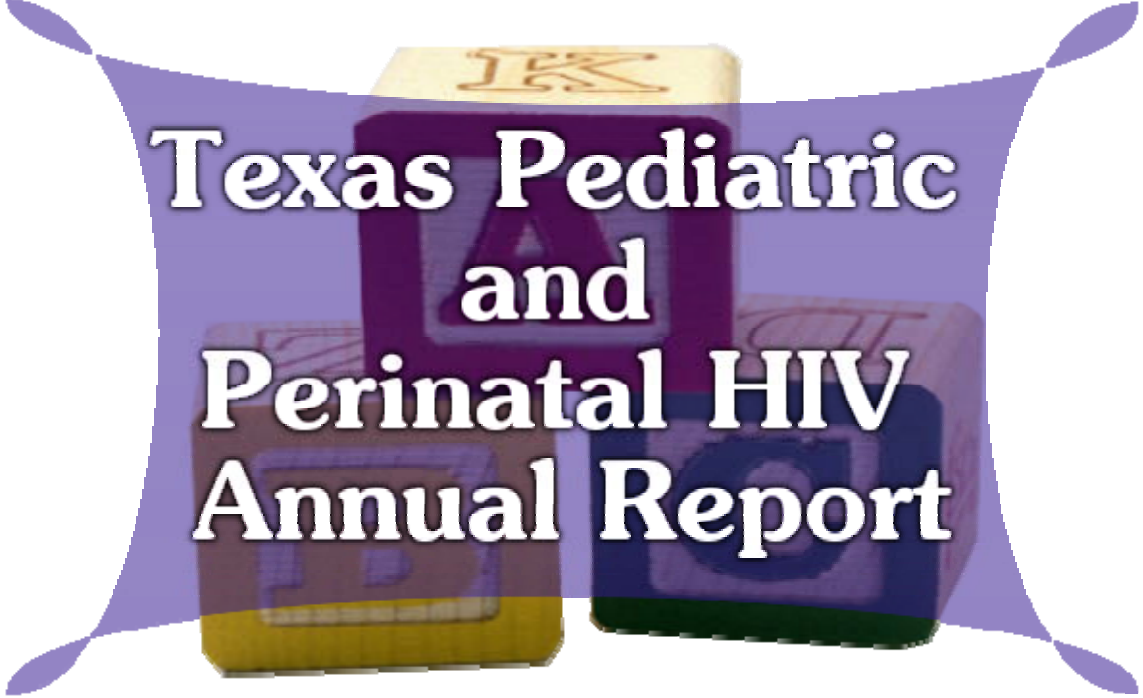


First Annual Report, Dated 12/31/2009

TB/HIV/STD Epidemiology and Surveillance Branch



Texas Pediatric and Perinatal HIV Annual Report



This Enhanced Perinatal Surveillance Report is the first annual report generated by the Texas Department of State Health Services, TB/HIV/STD Epidemiology and Surveillance Branch.

This report describes pediatric HIV/AIDS cases and perinatal exposures reported to the Texas Department of State Health Services Surveillance Program through July 2007 and children born through December 31, 2005.

Texas Department of State Health Services
P.O. 149347
Austin, Texas 78714

TB/HIV/STD Epidemiology and Surveillance Branch
(512) 533-3000

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I. GENERAL BACKGROUND

Pediatric and perinatal HIV/AIDS surveillance in Texas measures trends in human immunodeficiency virus (HIV) pediatric/perinatal transmission rates, prevalence of receipt of prenatal care and antiretroviral treatment by HIV infected mother's and their infants and morbidity and mortality of HIV-infected children who were first diagnosed with HIV infection before 13 years of age. For purposes of this report, pediatric and perinatal HIV infection status is defined according to the Centers for Disease Control and Prevention (CDC) definition (MMWR 1999; 48 (RR-13): 1-36). This report provides an overview of pediatric HIV transmission in Texas, an overview of perinatal transmission in the United States and Texas and an analysis of Enhanced Perinatal Surveillance (EPS) data.

The first part of this report provides an overview of 876 infants infected perinatally or non-perinatally in Texas and reported through the HIV/AIDS Reporting System (HARS) as of July 2007. Of these 876 infants, 709 children contracted HIV perinatally, were diagnosed through July 2007 and were born through December 31, 2005. The remaining 167 children were infected through non-perinatal transmission.

