Homeless Care Providers and Rapid HIV Testing

National Health Care for the Homeless Council
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NATIONAL HEALTH CARE *for the* HOMELESS COUNCIL

DISCLAIMER

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BACKGROUND

The health status of people experiencing homelessness is difficult to generalize given the diverse characteristics, such as gender, age, race, and time spent in homelessness, that contribute to overall health; however, medical conditions frequently noted among homeless persons include HIV/AIDS, sexually transmitted diseases, tuberculosis, and Hepatitis C. [1]

Estimates of HIV prevalence among unstably housed people differ, depending on variables such as the sampling methods used, the geographic area sampled, and the economic status of the area. However, compared to other groups known to be at highest risk for HIV infection, including individuals who engage in intravenous drug use and/or unprotected sex with infected partners, those without stable housing are more likely to be HIV positive consistently across geographic areas. [2]

HIV testing and counseling are the cornerstones of the HIV prevention response allowing individuals to know their HIV status, and access appropriate services. The Centers for Disease Control and Prevention (CDC) recommends routine, voluntary HIV screening for all patients aged 13 to 65 years in all health care settings as a normal part of medical practice, similar to screening for other treatable conditions.[3] In April 2013, the U.S. Preventive Services Task Force (USPSTF) recommended that clinicians screen for HIV infection in adolescents and adults aged 15 to 65 years, as well as younger adolescents and older adults who are at increased risk. [4]

In 2013, federally-funded Health Care for the Homeless (HCH) Health Center Program grantees provided care to 851,641 patients. Even though 740,828 (87%) of these patients were between the ages of 13-64, only 81,869 of all patients (9.6%) received an HIV test.[5]

Although HIV testing and counseling is clinically important, testing rates in primary care settings remain low. [6] Therefore, exploring ways to increase the rate of HIV testing in individuals experiencing homelessness can also provide insight into increasing routine (universal) HIV testing among this special underserved population.

Currently the most common HIV test for routine screening is the antibody screening test (immunoassay). Generally referred to as ELISA (enzyme-linked immunosorbent assay) or, alternatively,

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[1] Kidder, D.P., Wolitski, R.J., Campsmith, M.L., et al. (2007). Health status, health care use, medication use, and medication adherence among homeless and housed people living with HIV/AIDS. *Am J Public Health,* 97(12): 2238-2245.
[2] Beijer, U., Wolf, A., & Fazel. S. (2012). Prevalence of tuberculosis, hepatitis C virus, and HIV in homeless people: a systematic review and meta-analysis. Retrieved from http://www.thelancet.com/pdfs/journals/laninf/PIIS1473-3099%2812%2970177-9.pdf
[3] CDC, "Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health care settings: annotated guide. Retrieved from http://stacks.cdc.gov/view/cdc/22148
[4] USPSTF, Screening for HIV, April 2013. Retrieved from http://www.uspreventiveservicestaskforce.org/uspstf13/hiv/hivfinalrs.htm
[5] Bureau of Primary Health Care (2010). *Uniform Data System: Calendar Year 2013*. Retrieved from http://bphc.hrsa.gov/uds/datacenter.aspx?q=tall&year=2013&state=&fd=ho
Since the numbers of HIV tests provided to patients are not recorded by age groups in the UDS dataset, it is unknown whether the patients who received HIV tests were between the ages of 13-64 as recommended by CDC.
[6] Office of National AIDS Policy. (2010). *National HIV/AIDS Strategy for the United States*. Retrieved from http://www.whitehouse.gov/sites/default/files/uploads/NHAS.pdf.

EIA (enzyme immunoassay), this type of test detects HIV antibodies made by the body. The immunoassay may be conducted in a lab or as a rapid test at a testing site. The rapid test immunoassay produces results in 30 minutes or less, and may be performed on blood or oral fluid (not saliva). Rapid tests using blood are more sensitive than the oral fluid tests. [7]As with all ELISA tests, oral tests detect antibodies, not HIV virus itself, and it may have a slightly lower sensitivity than blood-based tests. [8]

When selecting the most appropriate HIV testing method, primary care practices take into consideration the following: HIV prevalence in the patient population, costs and available resources, space available to conduct point-of-care testing, test sensitivity, and turn-around time for results. Since the use of other point- of- care tests, such as fingerstick glucometers, have been helpful in expediting care for other conditions, a rapid HIV test may be the best screening method to use serving a hard-to-reach, highly-mobile or transient patient population. [9, 10] Research has suggested that rapid HIV testing programs may further improve testing capacity. [11]

Emergency Departments (ED) have obtained great success in identifying undiagnosed HIV among adult ED patients awaiting medicine admission through rapid testing using fingerstick blood, and performed point-of-care testing. [12] Rapid HIV testing coupled with counseling could lead to earlier disease identification, increased treatment, and reduced morbidity/mortality.[13] Additional research indicates that although fingerstick rapid HIV testing is more invasive than oral fluid testing, patients were very satisfied with both types of testing in the emergency department setting. [14, 15]

A preliminary study conducted by Fogg & Mawn (2010), identified facilitators to increase HIV testing among the homeless population. These facilitators included: access to free testing, health care provider recommendation of testing, and the test being administered by oral swab (rapid response test).

