

Shortage of Black physicians: Florida Black medical student enrollment from 2013 to 2021

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SUMMARY

On average, Black patients have substantially better health outcomes when they are under the care of Black physicians. The percentage of Black physicians in America has remained at approximately 5% for nearly half a century, even though Black people comprise 14% of the United States population. We used data from the Association of American Medical Colleges and Florida medical schools to examine two important research questions. First, we hypothesized that since the state of Florida has the twelfth largest percentage of Black residents, Florida medical schools enrolled a higher percentage of Black first-year students compared to the national average. We found that Florida medical schools that provided data enrolled a higher percentage of Black first-year students (13.5%) than the national average (9%), which supported our first hypothesis. Second, we hypothesized that the percentage of Black first-year medical students enrolled nationally was higher in 2021 compared to 2013, correlating with the emergence and rise of social justice movements, including Black Lives Matter. We found that the national average of enrolled Black first-year medical students was 6% in 2013 and 9% in 2021, which supported our second hypothesis. An increase in the percentage of Black medical students and physicians could help diminish race-based health and class inequity in America, leading to a significant increase in the health of many Black people.

INTRODUCTION

The percentage of physicians in America identifying as Black is only 5%, which is much lower than the 14% of Black people in the population (1). This underrepresentation has remained unchanged over many decades (2). This is salient because Black patients often seek medical care from Black physicians due to personal preference and geographic accessibility (3). Furthermore, by observing more Black physicians, Black students are often inspired and motivated to consider medical careers that could help decrease race-based social and class inequity in America (1,4). Additionally, many patients are more likely to follow through with testing, medication, and treatment recommendations when their physicians are from the same ethnicity/race/background as them (2,3,5,6). Consequently, increasing the number of Black physicians might help reduce the amount of race-based health disparities in America, including significant differences in life expectancy (6,7). Dobson describes the shortage of Black physicians as a national crisis due to its effect on

reducing the number of Black patients who seek medical care for illnesses, including chronic diseases such as diabetes and hypertension, and underscores the importance of increasing the number of Black people in the physician workforce (8). In addition, Somnath and Beach showed that Black patients were more receptive to treatment recommendations when given by a Black physician than a White physician (9).

Additionally, the AAMC's 2015 study clearly illustrated the broad public health impact of the shortage of Black physicians. Specifically, the AAMC report presented at the National Medical Association's (NMA) 112th Convention in Detroit demonstrated that although the number of Black male college graduates increased between 1978 and 2015, the number of Black male first-year medical school students decreased from 1,410 to 1,337 over the same period (10). Possible explanations cited in the study for this decrease included steering Black males away from STEM and the vast cost of a lengthy medical education (10).

Moreover, implicit bias, or the mental shortcuts one involuntarily and unintentionally makes regarding specific groups, is prevalent in medicine and contributes to health inequity due to gender, socioeconomic, and racial biases. Chatterjee et al. determined that bias exists during medical school admissions (13). This could be one of the crucial reasons why the percentage of Black physicians has remained at 5% for nearly half a century. The Chatterjee study also recommended that research be conducted on reducing medical school admission bias (13).

An effective way to resolve the critical shortage of Black physicians is to enroll more Black medical students. For example, with the percentage of Black physicians stuck at 5% since the Carter administration, Florida A&M University (FAMU) allied with Ross University Medical School in Barbados to increase the number of Black physicians, especially in rural communities and inner-city neighborhoods (8). The agreement allows up to five FAMU graduates who have met Ross' admissions requirements to enroll annually with a tuition and fee waiver for the student's first semester.

We first asked whether the percentage of Black first-year students at Florida medical schools was higher than the national average. We hypothesized that the percentage of Black first-year students at Florida medical schools is higher than the national average because Florida has a higher percentage of Black residents than 38 other states (11).

The Black Lives Matter (BLM) movement began in 2013 after George Zimmerman's acquittal for the murder of Trayvon Martin in Florida. BLM was integral in advocating for police forces to implement significant policy changes such as implicit bias training and body-worn cameras (12). Our second question was whether the percentage of Black first-year medical students nationally in 2021 was higher than

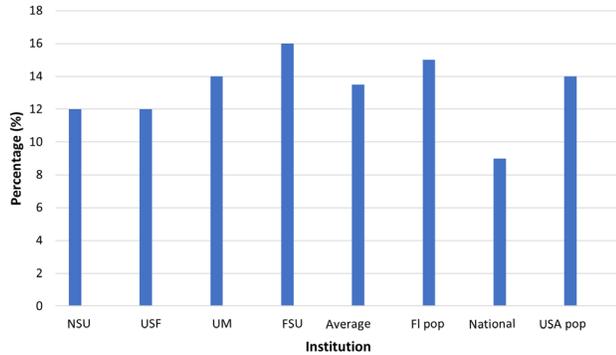


Figure 1. Percentage of Black first-year medical students compared to Black populations in Florida and nationally in 2021. In 2021, the percentage of Black first-year medical students was 12% at Nova Southeastern University (NSU), 12% at the University of South Florida (USF), 14% at the University of Miami (UM), and 16% at Florida State University (FSU). The average percentage of Black first-year medical students at these four Florida medical schools was 13.5%, and the percentage of Black people in Florida (FI pop) was 15%. The national average of Black first-year medical students was 9% and the percentage of Black people in the US population was 14%.

