

# Ensuring Access to Prescription Medications in the Post-ACA Healthcare Access Landscape: The Essential Role of FQHCs in the Safety Net for the Underinsured

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Access to affordable prescription medications is an essential component of healthcare services utilization, which has been demonstrated to improve health outcomes.<sup>1</sup> With the costs of prescriptions rising, underinsured and uninsured populations are especially at risk for not being able to access needed medications and, consequently, at risk for noncompliance with treatment plans.<sup>2-4</sup> Federally qualified health centers (FQHCs), which are primary care safety-net providers established to serve patients regardless of their ability to pay and insurance status, play a key role in closing the prescription access gap by offering several ways uninsured and underinsured populations can receive reduced-cost medications.<sup>5,6</sup> Specifically, FQHCs utilize 2 programs to meet prescription needs: 1) the Health Resources and Services Administration (HRSA) 340B Drug Pricing Program and 2) prescription assistance programs (PAPs), which rely on pharmaceutical manufacturer donations of reduced-cost medications or coupons.

Throughout the dynamic post-Affordable Care Act (ACA) healthcare environment, the role of FQHCs in the primary care and prescription medication safety net remains essential. Although rates of underinsured and uninsured citizens in the United States have been declining and disparities in access decreasing since the passing of the ACA in 2010,<sup>7</sup> FQHCs persist as critical access points for the underserved and those who are still ineligible for insurance subsidies on the Marketplace or who reside in a state that did not expand Medicaid.<sup>8,9</sup> Since the inception of the ACA Marketplaces and Medicaid expansion, rates of uninsurance have decreased across racial/ethnic groups and across levels of poverty status.<sup>7</sup> Despite these improvements, racial/ethnic and income disparities in access persist: African American and ethnically Hispanic individuals are more likely to be uninsured than nonminorities, and individuals and families with relatively lower incomes are more likely to be uninsured compared with counterparts with higher-income status.<sup>7</sup> Access to reduced-cost medicines is under further threat due a recent cut to the 340B program by CMS, effective on January 1, 2018.

To this end, FQHCs are uniquely situated in the post-ACA landscape to serve these underserved communities per their mission to

## ABSTRACT

**OBJECTIVES:** Federally qualified health centers (FQHCs) are essential to underinsured populations in the safety net by offering them several means of access to reduced cost medications. This study employed a 2-pronged approach to evaluate FQHCs' role, estimating both the need for patient assistance and the impact of the safety net.

**STUDY DESIGN:** A multiyear panel data study for post-Affordable Care Act (ACA) years 2012 to 2016 and a 2016 cross-sectional analysis design were utilized to analyze FQHCs, their patient populations, and prescription assistance programs.

**METHODS:** Publicly available Health Resources and Services Administration (HRSA) Uniform Data System data were merged with HRSA Office of Pharmacy Affairs Information System data on 340B programs. Descriptive statistics were produced to evaluate the need for patient assistance, costs, and conditions treated at FQHCs.

**RESULTS:** There were 1337 FQHCs serving more than 2.5 million patients, nearly 29% of whom were uninsured. FQHCs utilized 2 programs to provide affordable, reduced-cost prescriptions for patients without insurance: 1) the HRSA 340B Drug Pricing Program and 2) prescription assistance programs, which rely on pharmaceutical manufacturer donations of reduced-cost medications or coupons. Although these programs were effective at providing affordable prescriptions, program accessibility varied widely by state and FQHC resources.

**CONCLUSIONS:** Despite changes in the healthcare access landscape due to the ACA, underinsured populations remain prevalent and the need for financial assistance with medications persists. FQHCs are uniquely situated to provide access to these essential services. Further policy and funding efforts, such as expansion of 340B programs, could assist FQHCs in fulfilling the role of prescription safety-net providers.

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## TAKEAWAY POINTS

- ▶ Federally qualified health centers (FQHCs) serve an important role in providing need-based, reduced-cost prescription medications to the uninsured in the post-Affordable Care Act (ACA) landscape.
- ▶ FQHCs utilize 2 programs to provide affordable prescriptions for underinsured patients: 1) the Health Resources and Services Administration 340B Drug Pricing Program and 2) prescription assistance programs, which rely on pharmaceutical manufacturer donations of reduced-cost medications or coupons.
- ▶ Despite changes in access to health insurance and care in the post-ACA era, FQHCs continue to serve uninsured patients everywhere, but particularly in states that did not expand Medicaid.
- ▶ Further policy and funding efforts, such as expansion of 340B programs, could assist FQHCs in fulfilling the role of prescription safety-net providers.

organizations.<sup>13</sup> Furthermore, FQHCs have demonstrated their ability to optimize their 340B programs and wield their expertise in serving the communities in which they are located. FQHCs have proven their 340B programs useful for providing contraception medications to uninsured adolescent and young adult populations,<sup>14</sup> improving access to asthma medication and treatment plan adherence among uninsured Spanish-speaking Hispanic patients,<sup>15</sup> and improving cancer medication access in conjunction with partner Disproportionate Share Hospital systems.<sup>16,17</sup>

provide access; they are physically located in designated medically underserved areas and they have grant stipulation to provide care regardless of patients' ability to pay. In states that did elect to expand their Medicaid program eligibility to residents with incomes up to 138% of the federal poverty level (FPL), FQHCs are more likely to accept new Medicaid patients than are other primary care providers because of their health center grant requirements and enhanced prospective payment plan from CMS.<sup>10</sup> In the 18 states that did not expand Medicaid eligibility as of 2018, FQHCs serve as the primary care and prescription medication safety net for residents who do not qualify for traditional or categorical Medicaid nor for the subsidies provided on the ACA Marketplace, for which eligibility begins at 100% of the FPL.

