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Labor & Delivery Management for Women Living with HIV

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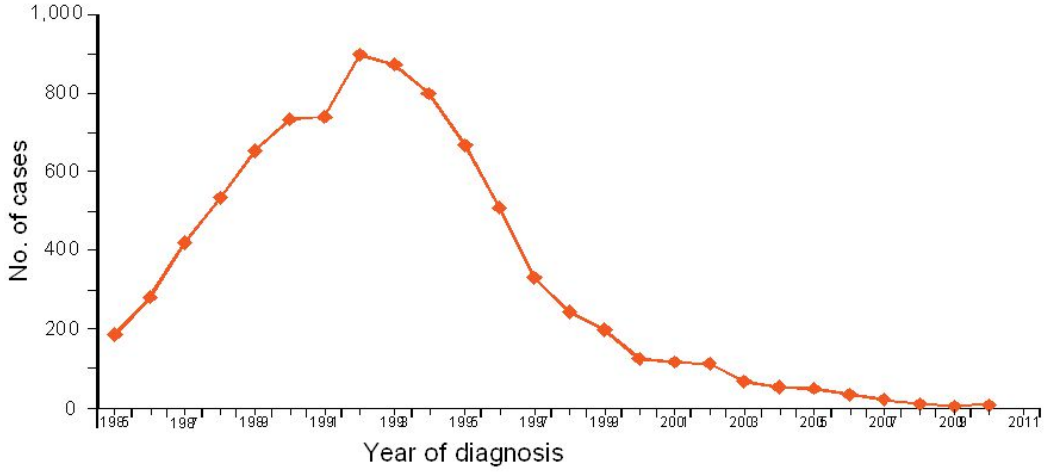
Statistics for Perinatally Acquired HIV

Estimated Numbers of Perinatally Acquired AIDS Cases by Year of Diagnosis, 1985–2010 — United States and Dependent Areas



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Note: Data have been adjusted for reporting delays and missing risk-factor information.

Timing of Perinatal HIV Transmission

- Most transmission occurs close to or during labor and delivery
  - Intrauterine (before 36 weeks): about 20% of cases
  - Peripartum about 80% of cases

Factors Influencing Perinatal Transmission

- Maternal Factors:
  - High viral load
  - Low CD4 count
  - Co-infections
  - IV drug use
  - No ARV therapy or ppx
  - HIV acquired during the pregnancy

Factors Influencing Perinatal Transmission

- Infant Factors:
  - Prematurity
  - Breastfeeding
- Obstetric Factors:
  - Length of rupture of membranes
  - Mode of delivery (vaginal if VL>1000)
  - Invasive procedures

Transmission Increases with Increasing Maternal Viral Load

		Infant Infections	
Maternal viral load (copies/mL)	N	Total	
		N	%
<50[1]	3859	2	0.05%
50-399	655	7	1.1%
400-999	104	2	1.9%
1000-9999	100	3	3.0%
>10,000	65	6	9.2%

Risk of HIV Transmission from HIV+ Source	Risk per Act	
	per 10,000	percent
Blood transfusion	9000	90%
No maternal ART (maternal viral load ≈15,000 copies/mL)		*8.5%*
Maternal cART: viral load 400-999 copies/mL		*2.6%*
Maternal cART: viral load 50-399 copies/mL		*1.0%*
Needle sharing: injection drug use	67	0.67%
Percutaneous needlestick	30	0.3%
Receptive anal intercourse	50	0.5%
Receptive penile-vaginal intercourse	10	0.1%
Maternal cART: viral load <50 copies/mL		*0.09%*
Insertive anal intercourse	6.5	0.065%
Insertive penile-vaginal intercourse	5	0.05%

AZT in Labor

- Intravenous (IV) zidovudine should be administered:
  - HIV RNA >1,000 copies/mL (or unknown HIV RNA) near delivery
  - Not required for HIV-infected women receiving cART regimens who have HIV RNA ≤1,000 copies/mL during late pregnancy and near delivery and no concerns regarding adherence to the cART regimen

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Mode of Delivery

- In women with **HIV RNA levels ≤1000 copies/mL**, if scheduled cesarean delivery or induction is indicated, it should be performed at the standard time for obstetrical indications.
- In women with an **HIV RNA >1,000 copies/mL or unknown HIV RNA level** who present in **spontaneous labor** or with **ruptured membranes**, there is **insufficient evidence** to determine whether cesarean reduces the risk of perinatal HIV transmission. Individualize!

