

# HIV Test Delivery in the United States



## Why is HIV Testing Important?

In the United States, more than 161,200 individuals – 13% of the 1.1 million people living with HIV (PLWH) – are unaware of their HIV infection.<sup>1</sup> Estimates say these individuals account for 30% of all new annual infections.<sup>2</sup>

## Knowledge is power!

People who know they are infected with HIV can be linked to care and start antiretroviral therapy (ART). Sustained HIV treatment reduces one's viral load (VL) level to undetectable, making it unlikely that HIV is transmitted to sexual partners.<sup>3</sup> People with a negative test result can make positive decisions about their sexual behaviors and drug use. They can take pre-exposure prophylaxis (PrEP), which prevents HIV transmission by more than 90%.<sup>4</sup>

## Who needs to be tested?

The Centers for Disease Control and Prevention (CDC) recommends opt-out HIV testing in clinical health care settings for patients ages 13-64 at least once as part of routine health care regardless of known HIV risk factors or symptoms, and at least once a year for those with specific risk factors. It also recommends that pregnant women and any newborn whose mother's HIV status is unknown be tested.<sup>5</sup> Gay and bisexual men at risk for HIV should be tested more frequently – every 3 to 6 months.<sup>6</sup>

## Who is (and is not) testing?

Testing among the general adult population (age 18 or older) in the United States (U.S.) is inadequate; those reporting ever being tested increased from 38% in 2013 to just 44% in 2018.<sup>7</sup> Testing disparities exist among people who have ever tested for HIV. People within groups with the highest testing rates include: race (Non-Hispanic Blacks/African Americans, 63%)<sup>8</sup>; age (25-34, 55% and 35-44, 59%)<sup>9</sup>; sex (women, 52%)<sup>9</sup>; youth (Non-Hispanic Blacks/African Americans, 17%)<sup>10</sup>; transgender (women, 36%)<sup>11</sup>. Men who have sex with men (MSM) are more likely to have ever been tested for HIV (71%) than any other group.<sup>12</sup>

## What is being done?

**Routine HIV testing (RHT) in clinical settings** allows the offer of opt-out HIV testing (patient tested unless decline) and/or opt-in testing (patient actively requests/accepts to be tested) however barriers exist (e.g., lack of access to healthcare, time constraints/competing priorities, lack of knowledge/training, pretest counseling requirements; fear and misperceptions about HIV risk and the testing process, inadequate reimbursement).<sup>15-17</sup> Even so, testing in clinical settings has occurred with some success.<sup>18</sup> Rates vary for test offer, acceptance, performance, and HIV positivity.<sup>19,20</sup> Rates of offering RHT in U.S. hospitals are low (19% to 26%) but, when offered, test acceptance is high (53% to 75%).<sup>16</sup> More than 80% of surveyed U.S. hospital emergency departments (EDs) reported conducting any HIV testing.<sup>21</sup> Patient satisfaction with RHT in EDs is high, reaching 92%.<sup>22</sup> Also, patients who declined testing in the ED later accepted when re-offered during hospitalization.<sup>23</sup>

Forty-one percent of surveyed primary care (PC) physicians in community health centers (CHCs) reported knowing about CDC's RHT recommendations.<sup>24</sup> Sixty-nine percent of patients offered opt-out testing at urban PC clinics agreed to test<sup>25</sup> Just 22% of patients offered opt-in testing at urgent care clinics agreed to test.<sup>26</sup>

Family planning (FP) clinics serve diverse clients and can play an important role in HIV screening, education, and risk-reduction counseling. A study of 10 clinics found that as HIV testing changed from opt-in to routine opt-out to routine rapid testing the number of clients receiving HIV tests and identified as positive increased significantly<sup>27</sup> Another study found that transition from targeted testing to integrated routine rapid testing improved test acceptance by 17%; 100% of HIV positive individuals were linked to care.<sup>28</sup>

Patients seen in sexually transmitted disease (STD) clinics are at higher risk for HIV infection than the general population.<sup>29</sup> High HIV test acceptance (68%) and receipt of test results (85%) are reported for individuals offered an HIV test at a STD clinic. Overall, 5.6 people tested positive for HIV per every 1,000 people who tested. Men who tested were more likely to be HIV positive than women who tested (8.6 per 1,000 and 1.2 per 1,000, respectively). For MSM, the HIV positivity rate was much higher (63.8 per 1,000).<sup>29</sup> When HIV testing services at STD clinics are expanded from referral/opt-in to opt-out, testing increased – from 10 to 68%.<sup>30</sup> When risk-reduction counseling is excluded, the cost of implementing universal rapid HIV testing is reduced by more than 50%.<sup>31</sup>

