

Background

The benefits of diversity in medicine and the promotion of a diverse physician workforce are in the interest of all patients. These benefits include an enhanced educational environment for all medical students, the disproportionate service of minority physicians in underserved areas, and the potential growth of research addressing healthcare inequities. Of the many forms of diversity, the adequate representation of those from ethnicities under-represented in medicine has been particularly difficult to achieve. In fact, the difficulty in achieving diversity in medicine was recently highlighted by the "Altering the Course" AAMC report, which found that there are fewer African-American men in medicine today than in 1978. It has long been known that there is a paucity of ethnic minorities in medicine. African-Americans, Latinos/Hispanics, and Native Americans/Pacific Islander/Alaska Natives compose 13.2%, 17.4% and 1.4% of the U.S. population respectively, yet constitute 10% of direct care physicians (U.S. census, Diversity Data Snapshots, 2013. AAMC).

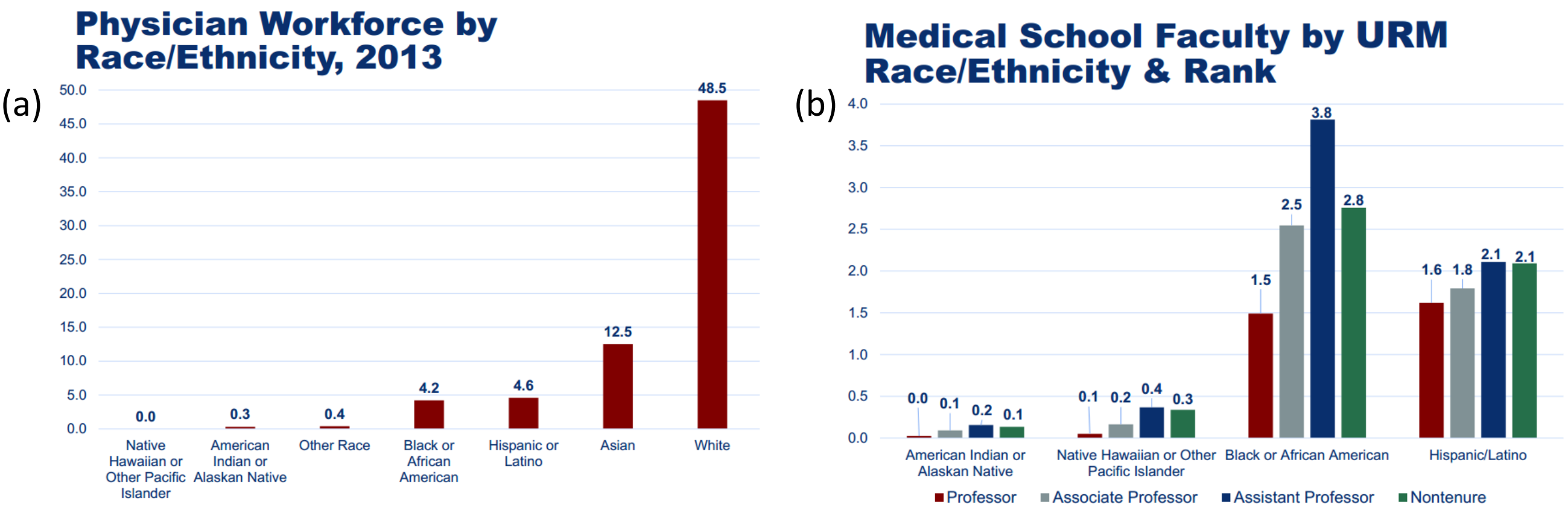


Figure 1. Physician Workforce Diversity. (a) Physician workforce diversity, as percentage of direct care physicians.. (b) Medical school Faculty diversity. Adapted from: Diversity Resources and Data Snapshots, August 2015 Edition. <https://www.aamc.org/initiatives/diversity/data/>

