Published in final edited form as:

Fam Community Health. 2018 ; 41(2): 83–94. doi:10.1097/FCH.0000000000000181.

There and Back Again: How the Repeal of ACA Can Impact Community Health Centers and the Populations They Serve

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Abstract

We examined the impact of Medicaid expansion on rates of the remaining uninsured at the FQHC-level by race/ethnicity, limited English proficiency, and poverty status of their patients. Results indicated a systematic disadvantage in non-expansion states for FQHCs with high concentrations of these populations and an advantage in expansion states for FQHCs with fewer limited English proficiency patients. Our findings highlight the importance of maintaining the Affordable Care Act in reducing disparities in coverage and the importance of federal funding to continue services for the remaining uninsured and vulnerable populations in both expansion and non-expansion states.

Keywords

Health Disparities; Access to Care; Health Reform; Safety-Net Systems

Introduction

Federally Qualified Health Centers (FQHCs) are required to provide care regardless of ability to pay and are thus the premier providers of primary care within the safety net. Consequently, the great majority of patients receiving care in FQHCs are the uninsured, those with inadequate insurance coverage, and those with Medicaid coverage.¹ The latter group seek care at FQHCs for multiple reasons including lower participation of private providers in Medicaid, contractual agreements between Medicaid Managed care organizations and FQHCs, their concentration in medically underserved areas, and the availability of culturally and linguistically competent care in community health centers in general.²⁻³ FQHCs receive Section 330 grants to support the delivery of care to the uninsured who are unable to pay in full for services they receive. But the capacity of FQHCs to provide care for uninsured and underinsured populations is also dependent on adequate numbers of insured patients to guarantee sustainability and financial solvency of these organizations.

The Affordable Care Act (ACA) led to unprecedented gains in coverage in two ways: (1) by expanding eligibility for Medicaid to income eligible childless adults in states electing to implement the expansion and (2) by providing subsidies to individuals without workplace insurance whose incomes are too high for Medicaid but below 400% of the federal poverty guideline through federal and state exchange marketplaces established under the law. The potential impact of the ACA on FQHCs prior to its passage was unknown. Some anticipated an exodus of the newly insured patients from FQHCs to private providers since the newly insured would suddenly have a broader set of options.⁴ There was also concern that once the supplemental FQHC funding by the ACA ended (described as a “fiscal cliff”) that these organizations would face difficulties in serving all their patients).⁵⁻⁶

Between the passage of the ACA in 2010 and the first quarter of 2016, national gains in insurance coverage directly attributable to the law, were estimated to have surpassed 20 million adults.⁷ The gains in coverage were highest among individuals who matched the demographic and income profile of FQHC patients. Yet, an estimated 24 million remained uninsured, one-third of them with incomes below the Medicaid-eligibility threshold who lived in states that refused to expand Medicaid.⁸ Individuals remained uninsured because they were not able to find an affordable plan, lack of knowledge about the availability of benefits, needing assistance with navigating enrollment, and not being eligible due to immigrant legal status.⁹

A study of change in coverage in FQHCs in two Medicaid expansion and two non-expansion states revealed the greatest gains in the former group and contradicted the predictions of an exodus of newly insured patients from these organizations.¹⁰ Interviews with selected FQHCs in expansion states also indicated growth in infrastructure and workforce in response to increased demand from newly insured populations despite multiple challenges.¹⁰

The 2016 election of a Republican president who promised to “repeal and replace” the ACA has moved health care financing back to the top of the federal policy agenda. An early Congressional proposal to cut the subsidies to purchase coverage and per-capita caps on

federal payments to states for Medicaid was anticipated to lead to 14 million newly uninsured persons within two years and 21 million within four years.¹¹ The passage of the House-Republican version of the repeal legislation signaled that key aspects of the ACA are vulnerable, including income-based subsidies, Medicaid expansion, National Health Service Corps and supplemental FQHC funding, each of which impact FQHCs. These ACA provisions are particularly responsible for increased coverage among the lowest-income populations and the FQHC capacity to serve them.

