

Diversity of U.S. Medical Students by Parental Income

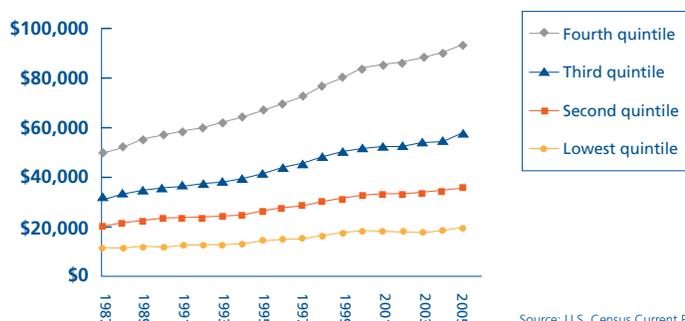
The AAMC and its member institutions have for many years pursued a common commitment to increase diversity among students attending U.S. medical schools, based on a belief that including students from different backgrounds, experiences, and identities enhances the education of all medical students. While efforts have been focused on achieving racial and ethnic diversity, there is also a concern that significant barriers confront students from lower-income families.¹ This Analysis in Brief reviews data on parental income of entering medical students from 1987 through 2005 and demonstrates that efforts to improve diversity in this dimension have made little or no progress.

Entering students report their family income on the annual Matriculating Student Questionnaire (MSQ), administered each year by the AAMC. The median family income reported by respondents has increased from \$50,000 in 1987 to \$100,000 in 2006.

Of the approximately 15,500 entering medical students each year from 1987 to 2005, the response rate on the MSQ has never been below 65 percent, and roughly 90 percent of those who completed the questionnaire have provided a figure for parental income. While medical students may have only an inexact idea of the amount of their family income, they are asked to estimate an approximate value.

Despite these limitations, examination of the data gives us confidence that the

Figure 1. Boundaries Between Quintiles of U.S. Household Incomes, 1987-2005



Source: U.S. Census Current Population Survey

incomes of medical student families are greater for each successive entering class. Paradoxically, however, this does not mean that schools are taking more students from high-income families. Because inflation and increases in productivity generally raise incomes by a small percentage every year, the definition of high income keeps changing.

A better way to look at income trends is to divide the population of U.S. households into fifths by family income, then see how many students come from each quintile. Using data from the U.S. Census Current Population Survey,² the break points between the quintiles necessary for this analysis are displayed in Figure 1. Note that the upper limit of each of the first four quintiles is shown. The highest quintile has no meaningful upper limit.

In 2005, the most recent year for which census data are available, the lowest quintile included household incomes no greater than \$19,178, and the highest quintile contained household incomes greater than \$91,705.

Using the quintile data for each year, it is possible to determine what fraction of each year's new medical students comes from each quintile of family income.³ The results are shown in Figure 2.

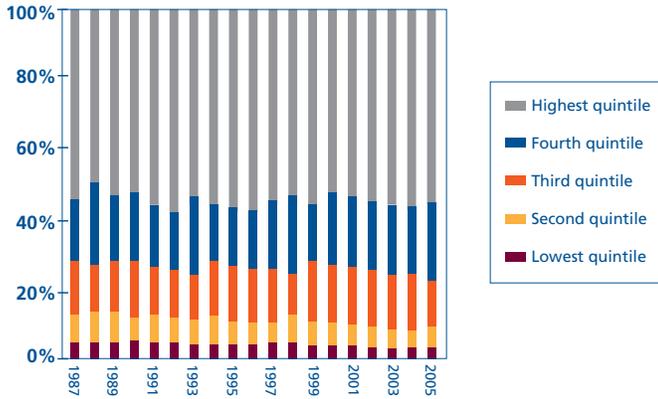
When viewed in this manner, the distributions are remarkably consistent. The percentage of students from the highest quintile has never been less than 48.1 percent or more than 56.9 percent. The fraction of students from the lowest quintile has never been greater than 5.5 percent. In the most recent year for which quintile

1 Many schools seek diversity not only by race and ethnicity, but also by socioeconomic status, generally defined as some combination of family income, parental education, and parental occupation. This work concerns itself with the first of these three components of socioeconomic status.

