TRAINING PARTICIPANT WORKBOOK

CONTENTS

PHASE Convening
November 29, 2018

CASE STUDY

Please read the following note describing an admission to the inpatient medicine service. When you have finished, discuss with your colleagues, imagining that you're the attending hearing this case. What questions do you have that might help you better understand the situation? What social, political, and economic structures might be contributing to this patient's problems?

Presenting Complaint: Acute loss of consciousness

History of Present Illness: Patient is a 37-year-old Spanish-speaking male found down with acute loss of consciousness. Was minimally responsive in ambulance, no response to naloxone, smell of alcohol on breath noted by first responders, pt. found on park bench w/empty cans of malt liquor. In Emergency Department the patient received fluids, initially somnolent but now tremulous and anxious despite IV lorazepam. Medicine consulted for admission for inpatient detox given risk of withdrawal.

Past Medical History: Frequent flyer well known to Emergency Department for alcohol-related trauma, assaults, withdrawal with associated seizures, and clearance for jail. Previous diagnosis of hypertension, treated for seizure disorder with anticonvulsants but lost to follow up.

Past Surgical History: Right orbital fracture secondary to assault w/o operative intervention, open reduction and internal fixation (ORIF) Right wrist secondary to alcohol-related fall, ORIF Left tibia/fibula for alcohol- related auto vs. pedestrian motor-vehicle accident.

Meds: currently noncompliant with all meds. Discharged after last hospitalization on folate, thiamine, multivitamin, and phenytoin 100mg orally 3x a day for seizure prophylaxis.

All: No Known Drug Allergies.
Family History: Not obtainable.
Social History: Heavy alcohol use, other habits unknown. Apparently homeless.
Review of Systems: Not obtainable.
Physical Exam:
Blood Pressure 165/89, Pulse 135, Respiration Rate 22, Temperature 37, 100% on Room Air.

General: malnourished, Hispanic male, disheveled, appears older than stated age.
Head, Eyes, Ears, Nose, Throat: Decent dentition.
Respiratory: Reduced breath sounds right base.
Cardiovascular: Regular rate and rhythm, no murmurs, rubs, or gallops.
Abdomen: 3cm tender hepatomegaly.
Ext: no edema, surgical scars noted.
Neurologic/Muscular Skeletal: patient muttering incoherently in Spanish. Alert and oriented to person and place, directable, able to answer "yes/no" consistently and follow simple commands. Denies pain. Tremulous, neuro nonfocal.

Labs: Alcohol level on presentation 0.35, CBC shows Hb 11.2 with MCV 105, AST 100 ALT 75, otherwise chemistry normal. EKG shows sinus tach.

Assessment: 37-year-old male noncompliant with meds with persistent Alcohol abuse and history of seizures presents with high alcohol level, now with signs of alcohol withdrawal.

1) Altered mental status: likely alcohol withdrawal, given history priors admission for similar. Do not suspect CNS or metabolic pathology. CIWA protocol instituted, patient admitted to floor with sitter. Fall precautions.
2) Hepatomegaly and elevated LFTS: likely alcohol hepatitis. Discriminant function does not indicate likely benefit from steroids, treat supportively.
3) Reduced breath sound right base: concerning for aspiration PNA given acute loss of consciousness – CXR PA and lateral.
4) Seizure disorder: unclear if primary or related to recurrent alcohol withdrawal; continue phenytoin in house.
5) Malnourishment: folate, thiamine, MVI
6) Homelessness: Medical Social Worker consulted for shelter/board and care given recurrent Emergency Department presentations.
7) Code: Full
8) Disposition: (Hospital) floor

What social, political, and economic structures might be contributing to this patient's problems?

KEY CONCEPTS

"Language is never neutral." — Paulo Freire.

Social Structure: The policies, economic systems, and other institutions (policing & judicial systems, schools, etc.) that have produced and maintain social inequities and health disparities, often along the lines of social categories (race, class, gender, etc.)

Structural Violence: "Structural violence is one way of describing social arrangements that put individuals and populations in harm's way… The arrangements are structural because they are embedded in the political and economic organization of our social world; they are violent because they cause injury to people."

–Paul Farmer et al. 2006

Structural Vulnerability: The risk that an individual experiences as a result of structural violence – including their location in socioeconomic hierarchies. It is not caused by, nor can it be repaired solely by, individual agency or behaviors.

Structural Racism (aka "Institutional Racism")**:** "When white terrorists bomb a black church and kill five black children, that is an act of individual racism, widely deplored by most segments of the society. But when in that same city – Birmingham, Alabama – five hundred black babies die each year because of the lack of power, food, shelter and medical facilities, and thousands more are destroyed and maimed physically, emotionally and intellectually because of conditions of poverty and discrimination in the black community, that is a function of institutional racism.

