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Continued Importance of Sexually Transmitted Disease Clinics in the Era of the Affordable Care Act

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Abstract

Introduction—Following the 2014 expansions of Medicaid and private health insurance through the Affordable Care Act, municipal sexually transmitted disease (STD) clinics—which have historically served predominantly uninsured patients—have been threatened with budget cuts nationwide. This study was conducted to evaluate the impact of the insurance expansions on the demand for STD clinic services.

Methods—The proportion of total incident sexually transmitted infections in Baltimore City that were diagnosed at STD clinics was compared between 2013 and 2014, and a multivariate analysis was conducted to determine factors associated with diagnosis at an STD clinic. Analyses were conducted in July 2015.

Results—There was no change in the overall proportion of sexually transmitted infection diagnoses made at STD clinics from 2013 to 2014 (relative rate, 1.03; 95% CI=0.95, 1.11). Hispanic ethnicity, black race, male sex, and age >24 years were associated with an increased likelihood of STD clinic utilization ($p<0.0001$).

Conclusions—Despite the Affordable Care Act's insurance expansion measures, the demand for STD clinics remained stable. These safety net clinics serve patients likely to face barriers accessing traditional health care and their preservation should remain a priority.

Introduction

The Affordable Care Act (ACA) improved healthcare access for millions of Americans, putting into question the role of publicly funded sexually transmitted disease (STD) clinics nationwide.^{1–3} With Medicaid expansion and the Health Benefits Exchanges, policymakers anticipated reduced demands for safety net clinics as newly insured patients increasingly

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obtained sexually transmitted infection (STI) services directly from primary care providers. However, many other high-income countries have maintained their governmentally supported STD clinics despite universal healthcare access.⁴ Before policymakers make further cuts to STD clinic budgets, it is critical to evaluate the impact of insurance expansion on STD clinic utilization.

To evaluate changes in the demand for STD clinic services, this study compared the proportion of incident STIs in Baltimore, Maryland, diagnosed at municipal STD clinics before and after implementation of the ACA's insurance expansion measures in January 2014. Baltimore is one of ten U.S. cities with the highest burden of STIs.⁵

Methods

The Baltimore City Health Department (BCHD) routinely collects surveillance data on new diagnoses of gonorrhea, chlamydia, syphilis, and HIV from all healthcare facilities in Baltimore City. Patient demographics and the healthcare facilities reporting the STIs are recorded for each diagnosis. Among the more than 900 Baltimore City healthcare facilities are two municipal STD clinics overseen by the BCHD, both of which operate primarily on the basis of walk-in visits and do not bill for services or charge copays. STI records of Baltimore residents aged ≥ 13 years reported to the BCHD between January 1, 2013 and December 31, 2014 were eligible for inclusion in this analysis, which was conducted in July 2015. The main outcome of interest was the relative proportion of incident STIs diagnosed at the STD clinics in 2014 compared with 2013.

Statistical Analysis

Patient demographics for STI diagnoses in 2013 were compared with those in 2014 (Appendix Table 1), and crude proportions of total incident syphilis, HIV, gonorrhea, and chlamydia diagnoses made at STD clinics were compared between the 2 years.

Log binomial regression was used to conduct a multivariate analysis of factors associated with diagnosis at an STD clinic compared with other healthcare facilities. Adjusted variables included diagnosis year, age, sex, race, and ethnicity. Missing values were excluded listwise. Statistical analyses were conducted using Stata, version 13. The study was approved by the Johns Hopkins IRB and the BCHD Public Health Research Review.

Results

A total of 10,061 STI diagnoses were reported to the BCHD in 2013 and 10,047 were reported in 2014. Among these, 98.6% had information on the healthcare facility where the diagnosis was made. Similar proportions of patients with any incident STI were diagnosed at the municipal STD clinics during the 2 years: 11.36% in 2013 versus 11.31% in 2014 ($p=0.90$).

