



HIV Testing in Hospital Emergency  
Departments:  
Collaborative Strategies for  
Implementation

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HIV testing activities supported by state/local health departments continue to be a cornerstone of our nation's HIV prevention efforts. Health departments have expanded HIV testing efforts into clinical settings in an effort to increase the number of individuals who learn their HIV infection status. Hospital emergency rooms continue to play a critical role in the successful expansion of HIV testing.

Emergency departments (ED) and urgent care facilities serve individuals who may not seek health care services in other venues and therefore might not access HIV testing. This, coupled with the fact that they are generally high throughput facilities, makes emergency departments opportune venues for HIV testing with the potential in some locations for relatively high yield of HIV diagnoses. With the publication of the Centers for Disease Control and Prevention's (CDC) [\*Revised Recommendations for HIV Testing of Adults, Adolescents and Pregnant Women in Health Care Settings\*](#) in September 2006, health departments have invested in HIV testing in various traditional and non-traditional clinical settings. With the availability of additional federal funding made available by the CDC through the *PS07-768 Expanded and Integrated Human Immunodeficiency Virus (HIV) Testing for Populations Disproportionately Affected by HIV, Primarily African Americans*, health departments have further expanded their support of HIV testing in EDs.

In April 2010 the National Alliance of State and Territorial AIDS Directors (NASTAD), with support from an independent educational grant from Tibotec Therapeutics, conducted a one-day consultation to obtain input from experts regarding emergency department-based HIV testing. Through presentations and facilitated discussion, the consultation sought to:

- Help determine "best practices" associated with the development and implementation of emergency department-based HIV testing;
- Identify facilitators and challenges to implementation;
- Identify the benefits of collaboration between hospitals and health departments in implementing HIV testing; and
- Clearly define the role of public health agencies in implementing HIV testing in emergency departments.

This meeting served as a follow-up to a similar 2007 meeting and was intended to assess the current status of HIV testing in emergency departments in terms of models and current challenges and facilitators. Importantly, this meeting also sought to identify the key issues associated with sustainability of efforts currently underway and concluded with a discussion regarding the future of HIV testing in EDs.

Invited participants included ten teams comprised of hospital emergency department staff and state/local health department representatives who

have partnered to implement HIV testing in EDs. Representatives from CDC and the Centers for Medicare and Medicaid Services (CMS) also attended.

During the meeting, each of the health department-ED teams provided brief [presentations](#) highlighting the model(s) and approaches utilized to implement HIV testing in their jurisdiction (e.g., patient selection, provision of counseling/consent; testing methodologies; results delivery and linkage to care); program outcomes; challenges and successes; and future plans. Some of the programs had been operational for several years while others had only recently initiated testing in ED-settings.

This report reflects a synthesis of the presentations and discussion from this meeting. It is also intended to serve as a guide for health departments and EDs as they implement HIV testing in clinical settings or as they consider implementation. It is not intended to serve as an operational guidance. Rather, it is meant to assist health departments and EDs to identify the range of issues and factors that should be considered as part of existing program evaluation or for implementing ED-based HIV testing.

#### Highlights: Implementation models

EDs and their health department partners continue to use a variety of strategies to support HIV testing in EDs. Some health departments provide EDs with staffing grants to support a range of testing activities, either to engage the services of dedicated staff or to provide partial support for existing staff. Others provide more indirect support such as rapid HIV tests for point-of-care testing, laboratory services, infrastructure support (e.g., purchase of laboratory equipment), and/or training and technical assistance.

Some jurisdictions support HIV testing in a number of EDs within their state/city, while others support efforts in only one ED. For those jurisdictions with multiple sites, models vary based on sites.

Several other key themes emerged throughout the consultation as state/city health department-ED teams provided program overviews:

#### *Staffing Models*

All but two jurisdictions support a model that includes financial support and/or coordination of staff within the ED setting. The role of staff differed depending on the ED. For some ED HIV testing programs, staff are charged with everything from initial consent, counseling, testing and delivery of results. The vast majority of the ED programs utilize a combination of dedicated health department staff and ED staff to perform the various stages

of HIV testing in the ED, with the health department providing program oversight and training. Another model allows for ED clinicians to work with the patients to perform the test while Disease Intervention Specialists (DIS) deliver results and facilitate linkages to care for newly diagnosed individuals.