in 2013. We hypothesized that the percentage of Black first-year medical students nationally increased between 2013 and 2021, correlating with the rise and prominence of BLM and other social justice movements over these eight years.

To our knowledge, there has not yet been a study comparing the percentage of Black first-year medical students in Florida to the national average, nor has there been a study examining whether the percentage of Black first-year medical students nationally has increased over this eight-year period as social justice movements received more attention. Thus, this study aims to fill a unique gap in the literature by examining how Florida medical schools currently compare to the national average for enrolling Black medical students and examining trends in the enrollment of Black medical students since the emergence of the BLM movement.

This research is salient for those concerned about race-based health disparities in America and those in a position to create policies to help diversify the healthcare workforce, as an increase in the percentage of Black physicians could lead to an increase in the health of a large number of Black people (3,5,6). In addition, Black students considering careers in medicine may be particularly motivated and inspired by this study as they consider medicine a pathway to helping others and a tool to decrease racial and social inequities. In this study, using data from the Association of American Medical Colleges (AAMC), we found that in 2021, compared to the national average (9%), Florida medical schools enrolled a higher percentage of first-year Black students (13.5%) as the state with the twelfth largest percentage of Black residents. We also found that the percentage of Black first-year medical students enrolled nationally was higher in 2021 (9%) compared to 2013 (6%), correlating with the emergence and rise of the Black Lives Matter movement.

RESULTS

We first wanted to determine if the percentage of Black first-year medical students enrolled in Florida medical schools was higher than the national average of Black first-

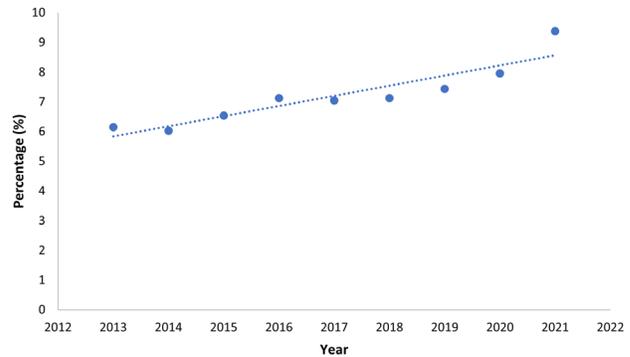


Figure 2. Percentage of Black first-year medical students nationally between 2013 and 2021. The data in this figure are from the Association of American Colleges database. The percentage of Black first-year medical students nationally in 2013 was 6% and increased to 9% in 2021.

year medical students. National data from the Association of American Medical Colleges (AAMC) and data from Florida medical schools were analyzed to explore this critical research question. Four Florida medical schools responded to our request for data on the percentage of Black first-year medical students: Nova Southeastern University (12%), University of South Florida (12%), University of Miami (14%), and Florida State University (16%). Each of these four Florida medical schools had higher percentages of first-year Black medical students than the national average. We found that Florida, a state with the 12th largest percentage of Black residents, had a higher average of Black first-year medical students enrolled at four Florida medical schools (13.5%) than the national average (9%) (Figure 1).

Second, we wanted to see whether the percentage of Black first-year medical students nationally was higher in 2021 than in 2013. We predicted that the percentage of Black first-year medical students nationally was higher in 2021 compared to 2013, correlating with the emergence and rise of the Black Lives Matter movement. To examine this, we reviewed AAMC data from 2013 and the year with the most recent data, 2021. Our hypothesis was confirmed as Black first-year medical students made up 6% of enrollment in 2013 versus 9% in 2021 (Figure 2).

DISCUSSION

While the percentage of Black people in America is 14%, there has been marked underrepresentation of Black people in medicine for nearly half a century, as only five percent of America's physicians are Black (1). If Black students see increasing numbers of Black physicians, these students might be inspired to consider careers as physicians, which could help diminish class inequity in America (1,4). In addition, this gross underrepresentation is critical since Black patients seek out Black physicians and have better health outcomes due to increased compliance with physician recommendations (2,3,5,6). Consequently, increasing the number of Black physicians by increasing the percentage of Black students entering medical school might help address the egregious health inequity in America as reflected in statistics such as race-based differences in life expectancy (6,7).

