

HIVAIDS

Surveillance Supplemental Report

==== Volume 13, Number 4 ====

Enhanced Perinatal Surveillance

Participating Areas in the United States and Dependent Areas, 2000–2003



DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Centers for Disease Control and Prevention
Atlanta, Georgia 30333



The *HIV/AIDS Surveillance Supplemental Report* is published by the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, Coordinating Center for Infectious Diseases, Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services, Atlanta, Georgia.

Data are presented for cases of HIV infection among pregnant women reported to CDC through June 2007. All data are provisional.

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Suggested citation

Centers for Disease Control and Prevention. Enhanced Perinatal Surveillance—Participating areas in the United States and dependent areas, 2000–2003. *HIV/AIDS Surveillance Supplemental Report* 2008;13(No. 4):[inclusive page numbers]. <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/#supplemental>.

On the Web: <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/#supplemental>

Single copies

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Acknowledgments

Publication of this report would not have been possible without the contributions of the state and territorial health departments and the Enhanced Perinatal Surveillance programs that provided surveillance data to CDC.

This report was prepared by the following staff and contractors of the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, CDC: Barbara R. DeCausey, Shubha Rao, Tebitha Kajese, Suzanne Whitmore, R. Luke Shouse, H. Irene Hall, Janet Brzuskiwicz (graphics), and Michael Friend (desktop publishing).

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In February 1994, the Pediatric AIDS Clinical Trial Group Protocol 076 demonstrated that zidovudine (ZDV) could reduce the risk of mother-to-child HIV transmission from 25% to 8% [1]. As a result, a United States Public Health Service (USPHS) task force issued recommendations in August 1994 for the use of ZDV to reduce perinatal HIV transmission [2]. These guidelines were updated in July 2008 and include treatment options for HIV-infected pregnant women and for infants born to HIV-infected women. The guidelines also include recommendations for the medical monitoring of pregnant women and of infants who receive ZDV [3]. In July 1995, the USPHS published recommendations for HIV counseling and voluntary testing for all pregnant women, which include advice to health care professionals on educating women about the importance of knowing their HIV status and the steps to preventing mother-to-child transmission [4]. Revised recommendations for HIV testing for adults, adolescents, and pregnant women in healthcare settings were published in 2006. The 2006 HIV testing recommendations seek to provide more opportunities for pregnant women to be tested for HIV. The recommendations were revised to include the following: HIV screening as part of the routine panel screening for all pregnant women unless they decline; repeat HIV testing during the third trimester in areas with high HIV or AIDS incidence and in facilities with one or more cases per 1,000 of HIV in pregnant women diagnosed in a year; and rapid HIV testing during delivery for all pregnant women without documented HIV test results [5].

After the HIV counseling and testing recommendations were published in 1995, CDC began conducting enhanced perinatal surveillance activities in 7 states to monitor the effect of the guidelines. Prevention indicators were assessed for the years before, during, and after the implementation of the guidelines (1993, 1995–1996). These indicators included receipt of prenatal care, HIV testing before or during pregnancy, and administration of ZDV to the mother antepartum and intrapartum and to the infant after birth. Data showed that an increased number of pregnant women and infants received ZDV after the recommendations were published. The proportion of infants infected

with HIV decreased from 16% of those who did not receive ZDV to 8% of those who received ZDV [6].

In 1999, the Institute of Medicine issued a report entitled *Reducing the Odds: Preventing Perinatal Transmission of HIV in the United States*. In this report, the committee described factors that lead to perinatal HIV transmission. They include the lack of prenatal care, HIV testing, and antiretroviral therapy (ART) for HIV-infected women and HIV-exposed infants [7]. Also in 1999, Congress appropriated \$10 million per year for activities aimed at reducing perinatal HIV infection. These activities included enhanced perinatal HIV surveillance, funded in 24 state and local health departments (Figure 1); perinatal HIV prevention programs, funded in 16 state health departments; and partnerships with 6 national organizations (Figure 1).

CDC implemented activities to further reduce perinatal HIV transmission in areas with high HIV prevalence. The Enhanced Perinatal Surveillance (EPS) project was created as an extension of routine HIV surveillance activities. The overall goals of EPS are to (a) monitor the implementation of the USPHS recommendations for counseling and voluntary testing of pregnant women, the use of antiretrovirals to prevent perinatal HIV transmission, and the effect of implementation on the trends of HIV disease among children; (b) to establish a surveillance system to collect data that enable states to respond to selected requirements of the Ryan White CARE Act; and (c) to assist in timely evaluation of perinatal prevention efforts.

This report includes data from the 24 areas conducting EPS for live births during 2000 through 2003 (Figure 1). As of December 2003, a total of 10,008 singleton births had been reported to EPS. The report, comprising data for birth years 2000–2003, is organized in 3 sections: (a) demographic, behavioral, and clinical information on HIV-infected pregnant women who gave birth; (b) demographic, behavioral, and clinical information on those women, by race/ethnicity; and (c) clinical information on infants born to HIV-infected women. EPS methods are described in the Technical Notes.

The purpose of this report is to describe the population of HIV-infected women who gave birth during

2000 through 2003. These data provide information for further focusing perinatal prevention efforts in the United States and the dependent areas. The data are presented by child's birth year so that readers can understand the characteristics of this population in a particular year.

HIGHLIGHTS

- The majority of HIV-infected pregnant women reported to EPS were black, not Hispanic (66%); 19% were Hispanic; 11% were white, not Hispanic; and 1% were Asian/Pacific Islander (Table 1).
- Thirty-two percent (32%) of the HIV-infected pregnant women were exposed to HIV through heterosexual contact, 11% were exposed through injection drug use, and exposure was unknown for 28% (Table 1).
- Most (88%) of the HIV-infected pregnant women received some prenatal care, eight percent (8%) did not receive prenatal care, and receipt of prenatal care was unknown for 4%. Of those HIV-infected pregnant women who received some prenatal care, 66% had 3 or more prenatal care visits (Table 2).
- HIV status was known before the pregnancy for 60% of HIV-infected pregnant women; 34% of women were diagnosed with HIV during labor and delivery; 2% were not tested for HIV before giving birth (Table 3).
- Eighty-one percent (81%) of HIV-infected pregnant women received ART during the prenatal period and 81% received ART intrapartum. Of the infants born to HIV-infected women, 93% received ART during the neonatal period (Table 4).
- More than one third (36%) of the HIV-infected pregnant women had an elective cesarean section; 44% had a vaginal birth (Table 5).
- One fifth (20%) of the HIV-infected pregnant women had used illicit drugs during pregnancy (Table 6).
- By race/ethnicity, the following proportion of HIV-infected pregnant women received prenatal care: 90% of white, not Hispanic women; 91% of Hispanic women; 89% of Asian/Pacific Islander women; and 88% of black, not Hispanic women (Table 9).
- The proportion of HIV-infected pregnant women who were tested before pregnancy varied by race/ethnicity: 68% of white, not Hispanic women; 61% of Hispanic women; 59% of black, not Hispanic women; and 41% of Asian/Pacific Islander women (Table 10).
- The proportion of HIV-infected women who were tested during labor varied by race/ethnicity: 43% of Asian/Pacific Islander women; 32% of black, not Hispanic women; 30% of Hispanic women; and 22% of white, not Hispanic women (Table 10).
- ART during the prenatal period was received by 86% of white, not Hispanic women; 84% of Hispanic women; 84% of Asian/Pacific Islander women; and 80% of black, not Hispanic women (Table 11).
- ART during the intrapartum period was received by 85% of white, not Hispanic women; 84% of Hispanic women; 84% of Asian/Pacific Islander women; and 80% of black, not Hispanic women (Table 11).
- Similar proportions of infants, categorized by mother's race/ethnicity, received ART during the neonatal period: 94% of infants born to white, not Hispanic women; 94% of those born to Hispanic women; 94% of those born to Asian/Pacific Islander women; and 93% of those born to black, not Hispanic women (Table 11).
- The proportion of HIV-infected women, by race/ethnicity, who had an elective cesarean section were: 40% of white, not Hispanic women; 40% of Hispanic women; 35% of black, not Hispanic women; and 32% of Asian/Pacific Islander women (Table 12).
- Similar proportions of HIV-infected women, by race/ethnicity, had a vaginal delivery: 46% of black, not Hispanic women; 46% of Asian/Pacific Islander women; 41% of white, not Hispanic women; and 41% of Hispanic women (Table 12).
- The proportion of HIV-infected women who reported illicit drug use during pregnancy varied by race/ethnicity: 25% of white, not Hispanic women; 21% of black, not Hispanic women; 16% of Hispanic women; and 8% of Asian/Pacific Islander women (Table 13)

