

Trends in the Provision of Oral Health Services By Federally Qualified Health Centers

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ABSTRACT

Purpose: The objective of this study was to evaluate trends in oral health service capacity in Federally Qualified Health Centers (FQHCs) and the factors influencing provision of general and/or specialty oral health services to patients.

Methods: This 2017 study is based on Health Center Grantee Data in the Uniform Data System, 2011-2014 as well as primary data from a survey of FQHCs conducted in 2016 and state-level data. Multivariable regression models were used to estimate associations between provision of dental services at FQHCs and predictive factors nationwide and by region.

Results: Between 2011 and 2014, the proportion of FQHCs providing dental services increased in the Midwest, Northeast, and West (+1.6% to +6.6% change), yet there was a noticeable decline in the South (-14.8% change). The proportion of FQHC patients accessing any dental services was positively and significantly associated with oral health staffing ratios in FQHCs in all regions (Rate Ratio=1.04-1.42; $P<.05$). Dental hygiene scope of practice (DHSOP) in a state and the funding from Affordable Care Act Capital Development Grants were positively and significantly associated with the likelihood of FQHCs providing dental care to patients (7% increase for every 10-point increase in the DHSOP index and 1.1% increase for every \$100,000 increase in revenue from grants, respectively; $P<.05$). The findings indicated that FQHCs were more likely to offer dental services in states with an extensive Medicaid dental benefit compared to those with a limited dental benefit [Odds Ratio (OR)=1.72; $P=.001$].

Discussion: The study findings show that FQHC patients are increasingly accessing oral health services in all regions except for the South where there was an overall decline. The results suggest positive associations between state workforce policies, Medicaid dental benefit for adults, and federal funding initiatives and provision of oral health services by FQHCs.

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BACKGROUND

- Access to oral health care in the safety net, especially Federally Qualified Health Centers (FQHCs) has expanded in recent years
- FQHCs are required to provide all pediatric dental services mandated in the Early and Periodic Screening, Diagnostic, & 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
- The objectives of this study were to:
 - Evaluate trends in the direct provision of oral health services by FQHCs in recent years
 - Analyze oral health service capacity in FQHCs and differences across geographic regions
 - Assess potential factors that influence FQHCs decisions to provide direct oral health services

METHODS

Data Sources:

- FQHC-level data
 - Health Center Grantee Data in HRSA's Uniform Data System (UDS), 2011-14
 - Data collected by OHWRC through a survey of FQHCs
- State-level data
 - Medicaid coverage of dental benefits for adults
 - Information on the scope of practice (SOP) for dental hygienists (DHs) from a study conducted by the OHWRC

