Letters

RESEARCH LETTER

Minority Physicians’ Role in the Care of Underserved Patients: Diversifying the Physician Workforce May Be Key in Addressing Health Disparities

Disparities in access to care persist despite efforts to improve care for underserved patients: racial and ethnic minorities, the uninsured, the poor, Medicaid recipients, and non-English speakers. A shortage of physicians practicing in communities where disadvantaged patients live is a major contributor.

Minority and non–English-speaking populations in the United States have grown markedly during the past 2 decades, and minorities may be a majority by 2050. While the Patient Protection and Affordable Care Act will expand insurance coverage for low-income, uninsured individuals, concern remains about the supply of physicians to care for these newly insured populations.

If nonwhite physicians care for a large proportion of the underserved, then increasing the racial and ethnic diversity of the physician workforce may help. A prior nationally representative study indicated that in 1987, nonwhite physicians disproportionately cared for underserved and sicker patients; to our knowledge, these data have not been updated since. Given the demographic changes and impending implementation of the Patient Protection and Affordable Care Act, this question has renewed relevance.

Methods | We performed a cross-sectional analysis of 7070 adults in the 2010 Medical Expenditure Panel Survey who identified a medical provider (not a facility) as their usual source of care. We calculated unadjusted odds ratios to estimate the likelihood of having a nonwhite physician for patients who were racial and ethnic minorities, low income, Medicaid enrollees, uninsured, and non-English home language speakers. We then adjusted these odds ratios for physician sex, office type, geographic region, and metropolitan statistical area status by applying multiple logistic regression models. Last, we compared self-reported health status and health care use for patients of minority and non-Hispanic white physicians using χ² tests. National estimates were calculated with weights provided by the Medical Expenditure Panel Survey. Institutional review board approval was waived.

Results | Nonwhite physicians cared for 53.5% of minority and 70.4% of non–English-speaking patients. In unadjusted (Table 1) and adjusted (data not shown) analyses, patients from underserved groups (except uninsured patients) were significantly more likely to see nonwhite physicians than white physicians. Patients of black, Hispanic, and Asian physicians were more likely to have Medicaid; patients of Hispanic physicians were more likely to be uninsured.

Higher proportions of black physicians’ patients were obese, had self-reported fair or poor health, and used the emergency department. For patients of Asian and Hispanic physicians, several health status measures were better than those of patients of white physicians, but self-reported fair or poor health was worse (Table 2).

Discussion | Nonwhite physicians provide a disproportionate share of care to underserved populations. Hence, increasing the racial and ethnic diversity of the physician workforce may be key to meeting national goals to eliminate health disparities.

Our findings do not argue for buttressing de facto medical segregation or denigrate the efforts of nonminority physicians who care for the disadvantaged. Nonetheless, it is clear that the preferences of physicians in choosing practice settings and of patients in choosing physicians combine to create an outsized role for minority physicians caring for the disadvantaged.

It is worrisome that there has been little growth in the proportion of physicians who are black or Hispanic relative to their population size, despite support for workforce diversification from the Institute of Medicine and the Association of American Medical Colleges. More robust policies aimed at recruitment of racial and ethnic minorities into medical school are likely needed. Building a physician workforce that is more representative of the US population would likely help address inequalities in health and health care.

Study limitations include assignment of physician race based on patient report and lack of information on physician characteristics such as age, postgraduate year, and foreign graduate status. Also, our findings are not generalizable to those without a usual source of care.

Lyndonna M. Marrast, MD
Leah Zallman, MD, MPH
Steffie Woolhandler, MD, MPH
David H. Bor, MD
Danny McCormick, MD, MPH

Author Affiliations: Department of Medicine, Cambridge Health Alliance, Harvard Medical School, Cambridge, Massachusetts (Marrast, Bor, McCormick); Institute for Community Health, Cambridge Health Alliance, Cambridge, Massachusetts (Zallman); City University of New York School of Public Health at Hunter College, New York (Woolhandler).

