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Clinical Learning
Environment Review

NATIONAL REPORT OF FINDINGS 2016

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HEALTH CARE QUALITY

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Issue Briefs

The CLER Program presents this series of Issue Briefs to supplement the *CLER National Report of Findings 2016*.

Each issue in the series features one of the focus areas of the CLER Program—supplementing the key challenges and opportunities highlighted in the National Report and enhancing the discussion as to their relevance and potential impact on GME and patient care.

In both the National Report and the Issue Briefs, the findings are based on data collected during the CLER site visits, including responses to closed-ended questions collected via an audience response system, open-ended structured interviews with the clinical site's executive leaders and leaders in patient safety and health care quality, and information gathered from the many individuals interviewed during walking rounds of the site's clinical units.

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Background

The ACGME established the CLER Program to provide formative feedback that presents graduate medical education (GME) leaders and the executive leadership of the clinical learning environments (CLEs) for GME with information on six areas of focus: **patient safety, health care quality, care transitions, supervision, duty hours/fatigue management and mitigation, and professionalism.**[1,2,3]

The *CLER National Report of Findings 2016*[4] presents information from the first set of CLER site visits to participating sites of 297 ACGME-accredited Sponsoring Institutions of residency and fellowship programs. These visits, conducted from September 2012 through March 2015, focused primarily on teaching hospitals, medical centers, and ambulatory sites that host three or more core residency programs.

In the group sessions conducted during these visits, the CLER teams collectively interviewed more than 1,000 members of executive leadership (including CEOs); 8,755 residents and fellows; 7,740 core faculty members; and 5,599 program directors of ACGME-accredited programs. Additionally, the CLER teams interviewed the CLEs' leadership in patient safety and health care quality and thousands of residents and fellows, faculty members, nurses, pharmacists, social workers, and other health care professionals while on walking rounds of the clinical areas.

OVERARCHING THEMES OF THE NATIONAL REPORT OF FINDINGS

The initial visits of the CLER Program revealed a number of findings that appeared to be common across many of the CLEs and six focus areas:

- Clinical learning environments vary in their approach to and capacity for addressing patient safety and health care quality, and the degree to which they engage residents and fellows in these areas.
- Clinical learning environments vary in their approach to implementing GME. In many clinical learning environments, GME is largely developed and implemented independently of the organization's other areas of strategic planning and focus.
- Clinical learning environments vary in the extent to which they invest in continually educating, training, and integrating faculty members and program directors in the areas of health care quality, patient safety, and other systems-based initiatives.
- Clinical learning environments vary in the degree to which they coordinate and implement educational resources across the health care professions.

In addition to serving as a basis for the overarching themes, the initial CLER visits sought to establish baseline structural and operational characteristics of the clinical sites, as well as their training practices in the six focus areas. In future cycles, the CLER Program will also seek to understand how the sites identify and prioritize areas for improvement and assess progress over time.

Health Care Quality

A STORY FROM THE FIELD

As part of walking rounds during a CLER visit, a chief resident was asked about his experience in undertaking quality improvement. He stated that he remembered taking online courses about quality early in his training, however didn't recall much of the content. He reported that he did not personally participate in any quality improvement projects.

He was then asked if, in his five years at the hospital, there was some aspect of patient care that he would like to see improved. He was quick to respond stating he had ongoing concerns that there was no surgical pathologist adjacent to the main operating rooms, which hampered timely communication between the surgical team and the pathologist. On more than one occasion he noted that a surgeon had to break scrub to go down to pathology to discuss the specimen, resulting in delay of the case and exposing the patient to increased risk. The chief resident went on to describe his ideas for how to solve this problem, and admitted that he did not know how to engage with the hospital or have the skills and ability to improve this process.

It was noteworthy that the resident was excited about the upcoming completion of his residency. He was less than a month away from joining a local physician group associated with this hospital.

This example of a resident encounter during a CLER site visit is not uncommon. It demonstrates that residents and fellows are very well positioned to see opportunities for improvement. It also demonstrates that while some basic quality improvement education is occurring, many residents and fellows still finish their training unable to improve the quality of patient care.

The *CLER National Report of Findings 2016* presents data on four major areas of health care quality: resident, fellow and faculty member awareness of the CLE's health care quality priorities; knowledge of health care quality terminology and methods; engagement in quality improvement (QI) activities; and involvement in developing and implementing the CLE's strategies for improving health care quality. This issue brief highlights selected information found in the National Report, expands upon the findings in the challenges and opportunities section, and provides a more in-depth look at the four major areas of health care quality in the discussion section.

Selected Findings

Figures 1 and 2 present data based on group interviews with residents and fellows. Figure 1 presents the distribution of CLEs by the percent of residents and fellows (PGY-2 and above) within their CLE who reported participating in a QI project of their own design or one designed by their program or department–a median of 78.6 percent.[a]

Figure 2 presents the distribution of CLEs by the percent of residents and fellows within their CLE who reported having ready access to organized systems for collecting and analyzing data for the purpose of quality improvement–a median of 65.5 percent.[a]

These findings highlight the current variability across sites with regard to resident and fellow engagement in health care quality improvement. The goal for GME and CLEs is to design systems that move learners along a path from initial exposure to the concepts of QI, to comprehensive, experiential learning that prepares residents and fellows to continue this work throughout their careers.

