Establishing an ED HIV Screening Program: Lessons from the Front Lines

Jeremy Brown, MD, Robert Shesser, MD, Gary Simon, MD

Abstract

In September 2006, the Centers for Disease Control and Prevention released its revised recommendations for human immunodeficiency virus (HIV) testing. Prominent among these were the recommendations that emergency departments should perform routine screening for HIV infection. This report outlines the steps needed to set up an emergency department–based HIV screening program based on these guidelines. It contains the lessons that were learned when such a program was initiated at an academic emergency department. Consideration of these steps will help streamline the establishment of the program, but there should be careful consideration of the program's costs and sustainability before embarking on the process.

ACADEMIC EMERGENCY MEDICINE 2007; 14:658–661 © 2007 by the Society for Academic Emergency Medicine

Keywords: HIV, epidemiology, public health

In September 2006, the Centers for Disease Control and Prevention (CDC) released its revised recommendations for human immunodeficiency virus (HIV) testing.[1] Prominent among these were the recommendations that emergency departments (EDs) routinely offer screening for HIV infection for all patients aged 13–64 years. These recommendations apply to all health care settings in which the documented prevalence of undiagnosed HIV infection is greater than 0.1% and are irrespective of the patient's risk factors. Patients seeking treatment for sexually transmitted diseases should also be screened routinely for HIV infection. In addition, the CDC made recommendations concerning consent and pretest information. These recommendations included the provision of either verbal or written information that HIV testing will be performed and the performance of the HIV test unless the patient declines (opt-out of screening). The CDC recommended that consent for an HIV screening test should be incorporated into the patient's general consent for medical care and that a separate consent form for HIV testing is no longer recommended. If a patient declines an HIV test, the decision should be documented in the medical record. The CDC recommendations emphasize that HIV testing must remain voluntary and free from coercion and that patients should not be tested without their knowledge or consent.

While EDs are not presently mandated to follow these recommendations, they will affect every U.S. ED that wishes to follow them. Even in settings in which the prevalence of HIV infection is too low to warrant routine screening, patients with sexually transmitted diseases (who are routinely treated in community EDs with a low prevalence of HIV) should be screened. HIV testing is currently an infrequent part of the ED management of these patients. An additional burden is placed on hospitals serving areas in which the prevalence of HIV is high; these hospitals often serve as safety net institutions and often have leaner management and information management infrastructures.[2] In addition, under most current reimbursement structures, hospitals and their professional groups that choose to follow the CDC recommendations will be assuming significant new costs without any additional revenue.

This report outlines the steps needed to set up an ED-based HIV screening program based on the CDC guidelines. It contains the lessons that were learned when such a program was initiated at an academic ED serving a population with a very high HIV prevalence rate in a jurisdiction that does not require written informed consent for an HIV screening test. In this program, the triage nurse informs patients that they will be offered a free HIV screening test once they are seen in the ED. The triage nurse also distributes information about HIV and HIV screening, which the patients are asked to read while they are waiting. The test is performed by trained additional nonmedical volunteer staff, who also inform the patient of all negative results. These staff perform a rapid oral test in parallel to the standard ED evaluation

A related commentary appears on page 653.

From the Department of Emergency Medicine (JB, RS) and Division of Infectious Diseases (GS), George Washington University Medical Center, Washington, DC.

Received January 18, 2007; revision received February 26, 2007; accepted February 26, 2007.

Contact for correspondence and reprints: Jeremy Brown, MD; e-mail: jbrown@mfa.gwu.edu.

ISSN 1069-6563
PII ISSN 1069-6563583

doi: 10.1197/j.aem.2007.02.033

and treatment. The test is available from 8 AM to midnight every day of the week. The attending physician is responsible for informing the patient of a preliminary positive test result. Patients with a preliminary positive result are given several follow-up options, but further testing from the ED is not offered. Patients without any medical insurance are directed to a local free care clinic specializing in HIV. This clinic agreed to see all patients with a preliminary positive test result from our program, irrespective of their ability to pay. It is important to note that this program was supported entirely with extramural industry funding and testing kits provided by the jurisdiction's public health department. Although we have not specifically calculated the true costs of the program, the establishment of such a program involves hours of time of highly paid professionals on an ongoing basis.

