



Published in final edited form as:

*Acad Emerg Med.* 2013 March ; 20(3): 309–312. doi:10.1111/acem.12082.

## Understanding HIV Screening in the Emergency Department: Is Perception Reality?

**Jason S. Haukoos, MD, MSc** and

Denver ED HIV Research Consortium, Denver, CO; Department of Emergency Medicine, Denver Health Medical Center, Denver, CO; University of Colorado School of Medicine, Aurora, CO; Department of Epidemiology, Colorado School of Public Health, Aurora, CO

**Emily Hopkins, MSPH**

Denver ED HIV Research Consortium, Denver, CO; Department of Emergency Medicine, Denver Health Medical Center, Denver, CO

---

## New Synergy of Human Immunodeficiency Virus (HIV) Screening Policy in the United States

Testing is the first in a series of important interventions aimed at mitigating the HIV epidemic.<sup>1</sup> Identifying individuals with HIV infection provides a critical opportunity to link them into care where treatment with highly active antiretroviral medications significantly improves immune function while reducing viral load, thus slowing disease progression and reducing infectivity.<sup>2,3</sup> Knowing one's serostatus also attenuates individual behaviors that contribute to transmission of the virus.<sup>4</sup> With this as the basis for control of the epidemic, a major prevention goal is for everyone to know his or her HIV serostatus, and for those infected with HIV to be actively engaged in care.

As an initial catalyst to this end, in 2006 the Centers for Disease Control and Prevention (CDC) released revised recommendations for HIV screening in health care settings.<sup>5</sup> These recommendations created a framework for performing broader HIV screening in the United States, and significantly changed the testing paradigm by fundamentally reducing barriers to completing testing. Over the past six years, the quality and quantity of research conducted around these recommendations has been nothing but unprecedented.<sup>6</sup>

The 2006 CDC recommendations specifically called for routine performance of non-risk-based opt-out screening for all patients 13 to 64 years of age who present to health care settings, including emergency departments (EDs), where the undiagnosed HIV prevalence is at least 0.1%. The recommendations were accompanied by additional suggestions for the integration of HIV consent into the general consent for medical care, and focused prevention counseling for only those patients who test positive. The basis for these recommendations stem from the following considerations: 1) the prevalence of undiagnosed HIV infection in the United States had not changed appreciably over the prior decade; 2) those with undiagnosed HIV infections contribute significantly to its forward transmission; and 3) such screening would result in larger numbers of individuals tested and identified earlier in their disease courses.<sup>7</sup>

---

Address for Correspondence: Jason S. Haukoos, MD, MSc, Department of Emergency Medicine, Denver Health Medical Center, 777 Bannock Street, Mail Code 0108, Denver, Colorado 80204 USA, Tel: (303) 436-7141, Fax: (303) 436-7541, Jason.Haukoos@dhha.org.

The authors report no conflicts of interest.

In 2007, the CDC released an “Expanded Testing Initiative”<sup>8</sup> and, in 2011, a “High Impact HIV Prevention Initiative”<sup>9</sup> in response to the 2010 National HIV/AIDS Strategy put forth by the White House.<sup>10</sup> The overarching goal of the High Impact HIV Prevention Initiative is to “advance the prevention goals of the National HIV/AIDS Strategy and [to] maximize the effectiveness of current HIV prevention methods...by combining scientifically proven, cost-effective, and scalable interventions targeted to the right populations in the right geographic areas.”<sup>9</sup> High impact prevention prioritizes effectiveness and costs, feasibility of implementation, and coverage of target populations, and our understanding of how best to incorporate HIV screening into medical care (including emergency medical care) has been, and will continue to be, a central theme of HIV prevention efforts.

In response to the CDC recommendations, a large number of states have altered their HIV testing consent laws to accommodate this “more inclusive” testing approach,<sup>11</sup> and on September 1, 2010 New York enacted a law mandating offering HIV testing to all patients who seek medical care.<sup>12</sup> Most recently, on November 17, 2012, the United States Preventive Services Task Force (USPSTF) published draft updated recommendations that, in part, give routine HIV screening (defined as clinicians screening all patients 15 to 65 years of age for HIV infection) a Grade A recommendation (defined as the USPSTF recommending this service and there being high certainty that the net benefit of the service is substantial).<sup>13</sup> This recommendation is significantly different from the previous recommendation (i.e., Grade C, USPSTF makes no recommendation for or against routinely screening for HIV in adolescents who are not at increased risk for HIV infection),<sup>14</sup> and is likely to be finalized without major modification. Furthermore, it is congruent with the 2006 CDC recommendations, is closely aligned with the National HIV/AIDS Strategy, and is a key requirement of the broader HIV testing coverage proposed in the Patient Protection and Affordable Care Act.<sup>15</sup> With this convergence of HIV policy, and for the first time in over 30 years since the epidemic was identified, we now have a unified and aggressive HIV prevention strategy in the United States.

