

How medical students drive ambulatory care quality improvement

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Medical students' pre-clerkship years shouldn't be devoid of authentic learning experiences. Indeed, medical schools across the U.S. are implementing longitudinal projects that give students important clinical insights while also adding value to health systems.

As a case in point, the University of North Carolina (UNC) School of Medicine has an experiential quality improvement (QI) curriculum for second-year medical students. It combines didactic, self-directed and experiential learning to help students understand and apply QI methodologies and population health concepts while building primary care QI projects.

The curriculum is profiled in a new instructor-directed textbook that describes in detail numerous value-added roles students have taken on at U.S. medical schools.

Following are highlights from "Primary Care Quality Improvement: The University of North Carolina at Chapel Hill," Chapter 6 of *Value-Added Roles for Medical Students*. Besides presenting case studies, the textbook also lays out the historical background and conceptual foundations that underpin value-added roles.

The textbook is part of the AMA MedEd Innovation Series, which provides practical guidance for local implementation of the education innovations tested and refined by the AMA Accelerating Change in Medical Education Consortium.

A three-pronged approach

The 16-week course begins with a didactic component that highlights the need to improve health care delivery. It also helps students get acquainted with QI methodologies and begin to use relevant tools, including driver diagrams and process maps. Students practice creating SMART (specific,

measurable, achievable, relevant and timely) aim statements and plan-do-study-act (PDSA) cycles, while interactive sessions facilitate peer and faculty feedback.

Meanwhile, a self-directed learning component has students complete seven web-based modules produced by the Institute for Healthcare Improvement.

Each student then collaborates with staff or clinicians at one of UNC's primary care practices to identify an area of improvement. Using a template for project management, they perform three PDSA cycles and receive assistance with project design, team formation and data collection. Faculty, clinical QI leads and coaches also provide help in creating end-of-project posters, which are used for evaluation.

Read about how value-added roles can transform medical education.

Improvement can be simple and easy

"Examples of projects at private practices include one student in a pediatric practice who worked to increase the screening for adverse childhood events," wrote the authors, who include Kelly Bossenbroek Fedoriw, MD, director of medical student programs for the UNC Department of Family Medicine. "She documented improvement by counting the number of forms collected recording the adverse childhood events."

Another student sought to increase mask use among patients with respiratory symptoms after learning that her practice had previously been forced to shut down during a flu outbreak. Her measure was the number of masks removed from the mask-supply box each day.

"Learning QI can be a relief and fun for students when properly incentivized and supported. Students are told to fail fast and learn what works," the authors noted, adding that failure is part of learning.

"Through purposeful reflection, students can gain insight into the complexity of systems, the nature of teams and leadership and the difficulty of change," they wrote. "These failures and successes change student perspectives on what constitutes a good doctor or practice."

The chapter also has insights on preceptor engagement, implementation, required resources and feasibility and sustainability.

More help for instructors



Value-Added Roles for Medical Students features additional case studies of longitudinal experiences, as well as guidance for planning, launching, sustaining and growing value-added roles.

The first book in the AMA MedEd Innovation Series, *The Master Adaptive Learner*, is an instructor-directed textbook designed to help faculty engender the habits of mind for lifelong learning in medicine in their students.

The third book in this series, *Coaching in Medical Education*, will be published March 31, and is available for pre-order.

The AMA also released the second edition of the *Health Systems Science* textbook. A companion, *Health Systems Science Review*, provides case-based questions followed by discussions of answers and suggested readings.

Read more about how value-added roles can transform medical education.