Figure 1 compares the crude proportions of syphilis, HIV, chlamydia, and gonorrhea diagnoses made at STD clinics pre- and post-Medicaid expansion. Although there were no significant changes in the proportions of syphilis or HIV cases diagnosed at STD clinics, the

proportion of chlamydia diagnoses at STD clinics increased from 8.76% in 2013 to 9.77% in 2014 and that for gonorrhea decreased from 18.45% to 14.80% ($p<0.05$).

A multivariate analysis demonstrated that, on average, STI patients who were Hispanic, black, male, or aged >24 years were more likely to be diagnosed at an STD clinic than their counterparts (Table 1). Listwise exclusion of missing values in the regression reduced the total number of STI records by 17% (from 20,987 to 17,487).

Discussion

The results of this study demonstrate a continued demand for municipal STD clinics during the year following implementation of the ACA, as the overall proportion of STI diagnoses made at these safety net clinics did not change. In addition, ethnic and racial minorities and men were more likely to be diagnosed at STD clinics. These populations are at increased risk of STIs and less likely to have established sources of primary care.⁶⁻⁹

Many factors likely contributed to the steady utilization of STD clinics in 2014. STD clinics offer walk-in services free of charge, improving access to uninsured populations. A recent study predicted that, despite the ACA, more than 10% of Americans are expected to remain uninsured over the next 8 years and, by 2023, 4.7 million uninsured people will be in need of STI services.¹⁰

Even pre-ACA, approximately a third of patients visiting the San Francisco and Denver municipal STD clinics were insured, suggesting that patients use STD clinics for reasons other than a lack of insurance.^{6,9,11} In 2015, approximately 50% of patients receiving services at the Baltimore City STD clinic were insured, primarily through Medicaid. STD clinics are preferred because of convenience, confidentiality, and cultural competence in treating vulnerable populations.^{4,7,9,11,12}

Hispanic ethnicity, black race, male sex, and age >24 years were associated with increased risk of diagnosis at STD clinics compared with other healthcare settings. Hispanic immigrants in Baltimore may rely on STD clinics, as many are ineligible for insurance coverage owing to their immigration status. Similarly, black patients who reside within the vicinity of the STD clinics face stressors associated with lack of insurance, including poverty, lack of trust in the traditional healthcare system, substance abuse, and urban violence. The finding that men were more likely to be diagnosed at STD clinics than women was not surprising because men have lower utilization of traditional healthcare resources than women of childbearing age.^{8,12}

Given the current fiscal environment, budget cuts may be inevitable, and STD clinics must seek alternative methods to maximize efficiency. Express testing or STD testing without a full clinical exam on asymptomatic patients can significantly reduce patient waiting time.¹³⁻¹⁵ Likewise, third-party billing, including Medicaid billing, could diversify revenue streams.²

Limitations

Only 1 year of surveillance data after the 2014 ACA insurance expansion measures was available, so these findings may be premature. However, the number of patient visits to the BCHD STD clinics remained stable in 2015 compared to 2014, more than 1 year after the ACA's implementation. Of note, budget cuts made to the BCHD STD clinics in October 2013 reduced operating hours by nearly 50% and an express testing pathway was implemented. These changes would have been expected to cause a decrease in the proportion of diagnoses made at STD clinics in 2014 compared with 2013, but this was not the case, demonstrating steady demand.

The multivariate analysis excluded a greater proportion of STI cases occurring at non- STD clinic locations owing to increased propensity of missing demographic data by these providers. However, bias and a Type II error are unlikely, as the excluded proportions were similar in 2013 and 2014. Finally, this study represents one urban center, and STI data from other cities must be analyzed to fully understand the ACA's effects on STD clinic utilization on a national scale.

