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Implementing Insurance Billing in Local Health Department Sexually Transmitted Disease Clinics in Virginia, 2017

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Abstract

In 2017, the Virginia Department of Health implemented billing of insurance in local health department sexually transmitted disease clinics. We examined data collected by Virginia Department of Health related to clinic encounters, billing, and revenue from sexually transmitted disease clinics statewide. Implementing insurance billing created a new revenue stream for local health departments.

BACKGROUND

Over the past decade, budget reductions have led many local health departments (LHDs) to reduce public sexually transmitted disease (STD) prevention services.^{1–3} Billing insurance is becoming a common response to address declines in public health funds and changes in the health care system.^{3–8} In this report, we describe the implementation of billing in all 113 LHD STD clinics in Virginia in 2017. Although Virginia expanded Medicaid coverage in January 2019,^{9,10} analysis of 2017–2018 data provides an illustration of the budgetary impacts of billing for STD services in a non-Medicaid expansion state.

The goal of this report is to document the results of billing implementation in LHD STD clinics in Virginia. We also describe some key lessons learned and challenges in the implementation process.

METHODS

The Virginia Department of Health (VDH) bills for its other clinical programs such as family planning and immunization; therefore, billing implementation brought STD clinics in line with the other clinical programs. In 2017, but before the inception of billing, Virginia's

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state laboratory decided to discontinue performing STD and HIV testing. As a result, testing transitioned to a commercial laboratory with the implementation of billing.

From the onset of billing, VDH collected data from all 113 LHD STD clinics regarding STD clinic encounters, testing, billing, and revenue. Data were collected through WebVision, a VDH proprietary patient demographics and billing system. With the exceptions of Arlington and Fairfax, all LHDs can access WebVision, which assists in the continuity of care. At the end of each visit (or business day), the patient encounter information is entered into WebVision. This includes patient demographics, financial responsibility, laboratories, and other quantifiable data related to the visit.

An encounter (visit) is defined as face-to-face interaction with a clinician or nurse. A patient can account for multiple encounters over time, but the number of encounters per patient is limited to one per day (e.g., a person seen in different clinics, within a single LHD on a single day, is one encounter). When a patient registers for clinic services, a “consent for services” form is signed, which explains that insurance is billed, if applicable. The patient can refuse to use insurance and pay out-of-pocket. The VDH uses a sliding fee scale to determine the patient’s financial responsibility. To minimize barriers to accessing care, VDH policy exempted a patient’s clinic visit from billing if any of the following conditions were met: the patient was referred by a disease intervention specialist, private provider, or pharmacist for a reportable STD; the patient was referred by a sexual partner for a reportable STD; or the patient was returning for treatment of a reportable STD.

Using VDH data from July 1, 2017, to June 30, 2018 (state fiscal year 2018, or SFY18), we calculated the number of STD clinic patient encounters (overall STD encounter), number of STD tests performed (chlamydia, gonorrhea, HIV, hepatitis B/C, and/or syphilis), percentage of encounters in which a patient or an insurance company was billed (billable encounter), percentage of billable encounters in which the patient refused to use insurance, and the amount of revenue collected from patients and insurance. This project was deemed a program evaluation activity and thus exempt from institutional review board review.

RESULTS

During SFY18, VDH documented 42,981 encounters resulting in 144,080 tests (Table 1). Of the total encounters, 18% were billable encounters. Data on insurance type were not available. Overall, 1.2% of patients refused to use insurance. Local health departments collected 67% of the amount billed to insurance. During this same period, \$135,432 was billed to patients and \$166,094 was received from patients (including payments for services provided in prior periods).

Billing also reduced testing costs for VDH. With the transition of HIV and STD tests from the state to a commercial laboratory, tests were directly billed to insurance companies. Based on data from the commercial laboratory, the total reduction in testing costs to VDH during SFY18 was approximately \$173,886. Combined with the amount collected from billable encounters, there was a positive fiscal impact of almost \$355,000 for VDH.

DISCUSSION

Billing created a new revenue stream for LHDs, which has been used to supplement existing public health work in Virginia and help address uncertainties in budgets. Before billing, the state STD and HIV programs funded all HIV and STD testing in the LHDs. With the onset of billing, the programs currently only pay for those who qualify as exempt. The cost savings allow the state programs to shift resources to expand testing in non-LHD settings.

