Pursuing Excellence: Driving GME Integration With Health System Strategic Priorities

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The Clinical Learning Environment Review (CLER) Program was developed by the ACGME to provide formative assessment and feedback to the nation's teaching hospitals and medical centers regarding engaging residents and fellows in patient safety, quality improvement, and other key areas of focus in their patient care environments.[1] The CLER Program's first *National Report of Findings* from visits to 297 clinical learning environments (CLEs) was published in 2016.[2] The report highlighted opportunities for graduate medical education (GME) leadership and CLE executive leadership to partner toward the goal of optimizing patient care and the learner experience. In response to that report, the ACGME Board of Directors approved the *Pursuing Excellence in Clinical Learning Environments* initiative (*Pursuing Excellence*).[3] The Pathway Innovators Collaborative represents a core activity within *Pursuing Excellence*, and an overview of this Collaborative has been presented in a prior publication.[4]

In brief, the overall design of the Collaborative was based on a longitudinal social learning model similar to that developed by the Institute for Healthcare Improvement's Breakthrough Series.[5] This model examines change by asking about the goal of the change, the anticipated improvement from the change, and if the change led to that improvement. The Pathway Innovators Collaborative included teams from 8 Sponsoring Institutions lead by the CLE's chief executive officer (CEO) and the designated institutional official (DIO). This DIO-CEO dyad is relevant for CLER site visits and *Pursuing Excellence*, as this team has great potential to activate change in the CLE. The Collaborative was conducted over a 4-year period with multiple in-person Learning Sessions followed by intersession work. This article provides a detailed perspective on the first of 4 major areas of work within the Pathway Innovators Collaborative.

The Driver Diagram and Driver 1

The overall aim of the Pathway Innovators Collaborative was to enhance the integration of health care delivery systems operations and GME such that the CLE enables measurable improvement in both learner experience and patient care. The Collaborative participants utilized a driver diagram to develop a shared conceptual model for achieving the aim. The diagram included 4 primary drivers and multiple secondary drivers.[4] This article focuses on the participants' journey in addressing the first of these drivers—alignment of GME and CLE strategic priorities. FIGURE 1 highlights the primary drivers in the conceptual model.

In addressing Driver 1, Collaborative participants recognized that, although leaders of GME and the CLEs, as stakeholders, share the goal of providing excellent and safe patient care, lack of coordination at the level of strategic planning can create silos that result in missed communications, inefficiencies, and even competition for resources within the health care system. The participants noted that DIOs currently vary in their access to and communication with their CLE executive leadership (C-suite). They posited that improving integration would require both sets of stakeholders to identify common goals to align their operational and educational objectives. This meant the need to purposefully enhance their relationships and establish better mechanisms for communicating and building trust.

The Approach to Advancing Driver 1

The efforts of the Collaborative were guided by a multiyear curriculum. BOX 1 outlines the Learning Sessions specific to Driver 1.

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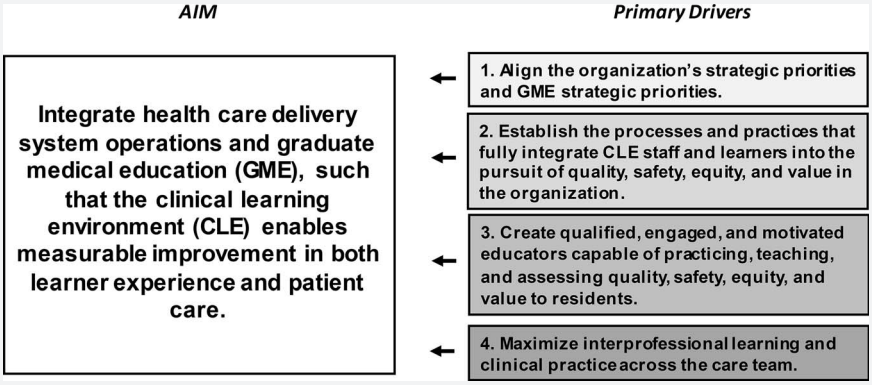

FIGURE 1
Pursuing Excellence Pathway Innovators Collaborative Driver Diagram with 4 Primary Drivers

Throughout the 4 years of the Collaborative, the in-person Learning Sessions ensured dedicated time for the individual teams (including the DIOs, CEOs, members of governance, and other organizational leaders) to spend addressing Driver 1. The in-person Learning Sessions also included time for the Collaborative teams to learn from one another. This purposeful learning path provided the space and shared experience for the DIOs to reconceptualize their role within the CLE. This included acquiring new skills in developing partnerships, taking a role in organizational culture change, envisioning learning as an organizational function, and transforming into leaders who exceed the traditional accreditation expectations of DIOs.