[7] CDC, Advantages and disadvantages of FDA -approved HIV immunoassays used for screening by generation and platform. Retrieved from http://www.cdc.gov/hiv/pdf/testing_AdvDisadvHIVtesting.pdf

[8] CDC, HIV basics, testing. Retrieved from http://www.cdc.gov/hiv/basics/testing.html

[9]Sands, V.M., Auerbach, P.S., Birnbaum, J., Green, M. (1995). Evaluation of a portable clinical blood analyzer in the emergency department. Acad Emerg Med. Mar2(3), 72-8. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/7497029

[10] Arbeleaez, C., Block, R. Losina, E., Wright, E.A., et.al. (2009). Rapid HIV testing program implementation: lessons from the emergency department. Int J Emerg Med. Sep; 2(3): 187–194. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2760703/#CR24

[11] Lubelchek, R.J., Kroc, K. A., Levine, D.L., Beavis, K.G., & Roberts, R.R. (2011). Routine, rapid HIV testing of medicine service admissions in the emergency department. American College of Emergency Physicians. Retrieved from DOI: http://dx.doi.org/10.1016/j.annemergmed.2011.03.027

[12] Ibid

[13] Anaya, H.D., Hoang, T., Golden, J.F., et.al. (2008). Improving HIV screening and receipt of results by nurse-initiated streamlined counseling and rapid testing. J Gen Intern Med 23(6):800–7. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2517869/pdf/11606_2008_Article_617.pdf

[14] Fink, L., Reichemann, W.M., Arbelaez, C., et. al. (2011). Patient satisfaction with rapid HIV testing in the emergency department. Annals of Emergency Medicine. Retrieved from http://www.annemergmed.com/article/S0196-0644%2811%2900258-7/pdf

[15] Donnell-Fink,L.A., Arbelaez C, Collins, J.E., Novais, A., et.al. (2012). Acceptability of fingerstick versus oral fluid rapid HIV testing: results from the universal screening for HIV infection in the emergency room (USHER Phase II) randomized controlled trial. J Acquired Immune Defic. Syndr. Dec; 61(5): 588-592. Retrieved from http://journals.lww.com/jaids/Fulltext/2012/12150/Acceptability_of_Fingerstick_Versus_Oral_Fluid.9.aspx

Barriers to conducting HIV testing among the homeless population included the stigma of being screened for HIV, use of a needle-stick to be tested, and having to pay cash for a test. [16]

In 2013, the National HCH Council collaborated with Dr. Catherine Fogg, Associate Nursing Professor at St. Anslem College in Manchester, New Hampshire, to develop and administer a survey that asked HCH health providers about routine and rapid HIV testing practices. The emphasis on "routine testing" was based on CDC recommendations, and the focus on "rapid testing" was based on Fogg's research which identified this method as a facilitator that may increase HIV testing among homeless populations.

The survey developed was based on Nola J. Pender's Health Promotion Model (HPM).[17] The HPM is a framework often used by nurses and other health professionals to counsel individuals to adopt healthy behaviors. These behaviors should result in improved health, enhanced functional ability, and better quality of life at all stages of development. The HPM makes four major assumptions, including the assumption that health professionals, such as physicians and nurses, constitute a part of the interpersonal environment, which exerts influence on people throughout their life spans. It is unknown how many health professionals are aware of this interpersonal environment, or of the influence they have on their patients. If this assumption is true, health professionals may be able to exert their influence on individuals to adopt healthy behaviors which include preventive screenings such as HIV testing.

The main goals of the survey were to:

- Assess HIV testing practices at HCH health centers;
- Explore health provider behavior-specific cognitions and affects as they relate to HIV testing; and
- Identify best practices around HIV testing including routine and rapid implementation.

