and NRT products and eliminating flavorings such as menthol that make cigarettes more palatable. States and Congress can work to minimize taxes on all clean-nicotine products while increasing cigarette taxes to drive substitution through significant price differentials. Furthermore, it would be helpful if companies that invest in research to demonstrate efficacy for cessation were not penalized with additional regulatory burdens, such as being forced under the regulatory category for pharmaceuticals. The FDA Center for Drug Evaluation and Research can streamline the approval process for smoking-cessation indications and, more important, can regulate these products flexibly to ensure that clean-nicotine products with a cessation indication can be marketed more appealingly and widely than products lacking evidence of such efficacy.

*An audio interview with Dr. Cobb is available at NEJM.org*

These recommendations are not meant to dismiss immediate consumer safety issues. The FDA has proposed creating a 2-year window before warning labels or product safety and quality standards for e-cigarettes would go into effect. The delay is disturbing, given the variability in product quality and a documented spike in cases of accidental nicotine poisoning.[5] We believe that no product subject to FDA regulation should be exempt (even temporarily) from basic supply-chain monitoring or simple safety devices, such as child-resistant containers, ensuring that they're as safe as possible.

Until the FDA enforces oversight and regulation of e-cigarettes, the safety of individual devices cannot be assumed. For smokers choosing among forms of refined nicotine, NRT products still represent safer, more predictable choices, even if they are more expensive and less appealing. This discrepancy is unfortunate, given the public health potential of e-cigarettes that consumers could assume to be safe, reliable, and effective. We would encourage the FDA to accelerate their regulations to eliminate uncertainty regarding safety, drive the substitution and use of clean nicotine, and hasten the demise of lethal combusted tobacco.

Disclosure forms provided by the authors are available with the full text of this article at NEJM.org.

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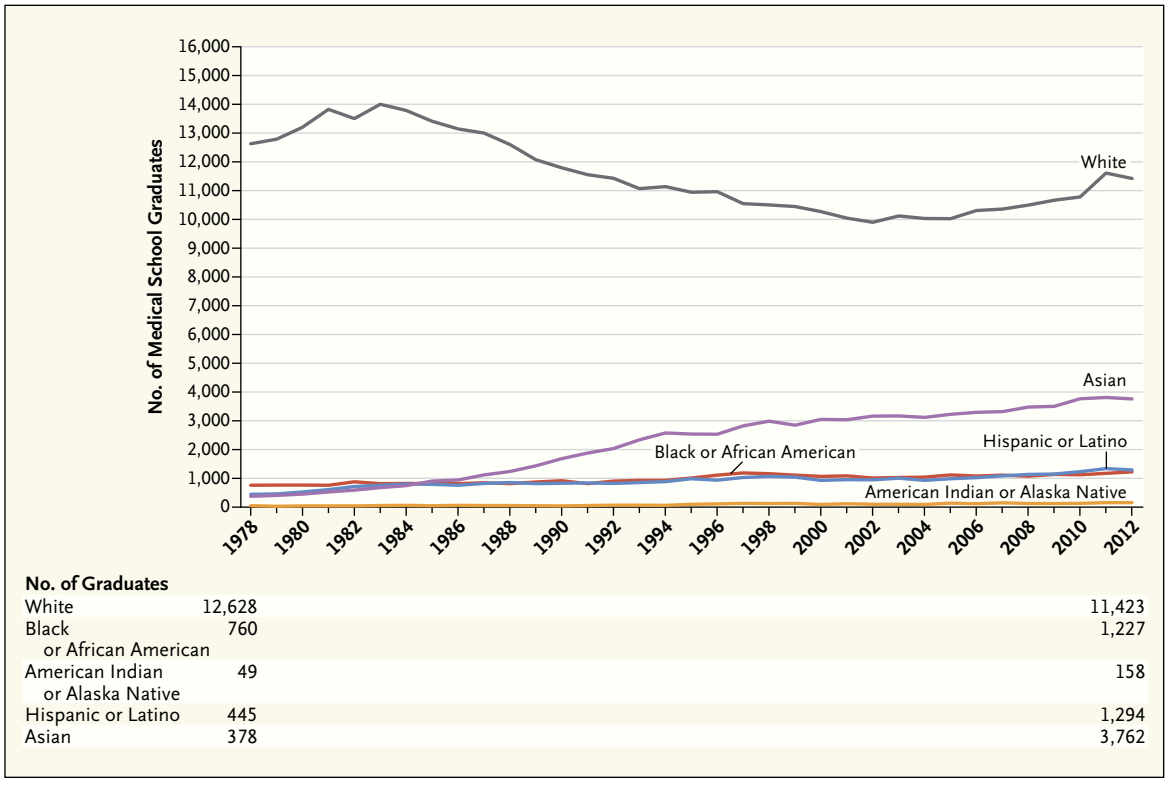
# Diversity Dynamics — Challenges to a Representative U.S. Medical Workforce

