Community-Based HIV Testing among American Indians in Pine Ridge, South Dakota, 2008–2009

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Abstract

Purpose: A large tribe in South Dakota implemented community-based HIV testing to increase access to testing and determine use of health facilities.

Methods: From October 2008 to October 2009 the program offered rapid HIV tests at community events, and asked participants about health care usage.

Results: A total of 429 persons were tested. All persons received results. Two tests were reactive, but negative in confirmatory testing. Most participants (80%) had accessed care in the past 12 months, either a scheduled visit (44%) and/or an emergency/acute care visit (47%).

Conclusions: These results show that HIV screening in health facilities is critical. In this sample, HIV screening in scheduled and non-scheduled medical visits would reach most participants. The community-based program has grown in acceptance and usage and will continue, and a tribally run program has begun on an even larger scale.

Introduction

Recent CDC guidelines recommend at least one HIV test of 13 - 64 year olds, regardless of risk factors.[1] Many persons at risk for HIV infection do not consider themselves at risk, or do not disclose risks to their provider, and patients with HIV may visit health facilities for years without being tested and diagnosed.[2-5] A universal, non-risk factor-based strategy may identify more infected persons.[1,6-8] Patients who are seen in health care setting but not tested for HIV represent a missed opportunity, especially in emergency or acute care settings.

Early detection of HIV/AIDS, which facilitates initiation of highly active antiretroviral treatment, is essential to increase survival time post-diagnosis of patients with HIV/AIDS.[9] American Indians/Alaska Natives (AI/AN) rank third in the rate of new HIV infections (incidence 14.7/100,000 population in 2007) among all US races and ethnicities.[10] In addition, American Indians/Alaska Natives have the shortest survival time from AIDS diagnosis to death,10 underscoring the importance of early detection in this vulnerable population.

Pine Ridge Hospital and its two satellite clinics serve about 50,000 tribal members of the Oglala Sioux Indian Tribe. The health care facilities are part of the Indian Health Service (IHS), a federal agency within the Department of Health and Human Services, which is responsible for providing health services to eligible AI/AN. The IHS is the principal health care provider and health advocate for Indian people, and its goal is to raise their health status to the highest possible level. The IHS provides a comprehensive health service delivery system for approximately 1.9 million AI/AN who belong to 562 federally recognized tribes in 35 states.

Starting in 2005, Pine Ridge medical staff began offering HIV testing at key community events and venues. In 2008, Pine Ridge Hospital began discussions to expand HIV screening services as per CDC guidelines. In 2008 - 2009, the community-based program sought to determine recent use of health facilities by participants to see if facility-based screening would reach this cohort.

Methods

From October 2008 to September 2009, community-based HIV tests were offered in public and institutional settings such as tribal sports tournaments, pow-wows, and a tribal jail. Tests were generally offered in an exhibit booth setting. One outreach worker gave pre-test counseling, took patient information, and administered the test. A second worker gave results and post-test counseling in an area separated by a folding screen for privacy. In some settings, persons were eligible for a raffle prize if they tested, although the raffle ticket was only given once the person came for their results.

The community outreach program used oral rapid testing technology (OraQuick Advance Rapid HIV-1/2 Antibody Test, OraSure Technologies, Inc. Bethlehem, PA). Persons who consented to testing were given a unique ID number, which was used to identify them for post-test counseling. Participants provided two phone numbers and an address to allow for follow up in case a person did not return for test results.

In order to best determine the role of community-based screening in reaching persons who would not otherwise access care and routine HIV screening, we asked participants about their access to care in the 12 months prior to the testing date and recorded data concerning the location and number of these visits. Conditional maximum likelihood estimates of the odds ratio and Fisher Exact 95% confidence intervals (95% CI) were

calculated using Open Epi (*http://www.openepi.com/TwobyTwo/TwobyTwo.htm*).

Results

A total of 429 persons were tested, of whom 408 were tested at public venues (pow-wows, sports tournaments, and a health fair), and 21 in a tribal correctional facility. The largest single event tested 250 persons. All persons received the rapid test results on the same day, at the venue where they tested. Two rapid oral tests were initially reactive (preliminary positives); however in both cases, they were found to be negative during confirmatory testing.

Most respondents (344/429, 80.2%) had accessed health care in the past 12 months. Of these, a nearly equal proportion of patients had accessed care via a scheduled visit (154/344 44.8%) as via acute care or an emergency room (163/344, 47.4%). A small proportion (23/344, 6.7%) had accessed both scheduled and non-scheduled medical care. Women were more likely to have accessed health care (Table 1), and among those who had accessed health care, most had been seen at a scheduled visit. Men were more likely to have accessed acute care than scheduled care. Among persons who had accessed any type of medical care in the past 12 months, most (279/344, 81%) had accessed care at a direct-care IHS facility.