- Of the 7,228 infants born to HIV-infected women, 274 (4%) were perinatally infected with HIV, 4,742 (66%) were not infected, and 2,212 (31%) remain in the indeterminate category; 2,780 cases were excluded due to missing HIV status (Table 16).
 - By race/ethnicity, the following proportion of HIV-infected pregnant women delivered preterm: 34% of black, not Hispanic women; 33% of white, not Hispanic women; 31% of Hispanic women; and 22% of Asian/Pacific Islander women (Table 18).
 - Similar proportions of HIV-infected women, by race/ethnicity, had children who were identified to have a birth defect within their first year of life: 4% of black, not Hispanic women; 3% of white, not Hispanic women; 3% of Asian/Pacific Islander women; and 2% of Hispanic women (Table 19).
 - The majority of HIV-infected pregnant women (92%) received reimbursement for their medical treatment (Table 20).
6. CDC. CDC report regarding selected public health topics affecting women's health. *MMWR* 2001;50(RR-6):17–28.
 7. Institute of Medicine, National Research Council. *Reducing the Odds: Preventing Perinatal Transmission of HIV in the United States*. Washington, DC: National Academy Press;1999.

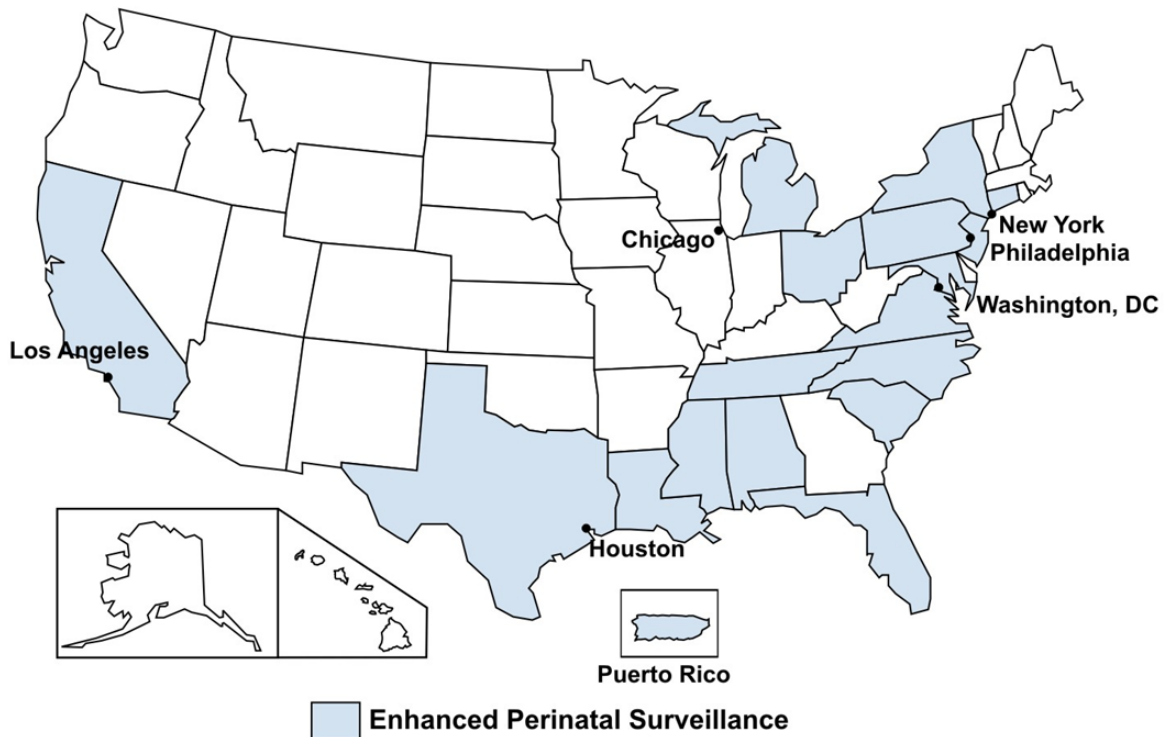
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2. CDC. Recommendations of the U.S. Public Health Service Task Force on the use of zidovudine to reduce perinatal transmission of human immunodeficiency virus. *MMWR* 1994;43(RR-11):1–20.
3. Public Health Service Task Force. Recommendations for use of antiretroviral drugs in pregnant HIV-1-infected women for maternal health and interventions to reduce perinatal HIV-1 transmission in the United States. Available at <http://aidsinfo.nih.gov/contentfiles/perinatalgl.pdf>.
4. CDC. U.S. Public Health Service recommendations for human immunodeficiency virus counseling and voluntary testing for pregnant women. *MMWR* 1995;44(RR-7):1–15.
5. CDC. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health care settings. *MMWR* 2006;55(RR-14):1–17.

Figure 1. Location of enhanced perinatal surveillance areas, 2000–2003



Facility type, by site, 2000–2003

Population-based

Alabama	New York City
Connecticut	North Carolina
Houston	Ohio
Louisiana	Puerto Rico
Michigan	South Carolina
Mississippi	Tennessee
New Jersey	Texas
New York	Virginia

Facility-based

California
Chicago
District of Columbia
Florida ^a
Los Angeles
Maryland
Pennsylvania
Philadelphia

Participants, by race/ethnicity and recruitment type

Race/ethnicity	Population-based		Facility-based	
	No.	%	No.	%
White, not Hispanic	859	11.1	249	10.9
Black, not Hispanic	5,109	66.2	1,532	66.9
Hispanic	1,510	19.6	426	18.6
Asian/Pacific Islander	41	0.5	22	1.0
American Indian/Alaska Native	16	0.2	10	0.4
Unknown	184	2.4	50	2.2
Total	7,719	100.0	2,289	100.0

Note. See the Technical Notes for an explanation of the recruitment type. The 16 perinatal HIV prevention program sites funded for 1999–2003 were California, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Louisiana, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, Puerto Rico, South Carolina, and Texas.

