

Prevalence of HIV Testing Provision at Community Organizations Serving Young People in a Mid-Atlantic City, 2013-2014

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Abstract

Objectives: Little is known about the prevalence of human immunodeficiency virus (HIV) testing at community organizations or the organizational characteristics associated with testing. The objective of this study was to describe (1) the prevalence of HIV testing at community organizations serving young people in a mid-Atlantic urban city and (2) the characteristics associated with organizations that provide such testing.

Methods: We conducted telephone or in-person surveys between February 2013 and March 2014 with 51 directors and administrators of community organizations serving young people. We asked whether the organization provided HIV screening or testing, and we collected data on organizational characteristics (eg, setting, client, and staff member characteristics; services offered). We generated frequencies on measures and used Poisson regression analysis to examine the association between testing and organizational characteristics.

Results: Of the 51 organizations surveyed, 21 provided HIV testing. Of the 30 organizations that did not provide HIV testing, only 7 had a relationship with programs that did provide it. Characteristics associated with the provision of HIV testing included offering general health services (relative risk [RR] = 4.57; 95% confidence interval [CI], 1.68-12.48; $P = .003$) and referral services for sexually transmitted infection screening (RR = 5.77; 95% CI, 1.70-19.59; $P = .005$) and HIV care (RR = 4.78; 95% CI, 1.61-14.21; $P = .005$), as well as among administrators who perceived their staff members were comfortable talking with young people about sexual health (RR = 3.29; 95% CI, 1.28-8.49; $P = .01$).

Conclusions: The prevalence of HIV testing provision at organizations serving young people in this mid-Atlantic city was low, and few organizations offered linkages to HIV testing. Strategies are needed to increase the provision of HIV testing at community organizations serving young people, whether through direct or linked approaches.

Keywords

HIV testing, community health, adolescents, young adults, prevention, health education

Young people aged 13-24 in the United States, particularly male members of racial/ethnic minority populations and young men who have sex with men, are at substantial risk for human immunodeficiency virus (HIV) infection.^{1,2} The Centers for Disease Control and Prevention (CDC) recommends that all people aged 13-64 be tested at least once in their lifetime for HIV and that those at high risk of acquiring HIV be tested at least annually.³ Rates of HIV testing are low among young people, in part because of inadequate access to testing.^{4,5} Community organizations serving young people may represent alternate testing locations to traditional clinical settings. Understanding the characteristics of community organizations that

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provide HIV testing could help organizations serving young people make decisions about providing HIV testing.

Evidence suggests that young people, particularly members of sexual minority populations (eg, people who are lesbian, gay, bisexual, or transgender), hold favorable opinions about HIV testing in community organizations and view such places as key access points for support of their psychosocial needs.⁶ Community organizations are often located in close proximity to where high-risk young people live and, thus, might facilitate the testing of young people who are unaware of their HIV status.^{7,8} Recent studies of rapid HIV testing among adolescents and adults as part of outreach and in community settings found that testing at social service community organizations resulted in higher proportions of new HIV diagnoses, as compared with more standard approaches (eg, at clinical settings).^{9,10}

Despite the potential of community organizations to provide HIV testing for young people, little is known about the prevalence of HIV testing at community organizations or the organizational characteristics associated with HIV testing provision. For example, organizations that serve only young people may be more likely to provide HIV testing than settings that serve a wider age range. A multistage national random sample of community organizations in urban settings found the prevalence of rapid HIV testing provision to be about 10%. However, this estimate was based on data collected from 2003 to 2006 and is not specific to organizations serving young people, and the study did not examine organizational characteristics associated with provision of HIV testing.¹¹ The objective of this study was to describe the prevalence of HIV testing provision among community organizations serving young people and the organizational characteristics associated with the provision of HIV testing.