2 Source: <http://www.census.gov/hhes/www/income/histinc/h01ar.html>.

3 The U.S. Census Bureau collects data on household income, while the MSQ asks parental income. For this study, we consider these to be equivalent.

Figure 2. Parent Income of Entering Medical Students in U.S. Medical Schools, by Quintiles of U.S. Household Income, 1987-2005



census data are available, more than three-quarters of medical students came from families in the top two quintiles of family income.

A college degree is normally a prerequisite for admission to medical school, and college graduates also come from families with an income distribution skewed toward the upper quintiles. This makes it difficult for medical schools to increase diversity by family income, should they attempt to do so. Figure 3 compares the family income

quintile distributions for public and private medical schools with the distributions for public and private colleges and universities granting bachelor's and master's degrees and for public and private universities granting doctoral degrees.⁴

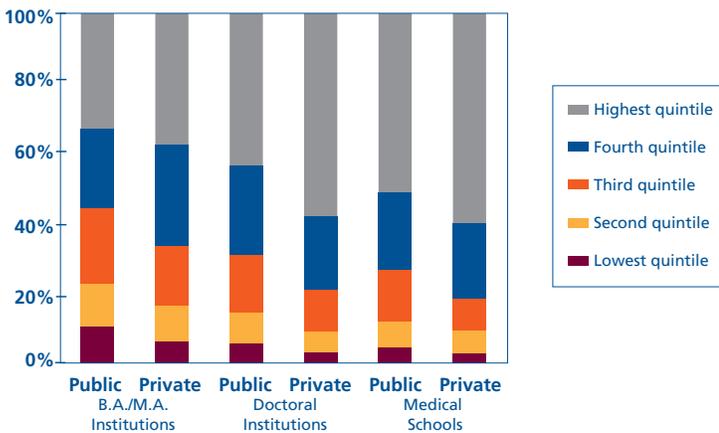
These data show that family incomes of students in private institutions are more skewed toward higher incomes than family incomes of students in public institutions and that family incomes of students in both medical

schools and universities granting doctoral degrees are more skewed than family incomes of students in colleges and universities granting only baccalaureate and master's degrees.

Three-fourths of new medical students in 2005 came from doctoral-granting institutions.⁵ These data demonstrate that even if medical schools were to give preference to applicants from lower socioeconomic strata, it would be difficult to greatly enhance economic diversity without first improving access to a college education.

A real concern is a possible *increase* in the systemic skewing toward children of upper-income families. From 2000, when 50.8 percent of matriculants came from the top quintile, to 2005, when 55.2 percent came from that quintile, there may be the beginning of an undesirable trend. As reported elsewhere,⁶ the debt incurred by medical students continues to increase with every passing year; 2007 graduates reported a median educational debt of \$140,000. With debt increasing much more rapidly than physician incomes, a continued increase in the fifth quintile percentage would be a warning that medical education is becoming increasingly out of reach for applicants of modest means.

Figure 3. Parent Income of Entering Students in Undergraduate Institutions and Medical Schools, by Quintiles of U.S. Household Income, 2005



Collins Mikesell and Gwen Garrison, Ph.D., assisted with this analysis.

Author: Paul Jolly, Ph.D., senior associate vice president, Division of Medical School Services and Studies, pjolly@aamc.org, 202-828-0257

4 John H. Pryor et al., *The American Freshman: National Norms for Fall 2005*, Cooperative Institutional Research Program, University of California, Los Angeles (December, 2005). Interval data reported in this work were interpolated to find the percentages of college freshmen with families in each population quintile.

5 AAMC Data Warehouse, October, 2007.

6 Jolly, P. Medical School Tuition and Young Physician Indebtedness. AAMC 2004; Jolly, P. Medical School Tuition and Young Physician Indebtedness (An Update to the 2004 Report), AAMC 2007; AAMC Data Book: Medical Schools and Teaching Hospitals by the Numbers, 2007. All three publications available from www.aamc.org/publications.

Association of American Medical Colleges

2450 N Street, N.W.
Washington, D.C. 20037-1127
analysis@aamc.org
www.aamc.org/data/aib