Teaching Structure: A Qualitative Evaluation of a Structural Competency Training for Resident Physicians

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BACKGROUND: The influence of societal inequities on health has long been established, but such content has been incorporated unevenly into medical education and clinical training. Structural competency calls for medical education to highlight the important influence of social, political, and economic factors on health outcomes.

AIM: This article describes the development, implementation, and evaluation of a structural competency training for medical residents.

SETTING: A California family medicine residency program serving a patient population predominantly (88 %) with income below 200 % of the federal poverty level.

PARTICIPANTS: A cohort of 12 residents in the family residency program.

PROGRAM DESCRIPTION: The training was designed to help residents recognize and develop skills to respond to illness and health as the downstream effects of social, political, and economic structures.

PROGRAM EVALUATION: The training was evaluated via qualitative analysis of surveys gathered immediately post-training (response rate 100 %) and a focus group 1 month post-training (attended by all residents not on service).

DISCUSSION: Residents reported that the training had a positive impact on their clinical practice and relationships with patients. They also reported feeling overwhelmed by increased recognition of structural influences on patient health, and indicated a need for further training and support to address these influences.

KEY WORDS: structural competency; social determinants of health; structural vulnerability; cultural competency; medical education.

INTRODUCTION

A large and growing body of evidence indicates that societal inequities in the United States and globally correspond to marked disparities in health.[1–6] The influence of such inequities

on health has long been noted by clinicians and public health practitioners, but such content has been incorporated unevenly into medical education and clinical training.[7–16] Proposed by clinicians and scholars in the medical social sciences, a "structural competency" framework calls for a "shift in medical education…toward attention to forces that influence health outcomes at levels above individual interactions."[17(p. 126–27)] "Structures" or "social structures" in this sense indicate the policies, economic systems, and other institutions (policing and judicial systems, schools, etc.) that have produced and maintain social inequities and health disparities, often along the lines of social categories such as race, class, gender, and sexuality.[17] This article examines structural competency as a paradigm for teaching medical trainees about health disparities by exploring the development, implementation, and evaluation of a structural competency training for medical residents.

SETTING AND PARTICIPANTS

The structural competency training was developed by a working group comprising physicians, nurses, medical anthropologists, health administrators, community health activists, and graduate and professional students in several disciplines, and was implemented in June 2015. Participants in the training included a cohort of 12 residents in a California family medicine residency program serving a patient population predominantly (88 %) with income below 200 % of the US federal poverty level.

PROGRAM DESCRIPTION

The training consisted of a single 3-h session. The overarching goal was for residents to recognize and develop skills to respond to illness and health as the downstream effects of social, political, and economic structures.[17] The following learning objectives (LO) correspond with curricular content (See Table 1). By the end of the training, residents were to be able to:

(LO1) Identify the influences of structures on patient health
(LO2) Identify the influences of structures on the clinical encounter

Table 1 Curricular Content with Learning Objectives

Module 1: How structures affect patient health
- Review epidemiology: influence of social structures on population health (LO1)
- Present patient case & discuss structural influences on patient (LO1)
- Define *structural violence* and *naturalizing inequality* (L01, LO3, LO4)
- Residents write & discuss cases from their clinical experience, applying key concepts (LO1-LO5)
- Describe origins of structural competency (LO1, LO3)
  - Relationship of structural competency to cultural competency
  - Relationship of structural competency to social determinants of health

Module 2: How structures affect the clinical encounter
- Discuss structures affecting the practice of medicine (LO2, LO3)
  - Time limitations and profit motives in health care
  - Medical school debt
  - Structural influences on diagnostic categories
- Residents reflect on & discuss structural influences on their own practice (LO2, LO3)

Module 3: Brainstorming strategies to use in and beyond the clinic
- Share examples of strategies for the clinic (LO3, LO5)
  - More complete social history—beyond health-related behaviors
  - Inclusion of structural factors in problem list and plan when appropriate
- Discuss examples of strategies to use beyond the clinic (LO4, LO5)
  - Community-level advocacy/ involvement/ organizing
  - Policy advocacy
  - Participation in health professional organizations working collectively to address these issues
  - Structurally oriented research
- Residents brainstorm and discuss "practical" and "impractical" solutions to structural barriers to health (LO3, LO4, LO5)
- Review: Take-home points and next steps

Table 2 Themes Identified from Post-Training Evaluation

Written-Response Survey: Key themes and examples immediately post-training

New framework and vocabulary
- "[The training provided] A toolbox of terms and clearer framework for discussing much of the frustration and injustice we witness daily."

Clinical relevance
- "Talking about how to address structural violence in the clinic was really helpful."
- "Case integration from our experience—this worked really well!"

Relationships with patients and burnout
- "If anything, this is a reminder of the enormities of the barriers to our patients accessing care/ our being able to care for them adequately, which doesn't really help with feeling burned out!"
- "Remembering the larger social context in which we practice medicine and the role I can play in helping to change it helps a lot."

Focus Group: Key themes and examples 1 month post-training

Influences on resident daily practice
- "I have been thinking about it constantly, in almost every one of my clinics and almost every day in the hospital, and it came up in conversation with my co-residents who are also really passionate about it. It has been on my mind constantly."

Positive influence on relationships with patients: Shifting blame
- "I felt like it has been very effective in helping to build a partnership with patients. Acknowledging that the system is failing all of us… helps to build that relationship in a different way."
- "The blame went from here's this patient who makes poor choices to here we are as a society failing huge portions of our population."

