Bridging Leadership Roles in Quality and Patient Safety: Experience of 6 US Academic Medical Centers

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Over the past 15 years, the quality and safety of US health care has become a topic of national attention, debate, and research.[1–3] In turn, medical educators have recognized that medical students and residents must be educated in these topics as part of their professional development.[4–6] Because physicians are acculturated into the practice of medicine during their graduate medical education (GME) years, this is an ideal time to embed quality and safety education. Recognizing this, the Accreditation Council for Graduate Medical Education (ACGME)[7–9] recently set standards for clinical learning environments and included the integration of patient safety and quality improvement activities into GME training as a priority.

While both GME and health system leaders are likely to endorse a shared mission of trainee education and engagement in quality and safety efforts, accountability for these efforts is still dispersed, and exactly who will lead this work in our nations' teaching institutions remains unclear. One strategy for organizations to meet these challenges is to create a bridging leadership role,[10,11] specifically designed to align and integrate GME and the health systems' quality and safety mission. We describe such roles created in 6 academic medical centers, including the evolution and structure of these roles, how the roles advance institutional goals, and recommendations for organizations considering similar positions.

Evolving Need for Leadership

The gap between GME and institutional quality and patient safety priorities is not new. At the University of California, San Francisco, a GME quality and safety leadership role was formalized in 2007 in the context of a strong institutional emphasis on quality and safety. At the University of Pennsylvania, the creation of hospital-wide, unit-based, clinical quality leadership teams brought quality and safety activities to the front line.[12] This visibility, coupled with an increasing interest among trainees to lead quality improvement work, caused health system and GME leaders at this institution to design a similar leadership role in 2011. While the development of 2 of our institutional roles preceded the ACGME Next Accreditation System and Clinical Learning Environment Review (CLER) requirements, these national expectations led additional institutions to create similar roles.

Structure and Funding

The different stakeholders served by this role create opportunities for funding and reporting relationships. While 6 of us work within the GME office of our institutions, and report to our respective designated institutional officials (DIOs), several of us also have a direct or indirect reporting relationship to the chief medical officer or chief quality officer. Funding for our support varies. At some institutions, GME funds for faculty are supported by the health system, while at others, GME funds for faculty flow through the dean's office. Institutional size, number of GME programs, and the anticipated scope of work were key considerations in determining the amount of financial support for our roles (TABLE 1).

Responsibilities

Several similar responsibilities have emerged as part of our core job descriptions and are described in the following sections:

Oversight: The ACGME institutional requirements have expanded the purview of the GME office and the DIO to include leading and managing aspects of quality and safety policies and training. In

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Editor's Note: The online version of this article contains tables of the Clinical Learning Environment Review initiatives and qualifications and skill sets of faculty in quality and safety leadership roles.

TABLE 1
Characteristics of Graduate Medical Education (GME) Quality and Safety Leadership Roles in 6 US Academic Medical Centers

Institution	Role Title	Year Role Initiated	Hospital Size, No. of Beds	GME Program Size	Reporting Structure		% of Time Allocated for Role	Committee Participation		
				No. of ACGME Accredited Programs/ No. of GME Trainees	Medical School and/or GME (DIO)	Medical Center (CMO)		GMEC	Hospital Quality	Hospital Safety
University of California, San Francisco	Director, Quality & Safety Programs, GME	2006	783	80/1300	X		40	X	X	X
University of Pennsylvania	Associate DIO for Quality & Safety, GME	2011	789	78/1039	X	X	35	X	X	X
Beth Israel Deaconess Medical Center	Director of Quality & Safety, GME	2013	672	43/683	X		30	X	X	X
University of Chicago	Director of Clinical Learning Environment Innovation[a]	2013	617	71/786	X	X (clinical partner CQO)	30	X	X	
University of Kentucky	Assistant Dean for GME[b]	2013	945	54/580	X		50 (25% for QI/PS)[b]	X		X
University of Colorado	Director of GME Quality and Safety Programs	2014	593	93/1111	X		40	X	X	X

Abbreviations: DIO, designated institutional official; ACGME, Accreditation Council for Graduate Medical Education; CMO, chief medical officer; CQO, chief quality officer; QI/PS, quality improvement/patient safety; GMEC, graduate medical education committee.

[a] In addition to quality and safety, this individual's scope encompasses innovation in other areas of the clinical learning environment.

[b] This individual is supported 50% by the GME office. Half of this effort is specifically directed toward quality and safety integration activities.

TABLE 2
Institutional Approaches to Faculty Development in Quality and Safety at 6 US Academic Medical Centers

Faculty Development Approach	Institutions Using This Approach	Example
Online repository of educational resources and curricula to be used with trainees	Pennsylvania, BIDMC, UCSF, Colorado	Internally developed QI, PS, and HVC teaching materials and links to external resources embedded within the University of Pennsylvania's GME Learning Management System (MedHub) and accessible to all trainees, PDs, and faculty.
GME-wide faculty development seminars in QI/PS skills	Pennsylvania, BIDMC, Chicago, Kentucky	University of Chicago Academy for Distinguished Medical Educators sponsors Faculty Advancing Medical Education sessions in "Making it CLER: Aligning GME and Institutional Quality/Safety." Over 30 faculty in 18 departments have trained through this mechanism.
MOC-based faculty development program in QI	Chicago, UCSF, Colorado	Faculty who mentor residents' and fellows' QI projects can receive MOC Part 4 credit through UCSF's Institutional MOC portfolio.
Coaching for individual program directors or QI/PS faculty	Pennsylvania, BIDMC, Colorado, Kentucky	At BIDMC, GME office offers "QI Education Consults": needs assessment, prioritization, and direct mentorship of new programming.

