Perspective: A Road Map for Academic Departments to Promote Scholarship in Quality Improvement and Patient Safety

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Abstract

The fields of quality improvement and patient safety (QI/PS) continue to grow with greater attention and awareness, increased mandates and incentives, and more research. Academic medical centers and their academic departments have a long-standing tradition for innovation and scholarship within a multifaceted mission to provide patient care, educate the next generation, and conduct research. Academic departments are well positioned to lead the science, education, and application of QI/PS efforts nationally. However, meaningful engagement of faculty and trainees to lead this work is a major barrier. Understanding and developing programs that foster QI/PS work while also promoting a scholarly focus can generate the incentives and acknowledgment to help elevate QI/PS into the academic mission. Academic departments should define and articulate a QI/PS strategy, develop individual and departmental capacity to lead scholarly QI/PS programs, streamline and support access to data, share information and improve collaboration, and recognize and elevate academic success in QI/PS. A commitment to these goals can also serve to cultivate important collaborations between academic departments and their respective medical centers, divisions, and training programs. Ultimately, the elevation of QI/PS into the academic mission can improve the quality and safety of our health care delivery systems.

In 2001, the Institute of Medicine’s report Crossing the Quality Chasm called for redesigning the U.S. health care system to improve the delivery of safe, effective, timely, patient-centered, efficient, and equitable care.1 This report followed the Institute’s landmark report, To Err is Human, which is often recognized as the birth of the patient safety movement.2 Both reports catalyzed the growth of quality improvement and patient safety (QI/PS) with greater attention and awareness, increased mandates and incentives, and a push for research in these areas.3–5 As the movement expands, academic medical centers—whose multifaceted mission to care for patients, educate the next generation, and conduct innovative research has created a long-standing tradition of innovation and scholarship—offer an important setting in which to design, implement, and critically evaluate QI/PS initiatives.6–9 These efforts can help meet the growing demands to demonstrate value (quality divided by cost) in our care delivery systems.10,11 Academic departments within academic medical centers face barriers to cultivating successful QI/PS programs. Perhaps the most critical are those that discourage faculty from meaningfully engaging in QI initiatives, despite growing demands that they do so. Poorly defined job descriptions, a dearth in formal roles all stand in the way.9,12,13 So does the absence of a dedicated academic promotion pathway (e.g., clinician–QI track) with its essential reward system, incentives, and framework for fostering engagement.6,12,13 Furthermore, unlike other areas of biomedicine, prominent journals and funding agencies have only recently begun to publish QI/PS studies, a key factor for academic advancement.6,9,12,14 Although others have published recommendations on what medical schools, journals, and federal funding agencies can do to advance scholarship and promote academic leadership in QI/PS,6,12,13 ambiguity remains about specific actions to be taken by academic departments. In this article, we describe a road map to guide academic departments in the growing need for more comprehensive programs that engage faculty and promote scholarship and innovation in QI/PS.

The Department of Medicine at the University of California, San Francisco (UCSF) is the largest department in the UCSF School of Medicine, with more than 2,700 employees, including nearly 600 faculty and more than 500 trainees. The department provides clinical services at medical centers across several campuses. In the past two years, the department has increased its commitment to QI/PS by appointing an inaugural associate chair for quality improvement and patient safety (N.L.S.) and, more recently, an administrative director for quality and safety programs (N.N.). Along with the more operationally driven clinical improvement initiatives at each medical center campus, the department explicitly sought to develop an academically oriented QI/PS program that would foster engagement, innovation, and scholarship. It also aimed to unify the department’s QI/PS enthusiasts across campuses to build a sense of community for such activities, and to align efforts with respective medical centers.
A Road Map to Promote Scholarship in QI/PS

To begin the creation of a road map for promoting scholarship in QI/PS, the Department of Medicine hosted a strategic planning retreat with key clinical, educational, and QI/PS faculty leaders in April 2010. Through a facilitated brainstorming process, participants proposed a series of recommendations that were subsequently organized into five thematic focus areas: (1) define and articulate a QI/PS strategy, (2) develop individual and departmental capacity to lead scholarly QI/PS programs, (3) streamline and support access to data, (4) share information and improve collaboration, and (5) recognize and elevate success in QI/PS. Below, we summarize highlights from each area to delineate a framework that other academic departments can apply or adapt in their own efforts to promote scholarship in QI/PS.

