Overview of HIV Testing in the US: Perspectives from the ED

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OBJECTIVE
Set Stage for Discussion

- Historical Context
- Broader ED Context
- Current Activities
- National Trends
  - Surveys
  - Multi-site Evaluation
HISTORICAL CONTEXT
for HIV Testing in EDs

• 1980’s
  – Research opportunity: ED ‘window into community’
    • Surveillance: contributed to understanding of epidemic
    • Clinical: highlighted importance of universal precautions

• 1990’s
  – Small demonstration projects showing feasibility of testing and suggested targeted strategies
  – Increased attention to public health
    • Society for Academic Emergency Medicine: Systematic Evaluation Multiple Screening Intervention in EDs (USPHTF)
    • Theoretical feasibility; practical feasibility questioned
HISTORICAL CONTEXT
for HIV Testing in EDs

• 2000-2006
  – Rapid tests become available
  – Routine testing becomes truly feasible
  – JCAHO ‘mandates’ become a reality
  – ED face increasing logistical problems related to failing of the health care systems
  – Active debate in the ED community

• The present/future
  – Guidelines released
  – ACEP response
  – Surge in activity: national, state, local
ED CONTEXT

VISITS UPS
CAPACITY DOWN

SOURCES: CDC/NCHS National Hospital Ambulatory Medical Care Survey, American Hospital Association.
The Bigger Picture
The Future of Emergency Care
(Institute of Medicine 2006)

- ED overcrowding a universal problem
- Emergency care is highly fragmented
- Critical specialist unavailable
- Ill-prepared to handle a major disaster
Public Health Interventions Still Embraced by Some:

• Most frequently cited
  – Alcohol screening and brief
  – Domestic violence
  – Injury prevention
  – Disaster preparedness

• Bottom line (across US)
  – Generally isolated and limited in scope
  – Steady/growing interest
  – Active debate ongoing
Academic Emergency Medicine Alcohol Screening Collaboration
(Screening, Brief Interaction, Referral and Treatment)
CURRENT ACTIVITIES
HIV 2006 – Present
Multiple Programs Report Experiences

• At least 10-15 programs (testing > 1 year)
• Early experiences promising
• Common barriers
• Varied terminology
• Movement from research to programmatic (data trickling in)
HIV Testing Models in EDs: Concepts and Considerations


Operational Considerations for All Testing Models

- Opt-in versus opt-out consent
- Education versus counseling
- Rapid versus conventional assay
- Point-of-care testing versus laboratory-based testing
- Result notification, reporting, and linkage of positive
- Native versus external resources
American College of Emergency Physicians Policy Statement

• Early HIV diagnosis and treatment
  – Prolong life, reduce transmission, and is a cost-effective public health intervention
• HIV testing in the ED
  – Should be available in an expeditious and efficient fashion similar to testing and results for other conditions

American College of Emergency Physicians Policy Statement

• HIV screening when deemed appropriate by the ED physician:
  – Must be practical and feasible for emergency settings
  – Cannot interfere with the primary acute care mission of ED
  – Should be offered based on the local prevalence and medical needs of the community
  – Should be integrated with the resources of the entire health care system
  – Policies and procedures must adequately address patient confidentiality, informed consent (state dependent), provider training, significant need for pre and post-test counseling, and linkage to care
  – All local and state requirements must be met

CURRENT ACTIVITIES

4 THEMES
- Public Health/Clinical Impact
- Models
- Funding/Ethics
- Metrics

Deliverables:
- Consensus manuscripts
- Systematic Assessment of Outcomes
- Multi-site collaboratives
- ED testing registry
CURRENT ACTIVITIES
CDC HIV Testing Workshops

- Series of regional workshops aimed at implementing rapid HIV testing in two critical settings:
  - Labor and Delivery
  - Emergency Departments

- Workshops will enhance the capacity of hospitals and healthcare providers to increase identification of HIV-infected persons early in their disease progression and to further decrease perinatal HIV transmission in the U.S.
CURRENT ACTIVITIES

CDC HIV Testing Workshops

- Format:
  - Overview and rationale for recommendations: "Lessons from the Field" with experienced ED providers
  - SWOT analysis
  - Concurrent workshop (nuts and bolts of ED screening, demonstration of rapid HIV tests)
  - Strategic planning for conducting ED screening by teams from each institution.