## BACKGROUND

## HRSA 340B Programs in Community Health Centers

The utilization of the HRSA 340B Drug Pricing Program, in which covered entities are able to purchase and redistribute prescription and nonprescription medications for outpatients at reduced costs,<sup>10</sup> is a crucial tool with which FQHCs provide access to affordable prescription medications for under- and uninsured health center patients. The Pharmacy Services Support Center (PSSC) is a unique collaboration between HRSA and the American Pharmacists Association in which HRSA grantees, such as FQHCs, are provided with technical assistance on HRSA demonstration projects and programs aimed at addressing the prescription medication access gap for the under- and uninsured, namely the 340B program.<sup>11</sup>

Clinic-level case studies related to 340B program utilization have demonstrated that health center patients without insurance and/or prescription drug coverage, a sample including nearly 90% of patients at or below 200% of the FPL, were able to gain access to affordable \$4 generic prescriptions through the 340B program.<sup>12</sup> FQHCs are adept at stretching limited resources and collaborating with community partners. In one case, a health center expanded medication formularies leveraging their 340B program and partner

## PAPs in Community Health Centers

PAPs (also known as drug assistance programs) are another essential tool with which FQHCs provide access to prescription medications to under- and uninsured patients. PAPs are health center-organized programs that distribute medications to qualifying indigent patients at little or no out-of-pocket cost,<sup>18</sup> and their utilization has been proven to decrease patient prescription expenditures for the uninsured,<sup>19</sup> in particular for high-cost medications, such as cancer treatments.<sup>20</sup>

The medications are provided by pharmaceutical manufacturer donations, and recipient qualifications and application processes differ among manufacturers, with some requiring as many as 4 applications per year per prescription per patient.<sup>18</sup> More than 53% of the top 200 prescriptions were offered via PAPs to qualifying indigent patients through manufacturers.<sup>19</sup> Another study found that the average drug procured through a PAP for a sample of 32 pharmaceutical manufacturers cost \$25.18 per prescription and required approximately 6 minutes of health center staff time per submission per prescription, indicating that the effectiveness of these programs is heavily dependent on which prescriptions and how many medications health center patients require, as well as staff availability to manage applications.<sup>18,19</sup>

The literature notes that the success of prescription access programming, both the 340B program and PAPs, for the under- and uninsured in health centers is reliant on resources such as staffing, access to patient data, and coordination with community partners, such as retail pharmacies, for 340B programs.<sup>21</sup> Findings from another study show that an interdisciplinary team approach involving physicians with midlevel providers, clinical pharmacists, nurses, social workers, and eligibility specialists is most effective in assisting patients without insurance or prescription coverage to gain access to their prescription medications,<sup>22</sup> again situating FQHCs to play an important role in bridging the prescription access gap, as they often employ a wide range of staff to provide comprehensive primary care, mental health and substance use assistance, and eligibility services in accessible and coordinated locations.

ACA initiatives, such as the Community Health Center Fund, an \$11-billion operations and infrastructure building grant to FQHCs; the Centers for Medicare and Medicaid Innovation Advanced Primary Care Practice Demonstration, which funded and assisted FQHCs to obtain National Commission for Quality Assurance Patient-Centered Medical Home designation in a 3-year demonstration ending in 2014; and funding for Marketplace Outreach and Enrollment assistance at health centers, poised FQHCs to maintain an essential role in providing primary care and access to medications for the under- and uninsured in the post-ACA era across the country. Although evidence substantiates this vital role, there remains a gap in the literature reflecting a formal evaluation of FQHCs' performance in providing access to prescription medications to the under- and uninsured. This study aimed to evaluate FQHCs' role, estimating both the need for patient assistance and the impact of the safety net. Findings of this study are intended to be of interest to patient advocacy groups concerned with prescription medication costs, such as the Patient Access Network Foundation; legislators involved with HRSA funding and programming to meet these needs; and FQHC advocates and leaders responsible for implementing these PAPs.

## METHODS

A 2-pronged approach was used to evaluate FQHCs as a safety net for access to prescription medications: 1) assessing the need for patient assistance and 2) evaluating the FQHC safety-net system for prescription medications. HRSA Uniform Data System (UDS) complete report data were obtained via a Freedom of Information Act request from the HRSA Bureau of Primary Health Care for all health center programs for 2013 and 2014, with the FQHC grantee as the unit of analysis. Additionally, publicly available partial report data were collected and utilized for 2012 to 2016 for panel data analysis. UDS data were merged by HRSA grant recipient identifier with HRSA Office of Pharmacy Affairs Information System data related to 340B Drug Pricing Program covered entities, which are also publicly available.