Methods

Study Procedures

This study was part of a larger ongoing program focused on engaging adolescents and young men (aged 15-24) using clinical services in a mid-Atlantic urban city. We identified the geographic target area for the program through a series of steps. Using the 2010 American Community Survey,¹² we identified census tracts with the greatest concentration of racial/ethnic minority adolescents and young men. Using public health surveillance data, we then overlaid information on census tracts in which the number of reported cases of chlamydia, gonorrhea, syphilis, and HIV (separately) was above the 50th percentile among racial/ethnic minority adolescents and young men from 2009 to 2011. This information identified 1 contiguous geographic area comprising 6 ZIP codes in the city, which had a concentration of racial/ethnic minority adolescents and young men and a need for health care services for people with HIV and sexually transmitted infections (STIs).

We then identified potential organizations serving young people from several resources, including the Mayor's Office of Information Technology, city guides for young people, the

Well-being of Adolescents in Vulnerable Environments study (which mapped organizations serving young people in the targeted geographic area),¹³ Google map searches (based on a combination of search terms, such as "youth" and "community-based organizations"), and referrals from surveyed organizations. We then geocoded these organizations to identify those inside the geographic target area and within a half-mile buffer around it. For this analysis, we defined organizations as community based (ie, those located in and focused on serving a community; eg, after-school programs, community centers, or family centers), social service based (ie, organizations that may not necessarily be located in a community but serve specific populations or provide specific services to populations; eg, homeless, Latino, or lesbian, gay, bisexual, and transgender), recreation center, or faith based.

We then surveyed the organizations by telephone or in person. To be included in the survey, an organization had to serve young people aged 15-24 in any capacity. Of 107 screened organizations, 9 were permanently closed, 63 served young people aged 15-24, and 35 did not serve young people aged 15-24. Of the 63 eligible organizations serving young people, 51 agreed to participate (81% participation rate). Despite repeated attempts, we could not reach 9 organizations (5 community-based organizations, 2 recreation centers, and 2 faith-based organizations). Three organizations declined to participate in the survey (1 recreation center, 1 faith-based organization, and 1 community-based organization).

We surveyed 36 directors or administrators by telephone and 15 in person. Trained research staff members administered surveys between February 2013 and March 2014 and entered responses into a Microsoft Access database. Study participants provided oral consent as outlined by the Johns Hopkins University-approved human subjects review board protocol.

Study Measures

HIV Testing. We assessed respondents on whether the organization provided HIV screening and/or testing. We asked organizations that provided HIV testing if they conducted testing on-site with internal staff members (eg, a nurse) or with external staff members or other programs. We asked organizations to name the external programs used, and we coded these programs by type (outreach testing, health department, clinic, another community organization, or unsure/missing).

We asked organizations that did not provide HIV testing if they had an established relationship with a program that conducts testing off-site to which they could refer clients. We asked organizations to name these programs (hereinafter called "linkage programs"); then, we coded them by type as described previously and by approach (eg, referral, flyer).

Basic Organizational Characteristics. We classified organizations by type as community based, social service based, recreation center, or faith based. We also assessed general characteristics: number of years in operation, types of staff members (eg, teachers and coaches, health staff members,

counselors or case workers, and peer leaders), and whether the organization had an explicit mission to serve young people.

Client Characteristics. We assessed the following for each organization: age of members served (coded as all ages, ≤ 24 , or 15-24), whether it served African American or Hispanic young people, the number of young people served per year (aged 15-19 vs 20-24), whether it served male young people (aged 15-19 vs 20-24), the number of male young people served per year, and whether it served young people who were gay, out of school because of dropping out, or unstably housed. For count measures, we calculated the median of the measure and created categorical measures (below vs at or above the median).

Services Available. We assessed whether the following non-health services were offered: arts programming, academic programming, tutoring, sports activities, employment assistance, English as a second language, general legal assistance, housing, supplemental income assistance, and food service assistance. We also determined whether organizations offered general health services and mental health services (eg, addiction, aggression counseling workshops or training), as well as services for HIV-positive young people (eg, Ryan White) and groups for young males and young gay males.

Referral Services Available. We assessed availability of the following referral services: STI screening other than for HIV, HIV care, family planning, and gay males (eg, for support groups).

