CLER
Clinical Learning
Environment Review

NATIONAL REPORT OF FINDINGS 2016

ISSUE BRIEF No.2

PATIENT SAFETY

ACGME
Accreditation Council for
Graduate Medical Education

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.

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 for residents and fellows. 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.

Patient Safety

A STORY FROM THE FIELD

While on walking rounds in a pre-operative area, the CLER site visitor asked a third-year resident if, during his training, he had witnessed any adverse events, near misses, or close calls. The resident responded that he had not.

In follow-up, the resident was asked about surgery cancellations due to abnormal laboratory tests–for example, high INR levels–a test used to assess the risk of bleeding. At this, the resident, rather surprised, stated, "I had a patient case canceled this morning for that very reason. Fortunately I caught it in time." He went on to proudly say, "On the days that I have surgery, I always come in extra early to double check the lab values, and sometimes re-order tests if a test is missing or I suspect there is a problem."

When asked about what happened next, the resident looked a little puzzled. He said, "The patient was sent home and told to reschedule–she wasn't very happy about it." When asked if he had submitted a patient safety event report, he shook his head and said, "No." The CLER site visitor then asked the resident, "How often are surgeries canceled at the last minute due to high INR levels?" to which the resident responded, "It happens all the time; worse yet, sometimes the high INR gets missed and then we can get bleeding problems."

This story highlights the common lack of a systems approach to identifying and managing patient safety problems that are discovered by well-intentioned individuals. In particular, the resident's response was one of trying harder and being careful rather than reporting to the CLE and working with the organization to identify the underlying systems-based issues and sustainable solutions that would benefit all patients.

The *CLER National Report of Findings 2016* presents data on four major areas of patient safety: resident and fellow education; patient safety event reporting; patient safety event review; and the role of the CLE in monitoring/governance around patient safety. 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 patient safety in the discussion section.

Selected Findings

Figures 1 and 2 present data based on group interviews with residents and fellows, and together highlight the current range of resident and fellow involvement in addressing patient safety.

Figure 1 presents the distribution of CLEs by the percent of residents and fellows within their CLE who reported knowing their clinical site's process for reporting a patient safety event (including a near miss/close call)—a median of 96.7 percent.[a]

Figure 2 presents the distribution of CLEs by the percent of residents and fellows within their CLE who reported a near miss/close call of a patient safety event—a median of 18.2 percent.[a]

These findings suggest that CLEs are engaged in educational efforts to increase awareness of the issues surrounding patient safety. The next steps, for both GME and CLEs, will be to move from the current state of heightened awareness and knowledge to a collaborative approach that promotes enhanced experiential learning and demonstrated competence in the practices of patient safety and health care quality and the other CLER focus areas.

Figure 1

Percentage of residents and fellows who reported knowing the clinical site's process for reporting an adverse event, near miss/close call, or unsafe condition in patient care: Distribution across CLEs

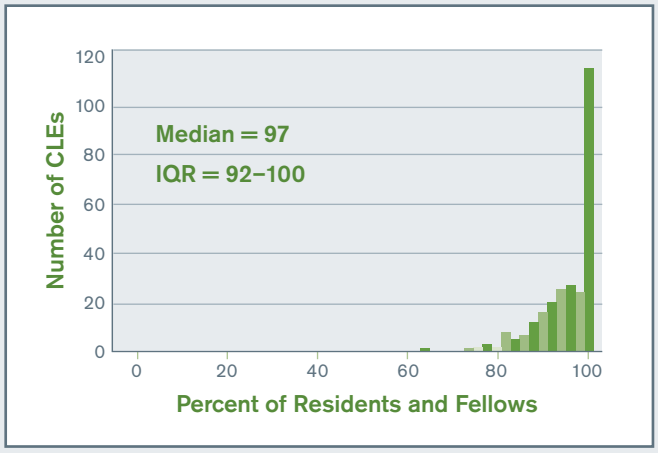
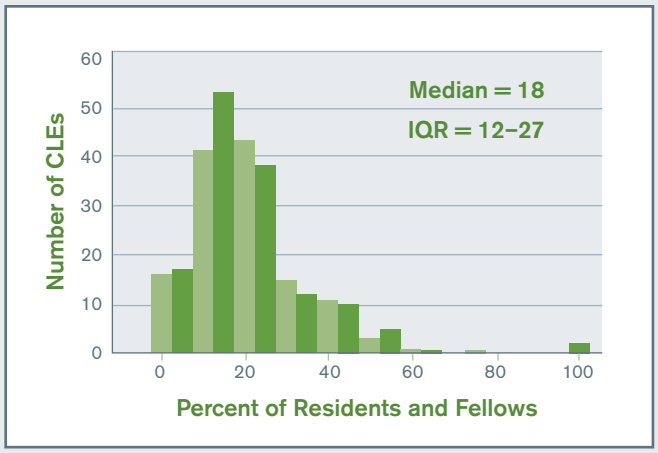


Figure 2

Percentage of residents and fellows who reported a near miss/close call event: 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.