With the threat of future legislative or regulatory action, and despite any gains in coverage by 2016, the sustainability of FQHCs and their ability to serve the remaining uninsured populations remains a highly salient issue. FQHC efforts to fulfill their mission and serve the remaining uninsured is hampered by the ineligibility of a significant proportion of the population for Medicaid or subsidized coverage under the federal and state exchanges. Significant proportions of FQHC patients with low incomes and limited English proficiency (LEP) likely face significant barriers in obtaining needed care. LEP populations are primarily immigrants who are likely to face challenges in successfully navigating the health care system, even from providers who are as linguistically and culturally competent as FQHCs.¹²⁻¹⁴ Similarly, low-income patients have fewer resources to pay for high deductibles and other cost sharing requirements that prevent them from seeking services from private providers. Also, populations of color have higher rates of remaining uninsured and are thus more likely to turn to FQHCs for low-cost care.¹⁵⁻¹⁶ Few providers other than FQHCs are willing or prepared to provide the comprehensive and critical array of primary care and social services that can address such needs on a sliding scale fee-basis. Any regulatory action leading to an erosion of federal subsidies is likely to further threaten the sustainability of FQHCs because the numbers of uninsured rise as subsidies fall.

We aimed to first confirm that the ACA led to a marked reduction in the size of the uninsured populations in FQHCs in Medicaid expansion states and had a much smaller impact on the size of the uninsured in non-expansion states. We then aimed to examine whether Medicaid expansion also led to changes in mix of vulnerable uninsured patients in FQHCs in 2015, including limited English proficient (LEP) patients, low-income patients, and people of color. We hypothesized that within Medicaid expansion states, FQHCs with a higher concentration of vulnerable populations would continue to have a high rate of uninsured, but those with a lower concentration of vulnerable populations would serve fewer uninsured patients. We expected that non-expansion states would see less of a similar effect. Our analyses can be used to identify policy solutions to increasing the sustainability of FQHCs as the primary providers of care to uninsured and low income populations.

Methods

Data

We used data from publicly available Uniform Data System (UDS) reports for 2012 and 2015.¹⁷ As grantees of federal funding under Section 330, FQHCs are required to submit UDS reports to the Health Resources and Services Administration (HRSA) on an annual basis for the calendar year. The health centers included in these reports were those with active, permanent, seasonal, and mobile service delivery sites. FQHCs can be Community

Health Centers, Migrant Health Centers, Health Care for the Homeless, and/or Health Centers for Residents of Public Housing, all of which were included in our analysis. Publically available UDS reports provide information on FQHCs' characteristics such as patient mix and non-patient revenue.

We merged the 2012 and 2015 data using the available FQHCs information including name and city in which the headquarters was located. We included all 989 FQHCs with complete reports in both years and excluded the other 161. Comparing all the available characteristics of the two groups showed that the missing FQHCs were less likely to be in rural areas and had higher populations of African American patients and those with Medicaid coverage than the FQHCs included in the sample. The excluded group were also less likely to have patients who were white or were ages 65 and older than the sample.

Variables of Interest

Our outcome of interest was the rate of uninsured patients (numerator) to total patients served at FQHCs in 2015 (denominator). The primary independent variable of interest was location in a Medicaid expansion state (vs. non-expansion state). Medicaid expansion status was assigned based on state law as of February 1, 2015.¹⁸ Alaska did not adopt Medicaid expansion until September 2015 and was included as a non-expansion state. Pennsylvania and Indiana adopted Medicaid in early 2015 (January 1 and February 1, respectively) and were categorized as expansion states as most of their data for 2015 would be impacted by this change.

Additional primary variables of interest were the proportion of each FQHC's patients who were limited English proficient (LEP); the proportion of patients who were Latino and other non-Latino groups including African American, Asian American (including Pacific Islander and Hawaiian), or other/multiple race (American Indian/Alaska native, more than one race, and did not identify); and the proportion low-income in 2012. Due to a high correlation (0.77) between percentage of patients who were Latino and percentage who were LEP, we created a combined variable for the proportion of LEP and Latino patients in the same FQHC. We first created a dichotomous variable to distinguish FQHCs with low (10% or lower) rates of Latino patients vs. those with higher rates. We then created a dichotomous variable to distinguish FQHCs with low (10% or lower) rates of LEP patients vs. those with higher rates. Finally, we created a variable identifying FQHCs with low rates of both LEP and Latino patients, low rates of LEP but higher rates of Latino patients, higher rate of LEP but low rates of Latino patients, and higher rates in both groups (reference). This variable allowed us to distinguish the impact of proportion of patients who were Latino from the proportion with LEP status. LEP was our proxy for being an immigrant, more likely to have limited navigation skills, and more likely to have communications difficulties. An unknown subset of LEP patients would be unauthorized immigrants. Alternatively, Latino and other racial/ethnic categories reflect other demographic and socioeconomic factors that are separate from LEP status.

