HIV Testing in Emergency Departments

A Primer on Issues and Strategies for Health Departments

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EXECUTIVE SUMMARY

Health departments have begun expanding HIV testing efforts into a variety of health care settings. Hospital emergency departments and other acute care facilitates are of particular interest. To help gain a better understanding of emergency department-based HIV testing programs, the National Alliance of State and Territorial AIDS Directors (NASTAD) convened a meeting of health departments and their emergency department (ED) partners in January 2007. Through this meeting, NASTAD sought to clarify the role of health departments in implementing and supporting HIV testing in emergency departments; identify strategies, challenges and facilitators associated with implementation of HIV testing in emergency departments; identify and discuss gaps in knowledge for which additional research and evaluation is needed; and determine priorities for policy development and advocacy.

By identifying and discussing a range of issues and factors which impact and influence implementation of ED-based testing, this document serves as a tool for health departments as they consider implementation of HIV testing in emergency departments. This document also identifies critical gaps in our knowledge about HIV testing in emergency departments and in this way helps to inform research and policy agendas.

The presentations during the meeting and associated discussion led to several key conclusions**:**

- Health departments have implemented HIV testing in EDs in an effort to enhance prevention efforts and health departments play an essential role in supporting HIV testing in emergency departments.
- Health departments support ED-based HIV testing efforts in many different ways. Some health departments support a single ED program while others support several. Some health departments are able to provide funding to support ED programs, while others are able to provide indirect support such as training, technical assistance, laboratory services, or provision of free test kits.
- There are a variety of models for ED-based testing but no single “best” model. The models vary according to three key dimensions: staffing, consent and patient education/ counseling procedures, and linkages with medical and other services. Some programs use dedicated staff for some or all aspects of HIV testing (e.g., consent, counseling, conducting tests, providing results) while others use clinical staff for some or all HIV testing related activities. The model for HIV

testing in ED settings must address many factors including the statutory/regulatory environment, institutional culture, facility volume, patient population, facility capacity, staff skills and engagement, organizational and logistical features of the facility as well as resources.

- None of the health departments had successfully implemented HIV screening in an ED using an "opt out" approach (i.e., all patients are tested for HIV, with notification, unless they decline). Even so, several programs have been successful in implementing HIV testing best characterized as "routinely recommended with right of refusal."
- Health departments must think critically about how and whether HIV testing in emergency departments fits into their overall prevention portfolio and engage in data-driven decision making.

Several key critical issues that deserve additional deliberation and research were highlighted:

- The feasibility and appropriateness of a population-based screening approach to HIV testing in emergency departments is a key concern for health departments. Data regarding the effectiveness and cost-efficiency of screening approaches is lacking. It is critical to conduct the operational research needed to identify the approaches and strategies that facilitate implementation of HIV testing in EDs, optimize the effectiveness of ED-based testing programs and ensure successful linkages to care and prevention services. Health departments and their ED partners should also advocate for resources to support such research.
- Financing HIV testing activities in EDs is a critical concern for health departments and their ED partners**,** particularly as related to sustainability of programs over the long run. Getting third-party payers to reimburse health care providers for HIV screening in emergency departments was seen as critical to addressing concerns about financing—advocacy with industry is urgently needed.
- Data and reporting requirements associated with federally funded HIV testing efforts were identified as an important barrier to ED-based testing. Substantially scaling back these requirements is necessary to ensure that providers are not overly burdened with data collection and reporting requirements which divert resources away from direct services.

BACKGROUND AND INTRODUCTION

Health departments continue to look for ways to enhance their HIV prevention portfolios, particularly in terms of identifying strategies to strengthen HIV testing and counseling programs in order to increase their effectiveness in identifying individuals who have undiagnosed HIV infection and linking them with care and treatment. Health departments have long supported HIV testing in a variety of clinic settings, such as sexually transmitted disease clinics, substance abuse treatment facilities and reproductive health clinics. In recent years, health departments have begun exploring other health care settings to expand HIV testing and counseling efforts.

Emergency departments (EDs) and other acute or urgent care facilities are of particular interest because they are high volume facilities, serve individuals who may not seek health care in other venues, and generally do not routinely recommend or offer HIV testing. 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, interest in HIV testing in emergency departments has intensified among federal agencies, health departments and among emergency departments. In January of 2007, the National Alliance of State and Territorial AIDS Directors (NASTAD) convened a two-day meeting to address implementation of HIV testing in EDs. NASTAD identified 11 state and city health departments that had implemented HIV testing in EDs. Each of these was invited to attend the meeting, along with representatives from the ED programs supported by the health department. Representatives from CDC, the HIV Medicine Association (HIVMA), the American Academy of HIV Medicine (AAHIVM), and the American Hospital Association (AHA) also attended this meeting.

During the meeting, each of the health department-ED pairs was asked to present and discuss their program and experiences with implementation. Some of these programs had been operational for several years while others had been operational for only a few months. Several had been implemented as research projects or had strong evaluation components and thus had substantial data to share with meeting participants. Through these presentations, coupled with facilitated discussion, the meeting was intended to clarify the role of health departments in implementing and supporting HIV testing in EDs; identify strategies, challenges and facilitators associated with implementation of HIV testing in EDs; identify and discuss gaps in knowledge for which additional research and evaluation is needed; and determine priorities for policy development and advocacy.

This document reflects a synthesis of the presentations and discussion from this meeting. It is intended to serve as a tool for health departments who are considering implementation of HIV testing in EDs. It is not intended to serve as an operational guidance. Rather, it is intended to help health departments identify the range of issues and factors that they should bear in mind as they consider implementation or expansion of ED-based HIV testing. It is also intended to identify and articulate critical gaps in our knowledge about HIV testing in emergency departments (and other health care settings) and thereby promote and frame a research and policy agenda.

RATIONALE FOR IMPLEMENTING TESTING IN EMERGENCY DEPARTMENTS

Health departments have implemented HIV testing in EDs in an effort to enhance prevention efforts. Health departments that have implemented ED-based testing indicate having critically examined HIV prevention efforts, particularly the effectiveness of HIV counseling and testing activities, in light of data which suggested that prevention efforts were not optimally effective (or had diminished effectiveness) relative to identifying new cases. Health departments reported that a number of factors prompted this critical examination of HIV counseling and testing services including:

- Epidemiological data indicating "shifts" in the epidemic;
- Blinded seroprevalence surveys;
- Surveillance data regarding the number and proportion of "late diagnoses;"
- HIV surveillance or other data indicating that private sector providers accounted for an increasing proportion of reported HIV/AIDS cases;
- Data regarding the number and proportion of individuals who know that they are HIV-infected but who are not in care, such as that collected through an "unmet needs analysis" or other means (e.g., Morbidity Monitoring Project);
- Funding issues (i.e., increasingly constrained or reduced funding); and
- Yield analysis of counseling and testing efforts.