Conclusions

Utilization of STD clinic services—particularly among high-risk individuals—has remained steady after the implementation of the ACA, substantiating their need for continued funding. Although the ACA has made important strides in expanding health insurance coverage, gaps persist and barriers to timely access to STD-related healthcare services are common.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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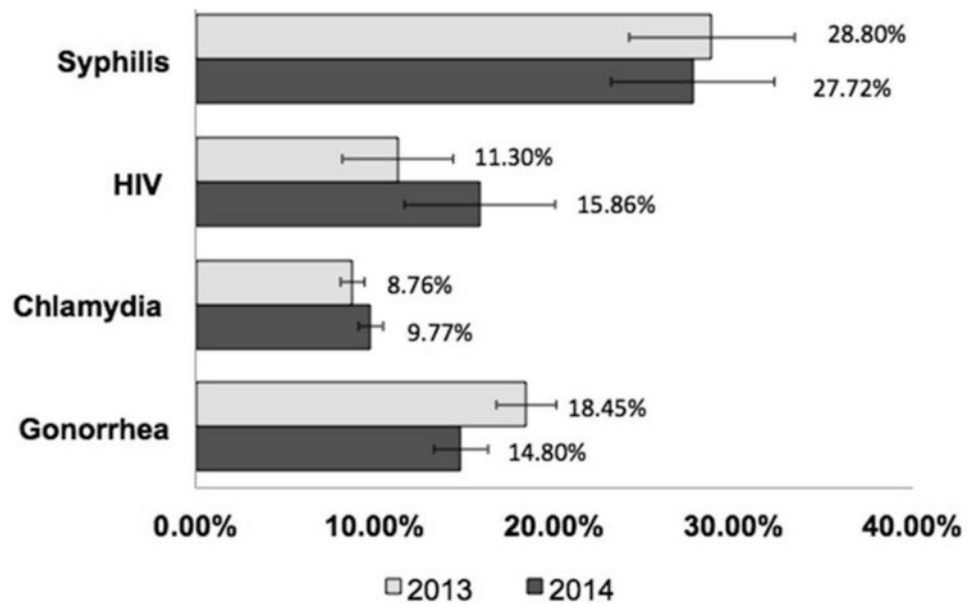


Figure 1. STIs diagnoses made at municipal STD Clinics before and after the ACA's Medicaid and private insurance expansions, Baltimore City, Maryland. STI, sexually transmitted infection; STD, sexually transmitted disease; ACA, Affordable Care Act

Table 1
Factors Associated With STI Diagnosis at a Municipal STD Clinic, Baltimore City, MD, 2013-2014

	Diagnosed at STD clinic		Not diagnosed at STD clinic		Unadjusted relative rate		Adjusted relative rate ^a	
	N= 2,218	%	N= 15,260	%	RR	(95% CI)	aRR	(95% CI)
Year								
2013	1,112	12.4	7,853	87.6	1.00		1.00	
2014	1,106	13.0	7,407	87.0	1.05	(0.97-1.13)	1.03	(0.95-1.11)
Age								
<24 yrs.	1,231	10.6	10,396	89.4	0.63	(0.58-0.68)**	0.76	(0.71-0.83)**
>24 yrs.	987	16.9	4,864	83.1	1.00		1.00	
Hispanic								
No	2,150	12.6	14,910	87.4	1.00		1.00	
Yes	68	16.3	350	83.7	1.28	(1.03-1.61)*	1.52	(1.20-1.93)**
Black race								
No	201	12.0	1,469	87.96	1.00		1.00	
Yes	2,017	12.8	13,791	87.2	1.06	(0.93-1.21)	1.34	(1.15-1.55)**
Sex								
Female	885	8.0	10,163	92.0	1.00		1.00	
Male	1,333	20.7	5,097	79.3	2.59	(2.39-2.80)**	2.44	(2.25-2.65)**

^a Adjusted for year of diagnosis, age, ethnicity, race, and sex using log binomial regression

Note: Boldface indicates statistical significance

* $p < 0.05$;

** $p < 0.001$.

STI, sexually transmitted infection; STD, sexually transmitted disease