Perceived Staff Member Knowledge and Attitudes. We assessed respondents' perceptions of their staff members' familiarity with 7 dimensions of clinical care offered for young people in the city (confidential, free/low cost, HIV test, STI test, pregnancy test, family planning, and preconception care) and created a knowledge index about clinical settings that ranged from 0 to 7, with higher scores indicating greater knowledge about clinical settings accessible to young people (Cronbach $\alpha = 0.90$). We also assessed the degree to which respondents perceived that their staff members were comfortable talking with young clients about sexual health issues. We coded responses on a scale from 1 to 3 (1 = not at all comfortable or don't know, 2 = somewhat comfortable, and 3 = very comfortable).

Data Analyses

We first generated frequencies on the proportion of organizations providing HIV testing and whether testing was provided by internal or external staff members or programs (among those providing testing) and whether linkage programs were in place (among those not providing testing). Next, we generated frequencies for categorical measures and means and standard deviations for continuous measures for organization characteristics. We then conducted crosstabulations and bivariate Poisson regression analyses to examine associations between provision of HIV testing and basic organizational characteristics, client characteristics, services available, and perceived staff member knowledge

Table 1. Number of community organizations serving young people and providing HIV testing in a mid-Atlantic city, February 2013–March 2014

HIV Testing Provided	Organizations (N = 51), No. (%)
Yes	21 (41)
By internal staff members	4 (19)
By external agency	17 (81)
No ^a	30 (59)
Linkage program ^b in place	7 (23)
Linkage program not in place	22 (73)

Abbreviation: HIV, human immunodeficiency virus.

^aOne case missing data for linkage.

^bAn established relationship with a program that conducts HIV testing to which the organization could refer clients.

and attitudes. Because providing HIV testing might vary by basic organizational characteristics, we examined the association between provision of HIV testing and each variable for client characteristics, services available, and perceived staff member knowledge and attitude by adjusting for basic organizational characteristics. Because we found no differences between the adjusted and unadjusted models, we summarized data from the unadjusted analyses only. We applied Poisson regression analyses to calculate a relative risk (RR) because odds ratios overestimate RRs when the outcome event is common (incidence $\geq 10\%$).¹⁴ We managed and analyzed data with SPSS version 12.0 and Stata SE version 12.1, respectively.^{15,16}

Results

Prevalence of HIV Test Provision

Of the 51 respondents, 21 reported that their organizations provided HIV testing. Of the 21 organizations providing HIV testing, 17 reported that tests were conducted by external agencies, including testing conducted by staff members from an outreach testing program ($n = 6$), the health department ($n = 6$), a clinic ($n = 4$), another community organization ($n = 1$), or not sure ($n = 3$). Four organizations reported that testing was conducted by internal staff members. Thirty respondents reported that their organizations did not provide HIV testing, with 22 reporting no linkage programs. Of the 7 organizations that had linkage programs, 5 linked them to the health department, 1 to a clinic, and 1 to other community- or service-based organizations (Table 1).

Organization Characteristics

Most organizations were either community based ($n = 23$) or social service based ($n = 14$; Table 2). Organizations reported being in operation for an average of 27 years (standard deviation [SD] = 37; median = 16; interquartile range [IQR], 7-31). Overall, 33 (65%) organizations had case workers and counselors as staff members, 30 (59%) had teachers and coaches, and 30 (59%) had peer leaders. Twenty-one organizations had an explicit mission to serve young people.

Table 2. Characteristics of organizations serving young people and number providing HIV testing, by organizational characteristic, in a mid-Atlantic city, February 2013–March 2014