Figure 1

Percentage of residents and fellows (PGY-2 and above) who reported participating in a quality improvement project of their own design or one designed by their program or department: Distribution across CLEs

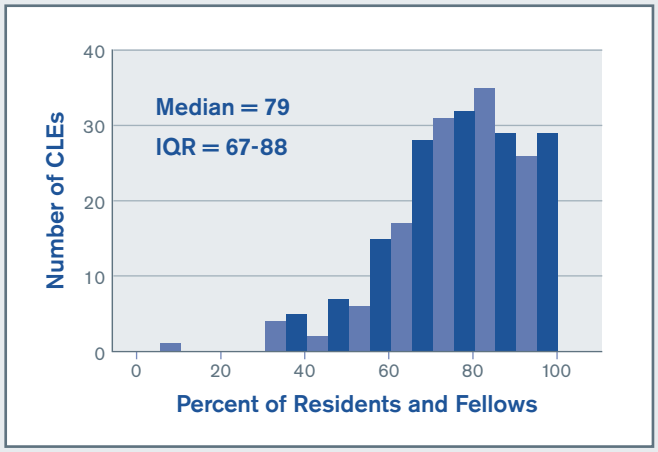
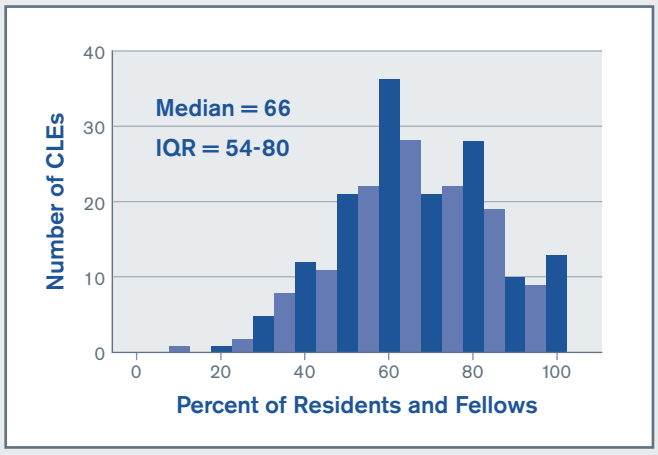


Figure 2

Percentage of residents and fellows who reported having ready access to organized systems for collecting and analyzing data for the purpose of quality improvement: Distribution across CLEs



[a] Distribution includes 90% or more of the 297 CLEs.

Challenges and Opportunities

For the National Report, the members of the CLER Evaluation Committee reviewed aggregated data and selected three to four key findings to highlight and discuss. The following section expands upon the information presented in the National Report to include additional findings regarding the potential impact on patient care and resident and fellow education.

Across CLEs, most residents, fellows, and faculty members indicated they were aware of the organization's priorities for health care QI; occasionally they could accurately identify them.

- Across CLEs, senior leadership, quality leadership, residents and fellows, faculty members, and program directors varied in the degree to which they were aligned in what they viewed to be the CLE's priorities for health care quality improvement.
- When the groups were closely aligned in priorities, it was most often on performance measures, such as hospital-acquired infections, hand hygiene, patient experience/satisfaction, readmission rate, and other measures related to pay for performance and meaningful use, value-based purchasing, and/or regulatory requirements.

While most residents and fellows indicated they participate in QI projects, many of those interviewed appeared to have a limited knowledge of QI concepts and the specific methods and approaches to QI employed by the CLE (e.g., PDSA cycles).

Many residents and fellows seemed to view QI engagement as implementing solutions prescribed by the CLE or their department.

- In general, most residents and fellows reported some type of involvement in QI. This level of involvement was often ascribed to ACGME requirements and appeared to vary by specialty and subspecialty.
- There were a limited number of CLEs that reported an active effort to engage residents and fellows in QI efforts led by the hospital or medical center.
- Across CLEs, residents' and fellows' descriptions of their QI projects varied widely from planning exercises and literature reviews, to quality improvement efforts that incorporated specific methodologies and system-wide efforts.
- While many CLEs provided didactic training in QI, it was uncommon for CLEs to provide residents, fellows, and faculty members with opportunities for experiential learning.

CLEs varied in the proportion of residents and fellows who reported being engaged with the hospital or medical center's leadership in developing and advancing the organization's quality strategy.

In most CLEs, residents and fellows appeared to have limited participation in interprofessional QI teams.

The health care quality leaders of the CLE varied widely in their knowledge of the breadth and scope of QI activities led by resident and fellows.

