DO EMERGENCY DEPARTMENTS REPRESENT A WINDOW OF OPPORTUNITY TO IDENTIFY OTHERWISE UNDIAGNOSED HIV INFECTIONS?

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- There is no relationship to disclose
Outline

- Learning objectives
- The state of the HIV epidemic in Maryland and Baltimore City
- The local response to the national plans and the global epidemic
- BCHD emergency departments (ED) testing program
- Significance of ED testing in identifying new HIV infections
- Conclusions
Learning Objectives

- Discuss the importance of emergency departments in identifying new HIV infections
- Demonstrate the feasibility of providing comprehensive services such as testing, linkage to care, partner services, referrals to prevention and support services in healthcare settings
- Demonstrate the importance of routine HIV testing and the need to engage healthcare providers at all levels and settings
HIV Trends in Maryland

- Third-highest HIV incidence rates in the US in 2011
  - Estimated HIV diagnoses: 1,311; incidence rate: 30.6/100,000
- 44% of these cases were diagnosed in Baltimore City
- Leading HIV exposure: Men who have Sex with Men (MSM) - 2009-2012
- Fastest growing risk group: young African American MSM
- Estimated 18% are undiagnosed
Trends in Rates of Adult/Adolescent HIV Diagnoses

Data Source: Maryland DHMH PHPA
## 2011 Adult/Adolescent HIV/AIDS Baltimore City and Maryland

### Reported Diagnoses (during 2011)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Baltimore City</th>
<th>Maryland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Rate/100,000</td>
</tr>
<tr>
<td>HIV</td>
<td>424</td>
<td>81.4</td>
</tr>
<tr>
<td>AIDS</td>
<td>303</td>
<td>58.2</td>
</tr>
</tbody>
</table>

### Living Cases (on 12/31/2011)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Baltimore City</th>
<th>Maryland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Rate/100,000</td>
</tr>
<tr>
<td>HIV without AIDS</td>
<td>5,333</td>
<td>1,024.1</td>
</tr>
<tr>
<td>HIV with AIDS</td>
<td>6,739</td>
<td>1,294.1</td>
</tr>
<tr>
<td>Total HIV</td>
<td>12,072</td>
<td>2,318.1</td>
</tr>
</tbody>
</table>

Data Source: Maryland DHMH PHPA, reported through 12/31/2012
Population and Reported HIV diagnosis by age, Baltimore City 2011

Data Source: Maryland DHMH PHPA
Continuum of Care in Maryland, 2011

Number and % of HIV infected adults/adolescents engaged in selected stages of continuum of care, Maryland 2011

Data Source: Maryland DHMH PHPA
Syphilis/HIV Co-Infection Among Men, 2009-2012

*P&S = Primary and Secondary Syphilis
## Local Response to the National Plan

<table>
<thead>
<tr>
<th>Goal</th>
<th>Reduce new HIV infections</th>
<th>Reduce transmission rate</th>
<th>Know your HIV status</th>
<th>Linkage to care</th>
<th>Reduce HIV Disparities: undetectable Viral Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>National HIV/AIDS Strategy Goals (2010)</td>
<td>25%</td>
<td>30%</td>
<td>79% -&gt; 90%</td>
<td>65-85% 73-80% 82-86%</td>
<td>MSM 20% AAs 20% Latinos 20%</td>
</tr>
<tr>
<td>Baltimore City Commission on HIV/AIDS (2011) &amp; Healthy Baltimore 2015 (2011)</td>
<td>25%</td>
<td>30%</td>
<td>79 -&gt; 90%</td>
<td>65 -&gt; 85% 73 -&gt; 80% 82 -&gt; 86%</td>
<td>MSM 20% AAs 20% Latinos 20%</td>
</tr>
</tbody>
</table>
BCHD supports HIV/STD testing programs in various healthcare and non-healthcare settings
- STD clinics, EDs, community health centers, FQHCs, CBOs, Dental clinics, mobile van testing programs, and schools-based clinics

BCHD HIV and STD services are integrated

Both rapid testing and conventional testing technologies are utilized

Western Blot is used for confirmatory testing

4th generation conventional testing has been implemented in two of the partner hospital settings

Public health lab services are offered at the BCHD and DHMH labs

Linkage to care and partner services
Why Routine HIV Testing in the EDs?

