Clarify mother's HIV status if still unknown

- Recommend rapid/expedited HIV testing of infant or mother as soon as possible after birth; if positive, start combination† ARV prophylaxis for infant STAT.
- Discontinue ARV prophylaxis if supplemental testing determines the mother is HIV negative.

Postpartum Care and Follow-up of HIV+ Women

- Breast feeding is not recommended for HIV+ women in the U.S.
- Provide counseling on the avoidance of premastication practices.
- Continuing cART after delivery is generally recommended. Considerations regarding ARVs after delivery are the same as for non-pregnant adults and should be made collaboratively with the patient.
- Discuss additional childbearing intentions; include counseling on reproductive and contraception options.
- Reassess support services; the postpartum period poses unique challenges to adherence.
- Women who are found to be HIV-infected in labor and delivery require immediate linkage to HIV care, comprehensive medical assessment, and counseling.

Neonatal Care

Give all HIV-exposed newborns ARV prophylaxis.

- Infant prophylactic regimens are based on HIV transmission risk. See intrapartum management for more information.
  - * Standard ARV prophylaxis: ZDV syrup 4 mg/kg po BID as soon as possible and within 6-12 hrs. of birth, through 6 wks. A 4-week prophylactic regimen can be considered if the mother has received standard cART during pregnancy with consistent viral suppression and there are no concerns related to maternal adherence.
  - † Combination ARV prophylaxis: ZDV syrup 4mg/kg po STAT BID through 6 wks AND 3 doses of NVP (at birth, 48 hrs after first dose, and 96 hrs after the second dose).
- Neonatal ZDV is recommended regardless of maternal ARVs or resistance history but consult an expert if considering combination therapy based on maternal resistance history.
- Consult Perinatal Guidelines for ZDV/NVP dosing in premature or SGA infants.

FOLLOW-UP CARE For Infants Born to Mothers with HIV Infection

- Educate mother about neonatal ARV prophylaxis and discuss recommendation to avoid breastfeeding.
- Perform CBC at baseline and then monitor for hematologic abnormalities; consult Perinatal Guidelines for timing.
- HIV DNA PCR or HIV RNA assays are the preferred virologic assays.
- HIV virologic testing is recommended within 14–21 days of birth, at 1–2 months, and at 4-6 months.
- Confirm first positive virologic test with a second virologic test soon as possible.
- HIV is diagnosed by 2 positive HIV virologic tests on separate blood samples.
- HIV infection can be presumptively excluded in a non-breastfed infant with 2 or more negative virologic tests: one obtained at age >14 days and one at >1 month.
- Definitive exclusion of HIV infection is based on 2 or more negative virologic tests performed at > 1 month and > 4 months.
- If infant HIV infection is confirmed, refer to pediatric HIV specialist for ongoing treatment and care.
- TMP-SMX for PCP prophylaxis should be started at 4-6 wks of age for all infants exposed to HIV unless determined to be presumptively uninfected.

To obtain the most current recommendations, visit www.aidsinfo.nih.gov

Perinatal HIV Hotline

National Perinatal HIV Consultation and Referral Service offers healthcare providers around-the-clock advice on testing and care of HIV-infected pregnant women and their infants and provides referral to HIV specialists and regional resources

1-888-448-8765 • 24 hours a day • 7 days a week

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This educational material was developed by the François-Xavier Bagnoud (FXB) Center

For information, please contact the FXB Center (973) 972-5644
www.fxbcenter.org • fxbcenter@sn.rutgers.edu

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Guidelines

for Use of HIV Antiretroviral Therapy in Pregnancy[1]

† The full perinatal guidelines are available at *http://www.aidsinfo.nih.gov/*

GUIDELINES: Use of Antiretroviral (ARV) Drugs in Pregnancy[2]