The Collaborative used an approach modified from John Kotter's 8-step Model of Change.[6] Key elements of this approach included:

- using the findings from the *CLER National Report of Findings 2016* [2] to establish a platform of urgency;
- structuring the Learning Sessions to include a coalition of hospital leaders, GME leaders, residents and fellows, and other stakeholders to guide the participating teams in developing a strategic vision; and
- ultimately instituting change through shared learning among the members of the Collaborative, including identifying lessons learned that appear to be common across participating CLEs.

BOX 1 Pathway Innovator's Curriculum to Advance Driver 1: Aligning the Organization's Strategic Priorities and GME Strategic Priorities

Year 1
- Collaborative team and community building
- Engaging leadership and governance in scope and value of graduate medical education (GME)

Year 2
- Elements of an interprofessional culture
- Relational coordination for engagement and measurement
- Bringing innovation to scale

Year 3
- What it means to be a change agent
- Designing and implementing an interprofessional CLE
- Designing for the future

Year 4
- GME in time of change
- Strategies for moving forward
- Creating a common conversation about value

A Focus on the Secondary Drivers

Many of the Collaborative's activities centered on advancing 3 secondary drivers associated with the primary driver 1 (see FIGURE 2).

Secondary Driver 1–Build and Deliver a Shared Business Case That Quantifies the Value of Integrated Clinical Care and Education: There were several key steps to advancing this secondary driver. The first step was to foster engagement between the DIO and the CEO of the CLE. From the outset, the Collaborative established an expectation that the CEOs would join their team for one in-person Learning Session a year for each of the 4 years. In years 2 to 4 a member of the CLE's governance joined the CEO. For the meetings where CEOs were present, each team was expected to conceptualize a project focused on a specific Collaborative goal (eg, enhance faculty development), develop a business case, and present their ideas to the CEOs for input and feedback. Early on, the teams realized that developing business cases would require them to think differently. For the GME participants, it meant expanding their perspective from an educational lens to also include a lens of

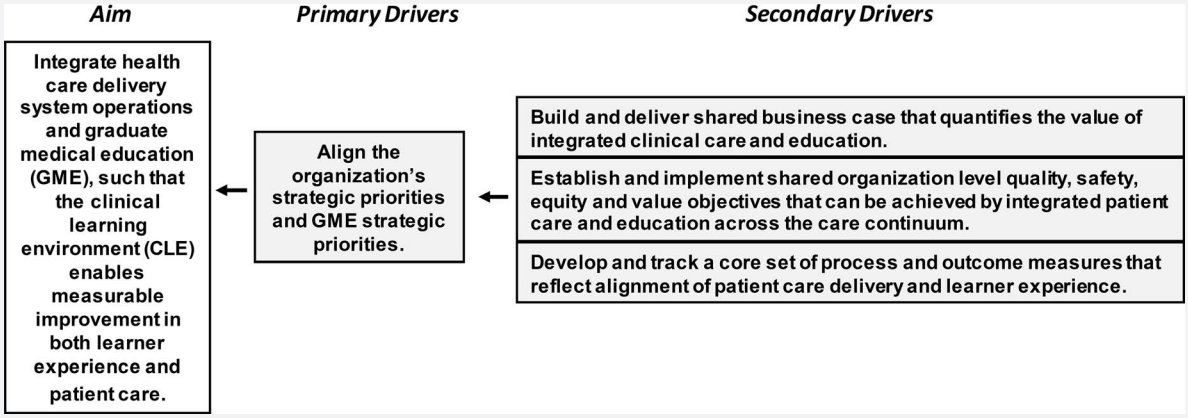

FIGURE 2
Pursuing Excellence Pathway Innovators Collaborative Primary Driver 1 of the Aim and Related Secondary Drivers

business operations—often learning new terminology and concepts in the process. To assist in this effort, the Collaborative engaged the chief financial officers from several of the teams to serve as coaches and mentors. The act of bringing these various leaders together in the Learning Sessions served as a catalyst to start the process of change. The DIOs were asked to familiarize themselves with the CLE's priorities as outlined in their organization's annual operating plan, survey the inventory of existing strategic initiatives within their organization, and identify needs or gaps that could potentially be filled through a GME and C-suite partnership.

The Collaborative introduced the participants to tools such as relational coordination, which captures the relational dynamics of coordinating work.[7] In one of the Learning Sessions, the teams considered how they might use this tool to identify essential stakeholders within their CLE and track their level of engagement. The teams were also introduced to the concept of a stakeholder matrix to better understand the needs and expectations of their various stakeholders—including their health system leaders and governing board.