The first research question, regarding the need for patient assistance, yielded a descriptive analysis of the underinsured FQHC patient populations benefiting from programs offering financial assistance for prescriptions, including their income, insurance status, and disease diagnoses. Additionally, the study estimated the impact of Medicaid expansion on the uninsured patients served by FQHCs using a difference-in-differences (DID) method, as it pertains to the question of where the need for prescription medication assistance is most concentrated, theorizing there would be greater rates of uninsurance in states that did not expand Medicaid. Panel data were constructed using UDS data for years 2012 to 2016. The 50 states and the District of Columbia (DC) were evaluated, excluding the Commonwealth of Puerto Rico and other US territories from the panel. A vector of time-variant control variables were included in

the estimating equation: insurance changes (private/other third-party payer, Medicare), population age (children younger than 18 years, adults younger than 65 years), racial and/or ethnic minority, and total costs per patient. Standard errors (SEs) were clustered at the state level, and linear time trending was identified and used in the model specification process. State and year fixed effects were included in the model. Several robustness checks were also employed and presented to ensure the validity of the findings. The treatment reflected state-based Medicaid expansion decisions and included the Section 1115 waiver states (8 states that implemented Medicaid expansion with slightly different provisions than outlined in the ACA) as well as states that expanded Medicaid after January 1, 2014 (for which expansion date by year was reflected in the model for the treatment time). STATA 13.0 was utilized for this analysis (StataCorp LP; College Station, Texas).

The second approach aimed to evaluate the FQHC safety net itself. This analysis produced estimations of the size of the FQHC safety net, types of medication access programs offered, approximated costs of these programs, and accessibility of reduced-cost prescription programs in FQHC settings. A cross-sectional study design was utilized to provide the analysis of underinsured FQHC patients and the FQHC PAPs for all FQHCs for 2016, the most recent UDS data available. Descriptive statistics were utilized to estimate the need for patient assistance at FQHCs and costs and accessibility of the programs. Analyses were conducted using STATA 13.0.

## RESULTS

The need for patient assistance in an FQHC setting is well established. In 2016, the most recent reporting year, 25.4 million patients were served by 1337 FQHCs across all 50 states and DC. The number of FQHCs per state in 2016 ranged from 4 (North Dakota) to 176 (California). Of these patients, 28.7% were uninsured, 90.6% had incomes at or below 200% of the FPL, and 66.7% had incomes at or below 100% of the FPL, as shown in [Table 1](#). Uninsured patient rates varied greatly by state, ranging from 9% in Vermont to 59% in Wyoming. From 2012 to 2016, the rate of uninsured FQHC patients decreased from 40.4% in 2012 to 28.7% in 2016. Indicators of patient income remained relatively constant, as in 2012, FQHC patients at or below 200% of the FPL accounted for 92.0% of FQHC patients and those at or below 100% of the FPL, 68.9%; these figures were very close to their above-mentioned 2016 counterparts.

FQHC services utilization remained consistent across the 5 years of UDS data reports, as 85.2% and 83.7% of FQHC patients utilized medical services in 2012 and 2016, respectively; 21.4% and 21.8% utilized dental services; 5.5% and 7.7% utilized mental health services; and 12.4% and 11.7% utilized enabling services, which include PAP services. Notably, FQHC Public Health Service Section 330 grants increased during the period as a result of the ACA Community Health Center Fund, increasing by \$1,214,902 in annual grant funding from

## ORIGINAL RESEARCH

**TABLE 1.** Attributes of FQHCs and Patients Served Included in Study

	Total	2012	2013	2014	2015	2016
FQHCs, n (%)	6273	1169 (18.6%)	1173 (18.7%)	1249 (19.9%)	1345 (21.4%)	1337 (21.3%)
Total patients, millions, n (%)	113.8	20.7 (18.2%)	21.3 (18.7%)	22.5 (19.8%)	23.9 (21.0%)	25.4 (22.3%)
Region, n (%)						
Northeast	1111	210 (18.9%)	211 (19.0%)	220 (19.8%)	235 (21.2%)	235 (21.2%)
Southeast	2154	413 (19.2%)	410 (19.0%)	428 (19.9%)	453 (21.0%)	450 (20.9%)
Midwest	1238	230 (18.6%)	232 (18.7%)	248 (20.0%)	256 (20.7%)	263 (21.2%)
West	1565	230 (14.7%)	232 (14.8%)	248 (15.8%)	265 (16.9%)	263 (16.8%)
Noncontiguous	205	39 (19.0%)	39 (19.0%)	42 (20.5%)	43 (21.0%)	42 (20.5%)
Finances						
Average grant	\$12,160,653	\$1,949,332	\$2,115,142	\$2,322,972	\$2,608,973	\$3,164,234
Average cost per patient	\$4083	\$688	\$725	\$796	\$914	\$960
Patient income						
At or below 200% FPL	–	92.0%	91.9%	91.5%	91.1%	90.6%
At or below 100% FPL	–	68.9%	68.6%	68.1%	67.5%	66.7%
Payer mix						
Medicaid/CHIP	–	33.3%	33.6%	38.0%	39.8%	40.4%
Medicare	–	9.2%	9.6%	10.0%	10.3%	10.5%
Privately insured	–	17.2%	17.5%	19.0%	20.0%	20.4%
Uninsured	–	40.4%	39.5%	33.3%	30.1%	28.7%
Patients served by visit type						
Medical	–	85.2%	85.1%	84.6%	84.5%	83.7%
Dental	–	21.4%	21.2%	20.9%	21.3%	21.6%
Mental health	–	5.5%	5.8%	6.3%	7.0%	7.7%
Substance abuse	–	1.1%	1.1%	1.0%	1.1%	1.0%
Vision	–	1.6%	1.6%	1.6%	1.8%	2.1%
Enabling	–	12.4%	11.9%	12.1%	12.2%	11.7%