## Misperception Negatively Affects Implementation of HIV Screening in EDs

While it is clear that controlling the HIV epidemic in the United States has become a central public health goal of policy leaders, understanding how to best integrate routine HIV screening into emergency care remains a critical next step for our specialty.

Although a substantial and growing body of research exists regarding HIV screening in EDs, a relative paucity of work has been published related to clinician and patient perceptions about such screening.<sup>16,17</sup> It is important to draw a distinction between “perception” and “satisfaction”; the latter concept has received significantly more attention, with conclusions generally supportive of routine HIV screening in the ED by both patients and ED staff.<sup>16,18-20</sup> Moreover, lack of understanding and misperceptions related to HIV screening in EDs likely contribute to its poor penetration as a prevention intervention in emergency medicine.

In this issue of *Academic Emergency Medicine*, Schnall et al.<sup>21</sup> and Cowan et al.<sup>22</sup> publish articles using qualitative methodology to better understand clinician and patient understanding, respectively, of routine HIV screening in the ED. Although qualitative research is meant to be exploratory or “hypothesis-generating,” it is the correct methodology for beginning to understand perception, and the work published by these two groups significantly advances the science of HIV screening. Their work primarily identifies and defines important gaps, and confirms some prior concerns related to how both clinicians and patients view HIV testing in EDs.

Schnall et al. used focus groups to assess clinicians' perceptions related to routine HIV screening after the New York state law was enacted, and uncovered fundamental and persistent knowledge gaps about HIV screening.<sup>21</sup> Not surprisingly, both physicians and nurses had difficulty understanding the importance of HIV screening in emergency medicine and how it should be prioritized in the context of record numbers of ED visits and shrinking health care resources.<sup>23</sup> This disconnect has been pervasive among the emergency medicine community<sup>24,25</sup> and overcoming it will be crucial if we expect to more fully integrate HIV testing into emergency medical care.

Additionally, the authors describe broad concerns about how best to integrate HIV testing into clinical practice without affecting patient flow and several more specific aspects of operationalizing screening in EDs.<sup>21</sup> Recognizing that EDs serve as the principal medical safety net in the United States, a growing contingency of emergency physicians, policy stakeholders, and administrators have argued two polarizing perspectives, namely, that the ED serve as a critical venue for advancing public health initiatives because of its place on the frontlines and because many patients who seek care in EDs do not make other contact with clinicians,<sup>6,26,27</sup> or that such initiatives should exist solely in primary care networks where preventive care is more of a priority and resources can be dedicated to such practice.<sup>24</sup> Irrespective of this ongoing debate, real operational confusion remains, including but certainly not limited to issues about how and to whom testing should be offered, which testing approach or sequence should be used, who should perform testing, and how best to obtain consent and perform counseling and linkage to care for those identified with HIV infection. Understanding these important operational components, while also knowing which methods are most effective, remains vital to understanding how HIV testing should be incorporated into emergency care. Ongoing work by investigators across the country, including those associated with the National ED HIV Testing Consortium, will be paramount in helping understand how best to perform HIV testing in EDs in the future.

The article by Cowan et al. used semi-structured interviews to assess patients' perceptions related to consent and counseling as suggested by the CDC.<sup>22</sup> These authors nicely demonstrate support of the CDC recommendations for streamlining consent (i.e., integrating HIV consent into the general consent and eliminating the need for separate written consent); they also highlight differences in patients' perceptions related to counseling – some believing counseling is important and others do not. Resolving this discrepancy will require ongoing evaluation of methods of providing information and resources to patients, and may benefit from novel interactive and informational methodologies like those developed by investigators in New York and Rhode Island.<sup>28,29</sup>

Also, similar to results from our research group, Cowan et al. importantly confirmed fundamental misunderstanding of opt-out consent,<sup>22</sup> which supports an existing notion that patients may not understand what they are consenting to.<sup>30</sup> While the CDC explicitly states that “[s]creening should be voluntary and undertaken only with the patient's knowledge and understanding that HIV testing is planned,”<sup>5</sup> these results, unfortunately, suggest otherwise. Although a number of studies support a larger proportion of patients “agreeing to” and completing HIV testing when it is offered using an opt-out approach,<sup>30,31</sup> we wonder if this should be the goal when potentially important misunderstanding (even to the extent that some patients do not know they are being tested for HIV infection) exists. Additional research is required to better understand how opt-out consent mechanisms are interpreted, and until this picture is clearer, we believe clinicians and program administrators must be careful in how they incorporate opt-out consent into screening programs.