IDENTIFICATION OF A TESTING "CHAMPION"

Initiating an HIV testing program in an ED requires the considerable time and effort of at least one and possibly several emergency physicians (EPs). In the same way that EDs have identified specific physicians with responsibilities for areas as diverse as trauma, ultrasound, and medical student education, an active, respected member of the emergency medicine group must take responsibility for the HIV screening program as a whole. This person should have skills in managing complex operations, as well as an interest and belief in the project as a whole. Even with the best of intentions, physicians who do not practice inside an ED are not familiar with the challenges of patient flow and the realities of prioritizing care. They are therefore not ideal candidates for spearheading an ED HIV screening program. The "champion" will need to explain to their emergency medicine colleagues why such a program can enhance clinical care in the ED and will need to be responsible for the writing of collaborative protocols. In our program, there was one physician (JB) with responsibility for the ED management of the program, although in other settings this work may be undertaken by several EPs.

MAKING THE CASE TO EPs

As noted previously, ED HIV testing depends on the goodwill, support, and extra effort of the EPs. Traditionally, EPs infrequently order HIV testing on patients other than those being treated for an occupational blood exposure. HIV testing on patients who are to be admitted is usually deferred until care is transferred to the inpatient team.

To successfully implement a screening program, the current paradigm must change. EPs understand that the ED population in high prevalence areas often has no sources of primary care and that the ED encounter may provide the only screening opportunity in this population. Because EPs are aware that early identification and treatment improve outcomes in patients with HIV, the physician group will support the program if it is efficiently designed to minimize patient delay. Physicians should be invited to express individual concerns, and the testing champion should work closely with physicians who express their skepticism about the effectiveness of the program. The group should receive frequent feedback about program performance. Physicians should share their experiences relating to informing the preliminarily positive patients, and develop a group consensus as to how best to accomplish this new task. In our group, there was unanimous support in principle for the initiation of the HIV screening program, although individual physicians may have had specific reservations. These were addressed by reference to the new CDC recommendations, review of the few prior experiences of HIV testing in the ED,[3–5] and meetings with infectious diseases physicians with a long experience of treating HIV. A commitment was also made to review the entire program after an initial six-week pilot period.

EARLY INVOLVEMENT AND SUPPORT FROM ED NURSING

Although there are several different models and approaches to screening for HIV in the ED, all will involve nursing staff to one degree or another. Just as the support and involvement of physicians are vital, it is imperative that the ED nursing staff be involved early on in the planning process. In our experience, the ED nursing staff was overwhelmingly supportive of our screening initiative. Although in our program the nursing staff are not responsible for any aspect of testing or communication of the results (other than informing the patient of the program at triage), we believe it is both prudent and sensible to obtain early buy-in from the nursing staff. The nursing staff was informed of our intention to implement the program and was asked to express any concerns at regular ED management meetings. A large poster explaining the background of the program and our intention to initiate screening was prominently displayed in the ED for several weeks before the start of the program, and this helped to educate the ED nurses and ancillary staff about the planned screening program.

INVOLVEMENT OF HOSPITAL ADMINISTRATION AND MEDICAL STAFF

Screening programs for HIV have been widely discussed in the media, and it is important for the hospital administration to be fully informed and supportive of the ED's HIV testing program. The program should not be initiated without the explicit approval of the hospital administration and medical staff leadership. The screening policies and procedures should be written in draft form and sent to administration and medical staff leadership for their input.

