Practice-Based Learning and Improvement Curricula: A Critical Opportunity to Educate Future Physicians and Leaders

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The disconcerting fact that Americans do not get the care that meets their clinical needs has come to the forefront in health care, although it has taken several decades. This breach in health care delivery comes in the guise of quality and safety issues of underuse, overuse, and misuse of health care resources.[1] This gap exists despite years of training to create physicians armed with the knowledge and skills necessary to deliver appropriate clinical care. As one approach to address this issue, organizations and institutions, including accrediting bodies across the United States, have a renewed commitment to quality improvement and patient safety. For program directors, this translates to the implementation of practice-based learning and improvement (PBLI) and systems-based practice curricula for all residents and fellows.

In this edition of the *Journal of Graduate Medical Education*, Tomolo et al[2] discuss their quasiexperimental study of internal medicine residents. The study compares the impact of a PBLI curriculum on PBLI knowledge, skills, and self-efficacy and the impact of a systems-based practice and microteaching curriculum on the comparable learner outcomes.[2] The PBLI and systems-based practice curriculum were delivered through a series of didactics and small group exercises, and added elements of the PBLI curriculum (intervention arm) centered around the development of quality improvement (QI) projects that were aligned with organizational priorities. No information was provided on whether these projects were implemented or on their impact on process effectiveness or patient care delivery. At the end of the curriculum, elements of self-efficacy and knowledge received higher scores in the intervention group than in the control group, although none of the outcome measures required higher-order thinking or application of knowledge. Residents in the PBLI intervention arm expressed appreciation for the PBLI curriculum, with some requesting more time to develop and implement projects, and a desire for exposure to more achievable projects in the future.

With a burgeoning interest in teaching QI, it is time for educators to reflect on key strategies that will develop physician competence in PBLI. Experiential curricula are essential for QI competency because they facilitate a systematic analysis and improvement of practice using QI methods.[3] Participation in a real change-management process provides learners with an opportunity to experience collaboration, negotiation, and interdisciplinary team work and to understand the nuances of QI methodologies like Plan-Do-Study-Act, Six-Sigma, or Lean approaches.[4]

The health care system benefits from the impact of these learners' projects on delivery processes and patient outcomes. When residents develop or participate in the development of an improvement project but do not participate in its implementation and the actual change and improvement process, there is a likelihood of significant missed experiences and learning opportunities.

One question is whether the goal of significant resident involvement in QI program design and implementation is feasible, given the crowded curricula, competing demands on residents, and the need for significant faculty development related to QI. The literature shows that successful PBLI curricula do exist.[5] In a recent systematic review of published QI and safety curricula for medical students and/or residents, Wong et al[6] report that, of the 41 curricula that met criteria, 13 (32%) had successfully implemented changes in local care delivery, and 7 (17%) significantly improved targeted processes of care.

Resident clinic settings provide a myriad of opportunities to enhance care in continuity clinics, community-based settings, and rural settings. Key strategies that have helped programs implement successful QI curricula include dedicated time, a longitudinal curriculum that provides time for didactics and experiential components, collaboration and engagement with local or institutional leaders who can assist with the change process and provide the necessary resources, interprofessional collaboration and teamwork, and engagement of QI experts who can facilitate the various steps of the improvement process.[7–9] Relatively easy access to baseline data and information systems that facilitate recovery of necessary data has the potential to shift projects from a more common measurement focus to an improvement focus, which is key to learning QI. Guidance from expert faculty is critical to keep measurement recognized as a tool to enhance the process but not the goal of the project. Another important role of the educator or facilitator is in the choice of a QI project that can be completed within the available time in the curriculum and that is relevant to the residents' clinical practice.

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Embedding PBLI experiential curricula in graduate medical education has 2 primary benefits. It provides an opportunity for educators to train future physicians and physician leaders in a key skill—enhancing the quality and safety of care and redesigning health care systems. It also provides educators a unique opportunity to collaborate with institutional leaders to enhance care processes and, potentially, patient outcomes in the teaching settings.

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