

# Trends in the Provision of Oral Health Services by FQHCs: Identification of Contributing Factors

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# Study Background

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- Access to oral health services in the safety net, especially FQHCs has expanded in recent years
- FQHCs required to provide all pediatric dental services mandated in the *Early and Periodic Screening, Diagnostic, and Treatment (EPSDT)* benefit and preventive dental care for adults either through direct or referral services
- Between 2001 and 2015, HRSA invested \$55 million in oral health expansion grants
- In 2016, HRSA provided an additional \$156 million for expansion of oral health infrastructure in FQHCs

# Objectives

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- Summarize trends in the direct provision of oral health services by FQHCs in recent years
- Analyze oral health service capacity in FQHCs and differences among health centers and across regions
- Determine factors that predict the likelihood of an FQHC providing direct general and/or specialty oral health services

# Methods

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- **FQHC-level data:**
  - Health Center Grantee Data in HRSA's Uniform Data System (UDS) from 2011 to 2014
    - Demographic and socioeconomic characteristics of patients
    - Full-time equivalent (FTE) by provider type
    - Type and amount of services provided
  - Data collected by the OHWRC through a survey of FQHCs
    - Number of dental operatories, 2014
- **State-level data:**
  - Medicaid coverage of dental benefits for adults, 2011-2014
  - Information on the scope-of-practice for dental hygienists (DHs) extracted from a study conducted by the OHWRC:
    - Numeric scale - DH Professional Practice Index (DHPPI), 2014

# Methods (con't)

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- Measurement of outcomes and predictors:
  - Provision of direct oral health services by FQHCs
    - Proportion of FQHCs delivering direct oral health services
  - Patients' access to oral health services at FQHCs
    - Proportion of patients with any dental visits among all patients
    - Proportion of patients with specific dental visits among all patients
  - Predictor factors
    - Staffing ratios—level of support per dentist FTE
    - Panel size—patients per provider FTE
    - Capacity—number of dental operatories per patient
    - Medicaid coverage of dental benefits for adults in the state
    - Expanded scope of practice for DHs—numerical scale (DHPPI)

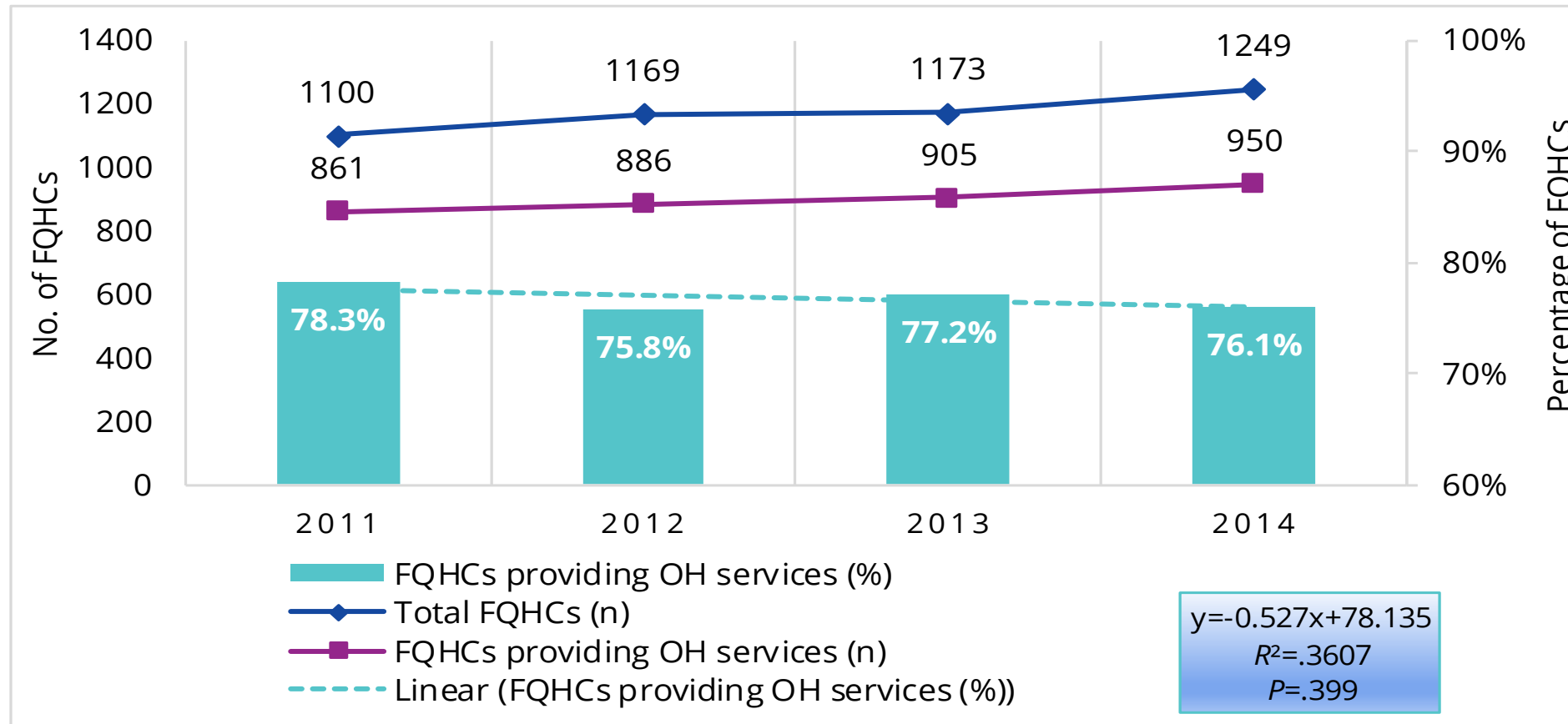
# Methods (con't)

