

# Exploring Factors Influencing Dental Care Visits in HRSA-Funded Health Centers

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April 8, 2025

National Oral Health Conference

Orlando, Florida



# Oral Health Workforce Research Center

The mission of the Oral Health Workforce Research Center (OHWRC) is to provide accurate and policy-relevant research on the impact of the oral health workforce on oral health outcomes.

The research conducted by OHWRC informs strategies designed to increase access to oral health services for vulnerable populations.

OHWRC is based at the Center for Health Workforce Studies (CHWS) at the College of Integrated Health Sciences, University at Albany, State University of New York, and is the only federally-funded research center with a unique focus on the oral health workforce.

# Acknowledgements

The Oral Health Workforce Research Center (OHWRC) is supported by the Health Resources and Services Administration (HRSA) of the US Department of Health and Human Services (HHS) as part of an award totaling \$450,000 with 0% financed with nongovernmental sources. The content of this presentation are those of the authors and do not necessarily represent the official views of, nor an endorsement, by, HRSA, HHS, or the US government. For more information, please visit [HRSA.gov](https://www.hrsa.gov).

Other authors include Simona Surdu, MD, PhD and Jean Moore, FAAN, DrPH, whose significant time and effort on the project was invaluable.

# Background

- Access to dental care remains a significant challenge for vulnerable populations<sup>1,2</sup>
- Safety-net providers include a combination of publicly owned hospitals, non-profit health centers and clinics, and private practice physicians<sup>1,3,4</sup>
- Health Resources and Services Administration-funded health centers (HRSA-HCs) play a crucial role in addressing disparities by providing essential oral health services to underserved communities<sup>1,2</sup>
- However, some patients still seek dental care outside their usual HRSA-HCs,<sup>1</sup> indicating potential gaps in service delivery

# Objective

- This study aimed to evaluate the individual, health center, and state-level factors influencing patients' ability to receive dental care at their usual HRSA-HCs

# Methods: Data Sources

## HRSA-HCs Patient Data

- Health Center Patient Survey (HCPS) data (2022)
  - Patients from Section 330-funded health centers (102 HCs) in 33 states

## HRSA-HCs Data

- HRSA Uniform Data System, 2021

## State-Level Data

- Dental hygienists (DHs) with direct access, 2022
- Medicaid coverage of dental benefits for adults, 2022
- Medicaid fee-for-service reimbursement as a percentage of dentist charges for child and adult dental services, 2022

# Methods: Statistical Analyses

- **Subpopulation:** HRSA-HCs with any full-time equivalent (FTE) dentists providing oral health services to at least 1 patient
- **Outcome Variable:** Received dental care at their usual HRSA-HCs in the last year or not
  - “In the past 12 months, when you did see a dentist, how many of your visits were at the health center?”
    - Yes (All or some of the visits ) vs No (None of the visits)
- **Individual Sociodemographic Predisposing Factors:** Gender, age group, race/ethnicity, marital status
- **Enabling Factors:** Dental insurance, area of residence, poverty status
- **Needs-Related Factors:** Number of oral health symptoms and mouth problems
- **HC Factors:** Size, total patients, dentists and DHs FTE per 2,600 patients, revenue from federal grants
- **State-Level Factors:** DHs with direct access, Medicaid dental benefit for adults, Medicaid reimbursement for dental services