Occasionally, CLEs and their GME community were exploring the use of resident and fellow workgroups and committees to increase resident and fellow engagement in QI. These committees varied in the structure of activities and the degree to which they interacted with the CLE's formal QI processes.

Across CLEs, residents and fellows varied in their reports of access to organized systems for collecting and analyzing data for the purpose of QI.

Occasionally, CLEs had recently implemented efforts to provide advanced formal education in QI methods and skills for some of their residents and fellows. These efforts varied in type of educational activity and how they interacted with the other major QI initiatives within the CLE.

Discussion

It has been over 15 years since the Institute of Medicine released a report that declared that "the U.S. health care delivery system does not provide consistent, high-quality medical care to all people." The results of this first set of CLER site visits describe a GME community that has started the journey towards educating its residents and fellows in health care QI. Educating the future workforce in these sciences and skills is essential if the US health care system is to achieve a state of continuous QI.

Organizational success in QI depends on a well-functioning QI system and the ability to focus on prioritized goals. Health care organizations often set broad QI objectives and let their workforce (as well as their residents and fellows) identify specific goals that are meaningful at the local level. Residents and fellows should be encouraged to design and implement interprofessional QI efforts that align with the CLE's overall goals. This will increase and enhance the probability of short-term, as well as sustained, patient care improvement, and also the chances of attracting organizational resources to support the effort.

If residents and fellows are to learn to improve the health of the populations they serve, they need to be aware of quality goals, such as those set by regulators, payers, and others outside the CLE (e.g., use of universal protocol, reducing central line associated blood stream infections, catheter-associated urinary tract infections, or potentially avoidable 30-day readmissions). They should also learn to critically evaluate their CLE's own processes of patient care and how those affect patient outcomes.

Didactic approaches are helpful but insufficient, and data from the CLER site visits suggest that residents' and fellows' exposure to QI is often fragmented. Learners rarely have the opportunity to work through the full scope of an improvement effort. Instead, they may plan an intervention they never get to test, or implement a change with limited knowledge of the background evidence and no opportunity for follow-up evaluation. Experiential training in all phases of QI is necessary to develop the skills essential to improving health care quality.

QI is both a systems-based and team-oriented activity. Well-trained residents and fellows need to learn how to work with an interprofessional team to achieve sustained improvements in health care quality. Most resident-led projects, while expedient for meeting minimum educational standards, are limited in scope and can only expose the learners to some of the most basic elements of QI. Interprofessional, team-based quality improvement efforts, especially those that align with CLE priorities, provide residents and fellows with experiential learning that goes beyond basic QI methods to include developing skills and behaviors in shared leadership, communications, systems-based thinking, change management, and professionalism.

In order to optimize residents' and fellows' exposure to QI, at least some portion of their QI experience should address the populations for which they provide direct patient care. This requires timely, easy access to performance data at the level of their own patients so there is

personal connection to the care processes and outcomes they are targeting for improvement. Residents and fellows also need access to support for data analysis. When this support is provided in a coordinated manner, the resulting information benefits both the resident, patients, and the CLE.

Optimal QI strategies should include formal, reliable, and regular structural links between the efforts generated by residents, fellows, and faculty members and the CLE's staff-led efforts to improve care. Coordinating resident and fellow QI efforts with those of the organization would benefit patients, tap into a rich resource of innovation, and provide the foundation for life-long QI success.

The findings also describe self-initiated efforts by GME and their CLEs to create programs for advanced training (e.g., fellowships, chief residencies) in health care QI. The findings from the first set of CLER site visits indicated that, to date, these efforts are relatively uncommon with varying curricula. There may be great value in seeking to better understand the performance of these various advanced training activities to identify successful practices, and promote common goals and alignment of efforts within and across CLEs.

When CLEs set expectations and actively work with faculty members so that they become knowledgeable, skilled, and enthusiastically engaged in the CLE's QI efforts, it reinforces for residents and fellows the importance of QI to both their training and their future careers in patient care. While the CLER site visits focused principally on the residents and fellows, they need to learn from exemplary behaviors modeled by the faculty members who serve as their mentors.

Conclusion and Next Steps

The CLER findings demonstrate that education about health care QI is being broadly introduced into GME activities across CLEs. To date, much of the educational efforts have focused on didactic activities and online learning programs. In many CLEs, residents and fellows receive little or no experiential learning related to QI.

Perhaps the greatest opportunity to improve both patient care and resident and fellow learning is to closely align and integrate GME and CLE efforts to address health care quality.

The ultimate goal of GME is to provide residents and fellows with the experiences that they need to deliver the safest and highest quality patient care.

To accomplish this, it is essential that they become well-versed in the science and practice of health care QI and apply these skills throughout their professional careers.[6] In order to achieve this, they need to be able to engage with other members of patient care teams to continuously assess and improve the quality of care they and their teams provide.

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5 Committee on Quality of Health Care in America, Institute of Medicine. *Crossing the Quality Chasm: A New Health System for the 21st Century.* Washington, DC: National Academy Press; 2001.

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Acknowledgments

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