Both Maryland and North Carolina ED testing programs utilize medical or nursing students from the affiliated or local university to staff the programs. Texas and Houston have both implemented testing programs led entirely by nurses with the program oversight provided by the health department.

While some ED HIV testing programs have the capacity to make HIV testing available 24-hours a day, others have scheduled days and times.

### *Approach to HIV Testing*

The majority of participants have implemented HIV testing using either a risk-based (behavioral and clinical) screening approach or a population-based "test as many as possible" approach. Only one jurisdiction (Houston) has successfully implemented a population-based screening (i.e., "opt-out") approach to HIV testing.

### *HIV Counseling*

The implementation of pre/post-test counseling depends largely on the jurisdiction and the state/city policies regarding HIV testing. Jurisdictions participating in this consultation use various approaches for providing counseling including; video presentations, written documents and verbal communication.

### *Testing Methods*

The use of rapid testing versus conventional testing varies based on whether a clinician or HIV-tester is providing a test. Health department-ED teams agreed that clinicians are more amenable to performing a traditional HIV test if a tester is not available.

### Current Success

Most ED programs reported a fairly good yield of HIV diagnoses. Many reported seroprevalence of approximately one percent. Other participants reported that the percent yield was lower than anticipated, but still good.

Some participants reported that a sizeable minority of patients diagnosed in ED programs had been previously diagnosed and were not in care, or had

fallen out of care. Thus, ED-based testing programs may represent important opportunities to engage or re-engage previously diagnosed persons with care. To that end, most ED programs have been relatively successful in linking newly diagnosed and previously identified HIV-infected persons into care, primarily due to effective partnerships with infectious disease clinics. The extent to which these individuals remain engaged in care is, however, less well documented.

Use of laboratory-based assays, using random access platforms, greatly increases the volume of tests that can be conducted with a rapid turnaround. Use of such technologies reduces the need for dedicated staff to conduct testing, eliminates disruptions to clinic flow associated with point-of-care testing, and reduces the overall costs of testing.

### Implementation Challenges

The state/city health department-ED teams identified several challenges associated with implementing HIV testing in emergency departments:

#### *Financing*

Many insurers do not pay for HIV screening, but do pay for diagnostic testing. However, the rate for reimbursement of diagnostic HIV testing is generally not adequate to incentivize physicians and EDs to routinely offer HIV testing.

Many EDs have bundled reimbursement, meaning that even if a bill is submitted for HIV testing, it may not be reimbursed because all services are included in the bundled rate which is negotiated with individual insurers.

Similarly, where reimbursement above the bundled rate is available, the level of reimbursement is generally not a sufficient incentive to increase provider offering of HIV testing. It was noted that New York's Medicaid program provides a generous reimbursement for HIV testing conducted in EDs, but this has not resulted in a notable increase in HIV testing.

#### *Physician/Hospital Administration Buy-In*

Clinician awareness and appreciation of the need and value for HIV testing, particularly at a community level, tends to be lacking and state/city teams reported that intensive efforts were often needed to engage clinicians and "sell" them on HIV testing. Additionally, administration buy-in for HIV testing can be difficult, particularly if it is not perceived to generate revenue and is seen to be an interference with clinic operations.

Buy-in and support of the laboratory to expedite laboratory-based assays and/or to support point-of-care testing can also be problematic. Some teams reported resistance to point-of-care rapid testing due to the perception that ED staff are unqualified or inadequately skilled to conduct such tests. Participants also reported a lack of cooperation or support for expedited laboratory testing. Concerns of risk management for conducting point-of-care tests was also cited as a barrier to obtaining buy-in for HIV testing conducted in EDs.

Competing priorities, such as vaccination for H1NI, were reported among administrators and clinicians as being more important than HIV testing.

### *Point-of-Care Rapid Testing*

True population-based screening programs, using point-of-care rapid tests, appear to be impractical due to the high volume of patients and the necessity of having staff specifically tasked to conduct rapid tests at point-of-care. This model often interferes with patient flow as few other point-of-care tests are conducted in EDs and they often lack the space and personnel to conduct such tests. It also tends to be difficult to maintain patient confidentiality when testing at bedside.

