The Educational Toolbox: Kick Start Your Educational Program in Quality Improvement

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OBJECTIVE: To disseminate materials and learning from the proceedings of the Association of Program Directors 2014 Annual Meeting workshop on the integration of quality improvement (QI) education into the existing educational infrastructure.

BACKGROUND: Modern surgical practice demands an understanding of QI methodology. Yet, today's surgeons are not formally educated in QI methodology. Therefore, it is hard to follow the historical mantra of "see one, do one, teach one" in the quality realm.

METHODS: Participants were given a brief introduction to QI approaches. A number of concrete examples of how to incorporate QI education into training programs were presented, followed by a small group session focused on the identification of barriers to incorporation. Participants were provided with a worksheet to help navigate the initial incorporation of QI education in 3 steps.

RESULTS: Participants were representative of all types of training programs, with differing levels of existing QI integration. Barriers to QI education included lack of resident interest/buy-in, concerns over the availability of educational resources (i.e., limited time to devote to QI), and a limited QI knowledge among surgical educators. The 3 steps to kick starting the educational process included (1) choosing a specific method of QI education, (2) incorporation via barrier, infrastructure, and stakeholder identification, and (3) implementation and ongoing assessment.

CONCLUSIONS: Recent changes in the delivery of surgical care along with the new accreditation system have necessitated the development of QI education programs for use in surgical education. To continue to make surgery safer and ensure optimal patient outcomes, surgical educators must teach each resident to adopt quality science methodology in a meaningful way. (J Surg 72:e111-e116. © 2015 Association of Program Directors in Surgery. Published by Elsevier Inc. All rights reserved.)

KEY WORDS: workshop, quality improvement, surgical education, barriers

COMPETENCIES: Interpersonal and Communication Skills, Practice-Based Learning and Improvement, Systems-Based Practice

INTRODUCTION

Modern surgical practice demands an understanding of quality improvement (QI) methodology. Numerous approaches to QI exist, and each depends on the use of data to measure performance and track improvements. Moreover, a familiarity with QI processes adopted from industry can be used to form a strong foundation for QI in health care.[1,2]

The regulatory agencies, including the Accreditation Council for Graduate Medical Education and The Joint Commission, require programs and hospitals to share data with their health care providers to affect a culture of continuous QI.[3,4] The new Clinical Learning Environment Review Program will ensure that excellence in clinical outcomes can be demonstrated to maintain accreditation.[5,6]

Outcomes have been an integral part of surgical education, as evidenced by the rigorous adherence to a weekly morbidity and mortality conference across all surgical programs.[7] The techniques used to review cases often include self-reflection, public reporting, and peer review. These techniques are also are the corner stone to a robust

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QI program. However, they are not enough in the current health care environment.

The knowledge gap between currently utilized QI processes and traditional practices in surgical education creates an uncomfortable barrier to the advancement of surgical QI. Surgeons teach the majority of surgical education in the United States, yet most of today's surgeon educators have not been formally taught QI methodology themselves. Therefore, it is hard to follow the historical mantra of "see one, do one, teach one" when it comes to the quality realm.

To aid in the process of teaching QI methodology while respecting the surgical culture, we present the content from a 2014 Association of Program Directors in Surgery (APDS) workshop designed for this purpose. The readers would gain a better understanding of the nature of QI education, learn strategies to engage residents in organizational quality and safety goals, identify surgery-specific QI lessons that blend with their current curriculum, and identify barriers to the integration of quality education and mechanisms to overcome them.

METHODS

In 2014, the workshop "Kick Start Education in Quality Improvement Using 3 Easy Steps" was offered at the annual APDS meeting to facilitate the expansion of education into the QI domain. The facilitators of the workshop were inspired to organize the session because of the early successes in the integration of QI that they had achieved by taking small steps within their own programs. A brief presentation was included to first summarize the practice-based learning and improvement milestone, the stated purpose of the Clinical Learning Environment Review Program, and the definition of quality and current practices in QI education (Fig. 1), and then to provide a suggested list of opportunities for the expansion of a QI program. Following the presentation, participants were divided into 4 groups based on hospital structure for detailed discussion. Participant roles, hospital-affiliation, and surgical specialty were recorded at the beginning of the small group session. Information on the level of QI knowledge among participants was not discussed so as to foster an open and inclusive dialogue centered on education.

A surgical trainee or faculty member with a particular interest/expertise in QI facilitated each of the small groups. Before the workshop, each facilitator was prepared to lead the group using a guide adapted from a previous workshop, complete with space to record qualitative comments during the small group round table discussion (Fig. 2). Using unpublished data from a survey of program directors on QI education, the facilitators were encouraged to start the discussion focused on barriers to implementation.[8] Facilitators were directed to synthesize the qualitative remarks into distinct, common themes immediately on completion of the workshop. Each participant was provided with an interactive participant guide, which included concrete examples of QI integration strategies and provocative questions to facilitate this integration at their home institution (Figs. 3 and 4). The participant guide was designed to parallel the facilitator guide. Each participant left the session with a plan for the adoption of 2 strategies for the implementation of QI education into their standing surgical curriculum.

Planned group report outs were scheduled for the last 15 minutes of the session, and then a facilitator debriefing

Practice Domain	Competency	Critical Deficiencies	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
Improvement of Care (IC)	PRACTICE-BASED LEARNING AND IMPROVEMENT (PBLI3)	This resident does not demonstrate interest or ability in learning from the results of his or her practice. This resident fails to recognize the impact of errors and adverse events in practice.	This resident actively participates in Morbidity and Mortality (M&M) and/or other Quality Improvement (QI) conferences with comments, questions, and/or accurate presentation of cases. This resident changes patient care behaviors in response to feedback from his or her supervisors. This resident recognizes when and how errors or adverse events affect the care of patients.	This resident evaluates his or her own surgical results and the quality and efficacy of care of patients through appraisal and assimilation of scientific evidence. This resident uses relevant literature to support his or her discussions and conclusions at M&M and/or other QI conferences. This resident performs basic steps in a QI project (e.g., generates a hypothesis, conducts a cause-effect analysis, creates method for study). This resident understands how to modify his or her own practice to avoid errors.	This resident evaluates his or her own surgical results and medical care outcomes in a systematic way and identifies areas for improvement. This resident identifies probable causes for complications and deaths at M&M and/or other QI conferences with appropriate strategies for improving care. This resident begins to recognize patterns in the care of his or her patients and looks for opportunities to systematically reduce errors and adverse events.	This resident exhibits on-going self evaluation and improvement that includes reflection on practice, tracking and analyzing his or her patient outcomes, integrating evidence-based practice guidelines, and identifying opportunities to make practice improvements. This resident discusses or demonstrates application of M&M and/or other QI conference conclusions to his or her own patient care. This resident leads a QI activity relevant to patient care outcomes.
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		Comments:				Not Yet Assessable ☐

FIGURE 1. Practice-based learning and improvement (PBLI3). (Reprinted from http://acgme.org/acgmeweb/Portals/0/PDFs/Milestones/SurgeryMilestones.pdf, page 13.)