

# Transmitting HIV from Mother to Infant

Human immunodeficiency virus (HIV), the virus that causes AIDS, can be transmitted from mother to infant at the following times:

- During pregnancy.
- During delivery of the baby.
- During breastfeeding.

### HIV Counseling During Pregnancy

For several reasons, it is important that health care providers discuss HIV with their pregnant patients and counsel them about getting tested for the disease:

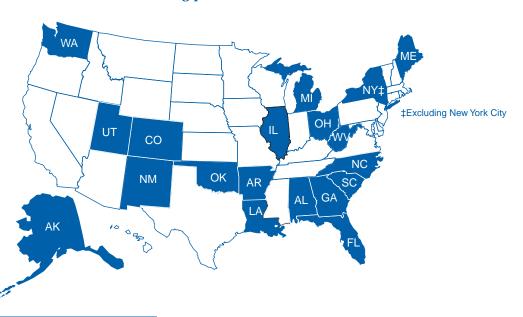
• More than 80% of pediatric HIV infections and almost all of pediatric AIDS cases are linked to maternal transmission.

- Through 1999, 7,934 cases of maternally transmitted AIDS had been diagnosed among children younger than 13 years old.
- Some recent research shows that twothirds of maternal-to-infant transmission of HIV can be prevented with antiretroviral medication during pregnancy.

### PRAMS and HIV Counseling During Prenatal Care

In 1996, questions about the overall content of prenatal care during pregnancy were incorporated into the PRAMS survey.\* Women were asked whether during any prenatal care visit—a physician, nurse, or other health care worker had discussed their getting tested for HIV. For this report, we used data from the 19 states that participated in PRAMS from 1996 through 1999† (Figure 1).

### Figure 1. PRAMS states with data on HIV counseling during prenatal care, 1996–1999







- \* The Pregnancy Risk Assessment Monitoring System (PRAMS) is part of CDC's program to reduce infant mortality and low birth weight. PRAMS is an ongoing, state-level, population-based surveillance system that identifies and monitors selected maternal experiences and behaviors before, during, and after pregnancy. Each state uses the same standardized mail-telephone method to survey mothers who recently gave birth. Responses are then weighted to be representative of all women who gave birth in each state during that year.
- † By 2002, 11 more states or areas had joined the PRAMS surveillance system: Delaware, Hawaii, Maryland, Minnesota, Mississippi, Montana, Nebraska, New Jersey, New York City, North Dakota, Oregon, Rhode Island, Texas, and Vermont.

## PRAMS Data on HIV Counseling During Prenatal Care

In 1999, the prevalence of HIV counseling during prenatal care visits ranged from 47.0% (Utah) to 88.4% (New York). PRAMS data indicate a significantly increasing trend in HIV counseling in 6 of the 15 states for which trend data for 1996 to 1999 are available (Table 1). The highest increase occurred in New York, from 65.7% in 1996 to 82.4% in 1999. In most states, as maternal age increased, HIV counseling significantly decreased. In addition, Medicaid recipients, black women, and women with less than a high school education were more likely to report HIV counseling than women with other sociodemographic characteristics (Figure 2).

### Recommendations

In 1995, because of the proven success of an antiretroviral medication in preventing maternal-toinfant HIV transmission, the U.S. Public Health Service recommended that health care providers discuss HIV testing with all their pregnant patients. PRAMS data can be used to evaluate state compliance with these recommendations and to determine which steps need to be taken to encourage physicians, nurses, and other health care workers to discuss HIV with pregnant women during routine prenatal care visits and to counsel them about getting tested. By discussing HIV with their health care providers, pregnant women will learn (1) the importance of early HIV detection and (2) ways to reduce the risk of maternal-to-infant HIV transmission.

### Table 1. Prevalence of HIV counseling during prenatalcare among participants in PRAMS, 1996–1999

State	1996 %	1997 %	1998 %	1999 %	P value for trend
Alabama*	72.8	72.5	75.5	75.9	0.04
Alaska	79.2	76.9	79.3	79.3	0.93
Arkansas	_	68.7	68.7	68.7	0.99
Colorado	_	_	74.6	74.9	0.84
Florida	79.0	85.4	85.1	82.4	0.13
Illinois*	_	69.4	71.4	76.4	0.00
Louisiana*	_	_	82.8	79.7	0.03
Maine*	63.4	64.6	70.3	70.8	0.00
New Mexico <sup>†</sup>	_	_	75.2	78.5	0.08
New York*‡	65.7	81.7	82.4	88.4	0.00
North Carolina§	_	87.4	86.0	85.8	0.42
Oklahoma*	59.6	70.3	71.5	72.1	0.00
South Carolina	77.1	74.9	75.4	77.8	0.68
Washington	79.1	80.1	82.2	79.1	0.84
West Virginia*	64.8	72.3	71.9	74.9	0.00

— No data available.

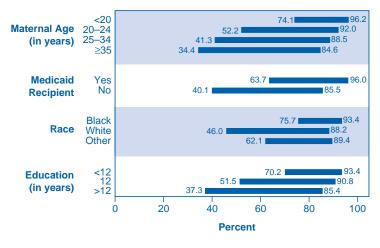
\* P value is statistically significant at the 0.05 level.

† 1998 data covers births from July 1997 through December 1998.

<sup>‡</sup> Data from New York City not included.

§ 1997 data covers only births from July to December.

#### Figure 2. The range of prevalence of HIV counseling during prenatal care among 1999 PRAMS participants, by selected demographic characteristics



#### **Sources of Information**

CDC. HIV/AIDS Surveillance Report. 1999;11(2):1-45.

Connor EM, Sperling RS, Gelber R, et al. Reduction of maternal-infant transmission of human immunodeficiency virus type 1 with zidovudine treatment. Pediatric AIDS Clinical Trials Group Protocol 076 Study Group. N Engl J Med. 1994; 331(18):1173-1180.

Fowler MG. Update: Transmission of HIV-1 from mother to child. Current Opinion in Obstetrics and Gynecology 1997;9(6):343-348.

To learn more or to order copies of this publication, write or call-

Centers for Disease Control and Prevention ♦ 4770 Buford Highway NE, Mailstop K-22 ♦ Atlanta, GA 30341-3717

Telephone: 770-488-6260 ♦ Internet: www.cdc.gov/nccdphp/drh/srv\_prams.htm

Beck LF, Johnson CH, Morrow B, et al. PRAMS 1999 Surveillance Report. Atlanta, GA: CDC; 2002.

CDC. Update: Perinatally acquired HIV/AIDS—United States, 1997. MMWR. 1997;46(46):1086-1092.

CDC. U.S. Public Health Service recommendation for human immunodeficiency virus counseling and voluntary testing for pregnant women. MMWR 1995;44(No. RR-7):8-15.