Analysis IN BRIEF

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Analyzing Physician Workforce Racial and Ethnic Composition Associations: Physician Specialties (Part I)

Health care reform in the United States is well underway. Given the current shortages with the physician workforce, the benefits of increased coverage and access many not be fully realized by those without access to a physician. Estimates suggest that the U.S. is facing an overall shortage of 130,000 active care physicians and almost 66,000 primary care physicians by 2025.[1] These shortages could exacerbate the health care access problems many Americans face today.

Despite substantial research on medical student specialty choice, few studies have considered specialty choice differences by distinct racial and ethnic groups. It has long been argued that increasing the racial and ethnic diversity of the physician workforce may have significant positive implications for primary care.[2,3] This *Analysis in Brief (AIB)*, the first in a two-part series exploring associations with the diversity of the physician workforce, examines whether there is an association between physician specialty and their racial and ethnic composition to determine whether increasing physician workforce diversity could influence the distribution of physicians across specialties.

Methodology

Data in this AIB come from three sources. The demographic characteristics and distribution of physicians who graduated from medical school between 1980 and 2010 are from the 2012 American Medical Association (AMA) Physician Masterfile, which is a database of education, training, and professional certification information of all physicians in the United States. The sample was limited to these physicians because racial and ethnic data for medical school graduates was not systematically or reliably collected prior to 1980. Physicians' race and ethnicity information were obtained from the AAMC Student Records System and the AAMC Minority Physicians Database. The association between physician specialties in direct patient care and physician racial and ethnic composition was analyzed. Primary care physicians were defined as family physicians and general practitioners, general internists, and general pediatricians.

Results

The sample was comprised of 507,622 direct patient care physicians, reflecting 73 percent of the total direct patient care physicians in the nation as of 2012. Of these physicians, 39 percent (192,083) were practicing primary care. Specifically, 15 percent (76,717) were practicing family and general medicine, 15 percent (77,766) were practicing general internal medicine, and 7 percent (37,600) were practicing pediatrics. A statistically significant association between physician specialty choice and their racial and ethnic composition exists ($p < 0.001$). While 35 percent of white physicians were practicing primary care, 41 percent of Asian physicians, and 44 percent of URM physicians (43 percent of Hispanic/Latino physicians, 45 percent of black or African American physicians, and 46 percent of American Indian, Alaskan Native, or Hawaiian or Pacific Islander physicians)[4] were practicing primary care (see Figure 1).

Results also show statistically significant differences within individual primary care specialties. American Indian, Alaskan Native, or Hawaiian or Pacific Islander and Hispanic/Latino physicians are more likely to practice family medicine while black or African American and Asian physicians are more likely to practice general internal medicine. These differences were smaller in pediatrics. Although nearly half of black or African American, Hispanic/Latino, and American Indian, Alaskan Native, or Hawaiian or Pacific Islander physicians were

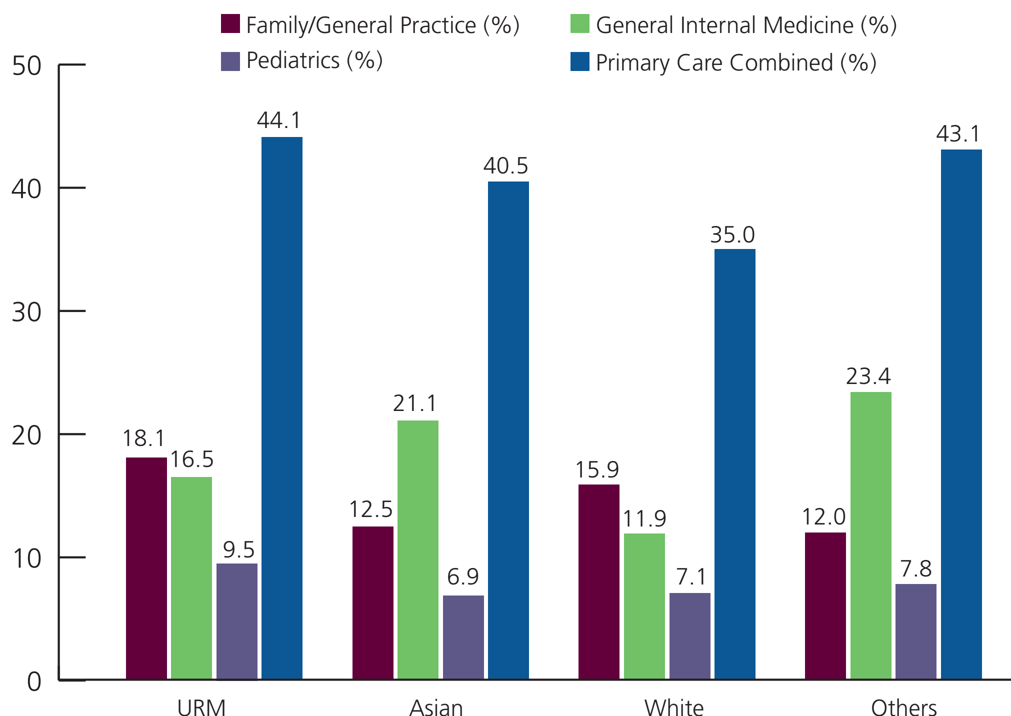
1 The impact of health care reform on the future supply and demand for physicians updated projections through 2025. Washington, DC: Center for Workforce Studies, Association of American Medical Colleges, 2010. Available at: https://www.aamc.org/download/158076/data/updated_projections_through_2025.pdf. Accessed July 30, 2014.

2 Council On Graduate Medical Education (COGME) 12th Report. Minorities in Medicine. May 1998. Available at http://www.hrsa.gov/advisorycommittees/bhpradvisory/cogme/Reports/twelfthreport.pdf. Accessed July 16, 2014.

3 Keith SN, Bell RM, Swanson AG, Williams AP. Effects of affirmative action in medical schools. A study of the class of 1975. N Engl J Med. 1985;313(24):1519-25.

4 This breakdown not shown in Figure but are available upon request from the authors.

Figure 1: Percent Physician Participation in Specialties, by Race and Ethnicity



Note: Physicians under-represented in medicine (URM) are defined as black or African American physicians, Hispanic/Latino physicians, and American Indian, Alaskan Native, Hawaiian and Pacific Islander physicians.

Source: 2012 AMA Physician Masterfile; 2013 AAMC Minority Physician Database

practicing primary care, their representation among all primary care physicians still remains low at approximately five percent each for black or African American and Hispanic/Latino physicians and less than one percent for American Indian, Alaskan Native, or Hawaiian or Pacific Islander physicians.

Discussion

These results show significant associations between physician specialty and their racial and ethnic composition. Physicians of American Indian, Alaskan Native, or Hawaiian or Pacific Islander; black or African American; or Hispanic/Latino origins are more likely to practice primary care than white physicians, which suggests that increasing representation from these groups within the physician workforce may increase the number of physicians practicing primary care. This study also shows a significant gap between the racial and ethnic composition of primary care physicians and the general population.

Not only are certain racial and ethnic minority physicians more likely to practice in medically underserved areas as shown in prior research,[5] these findings suggest they also are more likely to practice primary care. Eliminating disparities in K-12 education, enhancing pipeline programs and college-level interventions, and transforming medical school admissions[6] are promising ways to increase physician diversity and ultimately promote excellence in health care. Future research should consider the pursuit of specialties by underrepresented racial and ethnic minority physicians. A diverse physician workforce serves the national interest on many fronts, and has important implications for the physician shortages and the shortage of primary care physicians in our nation.

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