During the first year of the Collaborative, the teams grappled with various questions: What value does GME bring to the organization? Why should the organization invest in GME? How can residents and fellows help the CLE achieve its initiatives?

Working with the stakeholders identified in their matrix, each team drafted a business plan for how GME could add value to their CLE's existing structures and initiatives, create new processes, and acquire resources to improve the CLE. At the end of the first year, the teams pitched their draft plans to groups of CEOs and members of governance attending the Learning Session. Collectively, this exercise served to generate a shared perspective of the many ways that GME can be engaged in organizational strategy.

For the DIOs, one of the greatest lessons learned from engaging in the exercise of developing and pitching a business plan to executive leadership was the feedback that their plans, although interesting, were too narrow and therefore not likely to garner the full attention of the C-suite. As a result, the DIOs were pushed to think more broadly about the CLE and expand the scope of their proposals to focus on enhancing workplace effectiveness through improving interprofessional communication, health care quality, patient safety, and professional development. The exercise enabled the DIOs to see issues through the lens of the C-suite and to align their needs and contributions with the CLE's priorities.

In developing their business cases, the DIOs enhanced or built new relationships with a variety of stakeholders, including professionals in data management and finance, as well as the various members of the C-suite (eg, chief medical officers, chief nursing officers, chief quality officers). Although not required, most of the business plans were refined and ultimately implemented by demonstrating a return on investment through trends toward shortened length of stay, improved patient satisfaction, and/or improved interprofessional team experience.

Secondary Driver 2–Establish and Implement Shared Organization-Level Quality, Safety, Equity, and Value Objectives That Can Be Achieved by Integrating Patient Care and Education Across the Care Continuum: Early in the Collaborative, it became evident that one way to establish a shared set of objectives among the GME and CLE leaders would be through the design and implementation of projects centered on improving patient care. To that end, each

team designed a project and accompanying business case focused on meeting educational needs while improving patient care quality, safety, equity, and value.

The in-situ teams were much bigger than those that attended the in-person Learning Sessions and often included wide representation of both GME and CLE expertise to assist in implementation. Importantly, each team was led by a DIO-CEO dyad that worked to define and revise the business plan and secure the necessary resources. The DIO-CEO dyads ensured the participation of key leaders within the CLE, including the chief medical officer, chief nursing officer, and other senior leaders. The teams were encouraged to identify and engage individuals with expertise in the areas of education theory, quality improvement, patient safety, health equity, and operational value. They were also encouraged to test their design concepts with frontline providers, including residents, fellows, nurses, and other clinical staff members.

The projects focused on operationalizing one or more of the other primary drivers in the Collaborative's driver diagram (see FIGURE 1). The projects addressed a variety of goals, including improving patient safety, aligning quality initiatives with organizational goals, engaging residents and fellows in cost-saving strategies, and leveraging technology to improve efficiency. All the projects benefited from cultivating an interprofessional culture that contributed to improved patient outcomes and learner experience.The TABLE provides an overview of the projects for each of the Pathway Innovator teams.

In developing and implementing their projects, the teams fostered interprofessional partnerships that raised the CLE's awareness of the capacity of GME to contribute to facilitating innovation and achieving organizational objectives.

Secondary Driver 3–Develop and Track a Core Set of Process and Outcome Measures That Reflect Alignment of Patient Care Delivery and Learner Experience: As the Collaborative progressed, CEOs, participating members of governance, and executive teams were asked to reflect on the value of GME at their institution and the contributions of the Collaborative. They found that the Collaborative added a structure and framework for thinking about and initiating change. It was viewed as a catalyst that allowed for creativity and innovation. Governance members noted that their knowledge of GME functions was better defined and distinguished through the work of the Collaborative.

Since this effort was designed as an innovation Collaborative, it was difficult to define the best set of process and outcomes measures to capture progressive change toward greater alignment. However, there was an opportunity to listen to the CEOs and governance members toward the end of the Collaborative to glean what might define a framework for such measures in future efforts in this area. All 8 CEOs were interviewed.

