TIME OF HIV DIAGNOSIS AND PRENATAL CARE IMPACT OUTCOMES IN PREGNANT WOMEN WITH HIV

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Disclosures

I have no actual or potential conflict of interest in relation to this presentation
Background

- Suppression of HIV is crucial to prevent mother to child transmission (MTCT) of HIV.

- Public health interventions have reduced HIV MTCT from 22% to <2%.

- However, there is room for improvement, particularly for racial/ethnic minority women.
Background

• HIV MTCT remain elevated among blacks.

• No. of women with HIV giving birth has increased.
Study Objectives

1. Determine ART receipt and HIV suppression rates (close to delivery) among HIV-infected pregnant women.

2. Evaluate how timing of HIV diagnosis and quality of prenatal care impact these outcomes.
Methods

• Data Sources
  • Philadelphia Enhanced Perinatal Surveillance
  • Philadelphia Enhanced HIV/AIDS Reporting System

• Study Population
Outcomes of Interest

• ART receipt
  • Receipt of ART at any point during pregnancy.

• HIV viral suppression
  • HIV VL ≤ 400 copies/ml closest to delivery (measured as far out as 1 month postpartum).
Study Variables

Sociodemographic
- Age at delivery
- Race/ethnicity
- Insurance status
- Substance abuse
- Delivery year

Clinical
- Adequacy of Prenatal Care, measured by Kessner Index
  - adequate
  - intermediate
  - inadequate
- Timing of HIV diagnosis
  - before pregnancy
  - during pregnancy
Statistical Analysis

- **Descriptive statistics**
  - By receipt of ART and HIV viral suppression.

- **Multivariable logistic regression**
  - Unadjusted and adjusted analyses.
  - All demographic and clinical variables included in the final models.
## Sample Characteristics

<table>
<thead>
<tr>
<th>Sociodemographics</th>
<th>n, % (total n=836)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 25-34</td>
<td>431 (52)</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>661 (79)</td>
</tr>
<tr>
<td>Public Health Insurance</td>
<td>650 (78)</td>
</tr>
<tr>
<td>Drug Use During Pregnancy</td>
<td>191 (23)</td>
</tr>
</tbody>
</table>
## Sample Characteristics

<table>
<thead>
<tr>
<th>Clinical</th>
<th>n, % (total n=836)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequacy of Prenatal Care</td>
<td></td>
</tr>
<tr>
<td>Adequate</td>
<td>325 (39)</td>
</tr>
<tr>
<td>Intermediate</td>
<td>319 (38)</td>
</tr>
<tr>
<td>Inadequate</td>
<td>192 (23)</td>
</tr>
<tr>
<td>HIV Diagnosis Before Pregnancy</td>
<td>625 (75)</td>
</tr>
<tr>
<td>Receipt of ART during Pregnancy</td>
<td>708 (85)</td>
</tr>
<tr>
<td>HIV VL ≤ 400 copies/ml</td>
<td>437 (52)</td>
</tr>
</tbody>
</table>
Receipt of ART and Viral Suppression by Timing of HIV Diagnosis

- HIV dx Before Pregnancy:
  - % Receipt of ART: 89%
  - % VL ≤ 400 copies/ml: 56%

- HIV dx During Pregnancy:
  - % Receipt of ART: 71%
  - % VL ≤ 400 copies/ml: 42%

P<0.001 for ART receipt and viral suppression
Receipt of ART and Viral Suppression by Adequacy of Prenatal Care

P<0.001 for ART receipt and viral suppression
### Factors Associated with the Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Receipt of ART AOR (95% CI)</th>
<th>Viral Suppression AOR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (ref: 16-24)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-34</td>
<td>0.5 (0.3-0.9)</td>
<td>1.0 (0.7-1.5)</td>
</tr>
<tr>
<td>≥ 35</td>
<td>0.4 (0.2-0.9)</td>
<td>0.9 (0.6-1.4)</td>
</tr>
<tr>
<td><strong>Race (ref: white, non-Hispanic)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>0.5 (0.3-1.1)</td>
<td>0.9 (0.5-1.4)</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>0.3 (0.1-0.9)</td>
<td>0.8 (0.4-1.7)</td>
</tr>
<tr>
<td><strong>Illicit Drug Use (ref: no)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>0.7 (0.4-1.2)</td>
<td>0.7 (0.5-1.1)</td>
</tr>
<tr>
<td><strong>Insurance (ref: public )</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>0.80 (0.36-1.75)</td>
<td>1.21 (0.74-1.99)</td>
</tr>
<tr>
<td>Uninsured</td>
<td>1.09 (0.50-2.38)</td>
<td>1.25 (0.72-2.18)</td>
</tr>
</tbody>
</table>
## Factors Associated with the Outcomes

<table>
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<th>Receipt of ART AOR (95% CI)</th>
<th>Viral Suppression AOR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adequacy of Prenatal Care</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ref: adequate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediate</td>
<td>0.6 (0.3-1.2)</td>
<td>0.7 (0.5-1.0)</td>
</tr>
<tr>
<td>Inadequate</td>
<td>0.06 (0.03-0.11)</td>
<td>0.3 (0.2-0.5)</td>
</tr>
<tr>
<td><strong>Timing of HIV Diagnosis</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ref: before pregnancy)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>During Pregnancy</td>
<td>0.4 (0.2-0.6)</td>
<td>0.7 (0.5-1.0)</td>
</tr>
<tr>
<td>Year of Delivery</td>
<td>1.3 (1.1-1.4)</td>
<td>1.3 (1.2-1.4)</td>
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</tbody>
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Limitations

- Incomplete data recording by providers.
- ART receipt variable obtained by chart abstraction.
- Limited extrapolation to other populations.
Conclusions

• 25% of women were diagnosed with HIV during pregnancy.

• Only 39% engaged adequately in prenatal care and half achieved suppression at delivery.

• HIV dx during pregnancy and inadequate prenatal care were strongly associated with detectable virus at delivery.
Policy Implications

- Targeted interventions for early HIV diagnosis and improved engagement in prenatal care are needed
  - Full implementation of opt-out testing
  - Use of Social media
  - Peer navigators during pregnancy and postpartum
  - Case management involvement

- HIV care has to be integrated among the HIV specialist, obstetrician, and pediatrician.
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