



INNOVATIONS REPORT

A novel emergency medicine cultural competency curriculum addressing health care disparities

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Abstract

Background: Effective cultural competency (CC) training for future health professionals is an important first step towards improving healthcare disparities (HCD). The Accreditation Council for Graduate Medical Education (ACGME) now requires that institutions train residents and faculty members in CC relevant to the patient population they serve.

Methods: Using Kern's Model, we created and implemented a novel CC curriculum tailored to specific program needs in an emergency medicine residency program.

Results: At the end of the curriculum, respondents reported having a better understanding of the importance of CC for their practice ($p = 0.004$) and of how a patient's personal and historical context affects treatment ($p = 0.002$). They also reported an increase in the frequency of practicing strategies to reduce bias in themselves ($p < 0.001$) and others ($p < 0.001$), as well as comfort interacting with and treating patients from different backgrounds ($p < 0.001$). Lastly, they reported improved preparedness to collaborate with communities to address HCD ($p = 0.004$) and to identify community leaders to do so ($p < 0.001$).

Conclusions: The challenges of CC training demonstrate the need for a standard yet adaptable framework. We have designed, implemented, and evaluated a novel curriculum tailored to the specific needs of our EM residency program. The curriculum improved participants' attitudes, preparedness, and self-reported behaviors regarding CC and HCD. This framework represents an example of a successful model to meet ACGME requirements.

NEED FOR INNOVATION

The COVID-19 pandemic has magnified unjust health care disparities (HCD). Effective Cultural Competency (CC) training for health

professionals is an important first step towards improving HCD.¹ The Accreditation Council for Graduate Medical Education (ACGME) requires residents and faculty to receive CC training that addresses HCD relevant to the communities served.²

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BACKGROUND

CC and HCD are core content topics in the Emergency Medicine (EM) Model, which outlines EM practice standards.³ Many EM programs are interested in universal open-source tools to improve CC training.⁴ While efforts have been made to address these challenges in undergraduate medical education, there remains a lack of CC and HCD training in graduate medical education.⁵ One of the major challenges is lack of consensus on curriculum design and implementation.⁵

OBJECTIVE OF INNOVATION

We outline a novel framework for designing, implementing, and evaluating the impact of a novel 2-year CC curriculum to address HCD for an EM residency program that is concordant with ACGME standards.

DEVELOPMENT PROCESS

As advised in Bowman's article on teaching CC in EM, the authors followed Kern's model of curriculum development and began with a targeted needs assessment survey based on the Association of American Medical Colleges' Tool for Assessing Cultural Competency Training (TACCT) (Figure S1).⁶⁻⁸ The previously validated TACCT survey contains 42 items that reflect six domains. The six domains of CC consist of: HCD, community strategies, bias/stereotyping, communication skills specific to cross-cultural communication, use of interpreters, and self-reflection/culture of medicine. Each item of the TACCT reflects a separate facet of the participant's knowledge, skills, and attitudes. Respondents indicated which of the items were already addressed in ongoing weekly residency didactics. The mean percentage of "yes" answers to each item was computed and the bottom quartile were identified as concepts to highlight within a new CC curriculum (Table S1).

Goals and objectives were then iteratively developed and refined based on the needs assessment and discussions with a curriculum development committee of EM residency program leaders, residents, social workers, and the institutional health equity and advocacy clinical scholars program director. The new CC curriculum ultimately included sessions addressing missing TACCT items and emphasizing those topics deemed most critical by the committee.

IMPLEMENTATION PHASE

The final curriculum design consisted of eight quarterly sessions integrated into weekly residency didactics over 2 years featuring engaging didactics and case discussions taught by residents, social workers, community activists, and faculty members from departments across the institution (Table S2).

EVALUATION

At the end of the 2-year curriculum in June of 2020, EM residents and attendings completed a post-curriculum survey. We utilized a retrospective pretest-posttest survey methodology to mitigate potential response-shift bias.⁹ We asked participants to report on their attitudes, preparedness, and behaviors before and after the curriculum. These attitude, preparedness, and self-reported behavior questions were mapped to the learning objectives for curriculum sessions. Additional questions about participant comfort with interacting and treating patients from different backgrounds were included to provide context for baseline and post-curriculum findings.