The 6 national organizations funded for 1999–2003 were CityMatCH, Omaha, Nebraska; Association of Maternal and Child Health Programs, Washington DC; American Academy of Pediatrics, Chicago, Illinois; American College of Obstetricians and Gynecologists, Washington, DC; National Pediatric and Family HIV Resource Center, Newark, New Jersey; and AIDS Alliance for Children, Youth, and Families, Washington, DC.

^a Florida enhanced perinatal surveillance represents HIV-infected women who gave birth at selected facilities in Broward, Dade, and Palm Beach counties.

Table 1. Number and percentage of HIV-infected pregnant women who gave birth to a live infant, by year of infant's birth and selected characteristics of mother, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	% ^a	No.	% ^a	No.	% ^a	No.	% ^a	No.	% ^b
Age at delivery (yrs)^c										
13–19	252	7	217	7	142	7	101	6	712	7
20–24	856	25	738	25	466	24	354	22	2,414	24
25–34	1,718	51	1,473	50	1,013	52	815	51	5,019	51
≥35	547	16	502	17	338	17	328	21	1,715	17
Unknown ^d	1	<1	1	<1	0	0	2	<1	4	<1
Race/ethnicity^e										
White, not Hispanic	363	11	356	12	232	12	157	10	1,108	11
Black, not Hispanic	2,331	68	2,020	68	1,292	65	998	61	6,641	66
Hispanic	600	18	505	17	407	20	424	26	1,936	19
Asian/Pacific Islander	25	1	12	<1	14	1	12	1	63	1
American Indian/Alaska Native	11	<1	7	<1	3	<1	5	<1	26	<1
Unknown	92	3	63	2	39	2	40	2	234	2
Exposure category										
Injection drug use	415	12	345	12	209	11	127	8	1,096	11
High-risk heterosexual contact ^f	942	28	973	33	784	39	536	33	3,235	32
Other ^g	1,186	35	713	24	312	16	712	44	2,923	29
Unknown	879	26	932	31	682	34	261	16	2,754	28
Marital status										
Single	1,738	51	1,584	53	915	46	722	44	4,959	50
Married	515	15	492	17	315	16	222	14	1,544	15
Separated	41	1	35	1	16	1	15	1	107	1
Divorced	43	1	37	1	21	1	10	1	111	1
Widowed	17	1	21	1	14	1	16	1	68	1
Unknown	1,068	31	794	27	706	36	651	40	3,219	32

Table 1. Number and percentage of HIV-infected pregnant women who gave birth to a live infant, by year of infant's birth and selected characteristics of mother, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas (cont)

	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	% ^a	No.	% ^a	No.	% ^a	No.	% ^a	No.	% ^b
Mother's country of birth^{h,i}										
El Salvador	14	<1	16	1	11	1	14	1	55	1
Haiti	65	2	82	3	46	2	30	2	223	2
Honduras	22	1	18	1	16	1	20	1	76	1
Jamaica	15	<1	12	<1	11	1	12	1	50	<1
Mexico	58	2	70	2	49	2	52	3	229	2
United States	1,960	57	1,748	59	1,026	52	681	42	5,415	54
U.S. dependent areas ^j	144	4	99	3	59	3	31	2	335	3
Other ^k	125	4	145	5	103	5	109	7	482	5
Unknown	78	2	106	4	22	1	85	5	291	3
Total	3,422		2,963		1,987		1,636		10,008	

Note. Because of rounding, column percentages may not total to 100 percent.

^a Percentages represent proportions of the total number of HIV-infected women for a given birth year.

^b Percentages represent proportions of the total number of HIV-infected women for all four birth years.

^c Excludes 144 cases that were missing age at delivery.

^d Includes 4 cases that were reported as less than 12 years of age.

^e Includes women of unknown race or multiple races.

^f Heterosexual contact with a person known to have, or to be at high risk for, HIV infection.

^g Includes blood transfusion, perinatal exposure, and risk not reported or not identified.

^h Countries with a minimum of 30 women in the cumulative total.

ⁱ Excludes 2,852 cases that were missing mother's country of birth.

^j U.S. dependent areas include Puerto Rico, U.S. Virgin Islands, American Samoa, Guam, and Northern Mariana Islands.

^k Includes countries with fewer than 30 women in the cumulative total.

Table 2. Prenatal care of HIV-infected women, by year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Prenatal care										
Yes	3,002	88	2,606	88	1,778	89	1,449	89	8,835	88
No	270	8	235	8	144	7	115	7	764	8
Unknown	150	4	122	4	65	3	72	4	409	4
Prenatal care visits^a										
1–2 visits	119	4	110	4	70	4	87	6	386	4
≥3 visits	1,905	63	1,666	64	1,033	58	1,213	84	5,817	66
Unknown	978	33	830	32	675	38	149	10	2,632	30
Subtotal	3,002		2,606		1,778		1,449		8,835	
Total	3,422		2,963		1,987		1,636		10,008	

Note. Because of rounding, column percentages may not total to 100 percent.

^a Includes only women who had documentation of prenatal care in their records.

Table 3. Timing of HIV testing of HIV-infected women, by year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Timing of mother's HIV test										
Before pregnancy	1,975	58	1,762	59	1,207	61	1,030	63	5,974	60
During labor	1,062	31	906	31	604	30	459	28	3,031	30
At delivery	154	5	124	4	60	3	46	3	384	4
After birth	94	3	72	2	26	1	36	2	228	2
Unknown	136	4	96	3	79	4	65	4	376	4
Total^a	3,422		2,963		1,987		1,636		10,008	

Note. Because of rounding, column percentages may not total to 100 percent.

^a Includes 15 women who refused HIV testing.

Table 4. Receipt of antiretroviral therapy by HIV-infected women and HIV-exposed infants, by timing of receipt and year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

Receipt of antiretroviral therapy	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Prenatal period										
Yes	2,730	80	2,390	81	1,627	82	1,361	83	8,108	81
No	527	15	441	15	243	12	207	13	1,418	14
Unknown	165	5	132	4	117	6	68	4	482	5
Intrapartum period										
Yes	1,856	79	1,812	80	1,606	83	1,391	85	6,665	81
No	391	17	352	15	277	14	205	13	1,225	15
Unknown	108	5	112	5	55	3	40	2	315	4
Neonatal period										
Yes	3,162	92	2,741	93	1,875	94	1,559	95	9,337	93
No	175	5	121	4	69	3	35	2	400	4
Unknown	85	2	101	3	43	2	42	3	271	3
Total^a	3,422		2,963		1,987		1,636		10,008	

Note. Because of rounding, column percentages may not total to 100 percent. The numbers of women receiving antiretroviral therapy prenatally and intrapartum are not mutually exclusive.

^a Total includes 1,803 women with unknown treatment status.

Table 5. Method of delivery for HIV-infected women, by year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

Method of delivery	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Vaginal	1,599	47	1,328	45	845	43	663	41	4,435	44
Cesarean section										
Elective ^a	1,130	33	1,101	37	727	37	650	40	3,608	36
Non-elective	579	17	421	14	353	18	261	16	1,614	16
Type of decision unknown	71	2	70	2	28	1	21	1	190	2
Unknown	43	1	43	1	34	2	41	3	161	2
Total	3,422		2,963		1,987		1,636		10,008	

Note. Because of rounding, column percentages may not total to 100 percent.