- HIV testing is the entry point to the continuum of HIV care
- Opportunity for early diagnoses and linkage to care
- Opportunity to capture acute HIV cases
- Routine HIV testing increases the proportion of people who know their HIV status
- Often reaches persons who don’t perceive themselves to be at risk
- EDs are often the only access to health care for the urban poor who utilize the ED as a source of their primary care
- A positive HIV diagnosis may help the clinicians in making accurate diagnosis and treatment decisions
- Provides an opportunity for risk reduction education and referrals
BCHD Supported ED-Based Routine HIV Testing Program

- Began testing in 2008 with 5 EDs and expanded to 7 EDs
  - 5 EDs are currently participating
  - Attempts to further expand beyond the 7 EDs have not been successful
- All the EDs utilize rapid testing with the exception of one that recently added conventional 4th generation testing
- Providers report new positives based on self-report
- BCHD determines new positivity by record-searching the HIV surveillance systems including the Ryan White care database
- EDs are responsible for linking the new positives to care and re-engaging previous positives back to care
Linkage to Care & Partner Services

- Those who do not attend their first medical appointment are referred to BCHD

- BCHD care linkage team
  - Field visits to locate patients and link them to care
  - Provide transportation
  - MOUs with local providers for same-day appointment

- BCHD partner services/Disease Intervention Specialist team
  - Interviews – partner solicitation, notification, and testing
  - Linkage to care
  - Health education
Participating ED Locations

EDs Participating in BCHD-Supported HIV Testing Program

Legend:
- 2010 HIV Incidence Rates by Baltimore City Zip Code
  - 0
  - 1.0 - 20.9
  - 30.1 - 54.0
  - 55.1 - 177.2
  - 178.1
- Participating EDs

Data Source: Maryland Department of Health & Mental Hygiene
# Testing Summary: 2008-2012

<table>
<thead>
<tr>
<th>#EDs, clinics</th>
<th>#Tests</th>
<th>Confirmed Positives</th>
<th>% Positivity</th>
<th>New positives</th>
<th>% New Positivity</th>
<th>Linkage to Care (New)</th>
<th>Linkage to Care %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>5066</td>
<td>56</td>
<td>1.11%</td>
<td>53</td>
<td>1.05%</td>
<td>25</td>
<td>47%</td>
</tr>
<tr>
<td>Year 2</td>
<td>14958</td>
<td>87</td>
<td>0.58%</td>
<td>68</td>
<td>0.5%</td>
<td>42</td>
<td>62%</td>
</tr>
<tr>
<td>Year 3</td>
<td>18221</td>
<td>116</td>
<td>0.64%</td>
<td>83</td>
<td>0.5%</td>
<td>53</td>
<td>64%</td>
</tr>
<tr>
<td>Year 4</td>
<td>18355</td>
<td>75</td>
<td>0.41%</td>
<td>57</td>
<td>0.3%</td>
<td>51</td>
<td>89%</td>
</tr>
<tr>
<td>Year 5</td>
<td>19095</td>
<td>74</td>
<td>0.39%</td>
<td>48</td>
<td>0.25%</td>
<td>34</td>
<td>71%</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td>75695</td>
<td>408</td>
<td><strong>0.54%</strong></td>
<td>309</td>
<td><strong>0.41%</strong></td>
<td>205</td>
<td><strong>66%</strong></td>
</tr>
</tbody>
</table>
Positivity Trends

Trends in HIV positivity in ED testing program, 2008-2012

Confirmed positivity %
New positivity %
Record searches were conducted on the 47 positives identified via EDs from January to June 2013 to assess if they had been previously tested elsewhere

- **n=47**: 24 newly diagnosed, 20 previously diagnosed, and 3 discordant
- **58% (14/24)** of the new positives had not been previously tested elsewhere based on the BCHD surveillance records and morbidity reports*
- **Limitation** – small sample size
## Significance of ED Testing in Identifying New HIV Infections

<table>
<thead>
<tr>
<th></th>
<th>Previously tested (%)</th>
<th>Not previously tested (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>New</td>
<td>10 (42%)</td>
<td>14 (58%)</td>
<td>24</td>
</tr>
<tr>
<td>Previous</td>
<td>20 (100%)</td>
<td>0 (0%)</td>
<td>20</td>
</tr>
<tr>
<td>Discordant</td>
<td>3 (100%)</td>
<td>0 (0%)</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>33 (70%)</td>
<td>14 (30%)</td>
<td>47</td>
</tr>
</tbody>
</table>
Conclusions

- EDs play a significant role in identifying undiagnosed HIV infection that would have otherwise been missed or those who would probably have not been tested elsewhere.

Recommendation & future studies:
- Identify and address barriers for integrating routine HIV testing to ED and hospital standards of care.
- Cost-benefit analysis of routine testing in EDs and expand the evaluation on the significance of ED testing in identifying new positives.

Implications related to program sustainability:
- The provisions of the Affordable Care Act.
- The revised US Preventative Services Task Force recommendations for routine HIV testing to Grade “A”
Acknowledgements

- CDC, Division of HIV/AIDS Prevention
- Maryland DHMH, Prevention and Health Promotion Administration

- Partnering EDs:
  - Bon Secours Hospital
  - Johns Hopkins Hospital
  - Sinai Hospital
  - Mercy Hospital
  - University of Maryland Medical Center
  - Maryland General (UM Midtown Campus)
  - Johns Hopkins Bayview Medical Center

- BCHD and Bureau of HIV/STD Prevention Staff
Contact Information

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