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When a black family moves into a home in a white neighborhood and is stoned, burned or routed out, they are victims of an overt act of individual racism which most people will condemn. But it is institutional racism that keeps black people locked in dilapidated slum tenements, subject to the

daily prey of exploitative slumlords, merchants, loan sharks and discriminatory real estate agents. The society either pretends it does not know of this latter situation, or is in fact incapable of doing anything meaningful about it."

-Kwame Ture (Stokely Carmichael) and Charles V. Hamilton
Black Power: The Politics of Liberation, 1967

Naturalizing Inequality: When inequality and structural violence are justified by—or go unacknowledged due to—ways of thinking that focus on individual behaviors, "cultural" characteristics, or biologized racial categories (see "implicit frameworks" below). This helps preserve social inequities by giving the impression that the current, inequitable status quo is "natural," in the sense of not being primarily social or structural in origin.

Implicit Frameworks: The common, taken-for-granted (implicit) ways of understanding health and wellness – among health professionals and in society more broadly. Examples include interpreting health disparities in terms of individual behavior, "culture," and biology/genetics, without also adequately considering underlying social and structural factors. Discussing implicit frameworks does not suggest that individual behaviors, culture, and genetics do not matter for health. Instead, this highlights ways we and others might inadvertently fail to recognize, acknowledge, and address the structural factors that are primary drivers of health disparities (see "naturalizing inequality" above).

STRUCTURAL VULNERABILITY CHECKLIST

From: Bourgois P, Holmes SM, Sue K, & Quesada J. (2017). "Structural Vulnerability: Operationalizing the Concept to Address Health Disparities in Clinical Care." *Academic Medicine, 92*(3): 299-307.

Chart 1

Structural Vulnerability Assessment Tool[a]

Domain	Screening questions and assessment probes[b]
Financial security	**Do you have enough money to live comfortably—pay rent, get food, pay utilities/telephone?** • How do you make money? Do you have a hard time doing this work? • Do you run out of money at the end of the month/week? • Do you receive any forms of government assistance? • Are there other ways you make money? • Do you depend on anyone else for income? • Have you ever been unable to pay for medical care or for medicines at the pharmacy?
Residence	**Do you have a safe, stable place to sleep and store your possessions?** • How long have you lived/stayed there? • Is the place where you live/stay clean/private/quiet/protected by a lease?
Risk environments	**Do the places where you spend your time each day feel safe and healthy?** • Are you worried about being injured while working/trying to earn money? • Are you exposed to any toxins or chemicals in your day-to-day environment? • Are you exposed to violence? Are you exposed regularly to drug use and criminal activity? • Are you scared to walk around your neighborhood at night/day? • Have you been attacked/mugged/beaten/chased?
Food access	**Do you have adequate nutrition and access to healthy food?** • What do you eat on most days? • What did you eat yesterday? • What are your favorite foods? • Do you have cooking facilities?
Social network	**Do you have friends, family, or other people who help you when you need it?** • Who are the members of your social network, family and friends? Do you feel this network is helpful or unhelpful to you? In what ways? • Is anyone trying to hurt you? • Do you have a primary care provider/other health professionals?
Legal status	**Do you have any legal problems?** • Are you scared of getting in trouble because of your legal status? • Are you scared the police might find you? • Are you eligible for public services? Do you need help accessing these services? • Have you ever been arrested and/or incarcerated?
Education	**Can you read?** • In what language(s)? What level of education have you reached? • Do you understand the documents and papers you must read and submit to obtain the services and resources you need?
Discrimination	***[Ask the patient]* Have you experienced discrimination?** • Have you experienced discrimination based on your skin color, your accent, or where you are from? • Have you experienced discrimination based on your gender or sexual orientation? • Have you experienced discrimination for any other reason? ***[Ask yourself silently]* May some service providers (including me) find it difficult to work with this patient?** • Could the interactional style of this patient alienate some service providers, eliciting potential stigma, stereotypical biases, or negative moral judgments? • Could aspects of this patient's appearance, ethnicity, accent, etiquette, addiction status, personality, or behaviors cause some service providers to think this patient does not deserve/want or care about receiving top quality care? • Is this patient likely to elicit distrust because of his/her behavior or appearance? • May some service providers assume this patient deserves his/her plight in life because of his/her lifestyle or aspects of appearance?