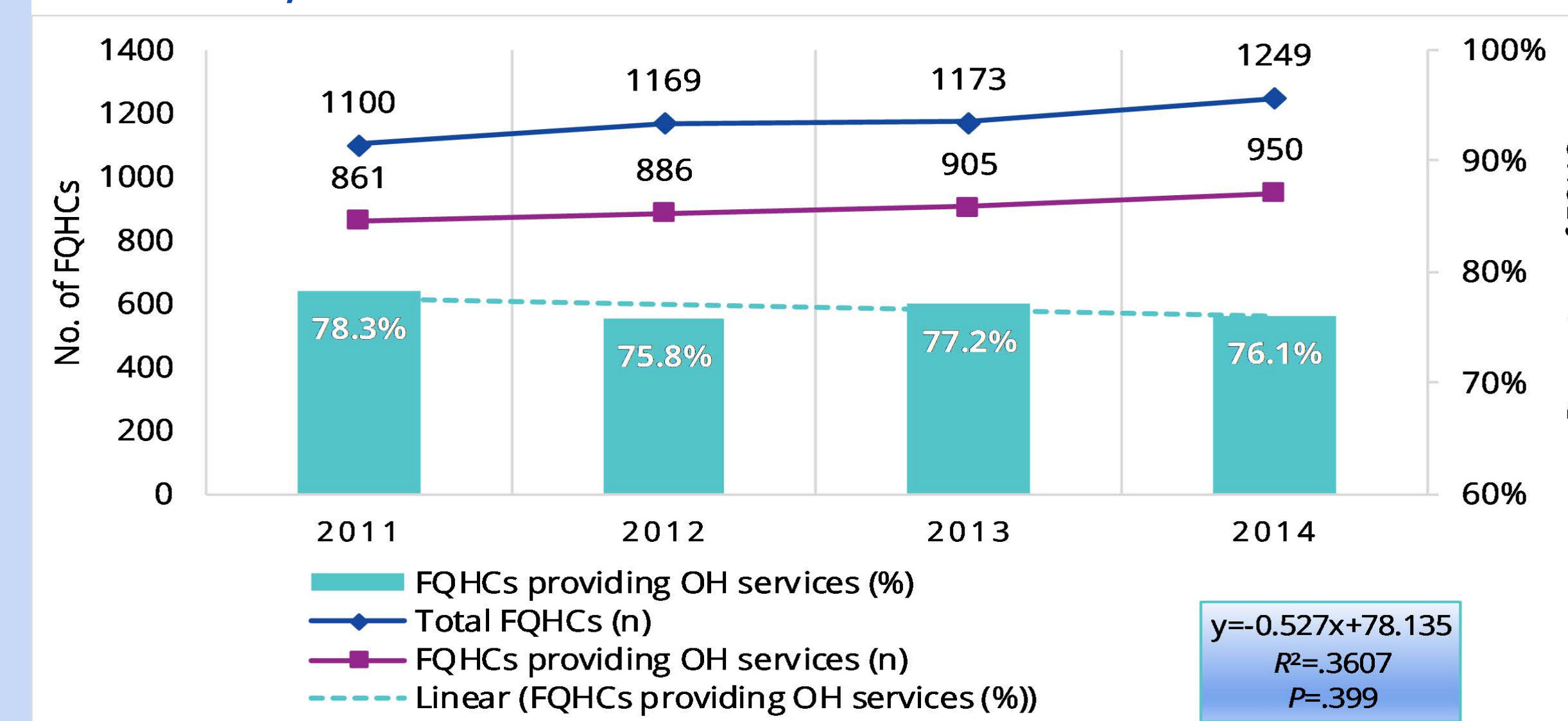
Data Analysis:

- Outcome Measures
 - Proportion of FQHCs delivering direct oral health care
 - Proportion of patients with any dental visits
- Predictor Factors Measures
 - Staffing ratios—level of support per dentist
 - Capacity—no. of dental operatories per 1,000 patients
 - State Medicaid coverage of dental benefits for adults
 - Scope of practice for dental hygienists—numerical scale
- Statistical Analyses
 - Temporal distribution of outcomes was analyzed by computing % change between 2011 & 2014 and by estimating the trends using simple linear regression
 - Generalized linear mixed models were used to estimate associations between the proportion of patients accessing dental services and FQHC characteristics
 - Logistic regression models were used to estimate associations between FQHCs providing direct dental services and FQHC as well as state-level characteristics
 - All analyses were conducted using SAS v9.4

RESULTS

- Nationwide, the total no. of FQHCs as well as the no. of FQHCs providing direct OH services increased from 2011 to 2014.
- However, the proportion of FQHCs providing direct oral health services slightly decreased from 861 (78.3%) in 2011 to 950 (76.1%) in 2014. This finding appears to be a regional issue.

