# Health Educators and Academic Leaders: A Developmental, Principles-Focused Program Evaluation Approach for Aspiring Clinician Educators in Graduate Medical Education

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## **ABSTRACT**

**Background** Aspiring clinician educators (CEs) need formal training and community as they transition into academic roles. To address this, we launched the Health Educators and Academic Leaders (HEAL) program at our institution in 2021, integrating communities of practice (CoP) principles and innovative curricular design.

Objective To report HEAL outcomes using a principles-focused program evaluation approach.

**Methods** HEAL's curriculum was guided by the Kern 6-step approach and incorporated seminars, reflective teaching portfolios, mentorship, video-based coaching (VBC), and the Clinician Educator Self-Assessment Toolkit (CESAT). This 2-year program centered on 3 principles: CoP; reflective practice; and use of innovative curricula, like CE milestones. From 2021 to 2023, a mixed-methods, developmental evaluation informed the iterative refinements, emphasizing evolving principles over fixed outcomes. Data were collected from trainees via de-identified surveys and focus groups.

**Results** Postgraduate trainees from 9 disciplines joined the inaugural HEAL cohort, with a 92.9% (13 of 14) completion rate. Seventy percent of HEAL trainees in the first year (7 of 10) ranked VBC sessions as the most valuable curricular component, while 80% (8 of 10) ranked the CESAT tool as least valuable. Qualitative feedback emphasized the value of real-time, individualized feedback and challenges with milestone-based self-evaluation tools. Eighty-nine percent (8 of 9) of HEAL trainees in the second year reported improved confidence as CEs.

**Conclusions** By centering educational strategies on principles essential to CE development, including CoP, HEAL's developmental evaluation approach has sustained 5 years of curricular innovation and increased the confidence of CE graduates.

### Introduction

As competency-based medical education has evolved to become the standard for medical training and assessment, the roles and responsibilities, of clinician educators (CEs) have expanded.<sup>1,2</sup> The need to prepare highly skilled CEs has become apparent, and many formalized options have been proposed.<sup>3,4</sup> Clinician educator tracks (CETs) offer longitudinal, mentored experiences for graduate medical trainees as they transition into faculty roles, without requiring an extension of medical training.<sup>5</sup> Still, less than 25% of internal medicine programs in North America

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Editor's Note: The online supplementary data contains a comprehensive description of the Health Educators and Academic Leaders (HEAL) tiered curriculum, monthly seminar topics, Clinician Educator Self-Assessment Toolkit, HEAL focus group semi-structured interview guide, and the distribution of teaching portfolios themes submitted each semester.

have a CET,<sup>6</sup> with lower rates reported in subspecialties.<sup>7</sup> Additionally, no consensus exists on best practices for CET curricular development.<sup>5,8</sup> Further, emphasis on developing key skills such as teaching, assessment, communication, leadership, and feedback delivery are either lacking or vary widely across CET programs.<sup>3</sup>

Evidence is also sparse for the impact of CETs on long-term outcomes, such as workforce attrition, curricular innovation, and scholarly productivity.<sup>3</sup> CET program evaluation is further obscured by the absence of uniform standards and clearly defined CET outcomes. Even if a proposed logic model clearly mapped curricular goals to CET interventions, context-specific assessments are lacking within the clinical learning environment. Although instructional competencies and CE milestones have been proposed, existing measures of assessment, such as teaching evaluations and publication counts, are tenuously linked with actual educator skills.<sup>1,9</sup> Without valid, ready-made instruments to drive global CE competencies, both

training and evaluation risk being untethered from meaningful benchmarks as they are operationalized within CET curricula.<sup>1,9</sup> As such, there is room for innovation in not only the training and assessment of instructional skills, but also its program evaluation.<sup>10</sup> Given the emergent and expanding nature of our CET community, paired with uncertainty in integrating CE milestones, we chose a principles-focused, developmental evaluation approach with heightened sensitivity to participant experiences to surveil for unintended consequences. To avoid misalignment between stakeholder needs, desired outcomes, and available resources, we also involved participants (including the second author) in curricular design elements.

In 2019, an internal, informal targeted needs assessment revealed locally available master of science (MS) degree coursework was largely untenable for graduate medical trainees alongside their medical training. Additionally, preexisting programs lacked an established community of practice (CoP), which has been identified as crucial for CET success. <sup>11,12</sup> In response, we launched the Health Educators and Academic Leaders (HEAL) program, a CET at our institution, in August 2021, with the first cohort graduating in May 2023. This article describes the developmental program evaluation approach used in HEAL development and reports outcomes from the first cohort.