STRUCTURAL VIOLENCE EXERCISE

Please reflect on an example of structural violence you have witnessed, as a provider/ trainee or otherwise. Before you start writing, be sure to reflect: what were the structures involved, and how were they violent (i.e. what bodily and/or emotional harm did they cause)?

NATURALIZING INEQUALITY EXERCISE

Underline the parts of the passages below where you see inequality/injustice being naturalized through "Implicit Frameworks." Implicit Frameworks discussed include focusing on any of the following instead of the influence of structures: "culture," individual level behaviors/choices, and/or biology/genetics.

Excerpts from: Holmes SM. (2006). "An Ethnographic Study of the Social Context of Migrant Health in the US." *Public Library of Science Medicine, 3*(10).

#1: When asked why very few Triqui people were harvesting apples, the field job known to pay the most, the Tanaka Farm's apple crop supervisor explained in detail that "they are too short to reach the apples, and, besides, they don't like ladders anyway." He continued that Triqui people are perfect for picking berries because they are "lower to the ground." When asked why Triqui people have only berry-picking jobs, a mestiza Mexican social worker in Washington state explained that "a los Oaxaquenos les gusta trabajar agachado [Oaxacans like to work bent over]," whereas, she told me, "Mexicanos [mestizo Mexicans] get too many pains if they work in the fields." In these examples and the many other responses they represent, perceived bodily difference along ethnic lines serves to justify or naturalize inequalities, making them appear purely or primarily natural and not also social in origin. Thus, each kind of ethnic body is understood to deserve its relative social position.

#2: The urgent-care doctor he first saw explained that Abelino should not work, but should rest and let his knee recover. The occupational health doctor he saw the following week said Abelino could work but without bending, walking, or prolonged standing…. After a few weeks, the occupational health doctor passed Abelino to a reluctant physiatrist who told Abelino that he must work hard picking strawberries in order to make his knee better. She told Abelino that he had been picking incorrectly and hurt his knee because he "didn't know how to bend over correctly." Once Abelino had recovered, this doctor explained to the researcher that Abelino no longer felt pain, not because he got better, but because the picking season was over and he could no longer apply for worker's compensation…. Knee and back pain continue to be the most common health complaints among pickers on the Tanaka Farm.

YOUR ARROW DIAGRAM EXERCISE

1) *In the space below, write out your personal trajectory. What has your trajectory been up until now, as a provider/trainee and otherwise? You may want to include why you chose to go into healthcare. If you are early in your career, you could consider the possible trajectories you could have moving forward.*
2) *Next, in a different color, if available, identify the structures that have influenced (or might influence) your trajectory. What structures have given you advantages? What harmful/unjust structures have you encountered? Have any structures put you at risk for feeling burned out?*
3) *For Module 3: what strategies could modify your trajectory moving forward?*

COMPONENTS OF STRUCTURAL COMPETENCY

Structural Competency *is the capacity for health professionals to recognize and respond to health and illness as the downstream effects of broad social, political, and economic structures.*

"A shift in medical education … toward attention to forces that influence health outcomes at levels above individual interactions."

– Metzl and Hansen 2014

Components of Structural Competency

1. Recognizing influences of structures on patient health
2. Recognizing influences of structures on the clinical encounter, including implicit frameworks common in healthcare
3. Responding to structures in the clinic
4. Responding to structures beyond the clinic
5. Structural humility

Structural Humility

An orientation emphasizing collaboration with patients and communities in developing responses to structural vulnerability, rather than assuming that health professionals know best. This includes (but is not limited to) awareness of interpersonal privilege and power hierarchies in healthcare.

Levels of Intervention

1. Individual
2. Interpersonal
3. Clinic/Institutional
4. Community
5. Policy
6. Research

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LEVELS OF INTERVENTION

Listed below are potential structural challenges and interventions at each of the levels. Note that many items could potentially fall under multiple headings.

Level	Challenges	Strategies
Individual	• "Implicit Bias" • Discrimination: Racism, sexism, heteronormativity, ageism • Moral judgments of patient behavior • Negative/blaming language • Concern for medical education debt and choice of career path • Ignorance of structural problems and solutions/services	• Education • Find way to one-self accountable • Use neutral language • Ask more questions of your patients • Talk less, listen more • Cultivate structural humility
Interpersonal	• Language Barriers (including complex medical jargon/terminology) • Power imbalance between patient and provider • Training and/or clinical team hierarchies • The "Hidden" Curriculum • Time constraints • Student needs (learning, performance) balanced with patient needs • Exploitation of patients (both historical and immediate) • Preference for biomedical interpretation over patient interpretation	• Use existing support service (interpreters, etc.) and use real language • Recognize the hierarchies, practice humility, resist where you can, use your status for good where appropriate/possible (med students). • Understand that medical professionals have a culture as well. • Structural vulnerability checklist (as a tool to avoid assumptions, address patient needs
Clinic/ Institutional	• Poor interpretation services • Inaccessible for families (hours of operation, location, etc.) • Disorganized, chaotic care (different providers) • Not adapted to patient/community needs • Providers feeling overstretched, time pressures • Underfunding	• Restructure clinic within constraints to best meet patient needs, advocate to change the restraints • Community engagement –ask what they need • Case management • Integration of behavioral services with mental health services

