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Development of an interprofessional clinical learning environment report card☆

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ABSTRACT

Multiple factors in the learning environment can encourage or impede student learning. Unanswered questions regarding the shared learning environment for graduate nursing and medical education and the desire for an ongoing improvement process drove creation of an interprofessional collaborative and development of an Interprofessional Clinical Learning Environment Report Card (I-CLERC) at one U.S. academic medical center. The I-CLERC offers a process and a product for institutionalizing a shared assessment tool to inform improvement efforts, track progress and promote accountability. In addition, it enhances interprofessional collaboration, with students and faculty from both nursing and medicine working together to define excellence, monitor performance, and identify areas for improvement in the shared clinical learning environment. The purpose of this manuscript is to describe development and implementation of an interdisciplinary, institutional collaborative for ongoing evaluation of the shared clinical learning environment.

Introduction

As practice disciplines, much of learning in nursing and medicine takes place in the clinical setting where the learning environment is influenced by interactions with varied healthcare professionals, patients, and families. It is critical for learners to grow into professional roles in a culture that exhibits trust and rapport among healthcare professionals providing safe and quality patient care (Liljedahl, Boman, Falt, & Laksov, 2015; Macy Report, 2018). In addition, understanding factors or patterns in the learning environment that contribute to poor communication, unhealthy work relationships, and potential burnout in future healthcare professionals is essential. Recognizing the need for an ongoing process of gathering information and facilitating improvement, an interprofessional group of educators, clinicians, and students collaborated to develop an innovative learning environment report card, the Interprofessional Clinical Learning Environment Report Card (I-CLERC), focused specifically on the shared clinical learning environment. The purpose of this manuscript is to describe development and implementation of this interdisciplinary, institutional collaborative for ongoing evaluation of the shared clinical learning environment.

Background

Learning environment

The learning environment has a major role in determining student academic inspiration, learning, and achievement. The social, cultural, relational, digital/virtual, academic, and personal aspects of learning environments provide context for processes that shape learner experience, performance, and professional identity formation. Further, the

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student's own perception of the learning environment is widely accepted as a significant influence on student outcomes (Payne & Glaspie, 2014). The complex and dynamic interactions among all these components create the learning environment for students. While every aspect of the learning environment cannot be controlled, understanding student perceptions can facilitate opportunities to identify trends and address issues that may decrease learner safety and negatively impact student outcomes, as well as develop strategies to support and enhance positive influences.

Educators in the health professions work to establish and improve culture by designing opportunities for learners to grow as professionals, with the ability to practice collaboratively. However, educators are unable to improve the culture effectively without consistent, accessible monitoring and metrics to inform initiatives. Generally, a variety of relevant program data is collected through questionnaires, surveys, self-studies, and other instruments or reports, yet results may not be integrated or shared across programs and professions, even within the same institution.

Monitoring

Accrediting bodies in both nursing and medicine (The Commission on Collegiate Nursing Education [CCNE], Accreditation Commission for Education in Nursing [ACEN], Liaison Commission for Medical Education [LCME]) include a standard that requires academic programs to identify how teaching/learning practices and environments support the achievement of expected student outcomes. At the graduate medical education level, a recent initiative by the Accreditation Council for Graduate Medical Education (ACGME), the Clinical Learning Environment Review (CLER), supports extensive site visits and internal review to focus attention on ways to improve clinical learning environments (Bagian & Weiss, 2016; Nasca, 2018). Nursing education professional organizations, the American Association of Colleges of Nursing (AACN) and the National League for Nursing (NLN), lead excellence and innovation in nursing education initiatives. According to the NLN (2012), key competencies of the academic and clinical nurse educator role include creating a positive and caring environment and modeling professional behaviors that facilitate learning and achievement of desired outcomes. In addition, nurse educators should foster student integration of professional values and behaviors, and function as change agents for a preferred future of education and practice. Consistent with their mission of advancing nursing to improve health for all, the American Nurses Association (ANA) addresses issues that impact all current and future registered nurses such as ethics, coordination of care, and nursing roles in the healthcare system, to support positive, team-oriented, practice environments. Nursing education literature continues to highlight the importance of designing effective clinical learning environments for improving learner outcomes (Jessee, 2016).