^a Refers to a cesarean section that is performed before the membranes rupture and before labor begins. However, a planned cesarean section that was performed ahead of schedule because of unexpected circumstances was coded Elective.

Table 6. Substance use and toxicology screening of HIV-infected women during pregnancy, by year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Illicit drug use^a										
Yes	661	19	618	21	406	20	328	20	2,013	20
No	1,939	57	2,117	71	1,494	75	1,189	73	6,739	67
Unknown	822	24	228	8	87	4	119	7	1,256	13
Alcohol/tobacco use^b										
Alcohol	68	2	86	3	53	3	42	3	249	2
Tobacco	250	7	263	9	206	10	276	17	995	10
Alcohol and tobacco	129	4	105	4	76	4	78	5	388	4
None	873	26	1,007	34	845	43	721	44	3,446	34
Unknown	2,102	61	1,502	51	807	41	519	32	4,930	49
Toxicology screening^c										
Positive result	519	15	475	16	228	11	135	8	1,357	14
Negative result	363	11	261	9	174	9	140	9	938	9
Not done	1,229	36	1,218	41	860	43	629	38	3,936	39
Unknown	1,311	38	1,009	34	725	36	732	45	3,777	38
Total	3,422		2,963		1,987		1,636		10,008	

Note. Because of rounding, column percentages may not total to 100 percent. A woman may be represented in more than 1 category.

^a Included only if noted in medical or social work records during pregnancy: amphetamines, barbiturates, benzodiazepines, cocaine, crack, hallucinogens, heroin, marijuana, methadone, methamphetamines, opiates, and other drugs noted in the woman's records.

^b Only if noted in the medical or social work records during pregnancy.

^c Conducted during pregnancy. If more than 1 toxicology screening was done and any result was positive, only the positive test result was counted.

Table 7. Screening of HIV-infected women during pregnancy, by year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

Screening ^a	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Group B strep										
Yes	1,511	44	1,402	47	761	38	685	42	4,359	44
No	347	10	362	12	266	13	103	6	1,078	11
Unknown	1,564	46	1,199	40	960	48	848	52	4,571	46
Hepatitis B (HBsAg)										
Yes	2,222	65	2,053	69	1,220	61	945	58	6,440	64
No	87	3	70	2	48	2	29	2	234	2
Unknown	1,113	33	840	28	719	36	662	40	3,334	33
Rubella										
Yes	2,166	63	1,981	67	1,188	60	927	57	6,262	63
No	99	3	74	2	57	3	37	2	267	3
Unknown	1,157	34	908	31	742	37	672	41	3,479	35
Syphilis										
Yes	2,238	65	2,077	70	1,212	61	948	58	6,475	65
No	78	2	71	2	49	2	29	2	227	2
Unknown	1,106	32	815	28	726	37	659	40	3,306	33
Total	3,422		2,963		1,987		1,636		10,008	

Note. Because of rounding, column percentages may not total to 100 percent.

^a Only if screening performed during pregnancy. Each woman is represented 4 times, once for each condition.

Table 8. Number and percentage of HIV-infected women with positive test results for selected conditions, by year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

Diagnosis	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Sexually transmitted disease^{a,b}										
Yes	783	23	769	26	512	26	351	22	2,415	24
No	1,286	38	1,251	42	852	43	581	37	3,970	40
Unknown	1,353	40	943	32	623	31	629	40	3,548	36
Selected condition^c										
Yes	615	18	640	22	438	22	349	21	2,042	20
No	1,341	39	1,253	42	887	45	626	38	4,107	41
Unknown	1,466	43	1,070	36	662	33	661	40	3,859	39
Total	3,422		2,963		1,987		1,636		10,008	

Note. Because of rounding, column percentages may not total to 100 percent.

^a Includes presumptive or definitive diagnoses during pregnancy of the following sexually transmitted disease: Chlamydia, genital herpes (primary herpes and active lesions), gonorrhea, hepatitis B, syphilis, and *Trichomonas*.

^b Excludes 75 cases with missing information.

^c Includes presumptive or definitive diagnoses during pregnancy of the following conditions: bacterial vaginosis, group B strep, hepatitis C, or pelvic inflammatory disease.

Table 9. Prenatal care of HIV-infected women, by race/ethnicity and year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
White, not Hispanic										
Prenatal care										
Yes	322	89	326	92	211	91	142	90	1,001	90
No	20	6	13	4	13	6	9	6	55	5
Unknown	21	6	17	5	8	3	6	4	52	5
Prenatal care visits^a										
1–2 visits	13	4	7	2	9	4	12	8	41	4
≥3 visits	223	69	223	68	118	56	120	85	684	68
Unknown	86	27	96	29	84	40	10	7	276	28
Total	363		356		232		157		1,108	
Black, not Hispanic										
Prenatal care										
Yes	2,042	88	1,755	87	1,145	89	869	87	5,811	88
No	203	9	191	9	109	8	91	9	594	9
Unknown	86	4	74	4	38	3	38	4	236	4
Prenatal care visits^a										
1–2 visits	93	5	94	5	51	4	47	5	285	5
≥3 visits	1,346	66	1,142	65	699	61	742	85	3,929	68
Unknown	603	30	519	30	395	34	80	9	1,597	27
Total	2,331		2,020		1,292		998		6,641	
Hispanic										
Prenatal care										
Yes	539	90	463	92	373	92	393	93	1,768	91
No	38	6	27	5	21	5	13	3	99	5
Unknown	23	4	15	3	13	3	18	4	69	4
Prenatal care visits^a										
1–2 visits	13	2	7	2	8	2	25	6	53	3
≥3 visits	286	53	279	60	198	53	317	81	1,080	61
Unknown	240	45	177	38	167	45	51	13	635	36
Total	600		505		407		424		1,936	

Table 9. Prenatal care of HIV-infected women, by race/ethnicity and year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas (cont)

	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Asian/Pacific Islander										
Prenatal care										
Yes	22	88	10	83	13	93	11	92	56	89
No	2	8	2	17	0	0	0	0	4	6
Unknown	1	4	0	0	1	7	1	8	3	5
Prenatal care visits^a										
1–2 visits	0	0	1	10	1	8	0	0	2	4
≥3 visits	10	45	3	30	9	69	9	82	31	55
Unknown	12	55	6	60	3	23	2	18	23	41
Total	25		12		14		12		63	

Note. Because of rounding, column percentages may not total to 100 percent. American Indian/Alaska Native excluded due to small numbers. See Table 2 for cumulative totals of all races. 234 cases excluded due to unknown race/ethnicity.

^a Includes only those women who had documented prenatal care.