- ARV therapy for prevention of perinatal HIV transmission is recommended for all pregnant women with HIV infection regardless of HIV RNA (viral load) or CD4 count.
- The goal of treatment is to achieve a suppressed viral load (VL). Combination ARV Treatment (cART), containing at least 3 drugs, is the standard of care. See the Perinatal Guidelines for information on recommended regimens.
- Generally, the same regimens are recommended for treatment of pregnant women as non-pregnant adults unless there are known adverse effects for women, fetuses or infants that out-weigh benefits.
- An HIV-infected woman should make the decision about ARV drugs during pregnancy after talking with her provider about the known and unknown benefits and risks of ARV drugs for her and her infant.
- All HIV-exposed infants should receive postpartum ARV drugs to reduce perinatal transmission of HIV. The guidelines provide detailed recommendations for infant prophylaxis based on specific clinical situations.

Preconception Counseling

- Discuss childbearing intentions consistently with all women of childbearing age.
- Provide contraceptive counseling to reduce unintended pregnancy.
- Preconception counseling includes information on safer sexual practices, optimization of chronic medical conditions, and elimination of alcohol, illicit drugs, and smoking.
- All HIV-infected women and/or HIV-infected male partners contemplating conception should be on maximally suppressive cART.
- Effective cART regimens should consider hepatitis B virus disease status, teratogenic potential of the drugs in the cART regimen, and possible adverse outcomes.
- For concordant or serodiscordant couples who want to conceive, the Perinatal Guidelines provide recommended methods for safer conception. Approaches, including the use of pre-exposure prophylaxis (PrEP), can be tailored to specific needs, which may vary from couple to couple.
- Screen and treat genital tract infections of the woman and her partner(s) prior to attempts to conceive.

[2] Panel on Treatment of HIV-infected Pregnant Women and Prevention of Perinatal Transmission. Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-1-Infected Women for Maternal Health and Interventions to Reduce Perinatal HIV Transmission in the United States. Retrieved May 8, 2014 from http://aidsinfo.nih.gov/guidelines/html/3/perinatal-guidelines/0.

ANTEPARTUM CARE Initial evaluation

- Past CD4 counts and VLs.
- Obtain an early ultrasound to determine gestational age.
- Current CD4 cell count.
- Current VL.
- Assess the need for prophylaxis against opportunistic infections (see Adult and Adolescent Opportunistic Infections Guidelines available at: http://aidsinfo.nih.gov/guidelines).
- Screen for hepatitis C virus and tuberculosis, in addition to standard screening for hepatitis B virus (HBV) infection.
- Assess the need for immunizations per guidelines from the American College of Obstetricians and Gynecologists, with particular attention to hepatitis A, HBV, influenza, pneumococcus, and Tdap immunizations.
- Obtain a complete blood cell count and renal and liver function testing.
- Obtain HLA-B*5701 testing if abacavir use is anticipated.
- Review prior and current ARV drug use, including prior ARV use for prevention of perinatal transmission or treatment of HIV and history of adherence problems.
- Conduct HIV resistance testing if detectable viremia (>500-1000 copies/mL).
- Elicit any history of adverse effects or toxicities from prior ARV regimens.
- Assess supportive care needs such as mental health services, substance abuse treatment, and smoking cessation.

Women with no history (hx) of ARVs (ARV-naïve)

- Start cART as soon as possible or after 1st trimester. Earlier initiation may be more effective.
- Preferred combination ARVs are available in the full Perinatal Guidelines.

Women currently on ARVs

- Generally, continue regimen if VL undetectable.
- Avoid d4T/ddI combination
- The teratogenic risk for efavirenz is restricted to the first 5–6 weeks of pregnancy. Since pregnancy is rarely recognized before 4-6 weeks, efavirenz may be continued through the first trimester provided the regimen is effective.

Women with hx of ARVs but not currently on ARVs

- Obtain accurate hx of all prior ARVs.
- Obtain HIV resistance testing before starting cART regimen to inform ARV choice.
- If a pregnant women presents late to care, empiric cART should be initiated until results of resistance testing are known.
- Assess adherence and tolerability issues.
- Consult with HIV expert for choice of ARV for women previously treated.

