

EXPANDING THE HORIZONS: NEW APPROACHES TO PROVIDING HIV TESTING SERVICES IN THE UNITED STATES

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This supplemental issue of *Public Health Reports* presents new strategies for the delivery of human immunodeficiency virus (HIV) testing services in the United States, particularly the delivery of testing services to people from racial/ethnic minority groups. These topics are timely because of a convergence of policy, improved technology, and persistent disparities in the HIV epidemic.

Much is new: 2008 marks six years since the licensing of the first HIV rapid test approved for use with finger-stick whole blood specimens; five years since the launch of the Centers for Disease Control and Prevention's (CDC's) Advancing HIV Prevention initiative to increase opportunities for HIV testing;¹ and two years since the publication of CDC's recommendations for routine screening for HIV in medical care settings.² But the racial and ethnic disparities in HIV prevalence in the U.S. are old stories, ones that have changed very little during the past decade.³ For these reasons, discussions of how to leverage new technologies, operationalize new screening recommendations, and provide testing opportunities to people at disproportionately high risk for HIV infection are critical. We hope that the articles in this issue will further these discussions, perhaps start new conversations about the science and practice of HIV testing, and assist health-care providers and public health practitioners in deciding how best to deliver HIV testing services.

This *Public Health Reports* supplemental issue is focused on reports of new strategies for delivering HIV testing services to people of minority races/ethnicities and others disproportionately affected by the epidemic. Though only 13% of the U.S. population, African Americans account for 50% of the most recently reported new HIV diagnoses.³ Similarly, Hispanic and Latino people make up only 13% of the U.S. population, but account for 18% of the most recently reported new HIV diagnoses. Men who have sex with men (MSM) continue to account for the largest number of new HIV diagnoses. Compared with white MSM,

African American MSM may also be disproportionately affected: the prevalence of HIV infection among African American MSM is twice the prevalence among white MSM, and African American MSM are three times as likely as white MSM to be unaware that they are HIV seropositive.^{4,5} High HIV prevalence has also been reported for other subpopulations of minority races/ethnicities, such as transgender individuals.⁶

HIV case surveillance data suggest that people of minority races/ethnicities, compared with white people, learn their HIV serostatus substantially later in the course of disease,⁴ and subsequently have poorer survival outcomes.⁷ Despite the individual health benefits of a diagnosis earlier in the course of disease, there is growing evidence of the potential for reduced HIV transmission to sex partners after one's diagnosis is known and treatment or counseling has begun.⁸⁻¹⁰ Thus, HIV testing is secondary HIV prevention at the individual level, and primary HIV prevention at the population level.

High rates of HIV infection combined with late diagnoses and the potential benefits of earlier diagnosis highlight the need for specific strategies to improve the delivery of HIV testing services to these disproportionately affected groups.¹¹ Local public health practitioners or health-care providers must have information on which to base their decisions about the best way to deliver HIV testing services with the resources they have at hand. Delivery may be particularly challenging when the populations at highest risk are hard to reach through more traditional health-care mechanisms.¹² In these situations, multiple local strategies may need to be developed, implemented, and evaluated to optimize the chance of reaching those at highest risk.

HIV testing strategies can be described in several ways. HIV testing can be for diagnostic purposes (when a person is tested because of clinical signs of disease) or can be part of a screening program. HIV screening programs are often divided into the routine (or universal) screening of all people in a given setting, and targeted screening, in which people with specific characteristics (usually demographic or behavioral characteristics) are prioritized for screening. HIV screening programs can also be grouped according to whether they are conducted in clinical settings (offices of physicians, community clinics, hospitals, or emergency departments [EDs]) or in nonclinical settings (outreach HIV testing activities held at community venues and conducted by community-based organizations

[CBOs] or local public health agencies). The articles in this supplemental issue provide real-world examples of these various types of HIV testing programs.

Several articles in this supplement are reports of findings of HIV testing in clinical settings where substantial numbers of patients were members of minority races/ethnicities. Brown et al.¹³ and Merchant et al.¹⁴ report on their studies conducted with ED patients to determine the factors associated with accepting (or declining) HIV testing. In both studies, HIV testing was routinely offered; most of the people who declined testing did so because they didn't believe they were at risk for HIV infection. In the study of Brown et al., the majority of people who were offered testing in the ED indicated that they would recommend HIV testing in the ED to others. Merchant et al. found that routine, opt-in approaches in the ED may miss some groups (e.g., people who are white, older, or married) who, in their experience, didn't accept HIV testing when offered.