We also created variables for 10% or less of clinic patients who were African American, Asian American, or other race to assess the impact of the ACA on these groups. We distinguished FQHCs with low (10% or lower) rates of low-income patients defined as those

at or below the 150% federal poverty level (FPL) vs. those with higher rates. We used the 150% cut-off rather than 100%, which was the only other available cut-off in UDS, since it is closer to the Medicaid eligibility criteria under the ACA. This variable identifies the impact of ACA on both poor and many of the near poor patients seen by FQHCs.

We accounted for potential confounding factors that could impact the rate of insurance coverage in 2015. We classified FQHCs with low (10% or lower) rates of Medicaid patients vs. those with higher rates. We controlled for FQHC size as a measure of organizational capacity for care delivery. Size was measured by two variables: the total number of clinic sites for an FQHC (1-2 as reference group vs. 3-8, or more than 8) and a continuous variable of total number of patients seen in 2012. Both variables indicate better staffing and incentives to find insurance coverage for uninsured patients.

Confounding variables also included the age (percentage under age 20, ages 20-64 (reference group) and age 65 and over) and gender (percentage female) distribution of patients. These variables controlled for care seeking patterns by patients and variations in need and insurance eligibility that vary by age or gender.

We controlled for the confounding impact of differences among FQHCs in financial resources by including measures of type and size of revenues. We included total revenue per capita from non-patient or third-party insurance sources such as federal and non-federal grants and donations. We included an indicator of federal funding for special populations by indicating receipt of funds for the homeless, migrants, or being a public housing center vs. FQHCs that only receive funding as a community health center. These factors may confound the impact of Medicaid expansion on the independent variables of interest because populations such as migrants, those living in public housing or the homeless have disproportionate barriers to obtaining coverage and the homeless would have a significantly higher level of need for care. We also controlled for rural status as a measure of availability of other providers in the area and variations in population characteristics.

Analyses

We used generalized regression models with logit link function and binomial distribution to model rate of uninsured in the FQHC as the dependent variable, which was bound between 0% and 100%. We adjusted the standard errors for clustering of clinics within states and reduced bias in our results. We assessed multicollinearity and found none among the variables selected for the final model. We constructed models with interactions to identify variations in rates of uninsured among vulnerable populations by Medicaid expansion status. We included interaction terms between Medicaid expansion status and the indicator for low rate of poverty as well as the combined indicator for LEP and Latino status. In a separate model, we included only the race/ethnicity indicators to assess the likely relationship between the remaining race/ethnic categories (i.e. white, African American, and Asian American) and the rate of uninsured in 2015. We also created a third model including only LEP status and excluding race/ethnicity status as sensitivity analyses to our primary model that included the interaction of LEP and Latino status.

We used the margins command in STATA¹⁹ to generate the adjusted rate of uninsured in 2015 controlling for all confounding factors for ease of interpretation, to measure the difference in rates between Medicaid expansion and non-expansion states by income, LEP, and race/ethnicity status, and to test the significance of these differences.

Our analyses have limitations. UDS data are reported at the grantee organization level and therefore mask variations experienced by individual sites. We found about 13 FQHCs that had sites in more than one state but due to discrepancies in address information in UDS we did not include such data. The capacity of FQHCs in collecting accurate race/ethnicity, income, and English proficiency also varies and some error in this data is expected. The LEP variable is also constructed from FQHCs' assessment of patients best served in a language other than English, which is most likely to reflect English proficiency in medical settings and a more stringent measure of proficiency.²⁰

Also, the public use UDS data used for this study lacked detailed information on finances such that we could not determine the financial health of clinics. We assume that lower proportions of uninsured patients in general results in a more stable financial status,²¹ even though some clinics with few uninsured patients may also have financial difficulties for reasons such as poor billing practices. Lack of data on authorization status of uninsured and LEP populations is also a limitation and did not allow us to isolate the impact of either factor from authorization status. Our choice of the cutoff of 10% or less for FPL, LEP, and race/ethnicity may mask some of the variation in distribution of each variable. But, we chose to conceptually identify low volume of each type of patient consistently as less than a tenth.