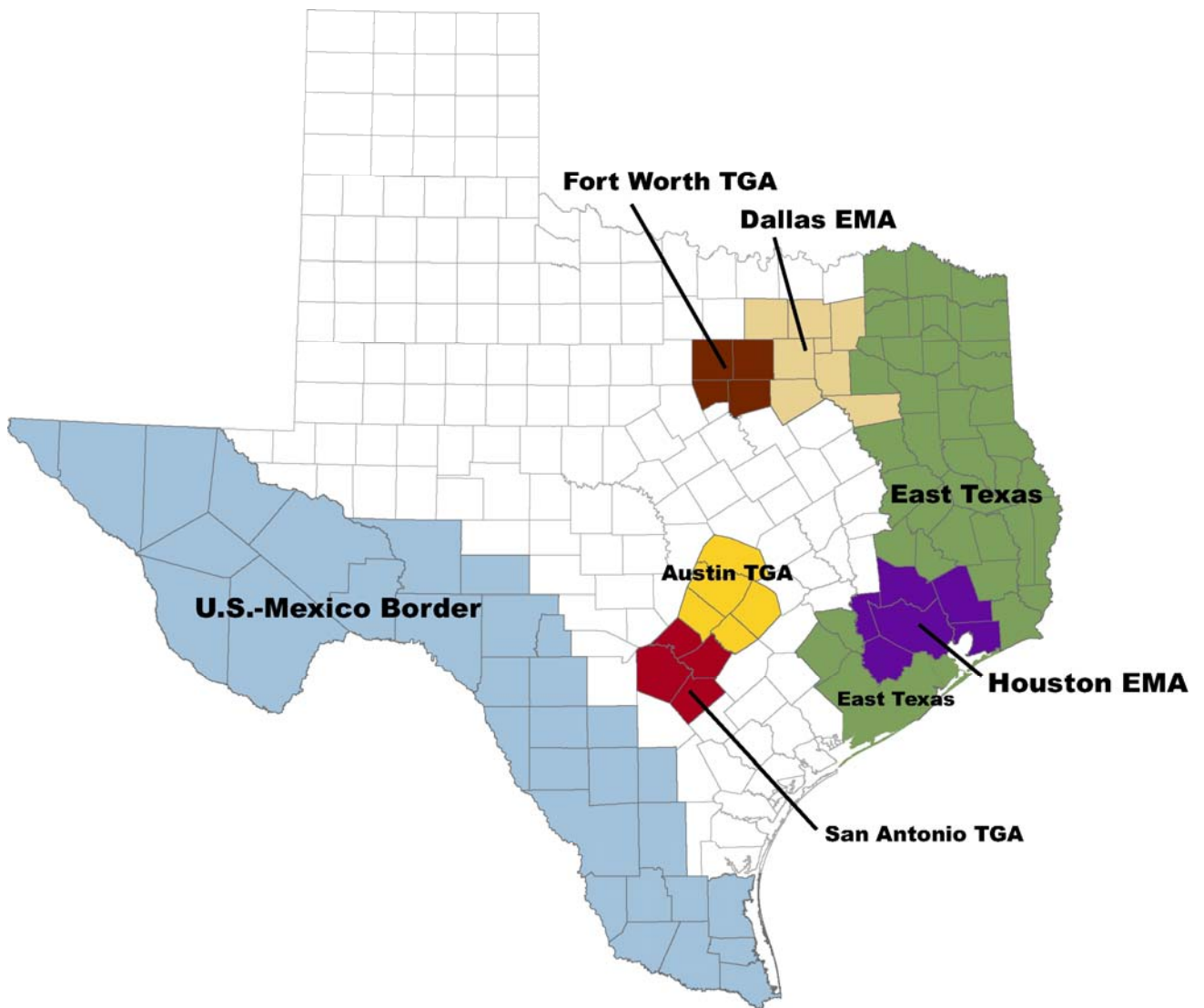
The second part of this report provides data for perinatally exposed infants born through December 31, 2005 and reported through HARS as of July 2007. The last part of this report, the analysis of Enhanced Perinatal Surveillance data, provides data on 2,468 perinatally HIV-exposed children (i.e., infected, non-infected, and children of indeterminate status). The information in this last section is based on data updated as of January 2008 which includes 2,468 mother-infant pairs, representing 2,400 pregnancies. These perinatally exposed infants were reported through EPS and/or HARS and this data has been collected by twelve regional public health departments and local city/county health departments across Texas from 1999-2005.