METHODOLOGY

The survey instrument was developed with the online tool Survey Monkey. A link to access the survey was emailed to homeless care providers with clinical duties as identified through the National HCH Council database. Email recipients were advised to complete this survey if they had ANY direct contact with patients(including, for example front desk/intake staff), were involved in providing direct care to patients who are homeless, or made decisions regarding HIV testing for patients at their HCH site. Recipients were asked to forward the survey to any appropriate staff with the most knowledge of HIV practices at their organization.

Email addresses and computer IP addresses were not documented to ensure the anonymity of responses. The survey included 82 total multiple-choice and open-ended questions; though all question sets were not visible to all respondents based on the use of branching logic. Data was analyzed using IBM SPSS Statistics 21 software.

[16] Fogg, C.J. & Mawn, B. (2010). HIV screening: Beliefs and intentions of the homeless. J Assoc Nurses AIDS Care, 21(5), 95-407.
[17] Pender, N. J., Murdaugh, C. L., & Parsons, M. A. (2002). The health promotion model. *Nursing Practice.* Retrieved from: http://research2vrpractice.org/wp-content/uploads/2013/02/HEALTH_PROMOTION_MANUAL_Rev_5-2011.pdf

RESULTS

A total of 2,487 HCH clinic staff were invited to participate. Of this number, 166 individuals accessed the survey. Twenty responses were excluded because the submitted data was incomplete, therefore, the remaining 146 responses were analyzed.

Participants

Participants were from 37 states in the U.S., and represented each of the four regions as defined by the U.S. Census Bureau; (27%) were from the Midwest, (25%) each were from the South and West, and (23%) were from the Northeast. California, Ohio, and New York were states with the highest response rates.

All respondents were asked to provide demographics and background information. Females represented the majority (72%) of respondents. More than half (58%) identified as Caucasian and were reportedly 50 years or older (54%). The top three job roles represented were: administrators (24%), nurses (16%), and case managers (13%). Nearly all respondents regardless of job title reported a clinical role (Table 1). Approximately 35% of respondents have worked at their organization for 10 or more years.

Table 1: Background Information (Job Role)[18] (N=146)

	Frequency	Percentage
Clinical	143	97%
Administrator	35	24%
Administrative	6	4%
Other- Development, Patient Service Representative, Peer Mentor, Practice Manager, Program Supervisor, Resource Specialist, Supervisor of Social Services Dept., Volunteer-CAB	8	6%

*Percentages may not add up to 100 as one individual may hold more than one role.

The most HCH reported work settings were HCH grantees within Community Health Centers and stand-alone entities (Table 2). More than half (77%) reported they received 330(h) Health Care for the Homeless funding. More than 30% also reported receiving 330(e) and Ryan White HIV/AIDS federal funds. Among participants receiving Ryan White HIV/AIDS funding (n=46), more than half (67%) reported their organization used Ryan White funding for "outreach" to bring people in for HIV testing.

Table 2: Background Information (Work Setting) (N=146)

	Frequency	Percentage
HCH grantee or subcontractor within a Community Health Center	83	57%
Stand-alone HCH grantee or subcontractor	41	28%
HCH grantee or subcontractor within a Public Health Department	14	10%
Mobile medical unit	11	8%
Homeless Shelter	8	6%
HCH grantee or subcontractor within a Hospital System	5	3%

[18] Job roles were collapsed to represent the following: Administrator (e.g. CEO, President, Executive Director); Clinical (i.e., advanced practice nurse, case manager, community health worker, health care technician, medical assistant, medical director, mental health specialist, nurse, nurse's aide, outreach worker, pharmacist, physician, physician assistant, social worker, and substance abuse counselor); and Administrative (i.e., administrative assistant and front office staff/receptionist)

Medical Respite care program	4	3%
HCH grantee or subcontractor within a Public Housing Development	1	<1%
Other- City employee, Homeless Agency, Housing and Services for the Homeless Population, Nonprofit Community Base[d] Organization, Transitional Housing Program	5	3%

*Percentages may not add up to 100 as one individual may work in more than one setting.

HIV Testing Practices in Homeless Care Provider Settings

Informing Patients of Availability of Testing

Respondents reported that currently, HIV screening in most homeless care provider sites occurs when (1) the provider believes a client needs to be screened due to behavioral risk factors, (2) a client is seen for STD symptoms, or (3) the client asks to be tested. More than three-quarters (78%) of participants reported that they directly informed patients of the availability of HIV testing at their organization (n=114). When asked what other clinic staff were responsible for informing patients of the availability of HIV testing, primary medical providers and other clinical staff (i.e., physicians, nurses, nurse practitioners, case managers, and medical assistants) were the most commonly reported (Table 3).