Partnerships between health departments and EDs have grown based on examination of these factors and determination that HIV testing in EDs can increase the reach and effectiveness of HIV testing efforts. Thus, health departments view testing in EDs as one "tool" to increase the effectiveness of HIV prevention efforts and to facilitate case identification and linkages with necessary care and treatment services.

ROLES FOR HEALTH DEPARTMENTS IN SUPPORTING IMPLEMENTATION

Health departments play an essential role in supporting HIV testing in EDs. Health departments participating in the meeting described a wide range of ways that they support implementation of HIV testing in EDs. Health departments can and do play a critical role in stimulating interest in and promoting adoption of HIV testing in EDs. Specifically, health departments:

- Compile and provide data and information to EDs and other stakeholders to describe unmet needs, identify gaps in testing services, and identify facilities where implementation of HIV testing could help to address identified gaps;
- Educate providers and other stakeholders regarding the clinical and public health benefits of HIV testing;
- Educate providers and other stakeholders regarding the statutory and regulatory environment for HIV testing;
- Identify and convene stakeholders to facilitate open discussion regarding the benefits and drawbacks of HIV testing in EDs; and
- Identify challenges and facilitators to testing, as well as promote consensus regarding the value of ED-based HIV testing efforts.

Health departments also provide more direct support and assistance for implementation of HIV testing in EDs. Health departments provide:

- Guidance and technical assistance to EDs to identify implementation models and to operationalize HIV testing services;
- Training to ED staff and others involved in, or essential to, program implementation on a variety of topics including prevention counseling, strategies to obtain consent, and laboratory procedures and associated quality assurance;
- Technical assistance regarding interpreting statutes and regulations related to HIV testing, development of implementation protocol, program marketing, patient recruitment, and strategies for enhancing linkages with community-based and other service providers necessary to facilitate referral;
- "In-kind" support such as rapid HIV test devices and laboratory services for confirmatory and other testing (e.g., viral load testing);

- Advocacy and education of third party payers to enable reimbursement of HIV testing, including testing provided through population-based screening programs; and
- Funding for planning, implementation and evaluation of HIV testing services (e.g., providing for administration and oversight of programs, hiring staff to provide testing and/or counseling services, and paying for laboratory services).

It is important to note that there is wide variation in the extent to which health departments are supporting implementation of ED-based HIV testing efforts. Some jurisdictions, like New York City and New Jersey, are supporting implementation in a number of emergency departments within their jurisdiction while some health departments are supporting efforts in only one ED. At the same time, the extent of financial investment that health departments have and are able to make into ED-based testing programs varies widely. Some health departments are able to provide in-kind support, such as providing rapid testing devices to EDs. Other health departments are able to provide grant funding that pays for staff to oversee services and provide testing, promotional efforts, and laboratory services. Still other health departments are able to primarily provide technical assistance and consultation to EDs and other stakeholders.

CONSIDERATIONS FOR IMPLEMENTATION

Stakeholder Engagement

Health departments and their ED partners reported during the meeting that it is essential to engage a diversity of stakeholders in planning for and implementing HIV testing in EDs. Key stakeholders identified by meeting participants include:

- *Provider professional associations including state and county medical societies, nursing associations, medical specialty associations, and hospital associations*. Engaging such organizations can facilitate and promote buy-in and support for ED-based testing, identify key challenges and facilitators to implementation, and enable advocacy for policy/legislative reform and funding to conduct provider education and training.
- *State Medicaid programs and representatives from the insurance industry.* Involving third-party payers in planning and implementation discussions is critical in order to address financing of HIV testing efforts, including advocating for reimbursement of HIV screening.
- *Medical and/or provider education (e.g., medical schools, nursing schools, AIDS Educational and Training Centers, Prevention Training*

Centers). Providers of medical education are essential to engage in order to facilitate buy-in and support for ED-based testing and to conduct provider education and training.

- *State and local public health agencies*. In addition to partnering with EDs in implementing HIV testing in their facilities, public health agencies provide essential expertise and support facilitating access to, and utilization of, partner services, prevention counseling, and other prevention/support services; ensuring timely and accurate case reporting; and facilitating follow-up on patients.
- *Community planning groups (CPGs).* Engaging CPGs is important in obtaining needed community-level buy-in and support for ED-based testing programs. CPGs can also assist in identifying gaps in services and suggesting appropriate facilities for implementation, community-level promotion/ marketing, and identifying and facilitating linkages with prevention and support services.
- *Universities and research institutions*. These institutions and organizations can provide needed expertise and resources for program design and evaluation and can provide or assist in developing and implementing training for clinicians and other staff involved in HIV testing efforts.
- *Other community organizations and/or consumer advisory groups.* Community-based organizations and advisory groups can help raise awareness about the importance of HIV testing efforts and the value of ED-based testing, facilitate buy-in and support of ED-based testing programs, identify gaps in services and suggest appropriate facilities in which to implement testing, engage in community-level promotion/ marketing, and facilitate linkages with needed prevention and support services.

Within hospitals and EDs there are a variety of stakeholders that are important to involve in discussions about, and planning for, implementation of ED-based testing including:

- *Hospital administration:* To ensure that programming is consistent with the mission of the facility and to facilitate interdepartmental coordination and collaboration;

- *Laboratory services:* To ensure provision of quality assured testing services;
- *Infectious disease clinic and/or HIV specialty clinic*: To ensure timely and effective linkages with care and treatment;
- *Behavioral health services and/ or social work*: To ensure timely and effective linkages to needed prevention and support services among newly diagnosed individuals as well as high-risk HIV-negative persons;
- *Legal department:* To ensure that services are provided in accordance with hospital policy and state/local laws;
- *Quality assurance/accreditation coordinators*: To ensure provision of high quality services delivered in accordance with existing standards of care; and
- *Emergency department staff, including:*
  - Administrators;
  - Clinical staff, including nurses, physicians, physicians assistants, and others;
  - Support staff, such as staff responsible for patient registration; and
  - Social workers, counselors, and other behavioral health staff.

Engaging multiple stakeholders at multiple levels early in the process of discussing and/or planning for implementation will ensure that a diversity of issues and concerns are articulated and strategies to address them are identified. It will also help identify and articulate appropriate roles and responsibilities for stakeholders in stimulating and supporting implementation. It also facilitates development of partnerships that are critical for policy and funding advocacy efforts.

Implementation Models

Many models for implementing HIV testing in EDs were presented during the meeting. A brief overview of the implementation model for each participating jurisdiction is available in Appendix A. Decisions about which model to implement are generally informed by a number of factors including:

- Patient/clinic flow;
- Physical layout and organization of the facility (e.g., availability of private rooms);
- Support for HIV testing among clinical and ancillary staff;
- Support for HIV testing among hospital and/or ED administration;
- Consent and counseling/patient education requirements and/or preferences;

- Type and strength of mechanisms to facilitate needed referrals; and
- Resources, human and fiscal, available to support testing and associated services (e.g., counseling, referral).

The models for implementing HIV testing in EDs varied along three key dimensions: staffing, consent and patient education/counseling procedures, and linkages with medical and other services.