# **Methods**

Kern's 6-step approach was applied to guide HEAL curriculum development and implementation at our tertiary academic center in the Midwest.<sup>13</sup>

#### **KEY POINTS**

#### What Is Known

Developing clinician educators (CEs) would benefit from formal training, feedback, and a sense of professional community as they transition into academic roles.

#### What Is Learned

The authors developed, implemented, and sustained the Health Educators and Academic Leaders (HEAL) program for academic-bound trainees, which incorporated seminars, reflective teaching portfolios, mentorship, video-based coaching (VBC), and the Clinician Educator Self-Assessment Toolkit (CESAT). VBC was consistently rated as the most valuable component by attendees, while the milestone-based self-assessment CESAT was least valuable.

#### **Bottom Line**

The HEAL program offers an example of a structured curriculum based in a community of practice model with sound preliminary feasibility and acceptability data.

## Steps 1 and 2: Needs Assessment

An informal needs assessment conducted in 2019 identified a lack of community for aspiring CEs in graduate medical education (GME). With input from 3 national experts in CET design, HEAL was established to address this gap. Key elements requisite for CET launch were identified including a formal application process, coordinated in-person events, and a flexible, tiered curriculum. Since protected time could not be guaranteed, graduate curriculum coursework was tiered, allowing trainees to use master's credits earned in HEAL (Tier 2) toward a professional certificate (Tier 1) and/or a master's degree (FIGURE 1, online supplementary data Appendix A). Due to COVID-19 pandemic constraints, the inaugural HEAL cohort included 9 disciplines in GME but has since expanded its reach.

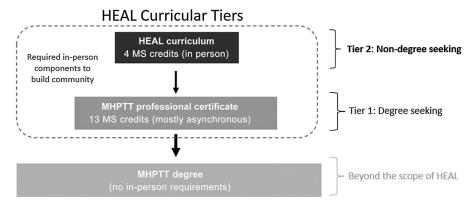


FIGURE 1
Health Educators and Academic Leaders (HEAL) Tiered Curriculum and Pathways

Note: HEAL curriculum is a program approved as a seminar series by the College of Graduate Studies. Tier 2 is non-degree seeking, requiring 1-2 hours of trainee time per week. Tier 1 offers a professional certificate and requires 4-6 hours of trainee time per week, accounting for nearly half of the credits required for the asynchronous Master of Health Professions Teaching and Technology degree. Participants can opt into Tier 1 after 6 months in Tier 2 without reapplying through the College of Graduate Studies. Credits earned in Tier 1 and Tier 2 may be applied toward a future MHPTT degree. The MHPTT degree is 100% online, whereas the HEAL curriculum has mostly in-person requirements to facilitate community.

Abbreviation: MHPTT, Master of Health Professions Teaching and Technology.

## Step 3: Goals and Objectives

The approval of the program as a non-degree seeking seminar series (1 master's credit per semester) helped establish institutional credibility and faculty support. Approval from the College of Graduate Studies curriculum committee required submission of a syllabus for each of the 4 HEAL semestersmodular approach that afforded flexibility to iterate from one year to the next. We adopted a principlesbased approach grounded in the American Evaluation Association standards and the GUIDE framework for program evaluation. 10,14 Given the developmental nature of the curriculum, our 3 guiding principles evolved based on trainee feedback during the first 2 years of the program. These guiding principles were (1) establishing a CoP to foster collaboration, scholarship, and mentorship among aspiring CEs in GME; (2) encouraging self-reflective practice, integrating instructional coaching and reflective teaching; and (3) fostering career exploration and identity formation through CE milestones. The iterative refinement of these principles, informed by feedback from HEAL trainees, is detailed in TABLE 1.

### **Step 4: Educational Strategies**

The HEAL program is 2 years in length and utilizes 5 key educational strategies: a seminar series, reflective teaching portfolios, mentorship, video-based coaching (VBC), and the Clinician Educator Self-Assessment Toolkit (CESAT).

Twenty 90-minute monthly seminars were conducted in the evenings to maximize attendance. These sessions balanced didactic instruction with interactive elements and were led by local experts, including program directors and education specialists from the Office of Faculty Development and the Interprofessional Academy of Educators at our institution. Teleconference options were available, but in-person attendance was encouraged, with meal cards provided. Attendance was required for 3 out of 5 sessions each semester. Topics included direct teaching skills, human skills and leadership, curriculum development, scholarship, learning theory, and promotion/tenure (online supplementary data Appendix B).