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Mode of Delivery: Elective C-section

- NIH Consensus Guidelines, ACOG
  - Recommend **elective c/s at 38 wks for VL >1000 or unknown VL**
  - **Unknown benefit if already laboring**
  - No evidence of benefit if VL < 1000
  - Preoperative antibiotics are recommended
  - IV ZDV should be administered for 3 hours total prior to scheduled delivery

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Mode of Delivery: Elective C-section

- As with any early elective delivery, risk of fetal lung immaturity
- Complications of c/s are higher in HIV-infected than non-infected: especially in the setting of a woman with low CD4/AIDS
- Limited future delivery options

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Intrapartum Interventions: The Basics

- **Continue ART** on schedule during labor and before scheduled C-section. (AIII)
- **ROM** when obstetric indications if VL< 1000, on ARTs
  - Shorten duration of ROM with **augmentation**
  - Avoid in elevated VL's
- **Minimize # exams** to ↓ risk of chorioamnionitis

Other Intrapartum Issues

- Avoid invasive fetal procedures
  - Fetal scalp electrode, fetal scalp sampling
- Avoid episiotomy
- Avoid operative vaginal delivery if possible (forceps, vacuum)

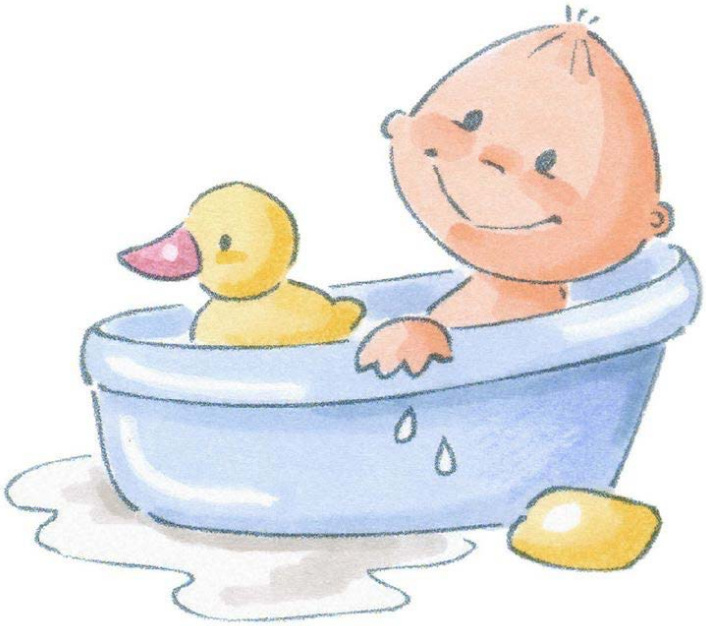
Other Intrapartum Issues

- Postpartum hemorrhage consider the ARVs
  - If she is receiving a cytochrome (CYP) 3A4 enzyme inhibitor (eg, a PI), methergine is last resort due to potential for excessive vasoconstriction
  - If she is receiving a CYP3A4 enzyme inducer such as NVP, EFV, or etravirine, additional uterotonic agents may be needed because of the potential for decreased methergine levels and inadequate treatment effect.

- Pre-Eclampsia and Preterm Labor
  - Do not run AZT and MgSO4 in same line.

Infant Care

- Cord Clamping
  - No data to advise against
- Bathing
  - Once temperature stable



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Communication with Pediatrics

- Essential for ensuring that the pediatrics team has the data they need to assess risk and make decisions about the baby's prophylaxis
  - Allows decisions about testing of the baby
  - Allows for preparing/obtaining the medications needed for baby's prophylaxis
  - Allows for understanding of the social situation as it relates to issues such as breastfeeding the compliance with providing medication to the baby

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Case #1

- Ms. R is admitted from the ER fully dilated and pushing. This is her third baby and according to her chart, she had two prenatal visits. Her history leads you to believe that she is at risk for HIV.
- What are your next steps?