Table 3: Staff who Inform of the Availability of Testing (Job Role) (N=146)

	Frequency	Percentage
Physician	111	76%
Nurse	104	71%
Nurse practitioner	104	71%
Case manager	103	71%
Medical assistant	101	69%
Outreach worker	86	59%
Social worker	76	52%
Front office staff	68	47%
Physician assistant	60	41%
Intake staff	59	40%
Mental health specialist	59	40%
Community health worker	58	40%
Substance abuse counselor	57	39%
Dentist	41	28%
Other- Employment & Housing Specialists (1), I don't know (2)	3	2%

*Percentages may not add up to 100 as participants were given the option to check all that apply.

Conducting HIV Testing

All participants were asked to identify individuals at their work sites who were trained to conduct HIV testing. The most commonly trained staff reported were nurses, medical assistants, and primary medical providers (i.e., nurse practitioners, physicians, and physician assistants) (Table 4). Among the minority of respondents reporting no trained staff on site to conduct HIV testing (n=17), 88% reported they referred out for HIV testing. Among respondents whose sites referred out for HIV testing, more than half (79%) reported less than 25% of patients were referred-out on an average workday.

Table 4: Staff who are Trained to Conduct Testing (Job Role) (N=146)

	Frequency	Percentage
Nurse	77	53%
Medical assistant	60	41%
Physician	55	38%
Nurse practitioner	53	36%
Outreach worker	41	28%
Case manager	32	22%
Physician assistant	29	20%
Community health worker	13	9%
Social worker	8	6%
Substance abuse counselor	9	6%
Intake staff	6	4%
Front office staff	5	3%
Dentist	1	<1%
Mental health specialist	0	--%
Other- I don't know (7), Testing/Lab staff (5), Health/Patient educator (3), Ryan White/HIV coordinator (2), Resource Specialist (1)	18	12%

*Percentages may not add up to 100 as participants were given the option to check all that apply.

Patient Care Model

Survey participants were asked about the use of a patient care model (an identified process and/or personnel responsible for HIV testing) at their homeless care provider sites. Responses were almost equal, with 41% stating they utilized a care model and 45% indicating no model used. Of those using a care model, four most commonly described components within the model were: (1) assigned staff on-site to administer HIV tests (78%); (2) staff identified to provide results to patients (78%); (3) identified staff who document when results are confirmed (76%); and (4) specific system in place to contact persons with reactive HIV tests or indeterminate results (71%). [See Appendix A for Table 5: Patient Care Model response set]

Respondents identified patient populations and/or subpopulations typically tested for HIV. Eighty-three percent (83%) indicated they typically test adults 19 years of age and older. High-risk patients and those initiating treatment for STD's were also identified as typically tested (Table 6). Sixty-two percent of respondents felt their organization was successful in providing HIV testing to all individuals who were eligible.

Table 6: Populations Typically Tested (n=129)[19]

	Frequency	Percentage
Adults (19 and older)	107	83%
Patients identified as "high risk"	97	75%
Patients initiating treatment for STDs	77	60%
Pregnant women	51	39%
Adolescents (13-18 years old)	43	33%
Patients initiating treatment for Tuberculosis (TB)	37	29%
Don't know	8	6%

[19] Excludes those that do not conduct testing in-house (at their site)

I prefer not to answer	2	2%
Other- Opt-out/All patients offered testing (6), Patients requesting testing (1), Family planning (1), Just trained, testing not started (1)	9	7%

*Percentages may not add up to 100 as participants were given the option to check all that apply.

Routine and Rapid HIV Testing

Among respondents reporting HIV testing on-site, more than 30% indicated routine and rapid HIV testing (test results given the same day) was offered to all patients at the time of their appointment (Table 7). When asked what type of routine and rapid test was utilized, 64% reported their organization utilized the finger stick with rapid results test. Organizations not utilizing rapid testing most often reported using finger sticks testing with delayed results as the test of choice.

Less than 10% of respondents reported "other" approaches to testing. Responses revealed mix method testing approaches (e.g. rapid and routine testing, testing offered to patients based on different criteria) or that testing practices were inconsistent. Sixty-one percent of respondents estimated that 25-74% of patients who frequented their organizations received HIV testing in 2012.