Data collection systems from which this report was generated include:

1. HIV/AIDS Reporting System (HARS): Name based reporting began in Texas in 1999.
2. Enhanced Perinatal Surveillance (EPS): Initiated in 1999 as an adjunct to Pediatric HIV/AIDS surveillance. EPS is a surveillance system for HIV-infected women and their infants. In order to reduce perinatal transmission in areas with high prevalence, the CDC implemented activities such as the EPS Project (EPS) throughout the United States.
3. The overall goals of EPS are:
 - a. to monitor the implementation of the United States Public Health Service (USPHS) recommendations for counseling and voluntary testing of pregnant women,
 - b. to monitor the use of ZDV and other antiretrovirals to prevent perinatal HIV transmission and monitor potentially adverse outcomes of antiretroviral exposure among infected and uninfected children in the short and long term, and
 - c. to ascertain complete reporting of HIV positive women who deliver an infant.

Note: Data presented by geographic area has been broken down according to the Health Resources and Services Administration (HRSA) designations of counties as an Eligible Metropolitan Area (EMA) or a Transitional Grant Area (TGA). The five areas in Texas designated by HRSA (Figure 1) as EMAs or TGAs are Austin, Dallas, Fort Worth, Houston and San Antonio. For this report, we define the border area as those 32 counties within 100 kilometers of the U.S.-Mexico border, a standard definition in health and human services reports. The East Texas area includes all counties in Texas Health Service Regions (HSR) 4, 5, and 6, excluding the Houston EMA and Henderson County, which is included in the Dallas EMA.

Figure 1: Geographic Areas of Interest



II. OVERVIEW OF PEDIATRIC HIV INFECTION IN TEXAS

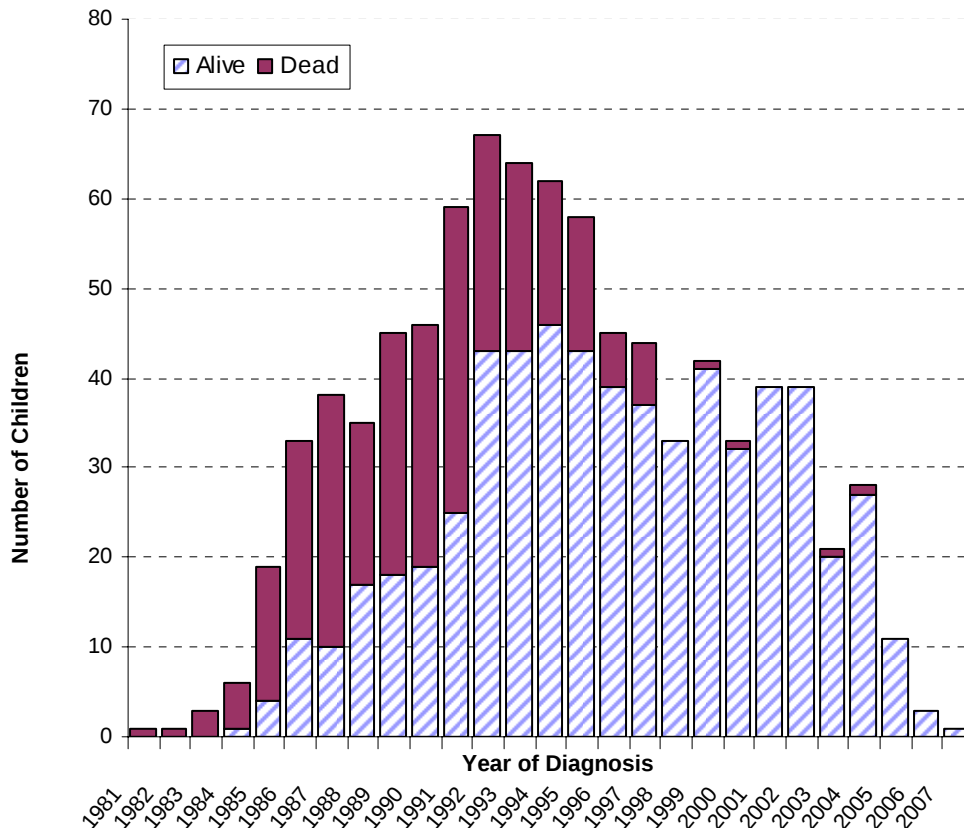
At the end of 2005, more than 80% of the 876 children diagnosed with HIV were infected through mother to child transmission, and more than half of all the HIV-infected children developed AIDS (Table 1). The majority of children diagnosed with AIDS were diagnosed prior to 13 years of age. Of the 876 children diagnosed with HIV, 31% (n=274) have died. (Figure 2) Among those who have died, 95% (n=260) were diagnosed with AIDS and 5% (n=14) were HIV-infected but had not yet progressed to AIDS.

