Mississippi State Department of Health

Mississippi Morbidity Report

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Preventing Perinatal HIV in Mississippi

Introduction: The prevention of mother-to-child transmission (MTCT) of HIV (Human Immunodeficiency Virus) is arguably one of the most successful interventions to date in the fight against the spread of the HIV. In 1994, analysis of data from the Pediatric AIDS Clinical Trials Group protocol 076 revealed that a treatment regimen which included prenatal, intrapartal, and neonatal treatment with zidovudine (AZT), reduced the rate of MTCT from 25.5% to 8.3%.[1] Subsequent studies and clinical experience with the use of combination antiretroviral treatment during pregnancy followed by post-exposure prophylaxis for the baby have led to further decreases in MTCT in the United States to a current rate of <2%.[2]

In Mississippi, statewide implementation of a program to identify HIV infected women early during pregnancy and to provide the needed prophylactic therapy was begun within months of the publication of the study data in 1994. Collaborative efforts of the Mississippi State Department of Health, Office of STD/HIV providing surveillance and support with the Pediatric/Perinatal HIV Program at University Medical Center providing medical care, consultative services, and intense case management, have resulted in a reduction of mother-to-child HIV transmission in our state from >20% prior to 1994 down to a current rate of <1%.[3,4]

The continued success of this program of surveillance and intervention, however, is dependent on having all health care providers across the state carefully follow guidelines concerning testing for and treatment of HIV during pregnancy and for the follow-up of perinatally exposed babies.

The revised recommendations for HIV testing of pregnant women according to the Centers for Disease Control and Prevention are:

1. All pregnant women in the United States should be screened for HIV infection during each pregnancy. Health care providers should test women for HIV as early as possible during each pregnancy. Women who decline the test early in prenatal care should be encouraged to be tested at a subsequent visit.
2. A second HIV test during the third trimester, preferably before 36 weeks gestation, is recommended for women who receive health care in areas with increased incidence of HIV or AIDS among women aged 15-45 years. The entire state of Mississippi falls in this category.
3. Any woman with undocumented HIV status at the time of labor should be screened with a rapid HIV test unless she declines.
4. When a woman's status is still unknown at the time of delivery, she should be screened immediately postpartum with a rapid HIV test.
5. When a woman's HIV status is unknown postpartum, rapid testing of the newborn is recommended as soon as possible so that antiretroviral prophylaxis can be offered to HIV exposed infants.

For pregnant women who are shown to be HIV infected:
Care for HIV infection during pregnancy is complex and should be undertaken with a view toward both the long-term control of maternal disease progression as well as prevention of transmission to the infant. The US Department of Health and Human Services sponsors the work of a panel of experts who regularly review the rapidly evolving body of information concerning this subject and frequently revise

the Public Health Service extensive guidelines concerning the treatment of these women which can be found in:

> Perinatal HIV Guidelines Working Group. Public Health Service Task Force Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-Infected Women for Maternal Health and Interventions to Reduce Perinatal HIV Transmission in the United States. April 29, 2009; pp 16-74. Available at: http://aidsinfo.nih.gov/ContentFiles/PerinatalGL.pdf

For any case in Mississippi, medical consultative services and case management services are available through the Perinatal HIV Program at the University of Mississippi Medical Center and may be accessed by calling the office at 601-815-1119 or paging Dr. Ben Nash at 601-952-5221.

For Exposed Infants:
Neonates born to infected mothers should be evaluated within the first 4 hours of life with consideration of factors which may increase the risk of viral transmission such as: maternal viral load during pregnancy and at the time of delivery, gestational age, mode of delivery, any compromise of placental barrier, duration of rupture of membranes and intrapartal treatment. Guidelines for the post-exposure prophylaxis of the infant are included in the same Public Health Service Task Force recommendations referenced in the previous paragraph (available at: http://aidsinfo.nih.gov/ContentFiles/PerinatalGL.pdf) on pp 75-85.

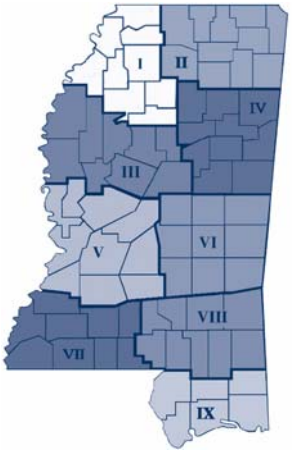
For any baby born in Mississippi, assistance with evaluation of risk and recommendations for post-exposure prophylaxis can be obtained by calling the Pediatric HIV Program at the University of Mississippi Medical Center office at 601-815-1119 or paging Dr. Hannah Gay at 601-952-5220.

Because of the transplacental transfer of maternal antibodies during pregnancy, the infection status of the perinatally exposed neonate cannot be determined from the standard HIV antibody testing. Instead it must be determined using a series of virologic tests (HIV DNA by PCR or HIV RNA by PCR) which are done over the first 4-6 months of life. National guidelines for the testing of exposed infants can be found in:

> Working Group on Antiretroviral Therapy and Medical Management of HIV-Infected Children. Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection. February 23, 2009; pp 1-139. Available at http://aidsinfo.nih.gov/ContentFiles/PediatricGuidelines.pdf

The standard schedule of testing done in the Pediatric HIV Program at UMC is virologic tests at ages 2 weeks, 1 month, 3 months and 6 months. Because loss of maternal antibody should occur by 18 months of age in uninfected infants, we also recommend antibody testing to be done at the local health department clinic at age 15-18 months to document seroreversion.

