Purpose: As part of curricular reform at the University of California San Francisco (UCSF) and Vanderbilt medical schools, students are directly involved in quality improvement activities. One of the challenges is finding faculty willing to take on the additional supervisory responsibility. We sought a solution by creating an incentive for faculty to do so.

Approach/Methods: Almost all physicians need to provide evidence of participation in “Improvement in Medical Practice” activities for Maintenance of Certification (MOC) credit. The American Board of Medical Specialties (ABMS) Portfolio Program approved our schools to pilot programs that would allow faculty who meaningfully supervise medical student QI projects designed to improve patient care to receive MOC Improvement in Medical Practice (“part 4”) credit.

Results/Outcomes: At UCSF, medical students are assigned to coach and participate in a longitudinal clinical microsystem clerkship during the first 18 months of medical school. During this time, they participate in QI activities under supervision of their coach at the coaches’ clinical site (“microsystem”), partnering with the interprofessional team in each microsystem. Coaches regularly review their students’ engagement in, and progress with the projects. Beginning September 2016, 180 medical students have started participating in QI projects under the supervision of 28 coaches.

At Vanderbilt, all students enroll in a three-part Quality Improvement course over 12 weeks in their third and fourth years as part of a longitudinal course spanning all four years called Foundations of Health Care Delivery. During this course, students work with clinical faculty and his or her team to implement an improvement project in the clinical setting of the faculty member. At the conclusion of the project, each student develops and presents a poster during the day of the course. From September 2015 to August 2016, 75 projects have been completed with over 100 students and 54 faculty coaches participating.

At both sites, faculty who wish to claim MOC Part IV credit attest that they were involved in working with the student to design the project and participate in more than one PDSA cycle as well as submitting a brief personal reflection on the process.

Discussion: These two models illustrate how faculty supervision of medical student QI activities can be rewarded with a tangible, professionally valuable, non-financial benefit. While previously described for supervision of GME QI activities applying this approach to medical student activities is novel. (1)

Significance: This approach can be applied by any medical school with a health system that is approved to award MOC 4 credit through the ABMS Portfolio Program or submitted directly to individual boards such as the American Board of Pediatrics, Internal Medicine, or Family Medicine for approval. Alignment of QI improvement processes, medical school QI initiatives, and physician MOC requirements helps to achieve greater integration of learners into clinical practice improvement activities and engagement of faculty into student educational improvement.


Level of Audience: Mid-career

Focus of Presentation: UME, CME, Continuum

PRESENTER: Jeffrey Tabas

AUTHORS/INSTITUTIONS: J. Tabas, S. VanSchaik, R.B. Baron, UCSF, San Francisco, California, UNITED STATES|D. Moore, J. Green, T.S. Bradham, S. Watkins, Vanderbilt University, Nashville, Tennessee, UNITED STATES|D. Price, American Board of Medical Specialties, Chicago, Illinois, UNITED STATES|
Purpose: Managing educational performance metrics and documenting achievement of goals has become increasingly important as undergraduate medical education (UGME) programs meet internal pressures and Liaison Committee on Medical Education (LCME) accreditation requirements. To achieve operational excellence, a culture of continuous quality improvement (CQI) is essential. Building on CQI-related performance dashboards from the business world (1) and academic scorecards (2), Wake Forest School of Medicine began utilizing a quarterly educational performance dashboard tool to track clerkship performance in academic year 2014-2015 and has continued through the current academic year (2016-2017).

Approach/Methods: The original dashboard included student rating of the quality of the educational experience (scale = poor, fair, good, excellent; goal = good/excellent > 80%), end of rotation evaluation of patient history and physical exam observation (goal = 100% adherence), NBME shelf exam scores (goal > national mean), and a table of identified strengths and opportunities based upon student evaluation comments. In academic year 2015-2016, other clerkship requirements including mid-clerkship evaluation (goal = 100% adherence), conditions and skills (goal =100% completed), final grade submission < 4 weeks (goal = 100% adherence), duty hour violations (goal = 0), and reported occurrences of mistreatment (goal = 0) were added. Due to the heightened emphasis of LCME on the learning environment, a question was placed on the clerkship evaluation and appraised on the dashboard to gauge a positive learning environment (goal = 100%) in academic year 2015-2016. Each quarter, the assistant dean of clinical curriculum reviews the dashboard with the clerkship director through a personal conversation. For accountability, a letter is sent to the chair from the associate dean of academic affairs and the program director of academic affairs with a copy to the Dean and residency director. These chair letters are assimilated and used as part of the chair’s annual performance review by the Dean. The dashboard is shared quarterly at the Undergraduate Medical Education Curriculum Committee (UMECC) and the Faculty Executive Council (FEC). The learning environment data is shared institution-wide through dissemination at an established safety huddle with representation across the entire healthcare team.

