

# Repeat Third Trimester HIV Testing: An Opportunity to Prevent Maternal to Child Transmission

Laurie D. Ayala, MPH<sup>1</sup>, Emily S. Miller, MD, MPH<sup>2</sup>, Sarah Deardorff Carter, MPH<sup>1</sup>, Lynn Yee, MD, MPH<sup>2</sup>, Moeun Son, MD<sup>2</sup>, Anne Statton, BA<sup>3</sup>, Patricia M. Garcia, MD, MPH<sup>2</sup>

<sup>1</sup>Northwestern Memorial Hospital, <sup>2</sup>Northwestern University Feinberg School of Medicine, <sup>3</sup>Pediatric AIDS Chicago Prevention Initiative (PACPI), Chicago, IL

## BACKGROUND

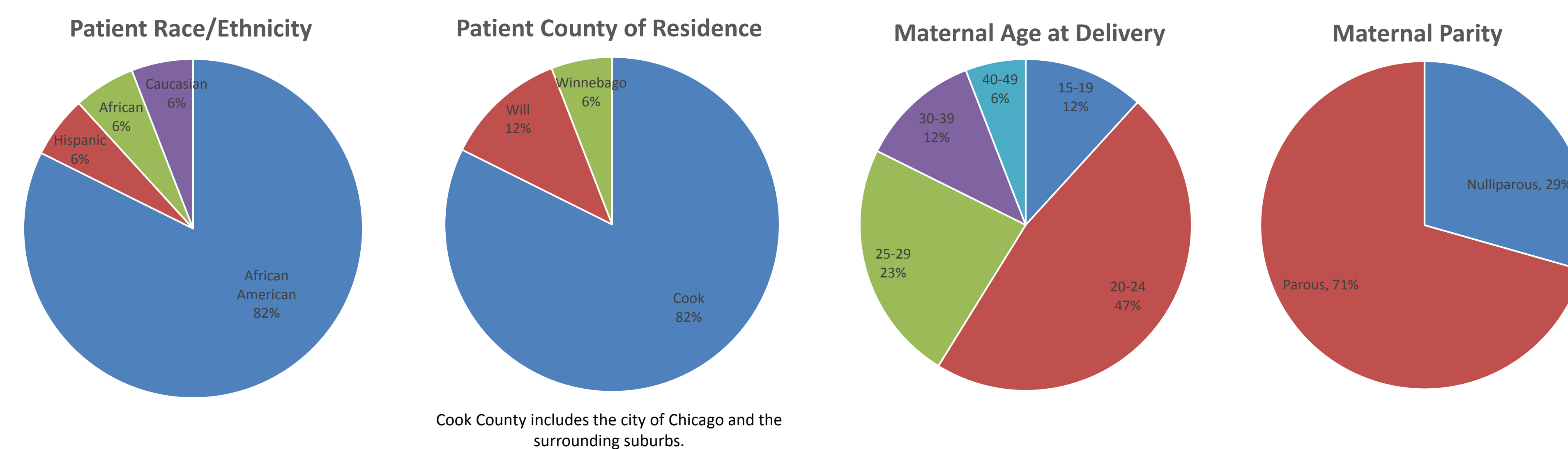
Efforts to reduce maternal to child transmission (MTCT) of HIV have been highly successful, but perinatal infections continue to occur. The CDC and ACOG recommend repeat third trimester HIV testing in Illinois based on statewide estimates of disease burden. However, this testing is recommended but not legislated, and maternal seroconversion in pregnancy after an initial negative test contributes to ongoing cases of MTCT in Illinois.