Staffing

Models presented utilized a wide range of clinical (e.g., physicians, nurses, physician assistants, social workers) and ancillary staff, in various combinations, to provide various aspects of HIV testing including oversight and coordination, obtaining consent, providing patient education or counseling, obtaining specimens, conducting point-of-care testing, delivering test results, and facilitating referrals. In terms of staffing, the testing models used in EDs can be grouped into three categories: dedicated staff, clinician mediated, and a hybrid of dedicated-staff and clinician mediated.

In models which rely on dedicated staff, paid staff which work exclusively on HIV testing perform most or all aspects of testing including approaching patients, obtaining consent, providing education/ counseling, conducting point-of-care testing, delivering results, and making needed referrals. In some facilities, dedicated staff are trained HIV counselors, similar to those used in community-based organizations or other public health venues where testing is conducted. In some facilities, dedicated staff may receive basic "AIDS 101" training along with training in test administration and patient approach, but are not trained "counselors." These staff members sometimes use a "script" to aid them in approaching patients and obtaining informed consent for testing. Other facilities use nurses, medical students, medical assistants, or other individuals with some clinical training to serve as dedicated HIV testing staff. Some programs collaborate with community-based and public health agencies by utilizing "outposted" health department staff or counselors from community-based organizations to serve as dedicated staff to provide HIV testing in the ED and to facilitate referrals to care, prevention, and other support services.

Other staffing models can be characterized as clinician-mediated, wherein a clinician such as a physician, nurse, or nurse practitioner incorporates HIV testing into their routine delivery of care. None of the models presented utilized a clinician-mediated approach in the context of a screening or "test as many as possible" approach. Participants

indicated that in the context of busy EDs, clinicians "can't do it all." This suggests that it may not be feasible to employ a clinician-mediated model of HIV testing in the context of a routine, general screening approach. Clinician-mediated approaches appear to be successful in the context of a risk-based approach to testing. Evidence from the presenting programs suggested that a clinician-driven model stimulates uptake of testing and may help facilitate successful linkages with care and treatment services.

Hybrid staffing models rely on a combination of dedicated staff and clinicians to perform some or all aspects of HIV testing. In some programs, clinicians identify clients for whom HIV testing is appropriate, recommend HIV testing, and then call upon dedicated staff, such as an HIV counselor or social worker, to provide counseling and testing and facilitate needed referrals. Other programs use dedicated staff (e.g., counselors, medical students, or other trained staff) to approach patients, conduct patient education/counseling, obtain consent for testing, and then notify the clinician that the patient has agreed to HIV testing, who then conducts the test. In other programs, clinicians take primary responsibility for providing patients with test results (especially for patients who are found to be HIV-infected), but other staff has primary responsibility for other aspects of the testing process.

Counseling, Patient Education, and Consent

Counseling and patient education are provided using a number of mechanisms and formats. Some programs deliver a traditional model of prevention "counseling" (i.e., risk assessment and risk reduction planning) in conjunction with HIV testing. These programs utilize dedicated staff such as HIV counselors or social workers. Consent for testing is addressed in the context of a pre-test counseling session. Dedicated staff members deliver results and provide counseling regarding partner services (if the patient is found to be HIV-infected) or other needed services, sometimes in conjunction with, or in addition to, clinical staff. In general, clients who are HIV negative, particularly if they are high-risk, also receive counseling in these programs. At least one program (Jacobi Medical Center, Bronx, New York) has implemented computer-assisted counseling in conjunction with ED-based HIV testing. In this program, patients complete an educational module and risk assessment on a computer and then are provided with an opportunity to ask questions and receive counseling from a "Public Health Advocate."

Other programs provide "counseling" in conjunction with testing that is primarily information-based. In these models, patients are provided with information about the test, including

benefits and drawbacks, as well as meaning of test results and informed of legal issues such as reporting laws and the need to notify partners if they are found to be HIV-infected. Such information is generally sufficient for the purposes of obtaining consent to test. Patients may also receive basic information about HIV, including transmission and preventive strategies. This type of "counseling" is sometimes "scripted" and appears to be easily delivered by a wide range of clinical and ancillary staff or volunteers.

In many of these programs, patients who are found to be HIV-infected are provided with prevention counseling in association with results disclosure. Dedicated staff (e.g., HIV counselors) may provide such counseling (and obtain consent to test) or it may be provided by indigenous ED or other hospital staff, including social workers, psychologists, or behavioral health specialists. In other programs, patients receive prevention counseling via referral to such services or in conjunction with their first clinic visit for evaluation of and treatment for their infection. Programs which have adopted this approach frequently do not provide prevention counseling to negative clients, although many of them do make referrals for such services.

Other programs address patient information through written materials and/or videos provided at the time of intake, in waiting areas, in patient examination rooms or in separate areas within the ED set aside specifically for patient education. Some programs rely, entirely or in part, on written materials for patient education and to facilitate consent to test. In these programs, patients who consent to testing do not receive prevention counseling (i.e., risk assessment and risk reduction planning) in the context of HIV testing (i.e., "pre-test counseling"). Some of these programs provide counseling to HIV-infected persons at the time of, or subsequent to, results disclosure, utilizing primarily indigenous ED or hospital staff, such as social workers or other behavioral health staff. HIV-negative clients do not receive prevention counseling in the context of testing in these programs.

Linking HIV-Infected Patients with Care

Ensuring linkages to care for patients found to be HIV-infected received considerable discussion during the meeting. The experience with successfully linking patients diagnosed with HIV infection into care varied widely, with some programs reporting relatively poor success in ensuring that individuals are linked with care and treatment and others reporting being highly successful in this regard. Programs reported employing a variety of strategies to facilitate referrals including:

- Using counselors or other staff to escort patients to a nearby or co-located HIV clinic or infectious disease (ID) practice;
- Having ID clinic staff meet patients in the ED and escort them to the HIV or ID clinic;
- Arranging same/next day appointments with a nearby or co-located HIV or ID clinic;
- Providing referral information and appointment scheduling as part of discharge instructions;
- Using incentives to encourage patients to return for scheduled medical appointments;
- Referring patients to case managers who work closely with them to ensure that they are able to make their first appointment; and
- Using partner services staff to follow-up on patients who do not return for a scheduled medical appointment.

In general, providing patients with some kind of assistance appears to increase the likelihood of successful referrals.

While it may be preferable to provide newly diagnosed patients with same day medical appointments in an HIV or ID clinic, this is often not feasible since EDs operate "24/7" while most HIV clinics do not. HIV or ID clinics may not be able to accommodate same day appointments due to existing patient loads or other factors. Patient insurance status or payer type also makes referrals to and linking with care services challenging.

Co-location of specialty care with the ED does not guarantee successful linkages to care. Some programs where HIV or ID clinics were located within the same building, in relatively close proximity, reported that success with linking newly diagnosed patients with medical care for HIV was poor. This suggests that there are a number of factors which influence the success of referrals in these settings, including the strength of the relationship and quality of communication between the ED and the HIV or ID clinic; how information about referrals is presented to and understood by patients; and logistical factors such as how far away from the ED the HIV clinic is located and how difficult it is for a patient to find. Other patient-specific factors such as the length of the ED services, the reason for their visit, their readiness to learn their HIV status and engage in care for HIV disease, or their satisfaction with the services provided in the ED may also influence success of referrals.