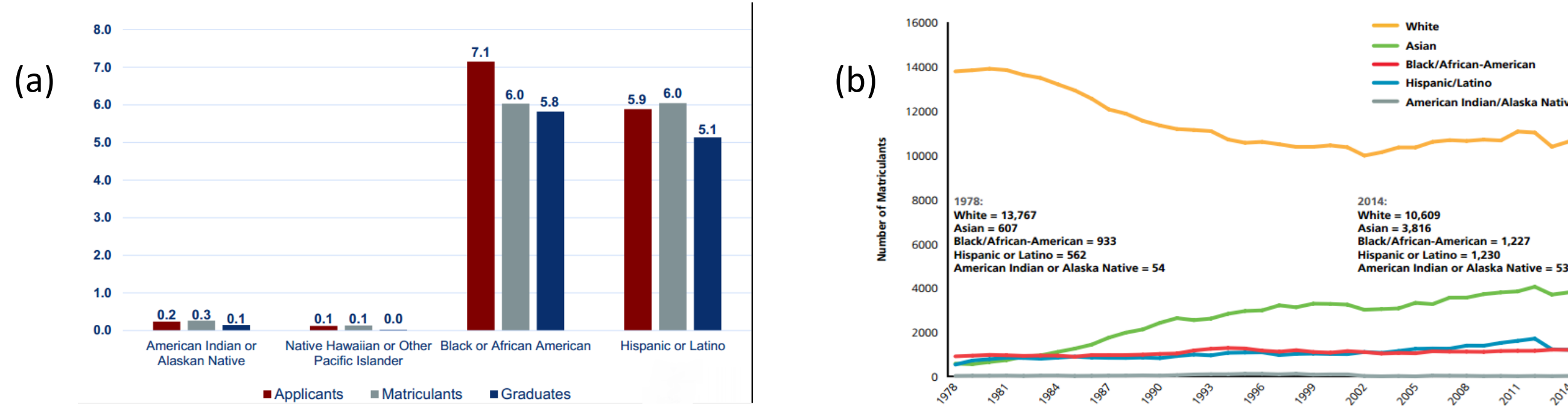


Figure 2. National trends in UME diversity. (a) Percentage of medical school applicants, matriculants and graduates who self identify as members of ethnic groups URM. (b) Historical view of total number of medical school matriculants self-identifying as members of ethnic groups URM. (a) Adapted from: Diversity Resources and Data Snapshots, August 2015 Edition. (b) adapted from Altering the Course AAMC report.

Motivation and Methods

In order to better inform future diversification efforts, we have used Association of American Medical Colleges (AAMC) and U.S. Census data to evaluate U.S. medical schools by their degree of diversity. We have ranked all U.S. medical schools by % URM enrollment and compare these rates to national demographics. We also introduce a new approach of quantifying diversity beyond the percent enrollment of URM by normalizing enrollment levels to local demographics.

