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Using a structural competency framework to teach structural racism in pre-health education

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ABSTRACT

The inclusion of structural competency training in pre-health undergraduate programs may offer significant benefits to future healthcare professionals. This paper presents the results of a comparative study of an interdisciplinary pre-health curriculum based in structural competency with a traditional premedical curriculum. The authors describe the interdisciplinary pre-health curriculum, titled Medicine, Health, and Society (MHS) at Vanderbilt University. The authors then use a new survey tool, the Structural Foundations of Health Survey, to evaluate structural skills and sensibilities. The analysis compares MHS majors (n = 185) with premed science majors (n = 63) and first-semester freshmen (n = 91), with particular attention to understanding how structural factors shape health. Research was conducted from August 2015 to December 2016. Results suggest that MHS majors identified and analyzed relationships between structural factors and health outcomes at higher rates and in deeper ways than did premed science majors and freshmen, and also demonstrated higher understanding of structural and implicit racism and health disparities. The skills that MHS students exhibited represent proficiencies increasingly stressed by the MCAT, the AAMC, and other educational bodies that emphasize how contextual factors shape expressions of health and illness.

Racial disparities in health and healthcare reflect implicit biases embedded in the U.S. healthcare system. Research shows that physicians "unwittingly perpetuate health-care disparities" by making clinical decisions based on implicit racial stereotypes (Chapman et al., 2013). Implicit racial bias has also been linked to "unconscious" physician preference for white patients and "poor ratings of interpersonal care" in interactions with patients of color (Cooper et al., 2012). Meanwhile, minority patients receive fewer recommended treatments for diseases ranging from cancer to HIV to heart disease to neurologic disorders, leading to persistent racial gaps in health-care outcomes (Ayanian et al., 2014; Saadi et al., 2017). Researchers also find that implicit bias impacts administrative decisions ranging from what services are provided to which neighborhoods are chosen when opening new physicians' offices (Ansell and McDonald, 2015).

These concerns are not new. For instance, psychiatric researchers began tracking the race of patient populations in the late 1950s, and the first studies demonstrating physician over-diagnosis of schizophrenia in African American men appeared soon thereafter (Metzl, 2010). Attention to the effects of bias and racism in medicine have gained new valence in the present-day, however, as activists, clinicians, and scholars call attention to the precarity and sanctity of black life and as U.S. society struggles with larger existential questions of racial equity and justice. ("Black Lives Matter," "White Coats Matter"). Taking up this call, physicians "challenge" medicine to address racism more directly (Bassett, 2015), policy experts voice concern about ACA repeal on low-income and minority populations (Vollman, 2017), and the *New England Journal of Medicine* (Culp-Ressler, 2015), *JAMA* (Williams and Wyatt, 2015), the Institute of Medicine (Nelson, 2002) and the National Institute of Health (Ginther et al., 2011) join the call to address racism and stigma in healthcare.

A fundamental question underlies current efforts to address racism in medicine: what are the best ways to train healthcare providers to diagnose and treat the pernicious effects of racism and

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bias on health and well-being? For much of the past four decades, medical education promoted a cultural competency framework that targeted provider and system bias in ways that aimed to improve clinician-patient communication (Kripalani et al., 2006). Starting in the 1980s, mental-health agencies mandated that clinicians demonstrate "cultural and linguistic competence" that met the diverse "needs presented by consumers and their communities" (Cross et al., 1989). By the early 2000s, the U.S. Department of Health and Human Services defined a series of national standards for "culturally and linguistically appropriate" care, such as "ensuring that patients receive … effective, understandable, and respectful care provided in a manner compatible with their cultural health belief and practices." ("Teaching Cultural Competence"; Agency for Healthcare Research and Quality, 2014). Soon thereafter, cultural competency became a requisite component of the curricula in U.S. medical schools (Kripalani et al., 2006; Gregg and Saha, 2006; Burgess et al., 2010).

Cultural competency promoted important recognition of ways that clinician bias regarding race, ethnicity, and other factors impeded healthcare delivery during an era when U.S. medicine was often loath to do so (National Juneteenth Medical Commission; Jones et al., 1991). Yet growing evidence suggested that a focus on interpersonal communication left larger questions of systemic bias in healthcare unaddressed. Indeed, despite decades of cultural competency education, studies consistently show low levels of physician recognition of the ways health systems contribute to health disparities (Kaiser Family Foundation, 2002; Sequist et al., 2008; Taylor et al., 2006; Britton et al., 2016). Only a minority of physicians who recognize racial/ethnic and socioeconomic disparities in the US health system agree that health system disparities affect their patients (Kendrick et al., 2015). Moreover, research suggests that white providers' understanding of health system-related disparities reflects a dominant color-blind ideology in which physicians are more likely to identify individual shortcomings than structural barriers faced by minority patients (Malat et al., 2010; Wear, 2003; Fox, 1990).