Table 7: Current practice for HIV testing (n=125)[20]

	Frequency	Percentage
Routine and rapid HIV testing offered to all patients at the time of appointment	44	35%
HIV testing provided to all patients who ask to be tested	20	16%
HIV testing offered based on the patients "risk behaviors"	15	12%
Routine HIV testing offered to all patients (no rapid results)	15	12%
Don't know	12	10%
HIV testing is not currently offered to patients	3	2%
HIV testing only given to patients based on referral	3	2%
I prefer not to answer	2	2%
Other- Mixed method testing approach (8), Testing practices inconsistent (2), Testing at local lab (1)	11	9%

Preventive Health Screenings

Ninety-eight percent of respondents indicated other preventive health screenings were offered at their organizations. These health screenings included: sexually transmitted diseases (94%), tuberculosis (91%), hepatitis C (85%), and hepatitis B (80%). Half of the respondents reported many preventive screenings were often bundled (combined at one clinic visit) depending on time availability.

Behavior Specific Cognitions & Affects Related to Routine and Rapid HIV Testing

To assess barriers and facilitators to HIV testing practices among HCH staff, respondents were asked a series of questions related to their perceptions around HIV testing practices [See Appendix B for full list of behavior specific cognitions and affects]. These questions were based on the HPM and were designed to assess perceived benefits of action (anticipated positive outcomes that will occur from the behavior); perceived barriers to action (anticipated imagined or real blocks and personal costs of understanding a given behavior); and perceived self-efficacy (judgment of personal capability to organize and execute a health-promoting behavior). Perceived self-efficacy influences perceived barriers

[20] Excludes those that do not conduct testing in-house (at their site); Missing data, n=4

to action, so higher efficacy results in lowered perceptions of barriers to the performance of the behavior.

Perceived Benefits of Action

The majority (92%) of respondents indicated their organization provided routine and rapid HIV testing, they also agreed their patients have benefited from this method of testing. Of these respondents, 89% believed routine and rapid testing has increased the number of patients who know their HIV status.

Among respondents reporting the use of routine finger stick HIV testing without rapid results, the majority (87%) agreed their patients would benefit from routine and rapid HIV testing, and believed this method of HIV testing could increase the number of patients who know their status.

Perceived Barriers to Action

For perceived barriers to action, responses from homeless care providers that currently did not provide routine and rapid HIV testing on-site were analyzed. Although 94% of respondents believed knowledge of one's HIV status could result in dramatic improvement in HIV-related morbidity and mortality, 53% were uncertain or disagreed that their homeless population had a higher incidence of HIV than their local housed population. Fifty-nine percent indicated they did not have the resources necessary to implement routine and rapid HIV testing.

Of the HCH sites that utilized routine finger stick testing without rapid results, approximately 50% reported that many patients who were tested for HIV did not return for test results. Fifty-one percent of the HCH sites that utilized routine finger stick testing without rapid results responded they were uncertain or disagreed that they had resources needed to implement routine and rapid HIV testing, and 35% indicated they were concerned about the costs and reimbursements associated with implementing routine and rapid HIV testing. When asked if the state and/or local regulations allowed the administering of rapid testing, 42% were uncertain of the state or local regulations surrounding rapid HIV testing.

Several respondents identified barriers to HIV testing in the comment section:

- *"Because we are limited to drawing blood, many homeless youth decline testing and go elsewhere for the swab. We are happy to refer but it does interrupt continuity of care as they can't get any treatment from the drop in sites that have the rapid testing."*
- *"…our biggest challenge is having EVERYONE screen and refer-we get very few referrals from doctors."*
- *"We have adopted a universal HIV screening for all adults. We continue to work on implementation of this procedure, dealing with various barriers such as privacy, employee beliefs, workflow issues, etc. Gentle persistence in asking clients to test and –in the event of a positive–the same persistence in linking the client to care."*
- *…. "One barrier was administrative staff requesting Family Planning visits on a separate day. Roles and clinic flow aren't completely clear. Testing not incorporated in walk-in. Outreach nurses work alone and those seeing adults including street population are greeted with many emergencies every session."*

Perceived Self-Efficacy

When assessing self-efficacy, ninety-four percent of participants from the homeless care provider sites were conducting some type of HIV testing (rapid or finger stick delayed results) and indicated they were comfortable addressing HIV, STDs and sexual behaviors with patients. When asked if they were adequately equipped to counsel patients regarding HIV prevention and testing, 81% responded in the affirmative. Forty-nine percent felt they had the necessary training to provide routine and rapid HIV testing, 72% stated they were able to provide post-test counseling to patients regardless of their test outcome (reactive/nonreactive).

Promising Practices

The majority (89%) of respondents who performed routine finger stick testing without rapid results indicated that offering routine and rapid HIV testing to all HCH patients would be a valuable service; 76% agreed that offering routine and rapid HIV testing to all patients was better than targeted screening based on risk behaviors; and 83% indicated their organization should offer all preventive health screenings (e.g. HIV, HEP C, TB, STI) during the same patient visit as "bundled screenings". Eighty percent (80%) of the respondents felt that offering HIV testing at the same time of other preventive health screenings would increase HIV testing among patients.