LEVELS OF INTERVENTION

Level	Challenges	Strategies
Community	• Lack of community representation • Exploitation of communities • Community policing practices leading to violence and trauma • Poor access to clean water • Poor access to affordable gas and electricity • Poor access to healthy food • High levels of toxicity, environmental racism/classism	• Create opportunities for community voices/leadership • Work to educate police about the health costs of policing/incarceration • Partner with CBOs working on structural issue outside of clinical settings • Affordable and safe ride share opportunities for lower income communities • Community food gardens • Community organizing for safe water, lower neighborhood toxicity • Home/phone visits • Group visits Use your white coat/title as symbolic capital
Policy	• Immigration and housing policies • SSI benefits that require mental health diagnosis • Prison industrial complex and criminalization of drug use • Medicare value measurements that contribute to pressures • Access to/Cost of pharmaceuticals • Lack of diversity/inclusion in health professional education instructors • Lack of formal curriculum on structural determinants of health in health profession schools	• Refuse to report undocumented migrants • Contact media, seek out radio speaking opportunities • Write media articles, editorials, and position statements demonstrating the relationship between policies and poor health • Challenge claims (e.g. based on genetics) that naturalize inequality • Research the historical effects of policies • Make pharmaceutical access inequity transparent through blog posts, social media, and formal media (e.g. Shkreli) • Activism - Be a medic or wear your white coat (with permission from organizers) at rallies, marches, etc. • #whitecoats4blacklives and other student movements to change admissions policies, national policies about policing and incarceration • Medical education reform

LEVELS OF INTERVENTION

Level	Challenges	Strategies
Research	• Emphasis on quantitative research that takes for granted social categories • Demand for particular kinds of evidence • Lack of funding for social science research relative to basic science • Publishing bias-research preferentially published from elite universities	• Engage patients in defining important research questions and aims • Situate research in a structural context • Use the accepted forms of evidence to point to structural causes for health disparities • Research the historical effects of policies Advocate for better funding for qualitative research

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

Joshua Neff, MS[1], Kelly R. Knight, PhD[2], Shannon Satterwhite, BA[3,4], Nick Nelson, MBBS[5,6], Jenifer Matthews, MD[7], and Seth M. Holmes, MD, PhD[1,2,3,4,5,8,9]

[1]Joint Medical Program, UC Berkeley-UCSF, Berkeley, CA, USA; [2]Department of Anthropology, History, and Social Medicine, UCSF, San Francisco, CA, USA; [3]Medical Scientist Training Program, UCSF, San Francisco, CA, USA; [4]Joint Program in Medical Anthropology, UC Berkeley-UCSF, San Francisco, CA, USA; [5]Department of Medicine, Highland Hospital, Oakland, CA, USA; [6]Department of Medicine, UCSF, San Francisco, CA, USA; [7]Department of Adolescent Medicine, UCSF Benioff Children's Hospital Oakland, Oakland, CA, USA; [8]School of Public Health, UC Berkeley, Berkeley, CA, USA; [9]University of California Berkeley, Berkeley, CA, USA.

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.

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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.

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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

(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.

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."

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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Corresponding Author: *Seth M. Holmes, MD, PhD; University of California Berkeley, 50 University Hall, MC 7360, Berkeley, CA 94720, USA (e-mail: sethmholmes@berkeley.edu).*

Compliance with Ethical Standards:

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RECOMMENDED READING

This training barely scratches the surface. Here is a list of reading to go a little deeper.

Defining, Teaching, & Operationalizing Structural Competency

- Metzl J, & Hansen H. (2014). "Structural competency: Theorizing a new medical engagement with stigma and inequality." *Social Science and Medicine*.
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The Need for Structural Competency in Healthcare Education

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- Tervalon M & Murray-García J. "Cultural Humility Versus Cultural Competence." *Journal of Healthcare for the Poor and Underserved*, *9*(2): 117-123.