### *Staffing*

Dedicated staffing models with 24/7 coverage in busy EDs are resource intensive and can be tremendously difficult to support. Such a staffing model in high prevalence facilities is the most feasible way to conduct true population-based screening. It can however result in relatively rapid staff burn-out.

### *Data Collection*

Collection of data for federal funding requirements is exceedingly burdensome, as it requires, in most cases, a parallel data collection system to the ED's institutional system.

### Facilitators of Successful Implementation

While there were many identified challenges to the implementation of ED-based testing, state/city health department-ED teams also identified many facilitators.

Meeting participants identified the implementation of oral consent and streamlined counseling as facilitators for clinician buy-in. Additionally, novel multimedia strategies for patient education and consent, such as use of pre-test videos and computer-based (including handhelds) risk assessment/counseling have also aided in the integration of HIV testing into clinic flow.

Despite the identified challenges with staff retention and burnout most health department-ED teams still believe that dedicated staff are essential to HIV testing in EDs, particularly with regard to providing counseling, obtaining consent and conducting point-of-care testing. Champions and coordinators are also viewed as essential to promoting HIV testing and encouraging/supporting implementation among clinical staff as well as administrators.

Partnerships between key stakeholders, including health departments, hospitals, community-based organizations and the community, are critical to the success of any HIV testing program in EDs in order to leverage limited resources. As previously mentioned, medical students that have served as volunteer testing staff have been invaluable, as well as the health department or community-based organization staff who have been “out posted” to EDs. Another important partnership to cultivate is with hospital laboratories. Use of laboratory-based rather than point-of-care testing with rapid turn-around of results has enabled testing of a higher volume of patients, often at lower cost.

Dedicated funding and other support (e.g., rapid tests) made available through health departments has also been instrumental in initiating and sustaining ED testing. Some participants reported that standing orders for HIV testing encourages clinicians to make HIV testing a standard of care.

Jurisdictional mobilization and marketing campaigns are now being used to stimulate provision of testing by providers and to promote uptake of testing among patients. Examples of such campaigns included [Bronx Knows](#) and Washington, DC’s “[Ask for the Test](#).” The extent to which these result in significant uptake in testing is not yet known.

### Discussion of Critical Issues and Considerations

Meeting attendees engaged in robust discussions regarding additional considerations, as well as identified several key gaps in current knowledge about HIV testing in EDs that need to be addressed in order to guide future programming:

## *Sustainability*

Implementing “parallel” HIV testing programs in EDs, particularly those which use dedicated staff, have been important in stimulating the uptake of testing in these EDs and in promoting buy-in of clinicians and facility administrators. However, parallel programs are not sustainable.

Shifting from use of point-of-care rapid tests to testing conducted in central hospital laboratories with rapid turnaround may increase the likelihood of sustainability by reducing the need for dedicated staff to conduct testing.

Financing is a critical concern for sustainability of HIV testing in EDs. Even if reimbursement at acceptable rates were to become more widely available, this would not help support HIV testing in public hospitals. Other sources of financial support would still be needed, such as that currently provided by health departments.

Concern was expressed, however, that enabling billing for HIV tests above bundled rates customary in EDs would result in passing costs onto patients with higher co-pays and deductibles. This may end up being a disincentive to HIV testing.

## *Associated Costs*

An understanding of the cost per test and the cost per positive results for different kinds of testing platforms and technologies is needed in order to help make well-informed decisions about the most cost effective technologies. Similarly, more information is needed about the relative cost and effectiveness of risk-based testing versus population-based screening in order to make decisions regarding the most effective approach for a jurisdiction or an individual facility.

It is also unclear at this point as to cost-benefit or saving for investing in emerging technologies, such as handheld devices or laboratory equipment. It is generally accepted that technology has the potential to streamline the testing process and require less staff time and resources. Participants need more information to determine whether the cost-savings are real and if the technology could negatively impact the interaction with patients (i.e., privacy issues).