Define and articulate a QI/PS strategy

Promoting QI/PS programs requires that an academic department’s leaders define and articulate a mission statement and identify unified, inspirational goals for performance improvement initiatives. These goals should be ambitious, clearly articulated, and formulated to align the goals with those of the department and to those outside it. Communicating them both within the department and to those outside it is an important first step in organizing our QI/PS activities.

Develop individual and departmental capacity for QI/PS

To generate innovative and scholarly performance improvement programs, faculty and trainees must be taught the principles and application of QI/PS. This necessity is recognized in the Accreditation Council for Graduate Medical Education’s requirement that all residents and fellows achieve competencies in practice-based learning and improvement and systems-based practice, and in growing calls by deans and other key stakeholders that QI/PS be an educational priority in undergraduate, postgraduate, and continuing education. Academic departments should couple explicit QI/PS curricula with experiential participation in improvement initiatives. These should include a core set of learning opportunities for students, housestaff, and fellows, and two- or four-week electives dedicated to focused experiences. Residence and fellowship program directors should take the lead, ensuring the quality and comprehensiveness of such curricula while partnering with academic departments’ clinical and QI leaders to better marry the clinical and educational activities. Academic departments can also encourage trainees’ engagement in leading QI/PS efforts by establishing dedicated chief residency positions in QI/PS, developing advanced training opportunities (e.g., QI/PS fellowships), and creating longitudinal experiences (e.g., QI/PS tracks) within existing training programs. It is important that these opportunities and mentoring structures resemble those that academic departments have created for trainees interested in more traditional research and medical education.

Faculty must also have opportunities to leverage their existing expertise while building additional capacity to lead QI/PS efforts. Doing this requires that different faculty types collaborate. For instance, researchers already investigating ways to improve the delivery of health care are natural partners for clinical faculty who might participate in QI/PS initiatives without having the skills to make their participation scholarly. Such partnerships can be an effective, mutually beneficial strategy for fostering innovation through a scientific lens and, if they involve medical centers, can mean opportunities for funding.

Similarly, the growing demand to link education and clinical outcomes creates natural collaborations between clinical educators and clinical service leaders (e.g., medical directors of ambulatory clinics, chiefs of inpatient medicine). Both groups are increasingly learning about QI/PS, often teaching it at the undergraduate and graduate medical education levels, or applying it in the clinical setting. Bringing them together is another important strategy for cultivating collaboration and leadership training.

Streamline and support access to clinical data

Access to operational and clinical data is essential for performance improvement. Academic departments should provide an infrastructure that simplifies timely access to and use of data to facilitate the planning and execution of improvement efforts. This is more easily achieved when their affiliated medical centers invest in such information technologies as electronic medical records, provider order entry systems, and clinical data warehouses. Academic departments should strategically partner with their medical centers’ leadership and task forces (e.g., in information technology and quality departments) to create good tools for monitoring clinical data.

When medical centers do not have such an infrastructure in place, academic departments should consider cost-effective investments in information technology that would benefit the entire department, avoiding the waste of individual divisions and researchers custom-building their own database solutions. This is particularly relevant when health service researchers independently receive extramural funding to develop databases while their colleagues are doing the same. It is also important to provide faculty with appropriate staff support (e.g., data
analysts and statisticians). Creating partnerships with other academic departments and medical centers' quality departments around shared goals and priorities can further leverage limited resources and reveal innovative funding options.