CHIP indicates Children's Health Insurance Program; FPL, federal poverty level; FQHC, federally qualified health center.

\$1,949,332 in 2012 to \$3,164,234 in 2016. Furthermore, the FQHC cost per patient also increased by \$273 per patient per year, from \$688 per patient per year in 2012 to \$960 in 2016.

As shown in [Table 2](#), the most prevalent chronic conditions included hypertension, overweight and obesity, asthma, and heart disease. Mental health and substance use disorders were also common, with the most prevalent being depression, anxiety disorders, other mental health disorders, and tobacco use disorders ([Table 2](#)). Additionally, communicable diseases, including HIV, hepatitis C, sexually transmitted diseases (excluding HIV), and hepatitis B, were often primary diagnoses and causes for visits.

Results from the DID analysis aiming to assess the impact of Medicaid expansion on uninsured patient rates for FQHC patient panels yielded anticipated results, as shown in [Table 3](#). January 1, 2014, was the first day that states were able to expand Medicaid eligibility requirements per ACA provisions, and 24 states expanded immediately. Seven states expanded later: Michigan (April 1, 2014),

New Hampshire (August 15, 2014), Pennsylvania (January 1, 2015), Indiana (February 1, 2015), Alaska (September 1, 2015), Montana (January 1, 2016), and Louisiana (July 1, 2016). Maine is slated to expand Medicaid at a date to be determined.

The impact of Medicaid expansion on the uninsured rate of FQHC patients was a decrease of 7.9% (SE = 0.01;  $P < .001$ ) in 2014, controlling for changes to time-invariant differences among the states in the DID model and controlling for time-variant differences by controlling for changing patient demographics and costs to health centers. The Medicaid expansion DID model results did not demonstrate significant impact on FQHC uninsured rates after the policy implementation year of 2014, despite the impact of the 7 states that elected to expand their Medicaid eligibility at a later date. Additionally, no significant results demonstrating changes in services utilization were produced from the estimations. Medical services utilizations were not affected and ancillary services (vision, dental, mental health/substance abuse, and enabling services)

**TABLE 2.** All 2016 FQHC Patient Diagnoses by Number of Visits and Number of Patients

Disease or Condition Diagnosis	Applicable ICD-10-CM Codes	Number of Visits by Primary Diagnosis	Number of Patients With Primary Diagnosis
<b>Highest-Prevalence Chronic Diseases</b>			
Hypertension	I10- through I15-	10,995,226	4,335,639
Overweight and obesity	E66-, Z68- (excluding Z68.1, Z68.20-24, Z68.51, Z68.52)	8,674,179	4,472,815
Diabetes	E08- through E13-, O24- (excluding O24.41-)	7,699,943	2,283,360
Asthma	J45-	2,184,904	1,196,242
Heart disease (selected)	I01-, I02- (excluding I02.9), I20- through I25-, I26- through I28-, I30- through I52-	1,761,974	710,638
<b>Mental Health and Substance Abuse Disorders</b>			
Depression and other mood disorders	F30- through F39-	6,932,972	2,138,559
Anxiety disorders, including PTSD	F40- through F42-, F43.0, F43.1-	5,012,300	1,667,334
Other mental disorders, excluding drug or alcohol dependence	F01- through F09-, F20- through F29-, F43- through F48- (excluding F43.1-), F50- through F59- (excluding F55-), F60- through F99- (excluding F84.2, F90-, F91-, F98-), R45.1, R45.2, R45.5, R45.6, R45.7, R45.81, R45.82, R48.0	4,057,429	1,399,347
Alcohol-related disorders	F10-, G62.1	966,281	292,750
Tobacco use disorders	F17-	2,152,007	1,086,401
<b>Infectious Diseases</b>			
Symptomatic and asymptomatic HIV	B20, B97.35, O98.7, Z21	634,906	158,323
Hepatitis C	B17.10, B17.11, B18.2, B19.20, B19.21, Z22.52	475,220	206,587
Sexually transmitted diseases, excluding HIV	A50- through A64- (excluding A63.0), M02.3-, N34.1	307,214	214,478
Hepatitis B	B20, B97.35, O98.7, Z21	93,983	46,342

FQHC indicates federally qualified health center; ICD-10-CM, International Classification of Diseases, Tenth Revision, Clinical Modification; PTSD, posttraumatic stress disorder.