Results/Outcomes: A t-test was completed between the last academic year where the dashboard process was not employed (2013-2014) compared to the last full academic year where dashboards were fully implemented (2015-2016). There was a significant improvement (P = 0.002) in the quality of the educational experience (73.2 ± 5.76% vs 93.07 ± 1.55%) across all clerkships (Emergency Medicine, Family Medicine, Internal Medicine, Neurology, OB/GYN, Pediatrics, Psychiatry, and Surgery). While there was no significant difference in NBME shelf scores (p=0.12), there was a 4 point increase for OB/GYN.

Discussion: While resource intensive, the clerkship performance dashboards have provided transparency and accountability of key metrics in our institution improving the student experience.

Significance: Similar to the work of Shroyer et al (3), our process and data suggest that the dashboard is a useful framework to facilitate clerkship feedback and to coordinate successful clerkship change efforts.


Focus of Presentation: UME
PRESENTER: JaNae Joyner
AUTHORS/INSTITUTIONS: J. Joyner, K. Ford, K. Askew, M. O'Brien, Medical Education, Wake Forest School of Medicine, Winston Salem, North Carolina, UNITED STATES
Purpose: The US healthcare system is the most expensive and (perhaps) the least effective in the world, with wide health disparities. Calls for integrating quality improvement (QI) mastery into undergraduate medical education have come from national1,2 and international organizations3,4 yet models for this implementation have been lacking. Monitoring the value of engaging all medical students into quality improvement principles and practice has as yet not been done. Boston University School of Medicine’s (BUSM) primary affiliated health system is Boston Medical Center, the largest safety net hospital in New England. Improving the health of underserved patients is a primary motivator for students who select BUSM. This novel integration of QI and medical students demonstrates both feasibility and effectiveness in reducing health disparities as an exportable model to other organizations.

Approach/Methods: Armstrong5 recommended that successful QI curricula incorporate four elements: both didactic and experiential education, link with health system improvements, assessment of educational outcomes, and modeling QI in educational processes. At BUSM, we utilize these elements to incorporate medical students into QI throughout the curriculum. Every clerkship student since 2015 has participated in eight QI projects during required clerkships. The project leadership team has students and faculty from each department. The process was developed to link project and departmental, institutional, and national QI goals. The curricular project was framed by a didactic training in the principles of quality improvement methodology and a brief workshop, as well as an orientation to the goals and activities of each of the projects. Each clerkship introduces the evidence behind each departmental intervention, within the context of our clinical environment.

Results/Outcomes: Student knowledge, behaviors and outcomes were assessed. Students were given a pre and post curricular multiple choice test of knowledge of quality improvement principles. Students showed improved knowledge of QI interventions from the beginning to end of the year as evaluated by pre- and post-test scores. There was a significant change in scores between pre- and post-test responses (p=0.0007). The median of the difference score was 1 with a Q1 25th percentile of -1 and a Q3 75th percentile of 2. The number of total interventions for all clerkships also increased throughout the year from first to last block by 17.2%, from 226 to 265. A total of 2239 interventions were completed throughout the year. Clinical outcomes were assessed in many of the projects: Internal Medicine demonstrated students were able to improve patient health literacy and identified patients at increased risk for readmission. Pediatrics students demonstrated interpreters on rounds impacted improved clinical care. In Ob/Gyn student participation in the department initiative increased to 90% patient screening and appropriate VTE intervention.

Discussion: This project demonstrates the feasibility of full integration of a cohort of medical students into quality improvement projects across clinical sites. QI initiatives designed for medical student participation provide experiential education regarding health disparities, team-building skills, and clinical application of evidence-based medicine. A collaborative effort between clinical clerkships to facilitate medical student engagement throughout the third-year also provide leadership opportunities for students, residents and faculty with career interests in quality improvement and patient safety. Above all, medical students play active roles in quality improvement processes and contribute towards improved care for patients. This model demonstrates that forward motion toward U.S. and international recommendations can be made despite the current lack of universal faculty QI competence. Indeed, we are training the QI faculty of the future.

Significance: Developing medical school graduates already experienced in both didactic & experiential QI education has the capacity to both directly improve the safety and efficacy of graduate medical training as well as hasten the transformation of the healthcare system in the U.S. and abroad. This model is both adaptable and exportable to other clinical and educational environments, and its success demonstrates that implementing an integrated model in QI can be scalable to large groups of learners.

References:


Level of Audience: Mid-career
Focus of Presentation: UME
PRESENTER: Jodi Abbott
AUTHORS/INSTITUTIONS: J. Abbott, J. Moses, Boston University School of Medicine, Needham, Massachusetts, UNITED STATES