Approach to Testing – Targeted vs. Routine; Opt-in vs. Opt-out

While one state (Colorado) indicated near-term plans to implement HIV screening in EDs, none of the participating health departments had successfully implemented an approach to testing which represented "true" screening (i.e., all patients are tested for HIV, with notification, unless they decline). The programs that presented during the meeting which most closely approximated a screening approach might best be characterized as a "test as many as possible" approach. Other ED-based testing programs utilized a risk-based approach, wherein patients were screened for HIV-related behavioral and/or clinical "risks" and recommended for HIV testing on the basis of risk.

Health departments and their ED partners clearly recognize the potential clinical and prevention benefits of HIV screening in emergency departments. The extent to which implementation of HIV screening is feasible or desirable is not, however, entirely clear. Screening programs may be impractical or even impossible due to the high volume of patients seen in most EDs. In high prevalence locales where a large number of patients with undiagnosed HIV infection may be seen in EDs, the feasibility of screening is challenging due to the intensity and amount of effort that may be required for patient follow-up and assistance in order to facilitate and ensure entry into care. ED-based programs attending the meeting presented mixed results in terms of the proportion of patients tested in EDs who were successfully linked to care. Most of the programs that presented operated using dedicated staff (in place of, or in addition to, existing clinical staff) to perform some or all aspects of HIV testing and related activities (e.g., counseling, referral management). Such models are relatively resource intensive. Point-of-care testing with rapid tests also requires additional resource investment. Taken together, these issues highlight the importance of considering whether a screening approach to testing in EDs is sufficiently effective, in terms of identifying undiagnosed HIV infection and linking those patients to care, to justify the investment of time, effort, and resources.

CDC and others have advanced "opt-out" testing (i.e., patients are tested, with notification, unless they specifically decline) as the ideal approach to HIV testing in emergency departments and other clinical settings. However, health departments and their ED partners identified a number of operational challenges which have precluded implementing HIV screening including: volume of patients served; clinical flow (especially in association

with provision of point-of-care rapid testing); staffing (especially to provide needed prevention counseling and to facilitate referrals); consent requirements (actual and perceived); clinician engagement and support of HIV testing; and the strength of mechanisms needed to facilitate linkages to care and prevention services.

Also, many states currently require, by statute or regulation, specific consent for HIV testing. This precludes implementation of "opt-out" testing, at least as CDC defines it in its *Recommendations of HIV Testing in Health Care Settings*. Implementation of "opt-out" testing pursuant to the CDC recommendations may, for some states, require a change of law or regulation, as current statutes and regulations in these states require specific consent for HIV testing. Health departments may be reluctant to open current statutes due to the potential for other, undesirable, changes to be incorporated.

It is noteworthy that experiences from current ED-based HIV testing programs indicate that HIV testing has been successfully implemented in EDs operating in jurisdictions in which specific consent for HIV testing is required by statute or regulation. States such as Maryland and Michigan have adopted an approach to testing best described as *routinely recommended with right of refusal.* Test acceptance rates in these health department supported ED programs are reportedly high. In effect, acceptance of testing may not be entirely predicated upon the method for obtaining consent (i.e., "opt-out" versus "opt-in") but rather on how the individual patient is approached regarding HIV testing. Thus, it is possible and feasible to operationalize screening programs without necessarily adopting an "opt-out" approach; therefore legislative change may not be necessary for implementation of HIV testing in EDs and other clinical settings.

Consent

Specific consent for HIV testing has been identified as a barrier, especially by clinicians, to adopting screening approaches in health care settings, particularly EDs. To address this barrier, CDC recommends incorporating consent for HIV testing into the general consent for medical treatment and contends that this may facilitate uptake of screening, particularly in the context of an "opt-out" approach. When general consent for HIV testing is not feasible, because of statutory/regulatory requirements or other factors, health departments and their ED partners have developed strategies to streamline consent in order to facilitate implementation of HIV testing in EDs. Examples of streamlining include:

- Combining, onto a single form, consent for HIV testing along with consent for other tests and/or medical treatment;
- Adding a "check box" to existing general consent form to enable a patient to indicate acceptance or refusal of HIV testing;
- Allowing for verbal consent to test, providing it is documented specifically in patient medical charts;
- Creating "scripts" for clinical and ancillary staff to aid them in providing patients with essential information necessary to obtain consent; and
- Incorporating consent for HIV testing into intake and assessment processes including:
  - Providing patients with educational materials and consent forms during intake or registration; and
  - Incorporating consent for HIV testing into computer-assisted intake/assessment procedures.

Ethical considerations also factored into the discussion during the meeting of challenges associated with obtaining informed consent for HIV testing in EDs, particularly in the context of screening programs. Implementation of screening, especially using an "opt-out" approach, may decrease the likelihood that consent to test is truly informed and that a patient fully understands the potential implications of being tested for HIV (especially if they are found to have HIV infection). The importance of, and ethical responsibility for, ensuring that informed consent for HIV testing is obtained was underscored for populations which are marginalized such as non-English speaking persons, racial/ethnic minorities, undocumented persons, men who have sex with men, the mentally ill, and substance-using individuals. Thus, it was the position of some meeting participants that it is preferable to preserve specific consent for HIV testing, while simultaneously acknowledging that streamlining may be beneficial to stimulate and enable implementation of testing in EDs.

Lessons Learned

HIV testing in EDs has the potential to enhance HIV prevention efforts by increasing the number of HIV-infected individuals who learn their HIV status who might not seek testing in other venues. These programs can also aid in linking HIV-infected individuals into needed care and treatment services. Implementing HIV testing in EDs is not, however, without challenges. During the meeting, participants shared important "lessons learned" about ED HIV testing programs.

Building Support

Engagement of a diversity of stakeholders in making decisions about planning for ED-based testing is important. In order to ensure successful implementation, it is critical that a spectrum of representatives from both the health department and the specific facility is consulted and endorses ED-based HIV testing. A "champion" or "advocate" is also needed, both within the health department and within the ED, to stimulate and support implementation. These individuals can build needed intra- and inter-departmental and extracurricular relationships that are needed to support full implementation. They are also needed to build broad based support for implementation within their respective institutions.

One Model/Approach Does Not Fit All

Screening, including "opt-out" approaches, may not be feasible or sensible for every ED or every health department. Similarly, there is no evidence for a single "best" model for ED-based testing. Each state and each facility is unique. Thus, the approach and model adopted must be responsive to a variety of factors including statutory/regulatory environment, institutional culture, facility volume, patient population, facility capacity, staff skills and engagement, organizational and logistical features of the facility, and, of course, resources. Health departments are likely to find that a mix of models and approaches makes the most sense in terms of facilitating implementation and optimizing scarce public resources.