Participants provided qualitative data to identify successful practices for HIV testing. Implementing mobile vans and conducting outreach via mobile vans or other outreach activities were most often mentioned as successful practices for HIV testing. Training Medical Assistants (MAs) to conduct HIV testing and offering opt out routine testing were also cited as successful practices. Additional comments were provided by respondents to highlight successful practices:

- "*We have a very comprehensive program for all new admissions which includes HIV testing. The HIV testing is incorporated into our initial physical and we approach the patient as a team.*"
- "*Although we offer rapid HIV testing, we are more often doing serum testing because we are testing for hepatitis and syphilis at the same time. In addition, the serum test available to us is the antigen/antibody test so we can catch HIV positives earlier.*"
- "*Moving to opt-out and having all of our MAs trained has been great. They grab tests at every opportunity.*"
- "*We couple our HIV Testing with our Harm Reduction Outreach and Syringe Service Program. This helps to reach those at highest risk. Also, our team is very connected to other HIV Prevention and Testing Programs in the City and state.*"
- "*Offering rapid HIV testing as part of the normal routine of a visit has helped to make this test no more threatening than a finger stick for glucose. Easy access has helped to increase the number of clients who've been willing to be tested. Not needing to return for results has been a benefit for our patients.*"

KEY FINDINGS

The quantitative findings of this survey reveal that HIV testing and additional preventive health screens are common practices at homeless care providers across the U.S. who participated in this survey. However, the data demonstrate inconsistencies in HIV testing practices utilized by these organizations.

The findings of this survey and past research reveal and support the value of routine and rapid HIV testing for all patients who frequent homeless care provider sites including medical respite programs and homeless shelters, instead of testing only individuals believed to be at high risk. Because HIV crosses the boundaries of sexual orientation, gender, age, and ethnicity, risk-based testing may fail to identify many people with HIV.

Based on the reported attitudes of HIV testing by respondents, routine and rapid HIV testing has many perceived and actual benefits for patients, particularly individuals experiencing homelessness who are at an increased risk for HIV infection. Among homeless care providers not currently offering routine and rapid HIV testing, more than half are willing to be trained to administer the test and think this method can be integrated into the day-to-day process of their organization with minimal disruption and flow.

RECOMMENDATIONS

HIV testing can be difficult for patients, especially the time spent waiting for results. Rapid HIV testing may be able to alleviate some of the stress and discomfort affiliated with testing. Previous research has shown that rapid HIV testing is successful in various health settings, including primary and urgent care, and is acceptable to patients.[21]

Both the CDC and the USPSTF recommend a threshold for implementation of routine screening. "Health-care providers should initiate screening unless prevalence of undiagnosed HIV infection in their patients has been documented to be <0.1%. In the absence of existing data for HIV prevalence, health-care providers should initiate voluntary HIV screening until they establish that the diagnostic yield is <1 per 1,000 patients screened, at which point such screening is no longer warranted."[22]

Specialists and practitioners, treating individuals who are homeless and have HIV/AIDS, recommend the use of rapid testing in outreach settings, including shelters and correctional facilities, and for unstably housed/runaway youth. [23] However, before a routine and rapid HIV testing program is implemented, we recommend that a patient care model with a process for rapid HIV testing be adopted first.[24]

[21] Anaya, H.D., Hoang, T., Golden, J.F., et.al. (2008). Improving HIV screening and receipt of results by nurse-initiated streamlined counseling and rapid testing. J Gen Intern Med 23(6):800–7. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2517869/pdf/11606_2008_Article_617.pdf

[22] CDC, Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health care settings, *Morbidity and Mortality Weekly Report,* September 22, 2006. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5514a1.htm

[23] Audain, G., Bookhardt-Murray, L.J., Fogg, C.J., Gregerson, P., Haley, C.A., Luther, P., Treherne, L., & Knopf -Amelung, S. (Editor). (2013). Adapting your practice: Treatment and recommendations for unstably housed patients with HIV/AIDS. Nashville, TN: Health Care for the Homeless Clinicians' Network, National Health Care for the Homeless Council, Inc. Retrieved from http://www.nhchc.org/wp-content/uploads/2011/09/AIDS.pdf

[24] National Association of Community Health Centers. A model to integrate routine HIV screening services in Federally Qualified Health Centers (2012). Retrieved from http://www.nachc.com/hivmodel.cfm