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- **Statistical analyses, nationwide and by region:**
  - The temporal distribution of outcomes was analyzed by computing the % change between 2011 and 2014 and by estimating the trend slopes using simple linear regression
  - Generalized linear mixed models were used to estimate associations between the proportion of patients accessing any dental services and FQHC characteristics
  - Logistic regression models were used to estimate associations between FQHCs providing direct dental services and FQHC's revenue from federal grants & state-level characteristics
  - Analyses were conducted using SAS v9.4

# Proportion of FQHCs providing any direct oral health services nationwide

**Figure 1.** Four-Year Trend of All FQHCs and FQHCs Providing Direct Oral Health Services Nationwide, 2011-2014



# Proportion of FQHCs providing any direct oral health services by region

**Table 1.** Proportion of FQHCs Providing Direct Oral Health Services by Region and Nationwide, 2011-2014

Region	2011	2012	2013	2014	% Change 2014-2011	Annual % Change	P Value for Trend
Midwest	77.4%	71.3%	79.3%	78.6%	1.6%	1.2%	.583
Northeast	78.0%	77.6%	83.4%	83.2%	6.6%	2.1%	.132
South	80.9%	76.5%	70.0%	68.9%	<b>-14.8%</b>	<b>-4.3%</b>	<b>.030</b>
West	75.7%	76.9%	80.6%	78.5%	3.7%	1.2%	.269
Nationwide	78.3%	75.8%	77.2%	76.1%	-2.8%	-0.5%	.399



# Proportion of patients receiving direct oral health services in FQHCs among all patients

**Table 2.** Proportion of Patients Who Received Direct Oral Health Service at FQHCs by Region and Nationwide, 2011-2014

Region	2011	2012	2013	2014	% Change 2014-2011	Annual % Change	P Value for Trend
Midwest	25.5%	27.0%	33.3%	32.6%	27.5%	2.7%	.094
Northeast	23.0%	26.4%	28.6%	28.4%	23.5%	1.8%	.084
South	25.9%	25.7%	20.4%	20.5%	-21.1%	-2.2%	.097
West	24.8%	25.0%	24.6%	25.4%	2.7%	0.2%	.433
Nationwide	25.0%	25.9%	25.8%	25.9%	3.6%	0.3%	.200