**TABLE 3.** Difference-in-Differences: Medicaid Expansion Impact on FQHC Patients From 2012-2016, With Time-Lagged Treatment Year for All Outcomes and Treatment Populations<sup>a,b</sup>

Outcomes	Pre Actual Treatment Year 2013		Actual Treatment Year 2014		Post Actual Treatment Year				Variations on Treatment Populations			
	β (SE)	P	β (SE)	P	2015		2016		Without 1115 Waiver States		Only 1115 Waiver States	
Uninsured	0.003 (0.01)	.548	-0.079 (0.01)	<.001***	0.007 (0.01)	.309	0.030 (0.01)	.008**	-0.009 (0.02)	.577	0.009 (0.02)	.577
Medical service utilization	-0.008 (0.01)	.269	0.007 (0.00)	.135	0.004 (0.01)	.665	-0.003 (0.00)	.564	0.004 (0.01)	.737	-0.004 (0.01)	.737
Ancillary service utilization	-0.026 (0.02)	.288	-0.017 (0.02)	.311	0.044 (0.03)	.087*	0.024 (0.02)	.119	0.041 (0.04)	.334	-0.041 (0.04)	.334

FQHC indicates federally qualified health center; SE, standard error.

\* indicates  $P < .10$ ; \*\*,  $P < .05$ ; \*\*\*,  $P < .001$ .

<sup>a</sup>Coverage under the Medicaid expansion became effective January 1, 2014, in all states that adopted the Medicaid expansion, except for the following: Michigan (4/1/2014), New Hampshire (8/15/2014), Pennsylvania (1/1/2015), Indiana (2/1/2015), Alaska (9/1/2015), Montana (1/1/2016), Louisiana (7/1/2016), and Maine (to be determined).

<sup>b</sup>Arizona, Arkansas, Indiana, Iowa, Michigan, Montana, and New Hampshire have approved Section 1115 waivers for the Medicaid expansion.

utilizations were not changed at statistically significant levels, as referenced in Table 3.

Results demonstrated that substantial FQHC resources are allocated to pharmacy and medication access services, as presented in [eAppendix Table 1](#) (eAppendices available at [ajmc.com](#)). Roughly 2% of all FQHC personnel by full-time equivalent employees (FTEEs) were allocated for pharmacy services in 2016, averaging 84 FTEEs per state. Totaled direct (accrued) costs and indirect costs, including facility and nonclinical support services (excluding pharmaceuticals), allocated in FQHC cost reports for pharmacy services, averaged \$17,156,369.48 per state, ranging from a minimum of \$302,730 (\$6.07 in spending per FQHC patient) in Delaware to a maximum of \$147,063,607 (\$33.42 in spending per FQHC patient) in California. FQHC costs allocated to pharmaceuticals in cost reports averaged \$28,661,283.59 by state, ranging from \$1,118,380 (\$63.61 per patient) in Wyoming to \$250,485,263 (\$56.93 in spending per patient) in California. Enabling services costs allocations, which include PAP services, averaged \$4,566,594.92 per state.

[eAppendix Table 2](#) presents HRSA 340B Drug Pricing Programs implemented through FQHCs. Numbers of 340B programs by FQHC varied greatly by state, with a minimum of 3 (Nevada) to a maximum of 129 (California). Percentages of FQHCs operating 340B programs ranged from 60% to 100%; in several instances, there were more 340B programs affiliated with FQHCs than number of FQHCs themselves because a partner agency managed the 340B program (such as a health department, Disproportionate Share Hospital, or community clinic) and collaborated with local health centers. Additionally, because an individual FQHC can implement multiple 340B programs (eg, if the FQHC operates multiple sites, outreach locations, or pharmacies, or contracts with different locations of retail pharmacies for their 340B program), the number of 340B programs ranged greatly by state. The maximum frequency was in California, where there were 8709, and the minimum frequency was in Wyoming at 25. The average number of 340B programs per FQHC ranged from 2.6 (Alaska) to 72.6 (Illinois). The ratio of 340B programs to FQHC patients (programs:patients) ranged from 1:263 (South Dakota) to 1:2098 (DC).