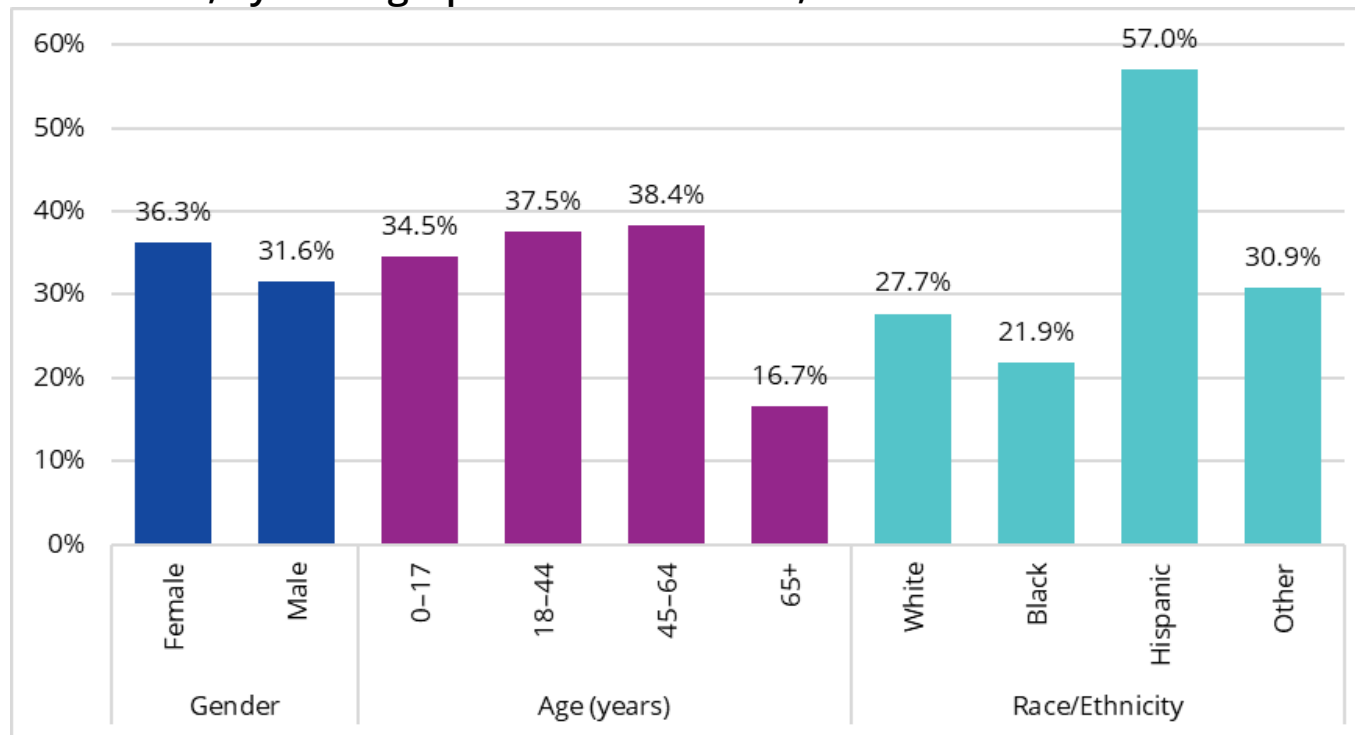
# Methods: Statistical Analyses (Con't)

- Descriptive statistics
- Multivariable logistic regressions model
  - Odds Ratios (OR), 95% Confidence Intervals (CI)
- All data analyses were conducted nationwide using complex survey method in Stata 17SE

# Adults More Likely to Receive Dental Care at Their Usual HRSA-HCs

- 14,469,508 patients (unweighted n=2,156) reported having dental visits in the last year
  - **34.4%** receiving dental care at their usual health centers and **65.6%** seeking dental care elsewhere

Proportion of Patients Who Reported Receiving Dental Care at Their Usual HRSA-HCs, by Demographic Characteristics, 2022



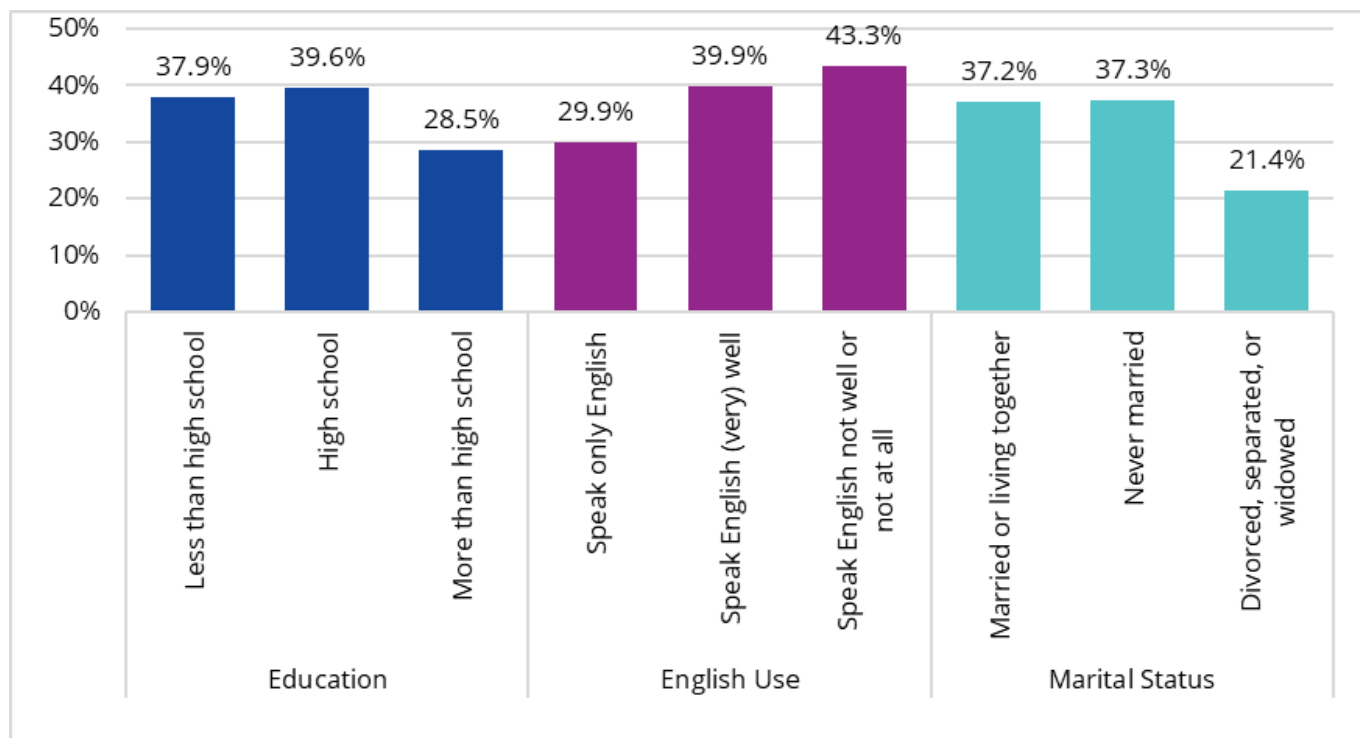
**Adult patients aged 18-64** were significantly more likely to receive dental care at their usual health center