If HIV screening is to exist as a routine part of emergency medicine, and as we strive to achieve the broader and more laudable goal of living in a society where all HIV infections

are known and new HIV infections are rare, it is critical that emergency physicians, patients, and administrators understand key aspects of HIV screening implementation, with sufficient congruence between those on the front lines and those who develop policy. In the end, perception is reality, and we believe misperception negatively affects implementation and effectiveness of ED-based HIV screening programs.

## Acknowledgments

Supported, in part, by an Independent Scientist Award (K02HS01726) from the Agency for Healthcare Research and Quality and an Investigator-Initiated Grant (R01AI106057) from the National Institute of Allergy and Infectious Diseases to Dr. Haukoos.

## References

- Gardner EM, McLees MP, Steiner JF, Del Rio C, Burman WJ. The spectrum of engagement in HIV care and its relevance to test-and-treat strategies for prevention of HIV infection. *Clin Infect Dis*. 2011; 52:793–800. [PubMed: 21367734]
- Cohen MS, Chen YQ, McCauley M, et al. Prevention of HIV-1 infection with early antiretroviral therapy. *N Engl J Med*. 2011; 365:493–505. [PubMed: 21767103]
- Crepaz N, Hart TA, Marks G. Highly active antiretroviral therapy and sexual risk behavior: a meta-analytic review. *JAMA*. 2004; 292:224–36. [PubMed: 15249572]
- Marks G, Crepaz N, Senterfitt JW, Janssen RS. Meta-analysis of high-risk sexual behavior in persons aware and unaware they are infected with HIV in the United States: implications for HIV prevention programs. *J Acquir Immune Defic Syndr*. 2005; 39:446–53. [PubMed: 16010168]
- Branson BM, Handsfield HH, Lampe MA, et al. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. *MMWR Recomm Rep*. 2006; 55:1–17. [PubMed: 16988643]
- Haukoos JS, Lyons MS. Idealized models or incremental program evaluation: translating emergency department HIV testing into practice. *Acad Emerg Med*. 2009; 16:1044–8. [PubMed: 20053220]
- Bartlett JG, Branson BM, Fenton K, Hauschild BC, Miller V, Mayer KH. Opt-out testing for Human Immunodeficiency Virus in the United States: progress and challenges. *JAMA*. 2008; 300:945–51. [PubMed: 18728268]
- Centers for Disease Control and Prevention. Results of the expanded HIV testing initiative--25 jurisdictions, United States, 2007-2010. *MMWR Morb Mortal Wkly Rep*. 2011; 60:805–10. [PubMed: 21697804]
- Centers for Disease Control and Prevention. [Accessed Jan 2, 2013] High-Impact HIV Prevention: CDC's approach to reducing HIV infection in the United States. Available at: [http://www.cdc.gov/hiv/nhas/dhap/pdf/nhas\\_booklet.pdf](http://www.cdc.gov/hiv/nhas/dhap/pdf/nhas_booklet.pdf)
- [Accessed Jan 2, 2013] The White House Office of National AIDS Policy. National HIV/AIDS Strategy for the United States. Available at: <http://www.whitehouse.gov/sites/default/files/uploads/NHAS.pdf>
- Neff S, Goldschmidt R. Centers for Disease Control and Prevention 2006 Human Immunodeficiency Virus testing recommendations and state testing laws. *JAMA*. 2011; 305:1767–8. [PubMed: 21540419]
- New York State Department of Health. N.Y. Pub. [Accessed Jan 2, 2013] Health Law Section 63.3 HIV-related testing. Available at: <http://w3.health.state.ny.us/dbspace/NYCRR10.nsf/11fb5c7998a73bcc852565a1004e9f87/8525652c00680c3e8525652c004f3d82?OpenDocument>
- Chou R, Selph S, Dana T, et al. Screening for HIV: systematic review to update the 2005 U.S. Preventive Services Task Force recommendation. *Ann Intern Med*. 2012; 157:706–18. [PubMed: 23165662]
- Chou, R.; Huffman, L. Screening for human immunodeficiency virus: focused update of a 2005 systematic review for the U S Preventive Services Task Force. Rockville, MD: Agency for Healthcare Research and Quality; 2007.