Quantitative data were analyzed using frequencies and one-way ANOVA statistics. Responses to survey questions were de-identified and researchers were blinded to learners' responses. This study was deemed exempt from IRB review.

PGY1-4 residents ($n = 45$) and attendings ($n = 22$) completed the baseline needs assessment survey for a response rate of 74%. The mean percentage of checked responses, indicating content was previously addressed, ranged from 4%–33%. Most items were in the HCD domain and were classified as skills (Table S1).

Upon completion of the curriculum, participants were asked to complete a retrospective pretest-posttest survey. Survey participants who were PGY1 at the time of the needs assessment and subsequently completed the 2-year curriculum were asked to complete the survey. Those who did not complete the needs assessment did not complete the survey. A total of 63 participants completed the retrospective pretest-posttest survey for a response rate of 69%. Respondents were fairly evenly split between EM residents in each year¹⁻⁴ and faculty, with between 11–14 participants from each group. The effect of the curriculum on respondents' attitudes, preparedness, and self-reported behavior are reported in Table 1. Frequencies of participant responses as well as the number of participants who reported increases in self-reported attitudes (e.g., from not at all important to very important), preparedness (e.g., somewhat prepared to very prepared), and behavior (e.g., rarely to always) related to curriculum components are presented in Table 1. Regarding changes in attitudes, at the completion of the curriculum respondents reported better understanding the importance of CC for their practice ($p = 0.004$) and how a patient's personal and historical context affects treatment ($p = 0.002$). Most respondents noted both concepts to be "very important" at the completion of the curriculum. Regarding changes in preparedness, respondents reported increased preparedness to collaborate with communities to address HCD ($p = 0.004$) and their ability to identify community leaders to do so ($p < 0.001$). Despite these improvements, most respondents reported still being only "somewhat prepared" to do so in the emergency department at the completion of the curriculum. Regarding changes in self-reported behavior, respondents reported an increase in the frequency of practicing strategies to reduce bias in themselves ($p < 0.001$) and others ($p < 0.001$), as well as comfort interacting with and treating patients from different backgrounds ($p < 0.001$). At the end of the curriculum, most of the respondents reported "often" or

TABLE 1 Retrospective pretest–posttest survey demonstrating the change in respondent’s attitude, preparedness, and behavior at the completion of the new curriculum

Curriculum component	Answer options	Pre- curriculum n/%	Post- curriculum n/%	n/% increased attitude/ frequency/preparedness related to components	p value
Attitude					
Perceived importance of CC for their practice	I did not know what cultural competency was	2/3.2%	0/0%	22/34.9%	0.004
	Not at all important	0/0%	0/0%		
	Somewhat important	31/49.2%	12/19%		
	Very important	30/47.6%	51/81%		
Perceived importance of how integral understanding a patient’s personal and historical context is for effectively treating them	Not at all important	1/1.6%	0/0%	23/36.5%	0.002
	Somewhat important	30/47.6%	10/15.9%		
	Very important	32/50.8%	53/84.1%		
Preparedness					
Perceived preparedness to collaborate with communities to address HCD	Not at all prepared	22/34.9%	3/4.8%	27/42.9%	0.004
	Somewhat prepared	38/60.3%	49/77.8%		
	Very prepared	3/4.8%	11/17.5%		
Perceived preparedness to identify community leaders to address HCD affecting their patients	Not at all prepared	28/44.4%	8/12.7%	28/44.4%	<0.001
	Somewhat prepared	28/44.4%	40/63.5%		
	Very prepared	7/11.1%	15/23.8%		
Self-Reported Behavior					
Frequency of practicing strategies to reduce bias in themselves	Never	2/3.2%	0/0%	29/46%	<0.001
	Rarely	27/42.9%	5/7.9%		
	Often/ Sometimes	29/46%	47/74.6%		
	Always	5/7.9%	11/17.5%		
Frequency of practicing strategies to reduce bias in others	Never	6/9.5%	2/3.2%	26/41.3%	<0.001
	Rarely	33/52.4%	17/27%		
	Often/ Sometimes	20/31.7%	40/63.5%		
	Always	4/6.3%	4/6.3%		
Comfort interacting with and treating patients from a different background	Not at all comfortable	1/1.6%	0/0%	15/23.8%	<0.001
	Somewhat comfortable	40/63.5%	30/47.6%		
	Very comfortable	22/34.9%	33/52.4%		

“always” practicing such strategies and feel “very comfortable” interacting with and treating patients from diverse backgrounds.