The framework outlined in BOX 2 presents GME and CLE alignment and integration as a multilayered progression from fundamental engagement to GME and CLE advanced integration. The first step of the framework begins with identifying fundamental aspects of how GME and CLE leadership engage. These fundamentals could be thought of as a set of preconditions promoting increased GME and CLE alignment and integration. For the Collaborative teams, the application process required both the CEO and DIO to be principal leads to ensure the commitment of the Sponsoring Institution at every level, including by integrating everyone from the C-suite to residents and fellows in considering innovations for patient care. As part of the Collaborative design, the presence of residents and fellows actively contributing to strategic goals was regarded as an opportunity to prompt enhanced relationships with other members of the CLE patient care teams, increasing the likelihood that the teams would be more adaptive to innovating improvements to patient care. As part of fundamental engagement, it seemed essential that CEOs recognize that residents and fellows have a positive impact on the CLE, and that embracing GME provides benefit beyond fulfilling workforce service needs for patient care. Similarly, the CEOs and their executive teams viewed residents and fellows as a positive force enhancing the patient experience and culture of the patient care teams across organizations. The value proposition was bidirectional. Residents and fellows gained insight into hospital leadership opportunities, quality improvement processes, the role of the C-suite, and operational excellence in initiating change. It was apparent that the fundamentals alone, while necessary, were not sufficient to ensure enhanced GME and CLE alignment and integration.

To progress beyond the fundamentals to the early integration step of the framework, the participating teams engaged in activities focused on practical operational opportunities for change, often by way of a project that broadly engaged GME with the CLE's initiatives. Examples included GME leaders working with CLE leaders to develop interprofessional programs, and efforts to increase the connections between GME activities to engage residents and

TABLE
Pathway Innovator Projects

Institution	Successful Proposal Pitched to Administration	Aim of Improving Quality, Patient Safety, Equity, or Value	Metrics
Children's National Medical Center	Hospital-wide, interprofessional, simulation-based training to develop communication and safety behaviors was proposed and executed twice over the course of this grant and delivered to over 3000 clinicians.	The focus of this quality and safety training was on communication behaviors and safety event reporting and analysis.	Increased safety event reporting with increased apparent cause analysis disclosure and discussion. Reduced precursor safety events and late rescues. Increased safety culture and interprofessional engagement scores.
Cleveland Clinic	Established an Office of Interprofessional Learning (OIPL).	Established tiered system of QI/PS recognition of achievements required for all residents/fellows. Implemented a standardized transition of care (TOC) note.	Four major projects coordinated by the OIPL currently underway. Mining data from the TOC project with the help of the quality office.
Dell Medical School	Created value director dyads of a physician and an interprofessional colleague to align resources driving improvement in 4 key domains: safety, affordability, experience, and well-being.	Dyads support a crowdsourcing program (Bridges to Better Care) that starts with an "ideas" contest (Shark Tank) where frontline providers submit an idea for improving patient care aligned with the improvement priorities in the department and hospital wide.	Expanded and standardized use of sign-out tool (CORES) to improve resident-nurse communication, more accurate team identification during day and night. Successful nurse-intern shadowing program extended into 2020–2021 intern class. Increased HCAHPS medication transitions by 7% and care transitions domain by 5% with internal medicine (absolute points).
Maine Medical Center	The iPACE project cohorted both patients and providers on 1 pilot unit as a strategy to improve patient satisfaction, cost of care and length of stay, and provider job satisfaction.	The institution modified admission protocols to support this proposal.	iPACE residents experienced a 6-fold increase in the time communicating in-person with providers outside the medical team. Positive patient/family results, increase in team engagement, and reduced cost per patient occurred.
Our Lady of the Lake	Teamwork on FLY—bringing quality improvement and IPE where education and clinical care merge.	Established new structured IPE huddles in the acute care clinical learning environment that focused on QUIPS issues during care planning. "On the Fly" sessions prioritized establishing a shared team vision through patient-centered discussion and positive recognition and affirmation.	Improved HCAHPS and Press Ganey data for care transitions, hospital environment and discharge information, and reduced cumulative unit harm score.

fellows in patient safety and quality improvement with the CLE's efforts in these areas.

To reach the advanced step of the framework, Collaborative participants engaged in activities geared toward alignment that suggested a new and deeper commitment to enhancing GME and CLE integration. These activities brought GME leadership and other members of the GME community closer to CLE governance, strategic planning, and goal setting.

The proposed 3-step framework represented in BOX 2 will need to be tested and improved over time. It also provides preliminary framing upon which a new

TABLE
Pathway Innovator Projects (Continued)