CDC provides lists of rapid tests suitable for clinical and non-clinical settings. [25, 26] Other factors such as ease of staff use, necessary Clinical Laboratory Improvement Amendments (CLIA) waivers, laboratory capacity, and HIV prevalence should also be considered when integrating HIV testing into the health care setting.[27]

There are distinct advantages of rapid testing (either by finger stick or oral fluid) over conventional testing:

- Almost all people tested will get post-test counseling and their results because only one visit is necessary;
- Because results are delivered quicker, positive people get into medical care quicker;
- By learning of infections earlier, potential exposures that would have occurred between traditional testing and receiving results is reduced;
- Rapid tests are easier to use; and
- The results are as accurate as a traditional Elisa test.[28]

Although there are distinct advantages to rapid HIV, there are also limitations. These limitations include a high number of false-positive results (particularly for oral fluid tests which have a slightly lower sensitivity than blood-based tests), and cost associated with obtaining test kits. However, the limitations of rapid HIV tests do not negate their advantages.

Reactive results from rapid testing are not confirmed results, and with any preliminary result additional testing is needed before an individual is considered to be infected with HIV.[29] To off-set cost, resources from State and local source may be available. Entities participating in HRSA's 340B Prime Vendor Program may also obtain discounted pricing on test kits as a value added service.[30]

Exploring the best way to increase the rate of HIV screenings for the prevention and treatment of HIV/AIDS in the homeless population which suffers from higher rates of substance-related disorders, mental illness, chronic diseases and poverty is important. Routine and rapid (finger stick or oral fluid) testing may be one of the most effective methods to increase HIV testing among individuals ages 13-64 experiencing homelessness.

[25] CDC, Rapid HIV tests suitable for use in clinical settings (CLIA- moderate complexity). Retrieved from http://www.cdc.gov/hiv/pdf/testing_ListModCompClinicalSettings.pdf
[26] CDC, Rapid HIV tests suitable for use in non-clinical settings (CLIA -waived). Retrieved from http://www.cdc.gov/hiv/pdf/testing_ListNonClinicalSettings.pdf
[27] Donnell-Fink,L.A., Arbelaez C, Collins, J.E., Novais, A., et.al. (2012). Acceptability of fingerstick versus oral fluid rapid HIV testing: results from the universal screening for HIV infection in the emergency room (USHER Phase II) randomized controlled trial. J Acquired Immune Defic. Syndr. Dec; 61(5): 588-592. Retrieved from http://journals.lww.com/jaids/Fulltext/2012/12150/Acceptability_of_Fingerstick_Versus_Oral_Fluid.9.aspx
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APPENDIX A

Table 5: Patient Care Model (n=58)

	Frequency	Percentage
Assigned individuals on-site to actually administer the HIV tests	45	78%
Someone identified to provide results to patients (e.g. negative/reactive)	45	78%
Someone identified who documents when results are confirmed	44	76%
System in place to contact persons with reactive HIV tests or indeterminate results	41	71%
A "one-stop shop" approach for patients with positive results- which includes receiving appropriate treatment and care at our organization	32	55%
A designated place where HIV testing occurs	31	53%
Specific individual(s) other than front-desk staff or receptionist designated to inform patients of when HIV testing is available	30	52%
Someone at the front-desk who informs patients/clients that HIV testing is available	30	52%
Someone or system that initiates recall/reminder calls regarding results	23	40%
A tracking system for clients who are high risk	19	33%
Someone who accompanies patients to where HIV testing occurs	17	29%
A map for staff of current patient flow (e.g. routine screening flow sheet)	13	22%
Assigned individuals to refer patients to HIV testing off-site	12	21%
Other- I don't know (7), Testing/Lab staff (5), Health/Patient educator (3), Ryan White/HIV coordinator (2), Resource Specialist (1)	3	5%

*If your organization utilizes a patient care model for HIV testing, does it include any of the following? (Check all that apply)
*Percentages may not add up to 100 participants were given the option to check all that apply.

APPENDIX B

Section III: Behavior Specific Cognitions & Affects Related to Routine-rapid HIV Testing

Please read each of the following statements. Rate how strongly you agree or disagree with each statement. **Scale: Strongly Agree >>Uncertain>>Strongly Disagree>>I prefer not to answer**

Section 3/Part A – FOR ORGANIZATIONS THAT REFER OUT

- ☐ Knowledge of one's HIV status and receipt of care can result in dramatic improvements in HIV-related morbidity and mortality.
- ☐ When compared to our local housed population, I think that our homeless population has a higher incidence of HIV.
- ☐ We have the resources needed to implement Routine-Rapid HIV testing.
- ☐ I am willing to be trained to administer Routine-Rapid HIV testing.
- ☐ I think Routine-Rapid HIV testing can be integrated into the day-to-day process of our organization with minimal disruption of flow.
- ☐ Our patients would benefit from Routine-Rapid HIV testing at our clinic/organization.
- ☐ Offering HIV testing at the same time that other preventive health screens (e.g. HIV, Hep C, TB, STI) are offered would beneficial to our patients.