While many CLEs provided didactic training in patient safety, it was uncommon for CLEs to provide residents, fellows, and faculty members with opportunities for experiential learning.

- Across nearly all CLEs, residents and fellows indicated they received education about patient safety, usually at orientation and through annual refresher activities. Often, these activities took the form of online modules focused on specific safety aspects. They did not necessarily include education on basic patient safety terminology, principles, and methods. Residents and fellows frequently reported they completed annual mandatory online modules about patient safety. They were often unable to describe the content of the modules or the knowledge gained from the learning activity.
- In most CLEs the primary mechanisms for reporting and learning around patient safety were informal conversations and problem solving that occurred resident to resident or resident to supervisor and appeared to contribute to the development of "work arounds" that bypass formal processes. Much of the experiential learning was reported to take the form of group learning through case conferences, such as morbidity and mortality (M&M) conferences, or was described as infrequent events where a resident is engaged in some portion of a hospital or departmental-based patient safety investigation.

In general, residents and fellows lacked clarity and awareness of the range of conditions that define patient safety events and were unaware of how CLEs use the reporting of adverse events and near misses/close calls to improve systems of care, both broadly and at the individual departmental level.

- Across CLEs, residents and fellows generally exhibited lack of clarity or awareness as to what defines a patient safety event within their CLE.
- Residents and fellows exhibited a general lack of recognition or awareness of the range of reportable events (beyond sentinel events, medication errors, and patient falls).
- Few residents and fellows appeared to be aware of how individual patient safety event reports can lead to generalizable improvements in patient safety in their environment. Most saw the impact of reporting patient safety events as it related to local problem solving. They exhibited even less clarity or awareness of what defines a near miss/close call and rarely reported these types of events.
- In many CLEs, patient safety events presented in M&M conferences, case conferences, or grand rounds did not appear to be routinely reported to the patient safety/quality office or into the CLE's formal event reporting system. Additionally, cases that were considered but not presented were frequently not reported into the CLE's event reporting system.
- Few CLEs had mechanisms for communicating and disseminating general findings or actions resulting from patient safety event investigations to residents, fellows, faculty members, program directors, and other staff members.

Challenges and Opportunities

Though most residents and fellows were aware of their CLE's process for reporting patient safety events, few of them appeared to have used it themselves to report events. When residents or fellows did file a report, or have others file it for them, many received little or no feedback from the CLE.

- Across CLEs, residents and fellows were underutilizing the formal patient safety reporting mechanisms offered in their CLE.
- In a few CLEs, residents and fellows were not permitted to enter reports into that CLE's patient safety event reporting system.
- Most residents and fellows were aware of the hospital/medical center's online or paper process for reporting patient safety events, but viewed reporting as a nursing function or considered it too time consuming. They appeared to be most comfortable reporting through chain of command and resolving issues at the local or departmental level.
- Across CLEs, most physician faculty members were aware of the hospital/medical center's online or paper process for reporting patient safety events, but across CLEs, physician faculty members appeared to be underutilizing these formal patient safety reporting mechanisms.
- Of the residents and fellows who submitted patient safety reports through their CLE's mechanisms, few appeared to receive comprehensive feedback. Most were unaware of the CLE's process of review, investigation, implementation of improvement activities, and monitoring. Most CLEs did not appear to set goals or monitor resident, fellow, and faculty member participation in patient safety activities (e.g., reporting events, participating in investigations and related improvement activities).

Across CLEs, a limited number of residents, fellows, and faculty members participated in interprofessional, interdisciplinary, systems-based improvement efforts, such as patient safety event reviews and analyses.