## METHODS

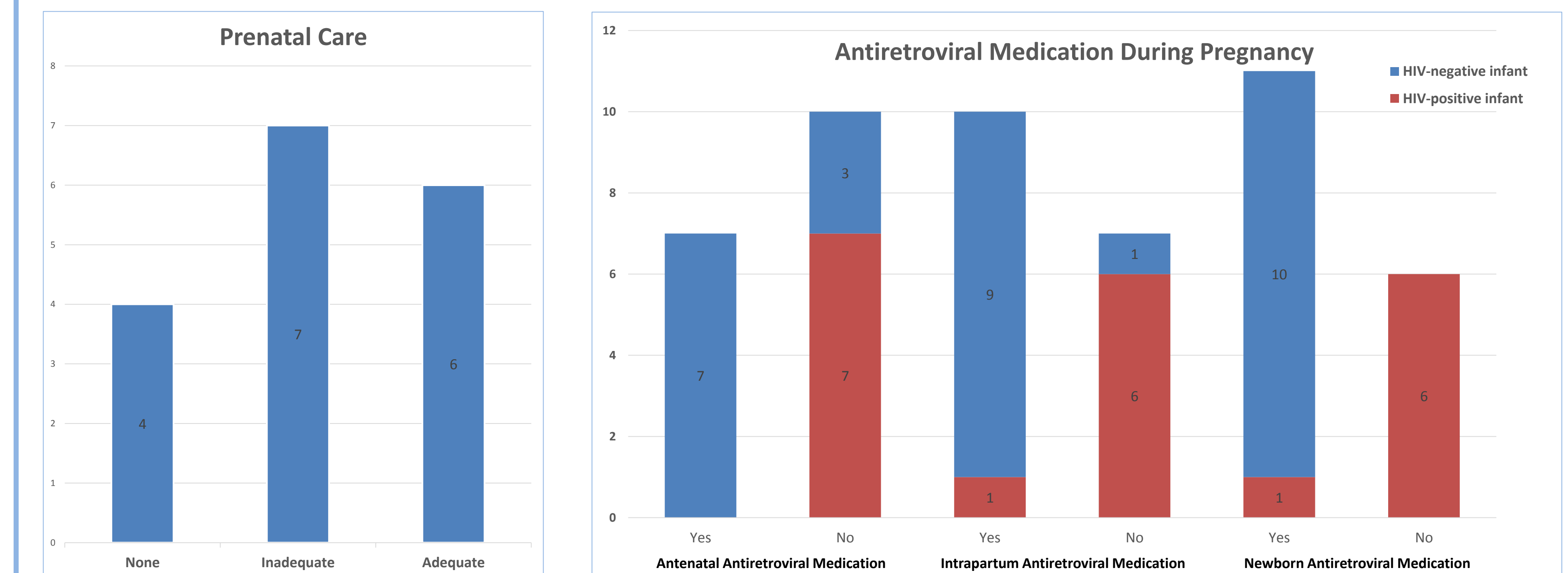
- Positive HIV tests in pregnancy reported to the Illinois Perinatal HIV Hotline between January 2007 and June 2015 were reviewed to identify cases of seroconversion in pregnancy.
- Cases of known seroconversion during pregnancy were defined by a documented negative maternal HIV test during pregnancy followed by a confirmed positive HIV test later in pregnancy or at delivery. Women diagnosed after delivery were determined to be known cases of seroconversion during pregnancy based upon HIV infection in the child in the absence of breastfeeding or suspected cases based upon HIV infection in the child and limited or unknown duration of breastfeeding.
- Seventeen cases (15 known and 2 suspected) of maternal seroconversion were identified.

