Underrepresented Minority Dentists' Contribution to Health Equity
Elizabeth Mertz, PhD, MA, Aubri Kottek, MPH, and Cynthia Wides, MA, Paul Gates, DDS, MBA

Introduction
In the field of dentistry, Black, Hispanic/Latino (H/L), and American Indian/Alaska Native (AI/AN) dental practitioners have long been underrepresented minorities (URMs). Improving workforce diversity is a critical component of efforts to reduce disparities in access to care and health outcomes, and serves to promote social justice and equity, particularly for minority populations. In the United States (US), URMs experience large disparities in both access to dental care and in oral health status. Multiple programmatic approaches to this problem have existed for many years with limited success (eg, bridge, pipeline, and scholarship programs). Research estimating the broader impact of these programs and policies on improving diversity or on improving health care for minority communities is difficult to conduct, and rare to find. The purpose of this study was to examine URMs' contributions to health equity by examining URMs' size, distribution, and practice patterns in relation to community characteristics and patient mix.

Methods
This study analyzed a national sample survey of URMs from 2012 and several external data sources. The 2012 survey assessed personal characteristics, practice patterns, educational history, and professional opinions of URMs. Survey data were linked to a number of external data sources by URMs' county locations, including the American Community Survey (ACS), County Health Rankings & Roadmaps (CHR), and Area Health Resources Files (AHRF). All of these data sources were used to assess concentrations of URMs and populations both at the Census Division and county-levels, along with assessments of economic and social indicators stratified by counties in which known URMs are located versus counties where we do not believe URMs are located. Analysis included descriptive statistics and tests of statistical significance.

Findings
The URMs' workforce is disproportionately smaller and unevenly distributed in relation to minority populations in the US. To bring URMs to parity with the URMs population in the US today would require an additional 19,048 Black dentists, 31,214 H/L dentists, and 2,825 AI/AN dentists. URMs treat higher concentrations of minority patients compared to the composition of the surrounding communities. The reported patient population of each concordant URMs group is on average 2.6 times greater (range 1.0 to 7.8) in the URMs' practices than in their surrounding county populations. The gap between the number of URMs and the minority communities that seek care from them is consistently significant.

Conclusions and Policy Implications
1) URMs are located in counties with high URMs populations and within those counties they provide care for a disproportionately large share of URMs.
2) URMs locate in counties that are more racially diverse, have higher racial segregation and have higher income inequality.
3) Counties that are rural and have poorer populations continue to be underserved, reflecting limitations of the fee-for-service practice model.
4) A purposeful approach to workforce diversity invests in a longer, deeper, and sustained pipeline, and creates a more robust and equitable system of care. The lack of oral health parity, in the workforce, in coverage, and in access, severely limits progress on addressing disparities in oral health.
Counties where URM dentists are located are overall more racially diverse and relatively affluent, but also have greater economic and social inequality than counties where they are not present. To understand drivers of practice location choice, we examined factors reported to influence URM dentists' initial practice choice and their job satisfaction. URM dentists are intrinsically motivated to serve minority communities, but translating these motivations into actual practice requires opportunity and support which may not always be present, especially considering 84% of URM dentists reported working in a traditional practice setting in 2012.

**Conclusions**

This analysis indicates that an important factor in oral health access disparities is the gross under-representation of minority dental providers in the dentist workforce. Further, this research finds that, among URM dentists, stated preference to work in underserved communities is high, as is racial concordance with patient populations, and practice location in safety-net settings. Still, high-poverty counties remain underserved, even among URM providers. This indicates that protracted underserved areas are likely a function of the limitations of the private fee-for-service practice model itself. These macro trends reflect the inadequacy of current policy approaches to address workforce diversity and health equity in the dental field.

**Policy Implications**

Workforce diversity must be an essential component of a broader strategy to improve the dental delivery system and address dental care and social disparities in oral health. Decision makers in the dental field are acutely aware of these problems, but current programs and policies intended to address the issues are only slowing the rate of increasing inequality. Diversity programs must reach deeper and cast a wider net. The model of dental care delivery itself that must evolve with diversity as a core value, if these endemic and structural problems are to be successfully addressed. Improving oral health access and health status for minority populations is clearly a multifactorial and complex issue which requires efforts far beyond workforce diversity of a single profession; however, without oral health workforce parity, there will be limited ability to address systemic disparities in oral health.

**References**