Institution	Successful Proposal Pitched to Administration	Aim of Improving Quality, Patient Safety, Equity, or Value	Metrics
University of California, San Francisco	Proposed to train a significant interprofessional cohort of true faculty experts in process improvement, implementation science, and learner coaching.	Developed a 2-year faculty development curriculum for 15 faculty members per cohort with a goal of training 45 learning health system coaches.	New faculty experts: tripling of Lean-certified physicians, enhanced coaching, and interprofessional skills. Enhanced alignment of residents, faculty members, staff members, and leadership. More meaningful, sustainable, value-based outcomes for resident-led improvement work. Greater resident competence, self-efficacy, professional identity, marketability.
University of Chicago	Improving GME and Nursing Interprofessional Team Experiences (IGNITE).	Unit based and institution-based components exist. Unit based: Monthly coaching sessions occur with team training on principles of quality improvement and patient safety. Unit-based projects are selected by resident-nurse champions identifying unique issues that affect their patient care units and implementing practice changes. Institution based: Interprofessional teams participate in regularly scheduled Kaizen events that engage residents, fellows, nurses, and other patient care providers in hospital-wide improvements.	Improved patient experience and satisfaction (HCAHPS). Increased satisfaction and engagement (ACGME Survey/ Press Ganey). Improved teamwork and communication LOS reduction. Broader engagement of residents and fellows in the Kaizen process. Tools and methods from the IGNITE teams were operationalized and disseminated across the institution to clinical units as models for team huddles, multidisciplinary rounds, and interprofessional improvement projects.
University of Rochester Medical Center	A new faculty development program was initiated incorporating a patient care unit's dyad leadership team (medical director and nurse manager).	The year-long course provided real time "workplace learning" focusing on quality improvement, data management, and team leadership skills.	Improved team (including resident/fellow) engagement in quality and safety resulting in reduced LOS, off-setting cost, and providing increased patient capacity. Forty-five teams created, with additional teams anticipated.

Abbreviations: QI/PS, quality improvement/patient safety; IPE, interprofessional education; HCAHPS, Hospital Consumer Assessment of Healthcare Providers and Systems; LOS, length of stay.

measurement schema for alignment and integration might be developed and tested. It should also be noted that for the teams participating in this Collaborative, their journey toward optimizing GME and CLE alignment and integration was seldom a straight path of linear progression. Rather, it often reflected a back and forth among the layers of the framework, sometimes interrupted or diverted by unanticipated events, such as turnover in CLE or GME leadership, organizational mergers, and ultimately the COVID-19 pandemic. This circuitous path of the Collaborative, however, was also part of the learning experience. The process of working together to solve problems provided valuable knowledge that is now being applied to new challenges exacerbated by unprecedented external stressors on the health care system due to the pandemic, including health care disparities and other injustices.

BOX 2 Proposed 3-Step Framework to Promote Enhanced Alignment and Integration of GME With CLE's Mission and Goals for Patient Care

Fundamental GME and CLE engagement—a prepared CLE
- Recognizes and enhances reflection on the basic value of GME—patient care provided by residents and fellows
- Enhances recognition of the relationship of GME and CLE efforts toward becoming a learning organization
- Recognizes and situates GME leadership, specifically DIOs, as critical leaders in the CLE's clinical performance in addition to their role as administrators of GME
- Demonstrates interest and readiness on the part of the CLE's executive team, including the CEO and members of governance, as well as the DIO and other key members of the GME community, to advance integration of GME beyond the traditional educational role

Early GME and CLE integration—a scaling CLE
- Starts or accelerates (GME/CLE) programmatic activities aligned with CLE strategies and goals, especially through interprofessional engagement
- Creates new structural relationships within the CLE to ensure GME is an active participant to interprofessional organizational learning
- Engages GME in CLE's efforts toward high performance as a learning organization through interprofessional workforce development that includes participation of the GME community (ie, faculty members, residents, and fellows)

Advanced GME and CLE integration—an optimizing CLE
- Integrates representation of GME workforce (ie, faculty members, residents, and fellows) into the CLE's major leadership committees
- Integrates representation of GME leaders (eg, DIO) into the CLE's governance committees
- Enhances engagement of GME community in CLE strategic planning and organizational goal setting

Abbreviations: GME, graduate medical education; CLE, clinical learning environment; DIO, designated institutional official.

In Summary

The Collaborative demonstrated that purposeful efforts to integrate GME and CLE strategic goals advances the CLE's overall mission and efforts to grow value-based care, drives clinical quality, and shifts the patient experience to a higher level. Since residents and fellows interact with many clinical teams as they rotate through different clinical areas, they are uniquely positioned to break down silos, promote common solutions, and instill a sense of cohesiveness throughout the organization.

Over the 4 years of the Collaborative, the participants worked in large interprofessional teams and smaller subsets toward common goals of improving health care delivery. Importantly, building on strengthened organizational alliances, the DIOs of the Collaborative moved beyond their usual scope of overseeing medical education. Ultimately, the Collaborative facilitated each CLE's ability to evolve toward becoming a nimble learning organization, with GME potentially contributing to all aspects of the organization's health care delivery strategy.

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