- 7 Regions Completed

- Outcome and follow-up evaluation underway

- 7 ED Specific Workshops planned
CURRENT ACTIVITIES

WEB TOOL: HEALTH RESEARCH EDUCATION TRUST

ED HIV test guide.org
HIV Testing in Emergency Departments: A Practical Guide

Welcome

About this guide

Multiple approaches to HIV testing are being employed in hospital emergency departments (EDs) across the U.S.; however, there are limited data to inform which approaches work best in different circumstances. HRET has developed this guide for clinicians and administrators seeking to incorporate routine HIV testing in their EDs. It is a practical guide to different approaches, considerations, and resources for making HIV testing routine in ED care. It is based on our findings from site visits and interviews with leadership and staff in EDs and health departments that have done it. Use this guide to navigate program design and resource allocation decisions as well as to inform policies and operational approaches to HIV testing in your ED.

Using this guide

"Where do you want to go?" on the left-hand side presents a list of topic areas you may navigate. Select your topic and a drop-down menu with additional topics will appear. You may print sections of the entire guide. Each section contains links and information on additional resources. You may see the entire list of resources by selecting Resources under "Where do you want to go?"

Not sure where to go? We provide sample menus to help you get started. Whether you are simply exploring the possibilities, actively planning, or considering expanding an existing effort, you will find useful information on this site.

Keep Posted!

Sign up if you would like us to keep you informed regarding updates to the HIV Guide and this Web site. We
WHERE HAVE WE COME FROM?

- 1996 Data
- 112 Directors Academic EDs

FIGURE 2. HIV testing in the emergency department.
NATIONAL TRENDS: Where have we moved to?

• Three surveys regarding ‘perceived’ testing patterns
  – 2004 (Academic and community)
  – 2006 (Academic only)
  – 2006 (Academic and community)

• One multiple year cross-section study
  – 1993-2005 (NHAMCS)
HRET National survey of HIV testing practices in hospitals (2004)*

• 4,500 hospitals surveyed
  – All nonfederal, general medical/surgical hospitals in the U.S. were eligible
• 1,229 responded; 88% with an ED
• Collected data on:
  – Policies
  – Practices
  – Barriers
  – Opportunities for increased testing
  – Clinical services
  – Referral system

*HRET team, In preparation.
Key Survey Findings (2004): Hospitals with ED-based HIV Testing

• 57% (613 of 1,086) offer HIV testing in ED

• 20% used the rapid HIV test in the ED
  – More likely among teaching hospitals

• Primary indications for testing
  – Occupational exposure (96%)
  – Patient symptoms (90%)

• Screening:
  – Less than 2% screen in ED
  – 64% w/policies explicitly prohibiting ED screening
Availability of Rapid HIV Testing in Academic EDs (12/06-3/07)

- National cross-sectional survey academic EDs
  - 80% response rate

- Results
  - 57% offered rapid HIV testing
    - 45% of these offer without restriction
    - 55% with policies/guidelines on its use
      » All policies allowing testing after occupational exposure

Availability of Rapid HIV Testing in Academic EDs (late 06-07)

• Results

• 13% offer routine screening

• Only 59% could link an HIV-positive patient to subspecialty care

ED Provider’s HIV Testing Practices in Scenarios of Different Suspicion of HIV

Differences in HIV Testing Among Academic and Non-Academic Emergency Departments in the US: A National Survey*

- All AC EDs and weighted random sample of all NAC EDs in US

**Results:**
- A larger proportion of AC sites believed HIV testing was needed ($p=0.02$)
- Larger proportion actually provided HIV testing (65% vs 50%, $p=0.04$).

*Haukoos et al, in preparation*
Differences in HIV Testing Among Academic and Non-Academic Emergency Departments in the US: A National Survey*

RESULTS

• External Funding: AC vs. NAC (23% vs 4%, $p=0.001$)
• Familiarity CDC Recs: AC vs NAC (64% vs 40%, $p=0.0002$)

Note: only 26% and 37% reported having implemented any part of them, respectively.

