Changes in Demographics of Patients Seen at Federally Qualified Health Centers, 2005-2014

Over the past decade, federal support for Federally Qualified Health Centers (FQHCs) has expanded under both the American Recovery and Reinvestment Act and the Affordable Care Act. The 2 expansions paralleled 2 demographic shifts in demand for FQHCs’ safety net health care and social services. The first such shift occurred with the loss of employer-sponsored insurance during the economic recession of 2008-2009; and the second with the expansion of health care coverage under the Affordable Care Act, including 6.5 million persons insured through Medicaid. Despite the increasingly important role of FQHCs in primary care in the United States, published analyses examining the trajectory of the FQHC network’s patients predate those expansions, lack population adjustments, or focus on a single demographic variable. We conducted a study to overcome these shortcomings by describing the changes in the demographics of patients seen by FQHCs over the past decade.

Methods | We retrospectively analyzed data on patients seen at FQHCs in all 50 US states from 2005 to 2014, using the Uniform Data System, a publicly available data set of health center operational information from the US Health Resources and Services Administration. We examined the demographic characteristics of FQHC patients including race, ethnicity, income as a percentage of the federal poverty line (FPL), insurance status, and state of residence. Because of changes in race reporting in the Uniform Data System, analyses of trends in race and ethnicity were limited to 2007-2014, and our health insurance analysis was limited to 2008-2014 because of changes in reporting practices by the US Census Bureau. The University of California–San Francisco Committee on Human Research approved this study.

Results | From 2005 to 2014, the proportion of Americans served at FQHCs increased from 5% to 7%, with more than 8.7 mil-

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**Figure 1. Trends in Percentage of US Population Served by a Federally Qualified Health Center (FQHC)**

(A) Insurance: Medicaid, Medicare, Private, Uninsured

(B) Income: <100% FPL, 100%-150% FPL, >150%-200% FPL, >200% FPL

(C) Age: ≤19 y, 20-44 y, 45-64 y, ≥65 y

(D) Race: White, Black, AI/AN, Asian American

All graphs trace trends in the percent of the US population served by an FQHC, defined by the number of FQHC patients in the 50 US states in the demographic group specified, divided by the number of total US residents in that same demographic group. Counts of FQHC patients were determined using the Uniform Data System from the Health Resources and Services administration (HRSA) and included all patients seen at HRSA grantees. Corresponding population data were gathered yearly from the US Census’s American Community Survey. All groups had significant differences in trends when analyzed using ordinary least squares regression with interaction between demographic group and year (P < .001). AI/AN indicates American Indian and Alaska native; FPL, federal poverty line.
lion additional Americans seeking care. Medicaid and uninsured populations were served at the highest rates (rate change from 2008 to 2014 for the Medicaid population, 13.5%-17.3% \( P < .001 \) for the regression; uninsured population, 14.7%-17.2% \( P = .001 \) for the regression), and the rate of FQHC use grew significantly faster than either Medicare or privately insured populations (rate change for the Medicare population, 3.0%-3.8% \( P < .001 \) for the regression; privately insured population, 1.2%-1.7% \( P < .001 \) for the regression) (Figure 1A).

In 2014, more than 1 in 4 persons living in poverty were seen by FQHCs compared with 0.6% of persons who had incomes greater than 200% of the FPL. The proportion of lower-income populations served by FQHCs grew significantly more rapidly over the study period than that of higher income groups (rate change from 2005 to 2014 for those at <100% FPL, 20.7%-25.3%; 100%-150% FPL, 6.0%-8.3%; >150%-200% FPL, 2.6%-3.7%; and >200% FPL, 0.5%-0.6% [for all, \( P < .001 \) for the regression]) (Figure 1B).

The rate of FQHC use was consistently highest in the youngest populations. The proportion of 0- to 19-year-olds seen by FQHCs grew at the fastest rate during the study period (from 6.3% to 9.2%; \( P < .001 \) for the regression; Figure 1C). There was also significant heterogeneity in the proportion of the population cared for at FQHCs by state (Figure 2).