Monitoring during pregnancy

- Monitor for potential complications based on what is known about the adverse effects of the chosen regimen
- Perform CD4 count initially, Q3 months or Q6 months if woman is stable on cART (suppressed VL and reconstituted immune system).
- Perform VL initially, at 2-4 weeks after starting or changing ARVs, and then monthly until undetectable; then Q3 months.
- Obtain VL at 34-36 weeks to inform decision about Cesarean section (C/S).
- Monitor and manage known side effects of ARVs.
- Perform standard glucose screening in pregnancy; consider earlier glucose screening for women taking protease inhibitors.
- Consult HIV expert if VL not suppressed after adequate period.

Acute HIV infection in pregnancy

- If suspected, perform HIV antibody test and VL simultaneously.
- If positive, start cART immediately, pending results of resistance testing.
- Perform 3rd trimester repeat HIV antibody testing for women known to be at risk, incarcerated, or in areas of higher incidence.[3]

HIV-2 infection in pregnancy

- HIV-2 infection should be suspected when the woman (or her partner) is from an endemic area.
- See Perinatal Guidelines for information on the diagnosis and treatment of HIV-2 infection in pregnancy.

INTRAPARTUM MANAGEMENT All HIV+ women

- Continue cART on schedule as much as possible during labor and before scheduled C/S.
- Intravenous (IV) Zidovudine (ZDV) is recommended for women with HIV VL > 1000 copies/ml (or unknown HIV RNA/VL) near delivery.
- If on d4T, stop d4T during labor while IV ZDV is running.
- For women with VL ≤1000 copies/ml near delivery where there is no concern for medication adherence, administration of IV ZDV is not necessary.
- Avoid artificial rupture of membranes or fetal scalp monitoring unless obstetrically indicated.
- If delivering vaginally, attempts should be made to avoid instruments, forceps or vacuum extraction and/or episiotomy unless obstetrically indicated.

[3] Areas of higher incidence are defined by the CDC in MMWR: Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health-Care Settings - September 22, 2006 available at http://www.aidsinfo.nih.gov/

INTRAPARTUM MANAGEMENT All HIV+ women (continued)

- Consult Perinatal Guidelines on management of postpartum hemorrhage when woman is on ARVs during pregnancy.

HIV+ women on virally suppressive cART regimens

- Continue antepartum ARVs on schedule during labor or prior to C/S for obstetrical reasons.
- Give newborn standard* recommended ARV prophylaxis.

HIV+ women on cART but not virally suppressed (VL>1000)

- Schedule a C/S at 38 weeks gestation.
- If fixed dose combination ARV regimen includes ZDV, continue other drugs orally while ZDV is given IV.
- Give standard* 6-week infant prophylaxis but consider combination† therapy in consultation with a pediatric expert based on maternal VL and mode of delivery.

HIV+ women in labor with no prior ARVs

- Evaluate for risks/benefits of C/S based on stage of labor at presentation.
- Begin IV ZDV loading dose and continue ZDV until delivery (ZDV loading dose 2 mg/kg over 1 hr then 1 mg/kg/hr until delivery).
- Give newborn combination† ARV prophylaxis and continue through 6 wks.

Women of unknown HIV status who present in labor

- Perform expedited/rapid HIV testing, preferably Ab/Ag testing. If positive, treat as stated for HIV+ women in labor with no prior ARVs. Start ZDV without waiting for results of supplemental testing.
- Give newborn combination† ARV prophylaxis for 6 wks. If mother's supplemental results are negative, stop infant ARV prophylaxis.

Counseling regarding scheduled C/S

- Scheduled C/S at 38 weeks for women who have VL>1000 copies/ml (or an unknown VL) near time of delivery.
- Scheduled C/S not routinely recommended for women on ARVs with VL≤1000 copies/ml.
- C/S for obstetric reasons in a women with a viral load ≤1000 copies/ml should be performed at 39 weeks.
- Prophylactic narrow spectrum antibiotic at the time of C/S is generally recommended.
- Women should be informed of the risks of C/S delivery as well as the potential benefits for the newborn.