- Few residents and fellows indicated they were exposed to formal methods of patient safety event investigation, such as root cause analysis. Often the GME and CLE leadership had no commonly established definition, criteria, or curriculum for providing residents and fellows with this experience.
  - Across CLEs, many residency/fellowship programs used M&M conferences, case conferences, or grand rounds as the primary means of engaging residents/fellows in analyzing patient safety events. The formats and methods of these analyses varied widely across programs. Residents and fellows described experiences that ranged from traditional M&M formats that principally focus on medical decision making, to informal discussions of what went wrong, to some analysis of systems factors. Rarely were the conferences reported to follow the rigors of a formal patient safety investigation, including the steps of developing and implementing action plans and monitoring the outcomes of those actions.
- In many CLEs, residents, fellows, faculty members, and program directors confused patient safety event investigations with peer review.
- In many CLEs, the patient safety and quality staff confused patient safety event investigations with peer review.
- In many CLEs, residents, fellows, and faculty members did not distinguish the differences between M&M conferences and formal patient safety event investigations/root cause analyses. In describing M&M conferences and formal patient safety event investigations, residents and fellows were often uncertain about how the findings from that learning activity led to enduring systems-based improvements.
- In general, residents, fellows, and faculty members described very little interprofessional (e.g., nurses, technicians, pharmacists) involvement in the patient safety investigations conducted in M&M conferences, case conferences, or grand rounds.
- In general, residents, fellows, and faculty members described very little interdisciplinary (i.e., across departments and service lines) involvement in the patient safety investigations conducted in M&M conferences, case conferences, or grand rounds.

Challenges and Opportunities

In many of the CLEs that serve as training sites for residents and fellows on short rotations from other Sponsoring Institutions, this subset of residents and fellows was reported to receive different, often less comprehensive, orientation and training in patient safety than the residents and fellows who spent longer rotations there or whose programs are formally sponsored by that CLE.

- Many residents and fellows indicated there was variation in the level and type of patient safety education, expectations for reporting, and expectations for involvement in improvement activities as they rotated from one CLE to other CLEs that were part of their training experience.

Across CLEs, executive leadership varied in their awareness of resident/fellow integration into their hospital or medical center's patient safety initiatives.

In many CLEs, GME leaders were aware of patient safety events related to resident/fellow supervision or fatigue. For many of these CLEs, the patient safety and quality leaders were not aware of these events.

Discussion

Resident, Fellow, and Faculty Member Education

It is essential to ensure that patient care occurs in an environment where residents, fellows, and faculty members are well trained in the science and practice of patient safety. These individuals are vital members of the health care team and, as such, their participation is important to achieving the CLE's goals for patient safety.

Critical to resident, fellow, and faculty member participation is their ability to clearly understand and recognize what defines a patient safety event, near miss/close call, or unsafe condition, and their responsibility to report such occurrences. Many of the themes defined in this Patient Safety Issue Brief relate to a broad concern about how each CLE promotes its culture of safety,[5] and specifically how it includes the GME community (e.g., its residents, fellows, faculty members, and program directors). Some critical elements of a culture of safety are:

- non-punitive approaches to patient safety activities;
- identification of systems-based underlying causes; and,
- solutions that are focused on mitigating the underlying causes rather than finding fault with individuals to enable sustainable results.

Didactic approaches, such as presentations during resident orientation and web-based modules on patient safety, may be helpful but are insufficient. Every resident and fellow should receive an orientation that includes:

- an overview of the high risk/hazard nature of health care;
- the most common patient safety events in that environment;
- existing prevention strategies;
- how to report near misses/close calls and adverse events; and,
- where to seek assistance when a patient safety event occurs.

Experiential learning, through participation in activities such as interprofessional, interdisciplinary reviews of patient safety events, enables residents, fellows, and faculty members to apply a systems approach to identifying and addressing potential causes of harm.

Patient Safety Event Reporting

It is essential for residents and fellows to have access to reporting into the CLE's patient safety event reporting systems. By providing residents and fellows access to these systems, CLEs gain the input of front-line caregivers (and thereby decrease the risk to patients), residents and fellows have the opportunity to learn about the importance of how and what to report, and residents and fellows will be more likely to report in the future.

Recognizing that in many programs residents and fellows rotate through a variety of CLEs, it is also important for GME leaders to work with each of the CLEs where their residents and fellows rotate to understand the similarities and differences in approaches to patient safety and appropriately manage them, to maximize resident and fellow experience across CLEs, and to be aware of the strengths and weaknesses associated with any variability between the CLEs' approaches to patient safety. This means that residents and fellows should be given the appropriate orientation and apprised of site-specific processes. This also holds for examining how various clinical departments within a CLE approach patient safety so as to aid in designing a common curriculum across the CLE and across the Sponsoring Institution.

It is also essential for residents and fellows to learn the value in reporting near misses/close calls. Lack of focus on reporting and acting on knowledge from near misses/close calls leads to lack of mitigation education focused on the possible precursors to enable the prevention of harm events. Training residents and fellows to only focus on reporting patient safety events where there is harm to the patient hinders the learning to mitigate risk of harm to patients and the importance of preventive strategies and actions. Near misses/close calls provide tremendously more opportunities to learn before harm occurs.[6]

Patient Safety Event Review

In addition to reporting events, the experience of receiving feedback encourages reporting and helps residents, fellows, and faculty members understand how patient safety can be improved in individual departments and across the organization. When a resident, fellow, or faculty member receives no response to a report, it deters future reporting. Alternatively, each report that results in both patient care improvement and a learning experience provides positive reinforcement to continue to engage in the efforts to improve patient safety within the CLE.