## DISCUSSION

FQHCs play a vital role in the prescription safety net. Despite the ACA provision broadening healthcare access by providing funding to states for voluntary Medicaid eligibility expansion, just 32 states elected to expand their Medicaid programs. Results of our analyses demonstrated that FQHCs still serve a vital role in providing healthcare access to patients without health insurance in a post-Medicaid expansion and post-ACA Marketplace landscape. The 2 programs that serve FQHC patients' prescription medication needs, HRSA 340B and PAPs, have been studied and evidenced to be affordable in several case studies in FQHC settings, at roughly \$4

per prescription for generic medications in FQHC 340B programs and \$25.18 per prescription cost to FQHC in PAPs.<sup>18,19</sup> However, affordability to uninsured patients may not indicate accessibility. The wide range of variations in proportions of FQHC patients and uninsured patients served by health centers and 340B programs may indicate that access to affordable prescription medications for uninsured patients relies heavily upon the patient's state of residence.

Areas of opportunity were identified for increasing access to affordable medications and include expanding these programs to states that are comparatively underserved. Specifically, although the ACA Community Health Center Fund has increased FQHC funding significantly (a 62.3% increase from 2012 to 2016), it may be advantageous to: 1) focus funding on FQHCs located in states that did not expand Medicaid in order to ensure access to affordable medications and 2) focus on resources, including technical assistance as outlined in the HRSA PSSC program, or funding to FQHCs in states that have not initiated 340B programs. Fewer than 80% of FQHCs in Nevada, DC, Vermont, California, Louisiana, Indiana, and Idaho (ranked in order from least to greatest percentage of FQHC 340B programs) operated 340B programs. Further, it may be beneficial to focus resources on FQHCs in states that have low 340B program-to-FQHC patient ratios. The lowest ratios were in states where there is only one 340B program per 1000 or more FQHC patients, ranked in order of lowest ratios: DC, Alaska, Montana, Missouri, New Mexico, Nevada, Hawaii, Wisconsin, Colorado, and Alabama.

## Limitations

One study limitation of the DID analysis was that there were only 2 years available for the pre-Medicaid expansion UDS data, 2012 and 2013, to be included in the pre-policy period for the evaluation. Although UDS data are available for years prior to 2012, the format of the publicly available UDS data does not include the health center-level data that were used for this study. Additionally, the study assumed that the data relating to the price of prescriptions in 340B programs and PAPs found in the literature review apply to all health centers with 340B programs and PAPs currently and across the country.

## CONCLUSIONS

Despite changes in the healthcare access landscape due to the ACA, underinsured populations being served by FQHCs remain significant, and the need for financial assistance with medications persists. FQHCs are uniquely situated to provide access to these essential services. Both the HRSA 340B program and PAPs are important tools with which FQHCs continue to serve their uninsured patients: The 340B program requires drug manufacturers to provide outpatient drugs to eligible healthcare organizations and covered entities at significantly reduced prices, and the drugs are then provided to indigent patients through contracts with retail pharmacies or direct

provision, and PAPs rely on pharmaceutical manufacturer donations of reduced-cost medications or coupons, which are then distributed to patients through a need-based system. This study substantiates that further policy and funding efforts to assist FQHCs in fulfilling the role of prescription safety-net provider should be encouraged. ■

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**eAppendix Table 1. FQHC 2016 Costs by State: Personnel, Facilities, and Pharmaceuticals, Including 340B-Purchased Drugs**

State	Total Uninsured Patients	Personnel		Pharmacy Costs				
		Pharmacy Personnel	Total FQHC FTEEs	Pharmacy Not Including Pharmaceuticals: Accrued (Direct) Costs	Pharmacy Not Including Pharmaceuticals: Allocation of Facility and Nonclinical Support Services	Pharmacy Not Including Pharmaceuticals: Total Cost After Allocation of Facility and Nonclinical Support Services	Pharmaceuticals	Enabling Services (includes, but not limited to, PAPs)
AK	27,929	62	2225	\$7,037,911	\$4,696,926	\$11,734,837	\$7,678,347	\$2,318,686
AL	151,354	32	1797	\$4,058,289	\$2,110,598	\$6,168,887	\$5,944,064	\$1,937,859
AR	39,361	19	1541	\$4,931,163	\$3,112,708	\$8,043,871	\$5,941,320	\$953,840
AZ	92,243	188	5083	\$17,989,320	\$8,972,734	\$26,962,054	\$33,405,640	\$4,647,601
CA	928,296	428	37,585	\$102,039,697	\$45,023,910	\$147,063,607	\$250,485,263	\$42,355,185
CO	128,713	175	5353	\$22,554,800	\$10,749,347	\$33,304,147	\$27,063,190	\$7,782,573
CT	60,148	11	3312	\$2,939,694	\$963,799	\$3,903,493	\$13,084,059	\$3,880,776
DC	33,858	17	1894	\$5,942,078	\$1,707,422	\$7,649,500	\$43,282,007	\$1,876,353
DE	14,522	0	387	\$283,204	\$19,526	\$302,730	\$1,128,710	\$559,256
FL	502,385	320	10,060	\$32,137,787	\$14,242,222	\$46,380,009	\$76,198,845	\$8,343,107
GA	178,511	55	2650	\$14,683,993	\$4,864,433	\$19,548,426	\$23,145,324	\$2,647,258
HI	21,373	34	1779	\$3,910,845	\$1,919,272	\$5,830,117	\$7,329,057	\$1,439,822
IA	45,329	33	1495	\$3,664,213	\$1,711,304	\$5,375,517	\$5,930,025	\$965,930
ID	59,753	31	1510	\$5,254,153	\$3,020,526	\$8,274,679	\$13,591,790	\$1,488,616
IL	250,824	41	7895	\$15,402,782	\$13,850,275	\$29,253,057	\$55,295,422	\$7,116,593
IN	96,807	24	3406	\$2,690,425	\$1,672,268	\$4,362,693	\$8,670,170	\$5,329,698
KS	77,016	24	1244	\$3,769,470	\$1,539,296	\$5,308,766	\$5,092,374	\$1,307,278
KY	57,440	106	2768	\$14,537,907	\$6,901,807	\$21,439,714	\$22,149,269	\$2,442,611
LA	87,623	41	2595	\$11,874,192	\$3,644,240	\$15,518,432	\$35,881,986	\$2,280,795
MA	117,920	164	8831	\$41,512,448	\$19,204,367	\$60,716,815	\$114,347,915	\$12,504,918