More broadly, recent political events in the U.S. make abundantly clear that racism and bias reside, not just in individual attitudes or interactions, but within larger systems, structures, and institutions. For instance, calls for police sensitivity training in the aftermath of the 2014 police shooting of Michael Brown in Ferguson, Missouri, were exposed as insufficient when it became clear that deep tensions also resulted from systemic racism in the police force (Berman and Lowery, 2015), zoning rules that classified white neighborhoods as residential and black neighborhoods as commercial or industrial, urban renewal plans that shifted black populations from central cities like St. Louis to inner-suburbs like Ferguson, and segregated public housing projects that replaced integrated low-income areas (Rothstein, 2014).

These and other developments raise the specter that, when teaching healthcare providers and students about racism and bias in medicine, medical education need also conceptualize and intervene into forms of racism that physician and public health scholar Camara Jones describes as "structural, having been codified in our institutions of custom, practice, and law" and manifest through differential access to "the goods, services, and opportunities of society by race." (Jones, 2000) Picking up this formulation, the White Coats 4 Black Lives movement calls for national medical school curricular standards that include "strategies for dismantling structural racism" ("White Coats For Black Lives").

This paper contributes to a growing body of literature that posits *structural competency* as a conceptual framework for bridging this gap between individual and institutional bias, or between what racism in medicine is and what it does (Metzl, 2010; Metzl and Hansen, 2014; Metzl and Roberts, 2014; Donald, et al. 2017; Neff et al., 2016). Whereas cultural competency focused mainly on identifying clinician bias and improving communication at moments of clinical encounter, structural competency emphasizes diagnostic recognition of the economic and political conditions that produce health inequalities in the first place. Structural competency calls on healthcare providers and students to recognize how institutions, markets, or healthcare delivery systems shape symptom presentations and to mobilize for correction of health and wealth inequalities in society (Hansen and Metzl, 2016). As Metzl and Hansen (2014) describe it, "if stigmas are not primarily produced in individual encounters but are enacted there due to structural causes, it then follows that clinical training must shift its gaze from an exclusive focus on the individual encounter to include the organization of institutions and policies, as well as of neighborhoods and cities, if clinicians are to impact stigma-related health inequalities" (p. 127).

Structural competency emerged in the context of North American medical education, in conversation with literature of critical race studies, sociology, economics, urban planning, anthropology, and social determinants, along with engagement with the "cultural humility" framework furthered by narrative medicine (Metzl and Hansen, 2014). It also aims to foster dialogue with structurally inflected models globally, such as the "social medicine model" developed in Latin America (Tajer, 2003) and global frameworks that aim to educate socially accountable health workforces (e.g. Training for Health Equity Network, 2011). Structural competency also finds common cause with the new "syndemic vulnerability" conceptual framework for understanding how diseases or health conditions that arise in populations are exacerbated by the social, economic,environmental, and political milieus (Lancet, 2017).

To date, most structural competency interventions have targeted healthcare providers and medical students (School of Public Health at University at Albany, Garcia, 2015, Pérez, 2014). Here we assess whether structural competency training is beneficial in pre-health baccalaureate settings as well, and in ways that potentially enhances how traditional pre-med education teaches students about diversity issues more broadly. Traditional pre-health education often separates pedagogy about the biological aspects of illness from training in other disciplines and approaches, with far more emphasis on the former topics than on the latter ones (Dalen and Alpert, 2009). As we show, a structural competency approach integrates scientific and medical advances with economics, sociology, anthropology, critical race studies, urban planning, epigenetics, and other frameworks in order to explore social and economic structures that contribute to inequities in the distribution of illnesses, as well as biases that surround attitudes about illness and health.

In what follows, we briefly detail an interdisciplinary pre-health curriculum, the Medicine, Health, and Society (MHS) major at Vanderbilt University, that integrates structural competency frameworks into semester-long baccalaureate courses. We then present the comparative results of a new evaluation tool, the Structural Foundations of Health Survey, developed to evaluate structural skills and sensibilities. We use the survey to evaluate three groups of students at Vanderbilt University—incoming premed freshmen, graduating premed science majors, and graduating MHS majors—with particular attention to student analysis of how political, cultural, economic, and social factors such as institutional racism shape assumptions about conditions including cardiovascular disease, obesity, and depression.

We hypothesized that MHS majors would identify and analyze relationships between structural factors and health outcomes in deeper ways than did premed science majors or incoming first-year students, while also demonstrating higher understandings of structural factors in their approaches to race, intersectionality, and

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