Characteristics	Total, No. (%) (N = 51)	No. of Organizations Providing HIV Testing (n = 21)	Relative Risk (95% CI) ^a	P Value
Basic organizational characteristics				
Organization type				
Community based	23 (45)	9	1.00 [Reference]	—
Social service based	14 (28)	9	1.64 (0.65-4.14)	.29
Recreation center	8 (16)	0	—	—
Faith based	6 (12)	3	1.28 (0.35-4.72)	.71
Years in operation (mean = 27; SD = 37; median = 16; IQR, 7-31)				
Below median	25 (49)	11	1.00 [Reference]	—
At or above median	26 (51)	10	0.87 (0.37-2.06)	.76
Staff composed of				
Teachers or coaches	30 (59)	11	0.77 (0.33-1.81) ^b	.55
Health professionals	21 (41)	13	2.24 (0.93-5.41) ^b	.07
No response	1 (2)	—	—	—
Case workers or counselors	33 (65)	15	1.36 (0.53-3.51) ^b	.52
Peer leaders	30 (59)	13	1.08 (0.45-2.61) ^b	.86
No response	1 (2)	—	—	—
Explicit mission to serve young people	21 (41)	7	0.71 (0.29-1.77) ^b	.47
Client characteristics				
Age focus				
All ages	31 (61)	12	1.00 [Reference]	—
Children and young people only (<=24 y)	7 (14)	3	1.11 (0.31-3.92)	.88
Young people only (15-24 y)	13 (26)	6	1.19 (0.45-3.18)	.72
Race/ethnicity focus				
Serve African Americans	42 (82)	16	0.76 (0.25-2.28) ^b	.63
No response	1 (2)	—	—	—
Serve Hispanic people	31 (61)	16	2.19 (0.73-6.56) ^b	.16
No response	3 (6)	—	—	—
No. of young people served annually				
15-19 y (mean [SD] = 124 [206]; median = 50; IQR, 20-105)				
Below median	19 (37)	12	1.00 [Reference]	—
At or above median	23 (45)	9	0.50 (0.18-1.36)	.17
No response	9 (18)	—	—	—
20-24 y (mean [SD] = 97 [129]; median = 40; IQR, 5-150)				
Below median	19 (37)	9	1.00 [Reference]	—
At or above median	20 (39)	12	0.95 (0.36-2.53)	.92
No response	12 (24)	—	—	—
Serve male clients, by age group				
15-19 y	40 (78)	16	0.80 (0.23-2.75) ^b	.72
No response	5 (10)	—	—	—
20-24 y	32 (63)	16	2.33 (0.68-8.01) ^b	.18
No response	5 (10)	—	—	—
No. of males aged 15-24 y (mean [SD] = 160 [415]; median = 50; IQR, 19-200)				
Below median	18 (35)	10	1.00 [Reference]	—
At or above median	20 (39)	11	0.90 (0.34-2.40)	.83
No response	13 (26)	—	—	—
Serve gay males aged 15-24 y	22 (43)	13	2.28 (0.91-5.71) ^b	.08
No response	2 (4)	—	—	—
Serve out-of-school young people due to dropout	21 (41)	9	1.11 (0.45-2.74) ^b	.81
No response	4 (8)	—	—	—
Serve unstably housed young people	25 (49)	14	2.35 (0.85-6.53) ^b	.10
No response	5 (10)	—	—	—
Services available				
Nonhealth services (eg, arts, academic, sports, employment assistance programming)	45 (88)	19	1.27 (0.30-5.44) ^b	.75

(continued)

Table 2. (continued)

Characteristics	Total, No. (%) (N = 51)	No. of Organizations Providing HIV Testing (n = 21)	Relative Risk (95% CI) ^a	P Value
General health services (eg, nonspecified health-related services)	21 (41)	16	4.57 (1.67-12.48) ^b	.003
Mental health services (eg, addiction, aggression counseling workshops or training)	22 (43)	13	2.14 (0.89-5.17) ^b	.09
Ryan White services (eg, services for HIV-positive young people)	8 (16)	6	2.15 (0.83-5.54) ^b	.11
Groups for males aged 15-24 y (eg, stress reduction, sexual health)	21 (41)	13	2.32 (0.96-5.60) ^b	.06
Groups for gay males aged 15-24 y (eg, support groups)	6 (12)	5	2.34 (0.86-6.40) ^b	.10
Referral services available				
STI screening other than HIV	26 (51)	18	5.77 (1.70-19.59) ^b	.005
HIV care	24 (47)	17	4.78 (1.61-14.21) ^b	.005
Family planning	22 (43)	13	2.14 (0.89-5.17) ^b	.09
Young men who identify as gay (eg, support groups)	13 (26)	8	1.80 (0.75-4.34) ^b	.19
Perceived staff member knowledge and attitudes				
Perceived staff member knowledge score about clinical settings where young people can go for sexual and reproductive health care (mean [SD] = 5.5 [2.2]; median = 7; IQR, 5.0-7.0) ^c				
Below median	25 (49)	9	1.00 [Reference]	—
At or above median	26 (51)	12	1.28 (0.54-3.04)	.57
Perceived staff member comfort talking about sexual health (mean [SD] = 2.2 [0.8]; median = 2; IQR, 1.0-3.0) ^d				
Below median	29 (57)	6	1.00 [Reference]	—
At or above median	22 (43)	15	3.29 (1.28-8.49)	.01