John K. Iglehart

In an era when the proportion of the U.S. population that is nonwhite has surged to 37%, two notable trends are shaping the composition of the physician workforce: the "overwhelming majority" of medical school graduates continue to be white,[1] and the number of black men completing medical school has been trending downward since 1997.[2] By comparison, medical school graduates of Hispanic and Asian descent have increased in number and as a percentage of total graduates. Although the Obama administration trumpets its support for improving opportunities for minority young people — and specifically black men — it has dismayed medical educators for 3 years running by proposing elimination of the Health Careers Opportunity Program (HCOP),




| No. of Graduates | | |
|---|---|---|
| White | 12,628 | 11,423 |
| Black or African American | 760 | 1,227 |
| American Indian or Alaska Native | 49 | 158 |
| Hispanic or Latino | 445 | 1,294 |
| Asian | 378 | 3,762 |

**U.S. Medical School Graduates According to Race or Ethnic Group, 1978–2012.**

In 2002, graduates began to use multiple race and ethnicity categories, so data for recent years are shown as race alone or in combination with another race. Data are from the Association of American Medical Colleges.

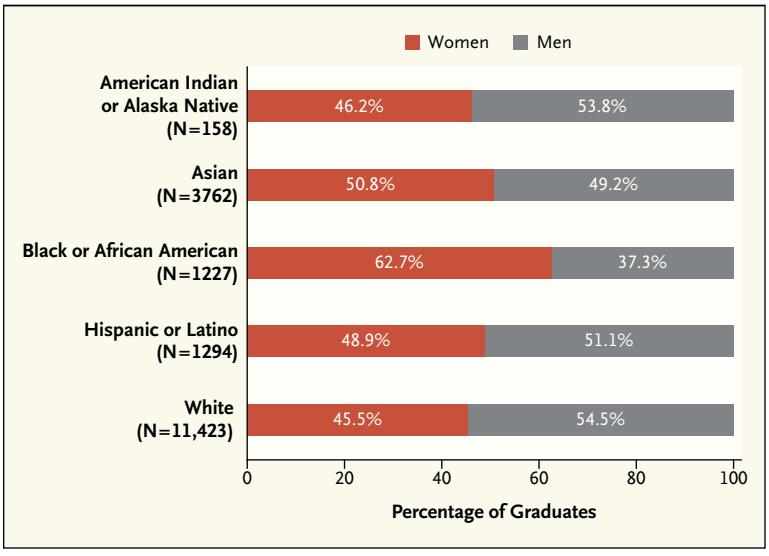
which aims to increase diversity in the health professions.

"Talent is universal, and there are smart, capable people of all racial and ethnic backgrounds who could become physicians, providing greater access to care for an expanding minority population," Marc Nivet, the chief diversity officer of the Association of American Medical Colleges (AAMC), told me. The problem, he said, is that "opportunity is not universal. There is indisputable evidence that we are not intervening effectively enough to increase the talent pool of African Americans interested in becoming health professionals."

Assembling a health care workforce reflecting the U.S. population's diversity has been a longstanding goal of the government,[3] organized medicine, and others. The progress made to date is clear from the racial and ethnic makeup of the medical school graduate population.[2] Between 1978 and 2012, the number of new medical school graduates who were non-Hispanic white decreased from 12,628 (85.4% of all graduates) to 11,423 (63.9%). During the same period, the number of graduates of Asian descent increased from 378 (2.6%) to 3762 (21.1%), and the number of graduates of Hispanic descent increased from 445 (3.1%) to 1294 (7.2%). The number of black medical school graduates was 760 (5.1% of all graduates) in 1978, and although it increased to 1192 in 1997 (7.5%), there was a relative decrease to 1227 by 2012 (6.9%) (see line graph).

Nationally, black women enrolled in medical schools now outnumber their male counterparts almost two to one (see bar graph), and women account for two thirds of all black medical school applicants. This pattern of female predominance among black students is also reflected in many other science, technology, engineering, and math fields.

Nevertheless, Nivet envisions a brighter future for diversity, writing that "the drumbeat for a




**Percentage of U.S. Medical School Graduates According to Sex and Race or Ethnic Group, 2012.**

Data are from the Association of American Medical Colleges.

new paradigm is accelerating. Medical schools and teaching hospitals are shifting their strategies to better capture, leverage, and respond to the rich diversity of human talents and aptitudes."[4]

As insurance coverage expands under the Affordable Care Act, it seems likely that increasing the number of physicians from racial and ethnic minority groups would broaden access to care: research shows that such doctors are more likely than white doctors to locate in underserved areas, and they tend to treat larger numbers of minority patients. Since 2005, a growing number of minority graduates have said they intend to pursue a career in primary care, through family medicine, internal medicine, or pediatrics. Black and Asian graduates have expressed an even greater interest than other minority groups in general internal medicine.