Despite its limitations, UDS is the most complete and reliable information available at the national level from these safety net providers and the data have been used extensively for studies of financial viability or other health care delivery by FQHCs.^{8, 22-26}

Results

Table 1 presents the patient and organizational characteristics for the FQHCs as a whole and by Medicaid expansion status. Overall, 27% of patients in all FQHCs were uninsured in 2015 on average (ranging from 1% to 99.95%), but the rate was much higher in non-expansion states (38%) vs. expansion states (19%). Most (59%) of FQHCs were in expansion states. In 2012, 62% of patients served at FQHCs on average were at or below 150% of FPL and 16% on average were best served in a language other than English. The patient population was 45% white, 25% Latino, 19% African American, 3% Asian American, and 8% who identified as American Indian, Alaska Native, more than one race, or did not identify a race or ethnicity. The makeup of patients was similar between FQHCs in Medicaid expansion states and those in non-expansion states, with some slight differences. FQHCs in expansion states had 19% LEP and 27% Latino patients on average, while those in non-expansion states had 13% and 20% respectively. FQHCs in non-expansion states had a higher rate of African American patients (24%) than those in expansion states (16%). Patient demographics such as gender and age did not differ by location in expansion or non-expansion state. But insurance coverage differed with a higher

proportion of patients with Medicaid coverage in expansion (38% vs. 27%) than non-expansion states.

About half of FQHCs in the sample were midsize with 2-8 clinic sites (47%) but more FQHCs in expansion states were larger as determined by having more than 8 clinic sites (31%) and larger patient populations (20,978) than those in non-expansion states (25% and 13,753, respectively). The average per capita revenue from non-patient insurance sources was \$350 in expansion and \$412 in non-expansion states. Variation in homeless center status by expansion state was observed but other funding sources did not vary. Fewer FQHCs in expansion states were rural (40%) compared to non-expansion states (60%).

The main regression results with the combined LEP and Latino variable showed that the adjusted proportion of uninsured in 2015 was higher in non-expansion than in expansion states given the proportion of LEP and Latino patients in 2012 (Figure 1). FQHCs with low rates (10% or less) of LEP and Latino patients had achieved the lowest rates of uninsured patients in 2015 in expansion states than in non-expansion states (14% vs. 31%, a difference of 17%), while FQHCs with higher rates of both patients had higher rates of uninsured (23% vs. 39%, respectively and a difference of 16%). Thus, the gap in rates of uninsured in expansion and non-expansion states was similar, i.e. the interaction of LEP and Latino variable with state expansion status was not significant.

Figure 2 shows the adjusted rates of uninsured in 2015 for clinics with different proportion of patients who were poor or had Medicaid coverage in 2012, based on the same regression model. Both measures indicated a lower rate of uninsured in Medicaid expansion states than non-expansion states. The rates also differed by expansion and non-expansion states but these differences (interaction terms) were not significant (see Appendix Table 1 for model results).

Further analyses in a second regression model (see Appendix Table 2) including only the race/ethnicity indicators showed similar results for the Latino population including a significant effect due to proportion of Latino patients (Figure 3), but still no significant interaction with state expansion status. However, including only the LEP variable in a third model (see Appendix Table 3) showed a significant impact of the proportion of LEP patients in the FQHC and a significant difference by Medicaid expansion status. In other words, in expansion states FQHCs with low rates of LEP patients had lower rates of uninsured in 2015 (16%) than FQHCs with higher rates of LEP patients (33%). In non-expansion states, FQHCs with lower rates of LEP patients had lower rates of uninsured in 2015 (23%) than those with higher rates of LEP patients (38%), independent of other variables.

The model with only race/ethnicity variables did not show a significantly different pattern in rates of uninsured in 2015 given Medicaid expansion for FQHCs with high or low shares of white, African American, or Asian American patients.

Discussion

Our findings confirmed that FQHCs benefited from Medicaid expansion by having a smaller proportion of uninsured patients in 2015 compared to those in non-expansion states. Our

findings partially confirmed our hypothesis that Medicaid expansion was likely responsible for a greater reduction in the rate of uninsured post ACA within FQHCs that had fewer LEP patients in expansion states compared to non-expansion states, whether or not they were Latino. Our results also suggest that higher rates of Medicaid and higher rates of poor, Latino, and LEP patients continued to create additional financing and other challenges for FQHCs.