## *Reimbursement*

Some jurisdictions have seen positive, albeit minimal, movement with regard to the policies guiding reimbursement for HIV tests by insurance, including

Medicare and Medicaid. Less clear is how to move from legislation to implementation. With the most recent changes in CMS for Medicare and HIV screening there is renewed commitment to making sure that HIV screening is reimbursable at a reasonable rate. Considering that issues of reimbursement are made on a state by state basis, it is less clear as to whether states will follow the CMS recommendations and how much will be reimbursed.

One jurisdiction commented that the greatest reimbursement comes from linkage to care. Therefore linkage to care should be emphasized for all new contracts as a source for the greatest fiscal return.

### *Partnerships and Communication*

As previously stated, the participating teams felt strongly that partnerships between health departments and EDs are critical for a successful testing program. Additional beneficial partnerships to consider include ones with professional organizations. These partnerships have the potential to improve the exchange of relevant information and data, and positively affect the standard of care.

Another consideration is how information is shared and communicated among partners, as well as with patients and the larger community. It is unknown as to whether jurisdictions share or interpret terms and theories the same as other jurisdictions (i.e., routine screening, opt-out/opt-in). Also of concern is the information that is, or is not, communicated to patients. Data suggest that many patients believe they have been tested for HIV if their blood has been drawn. Likewise, they believe they are negative if they've not received a call from the hospital.

### *Other Considerations*

As state/city ED HIV testing programs advance and evolve there is a need for more information and data analysis to support expansion. For example, jurisdictions would like to know if there is data to support the efficacy of testing admitted hospital patients. Also, there is a desire for impact evaluation data to demonstrate the impact of testing in clinical settings versus testing in ED settings—which types of venues have the greatest yield of diagnoses and are associated with successful engagement in care.

A representative from CDC suggested, for consideration, that jurisdictions emphasize positivity rates less and focus more on the number of people that learn their HIV status. The counter-argument is that rates tell us important things about the population at highest risk.

Several participants indicated that they have experienced the often-unintended success of re-engaging previously diagnosed persons in care. Additional data are needed regarding the extent to which and the effectiveness of ED-based HIV testing as successful in re-engaging previously diagnosed individuals in care.

### Future of HIV Testing in Emergency Departments

HIV testing in EDs is viewed by health departments and their ED partners as an important tool for identifying HIV-infected persons, both those newly diagnosed as well as those previously diagnosed. Importantly, ED-based testing can facilitate entry to and engagement in medical care.

Health departments have worked closely with their ED colleagues to streamline consent and counseling requirements. Many jurisdictions have moved away from separate written consent for HIV testing. Both of these factors have helped to enable and encourage providers to offer HIV testing.

Furthermore, as Dr. Bernard Branson (CDC) shared through his presentation "[The Future of ED Testing?](#)" there are several emerging factors impacting the future of ED testing including improved rapid testing technologies, fourth generation testing assays, new testing confirmatory algorithms and health reform related reimbursement.

Currently, there are a variety of models for providing HIV testing in EDs, many of which rely entirely or in part on dedicated staff to perform various aspects of HIV testing. These parallel models are not conducive to implementation of population-based screening in high volume facilities such as EDs, nor are they sustainable as resources become increasingly constrained. Point-of-care rapid HIV testing is currently the predominate method of testing in emergency departments. Shifting to HIV testing conducted using laboratory-based random access platforms may reduce the need for dedicated staff to conduct testing and enable EDs to increase the volume of tests conducted. This, in turn, will increase the cost effectiveness of HIV testing.

Financing of HIV testing in EDs must be addressed. Screening must be made more widely reimbursable and at rates which are acceptable to providers. Because many EDs receive bundled reimbursements, it will be essential to develop strategies to provide for reimbursement for HIV testing above these bundled rates or to incorporate HIV test reimbursement within bundled rates. The potential negative impact on patient acceptance of HIV

testing of higher co-pays and deductibles must be given serious consideration.

Of critical importance is how to sustain HIV testing in public hospitals where many, if not most, patients are currently uninsured. For the foreseeable future, this will continue to be an important reason for continued partnership between health departments and emergency departments. Because of this, it is essential that we gain a fuller understanding of the relative effectiveness and cost-effectiveness of ED-based testing in order to make the optimal use of public resources.