Table 10. Timing of HIV testing of HIV-infected women, by race/ethnicity and year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

Timing of mother's HIV test	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
White, not Hispanic										
Before pregnancy	236	65	245	69	167	72	105	67	753	68
During labor	81	22	87	24	46	20	35	22	249	22
At delivery	10	3	8	2	2	1	2	1	22	2
After birth	20	6	5	1	5	2	8	5	38	3
Unknown	15	4	11	3	11	5	7	4	44	4
Total^a	363		356		232		157		1,108	
Black, not Hispanic										
Before pregnancy	1,340	57	1,186	59	753	58	609	61	3,888	59
During labor	748	32	637	32	427	33	300	30	2,112	32
At delivery	112	5	93	5	44	3	32	3	281	4
After birth	50	2	50	2	13	1	19	2	132	2
Unknown	81	3	51	3	48	4	38	4	218	3
Total^b	2,331		2,020		1,292		998		6,641	
Hispanic										
Before pregnancy	343	57	302	60	254	62	283	67	1,182	61
During labor	197	33	153	30	116	29	114	27	580	30
At delivery	28	5	19	4	14	3	10	2	71	4
After birth	19	3	16	3	8	2	7	2	50	3
Unknown	13	2	15	3	13	3	10	2	51	3
Total^c	600		505		407		424		1,936	
Asian/Pacific Islander										
Before pregnancy	9	36	4	33	7	50	6	50	26	41
During labor	10	40	6	50	6	43	5	42	27	43
At delivery	1	4	1	8	0	0	0	0	2	3
After birth	2	8	0	0	0	0	0	0	2	3
Unknown	3	12	1	8	1	7	1	8	6	10
Total	25		12		14		12		63	

Note. Because of rounding, column percentages may not total to 100 percent. American Indian/Alaska Native excluded due to small numbers. See Table 3 for cumulative totals of all races. 234 cases excluded due to unknown race/ethnicity.

^a Includes 2 women who refused HIV testing.

^b Includes 10 women who refused HIV testing.

^c Includes 2 women who refused HIV testing.

Table 11. Receipt of antiretroviral therapy by HIV-infected women and HIV exposed infants, by timing of receipt, race/ethnicity, and year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

Receipt of antiretroviral therapy	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
White, not Hispanic										
Prenatal period										
Yes	303	83	314	88	196	84	136	87	949	86
No	46	13	29	8	25	11	19	12	119	11
Unknown	14	4	13	4	11	5	2	1	40	4
Intrapartum period^a										
Yes	177	82	238	86	200	90	132	84	747	85
No	31	14	27	10	17	8	21	13	96	11
Unknown	10	5	13	5	6	3	4	3	33	4
Neonatal period^b										
Yes	334	92	336	94	219	94	150	96	1,039	94
No	23	6	7	2	8	3	4	3	42	4
Unknown	6	2	13	4	5	2	3	2	27	2
Total	363		356		232		157		1,108	
Black, not Hispanic										
Prenatal period										
Yes	1,853	79	1,603	79	1,040	80	808	81	5,304	80
No	376	16	342	17	173	13	148	15	1,039	16
Unknown	102	4	75	4	79	6	42	4	298	4
Intrapartum period^c										
Yes	1,227	79	1,175	79	1,022	82	837	84	4,261	80
No	271	17	260	17	198	16	140	14	869	16
Unknown	58	4	56	4	33	3	21	2	168	3
Neonatal period^b										
Yes	2,165	93	1,865	92	1,224	95	954	96	6,208	93
No	116	5	87	4	45	3	27	3	275	4
Unknown	50	2	68	3	23	2	17	2	158	2
Total	2,331		2,020		1,292		998		6,641	

Table 11. Receipt of antiretroviral therapy by HIV-infected women and HIV exposed infants, by timing of receipt, race/ethnicity, and year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas (cont)

Receipt of antiretroviral therapy	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Hispanic										
Prenatal period										
Yes	487	81	423	84	344	85	375	88	1,629	84
No	88	15	62	12	42	10	34	8	226	12
Unknown	25	4	20	4	21	5	15	4	81	4
Intrapartum period^d										
Yes	395	80	368	83	340	84	379	89	1,482	84
No	77	16	58	13	56	14	39	9	230	13
Unknown	22	4	19	4	10	2	6	1	57	3
Neonatal period^b										
Yes	556	93	475	94	383	94	408	96	1,822	94
No	30	5	25	5	14	3	3	1	72	4
Unknown	14	2	5	1	10	2	13	3	42	2
Total	600		505		407		424		1,936	
Asian/Pacific Islander										
Prenatal period										
Yes	21	84	8	67	12	86	12	100	53	84
No	3	12	3	25	1	7	0	0	7	11
Unknown	1	4	1	8	1	7	0	0	3	5
Intrapartum period^e										
Yes	15	75	7	78	12	86	12	100	46	84
No	4	20	2	22	1	7	0	0	7	13
Unknown	1	5	0	0	1	7	0	0	2	3
Neonatal period^b										
Yes	23	92	11	92	13	93	12	100	59	94
No	2	8	1	8	0	0	0	0	3	5
Unknown	0	0	0	0	1	7	0	0	1	2
Total	25		12		14		12		63	

Note. Because of rounding, column percentages may not total to 100 percent. American Indian/Alaska Native excluded due to small numbers. See Table 4 for cumulative totals of all races. 234 cases excluded due to unknown race/ethnicity.

^a Excludes 232 cases with missing information.

^b Includes 1 HIV-exposed infant per pregnancy with the assumption that all infants of multiple birth received the same antiretroviral therapy.

^c Excludes 1,343 cases with missing information.

^d Excludes 167 cases with missing information.

^e Excludes 8 cases with missing information.

Table 12. Method of delivery for HIV-infected women, by race/ethnicity and year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

Method of delivery	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
White, not Hispanic										
Vaginal	161	44	135	38	97	42	61	39	454	41
Cesarean section										
Elective ^a	136	37	152	43	86	37	70	45	444	40
Non-elective	50	14	48	13	45	19	21	13	164	15
Type of decision unknown	12	3	12	3	2	1	3	2	29	3
Unknown	4	1	9	3	2	1	2	1	17	2
Total	363		356		232		157		1,108	
Black, not Hispanic										
Vaginal	1,138	49	953	47	555	43	407	41	3,053	46
Cesarean section										
Elective ^a	743	32	719	36	457	35	392	39	2,311	35
Non-elective	395	17	282	14	244	19	162	16	1,083	16
Type of decision unknown	38	2	46	2	17	1	14	1	115	2
Unknown	17	1	20	1	19	1	23	2	79	1
Total	2,331		2,020		1,292		998		6,641	
Hispanic										
Vaginal	242	40	214	42	164	40	170	40	790	41
Cesarean section										
Elective ^a	225	38	209	41	168	41	175	41	777	40
Non-elective	111	19	72	14	58	14	69	16	310	16
Type of decision unknown	17	3	10	2	9	2	3	1	39	2
Unknown	5	1	0	0	8	2	7	2	20	1
Total	600		505		407		424		1,936	

Table 12. Method of delivery for HIV-infected women, by race/ethnicity and year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas (cont)

Method of delivery	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Asian/Pacific Islander										
Vaginal	15	60	2	17	8	57	4	33	29	46
Cesarean section										
Elective ^a	3	12	6	50	4	29	7	58	20	32
Non-elective	6	24	4	33	1	7	1	8	12	19
Type of decision unknown	1	4	0	0	0	0	0	0	1	2
Unknown	0	0	0	0	1	7	0	0	1	2
Total	25		12		14		12		63	

Note. Because of rounding, column percentages may not total to 100 percent. American Indian/Alaska Native excluded due to small numbers. See Table 5 for cumulative totals of all races. 234 cases excluded due to unknown race/ethnicity.

