

### Recommendations for Screening

- ❖ Prenatal universal testing for HIV with patient notification is recommended by IOM, AAP, and ACOG.
- ❖ Alabama law requires written consent of the individual being tested for HIV and this can be accomplished by a general consent for care form with an opportunity to opt out or a separate consent. If the patient opts out of HIV testing, a note should be made in the medical record. HIV test results must be available to the patient along with information on the meaning of the results, methods of HIV transmission, ways to avoid becoming infected, or, if positive for HIV, on ways to avoid infecting others. Fact sheets on HIV and pregnancy can be found at <http://aidsinfo.nih.gov/education-materials/fact-sheets>.
- ❖ Intrapartum rapid HIV testing on admission to L&D is recommended for selected patients.
  - No documented negative HIV serology during current pregnancy.
  - High Risk for HIV acquisition during current pregnancy (IV drug use, STD, other).
- ❖ Ob providers should consult with experts in HIV disease when caring for a pregnant woman with HIV.
- ❖ HIV services available in Alabama can be found at <http://adph.org/aids/Default.asp?id=6128>.
- ❖ The National Perinatal HIV Hotline (1-888-448-8765) provides free clinical consultation on perinatal HIV care.

### Antepartum Management

- ❖ Review any previous HIV-related illnesses, CD4 T-lymphocyte (CD4-cell) counts and plasma HIV viral loads.
- ❖ Obtain current CD4-cell count and plasma HIV RNA copy number; repeat these each trimester or more often if clinically indicated.
- ❖ Additional labs for women commencing ART: CBC with diff & platelets and liver function tests.
- ❖ All HIV positive pregnant women should have a test for exposure to tuberculosis using either PPD testing or an interferon-gamma release assay (e.g. QuantiFERON).
  - If positive result on either test, do a standard workup for tuberculosis including chest x-ray and symptom evaluation.
  - Women with CD4-cell counts <200 have a greater risk of anergy. If PPD testing is used in such a woman and she has a negative result, she does not need an additional workup unless there is a high likelihood of exposure to tuberculosis. An infectious disease specialist should be consulted for these patients.
- ❖ Risk of fetal HIV inoculation posed by invasive procedures used for prenatal diagnosis (amniocentesis) should be weighed against the benefits of the procedure on an individual basis.
- ❖ CD4-cell counts < 200/ $\mu$ L should receive the following prophylactic therapy:
  - *Pneumocystis carinii* pneumonia: Bactrim DS 1 tab p.o. every day.
- ❖ CD4-cell counts <50/ $\mu$ L should receive these additional prophylactic therapies:
  - *Mycobacterium avium-intracellulare* complex: Azithromycin 1200mg p.o. every week.
  - For women with severe or recurrent vaginal/esophageal candidiasis: Diflucan 150mg p.o. every week.
- ❖ Vaccinations:
  - Inactivated influenza vaccine
  - Pneumococcal vaccine (unless vaccinated within last 5 yrs)
  - Hepatitis B vaccine series (unless previous vaccination or positive IgG to core antigen).
- ❖ Antiretroviral therapy (see below).

#### Delivery Plan

- ❖ Scheduled cesarean delivery at 38 weeks is recommended for women with HIV RNA  $\geq 1,000$  copies/mL.
- ❖ Women with HIV RNA  $< 1,000$  copies/mL can be delivered vaginally. It is reasonable to await spontaneous onset of labor, but the patient should be instructed to present to Labor and Delivery at the first signs of labor to ensure that there is adequate time to initiate intrapartum ZDV.
- ❖ Continue antepartum ARV regimen and administer intrapartum ZDV – see Antiretroviral Drugs.

#### Postpartum

- ❖ Breastfeeding should be discouraged as vertical transmission can occur (cumulative additional risk  $\sim 15\%$ ).
- ❖ Mothers and infants should be referred to clinicians with HIV-specific expertise for long-term care. A list of AIDS service organizations available to provide care to HIV positive women in Alabama can be found at <http://adph.org/aids/Default.asp?id=6128>.
- ❖ Provide counseling on contraception options and the importance of condom use.

#### Quality Indicators/Benchmarks

- ❖ Universal HIV screening-all patients
- ❖ Co-management with HIV specialty provider

### Antiretroviral Drugs

A combination ARV regimen with at least 3 agents is recommended. The goal is complete suppression of viral RNA in the plasma to reduce the risk of perinatal transmission of HIV.

#### **ARV naïve women:**

- ❖ Start on a combination regimen including two Nucleoside/Nucleotide Reverse Transcriptase Inhibitors (NRTI) and either one Protease Inhibitor (PI) or one Non-Nucleoside Reverse Transcriptase Inhibitor (NNRTI).
  - Preferred NRTI drugs include those with good placental passage: zidovudine (ZDV), lamivudine, emtricitabine, tenofovir, and adacavir.
  - Preferred protease inhibitor drugs are: atazanavir/ritonavir or lopinavir/ritonavir. Dosing of protease inhibitors may need to be increased during the second and third trimesters.
  - Preferred NNRTI drug is nevirapine and it can be considered in ARV- naïve pregnant women with CD4 counts  $\leq 250$  cells/mm<sup>3</sup>, and for continued use in ARV-experienced women already receiving a nevirapine regimen. Since nevirapine can increase the risk of severe hepatic toxicity in women with CD4-cell counts  $>250$  cells/mm<sup>3</sup>, it should be avoided in these women.
- ❖ Follow guidelines below for intrapartum ZDV, both loading dose and continuous infusion.

#### **HIV infected women on ARV who become pregnant:**

- ❖ Women on ARV drug treatment prior to pregnancy should generally continue their medications during the first trimester of pregnancy and beyond as long as the regimen is tolerated and effective in suppressing viremia. This includes the intrapartum and postpartum periods.
- ❖ Efavirenz or other potentially teratogenic drugs should be discontinued during the first trimester.
- ❖ ARV drug-resistance testing should be done on women on therapy with detectable viremia  $>500$ - $1,000$  copies/mL to determine if any modification of the regimen is needed.
- ❖ Follow guidelines below for intrapartum ZDV, both loading dose and continuous infusion.

#### **HIV infected women who are ARV experienced but not currently receiving ARV drugs:**

- ❖ Review ARV drug history and test for HIV ARV drug resistance before reinitiating ARV prophylaxis or therapy. These results should be considered in regimen selection for antepartum treatment.
- ❖ Follow guidelines below for intrapartum ZDV, both loading dose and continuous infusion.

#### **HIV infected women who have received no ARV before labor:**

- ❖ Follow guidelines below for intrapartum ZDV, both loading dose and continuous infusion.
- ❖ Consult with infectious disease experts to evaluate need for initiation of maternal therapy postpartum.

#### **Intrapartum ZDV:**

- ❖ Intrapartum zidovudine (ZDV) should be administered with a loading dose of 2 mg/kg over 1 hr followed by a continuous infusion at 1mg/kg/hr until delivery.
- ❖ ZDV should be initiated at least 3 hours prior to delivery, however, if it appears that the patient may deliver in less than 3 hours, the ZDV should still be initiated as soon as possible
- ❖ Continue antepartum ARV agents orally regardless of mode of delivery. If oral ZDV is part of the antepartum regimen, the oral ZDV component of her regimen should be stopped while she receives the intrapartum ZDV.