Discussion

In this group of AI/AN participants who participated in community-based screening, a high proportion had accessed health care facilities, primarily IHS facilities, in the prior twelve months. The frequent use of health care facilities in this sample underscores the importance of implementing HIV screening in health care settings. Acute care facilities are an important opportunity to offer HIV screening to men. Pine Ridge hospital and its two satellite clinics, with technical assistance and fiscal support of the IHS National HIV/AIDS Program, has begun to offer more systemic HIV screening to all 13 - 64 year olds as of July 2009.

Community-based screening has gained acceptance over time; the number of persons who agreed to be tested at one public venue has grown over 300% in three years (from 80 to 250 persons). Community screening also offered qualitative advantages. Testing in locations that are comfortable to the community has been conducive to more in-depth and candid counseling sessions, helped de-stigmatize HIV testing, and provided a testing environment that is perceived as being more confidential than small rural health clinics. In addition, program staff has noted a shift in participants from early years of the program from a low-risk demographic (older married couples and grandmothers testing for the incentive) to a higher-risk population (younger persons within the age range of most sexually transmitted diseases who are testing primarily to learn their serostatus).

As the result of numerous trainings, many tribal community health workers (CHRs) are qualified in giving rapid HIV tests, and to provide results and referrals to HIV medical and social services. The tribal program has grown to eclipse the federal program in 2010, providing over 600 community-based tests.

These data have certain limitations. This sample may not be representative of the community as a whole. We did not ask participants if they had been tested for HIV during their visits to health care facilities, so we cannot estimate the number of missed opportunities for HIV testing, nor the proportion of patients who chose community-based testing over facility-based testing for reasons of convenience, comfort, or other reasons.

Conclusions

The utilization of health care services by this sample of the population is high, and facility-based HIV screening is a critical service. The community-based program is growing in size and acceptance, and provides community members with an alternative setting to small, rural, federal clinics for HIV counseling and screening.

References

1. - CDC Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health-Care Settings. *MMWR* Recommendations and Reports September 22, 2006/55(RR14);1-17.
2. - Alpert PL, Shuter J, DeShaw MG, et al. Factors associated with unrecognized HIV-1 infection in an inner-city emergency department. *Ann Emerg Med.* 1996;28:159-64.
3. - Liddicoat RV, Horton NJ, Urban R, et al. Assessing missed opportunities for HIV testing in medical settings. *J Gen Intern Med.* 2004;19:349-56.
4. - Jenkins T, Gardner E, Thrun M, et al. Risk-based human immunodeficiency virus testing fails to detect the majority of HIV-infected persons in medical care settings. *Sexually Transmitted Diseases*. May 2009;33(5):329-333.
5. - Kuo A, Haukoos J, Witt M, et al. Recognition of undiagnosed HIV infection: an evaluation of missed opportunities in a predominantly urban minority population. *AIDS Patient Care and STDs.* 2005;19(4):239-246.
6. - CDC. Voluntary HIV testing as part of routine medical care -Massachusetts, 2002. *MMWR*. 2004;53:523-6.
7. - CDC. HIV prevalence, unrecognized infection, and HIV testing among men who have sex with men five US cities, June 2004-April 2005. *MMWR*. 2005;54:597-601.
8. - CDC. Anonymous or confidential HIV counseling and voluntary testing in federally funded testing sites United States, 1995-1997. *MMWR*. 1999;48:509-13.
9. - Palella FJ, Deloria-Knoll M, Chmiel JS, et al.

Survival benefit of initiating antiretroviral therapy in HIV-infected persons in different CD4+ cell strata. *Ann Intern Med.* 2003;138:620-6.
10. CDC. HIV/AIDS Surveillance Report, 2007. Vol. 19. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2009: *http://www.cdc.gov/hiv/topics/surveillance/resources/reports/2007report/figure4.htm*

Table 1. Use of health care facilities in the previous 12 months by 429 American Indian participants in community-based rapid HIV testing, by sex, South Dakota, 2008–2009*

Characteristic	Women	Men	Odds Ratio	99% Confidence Interval
Accessed any health care in previous 12 months	216/255 (84.7%)	128/174 (73.6%)	2.0	1.2-3.3
Among those who accessed care, type of care:				
Scheduled visit	108/216 (50.0%)	46/128 (35.9%)	1.8	1.1-2.8
Acute care	68/216 (31.5%)	56/128 (43.8%)	0.6	0.4-1.0
Emergency room	20/216 (9.3%)	14/128 (10.9%)	0.8	0.4-1.9
Both scheduled and non-scheduled care	20/216 (9.3%)	12/128 (9.4%)	1.0	0.4-2.3
IHS facility	176/216 (81.5%)	103/128 (80.5%)		

* Categories not mutually exclusive -