Abbreviations: CI, confidence interval; HIV, human immunodeficiency virus; IQR, interquartile range; SD, standard deviation; STI, sexually transmitted infection.

^aComparison results from separate bivariate Poisson regression models examining the unadjusted association between each community organization characteristic and providing HIV testing.

^bThe reference group for the relative risk is the opposite of the row's characteristic. For example, in the row for "Teachers or coaches" under "Staff composed of," the reference group would be "staff not composed of teachers or coaches."

^cKnowledge score ranges from 0 to 7, with 7 indicating that staff members were knowledgeable about all settings.

^dStaff member comfort scale from 1 (not at all comfortable or don't know) to 3 (very comfortable).

Thirty-one organizations served clients of all ages, and 13 served only young people aged 15-24. Overall, 42 (82%) organizations served African American people, 31 (61%) served Hispanic people, 40 (78%) served male clients aged 15-19, 32 (63%) served male clients aged 20-24, 22 (43%) served young gay males, 21 (41%) served young people who had dropped out of school, and 25 (49%) served unstably housed young people. Annually, organizations served an average of 124 young people aged 15-19 (median = 40; IQR, 20-105; SD = 206), 97 young people aged 20-24 (median = 40; IQR, 5-150; SD = 129), and 160 young males aged 15-24 (median = 50; IQR 19-200; SD = 415; Table 2).

Forty-five organizations (88%) provided nonhealth services. Fewer than half of the organizations provided services for general health (n = 21), mental health (n = 22), or HIV-positive young people (n = 8) or groups for male young people (n = 21) or young gay males (n = 6). On average, respondents perceived that their staff members were fairly knowledgeable about clinical settings accessible to young people (mean [SD] = 5.5 [2.2], range, 0-7 [7 = staff members were knowledgeable about all settings]) and comfortable talking

about sexual health (mean [SD] = 2.2 [0.8], range, 1-3 [3 = staff members were very comfortable talking about sexual health]; Table 2).

Organizational Characteristics Associated With Providing HIV Testing

Provision of HIV testing was associated with availability of general health services (RR = 4.57; 95% CI, 1.68-12.48; *P* = .003), referral services in place for STI screening other than for HIV screening (RR = 5.77; 95% CI, 1.70-19.59; *P* = .005) and HIV care (RR = 4.78; 95% CI, 1.61-14.21; *P* = .005), and greater perceived staff member comfort in discussing sexual health (RR = 3.29; 95% CI, 1.28-8.49; *P* = .01). Provision of HIV testing was not associated with other organizational characteristics (Table 2).

Discussion

Our study describes the prevalence of HIV test provision among community organizations serving young people in

an urban setting. Fewer than half of the organizations in our survey provided HIV testing, and among those that did not provide testing, most did not have linkage programs. We found differences in the provision of HIV testing by several organization characteristics. Provision of HIV testing was associated with organizations that offered general health services, had referral services in place for STI screening (other than for HIV) and HIV care, and greater perceived staff member comfort in discussing sexual health. Our study findings also showed opportunities to expand and integrate HIV testing in organizations that serve young people.