Source: Health Center Patient Survey (HCPS) Data, 2022.

Notes: There was a statistically (borderline) significant difference between respondents who received needed dental care at their usual HRSA-HCs and those who did not by age ( $P=0.021$ ) and race/ethnicity ( $P=0.067$ ). No statistically significant difference was found in gender ( $P=0.316$ ).

# Non-Native Speakers More Likely to Receive Dental Care at Their Usual HRSA-HCs

Proportion of Patients Who Reported Receiving Dental Care at Their Usual HRSA-HCs, by Socioeconomic Factors, 2022



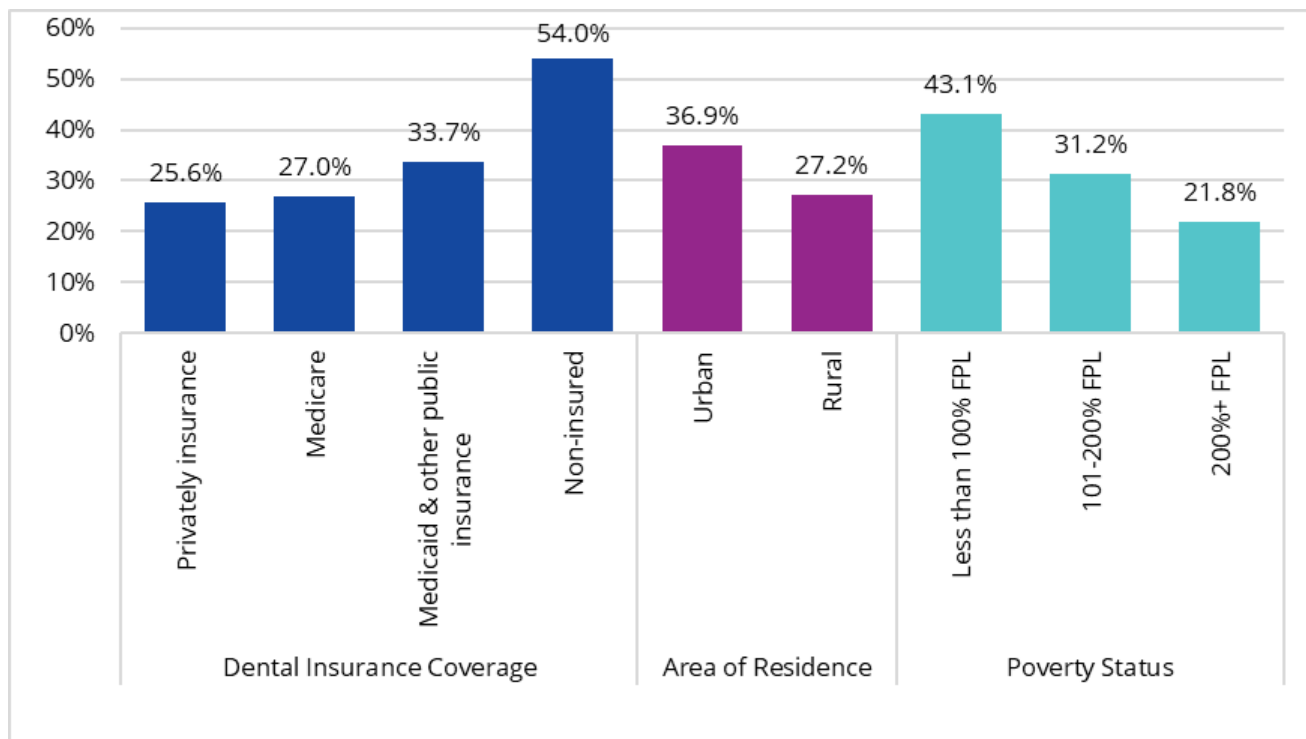
Patients that were **non-native speakers**, and either a **married/living together or never married marital status** were significantly more likely to receive dental care at their usual health center

