

## **Assessing first-year medical students' understanding of race in medicine**

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### **INTRODUCTION**

Research suggests that medical students hold false beliefs about biological differences between Black people and white people and that these false beliefs may impact the care they provide.<sup>1</sup> Understanding medical students baseline knowledge on this topic is crucial to bringing anti-racist pedagogy into medical education curricula in order to eradicate racist beliefs held by medical students and clarify the role played by social determinants of health. This study investigates the beliefs of first-year medical students as they start their medical training in order to gauge incoming students' understanding of race as a social construct rather than a biological concept as well as the effect of social determinants and racism on health outcomes of Black people.

### **METHODS**

An 11-item survey designed to assess incoming first-year medical students' false beliefs on the connection between race and biology was administered to students during their incoming student orientation. This survey was an adapted version of the survey used by Hoffman et. al<sup>1</sup>. Of the 11 items in the survey, two were true statements of racial health disparities related to the social determinants of health and nine were false statements of perceived biological differences between Black and white individuals. Given the purview of the study was whether non-Black populations had preconceived notions about race and medicine, students who identified as Black were not included in the analysis; this left 142 responses for analysis. Students' responses were divided into tertiles: true, false, and uncertain. The 'uncertain' category was designed to capture participants who answered under the possibly true/untrue category. Once the results were analyzed, students were sent a summary of the results and correct answers as a teaching tool.

### **RESULTS**

Responses from 142 first-year medical students were included in this analysis. Overall students struggled more with identifying the true statements about social determinants of health than they did identifying the false statements related to biological essentialism. These two questions were: "White people are less susceptible to heart disease than Black people" (only 16.1% correctly identified as true) and "White people are less likely to have a stroke than Black people" (only 16.8% correctly identified as true). Among the items regarding false biological beliefs, the three questions that were least likely to be correctly identified as false were: "On average, Black people have more fast-twitch muscle fibers than white people" (75.4% correctly identified as false), "Black peoples' skin has more collagen (i.e. it's thicker) than white peoples' skin" (82.5% correctly identified as false), and "Black peoples' blood coagulates more quickly than whites peoples' blood" (84.6% correctly identified as false).

### **CONCLUSION**

Our results demonstrate that first-year medical students hold some false beliefs pertaining to the connection between race and biology and may have an inadequate or flawed understanding of the effects of social determinants on the health of Black people. These results illustrate the

importance of educating medical students about the role of systematic racism in medicine, emphasizing the social and political etiologies of health disparities.

### **References**

1. Hoffman K, Trawalter S, Axt J, Oliver M. Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites. *Proceedings of the National Academy of Sciences*. 2016;113(16):4296-4301. doi:10.1073/pnas.1516047113