Issues: The guidelines outlined above have proven to be dramatically effective at preventing mother-to-child transmission of HIV in Mississippi. However, considerable obstacles exist to the complete eradication of MTCT including the continuing increase in the number of infected women of childbearing age, the large number of pregnant women who receive no or inadequate prenatal care, and poor adherence to antiretorival regimens which is often associated with illicit drug use, concurrent mental illness, and various social issues.



Mississippi
Provisional Reportable Disease Statistics
May 2009

		Public Health District									State Totals*			
		I	II	III	IV	V	VI	VII	VIII	IX	May 2009	May 2008	YTD 2009	YTD 2008
Sexually Transmitted Diseases	**Primary & Secondary Syphilis**	1	2	0	1	5	0	1	0	3	13	21	85	55
	Total Early Syphilis	2	2	5	1	14	1	2	3	8	38	44	217	126
	Gonorrhea	44	29	83	52	160	71	25	41	35	540	468	3,029	2,768
	Chlamydia	177	130	232	161	434	143	146	160	173	1,756	1,411	9,976	7,437
	HIV Disease	2	1	4	2	18	2	2	5	8	44	54	256	238
Myco-bacterial Diseases	**Pulmonary Tuberculosis (TB)**	0	0	0	0	5	1	1	0	0	7	6	32	32
	Extrapulmonary TB	0	0	0	0	0	0	0	0	0	0	2	5	7
	Mycobacteria Other Than TB	3	0	1	1	11	1	0	3	4	24	25	141	107
Vaccine Preventable Diseases	**Diphtheria**	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pertussis	0	0	0	0	0	0	0	0	1	1	11	23	47
	Tetanus	0	0	0	0	0	0	0	0	0	0	0	0	0
	Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0	0
	Measles	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mumps	0	0	0	0	0	0	0	0	0	0	0	0	0
	Hepatitis B (acute)	0	1	0	0	0	1	0	0	0	2	5	18	18
	Invasive *H. influenzae* b disease	0	0	0	0	0	0	0	0	0	0	1	0	2
	Invasive Meningococcal disease	0	0	0	0	0	0	0	0	0	0	2	2	9
Enteric Diseases	**Hepatitis A (acute)**	0	0	0	0	0	0	0	0	0	0	2	5	2
	Salmonellosis	0	5	2	1	20	5	4	11	10	58	81	184	203
	Shigellosis	0	0	0	2	0	1	1	0	0	4	43	13	209
	Campylobacteriosis	1	2	0	1	2	0	0	0	0	6	8	41	35
	***E. coli* O157:H7/HUS**	0	0	0	0	1	0	0	0	0	1	1	6	3
Zoonotic Diseases	**Animal Rabies (bats)**	0	0	0	0	0	0	0	0	0	0	0	0	1
	Lyme disease	0	0	0	0	0	0	0	1	0	1	0	2	0
	Rocky Mountain spotted fever	0	0	0	0	2	0	0	0	0	2	3	5	5
	West Nile virus	0	0	0	0	0	0	0	0	0	0	0	0	2

*Totals include reports from Department of Corrections and those not reported from a specific District.

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IMMEDIATE REPORTING TO THE STATE DEPARTMENT OF HEALTH IS REQUIRED (601-576-7723):

1. **HIV infection in a pregnant woman,**
2. **Pregnancy in an HIV-infected woman,**
3. **The birth of an infant to an HIV-infected woman.**

For consultation on HIV care during pregnancy, call Dr. Binford Nash at 601-815-1119, 601-815-1114 or pager 601-952-5221. For consultation on treatment of exposed infants, call Dr. Hannah Gay at 601-815-1119, 601-984-5234 or pager 601-952-5220.

References:

1. Connor EM, Sperling RS, Gelber R, et al. Reduction of maternal-infant transmission of human immunodeficiency virus type 1 with zidovudine treatment. *N Engl J Med,* 1994. 331(18):1173-80.
2. Centers for Disease Control and Prevention (CDC), Mofenson LM, Taylor AW, et al. Achievements in public health. Reduction in perinatal transmission of HIV infection--United States, 1985-2005. *MMWR Morb Mortal Wkly Rep,* 2006. 55(21):592-7.
3. Palmer AL, Gay H, Currier MM. The Impact of zidovudine use in HIV infected pregnant women on the vertical transmission of HIV in Mississippi. J Miss State Med Assoc. 2000 Feb;41(2):479-83.
4. Mississippi State Department of Health: HARS data
5. CDC. U.S. Public Health Service Revised recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health-Care Setting. MMWR September 22, 2006 / 55(RR14);1-17
6. Working Group on Antiretroviral Therapy and Medical Management of HIV-Infected Children. Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection. February 23, 2009; pp 1-139. Available at http://aidsinfo.nih.gov/ContentFiles/PediatricGuidelines.pdf