A higher proportion of patients in minority racial groups, specifically black and American Indian populations, were seen by FQHCs and had service rates with significantly higher growth between 2007 and 2014 compared with the service rates for white or Asian American populations (rate of change for the white population, 3.5%-5.5%; black population, 9.5%-11.3%; American Indian and Alaska native population, 7.8%-10.0%; and Asian American population, 3.0%-4.4% [for all, \( P < .001 \) for the regression]) (Figure 1D). The proportion of Hispanic Americans served by FQHCs grew from 11.2% in 2007 to 13.4% in 2014, which was a significantly more rapid rate of growth than that of non-Hispanic Americans (4.1% to 5.7%; \( P < .001 \) for the regression).

Discussion | In contrast to previous work showing a largely stable demographic profile of patients seen at FQHCs in earlier periods,\(^2,3\) we found that the proportion of young, low-income, uninsured or Medicaid-insured, and racial and ethnic minority Americans served by FQHCs between 2005 and 2014 increased slightly more rapidly than that of other demographic groups. These underserved groups represent the core populations that FQHCs are meant to serve. In addition, more than 17% of Medicaid and uninsured patients in the United States received care at FQHCs in 2014, which emphasizes the importance of an FQHC partnership in health policy changes aimed at those populations.

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Author Contributions: Ms Nath had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis. Study concept and design: All authors. Acquisition, analysis, or interpretation of data: All authors. Drafting of the manuscript: Nath, Costigan. Critical revision of the manuscript for important intellectual content: All authors. Statistical analysis: Nath. Administrative, technical, or material support: All authors. Study supervision: Nath, Hsia.

Conflict of Interest Disclosures: None reported.


COMMENT & RESPONSE

Mechanical Circulatory Support and Rationale for Future Research

To the Editor We read with interest an article by Khera et al1 in a recent issue of JAMA Internal Medicine on the trends in use of percutaneous ventricular assist devices in the United States from 2007 to 2012, commented on by Deedwania and Acharya.2

We agree with Inohara et al that efforts are needed to clarify the role of intra-aortic balloon pump (IABP) therapy,3 and we are concerned that the use of IABPs is increasing, especially for nonacute indications, despite guidelines recommending their limited use.1 However, in our opinion, the suggestion by Khera et al on the need of well-conducted randomized clinical trials (RCTs) on this topic is not justified because of the small risk reduction that mechanical support devices other than IABP offer.4 In fact, only small RCTs4 (IABP vs Medical therapy vs percutaneous left ventricular assist devices [Impella; TandemHeart]), underpowered to detect significance, were conducted to evaluate the effect of assist devices in cardiogenic shock because of practical and ethical difficulties in randomizing very sick patients. This is true also for the IABP-SHOCK II trial,5 the largest RCT on this topic. As remarked by Perera et al6, the mortality rate observed in the control group was lower than predicted, so the IABP-SHOCK II trial had insufficient power to verify the effect of IABP on 30-day mortality. In addition, if we consider the 2 RCTs of IABP vs medical therapy (IABP SHOCK Trial2 and IABP-SHOCK II) that enrolled 638 patients, there was only a small relative risk reduction between IABP and the control group (-2.3%). Furthermore, the PROTECT II trial for high-risk percutaneous coronary interventions was stopped as the interim analysis showed too small a benefit of Impella device (NCT00562016).

Of note, the estimates of the benefits of support devices in cardiogenic shock in meta-analyses come mainly from observational studies, wherein investigator bias cannot be excluded. We urge that the emphasis should be on the choice of appropriate estimate of the effect (risk ratios instead of odds ratios, depending on the baseline incidence rate of the outcome) and on the clinical characteristics of patients to control for patient heterogeneity among different studies.

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Conflict of Interest Disclosures: None reported.


In Reply Romeo and colleagues note that randomized clinical trials (RCTs) to determine the clinical efficacy of mechanical circulatory support especially percutaneous ventricular assist devices (PVAD) are not justified owing to the challenges in conducting RCTs in critically ill patients and the small expected treatment benefit of mechanical circulatory support devices.

We disagree with that assertion. Several trials of interventions in critically ill patients have been successful in improving patient outcomes and have substantially changed clinical