HEAL trainees were also required to submit 4 reflections on self-selected themes, constituting their teaching portfolio. Themes included teaching philosophy, teaching experience, teaching effectiveness, instructional materials, professional development, and educational scholarship. Twice yearly, HEAL trainees met with their self-selected CE faculty mentor. During these sessions, mentors provided career guidance and feedback on teaching skills after directly observing the HEAL trainee leading a teaching session.

Annually, each HEAL trainee engaged in a VBC session with 2 HEAL peers and 2 faculty coaches. These sessions, held at a coach's home, included a shared meal to foster trust and build community. HEAL trainees shared a recorded teaching experience and engaged in self-reflection. Individualized feedback was then provided by peers, followed by discussions that addressed "macro-skills," or broader teaching challenges, such as difficult interpersonal encounters. Coaches were selectively recruited and trained to facilitate these sessions under the supervision of a certified coach and clinician educator (D.M.H.) who attended each of the VBC sessions in the first year.

The CESAT is a milestones framework developed for HEAL based on the published Accreditation Council for Graduate Medical Education (ACGME) CE milestones (online supplementary data Appendix C). It is used to guide self-assessment throughout the program. HEAL trainees selected competencies as scaffolds for goal setting at orientation and again 6 to 12 months later.

#### **Step 5: Implementation**

The inaugural interdisciplinary HEAL cohort in 2021-2023 consisted of 2 residents (one from medicine-pediatrics and one from internal medicine), 4 internal medicine chief residents, and 8 fellows (2 from gastroenterology and one from each of the following specialties: allergy-immunology, cardiology, critical care/pulmonary medicine, emergency medicine, infectious disease, nephrology). Trainees earned master credits through the "seminar series" in the College of Graduate Studies, and all HEAL activities could be counted toward a professional certificate or master's degree. HEAL trainees were referred to as "juniors" in their first year and "seniors" in their second year.

#### Step 6: Evaluation and Feedback

A principles-focused, developmental program evaluation was employed using the GUIDE framework to capture HEAL trainees' experiences and iteratively improve the curriculum. We used a convergent mixed-methods design, collecting qualitative and quantitative data concurrently, analyzing them separately, and merging the findings to gather validity evidence for the results. 15

Quantitative data were collected via anonymous sticky notes at the outset of the first focus group, followed by formal de-identified surveys distributed at the end of the second year through Qualtrics. Initial qualitative data included a focus group at the halfway point in the curriculum in which 10 of 14 HEAL participants openly discussed curricular elements that were most and least valued. To provide some focus for an otherwise

 TABLE 1

 Initial and Revised Guiding Principles of Health Educators and Academic Leaders (HEAL)

Initial Guiding Principles (2021-2022)	Revised Guiding Principles (2022-2023)	Future Guiding Principles (2023-2026)	Future Outcomes
Developmenta	Traditional Program Evaluation		
Principle 1: Community of Pra	ctice		
Create a <b>community of practice</b> for internal medicine trainees interested in medical education.	Create an interdisciplinary community of practice for aspiring clinician educators across graduate medical education.	Foster an interdisciplinary community of practice for aspiring clinician educators in graduate medical education that values inclusion, belonging, and interprofessional collaboration and development.	Clinician educator resilience  Attrition of HEAL junior faculty relative to comparators  HEAL graduate burnout rates relative to peer graduate medical education comparators  HEAL graduate burnout rates relative to peer instructors and assistant professors
Representative quotes	"HEAL has been useful not only to develop as an educator, but also to find a sense of belonging. Especially for somebody like me who's not originally from Nebraska, or from the system, it was like an easy way to get introduced to peers and mentors. So, while you're developing as an educator, you're also becoming part of a community." FG Year 2, Participant 1, Group 3	"Like, it's like, just nice to kind of have that sense of community And so I think just knowing that, like, their motivation is similar and becoming a better educator, but they also have very different perspectives on things that I think I could learn from and implement." FG Year 2, Participant 2, Group 1	
Principle 2: Reflective Practice			
Stimulate <b>reflective practice</b> for aspiring clinician educators in guiding skill development through written reflections and sequencing of competencybased milestones.	Leverage video-based coaching of authentic teaching experiences to spur the intrinsic motivation and reflective practice of aspiring clinician educators.	Leverage the transformative potential of video-based coaching and OSTEs to spur a trainee's intrinsic motivation toward personalized skill development, advancement of instructional schema, and deliberate practice of authentic teaching styles.	Clinician educator excellence    OSTE teaching skill    OSTE communication skill    Teaching awards    Medical education publications/FTE    Innovations/grants    Clinician educator confidence
Representative quotes	"I would say, from the directly observed feedback from the mentors in the coaching session I left with actionable things that I actually do differently now, because of that feedback I left with things like I'm going to do this differently." FG Year 1, Participant 6, Group 1	"The number one thing that I think helped me become a better clinical educator from the get go are the coaching sessions, so that I think that in itself was such a valuable experience having further discussions about our kind of roles as clinical educators, anything that we struggled with as clinical educators, and getting kind of get to ask those questions to some great educators, and kind of get their feedback." FG Year 2, Participant 1, Group 1	