MD	56,719	92	2874	\$9,878,128	\$5,130,281	\$15,008,409	\$72,630,495	\$2,868,339
ME	28,761	35	1724	\$4,269,432	\$1,213,982	\$5,483,414	\$9,960,706	\$1,040,921
MI	103,694	155	5433.06	\$19,054,989	\$9,496,668	\$28,551,657	\$39,191,571	\$3,701,035
MN	50,168	29	1559	\$3,482,971	\$1,380,575	\$4,863,546	\$6,145,406	\$1,821,150
MO	136,333	66	4090	\$7,762,712	\$4,341,909	\$12,104,621	\$17,610,843	\$2,699,671
MS	103,421	30	1820	\$4,573,778	\$3,046,275	\$7,620,053	\$6,584,339	\$1,376,501
MT	26,662	32	949	\$3,080,890	\$1,399,526	\$4,480,416	\$9,242,824	\$922,770
NC	219,635	176	3674	\$15,929,403	\$7,900,275	\$23,829,678	\$27,273,488	\$27,273,488
ND	11,823	21	328	\$3,200,615	\$1,016,208	\$4,216,823	\$2,056,977	\$105,633
NE	41,019	22	764	\$2,271,431	\$1,049,690	\$3,321,121	\$3,262,523	\$1,407,781
NH	12,952	14	896	\$2,518,881	\$1,512,490	\$4,031,371	\$4,577,555	\$1,251,235
NJ	153,380	12	3170	\$1,989,233	\$2,142,555	\$4,131,788	\$7,445,970	\$4,562,765
NM	82,851	58	3201	\$5,643,534	\$3,520,061	\$9,163,595	\$6,876,765	\$3,148,836
NV	23,974	27	711	\$3,067,515	\$1,446,804	\$4,514,319	\$12,272,365	\$350,406
NY	330,874	67	16,522	\$20,817,039	\$9,324,283	\$30,141,322	\$106,220,619	\$13,246,740
OH	96,824	91	4238	\$11,341,270	\$5,710,458	\$17,051,728	\$18,994,254	\$3,344,914
OK	65,492	41	1451.88	\$4,275,801	\$1,910,442	\$6,186,243	\$10,146,273	\$1,002,176
OR	74,997	149	4732	\$17,559,701	\$9,884,720	\$27,444,421	\$26,471,671	\$5,379,382
PA	102,524	39	4915	\$24,040,106	\$11,065,600	\$35,105,706	\$51,899,973	\$4,323,446
RI	17,751	1	1407.64	\$3,815,167	\$1,520,213	\$5,335,380	\$4,409,432	\$1,009,126
SC	101,667	220	3145	\$22,632,970	\$10,498,164	\$33,131,134	\$52,988,019	\$1,894,110
SD	17,536	4	500	\$633,187	\$912,204	\$1,545,391	\$1,818,270	\$248,593
TN	132,591	66	2563	\$7,265,286	\$4,707,579	\$11,972,865	\$10,841,475	\$1,465,558
TX	540,107	280	10,380	\$24,247,279	\$14,376,591	\$38,623,870	\$80,133,104	\$15,487,920
UT	79,627	60	1028	\$6,323,549	\$3,728,607	\$10,052,156	\$10,079,036	\$1,473,412
VA	98,759	65	2316	\$6,128,921	\$3,268,246	\$9,397,167	\$8,575,545	\$3,021,633

VT	14,313	8	1294	\$2,853,300	\$724,644	\$3,577,944	\$4,197,617	\$768,835
WA	165,357	418	9178	\$47,556,919	\$25,241,171	72,798,090	\$52,127,694	\$10,812,929
WI	54,375	31	2410	\$4,557,994	\$2,269,293	\$6,827,287	\$15,541,103	\$2,802,387
WV	34,185	143	3047	\$15,732,237	\$5,265,618	\$20,997,855	\$25,386,394	\$1,697,865
WY	7194	13	164	\$1,112,104	\$853,739	\$1,965,843	\$1,118,380	\$208,029
Total	5,956,970	4268	195,602	\$624,830,713	\$305,785,851	\$857,818,474	\$1,461,725,463	\$232,896,341

FQHC indicates federally qualified health center; FTEE, full-time equivalent employee; PAP, prescription assistance program.

