/72017, the educational intervention focused on didactic sessions and value of QI in translating evidence-based medicine to patient's bedside. Pre and post-intervention SPICE-R and QICI electronic surveys as well as paper based QIKAT-R survey were conducted at the beginning and end of each 4-week rotation. Inter-rater reliability for QIKAT-R was initially calculated by assessing the response to 10 surveys, while blinded to the pre-vs. post-status of the responses, using Fleiss-Cohen weight. After reaching an accepted consensus, the raters independently graded each case. Differences in pre- and post-intervention scores were analyzed using t-test.

**Results/Outcomes/Improvements:** 60 students participated in the QI curriculum at DRH from 1/2017 to 7/2017 (medical students n=24, PA students n=24, pharmacy students n=12). Forty students completed the pre QICI whereas 39 students completed the pre SPICE-R survey (response rate=67%). Twenty-five students completed the post QICI and 23 students completed the post SPICE-R surveys (response rate=42%). Student confidence improved for all evaluated QI skills ($p<0.0001$) whereas the SPICE-R showed no statistically significant difference between the pre and post intervention results. We are in the process of analyzing the QIKAT-R survey responses.

**Significance/Implications/Relevance:** Participation in our QI curriculum significantly improved healthcare students confidence in performing a QI project, although it did not improve interprofessional teamwork perception. This intervention is novel because it involved a series of various instructional methods over a relatively short period of time (4 weeks) that were integrated into clinical learning experiences in a setting where QI efforts are prevalent. Standardization of expectations for students from leadership and leadership buy-in are of paramount importance for instituting educational curriculum for students.