Linkage to Care Requires Ongoing Attention

Linkages with and referral to care services are critical challenges which must be addressed in advance of implementation and must be monitored on an ongoing basis. Collaboration with, and strong communication between, HIV or ID clinics and ED programs is essential. Providing patients with some assistance in accessing care services appears to facilitate linkages but there is no evidence for a single "best" strategy for offering this assistance.

Proceed Thoughtfully; Implement Incrementally

Health departments and their ED partners who are considering ED-based HIV testing should implement such programs incrementally, monitoring implementation closely, and making adjustments to the program as needed. Health departments and their ED partners should not commit themselves to a particular model or approach at the outset. Rather, they should try something and see how and if it works and plan for making adjustments. Programs should also be monitored over time and adjustments made as

needed because patient needs change over time. The organization, operation, and administration of EDs change over time, thus requiring adjustments as well.

DISCUSSION OF CRITICAL ISSUES AND CONCERNS

Despite the wealth of experience offered by meeting participants about implementing HIV testing in EDs, there remain large gaps in our knowledge about HIV testing in EDs relative to their feasibility, operationalization, and effectiveness (including cost-effectiveness). There is also a lack of clear consensus on whether and/or to what extent ED-based testing programs should constitute part of health department HIV prevention portfolios. Several critical areas for additional discussion, inquiry, and research emerged as a result of discussion at the meeting among health departments and their ED partners.

Health departments must think critically about how and whether HIV testing in EDs fits into their overall prevention portfolio. Health departments participating in the meeting saw a potential value in implementing HIV testing in EDs. Most health departments that have implemented ED-based HIV testing have done so based on thoughtful review of surveillance and service data which enabled them to identify gaps in services. Identification of specific EDs in which to implement HIV testing was based on a number of factors including service area, characteristics of the patient population, interest/buy-in of the facility, as well as financial and operational feasibility. Health departments expressed concern, however, about how to prioritize support of ED-based testing relative to other HIV prevention services. For many health departments, particularly during periods of level or declining funding, supporting implementation and expansion of ED-based testing means redirecting resources from other important prevention services.

Health departments also expressed concern that CDC and others are overemphasizing the utility and importance of ED-based testing for identifying new cases. ED-based programs may result in an increase in the volume of tests conducted in a state and may result in an increase in the number of HIV-infected individuals diagnosed who would not have sought testing in other venues. However, health departments feel that the potential yield of ED-based programs, in terms of numbers of individuals tested and number of new positives identified, must be considered against the yield of other programs, including highly-targeted community-based efforts to locate infected individuals. The success in ensuring linkages with, and engagement in, prevention and care services is also a critical consideration for health departments as meeting participants described mixed success in facilitating such linkages.

Health departments expressed that testing is not just a "numbers game" and that they have a responsibility to ensure access to HIV testing services among those at risk for HIV, particularly those who are not likely to be reached in health care settings. Thus, for health departments, an increase in volume of tests conducted and new positives identified may not be sufficient justification for redirecting funding away from highly-targeted services.

Recommendations:

Health departments should consider a range of data and information sources in deciding to implement and/or expand HIV testing in EDs including:

- HIV prevalence and/or incidence data (if available) to guide decisions regarding where, geographically, to focus efforts;
- HIV testing service data to identify gaps in services by location and population, coverage of hard to reach populations which might not access hospital-based services, and yield of existing programs; and,
- Facility-specific data to understand the patient population (e.g., demographics, insurance coverage, proportion of patients receiving urgent care versus emergency care).

Health departments should also engage hospitals, with representation from multiple departments, to gauge interest in ED-based testing and to understand the financial and operational feasibility of implementing services.

The feasibility and appropriateness of a population-based screening approach to HIV testing in EDs is a key concern for health departments. Health departments and their ED partners have experience with and presented a number of models for implementing HIV testing. None of the programs presented at the meeting, however, represented a "true" screening approach (i.e., all patients are tested for HIV unless they decline). Those which most closely approximated a screening approach might best be characterized as a "test as many as possible" approach, while other programs used a risk-based approach, wherein patients were screened for HIV-related behavioral and/or clinical "risks" and recommended HIV testing on the basis of risk.

While health departments and their ED partners have implemented a variety of models of testing, all expressed the desire to have access to "good" evaluation data about the effectiveness of various models and approaches to guide program planning and refinement. There is currently little in the published literature which addresses this gap in knowledge.

As mentioned previously, CDC and others have advanced screening, especially screening which utilizes an "opt-out" approach, as the ideal for EDs. Health departments and their ED partners identified a number of operational challenges which have precluded implementing HIV screening.

Health departments and their ED partners also expressed concern over the lack of substantial evidence to support screening approaches as the "ideal" for ED-based HIV testing. In particular:

- Health departments are skeptical about the cost-effectiveness of screening approaches, particularly as implemented in EDs. Screening approaches have been promoted as cost-effective based on a limited number of studies, none of which are based on "real world" costs.
- Health departments expressed an urgent need for information about the costs associated with ED-based HIV testing. Currently, there is very limited information readily available regarding the cost of ED-based testing programs and this information is needed to guide program planning, decision-making about resource allocation, as well as policy advocacy and education efforts.
- There is little published evidence that supports that "opt-out" testing in EDs or other clinical settings improves entry to care or that it will successfully address the "problem" of late entry to care. This evidence is critical to helping health departments make decisions about prioritizing services within their overall prevention portfolios.
- Programs reported mixed results with regard to successful linkages to care. It is unclear, however, to what extent and in what ways the lack of success can be attributed to structural factors (e.g., processes for making referrals), providers (e.g., how referral information is presented to patients), or the patient (e.g., whether or not he/she shows up for an appointment). Information to help understand strategies by which to ensure successful referrals into care is essential and urgently needed.
- Importantly, health departments expressed concern about a lack of compelling evidence for the feasibility of operationalizing screening in an ED. Risk -based models of HIV testing may miss some patients who are HIV infected, but they may be more feasible to implement in EDs and may be more manageable in terms of ensuring that newly diagnosed patients access needed care and treatment services.

Recommendations:

- There are many gaps in knowledge about HIV testing in EDs in terms of models for delivery of testing, screening versus targeted approaches, cost-effectiveness, and overall effectiveness in identifying new positives and successfully linking these individuals to care. Until and unless this gap in knowledge is addressed, health departments and their ED partners should implement a model and approach to testing which makes the most sense for a particular facility in terms of operational issues, which is feasible within the context of available human and fiscal resources, and which is most likely to successfully achieve programmatic objectives related to helping patients learn their HIV status and to link them with needed prevention and care services. Health departments considering implementing or expanding ED-based testing efforts should seek the advice and consultation of their peers who are similarly engaged in supporting ED-based testing. Ongoing peer-to-peer consultation and technical assistance is likely to facilitate a rapid diffusion of current practices and strategies.
- Health departments and their ED partners should collaborate in operational research to identify the approaches and strategies that facilitate implementation of HIV testing in EDs, optimize the effectiveness of ED-based testing programs, and ensure successful linkages to care and prevention services. Health departments and their ED partners should also advocate for resources to support such research.