Our indicator for LEP status is based on FQHC reports of the number of patients best served in a language other than English and is likely to have captured a few native born patients as well as both naturalized citizens and immigrants with a variety of immigration statuses. Census data show that about 2% of the native born population of the United States are LEP and about 50% of the immigrants are LEP.²⁷ Some, but not all, of these immigrant patients may have lacked documentation and were therefore more likely to be excluded from coverage under the ACA.

Limited English proficiency itself is a likely barrier to obtaining coverage. Existing data indicate that many eligible but uninsured people in Medicaid expansion states such as California were unaware of their eligibility or had misperceptions of coverage options or the affordability of premiums.²⁸ FQHCs frequently provide linguistically and culturally competent care and many immigrants continue to seek care in these organizations even when they have health insurance.²⁹

Our finding that FQHCs with low concentrations of LEP patients had lower rates of uninsured patients than those with higher LEP patient populations in expansion states indicates the greater success of FQHCs in Medicaid expansion states in enrolling non-LEP patients. Many FQHCs in these states invested in personnel and resources for the sole purpose of outreach to eligible populations and enrolling them in Medicaid or other coverage.¹⁰ The lower concentration of LEP patients who may have been ineligible for coverage may have contributed to greater success of these FQHCs in reducing their uninsured rates post ACA in general and in states with lower concentration of such populations.

Beyond the impact of concentration of Latino patients on uninsured rates post ACA, we did not find evidence of a differential relationship due to concentration of other racial groups or poor patients. Our findings of the impact of concentration of Medicaid patients prior to the ACA on rates of uninsured post ACA are consistent with the existing evidence and confirm the success of Medicaid expansion in increasing insurance rates and coverage by Medicaid among FQHC patients.²²

Policy Implications

The repeal of the ACA, rolling back of the Medicaid expansion, or other attempts to curtail or undermine the aspects of the law that have led to increases in coverage are likely to dramatically impact FQHCs as the cornerstone of the safety net and the primary providers of care to the low-income and uninsured patients. The higher the gains of FQHCs in reducing their uninsured rates under ACA expansions, the higher their vulnerability to financial

uncertainty and reduced sustainability with repeal of the ACA. This is in part due to the fact that many FQHCs significantly expanded their capacity due to the increase in new and newly insured patients.¹⁰ The substantial gap between uninsured rates in expansion and non-expansion states suggest that ending Medicaid expansion would precipitously decline numbers of insured patients in all FQHCs. This gap is unlikely to be adequately addressed by the proposed limited increase in FQHC funding in the repeal legislation. Faced with such reduction, FQHCs would have to reduce fixed costs such as layoffs of clinical and non-clinical support personnel and close facilities.

In addition to the likely negative impact of the repeal of the ACA on the sustainability of FQHCs, the repeal and any undermining the ACA is likely to negatively impact the vulnerable populations who gained coverage under the law and rely on FQHCs for their care. The improvements in access across groups are likely to be lost when populations who gained coverage the most under the ACA lose it, including low income adults, people of color, and LEP populations.

The disparities in FQHC uninsured rates given the LEP status of their patients highlights the importance of continued efforts to outreach to vulnerable populations who have limited choice of linguistically and culturally competent providers, even in Medicaid expansion states. These efforts are curtailed with cuts in budget allocations for advertising and outreach by the Federal exchange in 2017.³⁰ But they are essential in reducing disparities in coverage and improving access to care.

The substantial difference in rates of uninsured patients in FQHCs between Medicaid expansion and non-expansion states reflect the perpetuation of disparities in coverage and access in non-expansion states for the most vulnerable populations. While the FQHCs in non-expansion states continue to provide care to the uninsured, this care is likely to be limited in scope, particularly since it does not include specialty or acute care for individuals with chronic conditions or the very sick. Even the primary care services provided by FQHCs are likely to be limited in extent since some FQHCs do not have the capacity for directly providing high value preventive services such as mammography or core primary care services such as clinical laboratory tests or pharmacy services.¹⁰

Ultimately, continued federal funding to provide essential primary care services to the remaining uninsured population is essential to address the gaps in coverage that could not be addressed by the ACA. In states such as California, counties have provided some coverage for the remaining uninsured populations through local but limited scope programs such as My Health LA. In this program, the Los Angeles County Department of Health Care Services partnered with local community clinics to provide uninsured patients with primary care and the County provided access to specialty and acute services.³¹ Similarly, California has included coverage for uninsured children without documentation through its Medicaid program using state funding. But these programs are not adequate to address the coverage gaps for the entirety of the remaining uninsured population. Without continued or increased federal funding to cover the uninsured, FQHCs' capacity to provide essential primary care services to these populations remains limited.