## RESULTS

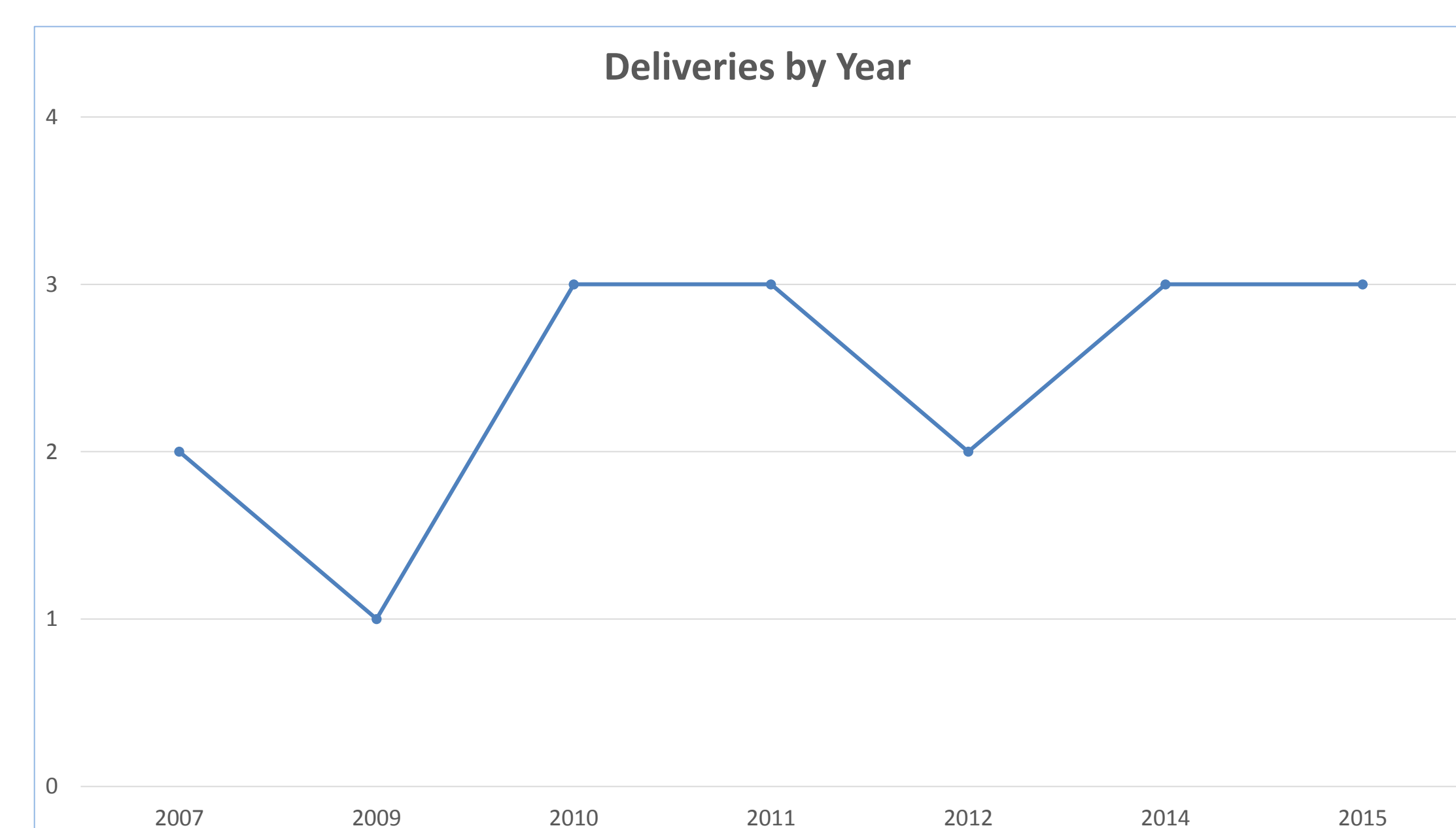
### Demographics



### Pregnancy Care

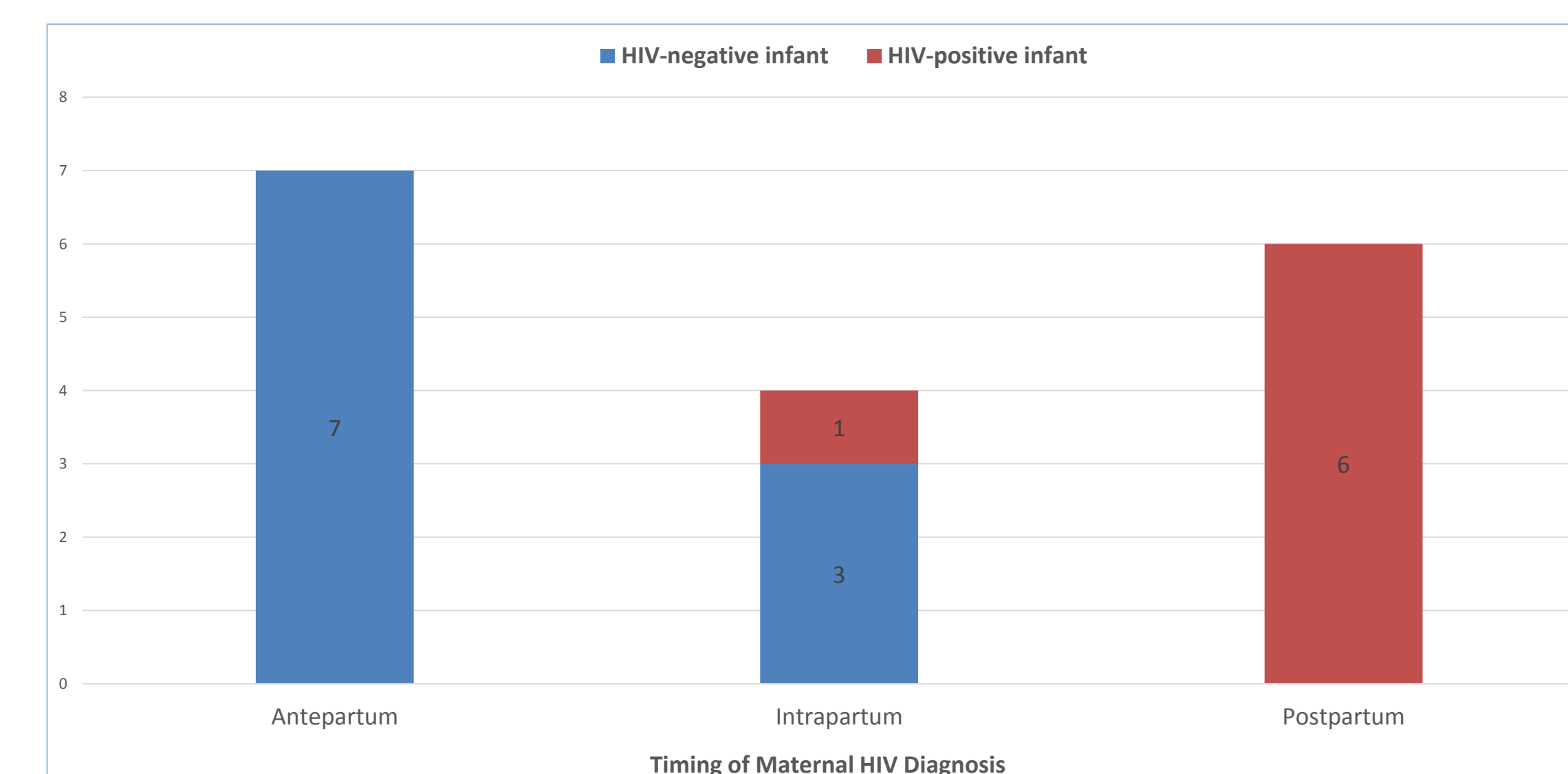


### Cases of Maternal HIV Seroconversion and Year of Delivery



- 130-150 HIV-positive women deliver annually in Illinois.
- Among women who seroconverted during pregnancy, 41% (7/17) of deliveries resulted in mother-to-child transmission.

### Timing of Maternal HIV Diagnosis and Mother-to-Child Transmission



- Overall, 41% (7/17) of cases of maternal HIV seroconversion resulted in infant HIV infection.
- None of the cases of maternal HIV seroconversion diagnosed antenatally resulted in HIV transmission to the infant.
- When diagnosis of seroconversion was delayed and not detected until postpartum, all (6/6) cases resulted in transmission.

## CONCLUSIONS

- Maternal HIV seroconversion in pregnancy is rare but will be missed without repeat third trimester HIV testing.
- Maternal seroconversion poses a high risk for MTCT but early detection can reduce this risk.
- Identification of HIV seroconversion during pregnancy is critical to achieving perinatal HIV elimination.
- Universal repeat third trimester HIV testing can identify maternal HIV seroconversion and prevent ongoing cases of MTCT.

The Illinois Department of Public Health provides funding to PACPI for the Illinois Perinatal HIV Hotline, the Perinatal Rapid Testing Implementation Initiative and the Perinatal Enhanced Case Management programs.