Data

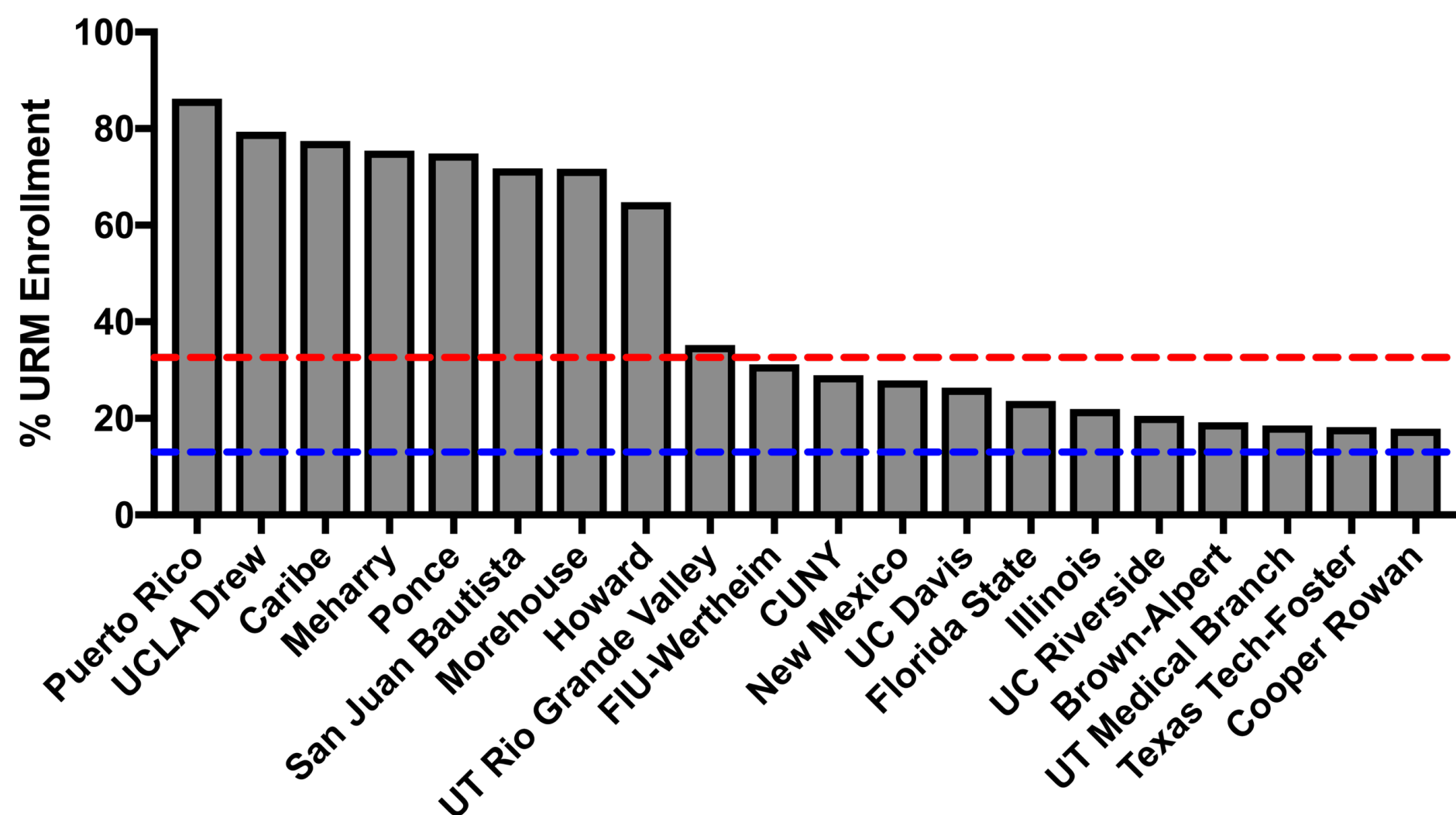


Figure 3: The top 20 medical schools ranked by percent URM enrollment (Black, Hispanic/Latino, American Indian/Alaskan Native/Pacific Islander) of total enrollment. The dashed red line indicates the percent URM in the US population, while the blue dashed line indicates the average percent URM across all enrolled medical schools. **Source:** Author's analysis of AAMC Table B-5 (2016-2017), 2015 U.S. Census.