However, there is a noticeable lack of national benchmark data related to aspects of the learning environment in nursing. While medical education and accreditation have long required frequent surveys and reviews of national comparative data across institutions, opportunities for data collection regarding the learning environment across similar academic nursing programs do not currently exist. The Association of American Medical Colleges (AAMC) regularly and systematically collects national comparison data on the experience of medical students during their clinical placements and supports institutional monitoring of student mistreatment. The results of institutional monitoring have uncovered the difficulty of eradicating negative behaviors in the clinical learning environment, even with extensive education and quality institutional response systems (Fried, Vermillion, Parker, & Uijtdehaage, 2012). The American Medical Association (AMA) created a collaborative group to study the impact of healthcare learning environments on the student experience. In a large national sample, results of the group study indicate medical student perceptions of the learning environment change negatively after transitioning to clinical work (Dunham, Dekhtyar, Gruener, et al., 2017). A similar approach to collection and monitoring this type of information could assist nursing schools in understanding their unique climate and culture, as well as provide valuable aggregate data for comparing overall climates and cultures of nursing education among types and levels of institutions.

There are distinct and significant challenges in nursing education due to the variety of educational pathways, multiple programs, accrediting bodies, and the creation of supporting infrastructure. However, regular and systematic analysis of national data provides the unique opportunity to identify and address issues critical to the future quality of nursing education and the well-being of nursing students. Therefore, this work represents a call for an initiative in nursing education for collection and benchmarking of national data regarding the learning environment for students, and is critical to continued advocacy efforts in nursing education.

Goals

To embrace the repeated emphasis on the learning environment as a primary influencer of learner outcomes, yet with no way to broadly, reliably, and validly assess the shared clinical learning environment across institutions in a manner essential to improvement, there was a clear need for a collaborative, coordinated and committed approach. The primary goal was to address the need for intentional, continuous monitoring of the clinical environment for elements relevant to all healthcare professions, informed by stakeholders including nursing and medical students at various stages of education and training, resident trainees, faculty, and staff, and responsive to the needs of both academic programs and healthcare practices. The overarching, perpetual goal of the work is to clearly define and create for the academic and practice institutions excellence in learning environments that will consistently support learners in reaching positive outcomes, in both training and future practice.

Overview

In 2015, a learning environment task force was assembled that included key leaders and current learners in the schools of nursing and medicine as well as the affiliated medical center. The task force was charged to 1) conceptualize and generate a report that identifies and defines essential elements of the shared clinical learning environment and 2) build a community of learners and educators who monitor and integrate data related to the environment, as well as serve as advocates for necessary change. The original members of the task force sought to incorporate the values of multiple stakeholder groups in order to strengthen the substance and meaning of the initiative, and to help ensure their long-term engagement. Nursing and medical students at various levels, medical residents, and faculty from the schools of medicine and nursing offered input and ideas to represent diverse perspectives. The clinical learning environment is also shared by other health professionals such as pharmacy and social work students. However, for initial implementation of the task force, only the nursing and medicine programs were included as those are the two entities housed in the academic institution and for which data are accessible.

Report format

The structure of an organizational report card was selected for multiple reasons. First, although report cards may be viewed as a static summative evaluation, they represent a commonly understood method of systematic, academic performance assessment in the educational environment. Report cards allow for review of performance in specific areas and represent an opportunity to identify areas of strength and opportunities for enhancement. Second, thoughtful reflection on

performance data can be a powerful driver for change. Aggregate feedback from event reporting systems and surveys of nursing and medical students, residents, employees, and patients often reveals trends and opportunities for improvement that may be missed if only individual experiences are considered. The report card structure also promotes a longitudinal view of organizational performance and tracking progress in targeted initiatives and improvements. Finally, the report card format has been cited in the graduate health professions education literature as a valid tool to support continuous quality improvement (Phitayakorn et al., 2007; Rose & Long, 2010). Though some organizational report cards may be created for consumer use, the I-CLERC was viewed as an ongoing formative assessment with a "snapshot" resulting from once a year data point collation. It was designed for internal dissemination to encourage open sharing of data across units and provide data to drive internal organizational improvement strategies, rather than for external audiences.

Framework development

The task force met monthly to determine key elements of an effective clinical learning environment, and further, how these elements could be best be measured with available data sources and tracked over time. Informed by an extensive review of the literature for the essential components of the learning environment and collective expertise of the task force members, a conceptual framework emerged that identified domains for inclusion in the report card. It was agreed that high quality learning environments should consistently reflect best practices in education, professionalism, and patient care, and should be deliberately organized to support the continuous learner (Cutrer, Miller, Pusic, et al., 2017). Therefore, positive learning environments should identify and monitor factors that impact learner development, reward quality role modeling, and establish effective processes to handle unsafe or disrespectful behaviors.