A concordant visit occurs when a physician of a particular race sees a patient of the same race (12). Studies have

suggested that, on average, Black patients have better physician-patient interactions with Black physicians than White physicians (12). For example, researchers had Black participants view videos of scripted vignettes of Black and White physicians. The participants gave higher ratings for the Black physicians on various physician attributes (12). The benefits of Black patients having Black physicians have been cited as a fundamental reason to increase the number of Black physicians (6). Simon et al. reported that, on average, the percentage of concordant visits is highest for White physicians (84.3%) and lowest for non-Hispanic Asian physicians (14.5%) (6). Increasing the percentage of concordance visits between Black physicians and Black patients could increase patient compliance with visits and physician treatment recommendations resulting in improved overall health of the Black population (3,5,6).

Our first hypothesis was that the percentage of Black first-year medical students at Florida medical schools would be higher than the national average since Florida has a higher percentage of Black residents than thirty-eight other states (8). We analyzed data from the AAMC and four Florida medical schools that provided data. We confirmed our first hypothesis, as the four Florida medical schools had higher percentages of Black first-year students in 2021 (13.5%) than the national average (9%). It is plausible that if other states, particularly those with higher-than-average Black populations, also began to enroll higher percentages of Black students, the gross underrepresentation of Black physicians could be diminished. Further research is needed to examine how other states compare to the national average. Also, future studies should make additional attempts to obtain data from the four Florida medical schools that did not respond to our requests.

Our second hypothesis was that the percentage of Black first-year medical students nationally increased between 2013 and 2021, correlating with the rise and prominence of the BLM movement over this period. The data obtained and analyzed in this study from the AAMC confirmed that hypothesis as the percentage of first-year medical students nationally increased from six percent to nine percent between 2013 and 2021, while the percentage of Black Floridians and Black Americans did not change during that period (14). While this data suggests a correlation between an increase in Black students entering medical school and the rise and popularity of the BLM movement, it does not confirm a cause-and-effect relationship. Further research is necessary to examine the relationship between social justice movements such as BLM and the empowerment of young Black people, as potentially demonstrated by pursuing medical careers.

Additional research is also needed on effective, efficient, and equitable mechanisms to increase the number of Black students in the physician pipeline and how to retain Black physicians in academia to serve as role models for Black students. Also, research is warranted on why the percentage of Black medical students has remained stagnant for decades, including examining sociocultural factors and systemic racism.

Several limitations exist in our study, such as only examining two years of data, limiting our data to percentages, the absence of data from four Florida medical schools, and the unknown effect of the COVID-19 pandemic on medical school applications during 2020–21. Also, we did not examine the number of out-of-state students who may

come from states with higher or lower Black populations than in Florida. In addition, the fact that the two private medical schools in Florida were two of the four schools in our data set that responded may bias the results away from larger public schools with greater percentages of in-state students in favor of smaller, private schools with greater percentages of out-of-state students. Overall, the findings from our study will be relevant for those concerned about race-based health disparities in America, as the population of racial minorities in America is predicted to exceed fifty percent by 2050 (15). An increase in the percentage of Black physicians could lead to an increase in the health of many Black people due to better health outcomes when Black physicians treat Black patients (3,5,6).

MATERIALS AND METHODS

Study Design

This study was a secondary data analysis comparing descriptive statistics, such as percentages. Data from the AAMC and Florida medical schools was used to examine two important research questions. The AAMC publishes current and past medical school enrollment information, including a breakdown by race (16). The most recent data (2021) from the AAMC was examined to determine the number of Black first-year medical students nationally. The data was recorded in an Excel spreadsheet. The most recent AAMC data regarding the total number of first-year medical students was also entered into the same spreadsheet.

Data Collection

Data regarding the number of Black first-year medical students was collected via email and phone requests sent to the eight medical schools in Florida: the University of Florida, University of Miami, USF Morsani College of Medicine, University of Central Florida, Florida Atlantic University, Florida State University, Florida International University, and Nova Southeastern University. These data were then compared to the national average of Black first-year students enrolled in medical school. Four Florida medical schools did not provide data on the percentage or number of Black first-year medical students on their websites nor respond to phone or email requests for this data. Four Florida medical schools responded to our requests, and their data were entered into the same Excel spreadsheet. The percentage of Black first-year medical students at each school was determined by dividing the number of Black first-year medical students by the number of total first-year medical students and represented in a bar graph to highlight the different percentages (**Figure 1**).

AAMC data from 2013 regarding the number of Black first-year medical students was also entered into the same Excel spreadsheet. The 2021 data was compared to 2013 data to explore any change in the percentage of Black first-year medical students nationally over those eight years concurrent with the rise of the Black Lives Matter movement (**Figure 2**).

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