**Testing in nonclinical settings** allows diagnosis of HIV among individuals who may not access health services and are willing to test in community testing programs (CTPs) and venues (e.g., stand-alone sites, bars/clubs, mobile clinics, substance abuse/drug treatment centers, sex on premises sites, etc.). Populations served and testing methods vary across CTPs/venues; a broad range of findings are reported: test acceptance (9% to 95%); test receipt (29% to 100%); client satisfaction (91% to 99%); HIV positivity rates (0% to 12%,  $\geq 10\%$  were reported for most studies). Higher percentages of clients received their results with rapid testing than with other methods.<sup>32</sup> Transgender women and people who are black, HIV positive, previously incarcerated, sex workers, or stably housed tend to test more at CTPs than their demographic counterparts.<sup>33</sup> Twelve percent of trans women who tested at CTPs tested HIV positive.<sup>34</sup> Eighty percent of individuals who tested onsite at substance use treatment centers received their result compared to 18% who were referred to another site and followed through with testing.<sup>35</sup> Across the nation, treatment programs were found to be the most frequently identified location of participants' last HIV test; however, despite the availability of free, on-site testing, substantial opportunities to test clients are missed.<sup>36</sup>

**Testing in pharmacies** is supported by 79% of surveyed staff<sup>37</sup>; lack of staff training, uneasiness delivering positive test results, patient linkage to care, and insufficient consulting space deter testing.<sup>38</sup> Individuals with recent high-risk behaviors who had not previously tested for HIV test at pharmacies and report favorable perceptions of their rapid HIV testing experience.<sup>39</sup>

**HIV self-testing (HIVST)** is a proven, growing testing alternative that allows private in-home testing via oral fluid or blood sample testing. Use of both are reported; oral fluid is simpler and more acceptable.<sup>40</sup> In the U.S., HIVST has been studied in diverse groups; test acceptance ranges from 63% to 85%.<sup>41</sup> HIVST is a positive addition to MSM's HIV prevention toolbox<sup>42</sup> and is preferred over other testing methods.<sup>43</sup> A peer-based self-testing strategy identified more MSM that had never tested for HIV and positive test results than MSM who used the County-sponsored testing programs.<sup>44</sup> HIVST is an effective testing choice for transgender women; 68% of participants in a study preferred HIVST to clinic-based testing and 91% indicated they would recommend HIVST to a friend.<sup>45</sup> HIVST was also highly acceptable among 1,535 individuals residing in an urban, mostly Black/African American neighborhood where 50% of participants were female.<sup>46</sup> Uptake, acceptability, and positive outcomes of HIVST are also reported using social media and internet strategies as well as distribution in bathhouses where kits potentially reach diverse, high-risk populations of MSM.<sup>47-50</sup> Ease of use, convenience, potential for integration with mobile health, and availability for various modes of distribution favor HIVST for large-scale implementation however it is challenged with lesser test performance relative to that in health care settings, nonstandard counseling following receipt of test results, and difficulty providing linkage to care.<sup>51</sup>

## What still needs to be done?

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To identify, reach, and test individuals in the U.S. who are infected with HIV but do not know their status

- Address barriers and continue to expand RHT in hospitals and other clinical settings, using the HIV rapid test.
- Expand testing in agencies with the potential to, or demonstrated history of, identifying individuals with undiagnosed HIV.
- Further tailor and build on HIV testing strategies that reach populations less likely to test and/or at heightened risk of HIV infection, (e.g., MSM, transgender women of color, youth/young adults, Blk/Afr. Am. women, and Latinx communities).
- Revise CDC testing recommendations to include populations known to be at increased risk for HIV infection but not included in the prior recommendations (e.g., transgender women).
- Promote self-testing where people at risk for HIV infection congregate (e.g., bathhouses, bars, internet/social media).
- Research, understand, and address the role of social conditions (e.g., homelessness, racism, exposure immersion and education/economic opportunities) and their effect on HIV testing decision-making.
- Support ending the HIV epidemic (EtHE) research and programs to promptly diagnose people with unknown HIV status.

**Produced by the Community Engagement Core.** Revised 02/2021 by Barbara Green-Ajufo and John-Manuel Android | Reviewers: Beth Bourdeau, John Hamiga, Greg Rebchook and Parya Saberi.

## Says who?

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