The report card framework (Fig. 1) includes three domains: learner development, professionalism, and patient care. Each domain contains three priority areas (i.e., elements of the clinical learning environment) that are monitored by collating internal performance measures. Examples of data points for each priority are presented in Fig. 1. Priority areas were chosen by reviewing literature, discussing professional experiences, prioritization processes, and consensus building. The task force then began to identify existing data sources in these areas.

Data sources

Selection of data sources was based on several principles. An assumption that data triangulated from a variety of perspectives would provide a truer picture of actual organizational practices guided selection. Existing, previously validated measures for data sources were prioritized over the creation of new ones for an established, repeatable mechanism for collection. Longitudinal internal program evaluation data and national data points that could provide benchmarking comparisons and targeted improvement items were valued for inclusion. Finally, sources that could provide care unit and department level data for potential future creation of individualized unit dashboards were considered.

Collection of data from the selected sources required collaboration with the organizational human resources department and staff, educational and program evaluation groups in academic settings, and medical center quality teams. Other national data sources were obtained from medical center benchmarking efforts related to patient experience and employee engagement. Internally developed sources included annual learning environments surveys for nursing and medical students and an organizational reporting system for professionalism concerns (Pichert, 2013). National data sources from medicine included annual resident and faculty surveys and the medical student graduation questionnaire.

Outcomes

In 2016, with the foundational work completed, the task force transitioned into the standing LEAF (Learning Environment Assessment and Feedback) Committee. Committee membership continues to represent key stakeholders in the academic and healthcare organization including nursing and medical students, medical residents, faculty, and senior nursing and medicine academic leadership. The committee generates the I-CLERC on an academic year cycle, which aligns with the majority of data sources and collection cycles. For the academic year (AY) 15-16, data was provided for the first topic in each domain: feedback, addressing concerns, and transitions in care. For AY16-17, data for the second topic in each domain was added: educator quality, diversity and inclusion and patient safety. Data sources for the final

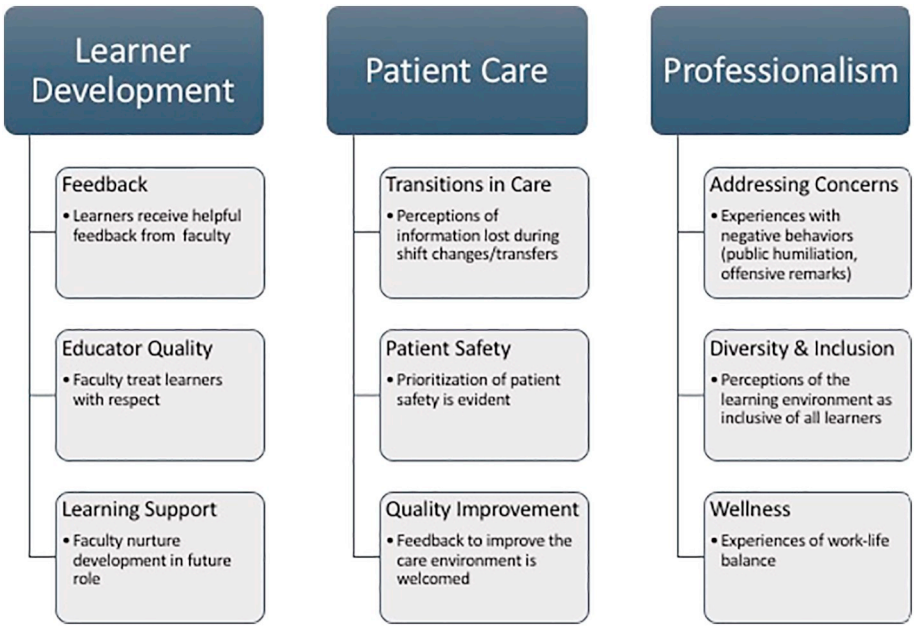

Fig. 1. Interprofessional clinical learning environment report card framework with domains and sample data points.

elements in each domain (learning support, wellness and quality improvement) were added in AY17-18. Data point sources continue to be evaluated and curated for inclusion in framework domains and priority areas. The I-CLERC is made available online to all organizational members (password protected) and is regularly disseminated in a formal way to stakeholders, including internal organizational and academic leadership and learner groups.

Lessons learned

For any project, it is important to recognize the many contextual factors that can contribute to success or impede progress. Task force work was done in a large academic healthcare center in the southeast region of the United States. The schools of nursing and medicine have separate leadership, and the university and medical center are organized as separate organizations. However, there is a long tradition of collaborative interprofessional work and the medical center shares educational leadership with the academic organizations. In addition, there is a strong tradition of using data for organizational improvement in the institutional clinical and academic settings. These factors facilitated creation of the collaborative task force.