Acknowledgments

The research for this analysis was funded by The Commonwealth Foundation, grant # 20140621. Wallace was also supported by the National Center for Advancing Translational Sciences through UCLA CTSI Grant UL1TR001881. The content is solely the responsibility of the authors and does not necessarily represent the official views of the funders.

Appendix

Appendix Table 1. Logistic Regression model predicting uninsured rate in 2015 with combined Latino and LEP status

Number of Observations: 1,971,197 Wald chi2(20) = 2711.26 Prob > chi2 = 0.0000 Pseudo R2 = 0.0595						
Dep. Var: % Uninsured in 2015	Coef.	Robust Std..Err.	z	P> z	[95% Conf. interval]	
Medicaid Expansion Status	-0.97	0.10	-9.27	0.00	-1.18	-0.77
Medicaid Coverage (Low)	0.93	0.15	6.36	0.00	0.64	1.22
%Latino/%LEP (ref: Low Latino, Low/High LEP)						
High Latino, Low LEP	0.28	0.09	3.03	0.00	0.10	0.46
High Latino, High LEP	0.35	0.08	4.43	0.00	0.20	0.51
% Under 150% FPL (Low)	-0.35	0.16	-2.16	0.03	-0.67	-0.03
Total Number of Patients (per 10k)	-0.03	0.01	-4.14	0.00	-0.05	-0.02
Total Number of Sites (ref: 1 or 2)						
2 - 8 sites	0.01	0.06	0.22	0.83	-0.10	0.12
More than 8 sites	0.14	0.07	2.14	0.03	0.01	0.27
Homeless Center Status	-0.01	0.06	-0.21	0.84	-0.14	0.11
Migrant Center Status	0.12	0.05	2.28	0.02	0.02	0.23
Public Housing Center Status	0.23	0.09	2.52	0.01	0.05	0.40
Total Revenue (per \$10k)	1.20	0.73	1.63	0.10	-0.24	2.63
% Patients over 65 years of age	-0.07	0.01	-11.21	0.00	-0.08	-0.06
% of Patients Age 0-19	-0.02	0.00	-12.05	0.00	-0.02	-0.02
% Percent of Female Patients	0.00	0.01	0.85	0.39	-0.01	0.01
Rural Location	0.05	0.06	0.80	0.42	-0.07	0.18
Interaction of Medicaid expansion and % Latino/LEP Patients (low Latino, low/high LEP)						
High Latino, Low LEP	-0.06	0.15	-0.39	0.69	-0.34	0.23
High Latino, High LEP	0.21	0.12	1.74	0.08	-0.03	0.45
Interaction of Medicaid expansion and % patients below 150% FPL (low)	-0.07	0.17	-0.41	0.68	-0.41	0.27
Interaction of Medicaid expansion and % patients w/Medicaid coverage (low)	-0.32	0.37	-0.87	0.39	-1.04	0.40
_cons	-0.13	0.35	-0.36	0.72	-0.82	0.56

Source: Authors' analyses of 2012 and 2015 Uniform Data System (UDS)

Appendix Table 2. Logistic Regression model predicting uninsured rate in 2015 with race/ethnicity status and excluding LEP status