The percentage of patients who refused to use their insurance (1.2%) was substantially lower than the refusal rate of approximately 50% to 60% reported in other studies.^{7,8,11} These differences in refusal rates across studies might be attributable to differences in the options available to the patients. For example, although Montgomery and colleagues⁸ reported that only half of insured patients at the Rhode Island STD Clinic used their insurance to pay for laboratory services, at the time their study was conducted the clinic provided services free of charge to those patients who were unwilling to use their insurance. When the clinic changed its policy so patients with insurance were required to pay out-of-pocket if they refused to use their insurance, there was no notable reduction in patient visits to the clinic.³ This latter scenario is more comparable to Virginia, in which patients unwilling to use their insurance are required to pay for services on a sliding fee scale. Collectively, this body of research suggests that although insured patients may have a strong preference not to use their insurance at STD clinics, most might do so when their only other option is to pay out-of-pocket.

There was a difference between the average amount collected from insurance companies per billable encounter (\$23.40) and per overall STD encounter (\$4.21). An important reason for this is that the exemption policy in Virginia is broader than other states. These exemptions are a main reason why only 18% of STD clinic encounters in Virginia were billable.

Implementing billing created new challenges as well. Based on feedback from staff, the duration of the visit may have increased by at least 15 minutes because of the determination of financial responsibility during registration and changes in medical record documentation. Some clinic staff were reluctant to implement billing, citing concerns such as a reduction in demand for STD clinic services and increases in morbidity. Similar concerns regarding billing have been documented in other settings.^{3,12} Lessons learned in the transition to billing include the need to standardize clinic procedures to ensure adherence to billing requirements, as well as the need for ongoing technical assistance related to appropriate medical record documentation.

Our analysis of 2017–2018 data provides an illustration of the budgetary impacts of the initiation of billing in a state before Medicaid expansion. This analysis also provides a baseline to examine the effects of Medicaid expansion. Even after Medicaid expansion, many individuals will remain uninsured and require safety-net STD services.^{8,13–16}

This analysis has several limitations. First, it focuses on STD clinics in LHDs in Virginia and is not necessarily generalizable to other states. For example, states that allow for fewer exemptions from billing might have a higher percentage of billable STD clinic encounters and thus might receive a higher amount from insurance companies per STD clinic encounter

than the \$4.21 calculated for Virginia. Second, in calculating the amount received from billing per STD clinic encounter, we only included the \$181,000 received from insurance. The amount received per encounter would be higher had we included the \$166,094 received in patient payments. However, we did not include patient payments in our main analysis owing to limitations in the data. Specifically, the amount received from patients during the study period includes amounts received for services provided before the study period, and thus, it is not a precise assessment of the revenue obtained from the billing of patients for services provided during the period analyzed. Third, we were unable to assess the effect of billing on the number of STD clinic encounters owing to a change in the standard definition of an encounter. Before billing, telephone conversations with a client were considered an encounter in some of the LHDs. In transitioning to billing, VDH standardized the definition of an encounter as referenced in the Methods section. An individual analysis of clinic encounters before and post billing showed a decline in encounters for 82% of clinics with an overall 22.6% decline in encounters. We are unable to determine how much of this decline was attributable to the change in how encounters were defined versus an actual change in demand for services. Fourth, we did not have data on patient characteristics such as employment status or type of insurance.

In conclusion, implementing insurance billing created a new revenue stream to support STD prevention services in Virginia but also created challenges. In the future, pilot interventions are planned to address these and other challenges and improve the billing and collection rate. As others have noted, more research is needed to understand patient acceptability of insurance use at STD clinics, the effect of billing on patient demand for STD clinic services and disparities (e.g., by race/ethnicity) in access to these services, challenges to implementing billing, and other related issues.^{3-7,11,17,18} Furthermore, more comprehensive analyses could be conducted to estimate the overall effects and cost-effectiveness of insurance billing by STD clinics.

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TABLE 1.

Number of STD clinic encounters, number of STD tests, and insurance billing information from LHD STD clinics in Virginia (July 1, 2017–June 30, 2018)

Item Estimated	Result
No. STD clinic encounters	42,981
No. STD tests performed *	144,080
STD clinic encounters classified as billable, no. (%)	7,736 (18)
Amount billed to insurance companies †	\$270,361
Amount received from billing insurance companies †	\$181,000
Amount received from insurance companies per billable STD clinic encounter	\$23.40
Amount received from insurance companies per STD clinic encounter (overall)	\$4.21

* Of the 144,080 tests, 61,751 were for chlamydia/gonorrhea using a nucleic acid amplification test, 37,851 were serologic tests for syphilis (reverse screening cascade), 37,765 were serologic tests for HIV (fourth generation), 3098 were serologic tests for hepatitis B, and 3885 were serologic tests for hepatitis C.

† This table excludes amounts billed to patients and received from patients. From July 1, 2017, to June 30, 2018, \$135,432 was billed to patients and \$166,094 was received from patients (including payments received in the referenced period for services provided in prior periods).