^a Refers to a cesarean section that is performed before the membranes rupture and before labor begins. However, a planned cesarean section that was performed ahead of schedule because of unexpected circumstances was coded Elective.

Table 13. Substance use and toxicology screening of HIV-infected women during pregnancy, by race/ethnicity and year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
White, not Hispanic										
Illicit drug use^a										
Yes	90	25	85	24	61	26	45	29	281	25
No	217	60	241	68	160	69	106	68	724	65
Unknown	56	15	30	8	11	5	6	4	103	9
Alcohol/tobacco use^b										
Alcohol	5	1	13	4	12	5	6	4	36	3
Tobacco	53	15	61	17	35	15	40	25	189	17
Alcohol and tobacco	19	5	17	5	18	8	16	10	70	6
None	60	17	101	28	75	32	59	38	295	27
Unknown	226	62	164	46	92	40	36	23	518	47
Toxicology screening^c										
Positive result	57	16	54	15	26	11	16	10	153	14
Negative result	46	13	35	10	27	12	21	13	129	12
Not done	145	40	147	41	87	38	62	39	441	40
Unknown	115	32	120	34	92	40	58	37	385	35
Total	363		356		232		157		1,108	

Table 13. Substance use and toxicology screening of HIV-infected women during pregnancy, by race/ethnicity and year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas (cont)

	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Black, not Hispanic										
Illicit drug use^a										
Yes	475	20	421	21	273	21	206	21	1,375	21
No	1,339	57	1,459	72	976	76	722	72	4,496	68
Unknown	517	22	140	7	43	3	70	7	770	12
Alcohol/tobacco use^b										
Alcohol	53	2	58	3	33	3	27	3	171	3
Tobacco	146	6	150	7	137	11	152	15	585	9
Alcohol and tobacco	89	4	76	4	48	4	45	5	258	4
None	641	28	697	35	573	44	463	46	2,374	36
Unknown	1,402	60	1,039	51	501	39	311	31	3,253	49
Toxicology screening^c										
Positive result	390	17	348	17	165	13	84	8	987	15
Negative result	286	12	204	10	125	10	102	10	717	11
Not done	841	36	830	41	567	44	393	39	2,631	40
Unknown	814	35	638	32	435	34	419	42	2,306	35
Total	2,331		2,020		1,292		998		6,641	

Table 13. Substance use and toxicology screening of HIV-infected women during pregnancy, by race/ethnicity and year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas (cont)

	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Hispanic										
Illicit drug use^a										
Yes	81	14	101	20	60	15	70	17	312	16
No	324	54	371	73	322	79	324	76	1,341	69
Unknown	195	33	33	7	25	6	30	7	283	15
Alcohol/tobacco use^b										
Alcohol	7	1	13	3	8	2	8	2	36	2
Tobacco	47	8	49	10	27	7	76	18	199	10
Alcohol and tobacco	17	3	12	2	7	2	14	3	50	3
None	159	27	196	39	189	46	185	44	729	38
Unknown	370	62	235	47	176	43	141	33	922	48
Toxicology screening^c										
Positive result	59	10	65	13	33	8	33	8	190	10
Negative result	24	4	19	4	16	4	16	4	75	4
Not done	209	35	220	44	196	48	161	38	786	41
Unknown	308	51	201	40	162	40	214	50	885	46
Total	600		505		407		424		1,936	

Table 13. Substance use and toxicology screening of HIV-infected women during pregnancy, by race/ethnicity and year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas (cont)

	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Asian/Pacific Islander										
Illicit drug use^a										
Yes	2	8	0	0	3	21	0	0	5	8
No	16	64	11	92	10	71	12	100	49	78
Unknown	7	28	1	8	1	7	0	0	9	14
Alcohol/tobacco use^b										
Alcohol	0	0	0	0	0	0	0	0	0	0
Tobacco	2	8	0	0	1	7	0	0	3	5
Alcohol and tobacco	0	0	0	0	1	7	0	0	1	2
None	6	24	3	25	6	43	6	50	21	33
Unknown	17	68	9	75	6	43	6	50	38	60
Toxicology screening^c										
Positive result	4	16	2	17	2	14	0	0	8	13
Negative result	2	8	1	8	1	7	0	0	4	6
Not done	8	32	3	25	6	43	6	50	23	37
Unknown	11	44	6	50	5	36	6	50	28	44
Total	25		12		14		12		63	

Note. Because of rounding, column percentages may not total to 100 percent. American Indian/Alaska Native excluded due to small numbers. See Table 6 for cumulative totals of all races.

^a Included only if noted in medical or social work records during pregnancy: amphetamines, barbiturates, benzodiazepines, cocaine, crack, hallucinogens, heroin, marijuana, methadone, methamphetamines, opiates, and other drugs noted in the woman's records.

^b Only if noted in the medical or social work records during pregnancy.

^c Conducted during pregnancy. If more than 1 toxicology screening was done and any result was positive, only the positive test result was counted.

Table 14. Type of birth, by year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

Birth type	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Single	3,231	94	2,842	96	1,906	96	1,561	95	9,540	95
Twin	144	4	91	3	70	4	36	2	341	3
Unknown	47	1	30	1	11	1	39	2	127	1
Total	3,422		2,963		1,987		1,636		10,008	

Note. Because of rounding, column percentages may not total to 100 percent. Values represent the total number of HIV-infected women who gave birth to a live infant.

Table 15. Number and percentage of infants receiving prophylaxis against *Pneumocystis jiroveci* pneumonia, by year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

Prophylaxis received	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	1,419	41	1,250	42	736	37	712	44	4,117	41
No	556	16	465	16	301	15	345	21	1,667	17
Unknown	1,447	42	1,248	42	950	48	579	35	4,224	42
Total	3,422		2,963		1,987		1,636		10,008	

Note. Because of rounding, column percentages may not total to 100 percent. Data represents the number of singleton births; if a woman delivered multiple infants, only one infant is represented in this table.

Table 16. Number and percentage of infants infected with HIV through mother-to-child transmission, by year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

HIV status	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Infected ^a	89	4	95	4	62	3	28	3	274	4
Not infected	1,568	67	1,535	69	1,134	62	505	60	4,742	66
Indeterminate ^b	685	29	595	27	626	34	306	37	2,212	31
Total	2,342		2,225		1,822		839		7,228	

Note. Because of rounding, column percentages may not total to 100 percent. 2,780 cases excluded due to missing HIV status. Data represents the number of singleton births; if a woman delivered multiple infants, only one infant is represented in this table.

^a Includes children whose HIV diagnosis was made according to the January 2000 HIV case definition or whose AIDS diagnosis was made according to the August 1987 pediatric AIDS case definition.

^b Refers to the classification of children born to an HIV-positive mother but whose laboratory test results were insufficient for a classification of infected or not infected with HIV (reference 2: CDC, *MMWR* 1999;48[RR-13]:1–31.)