Zetola et al., who report on a study of stored blood specimens from ED patients, found lower rates of new HIV diagnoses than they expected and a case of acute HIV infection that would not have been detected through most standard HIV screening programs.¹⁵ Farnham et al. provide a detailed analysis of the costs of rapid and conventional HIV testing in sexually transmitted disease (STD) clinics and EDs: the lowest costs were those for rapid HIV testing overall and rapid HIV testing in the ED (compared with testing in STD clinics).¹⁶ Reynolds et al. discuss their study on the bundling of clinical services for HIV and STDs: their results suggest that the availability of rapid HIV testing in clinics may improve the rates of return for STD test results.¹⁷ Cohall et al. report on the use of audio computer-assisted personal interviewing, a technology that shows potential for helping with pretest counseling and the ascertainment of risk factors.¹⁸

The authors of other articles in this issue report experiences in delivering HIV testing services in non-clinical settings. Three articles (Bowles et al., Clark et al., and Shrestha et al.) are reports of various aspects of a multisite prevention program that delivered rapid HIV testing through community outreach activities conducted by CBOs mainly serving people of minority races/ethnicities.¹⁹⁻²¹ Bowles et al. found that many of the study participants who tested HIV-positive had been tested previously during the past year (thus, they had probably been recently infected), and the authors believed this testing delivery method reached people at high risk, including those of minority races/ethnicities. According to Clark et al., who explored how CBO staff perceived the implementation of the HIV testing

project, staff considered the project a good way to reach populations at high risk, but noted that the project required thorough planning and substantial resources to start and maintain. Shrestha et al., who analyzed the cost of this testing project, found that community outreach testing was more expensive than testing in a CBO-run community clinic, primarily because in community outreach testing, the rates of new HIV diagnoses were unexpectedly low. The highest rate of new HIV diagnoses (12%) reported in this issue is from a project reported by Schulden et al., which delivered testing services to transgender people.²² Thomas et al. report on their rapid HIV testing project in clinical and nonclinical settings at historically black colleges and universities.²³ They discovered that a substantial proportion of students had never been tested and that those who accepted the offer of HIV testing had a higher perception of HIV risk than did those who refused testing. Begley et al., who used rapid HIV testing as part of HIV partner counseling and referral services, found that rapid HIV testing may improve the efficiency of these services and increase the rate of testing among exposed partners.²⁴

Collectively, these articles raise important issues in our public health discussions of the future of HIV testing programs and suggest the need for further information to pave the way for wider use of these new HIV testing strategies. In clinical settings, questions remain about the most cost-effective approach to HIV screening, but there are encouraging signs of the viability of clinical screening programs (e.g., high acceptability of routinely offered ED testing), and the promise of new programmatic approaches and technologies to improve testing delivery (e.g., integration of testing services and automation of pretest counseling). Additionally, other potential structural issues affecting routine HIV screening in clinical settings, such as state legislative changes to simplify or remove HIV pretest counseling requirements and discussions about third-party payers for routine HIV screening, may become increasingly important to the future of these new strategies.²⁵

Community outreach testing for groups at highest risk for HIV infection has been a staple of HIV prevention efforts, and there is little doubt that it has a role to play in any optimized HIV testing program. However, as routine HIV screening programs in clinical settings become more common, targeted HIV screening approaches will need to be reconsidered, particularly with respect to sustainability, to a diminishing yield of new diagnoses, and to reaching the populations at highest risk.

This *Public Health Reports* supplemental issue brings together the most current reports of new strategies

for the delivery of HIV testing services to the people who most need them. Improving the delivery of HIV testing services will result in earlier diagnosis and improved outcomes for individual patients, for communities at risk, and for public health. It seems clear that optimized HIV testing programs will comprise multiple approaches (e.g., routine screening in clinical settings and the screening of groups at high risk); be locally relevant, reflecting the characteristics of at-risk communities and the capacities of local public health jurisdictions; and be dynamic, responding promptly and effectively to the evolving epidemiology of HIV.

During the past five years, CDC has used public health initiatives and recommendations to highlight the critical role of HIV testing in our national HIV prevention portfolio. The Advancing HIV Prevention initiative, described by Heffelfinger et al., resulted in several of the demonstration projects reported in this issue and continues to provide a structure for CDC's current HIV prevention activities.²⁶ Revisions to CDC's STD treatment guidelines highlight the importance of repeating HIV testing for populations at highest risk.²⁷ Most recently, CDC issued a new set of recommendations for routine HIV screening in health-care settings; those recommendations have contributed to the discussion about the best ways to balance the delivery of testing services with competing logistical and fiscal issues.²

But CDC programs and recommendations are ultimately only as strong as the will of public health communities to implement them, the feasibility of implementing them in diverse settings, and the availability of the resources to develop and implement public health programs. Thus, pulling together early reports of the implementation of new HIV testing approaches is an important step between guidelines and programmatic realities. Scientific discourse and disclosure of our successes and challenges move all of us closer to our goal of identifying new HIV infections as early as possible. Health-care providers, public health practitioners, and prevention researchers must continue to explore the best new ways of using policy, technologies, and programmatic expertise to deliver HIV testing services to those in greatest need, to evaluate their successes and failures, and to continue the public health discussion about HIV testing—a critical HIV prevention tool.

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