Finally, there is often confusion in determining whether QI/PS data gathering falls under institutional review board (IRB) jurisdiction. Academic institutions often use scientific methodology to meet their continuing quality assurance obligations to evaluate and improve their clinical care and teaching. These activities, which may include methodological design, selection of participants, hypothesis testing, and even publication of findings, are hard to differentiate from research activities. But these challenging, evolving distinctions can represent an opportunity for academic departments to work with their local IRBs to establish and disseminate guidelines that help determine which activities require formal review. These guidelines may be algorithms that determine, on the basis of a project's characteristics, whether or not it requires IRB review, with, perhaps, a way to refine the algorithms on the basis of early experiences. They may include mechanisms for an intermediary IRB “consult” to determine the necessity of a full review. They could also include external (non-IRB) options for review. Overall, a clear, simple IRB review process lets QI/PS work progress efficiently with appropriate oversight when indicated. Our own IRB has approved guidelines that we believe balance the importance of research integrity and patient protection with a need for efficient QI activities.25

Share information and improve collaboration

As faculty and trainees become more engaged in QI/PS, it becomes increasingly important to have strategies for information sharing and collaboration between divisions, departments, and other disciplines. With limited resources always a challenge, academic departments should create opportunities for collective learning and sharing of resources by removing silos and encouraging communal initiatives.

Faculty can share information through listservs and portals that follow ongoing QI/PS activities. Web sites, wikis, and newsletters can also build collaborative communities. Trainees can be kept abreast of ongoing QI/PS initiatives through accessible databases that describe opportunities for active involvement, including information on potential faculty mentors for each project. This is particularly important for academic departments that provide clinical care at multiple campuses; trainees who rotate between sites may themselves bring innovative initiatives from one campus to another. Similarly, a staff liaison can stay on top of and foster QI/PS activities at different divisions or campuses and connect faculty and staff around those activities, further removing unintended silos.

Interdepartmental venues should be created where faculty learn about each other's goals and priorities, share best practices, and develop cross-department initiatives (including extramural grant applications), thereby leveraging their pooled expertise and resources. Similarly, it is crucial that academic departments work closely with their respective medical centers to comply with regulatory requirements (e.g., those of the Centers of Medicare and Medicaid Services and the Joint Commission), adapt to health care reforms (e.g., the Affordable Care Act), and implement information technology systems that streamline data collection and enhance patients' safety. These interdepartmental and cross-institutional collaborations can also create leadership opportunities, engender scholarly work, and provide resources (e.g., salary support, project management, and data analysis) that would otherwise require extramural support.

Recognize and elevate success in QI/PS

QI/PS efforts are intellectual activities that are consistent with academic medicine's values of research and discovery.26 Excelling in QI/PS requires teachers and role models who promote the acquisition of relevant knowledge and skills in trainees, develop educational programs, and lead innovative research and scholarly work to advance the field.10 Academic departments should recognize and reward these operational, educational, and scholarly activities by broadening the criteria for academic promotion to explicitly include QI/PS work.10 These criteria should still emphasize scholarship; committee participation is not sufficient, although it can be an important first step toward academic output. Departments should create local opportunities, such as symposia, to highlight successful QI/PS work and establish awards to honor innovation and scholarship in these arenas. At the institutional level, medical schools and academic medical centers can mirror what the field of medical education has done successfully and establish an “academy of QI/PS scholars” that encourages, promotes, and develops the science and implementation of continuous improvement in health care.27,28 The combination of academic departments’ local programs and institutions’ broader ones can only reinforce the meaning and value of QI/PS activities.

The Road Reviewed

Hosting a strategic planning retreat, as we did, brings leaders and front-line clinicians, educators, and investigators together to generate enthusiasm, build a sense of community, and draw a road map for promoting scholarship in QI/PS. At our retreat, we identified five strategies for achieving that goal. Our experiences in implementing those strategies suggest to us that this road map is a thoughtful, meaningful approach that can be used by other academic departments.

Fostering QI/PS work in academic departments requires broad engagement of faculty and trainees as well as strategic collaborations with medical centers, divisions, training programs, other departments, and institutions. Fundamentally, success requires a blend of central control and decentralized responsibility, whether this involves a medical school and its departments, an academic department and its divisions, or a medical center and its departments. Despite differences in how academic health systems are organized, collaboration is vital.

Although our recommended road map may require local adaptation, we believe that the five thematic areas reflect common needs within academic departments. As progress continues, it will be equally important to innovation and scholarship that academic departments collaborate around QI/PS as they have around clinical trials. Our hope is that...
academic departments lead rather than react to the times ahead by elevating QI/PS into the academic mission.

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**References**