15. U.S. Government Printing Office. Patient Protection and Affordable Care Act Pub L No 111-148, §2702, 124 Stat. Vol. 119. Washington DC: U.S. Government Printing Office; 2010. p. 318-319.
16. Merchant RC, Clark MA, Seage GR 3rd, Mayer KH, Degruttola VG, Becker BM. Emergency department patient perceptions and preferences on opt-in rapid HIV screening program components. *AIDS Care*. 2009; 21:490–500. [PubMed: 19283644]
17. Merchant RC, Waxman MJ, Maher JG, et al. Patient and clinician ethical perspectives on the 2006 Centers for Disease Control and Prevention HIV testing methods. *Public Health Rep*. 2012; 127:318–29. [PubMed: 22547863]
18. White DA, Scribner AN, Martin ME, Tsai S. A comparison of patient satisfaction with emergency department opt-in and opt-out rapid HIV screening. *AIDS Res Treat*. 2012; 2012:904916. [PubMed: 22400107]
19. Sohoni A, Gordon DM, Vahidnia F, White DA. Emergency department staff satisfaction with rapid human immunodeficiency virus testing. *Acad Emerg Med*. 2010; 17:561–5. [PubMed: 20536813]
20. Merchant RC, Seage GR, Mayer KH, Clark MA, DeGruttola VG, Becker BM. Emergency department patient acceptance of opt-in, universal, rapid HIV screening. *Public Health Rep*. 2008; 123(Suppl 3):27–40. [PubMed: 19172704]
21. Schnall R, Clark S, Olender S, Sperling JD. Providers' perceptions of the factors influencing the implementation of the New York state mandatory HIV testing law in two urban academic emergency departments. *Acad Emerg Med*. 2013; 20 this issue.
22. Cowan E, Leider J, Velastegui L, Wexler J, Velloza J, Calderon Y. A qualitative assessment of emergency department patients' knowledge, beliefs, attitudes, and acceptance towards revised HIV testing strategies. *Acad Emerg Med*. 2013; 20 this issue.
23. Bernstein SL, Haukoos JS. Public health, prevention, and emergency medicine: a critical juxtaposition. *Acad Emerg Med*. 2008; 15:190–3. [PubMed: 18275450]
24. Irvin CB, Flagel BT, Fox JM. The emergency department is not the ideal place for routine HIV testing [comment]. *Ann Emerg Med*. 2007; 49:722. [PubMed: 17452276]
25. Kelen GD. Emergency department HIV testing: reflections forward. *Ann Emerg Med*. 2011; 58(Suppl 1):S168–71. [PubMed: 21684398]
26. Rothman RE, Lyons MS, Haukoos JS. Uncovering HIV infection in the emergency department: a broader perspective. *Acad Emerg Med*. 2007; 14:653–7. [PubMed: 17538079]
27. Haukoos JS. Rethinking how we perform HIV testing in the emergency department. *Ann Emerg Med*. 2011; 58(Suppl 1):S160–3. [PubMed: 21684396]
28. Calderon Y, Leider J, Hailpern S, et al. A randomized control trial evaluating the educational effectiveness of a rapid HIV posttest counseling video. *Sex Transm Dis*. 2009; 36:207–10. [PubMed: 19265735]
29. Merchant RC, Clark MA, Mayer KH, Seage GR III, DeGruttola VG, Becker BM. Video as an effective method to deliver pretest information for rapid human immunodeficiency testing. *Acad Emerg Med*. 2009; 16:124–35. [PubMed: 19120050]
30. Haukoos JS, Hopkins E, Bender B, et al. Use of kiosks and patient understanding of opt-out and opt-in consent for routine rapid human immunodeficiency virus screening in the emergency department. *Acad Emerg Med*. 2012; 19:287–93. [PubMed: 22435861]
31. White DA, Sadoun T, Tran T, Alter HJ. Increased acceptance rates of HIV screening using opt-out consent methods in an urban emergency department. *J Acquir Immune Defic Syndr*. 2011; 58:277–82. [PubMed: 21876449]