Financing HIV testing activities in EDs is a critical concern for health departments and their ED partners. Health departments have financially invested in implementing HIV testing in EDS, ranging from purchasing HIV test devices to providing grants that fund staff and laboratory services. Health departments expressed serious concern, however, about their capacity to continue to support ED-based programs and to expand such services, as health departments have to address multiple, competing priorities within increasingly constrained resources. Sustainability of ED-based HIV testing, particularly if delivered through a screening approach, was expressed as a critical concern for health departments and their ED partners.

Obtaining reimbursement for screening from Medicaid and other insurers was identified as essential to facilitating implementation and expansion of HIV testing in EDs (as well as other clinical settings) and, more importantly, sustainability of these services. At the time of the meeting, only one state, New York, had successfully negotiated with its state Medicaid program to

cover HIV screening in EDs. Even if public and private insurers move toward covering HIV screening, EDs will continue to require additional resources to support HIV testing for under- and uninsured populations.

ED partners also indicated that financing is the most important challenge associated with implementation of HIV testing in EDs. Many EDs face serious financial challenges today, particularly as they serve greater numbers of under- and uninsured individuals while simultaneously dealing with decreased reimbursement from insurers and increasing costs of health care. Some EDs report that all ED services are included in a "global" charge to insurers which is insufficient to cover additional costs associated with implementation of HIV screening. Global charges either need to be increased to cover the cost of HIV screening or EDs need to be allowed to charge insurers separately for it.

Recommendations:

- Health department HIV/AIDS programs should engage state Medicaid programs regarding obtaining reimbursement for HIV screening in EDs. Collaboration with provider organizations, such as state hospital associations and professional provider organizations, may be beneficial in facilitating these discussions.
- Health departments, EDs, and professional organizations representing EDs and clinicians should engage in state-level advocacy and education to encourage third-party payers to reimburse health care providers for HIV screening in EDs.
- Health departments and provider organizations should collaborate, when feasible, in state-level advocacy for additional resources to support expansion of HIV testing in EDs.

Data and reporting requirements associated with federally-funded HIV testing efforts were identified as an important barrier to ED-based testing. Health departments and ED partners expressed a serious concern with the data collection and reporting requirements associated with publicly-supported HIV testing efforts in EDs and other clinical settings. Meeting participants raised repeated concerns regarding the burden of collecting and reporting client-level data, particularly as related to CDC's Program Evaluation and Monitoring System (PEMS). Many of the variables currently required by PEMS are not routinely collected from patients in association with health services provided by the ED. Data that are routinely collected in association with ED services are often compiled in clinical information systems (CIS) or electronic medical record (EMR) systems from which data extraction may not be possible due to incompatibility of file formats, lack of capacity/technical expertise to do so,

or because of confidentiality protections associated with patient information (e.g., HIPAA).

Data collection and reporting requirements were identified as a barrier to ED-based testing because the necessity of collecting such data can interfere with provision of services and interrupt patient flow. Busy clinicians have insufficient time to attend to data collection. Data collection, entry, and management can require dedicated staff to deal with either/both a large volume of data or duplicate entry of data, since data reporting requirements associated with federal funding have necessitated development of "parallel" data systems in order to satisfy reporting requirements. This diverts resources away from program services.

Recommendation:

- Health departments must continue to advocate for scaled-back reporting requirements associated with publicly-supported HIV testing efforts provided in clinical settings,

NOTES

APPENDIX A
STATE PROFILES OF HIV TESTING IN EDS

Colorado

Implementation: Beginning in 2004 in the Denver Health Medical Center. The University of Colorado Hospital also recently implemented HIV testing in its ED.

Approach: Physician-based, risk-targeted, "opt-in." Beginning in February 2007, Colorado planned to initiate a trial to evaluate "opt-out" rapid testing in the Denver Health Medical Center, supported with funding from the CDC. Risk assessment/risk reduction counseling is provided to patients.

Consent: Colorado statutes do not require specific consent for HIV testing. Verbal consent is permissible.

Testing: Rapid tests are processed in the hospital's central "core" laboratory.

Staffing Model and Flow: Physicians recommend HIV testing to patients, based on risk and/or clinical symptoms, and obtain verbal consent to test. An ED-based social worker obtains written informed consent and provides pre-test counseling. Nurses or health care technicians obtain blood specimens. Specimens are tested by the hospital's core laboratory. Clinical social workers provide negative results and post-test counseling. The physician, along with a clinical social worker, reports positive results.

Linkages for HIV Positive Patients: Clinical social workers facilitate linkage to care. Newly-diagnosed patients are "walked" to specialty care at one of four facilities (depending on patient needs and eligibility) during business hours. If patients are diagnosed at night or weekends they are followed-up on next business day.

Financing: Grant from the Colorado Department of Public Health and Environment (CDPHE) and, recently, a grant from the CDC.

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District of Columbia

Implementation: Beginning in September of 2006 in the ED of the George Washington University Hospital.

Approach: Population-based screening (patients 13-64 years old), using "opt-in" approach using trained "screeners" to approach patients.

Consent: District of Columbia does not require specific consent for HIV testing.

Testing: Point-of-care rapid testing.

Staffing Model and Flow: All patients who are not known to be HIV-infected and who are between the ages of 13 and 64 years are provided with an information sheet about HIV testing by a triage nurse. One or two staff specifically trained to perform HIV testing (i.e., "screeners") is available from 8am to 12am every day and approach patients in the ED to offer testing. If patients have a reactive result, the attending physician is notified of the result to support appropriate clinical decision-making and to order confirmatory testing.

Linkages for HIV Positive Patients: Patient discharge instructions include referral information. Infectious disease fellows are notified via page or email to arrange for initial follow-up of newly identified HIV-infected patients at the George Washington Infectious Disease Clinic.

Financing: District of Columbia Department of Health provided HIV rapid test kits at no charge.

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Florida

Implementation: Beginning in May 2006 at Jackson Memorial Hospitals (JMH) in Miami.

Approach: Population-based "opt-in" approach. Risk assessment/risk reduction counseling is provided to patients.

Consent: Patients provide specific consent for HIV testing.

Testing: Point-of-care rapid testing.

Staffing Model and Flow: Dedicated staff provides HIV testing services from 7:30am to 9:00pm, Monday-Saturday. Plans are underway to expand further into the evening and on Sundays. Dedicated testing staff approach patients who are already in beds and offer them HIV testing, obtain consent, provide counseling, perform HIV testing, and provide test results. Pre- and post-test counseling are provided to all patients in accordance with Florida statute.

Linkages for HIV Positive Patients: Patients found to be HIV-infected are immediately linked into the South Florida AIDS Network (SFAN) system. Patients are walked, by the HIV testing staff, to the SFAN office to facilitate linkage to clinical evaluation and care and engagement in case management services either at JMH or other services, depending on patient needs and eligibility. Plans are underway for the JMH to incorporate ARTAS Linkage to Care to strengthen linkages to care and prevention services for patients diagnosed in the JMH ED.