# Proportion of patients receiving specific oral health services in FQHCs among all patients

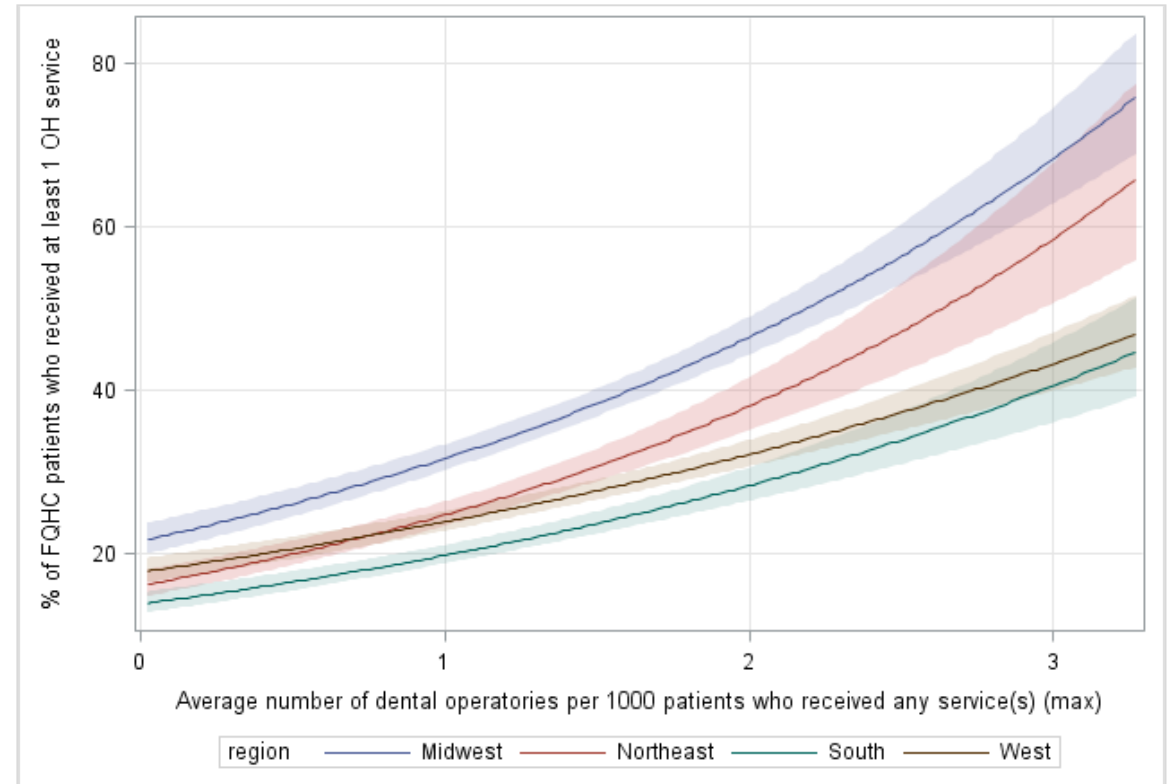
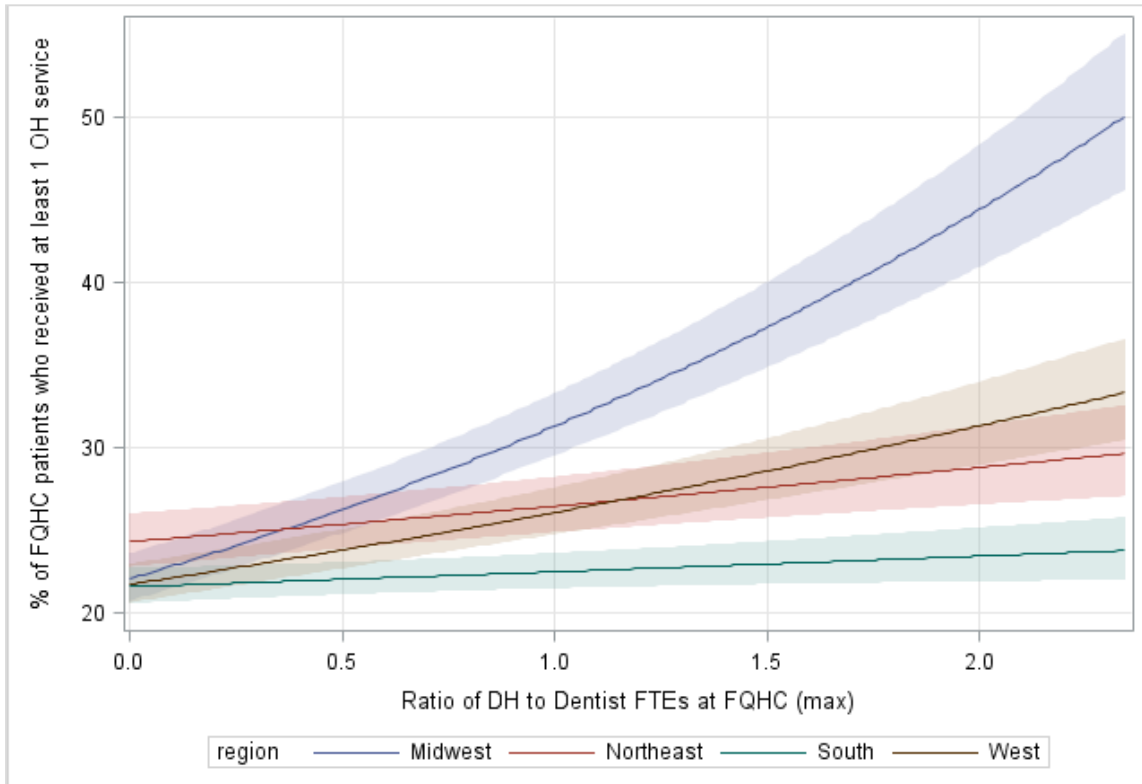
**Table 3.** Proportion of Patients Who Received Direct Oral Health Service at FQHCs by Category of Service Nationwide, 2012-2014