UNDERSTANDING STATE LEGAL REQUIREMENTS

There are numerous state laws that have an impact on how an ED HIV screening program will operate. Currently, 14 states require written informed consent, although some of these are expected to revisit this requirement. Some states have laws requiring verbal consent, partner notification, name-based reporting of positive cases, and the sharing of information about positive cases with EMS providers. These and many other regulations will impact the way in which the ED will offer the test and report any positive cases. We recommend

reviewing these laws with the State Department of Health to ensure that the ED program is fully compliant. We also recommend that the legal department of the hospital review the program to ensure it is in compliance with all applicable laws.

THE ROLE OF CLINICAL PATHOLOGY AND LABORATORY SUPPORT

Although the rapid HIV screening test kits are extremely easy to use, all ED point of care testing is subject to hospital laboratory oversight and requires a separate set of policies and procedures. In many hospitals, rapid HIV screening is already performed as part of an occupational exposure protocol, and therefore most laboratory departments are already familiar with the rapid HIV screening kits. However, it will be necessary to develop point of care protocols if the testing will be performed by ED staff members. Among the issues that need to be addressed are the frequency of performing quality control tests, the location of logbooks, and the nature of training of personnel who will be performing the HIV testing.

INVOLVEMENT OF THE HOSPITAL'S INFECTIOUS DISEASES SPECIALISTS AND INFECTION CONTROL STAFF

A successful ED HIV testing program requires the support of and input from medical staff members with expertise in HIV. Infectious diseases experts experienced with HIV testing and counseling will be invaluable in crafting the approach to patients with preliminarily positive ED HIV tests and will often be part of the referral process for these patients. Of all the concerns raised by our ED faculty before initiating a screening program, the absolute lack of experience in informing patients of a positive test result was among the most prominent. In our hospital, the EPs received a short training session from the director of the Division of Infectious Diseases. Once the ED faculty heard of the way in which informing a patient that they had tested positive for HIV had changed over the years, and the way in which the disease is now far less stigmatized than previously, many of their fears were alleviated.

In addition, ED HIV testing is not an end in itself but rather part of a process linking those who are infected to care. It is therefore critical to build a mechanism into the ED protocol that directs any patient found to be positive to a prompt follow-up appointment with an HIV specialist. This will require an estimation of how many patients will initially test positive and arranging some open appointments for these patients to be seen in the infectious diseases clinic. This ability to be seen in a short time by an infectious diseases expert must be available for all patients regardless of their ability to pay. There are, however, some practice settings in which it may not be possible for patients without health insurance to be seen in the infectious diseases clinic. In this case, there must be alternative mechanisms in place for patients to be seen at a venue willing to treat patients without insurance.

ARRANGEMENTS TO PROCURE HIV TESTS

Most third-party payment arrangements for ED care do not include a mechanism to reimburse the hospital for the cost of the testing kit. Although the CDC is currently discussing this issue with several large health care insurance companies (Bernie Branson, personal communication, December 2006), there is not yet a clear mechanism by which the provision of an ED HIV test may be reimbursed. In several of the EDs currently offering testing, a charge is made on the patient's bill for the test, and recent changes in Medicaid funding in the state of New York may allow for reimbursement for ED testing. Until hospitals can recover the costs of HIV screening, it will be necessary to obtain funding for the tests, which cost approximately $12–$18 each. The options are somewhat limited; EDs may seek provision of the test kits from state or municipal departments of health, federal funding including CDC grants, or hospital funds. In some cities such as Washington, DC, and Miami, Florida, the HIV screening kits are currently provided free of charge by the department of health, but this is by no means common across the states. Because of the costs, it is unlikely that a hospital will initiate an ED HIV screening program without either third-party reimbursement or an outside source of HIV test kits.

