Supplemental Online Content

Shahriar AA, Puram VV, Miller JM, et al. Socioeconomic diversity of the matriculating US medical student body by race, ethnicity, and sex, 2017-2019. *JAMA Netw Open*. 2022;5(3):e222621. doi:10.1001/jamanetworkopen.2022.2621

eAppendix. Supplementary Methods
eReferences.

This supplemental material has been provided by the authors to give readers additional information about their work.

eAppendix. Supplementary Methods

<u>Study Population</u>

Medical students self-report their last years combined gross parental income on the AAMC-MSQ. Parental income reported on the AAMC-MSQ correlates strongly with parental education and occupation.[1,2] As medical students responding in 2017 to 2019 were reporting parent income for 2016 to 2018, the comparison group chosen was CPS-ASEC respondents from 2016 to 2018.[3]

We were unable to assess AAMC-MSQ non-respondent characteristics as these data were unavailable. Comparison between those included and excluded in our study was done using standardized differences, considering a threshold of < 0.20 (20%) as similar groups. We expected to exclude a larger percentage of 2018 and 2019 respondents, because beginning in 2018, respondents were given an option to enter "unknown" for parental income, resulting in fewer responses.[2]

<u>Variables</u>

Income - On the AAMC-MSQ, medical students reported combined gross parental income for the previous year, whereas CPS-ASEC respondents reported current household income.

Race/Ethnicity - Medical students and CPS respondents self-reported race and ethnicity from investigator-defined categories. For this study, respondents were categorized as Hispanic of any race, White non-Hispanic, Black non-Hispanic and Asian non-Hispanic. Race/ethnicity categories from the AAMC were heterogeneous (i.e., Asian, non-Hispanic), and details are included in the footnotes of **Figure 1.**

Sex - Medical students and CPS respondents self-reported sex as male or female.

<u>Analysis</u>

The representation index (RI) for a given subgroup of students speaks to the degree of over- or underrepresentation of that subgroup. For example, "Top 5%" Black households comprised 9.1% of the Black medical student body, but 1.7% of Black US households. The RI is calculated as *0.091/0.017 = 5.3*. This is interpreted as the Top 5% being 5.3-times (430%) overrepresented in the medical student body.

For each race/ethnicity, AAMC-MSQ respondents were categorized into income groups based on the CPS-ASEC limits for the year corresponding to the MSQ response.[4] The CPS-ASEC reports the percent distribution of households by race/ethnicity within each income quintile and the top 5%; these publicly available data were downloaded and used for comparison,[5] and the exact thresholds are included in the footnotes of **Table 1.** Statistical comparisons between medical students and CPS respondents were done using chi-square tests and standardized differences. All analyses were conducted in 2021 with R version 3.6.1.

AAPOR Standard Disclosure Checklist For Survey Research:

Basic Disclosure Element	Details
Survey sponsor	Association of American Medical Colleges
Survey/Data collection supplier	Association of American Medical Colleges
Population represented	65-71% of matriculating U.S. medical students
Sample size	MSQ sample size 2017-2019: 44,903 Study sample size: 30,373
Mode of data collection	Electronic survey; email
Type of sample	Census of all U.S. LCME-accredited medical schools
Start and end dates of data collection	MSQ 2017: 6/1/2017 - 9/15/2017 MSQ 2018: 6/1/2018 - 9/15/2018 MSQ 2019: 6/1/2019 - 9/15/2019
Margin of sampling error for total sample	NA
Margin of sampling error for key subgroups	NA
Are the data weighted?	NA
Contact for more information	**Tyler Litsch, MPH, CHES** Research and Data Analyst, AAMC tlitsch@aamc.org

Questions Included for Analysis from the AAMC-MSQ 2017-2019

The following questions from the AAMC Matriculating Student Questionnaire (AAMC-MSQ) were included in this study. The questions are listed and numbered in the order in which they appear in the MSQ. All other questions are omitted from this Appendix.

* Indicates that the item is populated from other AAMC data sources (e.g., American Medical College Application Service [AMCAS])

1. Sex*

- o Male
- o Female

2. How do you self-identify?* *Multiple responses allowed*

- o American Indian or Alaska Native
- o Asian
- o Black or African American
- o Hispanic, Latino, or Spanish origin
- o Native Hawaiian or Other Pacific Islander
- o White
- o Other
- o Non-U.S. citizen and non-permanent resident

3. Regardless of your dependency status, please indicate your parents' combined gross income for last year (a rough estimate is sufficient). Note: starting in 2018, an additional response option of unknown parental income was added. Therefore, fewer participants reported parental income starting in 2018.

- o Free text

eReferences

1. Youngclaus J, Roskovensky L. *Analysis in Brief: An Updated Look at the Economic Diversity of US Medical Students*. Association of American Medical Colleges; 2018.

2. Association of American Medical Colleges. Matriculating student questionnaire. 2017-2019. Accessed July 10, 2021. https://www.aamc.org/data-reports/students-residents/report/matriculating-student-questionnaire-msq

3. US Census Bureau Current Population Survey - Methodology. https://www.census.gov/programs-surveys/cps/technical-documentation/methodology.html. Published 2021. Accessed June 29, 2021.

4. US Census Bureau Current Population Survey. Income Distribution to $250,000 or More for Households. https://www.census.gov/data/tables/time-series/demo/income-poverty/cps-hinc/hinc-06.html. Published 2021. Accessed June 29, 2021.

US Census Bureau Current Population Survey. Percent Distribution of Households, by Selected Characteristics Within Income Quintile and Top 5 Percent. https://www.census.gov/data/tables/time-series/demo/income-poverty/cps-hinc/hinc-05.html. Published 2021. Accessed July 10, 2021.