In determining the effectiveness of organizational report cards, success is determined by the goals of the project (Coe & Brunet, 2006). In that context, there were two major successes and two challenges to the quality of the I-CLERC project. The two primary goals established by the task force charge were clearly met as evidenced by the presence of a standing institutional collaborative committee with generation of the learning environment report card for the past four years.

In terms of challenges, a secondary goal had been to provide individual report cards, or dashboards, for each clinical department with their own "scores" relative to the entire healthcare center and to national benchmarks. However, the report card currently summarizes data only at the institutional level largely due to informatics demands. Current inability to individualize feedback for specific, unit based clinical learning environments in the medical center may reduce the efficacy of subsequent interventions if individuals or departments do not think the data apply to them specifically. For example, if aggregate data indicates an issue with professional behavior of specific clinicians, unit leaders and team members may not feel the problem rests with them, but instead, it must be occurring on another unit. Accessing and deconstructing the available data sources is an ongoing task as data sources change and the focus of different national medical surveyor groups can shift. In addition, the lack of national comparative survey data primarily from nursing students, yet also from medical students, regarding the learning environment is problematic. National comparison data would allow individual nursing and medical programs to have meaningful context for their own evaluation data, and provide a larger, disciplinary opportunity to identify and drive initiatives for continued excellence in nursing education.

The second challenge was staying within the boundaries of the initial task force charge to identify, communicate, and advocate. This charge remains central. Members are action-oriented, dedicated to creating and sustaining effective clinical learning environments, and were invited to join the group because of their expertise and enthusiasm. However, the natural inclination toward taking programmatic action blurs the lines between the charge and the work to implement improvements. Certainly, broad initiatives have been generated from issues identified in the I-CLERC as reported below, but it is hoped as data points are refined and unit or program specific dashboards can be designed, specific quality improvement projects and measures will be initiated by the immediate stakeholders in those units and programs.

Limited turnover in task force membership demonstrates commitment and provides the continuity and traction processes necessary for continued success. Each year a few individuals rotate off and a few are added for fresh perspectives, enthusiasm, and increased momentum. Creating one institutional report card per year is sustainable with available technology resources, but regularly providing a substantial number of unit-level report cards, as per the initial objective, would greatly increase the time and data-related demands. However, it would also support the goal of identifying unit-specific clinical learning environments that are excellent and those that need targeted interventions.

Learning environment initiatives

The I-CLERC has proven a catalyst for collaboration, a document of current and past performance, and a chance to critically reflect on what comprises the ideal (and the unacceptable) learning environment. Importantly, it provides a place for administrators, faculty, and learners who are currently making efforts to improve the clinical learning environment working to communicate and coordinate efforts. It has also resulted in increased awareness of the many existing projects and initiatives that fall within the scope of improving the clinical learning environment (Lomis, Carpenter, & Miller, 2009).

In the last two years, two major improvement projects have resulted directly from the I-CLERC project. In both the nursing and medical schools, ensuring learners feel safe in reporting concerns has been a priority. A common thread throughout the learning environment work is the importance of creating and maintaining a "speaking up culture" in clinical education (Martinez, Etchegaray, Thomas, et al., 2015). A sample item with results from the report card is presented in Fig. 2. As a result of data collected in I-CLERC, educational and institutional leaders are striving to improve learner comfort with institutional mechanisms

LEARNER GROUP	ITEM	DATA SOURCE	AY 16-17 RESULTS
NUR-STU	Knows procedures to report mistreatment of nursing students	VALES (internal)	57%
MED-STU	Knows procedures to report mistreatment of medical students	AAMC GQ (external)	95% (*86%) *National Benchmark

Fig. 2. Sample report card item – addressing concerns.
Notes:

- VALES = (University School of Nursing) Annual Learning Environment Survey.
- AAMC GQ = Association of American Medical Colleges Medical School Graduation Questionnaire. National Benchmark data from the 2017 All Schools Summary Report. https://www.aamc.org/download/481784/data/2017gqallschoolssummaryreport.pdf. Accessed June 13, 2018.
- Institutional survey results presented with permission.

for addressing and reporting concerns. Education for students, faculty, and staff regarding the reporting system and supporting processes has been a priority. In the area of feedback, similar levels of satisfaction from nursing students, medical students, residents and faculty indicated an opportunity for improvement in provision of meaningful performance feedback. Awareness of these needs provided support for a medical center-wide feedback initiative. In the school of nursing, specifically, I-CLERC information has been a driver for diversity and inclusion (D&I) initiatives including implementation of holistic admissions and establishment of a standing D&I committee.