Many CLEs have evolved or are evolving their M&Ms with a peer-review focus to include systems-based discussions of patient safety events. There are challenges associated with choosing to use M&Ms or dedicated patient safety conferences for the purpose of patient safety. Faculty members, administration, and thereby residents and fellows, could easily become confused as to the purpose of the M&M if it includes a mixture of both peer review and patient safety event analysis. The former seeks to examine the performance of individual physicians, with the end result often being "blame and shame;" the latter seeks to identify team and systems-based opportunities to reduce or eliminate harm and improve patient safety by asking what went wrong, why it went wrong, and what is being done to prevent it in the future.[7]

For CLEs that choose to use M&M conferences or have a dedicated patient safety conference as a mechanism for resident and fellow education and experiential learning, some important design considerations include:

- avoiding an ill-defined mix of peer review and systems-based reviews of patient safety events;
- seeking interprofessional engagement;
- including discussions of near misses/close calls and events with lesser harm to identify and address important precursors to and the underlying causes of patient safety events;
- being open to sharing the findings as sources for improving care across the organization; and,
- following the practices associated with a "culture of safety."[8]

Broadly communicating the key learnings and improvement plans from patient safety event reviews to residents, fellows, faculty members, and other staff members will help promote the value of CLE efforts to improve patient safety.

Through this, CLEs and GME can join together to create a culture of safety and teach residents and fellows about the role of systems thinking in forging sustainable improvements in health care.

The Role of the CLE in Monitoring/Governance Around Patient Safety

Leaders in CLEs and the GME community need to ensure that faculty members have the skills to educate and train residents and fellows to become competent in risk identification, harm reduction, and creating a culture of safety. Without good role models, residents and fellows may receive messages from the faculty members (either implicit or explicit) that contradict the CLE's efforts to create a culture of quality and safety. This could leave the next generation of physicians ill-prepared to advance the teaching and practice of safe care.

Resolving any disconnect between the CLE's executive leaders and its GME community has the potential to improve both patient care and the resident and fellow training experience. If the CLE's leaders have inadequate knowledge of resident and fellow involvement in patient safety activities, they will miss opportunities to improve patient care, as well as underestimate the value of resident and fellow contributions to promoting patient safety. Similarly, if the CLE's leaders have inadequate knowledge of resident supervision and fatigue as potential factors contributing to vulnerabilities in patient safety, they will miss opportunities to identify and address these issues as potential causes of patient safety events and prevent problems before they occur. It seems apparent that issues related to resident and fellow supervision and fatigue, while central to GME, are also areas that would benefit from close harmonization with the CLE's expectations for improving patient safety.

Conclusion and Next Steps

The ultimate goal of GME is to provide resident and fellow physicians with the experiences that they need to deliver the safest and highest quality patient care and the opportunities to become well-versed enough in the science and practice of patient safety to lead improvements in patient care throughout their professional career.

In order to achieve this, they need to be able to identify risks to their patients, understand how to prioritize and mitigate those risks in a sustainable way, and know how to lead and role model these skills when they transition to independent practice.

Medicine and health care delivery is continually evolving. It is therefore imperative to provide residents and fellows with lifelong skills to recognize system vulnerabilities, and to develop and implement strategies to mitigate these vulnerabilities, so that they are well prepared to meet the challenges of a continually changing health care environment throughout their careers.

The CLER Program findings demonstrate that education about patient safety has been introduced into GME. To date, much of the education has focused on didactic activities with much emphasis on online learning. There are many opportunities for CLEs to provide resident and fellow physicians with experiential learning, such as how to conduct patient safety event inquiries and translate the findings into systems-based improvements that result in better patient care.

The findings also suggest that resident and fellow physicians are beginning to engage in their CLEs' processes for reporting patient safety events. CLEs have an opportunity to build upon this engagement by increasing resident and fellow involvement in the processes of investigating events and providing feedback that results in creating and implementing plans to improve care. Lastly, it is important to note that resident and fellow physicians look to their mentors and other members of the health care team to model systems-based patient safety behaviors and lead the way in ongoing efforts to improve patient safety.

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CLER EVALUATION COMMITTEE MEMBERS

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Patricia M. Surdyk, PhD**
Susan White

* *Past CLER Evaluation Committee member*

** *Former staff member*

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