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



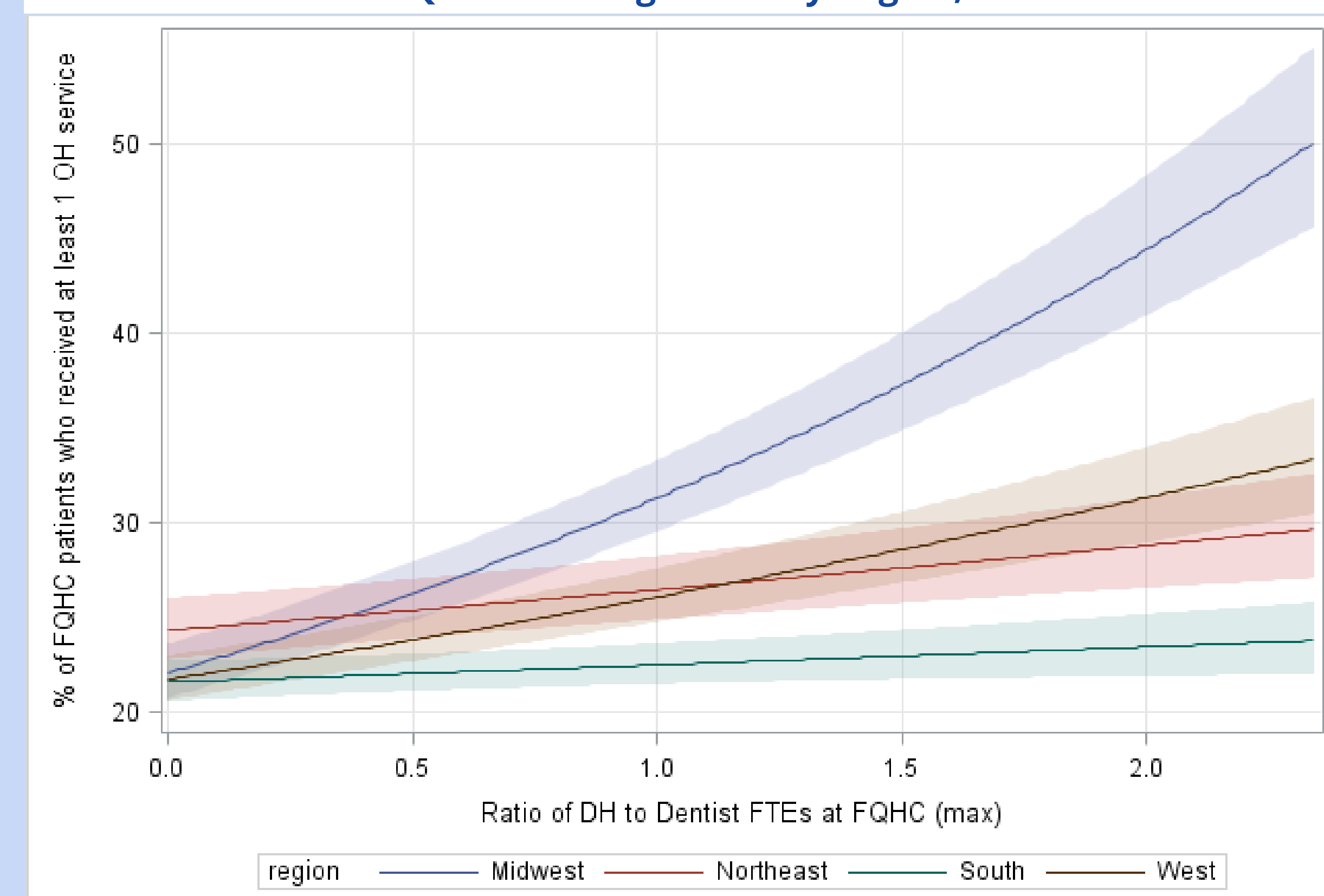
- The proportion of FQHCs providing direct oral health services increased in the Midwest, Northeast, and West regions from 2011 to 2014.
- In contrast, the proportion of FQHCs providing direct oral health services in the South region decreased significantly from 80.9% in 2011 to 68.9% in 2014 (-14.8% change).

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 for Trend
Midwest	77.4%	71.3%	79.3%	78.6%	1.6%	1.2%	0.583
Northeast	78.0%	77.6%	83.4%	83.2%	6.6%	2.1%	0.132
South	80.9%	76.5%	70.0%	68.9%	-14.8%	-4.3%	0.030
West	75.7%	76.9%	80.6%	78.5%	3.7%	1.2%	0.269
Nationwide	78.3%	75.8%	77.2%	76.1%	-2.8%	-0.5%	0.399