Source: Health Center Patient Survey (HCPS) Data, 2022.

Notes: There was a statistically (borderline) significant difference between respondents who received needed dental care at their usual HRSA-HCs and those who did not by education ( $P=0.062$ ), English use ( $P=0.028$ ), and marital status ( $P=0.011$ ).

# Non-Insured More Likely to Receive Dental Care at Their Usual HRSA-HCs

Proportion of Patients Who Reported Receiving Dental Care at Their Usual HRSA-HCs, by Enabling Factors, 2022



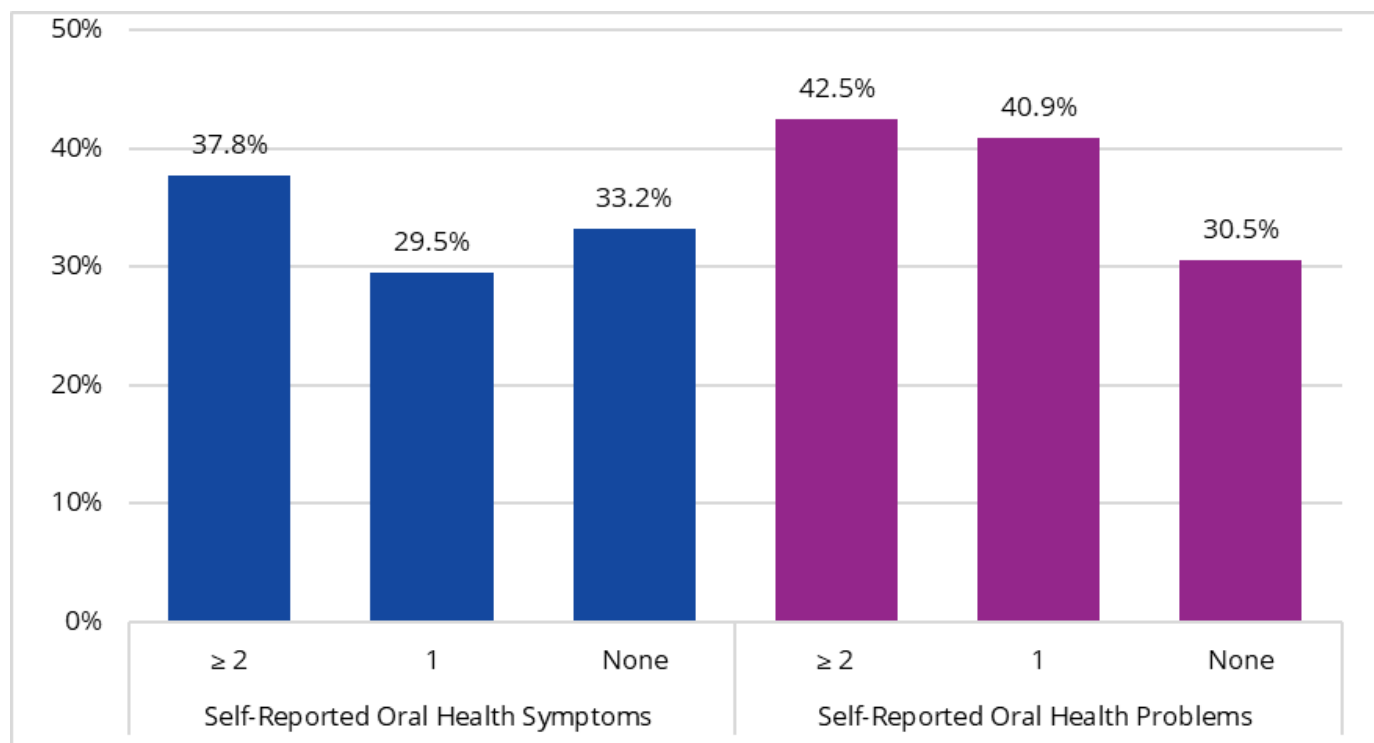
Patients who were **uninsured**, lived in **urban areas**, and had an **income less than 100% Federal Poverty Level (FPL)** were significantly more likely to receive dental care at their usual health center

Source: Health Center Patient Survey (HCPS) Data, 2022.