Number of obs = 1,971,197 Wald chi2(24) = 4224.17 Prob> chi2 = 0.0000 Pseudo R2 = 0.0592						
Dep. Var: %Uninsured in 2015	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
Medicaid Expansion Status	-1.22	0.26	-4.70	0.00	-1.73	-0.71
Medicaid Coverage (Low)	0.91	0.15	5.87	0.00	0.61	1.21
% Latino (Low)	-0.31	0.07	-4.36	0.00	-0.45	-0.17
% African. American (Low)	0.13	0.09	1.49	0.14	-0.04	0.30
% Asian (Low)	-0.21	0.17	-1.24	0.22	-0.55	0.12
% Other Race (Low)	-0.02	0.11	-0.15	0.88	-0.24	0.20
% Under 150% FPL (Low)	-0.41	0.16	-2.55	0.01	-0.72	-0.09
Total Number of Patients (per 10k)	-0.02	0.01	-3.06	0.00	-0.04	-0.01
Total Number of Sites (ref: 1 to 2)						
2- 8	0.02	0.06	0.33	0.75	-0.10	0.13
More than 8	0.13	0.07	1.84	0.07	-0.01	0.28
Homeless Center Status	-0.02	0.06	-0.38	0.71	-0.15	0.10
Migrant Center Status	0.12	0.06	2.10	0.04	0.01	0.23
Public Housing Center Status	0.20	0.09	2.23	0.03	0.02	0.38
Total Revenue (per \$10k)	1.32	0.66	2.01	0.05	0.03	2.61
% Patients over 65 years of age	-0.07	0.01	-11.71	0.00	-0.08	-0.06
% of Patients Age 0-19	-0.02	0.00	-11.95	0.00	-0.02	-0.02
% Percent of Female Patients	0.00	0.01	0.62	0.54	-0.01	0.01
Rural Location	-0.01	0.07	-0.13	0.90	-0.15	0.13
Interaction of Medicaid expansion and % patients below 150% FPL (low)	0.03	0.19	0.18	0.86	-0.34	0.41
Interaction of Medicaid expansion and % Latino patients (low)	-0.19	0.12	-1.54	0.13	-0.43	0.05
Interaction of Medicaid expansion and % African-American patients (low)	-0.06	0.10	-0.58	0.56	-0.26	0.14
Interaction of Medicaid expansion and % Asian patients (low)	0.28	0.25	1.11	0.27	-0.22	0.78
Interaction of Medicaid expansion and % patients who are other or mixed race (low)	0.18	0.15	1.22	0.22	-0.11	0.48
Interaction of Medicaid expansion and % patients w/ Medicaid coverage (low)	-0.31	0.35	-0.90	0.37	-0.99	0.37
_cons	0.50	0.39	1.29	0.20	-0.26	1.27

Source: Authors' analyses of 2012 and 2015 Uniform Data System (UDS)

Appendix Table 3. Logistic Regression model predicting uninsured rate in 2015 with LEP status and excluding race/ethnicity status

Number of obs = 1,971,197 Wald chi2(18) = 1389.51 Prob> chi2 = 0.0000 Pseudo R2 = 0.0586						
Dep. Var: %Uninsured in 2015	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
Medicaid Expansion Status	-0.76	0.08	-9.39	0.00	-0.92	-0.60
Medicaid Coverage (Low)	0.96	0.14	6.64	0.00	0.67	1.24
% LEP (Low)	-0.25	0.09	-2.93	0.00	-0.42	-0.08
% Under 150% FPL (Low)	-0.33	0.13	-2.60	0.01	-0.59	-0.08
Total Number of Patients (per 10k)	-0.03	0.01	-4.16	0.00	-0.05	-0.02
Total Number of Sites (ref: 1 to 2)						
2 - 8	0.03	0.05	0.65	0.52	-0.07	0.14
More than 8	0.18	0.07	2.73	0.01	0.05	0.31
Homeless Center Status	0.00	0.07	-0.04	0.97	-0.13	0.13
Migrant Center Status	0.15	0.06	2.63	0.01	0.04	0.26
Public Housing Center Status	0.24	0.09	2.69	0.01	0.06	0.41
Total Revenue (per \$10k)	1.27	0.72	1.76	0.08	-0.15	2.68
% Patients over 65 years of age	-0.07	0.01	-11.22	0.00	-0.08	-0.06
% of Patients Age 0-19	-0.02	0.00	-11.47	0.00	-0.02	-0.02
% Percent of Female Patients	0.01	0.01	1.18	0.24	0.00	0.02
Rural Location	0.06	0.06	0.92	0.36	-0.07	0.19
Interaction of Medicaid Expansion and % Patients Below 150% FPL (low)	-0.13	0.15	-0.85	0.40	-0.43	0.17
Interaction of Medicaid Expansion and % LEP Patients (low)	-0.22	0.11	-1.99	0.05	-0.44	0.00
Interaction of Medicaid Expansion and % Patients w/Medicaid Coverage (low)	-0.34	0.37	-0.92	0.36	-1.07	0.39
_cons	0.09	0.35	0.26	0.80	-0.59	0.77

Source: Authors' analyses of 2012 and 2015 Uniform Data System (UDS)

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Figure 1.

