



# **Eliminating Mother to Child Transmission (MCTC) of HIV and HBV**

**Minerva A. Galang, MD**  
**Practice Lead, Infectious Diseases**  
**Medical Director, Infectious Disease-McAuley Program**  
**Mercy Health Physician Partners**  
**Mercy Health Saint Mary's**

## MTCT of HIV

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### **Perinatal transmission is the most common route of HIV infection in children**

- Each year, 6,000 to 7,000 HIV-positive women deliver a baby in the United States
- Fewer than 200 HIV infected infants are born in the US each year
- 40% of HIV-infected infants are born to mothers who don't know their HIV status

## Missed Opportunities

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**Case #1:** May 2008, a 39F, educated (Masters degree) who was diagnosed AFTER her two-month old son was diagnosed with Pneumocystis pneumonia and HIV.

- She did not have HIV testing during her pregnancy
- “Are you at risk for HIV?” was a questions she clearly recalled being asked during her first prenatal visit and she did not believe she was at risk

• **Case #2:** In January 2012 a 33 year-old woman who was 36-weeks pregnant tested positive for HIV despite initial negative HIV at the recognition of pregnancy.

- She had a repeat HIV test around 26 weeks which was INDETERMINATE and was not referred to ID
- Despite starting ART the same day she was seen in our office, her baby was diagnosed with HIV at birth

## MTCT Prevention: HIV

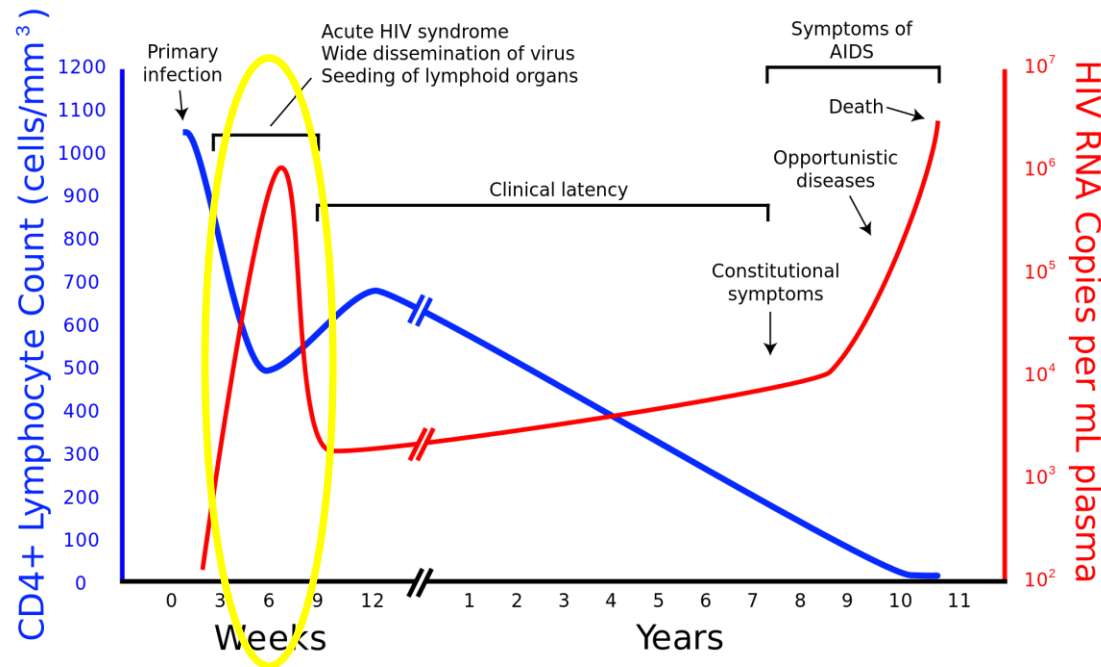
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- HIV Testing should be done at the following stages:
- Preconception (by PCP!)
- Recognition of pregnancy
- 26-28 weeks of pregnancy
- Repeat at 36 weeks if the following High-Risk Criteria is identified:
  - **Sexually transmitted infection (STI) during pregnancy**
  - **Injects drugs or has a partner who injects drugs**
  - **Exchanges sex for money or drugs**
  - **Has had a new or more than one sex partner during pregnancy**
  - **Has an HIV-positive partner**
  - **Has signs and symptoms consistent with acute HIV infection**

