Integrating Routine HIV Screening Into a Primary Care Setting in Rural North Carolina

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Blacks living in the southern United States are disproportionately affected by HIV infection. Identifying and treating those who are infected is an important strategy for reducing HIV transmission. A model for integrating rapid HIV screening into community health centers was modified and used to guide implementation of a testing program in a primary care setting in a small North Carolina town serving a rural Black population. Anonymous surveys were completed by 138 adults who were offered an HIV test; of these, 61% were female and 89.9% were Black. One hundred patients (72%) accepted the test. Among those Black survey respondents who accepted an offer of testing, 58% were women. The most common reason for declining an HIV test was lack of perceived risk; younger patients were more likely to get tested. Implementation of the testing model posed challenges with time, data collection, and patient flow.

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HIV infection continues to be a significant worldwide source of morbidity and mortality despite advances in the medical management of people living with HIV (PLWH) infection; within the United States, the South has been disproportionately affected by the epidemic (Centers for Disease Control and Prevention [CDC], 2011). According to the 2009 HIV/AIDS surveillance data from the CDC, 8 of the 10 states reporting the highest rates of new HIV infections were in the South, 46% of new AIDS diagnoses were in the South, and half of the newly reported cases of HIV were in the South (CDC, 2011). Of the 40 states and 5 territories that reported new HIV diagnoses in 2009, North Carolina ranked 8th, with 23.8 new infections per 100,000 population, slightly higher than the overall U.S. rate of 21.1 per 100,000, and the rate of AIDS diagnoses was the 11th highest in the country (North Carolina Department of Health and Human Services [NCDHHS], 2011). Since the early 1990s, roughly 25% of HIV-infected persons in North Carolina have lived in rural areas (NCDHHS, 2009). In 2006 North Carolina had the highest reported rates of both HIV infection and AIDS among U.S. rural areas, and rural Vance County, where this project

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was conducted, had the 12th highest rate of newly reported HIV-infected individuals in the state between 2008 and 2010 (NCDHHS, 2011).

North Carolina has the eighth highest percentage of the Black population in the United States, and in 2010 the rate of new HIV infections among adult/adolescent Blacks in North Carolina was more than 10 times greater than the rate of new infections among adult/adolescent Whites (NCDHHS, 2011). The highest rate of new infections in 2010 in North Carolina was found among adult/adolescent Black males (94.0 per 100,000 population), and the largest disparity in HIV diagnoses in North Carolina existed between adult and adolescent White and Black females; the 2010 HIV rate in Black females was approximately 17 times higher than that in White, non-Hispanic females (NCDHHS, 2011).

The risk for HIV transmission in North Carolina is highest among men who have sex with men (MSM), who accounted for 75% of new adult/adolescent HIV cases in 2010; Black MSM had nearly twice the number of cases as did White non-Hispanic MSM. Heterosexual transmission, which accounted for 95% of cases among adult/adolescent females, accounted for 21% of all new cases in 2010 (NCDHHS, 2011).

It is estimated that 20% of the nearly 1.2 million PLWH in the United States do not know their HIV-antibody status and therefore may unknowingly infect others (CDC, 2011); those who are unaware of their HIV status account for an estimated 54% to 70% of new infections (Marks, Crepaz, & Janssen, 2006). Additionally, 40% to 50% are being diagnosed late in infection with CDC-defined AIDS (Krawczyk, Funkhouser, Kilby, Kaslow, Bey, & Vermund, 2006; Mugavero, Castellano, Edelman, & Hicks, 2007). Treatment of HIV infection substantially reduces morbidity and mortality; early initiation of antiretroviral therapy can reduce a person's risk for transmitting the virus to an uninfected partner by as much as 96% (Cohen et al., 2011), and becoming aware of one's HIV status is known to lead to behavioral changes that reduce the risk for transmission (Marks, Crepaz, Senterfitt, & Janssen, 2005; Weinhardt, Carey, Johnson, & Bickham, 1999). All of these facts underscore the need for effective HIV-prevention and -screening strategies.

In 2006 the CDC issued a recommendation that all people ages 13 to 64 years be offered HIV-antibody testing as a routine part of primary care (Branson et al., 2006). In response to and in support of that recommendation, the National Association of Community Health Centers (NACHC) conducted a pilot implementation study of HIV-testing programs in six community health centers in Mississippi, North Carolina, and South Carolina from December 2006 through April 2008 (Myers, Modica, Dufour, Bernstein, & McNamara, 2009). The success of that pilot led to the development of an innovative national model for integrating HIV screening into routine primary care (Modica, 2009). The NACHC model integrated routine testing into a clinic's workflow utilizing existing staff, while adding only a few minutes to the patient visit.

A privately owned primary care clinic (referred to in this paper as *PCC*) and the Northern Outreach Clinic (NOC), a grant-funded HIV clinic with a staff skilled in rapid HIV testing, are located in Henderson, North Carolina, the county seat of rural Vance County. The two clinics, which provide care for a predominantly underserved Black population, joined together to integrate a routine HIV-screening program adopted from the NACHC testing model in February and March 2012 at the PCC, utilizing rapid HIV-testing kits provided by the North Carolina Rapid HIV Testing Program.

The primary aim of this project was to increase HIV testing in the Henderson community and surrounding rural area by integrating rapid HIV testing into the primary care setting. The second aim of the project was to examine the relationship between sociodemographic variables and acceptance of HIV testing. In this paper, the HIV-testing rates for the first 7 weeks of project implementation are reported, the challenges involved in the planning and initial implementation of the project are described, and the sociodemographic variables associated with test acceptance that were derived from survey data are discussed.

Methods

Study Sample

Between February 1, 2012, and March 20, 2012, 100 patients underwent rapid HIV-antibody testing at the PCC by a team of nursing and medical