Adjusted average rates of uninsured patients at FQHCs in 2015 by Medicaid expansion and non-expansion state and 2012 FQHC patients of combined limited English proficiency and Latino ethnicity status

Source: Authors' analyses of 2012 and 2015 Uniform Data System (UDS)¹⁸

Notes: Controls for all variables in Table 1 except racial/ethnic groups other than Latino.

* Indicates a significantly higher ($p < 0.05$) 2015 uninsured rate in non-expansion vs Medicaid expansion states.

Figure 2.

Adjusted average rate of uninsured patients at FQHCs in 2015 by Medicaid expansion and non-expansion type and 2012 FQHC patient Medicaid coverage and federal poverty level

Source: Authors' analyses of 2012 and 2015 Uniform Data System (UDS)¹⁸

Notes: Controls for all variables in Table 1.

* Indicates a significantly higher ($p < 0.05$) 2015 uninsured rate in non-expansion vs Medicaid expansion states.

Figure 3.

Adjusted rates of uninsured patients at FQHCs in 2015 by Medicaid expansion and non-expansion state and 2012 FQHC patient Latino or LEP status

Source: Authors' analyses of 2012 and 2015 Uniform Data System (UDS)¹⁸

Notes: Adjusted rates for Latino status are from the model that excluded LEP but controls for all other variables in Exhibit 1. Adjusted rates for LEP status are from the model that excludes the race/ethnicity variables but includes the LEP variable and controls for all other variables in Table 1.

* Indicates a significantly higher ($p < 0.05$) 2015 uninsured rate in non-expansion vs Medicaid expansion states.

** Indicates a significantly higher 2015 uninsured rate ($p < 0.05$) rate in FQHCs with 10% or less vs. those with higher rates of LEP patients in Medicaid expansion states.

Table 1
Characteristics of FQHCs and their patients in 2012 and 2015

	All FQHCs	FQHCs in Medicaid Expansion States as of 2015	FQHCs in Non-Medicaid Expansion States as of 2015
Sample size	989	582	407
Percent patients that were uninsured after ACA in 2015	27%	19%	38%
<i>Independent variables of interest</i>			
Medicaid Expansion by 2015 (vs. not)	59%	--	--
10% or less of patients were at or below 150% FPL in 2012	6%	7%	5%
Percent of LEP and Latino patients in 2012			
10% or less LEP & Latino	43%	38%	51%
10% or less LEP & more than 10% Latino	13%	13%	15%
More than 10% LEP & 10% or less Latino	3%	3%	2%
More than 10% LEP and Latino	41%	47%	32%
Percent of patients by racial/ethnic group in 2012			
10% or less of patients were white non-Latino	85%	83%	89%
10% or less of patients were Latino	46%	41%	53%
10% or less of patients were African American	54%	60%	46%
10% or less of patients were Asian-American non-Latino	95%	93%	98%
10% or less of patients were other or mixed race-non-Latino	77%	75%	79%
10% or less of patients were LEP in 2012	57%	50%	66%
10% or less of patients covered by Medicaid before ACA in 2012	6%	3%	10%
Percent of patients that were female in 2012	58%	57%	58%
Percent of patients by age categories in 2012			
Percent of patients that were under 20 years of age	10%	31%	29%
Percent of patients that were ages 20-64 (reference)	62%	61%	63%
Percent patients of patients that were 65 years of age or more	7%	7%	8%
Number of clinic sites in 2012			
1 to 2 (reference)	25%	23%	27%
2 to 8	47%	46%	49%
More than 8	28%	31%	25%
Average number of patients seen last year in 2012	18,004	20,978	13,753
Average per capita revenues from non-insurance sources (e.g., grants, donations) in 2012	\$378	\$350	\$412
Focus on specialized populations in 2012			
Only receives federal funding as community health center (reference)	67%	64%	70%
Receives federal funding as homeless center	20%	23%	16%
Receives federal funding as migrant center	13%	13%	14%
Receives federal funding as public housing center	6%	7%	6%

	All FQHCs	FQHCs in Medicaid Expansion States as of 2015	FQHCs in Non-Medicaid Expansion States as of 2015
Is located in a rural area	48%	40%	60%