Rapid Testing on L&D

- Conduct rapid HIV antibody testing for women in labor with unknown HIV status. (AII)

  If positive:

  –Perform confirmatory testing ASAP

  –Administer maternal IV ZDV and infant combination prophylaxis pending results of confirmatory test. (AII)

  –Should not breast feed until confirmatory testing back. (Pump and dump/store.)

Rapid Testing: Issues

- TIME!
  - Counseling
  - Obtaining results
  - Understanding results
  - Management of a preliminary positive pt

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Case #2

- 32 year old G2P1 at 38 weeks, HIV+
- On Truvada/atazanavir, VL undetectable at 36 weeks
- Uncomplicated pregnancy
- In labor
- Her mother says that she read that HIV+ women should get c-sections. She asks you why you are not recommending a c-section for her daughter.

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Case #2

- What do you tell her mom?
- What is your plan for her delivery?
- Is her baby a high risk or low risk infant?

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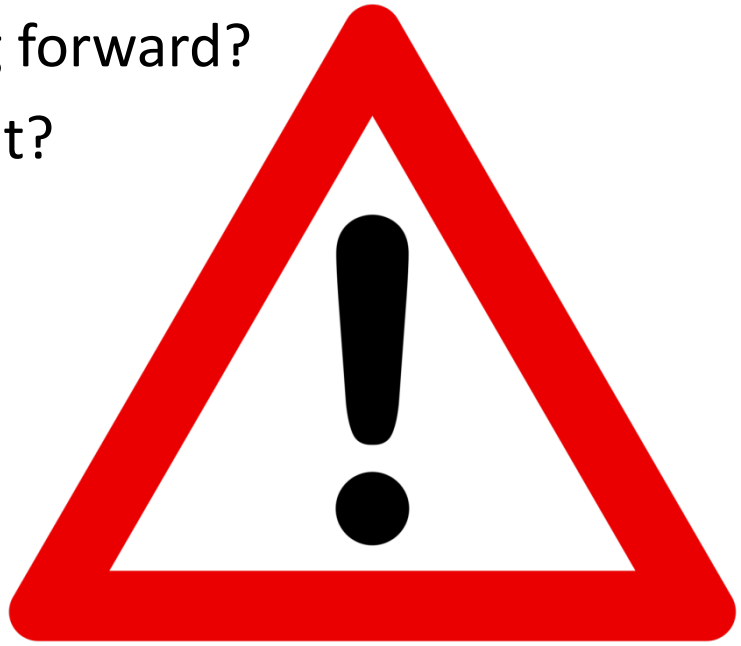
Case #3

- 24 yo G1P0 at 35 weeks has HIV, diagnosed during this pregnancy. She has been intermittenyl compliant with her ARVs and has never had a VL lower than 1200.
- What should her plan of care be going forward?
- Is her baby a high risk or low risk infant?



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National Perinatal HIV Hotline

24 hours a day, 7 days a week, 365 days a year
(888) 448-8765

The Clinician Consultation Center (CCC) provides free, confidential, and timely expert perinatal HIV and HIV-exposed infant consultation to clinicians of all experience levels and training backgrounds.

Advice is based on Federal treatment guidelines, current medical literature, and clinical best practices.

This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number U1OHA30039-01-00 (AIDS Education and Training Centers National Clinician Consultation Center) awarded to the University of California, San Francisco. (updated 10/24/17)

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The Clinician Consultation Center is a free telephone advice service for clinicians by clinicians. Receive expert clinical advice on HIV, hepatitis C, substance use, PrEP, PEP, and perinatal HIV.

See nccc.ucsf.edu for more information.

HIV/AIDS Warmline 800-933-3413
HIV treatment, ARV decisions, complications, and co-morbidities

Perinatal HIV Hotline 888-448-8765
Pregnant women with HIV or at-risk for HIV & their infants

Hepatitis C Warmline 844-HEP-INFO 844-437-4636
HCV testing, staging, monitoring, treatment

PrEPline 855-HIV-PrEP
Pre-exposure prophylaxis for persons at risk for HIV

Substance Use Warmline 855-300-3595
Substance use evaluation and management

PEPline 888-448-4911
Occupational & non-occupational exposure management

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Thank you!

To learn more, please visit www.nccc.ucsf.edu