Table 17. Birth weight (grams) of children born to HIV-infected women, by race/ethnicity and year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

Birth weight (gms)	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
White, not Hispanic										
Very low birth weight ^a	12	3	7	2	5	2	6	4	30	3
Low birth weight ^b	58	16	61	17	44	19	21	13	184	17
Normal ^c	286	80	282	81	181	79	129	83	878	80
Total^d	356		350		230		156		1,092	
Black, not Hispanic										
Very low birth weight ^a	118	5	104	5	68	5	46	5	336	5
Low birth weight ^b	439	19	367	18	257	20	190	19	1,253	19
Normal ^c	1,748	76	1,518	76	961	75	759	76	4,986	76
Total^e	2,305		1,989		1,286		995		6,575	
Hispanic										
Very low birth weight ^a	22	4	10	2	10	2	6	1	48	3
Low birth weight ^b	96	16	86	17	59	15	61	14	302	16
Normal ^c	473	80	407	81	333	83	355	84	1,568	82
Total^f	591		503		402		422		1,918	
Asian/Pacific Islander										
Very low birth weight ^a	0	0	0	0	1	7	1	8	2	3
Low birth weight ^b	1	4	2	17	5	36	0	0	8	13
Normal ^c	24	96	10	83	8	57	11	92	53	84
Total	25		12		14		12		63	

Note. Because of rounding, column percentages may not total to 100 percent. American Indian/Alaska Native excluded due to small numbers. 234 cases excluded due to unknown race/ethnicity. Data represent the number of singleton births; if a woman delivers multiple infants, only one infant is represented in this table.

^a Very low birth weight is defined as weight less than 1,500 grams.

^b Low birth weight is defined as weight between 1,500 and 2,499 grams.

^c Normal birth weight is defined as weight of 2,500 grams or greater.

^d Excludes 16 cases due to missing birth weight.

^e Excludes 66 cases due to missing or unknown birth weight.

^f Excludes 18 cases due to missing birth weight.

Table 18. Gestational age at birth among HIV-infected women, by race/ethnicity and year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

Gestational age by weeks	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
White, not Hispanic										
Preterm ^a	128	35	112	31	74	32	51	32	365	33
Normal ^b	235	65	244	69	158	68	106	68	743	67
Total	363		356		232		157		1,108	
Black, not Hispanic										
Preterm ^a	796	34	665	33	440	34	329	33	2,230	34
Normal ^b	1,535	66	1,355	67	852	66	669	67	4,411	66
Total	2,331		2,020		1,292		998		6,641	
Hispanic										
Preterm ^a	186	31	167	33	124	30	128	30	605	31
Normal ^b	414	69	338	67	283	70	296	70	1,331	69
Total	600		505		407		424		1,936	
Asian/Pacific Islander										
Preterm ^a	3	12	3	25	4	29	4	33	14	22
Normal ^b	22	88	9	75	10	71	8	67	49	78
Total	25		12		14		12		63	

Note. Because of rounding, column percentages may not total to 100 percent. American Indian/Alaska Native excluded due to small numbers. Excludes 234 cases due to unknown race/ethnicity.

^a Preterm is defined as gestational age of less than 38 weeks.

^b Normal is defined as gestational age of greater than or equal to 38 weeks.

Table 19. Birth defects in first year of life in children born to HIV-infected women, by race/ethnicity and year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

Birth defects in first year of life	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
White, not Hispanic										
Yes	14	4	6	2	7	3	6	4	33	3
No	248	68	235	66	129	56	108	69	720	65
Unknown	101	28	115	32	96	41	43	27	355	32
Total	363		356		232		157		1,108	
Black, not Hispanic										
Yes	75	3	80	4	37	3	53	5	245	4
No	1,467	63	1,261	62	733	57	750	75	4,211	63
Unknown	789	34	679	34	522	40	195	20	2,185	33
Total	2,331		2,020		1,292		998		6,641	
Hispanic										
Yes	9	2	8	2	4	1	26	6	47	2
No	335	56	301	60	224	55	307	72	1,167	60
Unknown	256	43	196	39	179	44	91	21	722	37
Total	600		505		407		424		1,936	
Asian/Pacific Islander										
Yes	2	8	0	0	0	0	0	0	2	3
No	12	48	6	50	10	71	11	92	39	62
Unknown	11	44	6	50	4	29	1	8	22	35
Total	25		12		14		12		63	

Note. Because of rounding, column percentages may not total to 100 percent. American Indian/Alaska Native excluded due to small numbers. 234 cases excluded due to unknown race/ethnicity. Data represent the number of singleton births; if a woman delivers multiple infants, only one infant is represented in this table.

Table 20. Number and percentage of HIV-infected women who gave birth to a live infant and received medical treatment reimbursement, by year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas

	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Medical treatment reimbursement										
Yes	1,346	90	1,491	92	1,226	94	1,237	94	5,300	92
No	42	3	42	3	42	3	40	3	166	3
Unknown	108	7	92	7	32	2	38	3	270	5
Total	1,496		1,625		1,300		1,315		5,736	

Note. Because of rounding, column percentages may not total to 100 percent. 4,272 cases excluded due to missing information.

**Table 21. Type of facility where prenatal care was provided, by year of infant's birth, 2000–2003—
24 areas conducting enhanced perinatal surveillance in the United States and dependent
areas**

Type of facility	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
White, not Hispanic										
Private care (OB/GYN, midwife)	53	16	54	16	43	20	17	12	167	17
HMO clinic (for prenatal care)	3	1	5	2	1	<1	0	0	9	1
Public health clinic	2	1	3	1	0	0	0	0	5	0
Hospital outpatient clinic	66	20	43	13	5	2	0	0	114	11
Community health center	12	4	7	2	2	1	0	0	21	2
AIDS Clinical Trial Group site	0	0	2	1	0	0	0	0	2	<1
OB/GYN clinic	117	36	138	42	100	47	72	50	427	42
Other	15	5	13	4	9	4	4	3	41	4
Adult HIV specialty clinic	34	10	42	13	43	20	7	5	126	12
Unknown	22	7	22	7	11	5	44	31	99	10
Total	324		299		214		114		1,011	
Black, not Hispanic										
Private care (OB/GYN, midwife)	248	12	299	17	224	19	104	12	875	15
HMO clinic (for prenatal care)	15	1	18	1	13	1	2	0	48	1
Public health clinic	20	1	25	1	0	0	0	0	45	1
Hospital outpatient clinic	399	19	256	14	20	2	0	0	675	12
Community health center	42	2	34	2	26	2	0	0	102	2
AIDS Clinical Trial Group site	2	<1	1	<1	0	0	0	0	3	<1
OB/GYN clinic	854	42	774	44	616	53	441	50	2,685	46
Other	90	4	68	4	19	2	8	1	185	3
Adult HIV specialty clinic	242	12	182	10	173	15	9	1	606	10
Unknown	139	7	116	7	67	6	312	36	634	11
Total	2,051		1,773		1,158		876		5,858	

Table 21. Type of facility where prenatal care was provided, by year of infant's birth, 2000–2003—24 areas conducting enhanced perinatal surveillance in the United States and dependent areas (cont)