STAFFING MODELS FOR HIV SCREENING

Perhaps the main challenge after funding for the test kits is that of staffing models. It is abundantly clear from anyone who has stepped into a busy ED that any time dedicated to testing by existing staff will come at the expense of some other vital function that they already perform. Different models are currently being evaluated, and until they are reported and compared, EDs will have to develop their own staffing model. Among the options to consider are physician-based ordering and screening, screening that takes place as a routine part of the triage process and that therefore involves several extra steps by the triage nurse, and screening by additional paid or volunteer personnel. In some departments, a patient advocate or social worker is involved in some of the testing process. Additional personnel may not have previous medical training and may therefore require more oversight than staff already serving in the ED. In addition, it will be necessary to determine at which stage of the ED visit the consent for a test is obtained, at which stage the HIV screening test is performed, who ensures that the result is recorded on the chart, and how the result is delivered to the patient.

CHARTING OF THE TEST AND THE TEST RESULTS

The CDC recommends that the point-of-care HIV test results should be documented in the patient's medical record, where they can be freely available for review by other health care providers. It will therefore be necessary to determine where on the chart a screening test result should be placed. Because most computerized ED records have direct interfaces with the laboratory, new fields will need to be created, into which the results of a bedside or point of care test such as the rapid HIV screen may be entered. Handwritten charts also face

documentation challenges; the results of point of care tests may not be entered into a retrievable system and thus may not be available for other physicians.

FEEDBACK AND QUALITY IMPROVEMENT

Routine ED HIV screening is in its infancy. Even previously funded programs that have been in existence for a number of years are constantly undergoing changes and improvement, and quality improvement is a vital part of any clinical delivery process. We recommend that the HIV screening processes regularly be reviewed and that the benchmarks for success are clearly stated. First among these is not only the accurate delivery of screening results, but also the number of patients with a confirmed positive result being linked to HIV care. Just as an ED will keep records of missed fractures, discordant electrocardiogram readings, or clinically important missed diagnoses, it will be necessary to record and review the ongoing HIV screening process.

FOLLOW-UP OF PATIENTS WITH AN INITIAL POSITIVE SCREEN

For patients with an initial positive HIV screen, a follow-up confirmatory blood test (usually a Western blot) is required. The confirmatory testing should be performed promptly in a setting that is both convenient for the patient and efficient for the follow-up physician to obtain the results. Wherever the confirmatory test is obtained, we recommend that a specific individual be charged with the telephone follow-up of patients who have an initial positive screen. This follow-up contact should be used to ensure that the patient has had a Western blot and is linked to care. The exact workload of the individual charged with follow-up cannot be predicted until the incidence of occult HIV has been determined in the particular ED setting. However, based on our experience in an area of high HIV prevalence, the number of individuals with a preliminary positive test result is not high, and the few publications reporting this number suggest a rate of approximately 1%–3% of all patients tested.[4,5]

CONCLUSIONS

Most U.S. EDs are not in compliance with current CDC HIV screening recommendations. Implementation of the current recommendations can be accomplished but requires a significant initial and ongoing investment of physician and nursing staff time and material. Consideration of the steps listed in this report will help streamline the establishment of the program, but there should be careful consideration of the program's costs and sustainability before embarking on the process.

References

1. 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(RR-14):1–17.
2. Burt CW, Arispe IE. Characteristics of emergency departments serving high volumes of safety-net patients: United States, 2000. Vital Health Stat. 2004; 13(155):1–16.
3. Rothman RE. Current Centers for Disease Control and Prevention guidelines for HIV counseling, testing, and referral: critical role of and a call to action for emergency physicians. Ann Emerg Med. 2004; 44:31–42.
4. Lyons MS, Lindsell CJ, Ledyard HK, Frame PT, Trott AT. Emergency department HIV testing and counseling: an ongoing experience in a low-prevalence area. Ann Emerg Med. 2005; 46:22–8.
5. Lyss SB, Branson BM, Kroc KA, Couture EF, Newman DR, Weinstein RA. Detecting unsuspected HIV infection with a rapid whole-blood HIV test in an urban emergency department. J Acquir Immune Defic Syndr. 2007; 44:435–42.