Evaluating Facility Infrastructure for PMTCT of HIV – A 2015 Assessment of Major Delivery Hospitals in Atlanta, Georgia, US

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Disclosures

- I have no actual or potential conflict of interest in relation to this program/presentation.
Perinatal HIV: Where Does GA Currently Stand?

- GA ranked 5th highest in nation for overall total number new HIV infections (2014)¹

- Prevalence of HIV (2013)²
  - 12,801 females
  - 181 children < 13 years old (vast majority perinatally infected)

- An estimated 250-300 HIV-positive women giving birth each year in GA²

- 36 newly diagnosed perinatal HIV infections in GA (2010-2016)²

²Georgia Department of Public Health, July 2015
Prevention Challenges

- Case review of perinatal infections at Ponce Infectious Disease Program
  - Objective: to describe system failures potentially contributing to MTCT

- Demographics:
  - 27 perinatal HIV transmission
  - 89% of women were African American
  - 63% between 16-30 years of age
  - 74% (20) knew their diagnosis prior to pregnancy
    - 50% did not receive prenatal care
    - 45% did not receive cART
    - 25% did nor receive intrapartum AZT

- 33% of babies did not receive postnatal AZT prophylaxis

- VL was not available at time of delivery for 17/27 women
THE INTERVENTION

Perinatal HIV Services Coordination (PHSC) Program
Objectives

**Primary:** To assess institutional infrastructure and policies to reduce MTCT of HIV-1 at major labor and delivery units in the Atlanta Metropolitan Statistical Area (AMSA)

**Secondary:** Evaluate knowledge and practices of healthcare providers, including reported adherence to national PMTCT guidelines
Methods

Target population:
- 11 delivery hospitals with approximately 40,000 annual births, constituting 70% of deliveries in the AMSA
- Study Period: March 2015- March 2016

Assessment:
- Interviews (on-site & phone) with department representatives from each facility to obtain department specific information
  - **Pharmacy**: availability of zidovudine (AZT) & nevirapine (NVP)
  - **Laboratory**: types of HIV testing for mother and infant, test result turn around times
  - **L&D Unit**: Policies and procedures, order sets for PMTCT, opt-out versus opt-in testing, rapid point of care testing on unit
Methods continued…

**Survey**: knowledge and practice based questions
- HIV-testing practices of mother and baby
- Knowledge of guideline recommendations for use of antiretroviral prophylaxis
- Practices for documentation & screening of maternal HIV status

**Participant Population**: Surveys were completed by a convenience sample of healthcare providers (obstetricians, neonatologists, pharmacists and nurses) involved in the intrapartum care of HIV-positive women and their infants
Survey Respondents (n=71)

Occupation of Respondents

- **OBGYN**: 33%
- **OBGYN Fellows/Residents**: 30%
- **Pharmacists**: 20%
- **Nurses**: 8%
- **Laboratory Technicians**: 6%
- **Neonatologist**: 3%
A deficit in PMTCT uptake:
- Defined as missing one or more of the national recommendations for PMTCT care continuum:
  - **Mother’s Care:**
    - Standardized policies and procedures for PMTCT
    - Rapid testing at delivery
    - Opt-out HIV screening of women at delivery
    - HIV test results available within 2 hours
  - **Infant’s Care**
    - Virologic testing of HIV exposed infant
    - Availability of oral AZT and NVP formulations for HIV exposed infant prophylaxis.
- 10/11 of hospitals had deficits in PMTCT infrastructure and did not follow one or more national PMTCT recommendations
Hospital Assessment Results: Measure for Care of HIV-Positive Pregnant Women

<table>
<thead>
<tr>
<th>Hospital Type (n=11)</th>
<th>Annual Deliveries</th>
<th># of HIV Positive Women Delivering (7/14-6/15)*</th>
<th># of HIV Infected Babies Born (2005-2013)*</th>
<th>Policies and Procedures for PMTCT</th>
<th>Rapid Point-of-Care Testing at Delivery</th>
<th>Expedited Testing (3rd or 4th generation) at Delivery with Results Available in 1-2 hours</th>
<th>Utilizes Opt-Out HIV Screening of Pregnant Women</th>
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* These numbers were retrieved from birth certificate data
## Hospital Assessment Results: Measures for Care of HIV Exposed Infant

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<th>Stocks Liquid AZT</th>
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OBGYN Knowledge and Practices

OBGYN Practices for HIV Rapid/Expedited Testing at Delivery (n=44)

- Provides Rapid Testing to Women with Undocumented 3rd Trimester HIV Test: 41% Yes, 59% No
- Provides Rapid Test to Pregnant Women with No Prenatal Care: 89% Yes, 11% No
- Provides Rapid Test to Pregnant Women with Unknown HIV Status: 91% Yes, 9% No
- Provides Rapid Test to Pregnant Women who Declined HIV Testing Antenatally: 77% Yes, 23% No
Provider Knowledge and Practices

- Majority of obstetricians (82%, 36/44) administer IV AZT to all HIV-positive women if their most recent HIV viral load >1000 copies/mL or unknown/pending HIV RNA test near delivery, regardless of antepartum regimen or mode of delivery.

- 75% (33/44) of obstetricians continued to administer IV AZT for women receiving combination antiretroviral therapy with associated virologic suppression (≤ 1,000 copies/mL).

- 14% (6/41) do not schedule C/S for women with VL > 1000 at 38 weeks gestation.
Provider Knowledge and Practices

- **18% (n=13/71)** aware of the Perinatal HIV/AIDS Clinical Consultation Center Hotline

- **50% (8/16)** of neonatologists and neonatal nurses reported virologic diagnostic testing at birth for HIV-exposed infants at high risk of perinatal HIV transmission

- **33% (n=2/6)** and **50% (n=3/6)** of neonatologists did not identify correct dosing for AZT and NVP, respectively
Study Limitations

- Lack of systematic assessment of reasons for not implementing guidelines recommendations where applicable
- Survey respondents were a small convenience sample
- Findings may not be generalizable beyond AMSA
- Obstetric providers in the prenatal setting were not surveyed
Conclusions

- Lack of the following may perpetuate perinatal transmission of HIV-1 in Atlanta:
  - Routine rapid point of care at the time of delivery
  - Presence of standardized PMTCT policies and practices
  - Provider knowledge
  - Availability of NVP suspension

- The one hospitals fully adherent to the guidelines in 2015 may have become so because they had had a high number of HIV infected babies born between 2005 and 2013.
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Thank you

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