CONCLUSIONS

• AC EDs make up only about 3% of all EDs in the U.S. Significant differences exist related to performing HIV testing. Increased efforts should be made to improve the ability of NAC EDs to provide this service.

*Haukoos et al, in preparation
Differences were evaluated based on Demographics, reason for visit

National Trends in HIV Serology Performed in ED Visits among Patients Aged 13-64 Years - Numbers

Over the 13 years: 2.8 million of 867 million ED visits had HIV testing performed.

Hsieh et al, submitted.
Interim Findings from a Multi-site Evaluation of HIV Testing EDS

• Objective: Compare outcomes and program costs of different HIV testing models used by EDs

• Methods
  – Pre-site visit survey and on-site interviews

Heffelfinger JD, et al CROI
Interim Findings from a Multi-site Evaluation of HIV Testing in Emergency Departments (EDs)

- George Washington University (GWU): Undergraduates offered point-of-care rapid HIV testing (RHT) on opt-out basis to medically-stable patients ≥13 yrs

- University of Cincinnati (UC) hospital: HIV counseling and testing staff provided diagnostic and targeted testing using conventional HIV testing

- Metropolitan Hospital Center (MHC): Existing nursing staff offered laboratory-based RHT to all patients ≥13 yrs

Heffelfinger JD, et al CROI, 2007
## HIV testing summary, January-June 2007

<table>
<thead>
<tr>
<th>Site</th>
<th>GWU</th>
<th>UC</th>
<th>MH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Census</td>
<td>27913</td>
<td>43556</td>
<td>22342</td>
</tr>
<tr>
<td>Offered*</td>
<td>2611 (9.4)</td>
<td>2270 (5.2)</td>
<td>21156 (94.7)</td>
</tr>
<tr>
<td>Tested (%)†</td>
<td>1300 (49.8)</td>
<td>1340 (59.0)</td>
<td>1880 (8.9)</td>
</tr>
<tr>
<td>% of census tested</td>
<td>4.7</td>
<td>3.1</td>
<td>8.4</td>
</tr>
<tr>
<td>Confirmed + tests (%)‡</td>
<td>11 (0.8)</td>
<td>14 (1.0)</td>
<td>19 (1.0)</td>
</tr>
<tr>
<td>New HIV diagnoses (%)‡</td>
<td>10 (0.8)</td>
<td>14 (1.0)</td>
<td>13 (0.7)</td>
</tr>
<tr>
<td>Linked to care (%)±</td>
<td>11 (100)</td>
<td>13 (92.9)</td>
<td>12 (63.2)</td>
</tr>
<tr>
<td>Maintained in care (%)§</td>
<td>Not available</td>
<td>Not available</td>
<td>11 (91.7)</td>
</tr>
<tr>
<td>CD4 count, median</td>
<td>Not available</td>
<td>223</td>
<td>246</td>
</tr>
<tr>
<td>Cost per new HIV diagnosis</td>
<td>$12,300</td>
<td>$10,400</td>
<td>Not available</td>
</tr>
</tbody>
</table>

*% persons presenting to the emergency department, †% persons offered testing, ‡ % persons tested, ±% persons with confirmed HIV infection, §% persons with confirmed infection who were linked to care

The findings and conclusions in this presentation are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention.

Heffelfinger JD, et al CROI, 2007
Multi-site Evaluation of HIV Testing in Emergency Departments (EDs): Preliminary Findings

• Considerable operational variability suggests a variety of approaches needed

• All sites indicated support from ED and ID leadership as well as Department of Health funding facilitated implementation

• Cost per newly diagnosed patient linked to care of approximately $11,000
  – Considering economic and health costs of delayed diagnosis, ED HIV testing appears to be cost effective

Heffelfinger JD, et al CROI, 2007
HIV Testing in EDs

- Culturally controversial
- Variable in implementation
- Recent rapid expansion (infrastructure and programs)
- True health impact (ED vs other settings) requires evaluation