Importance of this "bigger picture" framework
- "I think anyone practicing primary care who wants to be an effective clinician should be aware of these broader things that are impacting our patients, because otherwise, it's like you're just chipping away with a little drill, and there's this whole bigger issue there."
- "It can be our responsibility to go to people within our structure and our system and start to advocate for these things that we really clearly see as being big issues every day. I feel like we can take that on …that's part of the purpose of raising awareness among … us who are front line people."

Shared vocabulary
- "I just want to emphasize how valuable I found it to have a shared vocabulary, to know [my fellow residents] know the same terms that I do… it just lowers the barrier to having these conversations. It's a lot easier to talk about now."

Burnout and need for more concrete tools or steps
- "I think for me there's less of an element of control…. In my 20 min, if I'm not going to have a way to address it, it just feels really disempowering."
- "I feel like I'm more at risk for burnout after this training, because I feel like I don't have anything to do with the information, practical examples of what people do with it, and how you address it."
- "We are goal-oriented people, and we feel responsible and like we have got to do something."

More and earlier training
- "This stuff is critical for absolutely everyone going into a primary care field who wants to be an effective clinician and patient advocate."
- "I think it would be totally fair to bring it up for the first time in med school. It would be good to develop tools before you get to the point where you need them in 10 min."

(LO3) Generate strategies to respond to the influences of structures in the clinic

(LO4) Generate strategies to respond to the influences of structures beyond the clinic

(LO5) Describe structural humility as an approach to apply in and beyond the clinic

Structural humility,[17] inspired by cultural humility,[18] encourages a self-reflective approach, working in collaboration with patients and communities to develop understanding of and responses to structural vulnerability.[11,19–21]

PROGRAM EVALUATION

The training was evaluated with post-session surveys administered immediately following the training and by a focus group with residents 1 month after the training. Post-session surveys included written-response questions such as "Please share your candid thoughts on this training: What parts worked well? What parts did you like? What should we change? How could we make this training more effective?". The focus group consisted of semi-structured inquiry about training experience, effectiveness, and impacts on clinical practice post-training, including questions such as "Have you talked about the topics discussed in the training over the past weeks? If so, which ones and in what context?". All residents completed the surveys (response rate 100 %), and all residents without conflicting residency obligations participated in the focus group. Qualitative data were analyzed with directed content analysis techniques,[22,23] coding recurrent language and concepts to identify key themes (see Table 2). The evaluation was deemed exempt by UCSF's Committee on Human Research (CHR), IRB no. 15–16392.

DISCUSSION

Two key themes emerged from our structural competency training evaluation data. First, the residents in this program reported that the training had a substantial influence on their attitudes and their clinical practice in the weeks after the

training. Residents continued to often think about and discuss the content of the training. They reported that the terms and concepts they had learned led them to more frequently take note of the structural forces impacting their patients' health, and that sharing this vocabulary with colleagues "lowers the barriers to having these conversations."

Along these lines, residents stated that the training had a positive influence on their relationships with patients, helping them to "build a partnership." Further research can help clarify the ways that a structural competency framework might influence the practice and experience of clinicians. For instance, does approaching patients with this more contextualized, structural perspective promote empathy for marginalized or stigmatized patients in the long run? If demonstrated, this would be an important finding, as empathy has been associated with improved patient health outcomes, increased patient satisfaction, and decreased provider burnout.[24,25]

Second, residents reported feeling overwhelmed by their increased recognition of structural influences on health. They expressed a need for practical strategies to address structural vulnerabilities in and beyond clinical settings.[11] Though we concluded this iteration of the training by focusing on practical ways providers and patients might engage with the effects of harmful social structures, residents wanted more time to discuss these possibilities and more examples of what others had done in the past.

These findings raise several questions for further investigate. For instance, to what extent are the changes in orientation described by the residents impactful in themselves?[14,26] Research suggests that without a structurally informed perspective, even the best-intentioned providers may be more likely to exacerbate or miss opportunities to address health disparities in their delivery of care.[9,27–34] Thus, such changes in perspective, while not in themselves sufficient to address the structural issues underlying health disparities, may have a meaningful effect on the health care experiences and outcomes of structurally vulnerable patients. Additionally, some feelings of distress may be inevitable and perhaps appropriate—possibly even motivating—when providers who witness the harmful results of structural inequities on a daily basis begin to more actively reflect on this influence. Subsequent efforts designing and researching structural competency curricula can explore the most constructive ways to prepare trainees for a range of possible reactions, including distress.

This study has several limitations. First, our assessment of learners' attitudes, knowledge, and skills was limited to qualitative analysis of participants' self-reported impressions. Quantifying and evaluating these outcomes by external measures and assessing the effects of structural competency training on distal outcomes such as patient experience and patient well-being would be valuable next steps. Second, as our training was an isolated intervention at a single residency program, we cannot assume generalizability of our findings. For instance, it is possible that the learners in this residency program, which emphasizes care for underserved populations,

were more receptive to this material than other medical trainees would be. Conversely, it is possible that structural competency training would be even more impactful in settings in which such topics are not frequently considered. Finally, though the influence of the training as reported by residents 1 month afterwards was striking, our evaluation addresses neither the longevity of this impact nor the potential effects of incorporating structural competency curricula longitudinally.

Given that social structures are among the primary determinants of illness and health, curricula to help clinicians recognize and respond to social structures are needed.[12–17,31–33,35–37] Our findings suggest that trainees' engagement with structural forces and their downstream effects deepens when they share concepts and vocabulary for recognizing and describing such phenomena. Structural competency appears to be a promising foundation for developing this shared understanding.

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