Abbreviations: BIDMC, Beth Israel Deaconess Medical Center; UCSF, University of California, San Francisco; QI, quality improvement; PS, patient safety; HVC, high-value care; GME, graduate medical education; PD, program director; CLER, Clinical Learning Environment Review; MOC, Maintenance of Certification.

collaboration with the DIO, a GME quality and safety leader can assist with the development, implementation, dissemination, and oversight of GME-wide quality and safety policies and programs. For example, several of us have created policies and procedures related to handovers, supervision, and procedural competency. Another oversight activity common to our roles is responsibility for CLER focus areas (provided as online supplemental material).

Liaison Between GME and Hospital Quality and Safety: Ensuring that information relevant to quality and safety is communicated fluidly across an organization and acted on requires a consistent presence in key forums. All of us participate as members of our sponsoring institutions' graduate medical education committees (GMECs), hospital quality committees, and/or hospital patient safety committees (TABLE 1). These committees provide a platform for bidirectional communication related to quality and safety education and engagement of GME trainees. Prior to the creation of our roles, it was uncommon to have a consistent GME leadership presence at hospital quality and safety committees and to have consistent quality and safety leadership at GME forums. With a bridging quality and safety GME leader present in both arenas, opportunities for alignment and improvement naturally arise and can be addressed.

Curriculum and Faculty Development: The slow progress related to quality and safety in medical education over the last decade is due, at least in part, to the lack of a core curriculum and faculty proficiency in these fields.[13,14] Thus, 6 of us in our bridging leadership roles spend time in these areas by necessity. Examples of new curricula designed through our roles include the incorporation of a patient safety "room of horrors" simulation in GME boot camp at the University of Chicago and the University of Colorado,[15] the development of patient safety modules during intern orientation at the University of Kentucky, and centralized quality improvement training for fellows at Beth Israel Deaconess Medical Center. Strategies for faculty development within our institutions are all multipronged and have common themes (TABLE 2).

Educational Innovation: An exciting aspect of this role is the opportunity to design innovative approaches to educate and engage GME trainees in quality and safety. Examples of such innovations that were designed in part by the individuals in these roles include the creation of a resident and fellow quality improvement incentive program at the University of California, San Francisco, a GME-wide "Healthcare Leadership in Quality" track at the University of Pennsylvania, an interdepartmental, systems-based

morbidity and mortality conference at the University of Colorado, and the Choosing Wisely Challenge at the University of Chicago for trainees with ideas to operationalize the reduction of health care waste.[16–18] Several of us also oversee resident quality councils and facilitate the institutional connections necessary for their success.[19]

Lessons Learned

Based on our collective experiences, we have learned several lessons. Fundamentally, any organization considering the development of a GME quality and safety leadership role must have shared priorities, since the individual in the role will be supporting the needs of both GME and health system quality leadership. Given the breadth of new work related to the CLER expectations, a common challenge that we all have faced was how to prioritize our work. We needed to sequence our efforts, focusing first on the priority areas within our institutions and incorporating feedback from our first CLER site visit. How much of our time was spent on the responsibilities outlined above differed for each of us based on the strategic priorities of our DIO and health system.

Evaluation of our performance in these roles is linked in part to our institutions' performance on CLER metrics as well as the annual ACGME survey responses from our trainees and faculty in the areas of quality and safety. For example, several of our programs are working on improving safety event reporting by residents and fellows through a variety of mechanisms, and can point to improvements as a result of programs initiated under our leadership.

Our experiences suggest key skills and backgrounds to consider when selecting an individual for a GME quality and safety leadership role. Experience in both health care quality and medical education are ideal for a GME quality and safety leader. Experience leading interprofessional teams is important—as the role necessitates working jointly with residents, fellows, program directors, nurses, other hospital staff, and medical center leadership. Finally, proficiency in communication, conflict resolution, goal setting, time management, and project management are essential. Each of us had varying degrees of experience in these areas prior to our current roles (provided as online supplemental material). Sufficient flexibility should be built into the position to adapt to changing GME needs and the US health care quality landscape, as well as to allow the individual to grow professionally in related areas (eg, clinical work, education, research, etc).

While we describe the creation of a GME physician leadership role in quality and safety as 1 approach to bridge the gap between the institutional quality and safety mission and GME, it is not the only solution. Other approaches would include having the DIO or his or her designee participate in institutional meetings related to quality and safety, and similarly having a quality and safety leader participate in the GMEC or designating a nonphysician institutional leader with expertise in quality and safety to participate on the GME leadership team. While some physicians, including residents and fellows, are more likely to respond to a physician leader, a nonphysician leader may be able to effectively serve in a bridging role with sufficient DIO support. Ultimately, for our institutions with relatively large GME and clinical footprints, the creation of a dedicated physician leadership role seemed most appropriate.

Conclusion

There are immediate needs and unlimited potential at the intersection of GME and the health system to engage graduate medical trainees in enhancing the quality and safety of health care delivery. Creating an institutional role with focused responsibility in this area is 1 approach to bridge this historical divide and improve both educational and patient care outcomes. While our early experiences in these roles have been positive, this model should be rigorously evaluated to determine whether it improves GME and patient care outcomes. The development of a national learning collaborative for institutions with bridging leadership roles could have broad impact by collating and disseminating best practices in GME quality and safety integration to the national GME community.

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