Financing: Grants from the Miami-Dade Department of Health and Gilead Foundation.

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Louisiana

Implementation: Beginning in August of 2005 at the ED of Earl K. Long Hospital, a public not-for-profit ED in Baton Rouge.

Approach: Risk-based opt-in testing utilizing HIV test counselors, trained by the Louisiana Department of Health. Risk assessment/risk reduction counseling is provided to patients.

Consent: Louisiana, by statute, requires written informed consent for HIV testing.

Testing: Point-of-care rapid testing.

Staffing Model and Flow: Staffing for this program relied on a single dedicated "tester." Testing is offered to patients with identified risk for hepatitis B (HBV) in order to minimize stigma and awkwardness of HIV testing. Testing for HBV and hepatitis A (HAV), hepatitis C (HCV), and syphilis are offered along with HIV testing. HIV counselors obtain consent, provide counseling, and conduct point-of-care rapid tests. Confirmatory testing for reactive rapid tests is offered in the ED.

Linkages for HIV Positive Patients: Linkage Coordinators are immediately paged to the ED for patients with reactive test results. Linkage Coordinators meet with clients and assist them with making appointments for medical evaluation/treatment, prevention, and other support services.

Financing: Louisiana Department of Health provided staff and HIV rapid test kits.

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Maryland

Implementation: HIV testing has been performed in the ED for over 15 years, initially for epidemiologic studies, but over the past five years, HIV testing has been conducted in the Johns Hopkins University (JHU) ED as part of demonstration projects related to understanding operationalization of HIV testing in ED settings.

Approach: Population-based opt-in testing.

Consent: Maryland statute requires written consent specific for HIV testing.

Testing: Rapid tests are processed in the ED satellite laboratory.

Staffing Model and Flow: The JHU utilizes a combination of provider driven testing combined with dedicated HIV testing staff, referred to as "facilitators." The first staffing model is a health care worker (HCW) initiated model. In this model, the HCW (e.g., physician, nurse) approaches a patient to ascertain interest. Physicians provide pre-test information, primarily in the form of a written brochure, and obtain consent to test. Nurses or ancillary staff collect samples, which are processed in the ED laboratory. Physicians deliver test results and arrange for follow-up and referrals. JHU also uses dedicated "facilitators" to conduct HIV counseling and testing. Facilitators approach patients, provide them with information/pre-test counseling, and obtain consent. Nurses or other staff obtain samples which are processed in the ED laboratory. Physicians deliver test results and provide post-test counseling and referrals. Facilitators work with clinical staff to ensure that test results are delivered and to ensure referrals to care and treatment. The facilitator-led approach appears to increase the number of patients who consent to testing and thus JHU plans to expand the hours during which facilitated testing is available.

Linkages for HIV Positive Patients: Clinical staff and "facilitators" provide referrals for medical evaluation and follow-up. Facilitators also provide assistance to patients to ensure follow-up with referrals. The HIV specialty clinic of the JHU provides dedicated appointment "slots" for follow-up of patients with reactive rapid test results.

Financing: Grant from the Maryland Department of Health.

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Massachusetts

Implementation: Beginning in 2002, the Massachusetts Department of Health initiated efforts to implement routine offering of HIV testing to all patients in multiple Urgent Care Centers in Boston, Cambridge, Everett, Worcester, and Springfield under a research protocol. The HIV testing program run by the Boston University Medical Center was presented.

Approach: Hierarchical routine screening on an "opt-in" basis. Risk assessment/risk reduction counseling is provided to patients.

Consent: Massachusetts requires written consent for HIV testing.

Testing: Point-of-care rapid testing.

Staffing Model and Flow: The program at Boston University Medical Center utilizes dedicated HIV counselors. Nurse managers work with HIV counselors to identify highest risk patients on the basis of behavioral risk and presenting symptoms. HIV counselors approach patients in the exam room, after triage has been completed, but prior to clinical consultation with a physician. Approximately ten percent of patients are referred to counselors by physicians. Counselors conduct pre-test counseling, obtain consent, conduct tests, provide results, and facilitate needed referrals.

Linkages for HIV Positive Patients: HIV counselors walk patients to the HIV clinic during regular hours of operation; appointments for next business day.

Financing: Grant from the Massachusetts Department of Public Health.

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Michigan

Implementation: Beginning in 2004 in two EDs in Detroit: Detroit Receiving Hospital (DRH) and Henry Ford Health Systems (HFHS).

Approach: Detroit Receiving Hospitals: population-based, "opt-in" testing. Henry Ford Health Systems: risk-based targeted testing.

Consent: Michigan requires written consent for HIV testing. Counseling requirements have been streamlined.

Testing: Point-of-care rapid testing.

Staffing Model and Flow: DRH utilizes dedicated staff (i.e., "testers") to perform all aspects of HIV testing. HIV testing is available 24/7. Testers approach patients to offer HIV testing. If patients agree to HIV testing, testers provide pre-test information, utilizing a "script," obtain written consent to test, conduct HIV rapid testing at point-of-care, provide test results, and make referrals to care.

HFHS uses a "counselor on call" model. A nurse (employed by the Infectious Disease Clinic) utilizes an electronic patient information system to identify patients at high risk for HIV based on behavior or presenting symptoms. This nurse approaches these patients, offers them HIV testing, obtains consent to test, provides test results and makes referrals to care.

Linkages for HIV Positive Patients: DRH: During regular business hours staff from the Infectious Disease Clinic (ID) co-located in the building escort patients to their first appointment. Patients who are preliminary positive during evening and weekend hours are provided with an appointment on the next business day. Staff of the ID clinic conduct follow-up with patients who fail to make their first appointment.

HFHS: Same or next day appointments are provided for patients with preliminary positive results with the HFHS HIV Clinic, located in an adjacent building. Depending on insurance eligibility, patients are also referred to other HIV clinics. HIV clinic staff conduct follow-up on patients who fail to make their first appointment.

Financing: Grant from the Michigan Department of Community Health.

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New Jersey

Implementation: As a result of a statewide initiative to expand access to HIV testing, by March 2004, 21 EDs in New Jersey offered rapid HIV testing. The program at the ED of the University of Medicine and Dentistry of New Jersey (UMDNJ), Newark was highlighted (initiated in February 2005).

Approach: All facilities conduct risk-based, "opt-in" testing. Risk assessment/risk reduction counseling is provided in conjunction with HIV testing. UMDNJ uses a risk-based, opt-out approach to HIV testing.

Consent: New Jersey requires written consent for HIV testing.

Testing: Point-of-care rapid testing.

Staffing Model and Flow: Multiple models of testing are used across EDs including dedicated HIV counselors housed in the ED to specifically offer HIV counseling and testing; support of satellite services associated with EDs; and paging HIV counselors to the ED when HIV counseling/testing services are needed.