TABLE 1
Initial and Revised Guiding Principles of Health Educators and Academic Leaders (HEAL) (continued)

Initial Guiding Principles (2021-2022)	Revised Guiding Principles (2022-2023)	Future Guiding Principles (2023-2026)	Future Outcomes			
Developmenta	Traditional Program Evaluation					
Principle 3: Clinician Educator Milestones						
Explore use of <b>clinician educator milestones</b> as a formative roadmap to facilitate goal setting <i>and</i> document self-assessed progression as a summative metric in program evaluation.	Uncouple milestone assessment scores from program evaluation to guarantee psychological safety for trainees to explore use of CESAT for targeted, self-directed goal setting.	Use CESAT to spur the imagination and identity formation of aspiring clinician educators to explore their roles, interests, strengths, and weaknesses as clinician educators.	Educator identity formation Longitudinal qualitative research Terminal MS or PhD degree completion in education Medical education faculty positions			
Representative quotes	"I feel like they're used as an assessment tool, not as an education tool For this to be useful to me, I would have to like fill it out or discuss it one by one or certain areas with a mentor. And that conversation I will probably be more reflective and intentional than I am when I'm reading. I'd probably be able to type better my actual experiences in a conversational way then I would be just going through it." FG Year 1, Participant 5, Group 1	"And through this program, you know, I've appreciated those very unstructured learning, like kind of what I was talking about before is taking advantage of all the daily learning opportunities It's like creating a better learning environment for you too, to move forward." FG Year 2, Participant 5, Group 2				

Abbreviations: FG, focus group; OSTE, objective structured teaching examination; FTE, full-time equivalent; CESAT, Clinician Educator Self-Assessment Toolkit.

open discussion, participants ranked their 3 most and 3 least valued curricular activities from a list of 15 items (FIGURE 2). After tallying the results, a 90-minute semistructured interview was recorded and transcribed. We also reviewed teaching portfolio submissions to document which themes were selected for

self-reflection, and iteratively discussed the mixed methods results among the authorship team. Qualitative data were collected and interpreted using a constructivist, grounded theory lens and recursively validated with member checking from the second author (who attended the initial focus group as a

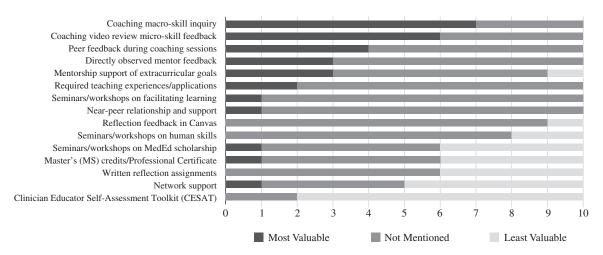


FIGURE 2
Ranking of Health Educators and Academic Leaders (HEAL) Activities

HEAL participant). VBC was represented in 3 activities from the list: coaching macro-skill inquiry, video micro-skill feedback, and peer feedback during coaching sessions. Iterative discussion of mixed methods results helped inform both incremental programmatic changes and the development of semistructured interview protocols for the final focus groups (online supplementary data Appendix D). The rank sum data were not intended to draw conclusive claims about educational strategies but rather to prioritize discussion around curricular components that participants found important to their experience. These focus groups were conducted at the end of the first and second years to explore trainees' sense-making and how they value the program elements. In the second year, focus group interviews expanded to explore how the program impacted HEAL senior trainees' CE identities, reflective practice, and teaching development. A forthcoming publication will detail these findings.

According to institutional policy, this study was not considered research and was therefore exempt from institutional review board submission requirements.