Corresponding Author: Lyndonna M. Marrast, MD, Cambridge Health Alliance, 1493 Cambridge St, Cambridge, MA 02139 (lmarrast@challiance.org).


Author Contributions: Dr Marrast had full access to all the data in the study and takes full responsibility for the integrity of the data and the accuracy of the data analysis.

Study concept and design: Zallman, Woolhandler, Bor, McCormick.
### Table 1. Unadjusted Association Between Disadvantaged Population and Receipt of Care From White vs Black, Hispanic, and Asian Physicians, Medical Expenditure Panel Survey, 2010

<table>
<thead>
<tr>
<th>Patient Characteristic</th>
<th>Millions of Patients With a White Physician</th>
<th>Millions of Patients With a Black Physician</th>
<th>Unadjusted Odds Ratio (95% CI)a</th>
<th>Millions of Patients With a Hispanic Physician, No. (%)</th>
<th>Unadjusted Odds Ratio (95% CI)b</th>
<th>Millions of Patients With an Asian Physician, No. (%)</th>
<th>Unadjusted Odds R (95% CI)c</th>
</tr>
</thead>
<tbody>
<tr>
<td>All patients</td>
<td>62.2 (100.0)</td>
<td>3.3 (100.0)</td>
<td>5.9 (100.0)</td>
<td>9.8 (100.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic whites</td>
<td>53.2 (86.8)</td>
<td>1.1 (34.7)</td>
<td>1 [Reference]</td>
<td>2.4 (41.5)</td>
<td>1 [Reference]</td>
<td>5.2 (53.7)</td>
<td>1 [Reference]</td>
</tr>
<tr>
<td>Minorities</td>
<td>9.0 (13.2)</td>
<td>2.2 (65.3)</td>
<td>12.0 (8.30-18.00)</td>
<td>3.5 (58.5)</td>
<td>8.20 (5.98-11.23)</td>
<td>4.6 (46.3)</td>
<td>5.40 (4.16-6.99)</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>4.1 (7.1)</td>
<td>1.9 (63.9)</td>
<td>23.24 (16.28-33.17)</td>
<td>0.5 (16.8)</td>
<td>2.65 (1.81-3.87)</td>
<td>1.0 (16.3)</td>
<td>2.56 (1.90-3.44)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>3.1 (5.5)</td>
<td>0.1 (5.3)</td>
<td>0.96 (0.49-1.88)</td>
<td>2.7 (52.6)</td>
<td>19.04 (13.47-26.93)</td>
<td>1.1 (17.7)</td>
<td>3.68 (2.62-5.18)</td>
</tr>
<tr>
<td>Asian</td>
<td>0.9 (1.7)</td>
<td>0.1 (5.1)</td>
<td>0.06 (1.15-8.17)</td>
<td>0.3 (9.0)</td>
<td>5.63 (2.67-11.86)</td>
<td>2.3 (31.2)</td>
<td>25.73 (16.92-39.13)</td>
</tr>
<tr>
<td>Other</td>
<td>0.9 (1.7)</td>
<td>0.1 (7.4)</td>
<td>4.60 (1.78-11.94)</td>
<td>0.02 (1.1)</td>
<td>0.61 (0.17-2.15)</td>
<td>0.2 (3.8)</td>
<td>2.25 (1.19-4.25)</td>
</tr>
</tbody>
</table>

**Odds of patients in a demographic group reporting a black physician relative to non-Hispanic white patients reporting a black physician.**

**Odds of patients in a demographic group reporting a Hispanic physician relative to non-Hispanic white patients reporting a Hispanic physician.**

**Odds of patients in a demographic group reporting an Asian physician relative to non-Hispanic white patients reporting an Asian physician.**

**Acquisition of data:** Marrast.

**Analysis and interpretation of data:** All authors.

**Drafting of the manuscript:** Marrast, Bor, McCormick.

**Critical revision of the manuscript for important intellectual content:** Marrast, Zallman, Woolhandler, McCormick.

**Statistical analysis:** Marrast, McCormick.

**Administrative, technical, and material support:** Zallman, Bor, McCormick.

**Study supervision:** Zallman, Woolhandler, Bor, McCormick.

**Conflict of Interest Disclosures:** None reported.

**Funding/Support:** This study was supported by grants T32 HP10251 and T32 HP12706 from the Health Resources and Services Administration and the Ryoichi Sasakawa Fellowship Fund (Dr Marrast) and by grant D34HP16868-03-03 from the Harvard Medical School Center of Excellence in Minority Health and Health Disparities, sponsored by Health Resources and Services Administration (Dr Zallman). No other disclosures were reported.