Table 1: Children Diagnosed with HIV Infection Before 13 Years of Age, by HIV Transmission Risk Category and Latest HIV Status, as of July 2007 (a), Texas

	HIV-Infected, non-AIDS	AIDS Diagnosed before 13 years	AIDS diagnosed at 13 years or older	Total
Perinatal HIV Risk (a)	360	325	24	709
Non-perinatal HIV risk:				167
Coagulation Disorder	14	18	32	64
Unknown/Other	39	8	9	56
Transfusion	1	35	11	47
Total (%)	414 (47%)	386 (44%)	76 (9%)	876 (100%)

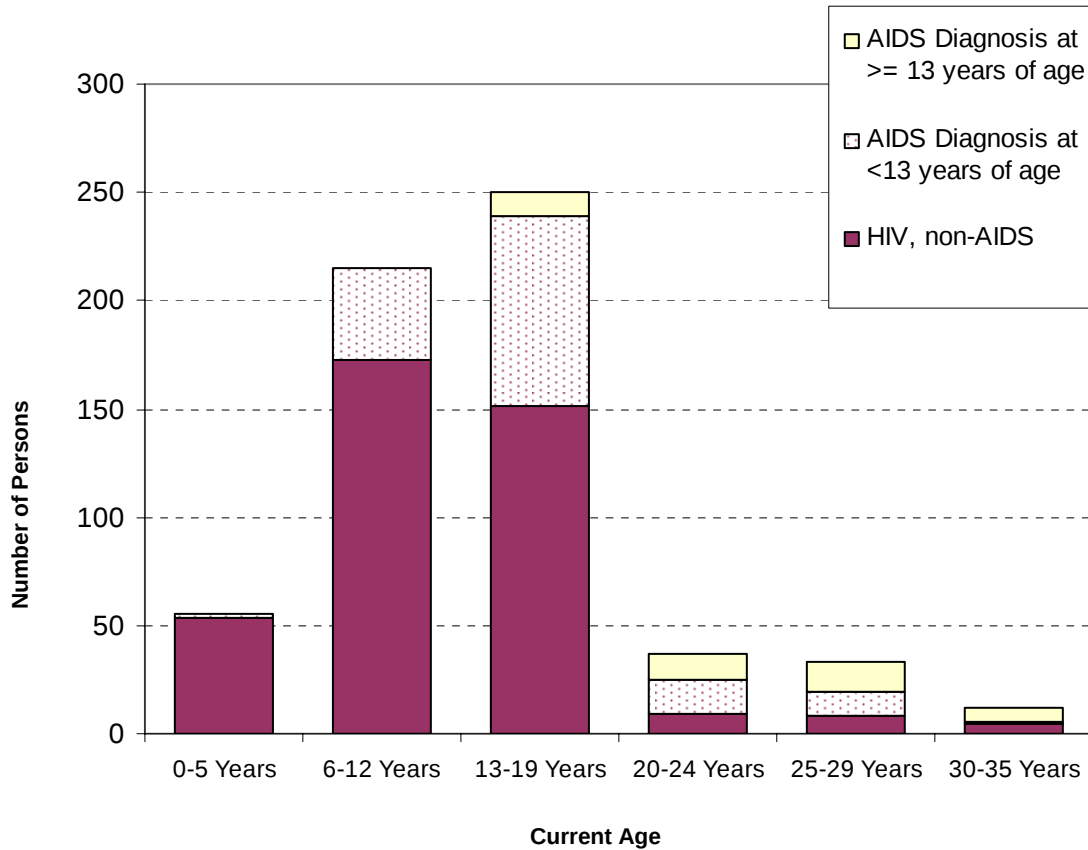
a-Excluding births for years 2006 and 2007 due to reporting delay.