## Results

Of the 14 trainees who enrolled in HEAL, 13 (92.9%) completed the program and one (7.1%) left the residency program. Of those who finished the program, 70% (9 of 13) were hired as faculty at our academic center. All trainees participated in biannual mentorship meetings and 2 of 13 (15.4%) earned the graduate professional certificate (Tier 1). For the teaching portfolio activity, 56 reflections were submitted over 4 semesters. The most chosen theme was teaching experience (48.2%, 27 of 56), followed by teaching philosophy (19.6%, 11 of 56), professional development (12.5%, 7 of 56), teaching effectiveness (10.7%, 6 of 56), instructional material (5.4%, 3 of 56), and educational scholarship (3.6%, 2 of 56).

At the end of the first year, among the 10 HEAL junior trainees who ranked HEAL activities, VBC sessions received the highest percentage of "most valuable" votes, comprising the highest ranked coaching macro-skill inquiry (70%, 7 of 10), followed by video micro-skill feedback (60%, 6 of 10) and peer feedback during coaching sessions (40%, 4 of 10; FIGURE 2). Conversely, the curricular elements that received the highest percentage of "least valuable" votes included the CESAT tool (80%, 8 of 10), written reflection assignments (40%, 4 of 10), and the professional certificate (40%, 4 of 10). Qualitative analysis revealed a higher appreciation for activities that offered timely, relevant, and individualized feedback, such as VBC sessions, mentor interactions, and peer feedback. Conversely, activities perceived as "busy

work" or overly reflective, such as self-evaluation exercises, were less valued since these elements felt forced and disconnected. Suggested areas for improvement identified in the focus groups centered on formalities of graduate studies requirements and the CESAT tool. Trainees noted unfamiliarity with educator-based selfevaluation, ambiguity in assessment metrics, and additional tension in how their self-assessment scores might be used at a programmatic level. Since inaugural participants knew HEAL was going to be formally evaluated, they felt conflicted to mark themselves in a way that might favor how HEAL is perceived. Additionally, the cognitive load of the tool (5 anchors per milestone across 14-21 competencies) and educational jargon made self-assessment challenging. However, trainees saw its potential for goal setting if real-time access to previous responses was more readily available. These findings guided adjustments for the subsequent year, including automation of the CESAT to reduce cognitive load and flexibility to focus on a few selfselected goals rather than the exhaustive list. Still, similar themes emerged from the focus groups held at the end of the second year, despite attempts to mitigate tensions by decoupling CESAT results from program evaluation. A comprehensive thematic analysis of these results will be detailed in a forthcoming publication.

Nine HEAL senior trainees (64%) responded to the end-of-year program evaluation survey (TABLE 2). Of the respondents, 100% (9 of 9) reported that HEAL requirements adhered to ACGME work hour rules and were worth the time investment, with 55.6% (5 of 9) reporting a small amount of added stress from participation. HEAL strengthened the CoP, with 100% (9 of 9) of respondents feeling more connected and 88.9% (8 of 9) feeling they belonged. Reflective practice was also improved, with 66.7% (6 of 9) reporting becoming more reflective (66.7%, 6 of 9), better teachers (88.9%, 8 of 9), and better at providing feedback (88.9%, 8 of 9). The majority (88.9%, 8 of 9) reported improved confidence as CEs.

#### Discussion

Before HEAL, no formal CoP or longitudinal pedagogical training existed for aspiring CEs in GME at our institution. The HEAL program boosted trainee confidence in teaching and was regarded as a worthwhile investment of time. Qualitative feedback indicated that a CoP was established across several postgraduate disciplines in GME. HEAL trainees found personalized and actionable curricular elements to be more effective, with VBC sessions being consistently ranked as the most valuable, versus the

 TABLE 2

 Health Educators and Academic Leaders (HEAL) Program Evaluation Survey at the End of the Senior Year