Notes: There was a statistically significant difference between respondents who received needed dental care at their usual HRSA-HCs and those who did not by dental insurance coverage ( $P=0.0005$ ), area of residence ( $P=0.002$ ), and poverty status ( $P=0.0004$ ).

# More Oral Health Problems More Likely to Receive Dental Care at Their Usual HRSA-HCs

Proportion of Patients Who Reported Receiving Dental Care at Their Usual HRSA-HCs, by Need Factors, 2022



Patients with **more self-reported oral health problems** were significantly more likely to receive dental care at their usual health center

Source: Health Center Patient Survey (HCPS) Data, 2022.

Notes: There was a statistically significant difference between respondents who received needed dental care at their usual HRSA-HCs and those who did not by the number of self-reported oral health problems (eg, toothache or sensitive teeth, stained or discolored teeth, broken or missing teeth) ( $P=0.002$ ). No statistically significant difference was found in the number of self-reported oral health symptoms (eg, bad breath, dry mouth, difficulty eating or chewing) ( $P=0.297$ ).

# Key Factors Related to Receiving Dental Care at Their Usual HRSA-HCs

Associations Between Receiving Dental Care at Usual HRSA-HCs and Patients, HRSA-HCs, and State Characteristics, 2022

Interest Variables	OR	95% CI		P Value
		Lower Limit	Upper Limit	
<b>Area of residence</b> (Reference level: Rural)				
Urban	2.42	1.24	4.72	0.009
<b>Poverty status</b> (Reference level: 200%+)				
Less than 100% FPL	3.34	1.68	6.64	0.001
101-200%	1.93	1.04	3.57	0.037
<b>Dentists and DHs FTE per 2,600 patients</b>	2.94	1.83	4.74	<0.001
<b>% capital development grants of total revenue</b>	1.28	0.99	1.65	0.059

There were **positive and (borderline) significant adjusted associations** between the patients receiving dental care at their usual health center and:

- Urban area of residence
- Income below 100% FPL
- HRSA-HCs with higher ratios of oral health providers per 2,600 patients
- HRSA-HCs with a greater proportion of total revenue that came from capital development grants

Sources: Health Center Patient Survey (HCPS) Data, 2022  
 Uniform Data System, 2021  
 American Dental Association (ADA), 2022  
 National Conference of State Legislatures, 2022

Note: Multivariable logistic regressions model (Odds Ratio [OR], 95% confidence interval [95% CI]).

# Conclusion and Implications

- An increase in the oral health workforce capacity can increase patients' utilization of dental care at their usual health centers
- Investing more federal funds to enhance infrastructure and workforce capacity of HRSA-HCs is essential for retaining patients at their usual health centers
- Targeted support is critical for improving services for low-income individuals who rely on their usual health centers for care
- Rural areas still face challenges, requiring policies to address provider shortages and resource gaps
- Future studies will explore where patients seek dental care when not visiting their usual health center and examine the factors that influence their decisions

# References

1. Pourat N, Chen X, Lee C, et al. HRSA-funded health centers are an important source of care and reduce unmet needs in primary care services. *Med Care*. 2019;57(12):996-1001. doi:10.1097/MLR.0000000000001206
2. Pourat N, Lu C, Chen X, et al. Trends in access to care among rural patients served at HRSA-funded health centers. *J Rural Health*. 2022;38(4):970-979. doi:10.1111/jrh.12626
3. Edelstein B. The dental safety net, its workforce, and policy recommendations for its enhancement. *J Public Health Dent*. 2010;70:S32-S39. doi:10.1111/j.1752-7325.2010.00176.x
4. National Institutes of Health. Oral health in America: Advances and challenges (executive summary). National Institute of Dental and Craniofacial Research. Accessed March 25, 2024. <https://www.nidcr.nih.gov/sites/default/files/2021-12/Oral-Health-in-America-Executive-Summary.pdf>

# Questions?

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