Targeted HIV-Testing in the Emergency Department with Linkage to Care Using an HIV Risk Score

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Introduction

• Individuals at risk for HIV present to the emergency department (ED) for many reasons.
• These visits provide an opportunity for HIV testing and linkage to care
• CDC Universal screening guidelines
  • High cost
  • High false positive rate in low risk population
  • In ED setting, difficult giving people timely results
• Targeted HIV testing as alternative
Introduction (2)

- Denver HIV Risk Score
  - Nursing driven tool in the ED used to identify people at risk for HIV infection
  - Developed at Denver Health Medical Center (J. Haukoos)
  - Adapted for use at University of Colorado Hospital (UCH)

- Study at Denver Health
  - Compared universal testing to testing using an HIV Risk Score
    - Included demographic and behavioral measures
UCH Emergency Department

• 620 bed hospital
• 73 beds in ED
• More than 120,000 visits per year
  • 15% are between the ages of 15 and 24
  • 55% between 25 and 60
  • 50% are women
Methods

• Adapted a previously developed electronic medical record (EMR) tool for HIV-risk assessment and offered testing
• All patient ≥ 18 years old with visits to the main ED received screening tool
  • Patients in ED urgent care and triage areas were not screened with the tool
• Used 4th generation HIV screening test with send-out confirmatory differentiation assay
  • Screening test run in the UCH laboratory
  • Confirmatory sent to the UCH north campus
    • Only performed M, W, F
Methods

- ED staff contacted the linkage coordinator who met with patient
- If after business hours, a behavioral health provider met with patient
  - Behavioral Health provider coordinated follow up in the ID clinic with the linkage coordinator within 1-2 days
    - Dot phrase was entered in EPIC message
    - EPIC message was routed to linkage coordinator and medical director
### Denver HIV Risk Score as in EPIC

<table>
<thead>
<tr>
<th>HIV Risk Questions (Metro Denver Only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you ever been tested for HIV?</td>
</tr>
<tr>
<td>Test negative for HIV within the</td>
</tr>
<tr>
<td>preceding 6 months?</td>
</tr>
<tr>
<td>Patient status</td>
</tr>
<tr>
<td>positive for HIV, no resources needed</td>
</tr>
<tr>
<td>Insert/Inject drugs?</td>
</tr>
<tr>
<td>Race or ethnicity you identify with?</td>
</tr>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>When have sex, do you have sex with</td>
</tr>
<tr>
<td>men, women, both, or neither?</td>
</tr>
<tr>
<td>Calculated HIV risk score (age and</td>
</tr>
<tr>
<td>gender automatically included in</td>
</tr>
<tr>
<td>calculation)</td>
</tr>
</tbody>
</table>

**Notes:**
- ED HIV Screening - Pt tested negative within last 6 months, pt tested positive and no resources are needed, OR risk screening completes requirement: 1507 - 1545
- ED HIV Screening - Pt tested positive within last 6 months, pt tested negative and no resources are needed, OR risk screening completes requirement: 1507 - 1545
- Unable to assess
Denver HIV Risk Score questions

- Have you ever been tested for HIV?
  - Tested negative in the last 6 months?
  - Patient states already positive for HIV
- Have you ever injected drugs?
- What race or ethnicity do you identify with?
- When you have sex, do you have sex with men, women, both or neither?
## Denver HIV Risk Score

<table>
<thead>
<tr>
<th>The Refined Denver HIV Risk Score</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient age</strong></td>
<td></td>
</tr>
<tr>
<td>22-25 or 55-60</td>
<td>+4</td>
</tr>
<tr>
<td>26-32 or 47-54</td>
<td>+10</td>
</tr>
<tr>
<td>33-46</td>
<td>+12</td>
</tr>
<tr>
<td><strong>Male gender</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>+21</td>
</tr>
<tr>
<td><strong>Patient self-reported race/ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>+9</td>
</tr>
<tr>
<td>Hispanic</td>
<td>+3</td>
</tr>
<tr>
<td><strong>Does the patient have sex with men, women, or both?</strong></td>
<td></td>
</tr>
<tr>
<td>Men or both</td>
<td>+22</td>
</tr>
<tr>
<td><strong>Has the patient ever injected drugs?</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>+9</td>
</tr>
<tr>
<td><strong>Has the patient ever been tested for HIV?</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>-4</td>
</tr>
<tr>
<td><strong>Total Score</strong></td>
<td></td>
</tr>
</tbody>
</table>
Denver HIV Risk Scoring

- Ages ≥13 years old (for UCH tested ≥ 18)
- Risk scores
  - ≥ 50 Very high Risk
  - ≥ 40-49 High Risk
  - ≥ 30-39 Moderate Risk
  - ≥ 20-29 Low Risk
  - <20 Very Low Risk
- HIV testing for score ≥ 35 at UCH (≥ 30 at Denver Health)
- Opt-in testing
  - Initial HIV Ab/Ag, confirmatory testing if positive
ED HIV Screening Pathway

Patient screened by RN
- Only in Main ED

Does patient have known HIV?