In addition, more opportunities to obtain a medical education are becoming available, as new medical schools open and others expand. Between 2002 and 2017, the AAMC projects that allopathic medical schools will increase their first-year positions by about 30% — from 16,488 to 21,434 students. Colleges of osteopathic medicine have been expanding their total national capacity for decades: total enrollment was 23,071 in 2013, as compared with 10,817 in 2000. Of 2013 enrollees, 15,401 (66.7%) were white, 4613 were Asian (20%), and 655 (2.8%) were black.

Yet challenges remain in the quest to diversify the physician workforce. Medical educators note that the most important obstacle is the shortcomings of elementary and secondary schools in preparing minority and low-income students for college, much less medical school. As a result, fewer underrepresented minority students than white students apply for, are accepted by, and graduate from medical schools. Complicating this picture is the uncertainty of future federal support for pipeline programs designed to better prepare members of underrepresented minorities for higher education.

Another major issue is the large debts that medical students incur, coupled, in the case of black students, with the highest rates of premedical school debt. At graduation in 2012, 94% of black students had debt; their median educational debt was $184,125, and their parents' median income was $69,000. Median debt among all graduates was $170,000.

Although many corporate and philanthropic foundations have provided financial support for health-professions-pipeline programs, the largest single funder has been the federal government. The Health Resources and Services Administration (HRSA) oversees the HCOP and the Centers of Excellence (COE), which are designed to increase diversity in the health professions by developing a pipeline to the these opportunities for K–12 and college students and mentoring enrolled students. The Obama administration's last three annual budget submissions maintained some, though decreasing, support for the COE, at about $21 million a year, but proposed eliminating the HCOP, an action that seems to run counter to President Obama's initiatives for supporting minority groups and echoes the earlier budgets of President George W. Bush.

When I queried HRSA about

the administration's rationale, I was told that although developing the early portion of the health-professions pipeline is valuable, "with limited funding we are investing in activities that more directly and immediately impact the supply and distribution of providers." The AAMC took strong exception to the proposed action, saying that the two programs encouraged at least 459,036 members of underrepresented minority groups to consider careers in the health professions and that their elimination would have "dire consequences for the health workforce" and the communities it serves.

Meanwhile, medical educators are increasingly concerned about declining support for affirmative action seen in court cases since the 2003 Supreme Court decision in *Grutter v. Bollinger*, which upheld the race-conscious admissions policy at the University of Michigan Law School. In June 2013, in the first challenge to such policies that the Court has since considered, *Fisher v. University of Texas*, it returned the case to a lower court for further action consistent with its opinion. (On July 15, 2014, responding to that directive, the U.S. Court of Appeals for the Fifth Circuit ruled that the University of Texas could continue using affirmative action in its admission policies.) Darrell G. Kirch, the AAMC chief executive officer, issued a statement, saying, "The AAMC is pleased that the Supreme Court continues to recognize the educational benefits of diversity and the appropriateness of individualized, holistic review in admissions. Diversity is a vital component of excellence in education, clinical care, and research at the nation's medical schools and is a requirement for accreditation by the Liaison Committee on Medical Education." But in the longer term, affirmative action may be on shaky ground, given that five of the nine Supreme Court justices have never voted in favor of race-based considerations in the enrollment processes of medical schools. In addition, eight states have banned race-based affirmative action steps, and others are considering similar actions.[5]

One development that may ultimately expand the diversity of the physician workforce is the impending demographic tsunami. According to the Census Bureau, the proportion of the U.S. population accounted for by racial and ethnic minorities is projected to reach 57% by 2060. In keeping with an ongoing demographic shift among young adults in the United States, the number of white applicants to medical schools has dropped by about 22% over the past three decades. However, the influx of millions of people from other countries — with a wide array of racial and ethnic backgrounds — cannot by itself resolve the diversity challenges facing black Americans and U.S. society.

Disclosure forms provided by the author are available with the full text of this article at NEJM.org.

Mr. Iglehart is a national correspondent for the *Journal*.

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# The New Diversity in Medical Education

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During my pediatrics rotation, the mother of a patient waited until the attending physician had left the room before she lowered her voice, smiled, and asked, "Are you wearing your hoodie for Trayvon?" She didn't know what city I was from, what faith I belonged to, or what tax bracket I was in. She just knew that I was black, like her. This race-based camaraderie between patient and physician can improve patient satisfaction,[1] and patients from racial minority