**eAppendix Table 2. FQHC 340B Programs by State for 2016**

State	Total FQHCs by State	Total Health Center Patients Served <sup>a</sup>	Percent FQHC Patients Uninsured	Number of FQHCs (or FQHC partners) With 340B Programs	Percent of FQHCs Operating 340B Programs	Count of FQHC or Partner 340B Programs	Average Number of 340B CEs per Health Center	Ratio of 340B Programs to FQHC Patients (340B:patients)
AK	28	113,027	27.9%	25	89.3%	74	2.64	1:1527
AL	14	347,694	42.7%	14	100.0%	340	24.29	1:1023
AR	12	195,397	20.1%	12	100.0%	394	32.83	1:496
AZ	21	548,487	20.3%	17	81.0%	637	30.33	1:861
CA	176	4,400,000	21.8%	129	73.3%	8709	49.48	1:505
CO	20	594,959	27.8%	18	90.0%	551	27.55	1:1080
CT	16	373,182	17.8%	13	81.3%	719	44.94	1:519
DC	8	178,324	20.9%	5	62.5%	85	10.63	1:2098
DE	3	49,900	31.1%	3	100.0%	130	43.33	1:384
FL	48	1,400,000	43.4%	48	100.0%	1834	38.21	1:763
GA	35	457,644	46.2%	29	82.9%	707	20.20	1:647
HI	14	152,155	13.6%	14	100.0%	130	9.29	1:1170
IA	14	188,969	28.7%	14	100.0%	236	16.86	1:801
ID	14	171,126	33.4%	11	78.6%	213	15.21	1:803
IL	45	1,300,000	20.0%	42	93.3%	3265	72.56	1:398
IN	25	473,237	21.9%	19	76.0%	525	21.00	1:901
KS	18	193,843	37.2%	16	88.9%	254	14.11	1:763
KY	23	423,515	13.3%	21	91.3%	744	32.35	1:569
LA	34	384,893	24.2%	25	73.5%	932	27.41	1:413
MA	39	751,918	16.5%	36	92.3%	809	20.74	1:929
MD	17	313,411	23.2%	16	94.1%	417	24.53	1:752
ME	18	186,039	22.7%	19	100.0%	373	20.72	1:499
MI	39	672,753	15.6%	33	84.6%	814	20.87	1:826
MN	16	174,811	28.1%	16	100.0%	199	12.44	1:878
MO	28	527,054	25.5%	24	85.7%	417	14.89	1:1264
MS	21	295,052	33.2%	21	100.0%	502	23.90	1:588
MT	17	106,342	24.1%	17	100.0%	82	4.82	1:1297
NC	38	508,599	40.2%	33	86.8%	599	15.76	1:849
ND	4	40,331	26.8%	4	100.0%	46	11.50	1:877
NE	7	84,556	50.6%	6	85.7%	110	15.71	1:769
NH	11	89,280	14.8%	10	90.9%	103	9.36	1:867
NJ	23	511,947	30.2%	20	87.0%	524	22.78	1:977

NM	17	320,163	26.2%	15	88.2%	267	15.71	1:1199
NV	5	88,962	31.0%	3	60.0%	76	15.20	1:1171
NY	65	2,000,000	14.6%	57	87.7%	2615	40.23	1:765
OH	45	667,007	14.4%	36	80.0%	1091	24.24	1:611
OK	20	200,937	33.0%	18	90.0%	265	13.25	1:758
OR	31	383,691	19.9%	29	93.5%	586	18.90	1:655
PA	44	774,921	16.0%	40	90.9%	852	19.36	1:910
RI	8	164,057	10.8%	8	100.0%	268	33.50	1:612
SC	22	374,257	30.0%	19	86.4%	792	36.00	1:473
SD	5	69,137	29.0%	6	100.0%	263	52.60	1:263
TN	29	396,877	34.1%	26	89.7%	1115	38.45	1:356
TX	73	1,300,000	45.0%	68	93.2%	1600	21.92	1:813
UT	13	151,250	49.2%	12	92.3%	157	12.08	1:963
VA	26	304,756	32.0%	25	96.2%	396	15.23	1:770
VT	11	171,828	8.9%	8	72.7%	248	22.55	1:693
WA	27	1,000,000	15.5%	25	92.6%	1373	50.85	1:728
WI	17	303,266	22.3%	16	94.1%	275	16.18	1:1103
WV	27	430,084	9.4%	27	100.0%	605	22.41	1:711
WY	6	17,582	59.1%	5	83.3%	25	4.17	1:703

CE indicates HRSA 340B Covered Entity; FQHC, federally qualified health center.

<sup>a</sup>Total Health Center Patients Served is self-reported by the FQHC, reflects only patients who had an office visit in the calendar year, and is not rounded.