Yes

Does patient have HIV care?

No

Was the screen positive or negative?

Positive

Does patient consent for HIV Test?

No

Preliminary HIV test done by RN performing screening
- RN notifies provider that HIV test was sent
- Patient will not be discharged before test result returns

Was HIV test positive or negative?

Negative

Reinforce Risk Reduction and give PrEP handout*
*Located in BHE Office

Positive
ED HIV Screening Pathway Cont.

ED Provider
- Gives HIV-positive preliminary test results
- Obtains CD4 and HIV-1 RNA (viral load)
Note: HIV Linkage Team will follow up on labs
- Informs patient that someone from Infectious Disease (ID) Clinic will be contacting them

ED RN calls Linkage and Retention and Care Coordinator, Megan Robins, at

Is Megan available?
- No
  - Call the IDGP nurse at [redacted] or [redacted]
  - notify them there is a new HIV diagnosis in the ED
- Yes
  - Is ID Clinic available?
    - No
      - ED Provider puts in ED Consult for Behavioral Health Evaluator (BHE) to meet with patient
    - Yes
      - Megan or ID Social Worker
        - Gets name, MRN, and room number of patient
        - Meets the patient within 20-30 minutes in the ED and coordinates their follow-up

Megan or ID SW will alert patient’s RN when they have finished with patient

BHE meets with patient
- Uses dotphrase newhivdx
- Obtains patient contact information
- Informs patient of time and date for Megan to contact the patient for follow-up

BHE routes note to Infectious Disease (Megan Robins and Hillary Dunlevy) in Epic

Megan
- Reports new HIV diagnosis to CDPHE
- Gives patient the confirmatory test results and link to patient medical care
After Hours New HIV Diagnosis Consult

- What is your preferred name?
- What pronouns do you prefer?
- Are you currently pregnant?
- How do you prefer that we contact you (phone call, text message, email, mail)?
- What is your current address?
- Primary phone number:
- May we leave a detailed message on this phone?
- Other phone number:

- May we leave a detailed message on this phone?
- Who can we call discreetly if we can't get a hold of you?
  - Name:
  - Relationship:

- Do you have reliable transportation to come to the ID clinic?
- If no, was bus pass given to patient to get to clinic?
- Arranged time and date for ID Linkage to Care Coordinator to call patient to discuss scheduling visit to get test results:
Results

• 70,023 visits to the main ED
• 36,882 received the HIV screening tool (53%)
• 1,698 had a 4th generation HIV test in the ED (4.6% of those screened)
• 16 positive tests
  • 3 false positives
  • 13 new diagnoses
## Number of HIV tests and diagnoses

<table>
<thead>
<tr>
<th></th>
<th>April 2016-March 2017</th>
<th>April 2017-March 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of tests in the ED</td>
<td>1125</td>
<td>1698</td>
</tr>
<tr>
<td>Number of positive HIV tests in ED</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>Number linked to care</td>
<td>7</td>
<td>11</td>
</tr>
</tbody>
</table>
Results - continued

• 5 new diagnoses in April through August 2018
  • All with linkage to care
Number of Tests in ED by Month
Benefits of the EPIC tool

• Multi-disciplinary HIV-Testing and Linkage Task Force:
  • Infectious diseases (physician, linkage coordinator, AETC and RW manager and physician and social work from Children’s Hospital Colorado), Emergency Department (physician, nursing, social work, data team), Lab Director
  • Communication protocols assist with smooth handoff from ED to linkage coordinator
  • Laboratory released HIV Ab/Ag result to the ED after the first positive result to shorten turnaround time to 1 hour
  • ED director and Nursing advocate use of the screening tool, leading to new HIV diagnoses.
  • Strong linkage rates for new HIV diagnoses through the linkage pathway
Barriers to the EPIC tool

- Some staff discomfort over asking HIV screening questions
  - Nursing advocate offered support
- Decreased adherence to HIV screening tool over time
  - ED director and nursing advocate for use
- HIV test turnaround time
  - Slow turnaround time in the ED
  - Laboratory director releases HIV screen positive results quickly
- Discharge from ED prior to results
  - Obtain contact information
  - Notify linkage team through EPIC message
Thank you

University of Colorado Anschutz Medical Campus