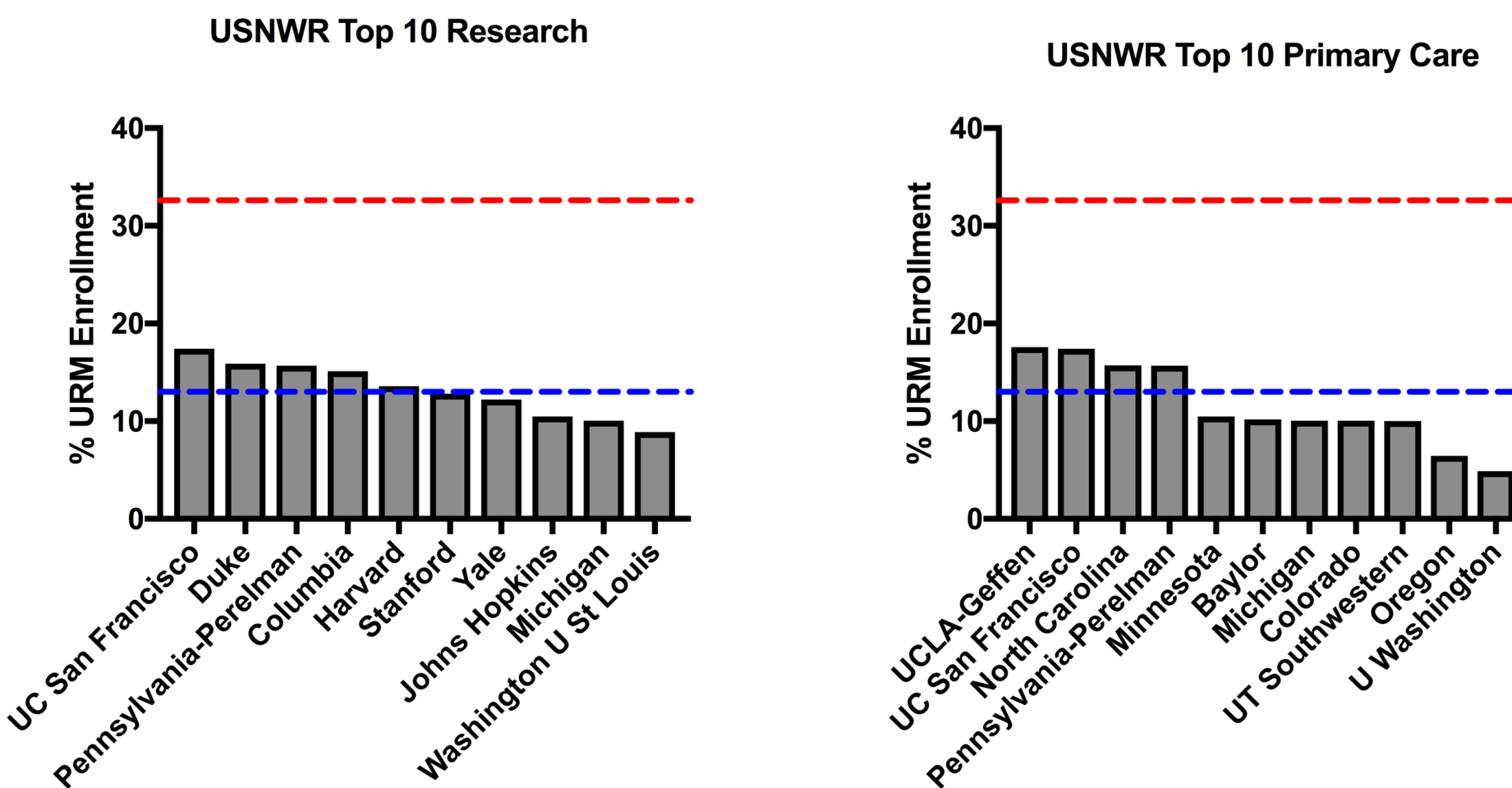


Figure 4: Top 10 U.S. News and World Report Research and Primary Care Medical Schools Ranked by % URM Enrollment. Percent URM (American Indian/Alaskan Native, Black, or Hispanic/Latino) of total enrollment within: (Left panel) Top 10 research and (B) Top 11 primary care medical schools (there are eleven schools in (Right panel) as a result of ties in the 2018 USNWR rankings). Dashed red line indicates the percent URM in US population,¹⁰ while dashed blue line indicates the percent URM across all enrolled medical students. **Source:** Author's analysis of AAMC Table B-5 (2016-2017), 2015 U.S. Census, 2018 U.S. News and World Report Best Medical Schools rankings.

Medical School ¹	% URM Students Enrolled	City/State	%URM in State ²	%URM in City ²	Diversity Quotient ³
UCLA-Geffen	17.59	Los Angeles/CA	47.5	58.6	0.370 0.300
UC San Francisco	17.41	San Francisco/CA	57.5	21.6	0.367 0.806
Duke	15.86	Durham/NC	32.9	54.6	0.482 0.291
North Carolina	15.71	Chapel Hill/NC	32.9	16.1	0.477 0.976
Penn-Perelman	15.68	Philadelphia/PA	19	56.6	0.825 0.277
Columbia	15.11	New York/NY	37.5	53.8	0.403 0.281
Harvard	13.6	Boston/MA	20.2	44.4	0.673 0.306
Stanford	12.83	Stanford-Palo Alto/CA	47.5	9.1	0.270 1.41
Yale	12.2	New Haven/CT	27.6	62.3	0.442 0.196
Johns Hopkins	10.491	Baltimore/MD	40.7	67.8	0.258 0.155
Minnesota	10.49	Minneapolis/MN	12.6	29.6	0.833 0.354
Baylor	10.17	Houston/TX	52.4	67.5	0.194 0.151
Michigan	10.06	Ann Arbor/MI	19.8	12.2	0.508 0.825
Colorado	10.05	Aurora/CO	27.6	45.7	0.364 0.220
UT Southwestern	10	Dallas/TX	52.4	66.4	0.191 0.151
Washington U	8.89	St. Louis/MO	16.6	51.7	0.536 0.172
Oregon	6.44	Portland/OR	17	16.7	0.376 0.386
U Washington	4.87	Seattle/WA	19.1	14.8	0.255 0.329

Table 1. The Top 10 Research and Primary Care Medical Schools¹ and their City and State Diversity Quotients³

¹The top 10 USNWR designated research and primary care medical schools
² Percent of the population that is URM within the city or state in which the medical school resides
³The ratio of %URM student enrollment to the %URM in the city or state population where the school resides. Quotients less than one indicate that the %URM students enrolled are less than the %URM in the population of the surrounding city or state of residence.
Source: Author's analysis of 2017 enrollment data from the AAMC (Table B-5), 2015 U.S. Census data, and 2018 U.S. News and World Report Best Medical Schools rankings.

Data Cont.