Forward thinking

Initial organizational responses to the report card by faculty and learners indicate significant potential to use this information for awareness and advancement. The report card serves notice to all members of the academic and healthcare organizations that the quality of the learning environment is an institutional priority, and everyone is accountable for excellence in both healthcare and learning. The I-CLERC is currently in its fourth year and continues to evolve and gain momentum. Determining the conceptual framework and identifying, accessing and integrating appropriate data sources from across the organization was time and effort consuming. However, after the initial building phase, identified data sources are expected to stay relatively stable, allowing for more concentrated effort on communication of yearly progress and support for improvement efforts.

Current goals for the standing LEAF Committee include further development of the concept and data sources for wellness in the Professionalism domain. Stressors in learning environments can negatively impact the health, satisfaction, and learning outcomes of all learners. In addition, patient and family outcomes are adversely affected by negative environmental factors. Supporting professional and personal wellness is a priority for the academic health center, but it also requires thoughtful individual reflection on personal goals and actions. Use of I-CLERC data can help with identifying and understanding experiences in the learning environment that could potentially contribute to burnout in current and future health professionals (Sasso, Bagnasco, Bianchi, & Bressan, 2016; ten Hoeve, Castelein, Jansen, & Roodbol, 2017). Learner-led focus groups are increasing communication around negative behaviors and student mistreatment and an intervention-oriented medical center task force is working to address system-level issues identified by the report card. The development of well-aligned data sources is ongoing and committee members are working to share a holistic and measureable vision of positive clinical learning environments both locally and nationally.

Discussion

A recent Josiah Macy Jr. Foundation Report (2018) on Improving Learning Environments in the Health Professions outlines definitions for key concepts, discussion themes, essential characteristics of the learning environment, and urgent, actionable recommendations for transforming learning environments for learners, educators, and practitioners. A report summarizing recommendations is presented in Table 1. While development of the I-CLERC has been ongoing since 2015, our work is consistent with the call to action in the Macy Report for dramatic improvement of the learning environment for healthcare professionals. For example, the definition of the learning environment used as the foundation for our work also identifies the elements of social interaction, organizational culture and structure, and physical and virtual spaces that shape the experience, perception, and learning outcomes. To acknowledge that we are all teaching and learning from each other, we also defined "learners" as all those participating in the work of the academic health center, including graduate and undergraduate nursing and medical students and faculty, as well as those receiving care and their families, in recognition of both formal and informal roles within the system.

Table 1
Summary of Macy report conference consensus recommendations for optimizing the learning environment

I. Engage academic and health care organization governance in responsibility and accountability for a positive learning environment.
II. Engage executive leadership in organizational support for resources, policies, and processes to support optimal learning environments across settings.
III. Create physical and virtual spaces for learning that are appropriate, flexible, and safe.
IV. Provide continuous learning and development opportunities for faculty and staff to improve learning environments.
V. Commit to continuous evaluation and improvement of the learning environment as well as promotion of research regarding the learning environment.
VI. Advocate for policy that supports funding, measuring, and improving the learning environment for healthcare professionals.

Presented in the consensus report are action-oriented recommendations for enacting the conference vision of "exemplary learning environments" that "prepare, support, and inspire, all involved in health professions education and health care to work toward optimal health of individuals, populations, and communities." Our collaborative effort to develop the I-CLERC represents a proactive response to the call, and an example of leadership commitment and accountability within the organization. In preparing the I-CLERC, the LEAF committee facilitates annual assessment and monitoring of the clinical learning environment in our effort to promote and sustain a safe, inclusive, positive culture for all learners.

Conclusion

The I-CLERC is intended to engage stakeholders and support ongoing assessment, critical reflection, and organizational improvement by aggregating data regarding the learning environment in key areas. The coordination of learning environment metrics in this manner has great potential to make positive change in clinical education. The value of interprofessional and intra-organizational collaboration in this project cannot be overstated. It created a shared vision for the learning environment that thoughtful, dedicated educators and clinicians can continuously monitor and improve for future healthcare professionals. Academic and practice leaders with responsibility for safe, quality care in shared clinical learning environments share the imperative for creation and monitoring of the learning environment. Development of the report card also proved a strong stimulus in identifying the critical need for national benchmarking data in nursing education. All nursing organizations with educational, accreditation, and healthcare delivery interests must align in shared responsibility for positive learning and work environments.

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