The provision of HIV testing in our study (41%) was higher than that found by Bogart et al (10%).¹¹ That study, which randomly sampled 12 primary metropolitan areas in 4 regions from 2003 and 2006, focused only on rapid testing, did not aim to identify organizations that served young people, and was conducted before the release of recommendations for universal opt-out HIV testing, including testing of young people.^{17,18} Future studies should evaluate the type of HIV tests used among community organizations serving young people, especially as more sensitive fourth-generation point-of-care HIV tests become available, which may be preferred for their simplicity and rapid results.¹⁹⁻²¹

Of the 31 organizations examined in our study that did not provide HIV testing, only 7 had linkage programs. Bogart et al¹¹ found that of the community organizations not focused on young people that did not provide HIV testing, 82% referred members to other organizations for testing through formal agreements or written referral procedures. Our study demonstrates the need for improved collaboration between urban community organizations and health care facilities that serve young people to better integrate community-based HIV testing and ensure that linkage programs are in place. This finding concurs with guidance from CDC and the American Academy of Pediatrics, which recommends that community organizations partner with agencies providing HIV testing and that health care providers serving young people actively forge relationships with agencies serving young people.^{3,22} In our study, most organizations that provided on-site HIV testing reported partnering with agencies that conducted the testing, rather than doing it themselves. Future research should examine whether on-site testing results in higher testing rates than off-site testing. Off-site testing may result in more barriers to testing (eg, finding the time to go, transportation issues). Future research also should address whether organizations assess members' HIV testing history to help target people in need, especially those who have never been tested. CDC has resources available at www.hivtest.org and gettested.cdc.gov that community organizations can use to help improve organizational HIV testing readiness and identify local HIV testing sites for partnership collaboration and/or linkage programs.²³

Organizational characteristics that differentiated rates of HIV testing provision included availability of general health services, having referrals in place for sexual and reproductive health-related matters, and having greater perceived

staff member comfort in addressing members' sexual health. Partnering with outside agencies, training staff members about sexual health, and developing a referral network for sexual health care are potentially easy-to-implement strategies that are low in cost and time investment. They are also in line with previous research, which suggests that making structural changes to community organizations can optimize HIV testing feasibility and sustainability (eg, external change by forming collaborative relationships with external testing sites; internal change by implementing policies and practices that promote universal HIV testing for all members).²⁴ Organizations may also be interested in training their staff members to perform HIV counseling and testing,^{23,24} although doing so may not be feasible or sustainable for all organization types. Our analysis also identified missed opportunities for HIV testing. For example, although not significant (possibly because of a small sample size), none of the recreation centers provided HIV testing, and testing prevalence was lower among organizations with a mission focused on young people.

Limitations

This study had several limitations. First, because our study was cross sectional, the direction of the observed associations could not be determined. The provision of HIV testing may have resulted in greater staff member comfort in discussing sexual health with clients, or greater comfort may have resulted in the integration of HIV testing at the organization. Organizational characteristics—such as serving only young people, serving high-risk young people, or having health care personnel on staff—did not appear to be critical features of HIV testing provision. Perhaps we did not observe differences by client characteristics because the participating organizations were in a high-risk geographic location and served at-risk populations.

Another limitation of this study was that data collected by the community organization director or administrator might not have completely reflected all aspects of the organization's operation, including testing availability. Also, survey responses were subject to social desirability bias, especially on staff member knowledge and attitudes. However, responses for these items were highly variable, suggesting that responses were minimally influenced by social desirability bias. The study's small sample size may also have limited our ability to detect factors associated with provision of HIV testing. In addition, the sample might have caused the findings to be generalizable only to other similarly sized urban cities. Offsetting these limitations were the study's characterization of HIV testing provision in organizations that serve young people, who are at the highest risk for not knowing their HIV status, and the study's use of methods that can easily be repeated in other cities.

In summary, the prevalence of HIV test provision at community organizations serving young people in 1 urban setting was low, and few linkages existed for young members to seek testing. Strategies identified in this study—which included partnering with outside agencies, training staff members about sexual health, and developing a referral network for sexual

health care—can improve HIV testing access among young people, and they have the potential to address the burden of high rates of HIV infection in this population.

Conclusion

Findings from this study demonstrate the need for strategies to increase the provision of HIV testing at community organizations serving young people, whether through direct or linked approaches.

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