Overall HEAL components, n/N (%)			
My participation in HEAL has been	Fully within the ACGME work hour rules	Within the ACGME work hour rules for the most part	Mostly beyond the ACGME work hour rules
	9/9 (100)	0/9 (0)	0/9 (0)
Time spent in HEAL is	Definitely worth the investment	Mostly worth the investment	Wasted
	9/9 (100)	0/9 (0)	0/9 (0)
Participating in HEAL contributes	Does NOT contribute added stress	A small amount of added stress	A great deal of added stress
	4/9 (44.4)	5/9 (55.6)	0/9 (0)
Principle 1: Community of Practice, n/N	N (%)		
	A lot	A little	Not much
HEAL helped you meet colleagues with common interests	7/9 (77.8)	1/9 (11.1)	1/9 (11.1)
HEAL helped feel like you belong	8/9 (88.9)	1/9 (11.1)	0/9 (0)
HEAL helped feel more connected	9/9 (100)	0/9 (0)	0/9 (0)
HEAL improved wellness	3/9 (33.3)	5/9 (55.6)	1/9 (11.1)
Principle 2: Reflective Practice, n/N (%)			
	A lot	A little	Not much
HEAL helped become more reflective	6/9 (66.7)	3/9 (33.3)	0/9 (0)
HEAL helped become more deliberate	7/9 (77.8)	2/9 (22.2)	0/9 (0)
HEAL helped become more innovative	5/9 (55.6)	4/9 (44.4)	0/9 (0)
HEAL helped become better teacher	8/9 (88.9)	1/9 (11.1)	0/9 (0)
HEAL improved confidence as clinical educator	8/9 (88.9)	1/9 (11.1)	0/9 (0)
HEAL helped become better doctor	5/9 (55.6)	3/9 (33.3)	1/9 (11.1)
HEAL helped provide better feedback	8/9 (88.9)	1/9 (11.1)	0/9 (0)

Abbreviations: HEAL, Health Educators and Academic Leaders; ACGME, Accreditation Council for Graduate Medical Education.

CESAT ranked as the least valuable component of the program.

HEAL is the first reported attempt at introducing CE milestones into a CET or longitudinal faculty development initiative. Interestingly, the most significant change between the first and second years was the reduced emphasis on the CESAT as a reflective and measurement-based tool. Although milestones were intended for individualized goal setting, psychological tension was a barrier to authentic engagement. Despite focused efforts to alleviate cognitive overload and promote psychological safety, we were unable to leverage the CESAT to support reflective practice. The CESAT is now positioned for introductory career exploration and professional identity formation, with its developmental evaluation ongoing. Since CE milestones have been proposed for use within faculty development programs to support needs assessment, CE goal setting, and deliberately developmental cultures, our results are timely to consider potential barriers of implementation. 1,16 We

agree CE milestones should not be used for summative assessment and caution against the perception of evaluative use as a hindrance to CE engagement. Whether or not automation or digitalization can overcome these barriers is an area for exploration. We plan to augment the CESAT with "just in time" resources in a "choose your adventure" format to support CE exploration of elements that are unfamiliar in the next iteration.

The next most significant change in our developmental evaluation was the increased focus on individualized feedback tied to the trainees' goals. Given the call to champion CE coaching paired with enthusiasm surrounding the value of VBC, <sup>18</sup> we expanded opportunities for video recording of teaching in a simulated environment, introducing an annual videorecorded objective structured teaching exercise session. Program evaluation of this bundled innovation is ongoing. The "teaching portfolio" remained the primary deliverable in the HEAL curriculum and CE reflective practice has proven the most ethereal principle

in our developmental evaluation. Next steps to better understand the complex and elusive process of CE identity formation include more intentional examination from the lens of transformational learning theory, social cognitive career theory, situated learning theory, teacher identity theory, and self-efficacy theory.<sup>2,19</sup>

Given the lack of consensus on how to measure CE excellence or CET program success, 19 we prioritized local values and needs to co-develop a curriculum with real-time trainee feedback. This developmental evaluation model allowed for flexibility and iterative adaptation, crucial in responding to challenges like the COVID-19 pandemic. Unlike traditional models focused on deliverables or confidence scores, our principles-based approach emphasized CoP, reflective practice, and competency-based development, while still meeting graduate study standards and requirements. This method not only enhanced "buy-in" but also spurred local innovation and ongoing curriculum development. By avoiding rigid assessment tools, the principles-focused model centered the experience of aspiring CEs by promoting continuous improvement in response to emerging needs. This developmental evaluation helped prioritize key values while allowing flexibility and iteration throughout different stages of implementation, ensuring the acceptability of these adjustments.

This study has several limitations inherent to its design, including a small sample size and its setting within a single academic institution, which may limit the generalizability of the findings to other contexts. Although we used a mixed-methods approach, our findings remain largely descriptive, and the reliance on self-reported data and limited direct observation may introduce potential biases.

#### **Conclusions**

We implemented a CET that leverages CoP principles for aspiring CEs in GME at our institution. By using a developmental evaluation approach to iteratively adapt innovations like CE milestones and VBC, HEAL has sustained 5 years of curricular expansion and improved the confidence of CEs as they launch into their early careers.

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