### Table 2. Health Status and Health Care Use of Patients Seen by White, Black, Hispanic, and Asian Physicians, Medical Expenditure Panel Survey, 2010

<table>
<thead>
<tr>
<th>Patient Characteristic</th>
<th>Millions of Patients With a White Physician</th>
<th>Millions of Patients With a Black Physician</th>
<th>P Value for Comparison Between Black and White Physicians</th>
<th>Millions of Patients With a Hispanic Physician, No. (%)</th>
<th>P Value for Comparison Between Hispanic and White Physicians</th>
<th>Millions of Patients With an Asian Physician, No. (%)</th>
<th>P Value for Comparison Between Asian and White Physicians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body mass index ≥30a</td>
<td>19.0 (31.6)</td>
<td>1.0 (44.2)</td>
<td>&lt;.001</td>
<td>2.0 (34.7)</td>
<td>.38</td>
<td>2.0 (26.0)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Smokes</td>
<td>9.0 (15.3)</td>
<td>0.5 (16.4)</td>
<td>.53</td>
<td>0.8 (13.7)</td>
<td>.003</td>
<td>1.3 (14.8)</td>
<td>.002</td>
</tr>
<tr>
<td>Reports limitationsb</td>
<td>19.0 (31.6)</td>
<td>1.2 (38.1)</td>
<td>.27</td>
<td>1.5 (25.2)</td>
<td>.004</td>
<td>2.9 (30.9)</td>
<td>.02</td>
</tr>
<tr>
<td>Fair or poor health</td>
<td>9.0 (14.8)</td>
<td>0.7 (21.3)</td>
<td>.05</td>
<td>1.1 (18.3)</td>
<td>&lt;.001</td>
<td>1.8 (18.0)</td>
<td>.04</td>
</tr>
<tr>
<td>≥2 Medical conditions reported</td>
<td>29.0 (46.4)</td>
<td>1.8 (53.3)</td>
<td>.43</td>
<td>2.5 (41.1)</td>
<td>.03</td>
<td>4.9 (49.8)</td>
<td>.15</td>
</tr>
<tr>
<td>Use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥2 Emergency department visits in past 12 mo</td>
<td>2.0 (3.7)</td>
<td>0.2 (7.1)</td>
<td>.03</td>
<td>0.1 (2.4)</td>
<td>.26</td>
<td>0.4 (4.4)</td>
<td>.72</td>
</tr>
<tr>
<td>≥2 Hospital discharges in past 12 mo</td>
<td>1.5 (2.4)</td>
<td>0.1 (4.2)</td>
<td>.21</td>
<td>0.1 (1.9)</td>
<td>.37</td>
<td>0.2 (1.8)</td>
<td>.29</td>
</tr>
</tbody>
</table>

**a** Calculated as weight in kilograms divided by height in meters squared.

**b** Describes limitations in physical activity, sensory functions, instrumental activities of daily living, or activities of daily living.
Role of the Sponsor: The Health Resources and Services Administration had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; and decision to submit the manuscript for publication.

Previous Presentations: This paper was presented at the New England Regional Society of General Internal Medicine (SGIM) meeting; March 8, 2013; New Haven, Connecticut and at the 34th annual SGIM national meeting; April 24, 2013; Denver, Colorado.

Additional Contributions: David U. Himmelstein, MD (City University of New York School of Public Health at Hunter College), helped conceive the study idea and assisted with data analysis. He did not receive financial compensation for the role he played in the project.