Section 3/Part B – FOR BOTH HIV TESTERS AND ROUTINE-RAPID

- ☐ Knowledge of one's HIV status and receipt of care can result in dramatic improvements in HIV-related morbidity and mortality.
- ☐ When compared to our local housed population, I think that our homeless population has a higher incidence of HIV.
- ☐ Ensuring that all adults (ages 18 and older) receive HIV testing is important at our organization.
- ☐ HIV testing solely on the basis of risk behaviors may fail to identify many HIV-infected individuals.
- ☐ There are more pressing health concerns that need to be addressed with our patients than HIV testing.
- ☐ Routine-Rapid HIV testing should not be performed in our organization.
- ☐ I am comfortable addressing HIV, STDs, and sexual behaviors with patients.
- ☐ I am equipped to adequately counsel patients regarding HIV prevention and testing.
- ☐ I am concerned that patients are offended when offered routine HIV testing.
- ☐ Offering Routine-Rapid HIV testing to all patients is a valuable service to all HCH patients.
- ☐ Offering Routine-Rapid HIV testing to all patients is better than targeted screening based on risk behaviors.
- ☐ We should offer all preventive health screens (e.g. HIV, Hep C, TB, STI) at the same time while we have the patient in the organization.
- ☐ Offering HIV testing at the same time that we do other preventive health screens would increase HIV testing among our patients.
- ☐ Our HCH organization is adequately staffed to perform Routine-Rapid HIV testing.
- ☐ I have the necessary training to provide Routine-Rapid HIV testing.
- ☐ I am able to provide post-test counseling to patients regardless of their test outcome (i.e., positive/negative).
- ☐ I am always prepared to provide supportive resources to patients during post-test counseling.

[HIV TESTERS ONLY >> GO TO SECTION 3/PART C]
[ROUTINE-RAPID TESTERS>> GO TO SECTION 3/PART D]

Section 3/Part C– FOR HIV TESTERS ONLY

- ☐ Routine-Rapid HIV testing (i.e., tests performed and results received on the same day), increases the number of patients in our organization who receive their HIV test results.
- ☐ We have the resources needed to implement Routine-Rapid HIV testing.
- ☐ I am willing to be trained to administer Routine-Rapid HIV testing.
- ☐ I think Routine-Rapid HIV testing can be integrated into the day-to-day process of our organization with minimal disruption of flow.
- ☐ Our state and/or local regulations do not allow us to administer Routine-Rapid HIV testing.
- ☐ Our organization is too busy to perform Routine-Rapid HIV testing.
- ☐ We lack adequate space to provide Routine-Rapid HIV testing.
- ☐ I am concerned about the costs and reimbursements associated with implementing Routine-Rapid HIV testing.
- ☐ I would prefer NOT to use Routine-Rapid HIV testing because the results may be inaccurate.
- ☐ Performing Routine-Rapid HIV testing in our organization would interfere with my ability to care for patients.
- ☐ Many of our patients are tested for HIV, but do not come back for their results.
- ☐ Our patients would benefit from Routine-Rapid HIV testing in our organization.
- ☐ Routine-Rapid HIV testing could increase the number of our patients who know their HIV status.
- ☐ I am in favor of incorporating Routine-Rapid HIV testing in our clinic/organization.

Section 3/Part D – FOR ROUTINE-RAPID TESTERS ONLY

- ☐ Routine-Rapid HIV testing increases the number of patients in our organization who receive their HIV test results.
- ☐ Patients often feel like they have to accept Routine-Rapid HIV testing when offered during their clinic visit.
- ☐ It is difficult to provide the privacy needed for Routine-Rapid HIV testing.
- ☐ The presence of family members/visitors makes it difficult to discuss Routine-Rapid HIV testing with patients.
- ☐ Performing Routine-Rapid HIV testing is burdensome on time at my organization.
- ☐ Providing Routine-Rapid HIV testing has placed strain on our financial resources.
- ☐ Our HCH organization has successfully integrated Routine-Rapid HIV testing into our primary care system.
- ☐ Our patients have benefited from Routine-Rapid HIV testing in our organization.
- ☐ Routine-Rapid HIV testing has increased the number of our patients who know their HIV status.