REFLECTIVE DISCUSSION

We have described the successful design and implementation of a novel CC curriculum to address the needs of our 4-year EM residency program located within an urban, quaternary care, level-one trauma center. To our knowledge, this is the first study to utilize a modified TACCT survey as an initial needs assessment for a novel CC curriculum within an EM residency program. Our results provide further support for modifying the TACCT survey to fit different healthcare specialties.¹⁰ It is our hope that other institutions and specialties can adapt this methodology to identify gaps and create curricula to meet the unique needs of their trainees and communities.

A curriculum development committee of residents, program leaders, social workers, and institutional HCD experts is essential for interpretation of the local needs assessment and curriculum design, particularly in the dynamic COVID era. Resident participation provides exposure to medical education theory and the potential for scholarly achievement. Involvement of program leadership facilitates integration into weekly core didactics. Social workers and institutional HCD experts provide connections to the broader community and ensure that content reflects current community priorities.

We believe that this framework helps residency programs meet the new ACGME Clinical Learning Environment Review (CLER) requirements for Health Care Quality (HQ) training.² For example, the lectures satisfy HQ pathway #5: Resident, fellow, and faculty member education on eliminating HCD. Resident participation in curriculum design and implementation satisfies HQ pathway #6 Resident, fellow, and faculty member engagement in clinical site initiatives to eliminate health care disparities. Lastly, the results support satisfaction of HQ pathway #7 Residents, fellows, and faculty members deliver care that demonstrates cultural humility.

Surveying participants before and after is a common strategy used to examine the impact of an educational intervention. However, this can be difficult to interpret if participants do not sufficiently understand the concepts needed to answer the pretest questions. A strength of the retrospective pretest–posttest method is that respondents are surveyed after completing the curriculum when they have a better understanding of the concepts.⁹ A limitation of all posttest surveys is the “good subjective effect” or respondents wanting to give answers that make the curriculum look good even if learning did not take place.⁹ The authors believe that this had minimal impact based on the mix of positive and negative results among respondents.

Our survey data demonstrates that implementation of this curriculum helped to improve respondents' attitudes, preparedness, and self-reported behaviors. Our curriculum was therefore effective in achieving Kirkpatrick level three outcomes.¹¹ Our study was not designed to measure Kirkpatrick level-four outcomes or the impact of CC on patient outcomes.¹¹ These improvements in attitudes,

preparedness, and self-reported behaviors regarding CC may not translate into improved patient outcomes without system-wide support for processes and strategies for clinicians to address HCD in real time. The authors believe that this lack of feasible strategies was reflected in our respondents' reporting of being only “somewhat prepared” to address HCD. This has been suggested in earlier research reporting that despite resident aware of the importance of cross-cultural care, they had little training, clinical time, and feasible options to treat the unique needs of diverse patients.¹²

To help reduce HCD, residencies today have a responsibility to provide effective CC training. We have designed, implemented, and evaluated a novel curriculum tailored to the specific needs of our EM residency program. This curriculum improved participants' attitudes, preparedness, and self-reported behaviors regarding CC and HCD. The framework presented here can be adapted for use in other healthcare specialties to create CC curriculum to address unique knowledge gaps, meet ACGME requirements, and ultimately better address HCD.

PRESENTATIONS

SAEM20, Virtual Innovations Talk, Virtual Meeting, Uploaded 06/23/2020.

SAEM Regional Meeting, William Beaumont Hospital, Southfield, MI. 09/19/2019.

ICEP Regional Meeting, Northwestern Memorial Hospital, Chicago IL. 04/25/2019.

AUTHOR CONTRIBUTIONS

Drafting the manuscript-AA, AI; study concept and design-AA, AI, JB acquisition of the data-AA, AI, ML, SW; analysis and interpretation of the data-AA, AI, SW, MC, NS, JB; critical revision of the manuscript for important intellectual content-AA, AI, NS, JB; statistical expertise-SW.

CONFLICT OF INTEREST

The authors have no relevant financial information or potential conflicts to disclose.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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