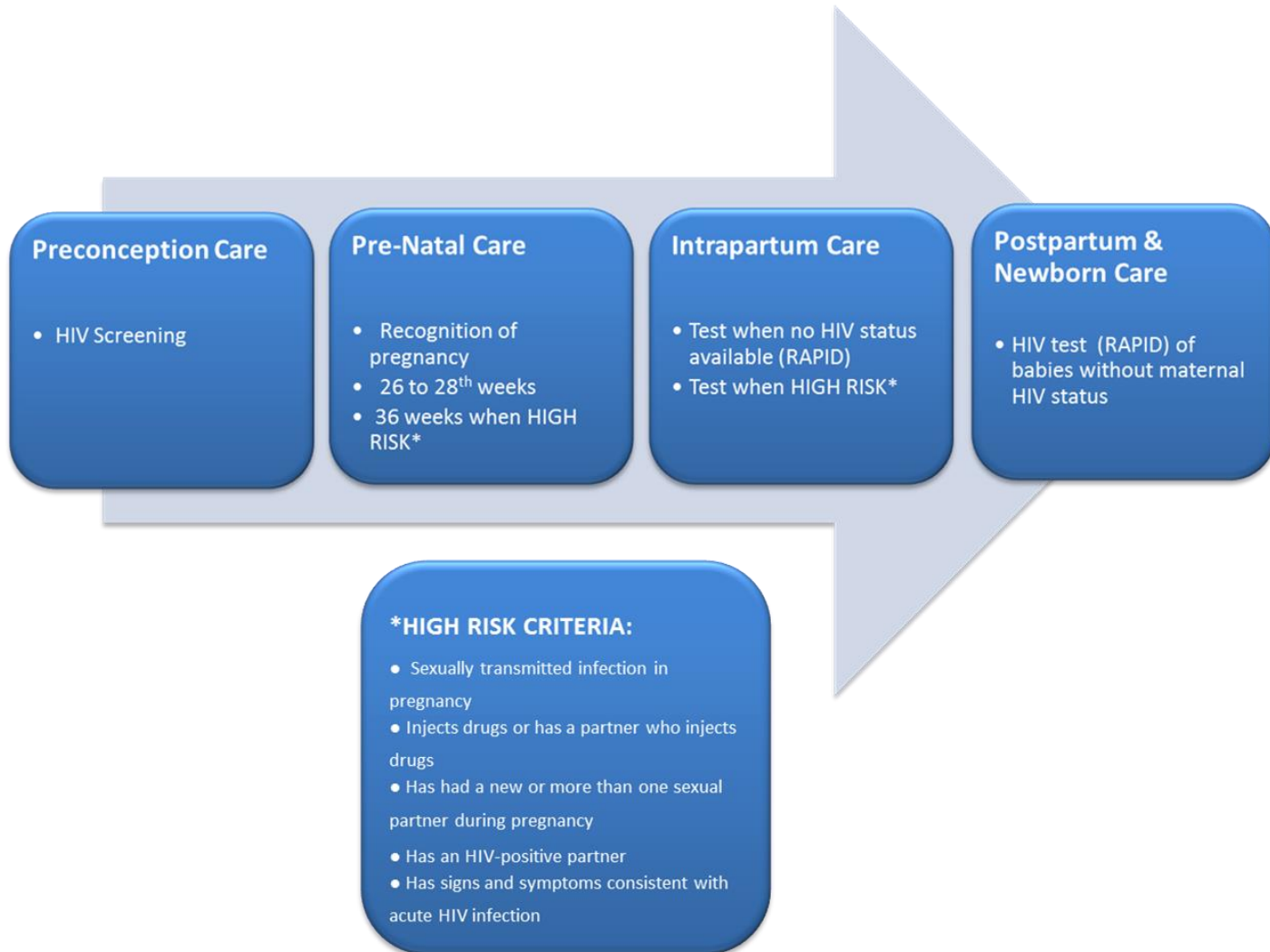
## HIV and Pregnancy

### HIV-positive mothers can have HIV-negative children!

- Key is treatment of mom to achieve control of infection (undetectable viral load); baby gets zidovudine prophylaxis and no breastfeeding
  - This reduces HIV risk to <1%
- Theoretical highest risk of perinatal transmission is when HIV is acquired by mom during the pregnancy because of peak of viremia during the seroconversion



# HIV Testing Timeline for Prevention of Perinatal Transmission



## Our Experience

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- From Oct 1, 2011 to Sept 30, 2012 – **77.6%** of pregnant women were screened for HIV.
- Our policy was put in effect **October 1, 2012**. And since then, our HIV screening of pregnant women is maintaining above 95%.
  - FOUR women diagnosed with HIV during pregnancy during this period, got into care and had healthy HIV-NEGATIVE babies

## HBV and Pregnancy

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- Screening for Hepatitis B infection to ALL pregnant women is important
  - Hepatitis B surface antigen (**HBsAG**) is the test of choice
  - If a pregnant woman has jaundice, better to ask expert opinion as HBsAG could be negative during window period of infection
- HBV transmission is much more efficient than HIV transmission!
  - Route of transmission similar; But if we talk about IV needle stick HBV >>> HCV >> HIV



## HBV and Pregnancy

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- If pregnant woman is found to be HBsAG-positive, then her baby is at risk to have HBV
  - Pediatrician involved with baby at delivery needs to be notified as baby will need Hepatitis B Immunoglobulin and HBV vaccination
    - Intervention can decrease risk up to 80-90%
  - Mom needs to be referred to ID or GI for further management as treatment is available
    - Antiviral (tenofovir) has been shown to be safe in pregnancy based on HIV-experience
- No contraindication to breastfeed in presence of HBV infection (baby needs to get intervention)
  - However, if mom is on treatment, discussion about breastfeeding and risk of baby for exposure from antiviral medication important

## Prevention of Perinatal Transmission: TESTING IS KEY

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Education to all providers (doctors, nurses, ancillary team) to the following stages:

- Preconception Care

- Vaccination history? Is patient protected/immune against HBV?
- Identify risks (IVDU, partner status, etc)

- Prenatal Care

- Intrapartum Care

- Postpartum & Newborn Care

- Newborn with HIV-positive mothers will get started on zidovudine right away and will have panel of workup to exclude perinatal transmission; Mom advised against breastfeeding
- Newborn with HBV-positive mothers will need to receive Hep B Immune globulin (HBIG) at birth and get started on HBV vaccine series; Mom can breastfeed but needs to learn about potential for blood exposure (cracked nipples)

# Prevention of Perinatal Transmission

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- Questions?

## End of AIDS starts with ZERO Perinatal Transmission

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- HIV-free generation is possible!
- YOU are the beginning of the END of AIDS.