Structural Violence & Structural Racism

- Bourgois P. (2010). Recognizing Invisible Violence: A Thirty-Year Ethnographic Retrospective. In Rylko-Bauer B, Whiteford L, & Farmer P (Eds.) *Global Health in Times of Violence* (17-40). Santa Fe, NM: School for Advanced Research Press.
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- Crenshaw K. (1989). "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics." *University of Chicago Legal Forum.*
- Farmer P. (1996). "On Suffering and Structural Violence: A View from Below." *Daedalus*, *125*(1): 261-283.
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- Knight, KR. (2015). *addicted.pregnant.poor.* Duke University Press.
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Foundational Social Theory & Structural Analyses of Healthcare

- Brown W. (2006). "American nightmare: neoliberalism, neoconservatism, and de-democratization." *Political theory, 34*(6): 690-714.
- Fanon F. (1965). Medicine and Colonialism. In *A Dying Colonialism* (121-145) New York: Grove Press.
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Writings on Teaching & Framing

- Boler M. (2004). Teaching for Hope: The Ethics of Shattering World Views. In Liston D & Garrison J (Eds.) *Teaching, Learning, and Loving* (114-129) New York and London: Routledgefalmer.

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Social Medicine: Examples of Healthcare-Based Responses to Harmful Social Structures

- Breilh J. (2008). "Latin American critical ('Social') epidemiology: new settings for an old dream." *International Journal of Epidemiology 37*(4): 745-750.
- Geiger JH. (1984). Community health centers: health care as an instrument of social change. In Sidel VW & Sidel R (Eds.) *Reforming Medicine: Lessons of the Last Quarter Century* (11-32) New York: Pantheon Books.
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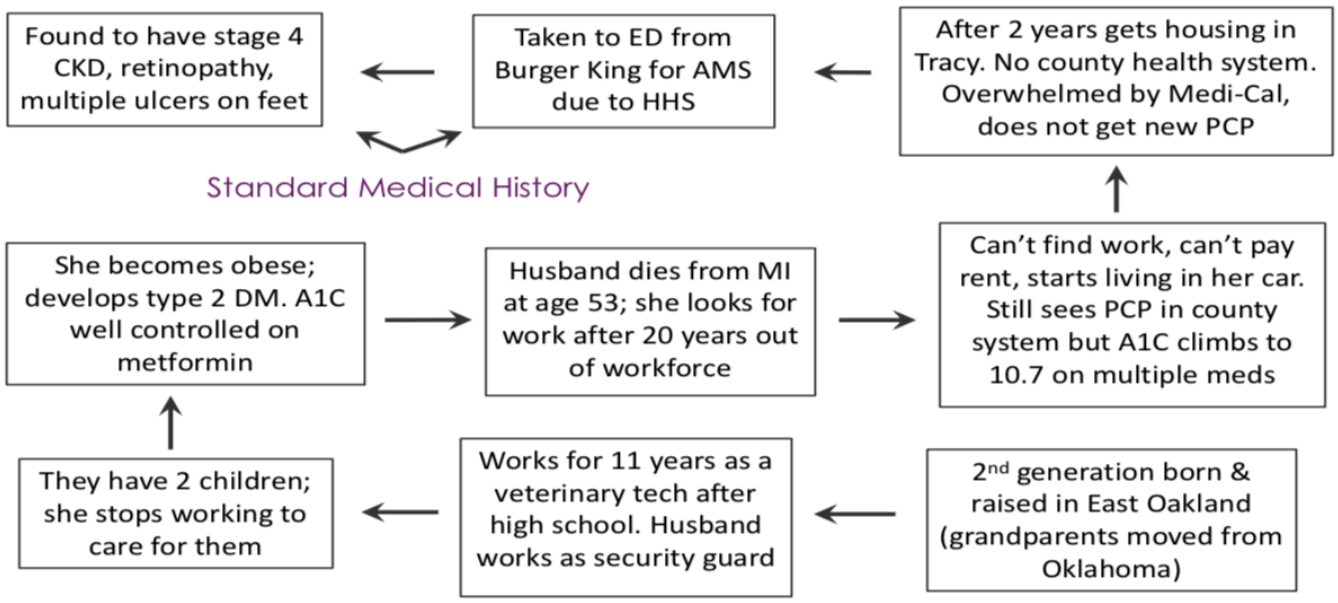
Diabetes Case Study



Questions

1. What **social, political, and economic structures** might be harming or helping the patient's health outcomes?

2. What implicit frameworks – **individual choices, "culture," and/or genetics** – might be used to explain or understand her poor health outcomes in a way that leaves out structural influences? In other words, how might her suffering be **naturalized**?