Type of facility	Year of infant's birth								Cumulative Total	
	2000		2001		2002		2003			
	No.	%	No.	%	No.	%	No.	%	No.	%
Hispanic										
Private care (OB/GYN, midwife)	29	5	43	9	22	6	29	7	123	7
HMO clinic (for prenatal care)	10	2	12	3	12	3	8	2	42	2
Public health clinic	2	<1	5	1	0	0	0	0	7	<1
Hospital outpatient clinic	55	10	22	5	1	<1	0	0	78	4
Community health center	30	6	11	2	6	2	0	0	47	3
AIDS Clinical Trial Group site	55	10	44	9	26	7	2	1	127	7
OB/GYN clinic	198	37	205	44	191	51	155	39	749	42
Other	20	4	26	6	6	2	4	1	56	3
Adult HIV specialty clinic	99	18	72	15	98	26	21	5	290	16
Unknown	42	8	27	6	13	3	174	44	256	14
Total	540		467		375		393		1,775	
Asian/Pacific Islander										
Private care (OB/GYN, midwife)	1	4	1	10	3	23	1	8	6	10
HMO clinic (for prenatal care)	0	0	0	0	0	0	0	0	0	0
Public health clinic	0	0	0	0	0	0	0	0	0	0
Hospital outpatient clinic	2	9	1	10	0	0	0	0	3	5
Community health center	2	9	0	0	0	0	0	0	2	3
AIDS Clinical Trial Group site	0	0	0	0	0	0	0	0	0	0
OB/GYN clinic	11	48	6	60	6	46	6	50	29	50
Other	2	9	0	0	0	0	0	0	2	3
Adult HIV specialty clinic	5	22	1	10	4	31	1	8	11	19
Unknown	0	0	1	10	0	0	4	33	5	9
Total	23		10		13		12		58	

Note. Because of rounding, column percentages may not total to 100 percent. American Indian/Alaska Native excluded due to small numbers. 1,106 cases excluded due to missing facility type.

This surveillance supplemental report describes the data collected from the 24 areas in the United States and dependent areas that were funded to conduct the Enhanced Perinatal Surveillance (EPS) project. During the time period covered by this report, these project sites included 17 state health departments, Puerto Rico, and 6 city health departments. This project constitutes a population-based and facility-based surveillance system for HIV-infected mothers and their perinatally exposed children. Data were collected by using both the HIV/AIDS case report form and a supplemental EPS data abstraction form. After the removal of personally identifying information, the data collected for EPS were submitted to CDC (see Figure 1 for list of participating areas).

Mother-infant pairs were identified through several means: pediatric HIV/AIDS surveillance, reports of HIV-infected pregnant women to surveillance, birth registry matching, and hospital discharge summaries. If the laws and regulations allowed, areas conducted a match with the HIV/AIDS Reporting System (HARS) and the birth registry for the birth years 2000–2003 to obtain a list of all possible mother-infant pairs. A small proportion of women who had not been tested or who did not disclose their HIV status during pregnancy were identified through their child's HIV-infection status. This report does not include HIV-infected women and HIV-exposed children who were tested negative. The report also does not include HIV-exposed children who were not tested but presumed to be negative.

Methods used by the areas to collect these data required linkage of mother-infant pairs and review of the records of both mother and infant. These records include prenatal care records, maternal HIV clinic records, labor and delivery records, pediatric birth records, pediatric HIV medical records, other pediatric medical records, birth certificates, death certificates, and health department records. The area-specific methods for collecting these data, however, differed to comply with local HIV reporting laws and regulations. Using the EPS abstraction forms, the areas collected information on the mother: prenatal care, HIV testing history, receipt of antiretroviral therapy during pregnancy, substance use, and clinical information. The

areas also collected birth history and pediatric history for the infant and then conducted follow-up of each infant every 6 months until the infant's HIV status was determined.

EPS areas conducted the project as population-based or facility-based. Population-based areas were defined as those that included all HIV-exposed infants born to HIV-infected mothers within the geographic area defined by the project (e.g., state or city). Medical records for all HIV-exposed infants and HIV-infected mothers were abstracted from all facilities within the defined geographic area. Facility-based areas conducted the project in selected facilities within the geographic area defined by the project. The selected facilities were those serving large numbers of HIV-infected women (e.g., delivery hospitals or high-risk prenatal clinics) and HIV-exposed children (e.g., specialty pediatric clinics, pediatric HIV clinics). The medical records for HIV-exposed infants and HIV-infected mothers were abstracted from the facilities selected in these geographic areas.

Most project areas collected data on HIV-exposed infants (and their mothers) born during 2000 through 2003 (see Figure 1 for participating area and birth years for data collection). All infants born in the state, dependent area, city, or facility specified as the project site have been included. These include each infant of a multiple birth (e.g., twins, triplets).

TABULATION AND PRESENTATION OF DATA

Data in this report are provisional. This report includes EPS reports received by CDC through June 2007. All data tables are stratified by year of infant's birth. Data on the infants include singleton births; the mother may deliver multiple infants in one pregnancy, but only one infant is represented in the data. The mother, however, may be represented more than once if she gave birth more than once during the project period.

Table 1 shows the numbers and percentages of HIV-infected women who gave birth to a live infant and who were reported to EPS. The race/ethnicity categories in this table are the categories used before the implementation of Office of Management and Budget

(OMB) Statistical Policy Directive 15 [1]. These revised standards, which were to be implemented by January 1, 2003, superseded the 1977 standards and reflect a change in federal policy on the collection of data on race and ethnicity. Because data for this report were compiled from births to HIV-infected women during 2000 through 2003, the race/ethnicity data are presented as they are in HIV/AIDS surveillance data collected before January 1, 2003. For EPS reports received after January 1, 2003, race and ethnicity data were collected in accordance with OMB Statistical Policy Directive 15.

For the purposes of this report, women with HIV infection or AIDS are counted only once in a hierarchy of exposure categories. If a woman is reported as having more than one mode of exposure, she is classified in the exposure category listed first in the hierarchy. Women whose exposure category is classified as heterosexual contact are those who reported heterosexual contact with a person with, or at increased risk for, HIV infection (e.g., an injection drug user) [2].

Tables 9, 10, 11, 12, 13, 17, 18, and 19 show data by infant's birth year and the mother's race/ethnicity. The cumulative totals reflect all racial/ethnic categories for the four birth cohort years. Because of small numbers for American Indians/Alaska Natives, Tables 9, 10, 11, 12, 13, 17, 18, and 19 do not show data for this group.

Tables 15, 16, 17, and 19 represent the number of singleton births and not the total number of infants born to HIV-infected women.

The high proportions of cases with missing information are due to data collection methods. Charts and medical records are often missing key information and are sometimes not available. Patients are also lost to follow-up which makes it difficult to ascertain missing or unknown information. EPS data are collected prospectively and therefore completeness of data may improve over time.

The EPS protocol includes follow-up of all HIV-exposed infants until HIV status can be determined. The revised HIV surveillance case definition for adults and children was published in December 1999 and became effective January 1, 2000. For surveillance purposes, a child younger than 18 months and born to an HIV-infected woman can be classified as not infected only if virologic or antibody testing was performed during specified periods. If the tests were not performed or were not performed during the specified

time periods, the child's status is classified as indeterminate [3]. In this report, the status of approximately one third (31%) of the total number of infants is indeterminate. It is presumed that many of these infants are not infected with HIV, but their status is indeterminate because the criteria for classification as not infected have not been met. Therefore, caution must be used in interpreting the perinatal HIV transmission rates.

Follow-up of these indeterminate cases is ongoing.

REFERENCES

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