Service Category	2012	2013	2014	% Change 2014-2012
Oral exams	20.3%	20.8%	20.9%	3.0%
Prophylaxis (adult or child)	12.1%	12.5%	12.5%	3.3%
Fluoride treatment (adult or child)	7.5%	5.9%	7.3%	-2.7%
Restorative services	8.0%	7.9%	7.9%	-1.3%
Oral surgery (extractions and other surgical procedures)	5.4%	5.3%	5.0%	-7.4%
Rehabilitation services (endo, perio, prosthodontics, orthodontics)	3.3%	3.3%	3.4%	3.0%
Emergency services	1.5%	1.4%	1.3%	-11.6%

endo, endodontics; ortho, orthodontics; perio, periodontics; prosthodontics, prosthodontics.

# Linear Regression Predictions of Patients Accessing Direct Oral Health Services at FQHCs by Region

**Figure 2.** Linear Regression Predictions for the Association Between Proportion of Patients Accessing Direct Oral Health Services and FQHC's Staffing Ratios & Capacity by Region, 2011-2014



# Impact of state characteristics on patients' access to oral services

**Table 4.** Association Between FQHCs Provision of Direct Oral Health Care and State Characteristics Nationwide, 2011-2014

State Characteristics	Odds Ratio	95% Confidence Interval		P Value
		Lower Limit	Upper Limit	
FQHC's Revenue From Federal Grants (\$100,000 unit)				
ACA Capital Development Grants	1.01	1.00	1.02	0.049
Medicaid coverage of dental benefits for adults, 2011-2014				
Emergency only versus none	1.70	1.24	2.32	<0.001
Limited versus none	1.40	1.02	1.92	0.036
Extensive versus none	1.72	1.25	2.38	0.001
Extensive versus limited	1.23	1.03	1.47	0.025
Dental Hygiene Professional Practice Index (DHPPI, 10-point unit), 2014	1.07	1.01	1.13	0.018

# Summary

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- Proportion of FQHCs providing oral health care in 2011-2014
  - Increased in the Midwest, Northeast, & West
  - In contrast, there was a decline in the South
- Proportion of FQHC patients receiving dental care in 2011-2014
  - Increased for preventive oral health services
  - Decreased for oral surgery and emergency dental care
- Proportion of FQHC patients accessing any dental services was positively and significantly associated with:
  - Oral health staffing (DHs to dentist ratio)
  - Capacity (number of dental operatories)
- The likelihood of FQHCs providing direct dental care to patients was positively and significantly associated with:
  - Funding from ACA Capital Development Grants
  - State coverage of dental benefits for Medicaid-eligible adults
  - Dental hygiene scope of practice in a state

# Conclusions

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- FQHC patients in the Midwest, the Northeast, and the West are increasingly accessing oral health services; in contrast, there was a noticeable decline in the South
- The analyses suggest promising impacts of recent federal funding initiatives to increase the infrastructure and workforce capacity of FQHCs to provide oral health care
- The results suggest the need for policymakers and FQHCs to consider strategies & local workforce solutions that increase access to oral health services for underserved populations
- It will be important to continue to track changes in the dental service delivery to understand the effect of recent investments by the federal government in oral health grants

# Thank You

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## Questions?

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