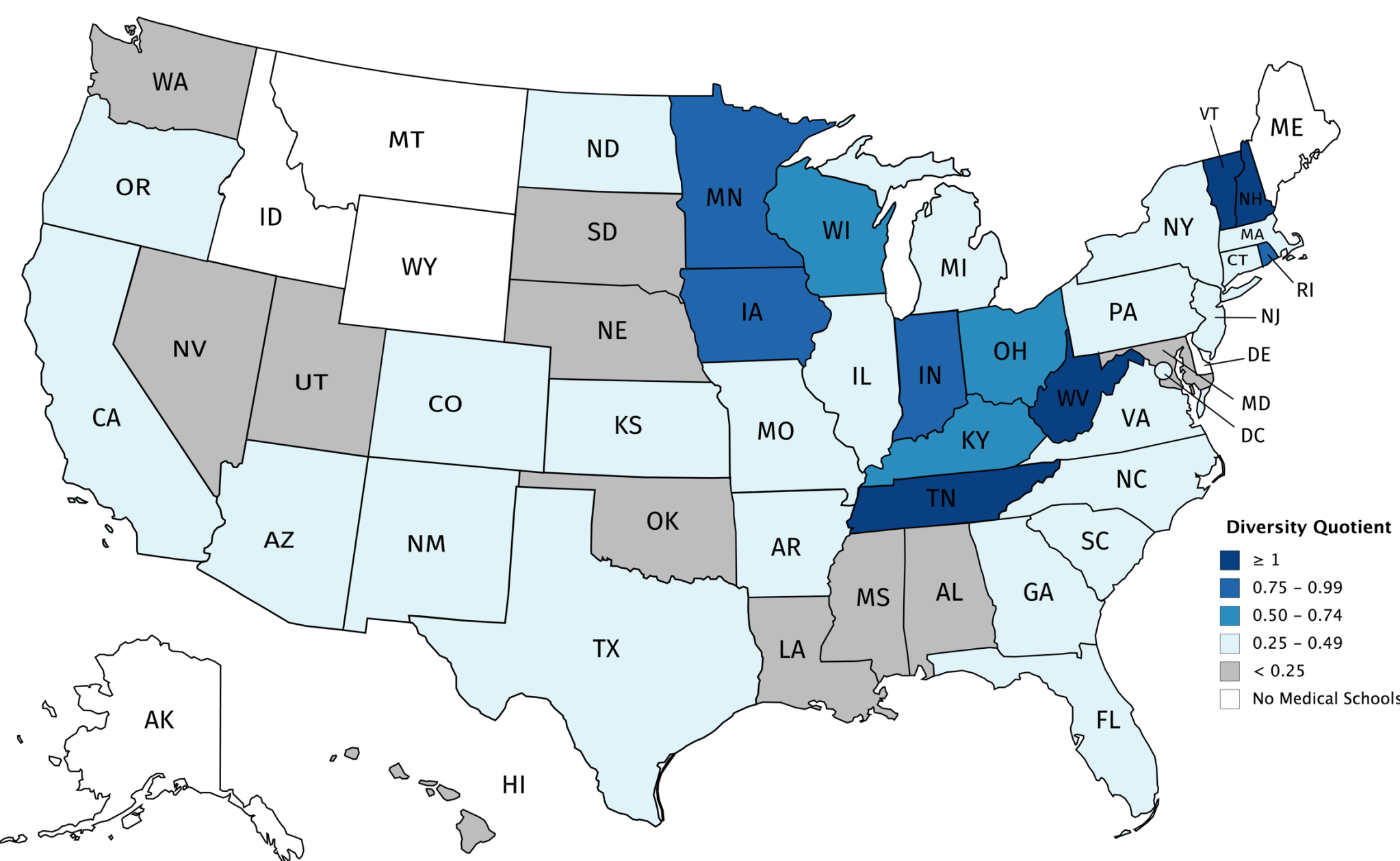


Figure 5. State-Level Diversity Quotients: The Percent URM Medical Students Relative to the State's Percent URM Population
Values less than 1 indicate that percent URM of current medical students in that state do not reflect the URM demographics of that state

Source: Author's analysis of AAMC Table B-5 (2016-2017) and 2015 U.S. Census. Mapping performed using mapchart.net.

Discussion and Future Work

We find that even amongst our most diverse medical schools, many do not match national demographics, and very few schools and states achieve parity between medical trainees and the populations they serve. Our study illustrates how data may be utilized to develop targeted goals and move the discussion beyond describing the lack of diversity in our physician workforce towards utilizing data to motivate and direct interventions to increase the number of URM physicians.⁴

Citations

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- Mullan F, Chen C, Petterson S, Kolsky G, Spagnola M. The social mission of medical education: ranking the schools. Ann Intern Med. 2010;152(12):804-11.

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