

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

## Background

- Research suggests medical students hold false beliefs about biological differences between Black people and white people.<sup>1</sup>
- This study investigates whether first-year medical students understand the effects of racism and social determinants on the health outcomes of Black people and whether they understand race as a social construct or a biological concept.

## 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 142 students.
- Of the 11 items in the survey, two were true statements of racial health disparities related to the social determinants of health
- Students' responses were divided into tertiles: true, false, and uncertain.
- Once the results were analyzed, students were sent a summary of the results and correct answers as a teaching tool.

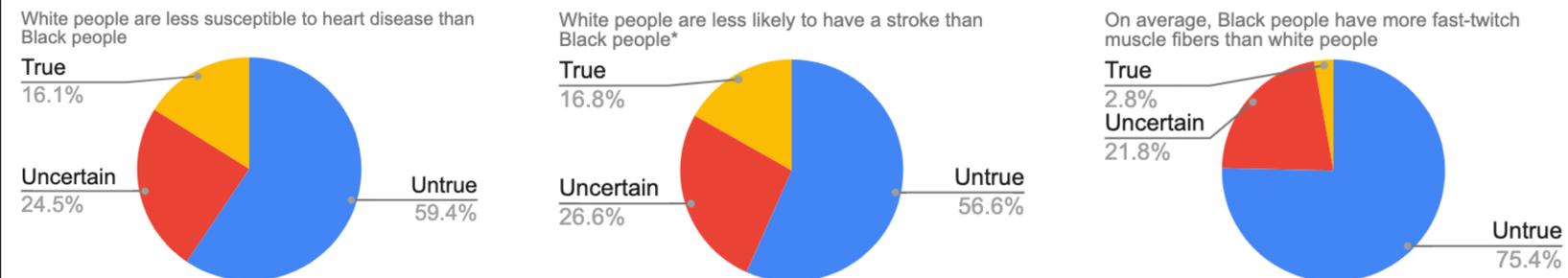
## Results

Table 1: Student Responses to survey items

	Untrue	Untrue n	Uncertain	Uncertain n	True	True n
On average, Black people age more slowly than white people	87.3%	124	12.7%	18	0.0%	0
Black people's nerve-endings are less sensitive than white people's nerve endings	94.4%	135	4.2%	6	1.4%	2
Black people's blood coagulates more quickly than whites people's	84.6%	121	14.0%	20	1.4%	2
<b>White people are less susceptible to heart disease than Black people*</b>	59.4%	85	24.5%	35	16.1%	23
White people have a better sense of hearing compared to Black people	90.2%	129	8.4%	12	1.4%	2
<b>Black people's skin has more collagen (i.e. it's thicker) than white people's skin</b>	82.5%	118	15.4%	22	2.10%	3
The lung expandability is considerably greater in Black people than white people of similar size, age, and habits	87.4%	125	12.6%	18	0.0%	0
Black couples are significantly more fertile than white couples	92.3%	132	7.7%	11	0.0%	0
<b>White people are less likely to have a stroke than Black people*</b>	56.6%	81	26.6%	38	16.8%	24
<b>On average, Black people have more fast-twitch muscle fibers than white people</b>	75.4%	107	21.8%	31	2.8%	4
Black people have stronger immune systems than white people	86.6%	123	13.4%	19	0.0%	0

\*Starred items are true statements that represent are a consequence of health inequity  
 Bolded statements were most commonly answered incorrectly

Figure 1: Top three statement most commonly answered incorrectly



## Conclusions

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

## Implications

- These results illustrate the importance of educating medical students about social and political etiologies of health disparities in order to dispel false beliefs that ultimately could have adverse outcomes on Black patients.

## 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