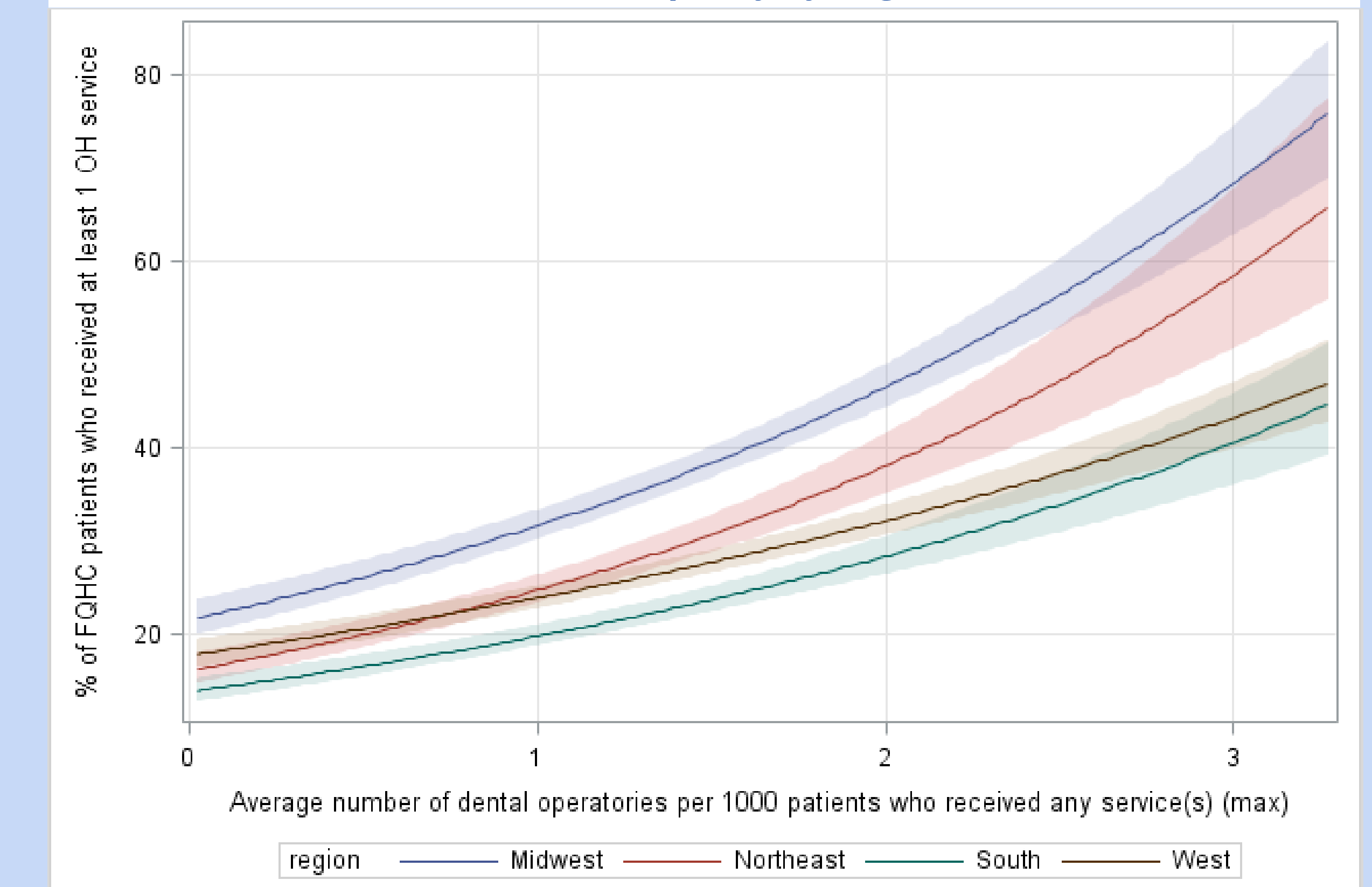
- The proportion of FQHC patients accessing dental services was positively and significantly associated with the ratio of DHs to dentist and the no. of dental operatories at FQHCs in all regions, particularly in the Midwest.

Figure 2. Association Between Proportion of Patients Accessing Direct Oral Health Services and FQHC's Staffing Ratios by Region, 2011-2014



RESULTS (cont.)

Figure 3. Association Between Proportion of Patients Accessing Direct Oral Health Services and FQHC's Capacity by Region, 2011-2014



There was a positive and significant association between the provision of direct oral health services by FQHCs and:

- Funding from Federal Development Grants
- Scope of practice for dental hygienists in a state
- State Medicaid dental benefit for adults, particularly in states with an extensive dental benefit compared with states without a dental benefit

Table 2. Association Between FQHCs Provision of Direct Oral Health Care and FQHCs Revenue & State Characteristics Nationwide, 2011-2014

FQHC & State Characteristics	Odds Ratio	95% Confidence Interval		P
		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
Scope-of-Practice for Dental Hygienists				
Dental Hygiene Professional Practice Index (DHPPI, 10-point unit)	1.07	1.01	1.13	0.018
Medicaid coverage of dental benefits for adults				
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

DISCUSSION

- FQHC patients are increasingly accessing oral health services in all regions except for the South where there was a noticeable decline from 2011 to 2014
- The study results indicate that the access to oral health services at FQHCs is associated with oral health workforce capacity at FQHCs, state coverage of dental benefits for Medicaid-enrolled adults, and DH SOP in the state
- The study analyses also suggest promising impacts of recent federal funding initiatives to increase the infrastructure and workforce capacity at FQHCs

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