At UMDNJ, providers identify patients for whom HIV testing is recommended on the basis of risk and refer these patients to dedicated HIV counselors housed in the ED. Counselors provide pre-test counseling, obtain consent to test, perform rapid HIV testing, and deliver test results. Counselors arrange for confirmatory testing and provide linkage to care and other needed prevention and support services. HIV-negative patients receive referrals to prevention services.

Linkages for HIV Positive Patients: At UMDNJ, patients with confirmed positive results are provided with same or next-day medical appointments in the UMDNJ Infectious Disease Practice. ED-based HIV counselors walk patients to the Infectious Disease Practice. Vouchers ($10) are provided to patients as incentive to return for confirmatory test results. Patients who fail to return for confirmatory results are referred to partner services. HIV-positive patients also have access to mental health services and prevention services through the ID Practice.

Financing: New Jersey Department of Health awarded grants to hospitals to fund counselors, supplies, and test and control kits.

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New York State

Implementation: New York State initiated HIV testing in EDs, on a pilot basis, beginning in mid-2004. The pilot project was designed to assess the feasibility and effectiveness of HIV testing in EDs. In 2005, the New York AIDS Institute embarked on a statewide initiative to encourage adoption of routine HIV testing in medical care settings. The program at the Metropolitan Hospital Center, New York City, was highlighted (initiated in July 2004).

Approach: Population-based, opt-in testing.

Consent: New York requires written informed consent for HIV testing. Counseling requirements have been streamlined; print and audio-visual materials can be used.

Testing: Rapid tests conducted and analyzed at point-of-care or via central laboratory. Most facilities provide point-of care testing.

Staffing Model and Flow: Among the six EDs supported by the New York Department of Health to provide HIV testing, three models for providing testing are utilized. The first is a clinician-driven model, used in low-volume settings. A triage nurse offers testing. Clinical staff (including physicians) conduct testing, point-of-care, and provide results. The second , known as a "counselor on call" model, is used primarily in medium volume ED settings. In this model, HIV counselors are called to the ED to assist clinical staff in delivering HIV positive results, facilitate linkage to care, and to otherwise support ED staff in provision of HIV testing. The third is a dedicated counselor model, used primarily in high volume EDs. In this model, dedicated HIV counselors perform all aspects of HIV testing, particularly related to delivery of HIV positive test results and facilitating entry to care, instead of, or along with, physicians.

Metropolitan Hospital Center (MHC) uses a clinician-based model for HIV testing. Triage nurses screen all patients and offer HIV testing and document test acceptance in the patients' electronic medical record (EMR). All patients interested in HIV testing are provided with a packet of written materials, including pre-test counseling information and consent forms. A staff nurse obtains signed consent from the patient and a sample for testing. Specimens are processed in the central lab. Physicians provide patients with test results and post-test counseling. Physicians refer patients with reactive rapid test results to the HIV clinic.

Linkages for HIV Positive Patients: Physicians make referrals to the MHC HIV clinic. HIV clinic staff follow up with patients to ensure linkage to care.

Financing: Grants from the New York Department of Health and the New York City Department of Health and Hygiene; Reimbursement via Medicaid (November 2006).

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New York City

Implementation: The New York City Department of Health and Mental Hygiene (NYCDHMH) funded nine EDs to provide HIV testing, beginning in January of 2006. The program at the ED of St. Luke's Roosevelt Hospital was highlighted.

Approach: Population-based, opt-in testing. All patients are provided with streamlined counseling, pursuant to state law. Most facilities offer risk assessment and risk reduction counseling.

Consent: New York requires written informed consent for HIV testing.

Testing: Rapid tests conducted and analyzed at point-of-care or via central laboratory. Most facilities provide point-of care testing.

Staffing Model and Flow: Multiple models of testing are used across EDs. In a "counselor model" all patients are offered of HIV testing at triage and dedicated HIV counselors consent patients, conduct rapid testing and provide results. In a "provider model," all patients are offered HIV testing at triage and clinical staff obtain consent from patients, order specimens, and deliver test results. Specimens are processed in a central laboratory. Hybrid models are also used. In one such model, Public Health Educators (PHEs) approach patients, obtain consent, and deliver test results. Physicians order tests and laboratory technicians conduct and read test results. In another hybrid model, physicians obtain consent and order HIV tests. HIV counselors obtain specimens and delivers results. Specimens are processed in a central laboratory.

St. Luke's Roosevelt Hospitals uses a physician-based model for HIV testing. Triage nurses provide patients with information about HIV testing. ED physicians offer HIV testing to all medically-stable patients, conduct pre-test counseling, obtain consent, and order HIV testing. If a patient requires blood work for other purposes, the sample for HIV testing is sent to the central laboratory and results are returned within one hour. If a patient does not require blood work for other purposes, dedicated HIV counselors performs rapid testing point-of-care. Physicians and/or HIV counselors provide test results to patients, including preliminary positives. Confirmatory testing is automatically ordered for all reactive rapid tests, without an additional order. HIV counselors provide post-test counseling, ensure that confirmatory test results are received, and facilitate linkages to care for all HIV-positive patients. Dedicated counselors are also available to provide HIV negative results to patients if physicians are not available.

Linkages for HIV Positive Patients: For patients receiving a reactive test result during regular business hours, HIV counselors are typically available to provide prevention counseling. Referrals are usually made to HIV clinics within the individual hospital's system.

Financing: NYCDOHMH supports nine EDs through a fee-for-service arrangement, based on the actual number of HIV tests conducted. New York City Health and Hospital Corporation (NYCHHC) provides grants to 11 EDs. The New York AIDS Institute supports at least one ED and the CDC also supports at least one ED. New York State has changed Medicaid billing to allow EDs to seek reimbursement for HIV screening.

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New York City (Jacobi Medical Center)

Implementation: Project BRIEF was initiated at Jacobi Medical Center (North Bronx) beginning in 2003.

Approach: Population-based opt-in testing utilizing video-assisted risk assessment and counseling.

Consent: New York requires written informed consent for HIV testing.

Testing: Point-of-care rapid testing.

Staffing Model and Flow: Public health advocates (PHA) approach patients in the ED to be recruited for HIV testing. Patients who agree are set up with a computer which plays a brief (approximately 1.5 minutes) video that covers information about HIV and testing required by state law. Patients are then asked to answer a series of questions designed to assess risk for HIV and guide PHAs in providing focused risk reduction counseling. The risk assessment takes about 15 minutes to complete. Patients indicate their interest in HIV testing as part of the computerized questionnaire. PHAs obtain written consent from each patient, conduct rapid HIV testing, and provide test results and referral to care.

Linkages for HIV Positive Patients: For patients receiving a reactive test result during regular business hours, PHAs provide immediate, escorted referrals to Jacobi's AIDS specialty clinic. Same day appointments are available. PHAs send secure emails on patients newly diagnosed to the AIDS specialty clinic to help initiate treatment planning. Patients receiving reactive results in the evenings and on weekends are provided with appointments for the next business day.

Financing: Grants from Gilead and New York City Health and Hospital Corporation

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