Figure 2: Children Diagnosed with HIV Infection before 13 Years of Age (N=876), by Year of HIV Diagnosis and Current Vital Status, as of July 2007(a), Texas



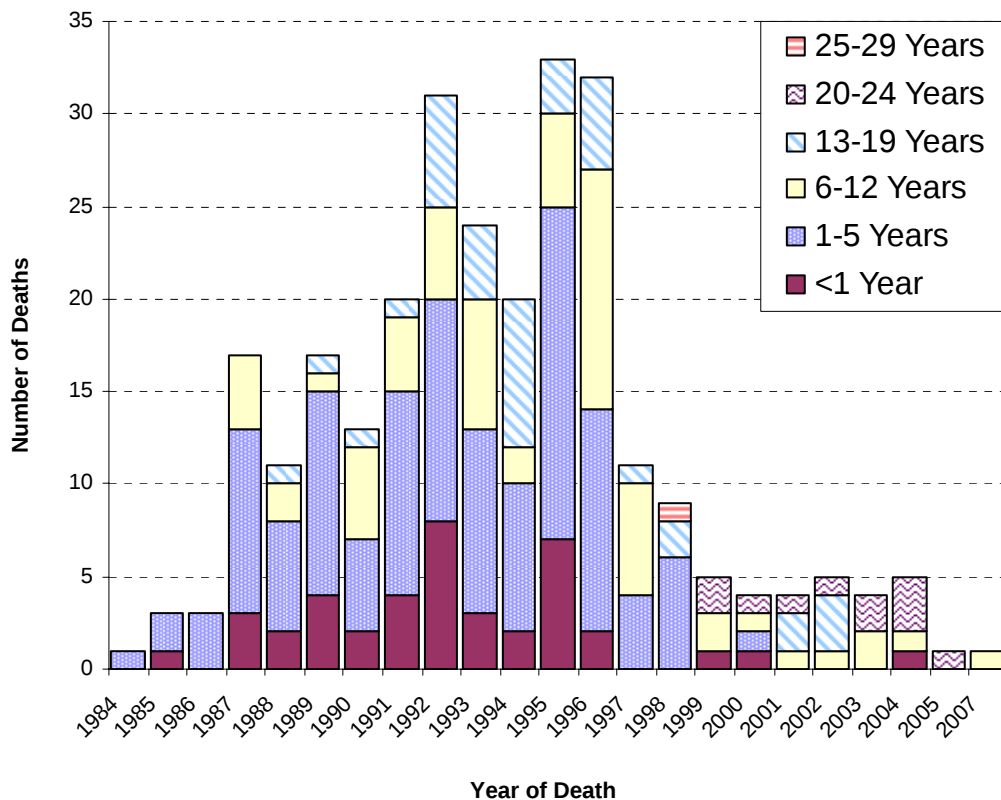
a-Excluding births for years 2006 and 2007 due to reporting delay.

Figure 3: Current Age of Persons Living with HIV/AIDS Who Were Diagnosed with HIV before 13 Years of Age (N=602), by Current Clinical Status, as of July 2007, Texas



As shown in Figure 3, of living persons diagnosed with HIV before 13 years of age, 55% were 13 years of age or older as of July 2007. This figure represents a growing population of pediatric cases surviving into adolescence and early adulthood.

Figure 4: Number of Deaths among Persons Diagnosed with HIV before 13 Years of Age (N=274), by Age at Death, 1981-2005, Texas



Since reaching a peak in 1995, deaths among children 1-5 years of age have greatly declined (Figure 4).

III. OVERVIEW OF PERINATAL HIV TRANSMISSION IN THE UNITED STATES

Perinatal HIV is the transmission of HIV from mother to child (vertical transmission). Perinatal HIV transmission may occur during pregnancy, labor, delivery, or breastfeeding. Research published in 1994 showed that zidovudine (ZDV) given to pregnant HIV-infected women reduced this type of HIV transmission.¹ Antiretroviral therapy (ART) administered during pregnancy, labor and delivery and then to the newborn, as well as elective cesarean section for women with high viral loads (more than 1,000 copies/ml), can reduce the rate of perinatal HIV transmission to 2% or less.²

Nationally, the number of infants infected with HIV through mother-to-child transmission decreased from an estimated peak of 1,750 HIV-infected infants born each year during the early to mid-1990s to 280 to 370 infants in 2000.³

If medications are not started until labor, a decreased rate of perinatal HIV transmission can still be achieved (less than 10%). In the absence of any intervention, rates of mother-to-child transmission of HIV can vary from 15% to 30% without breastfeeding and can increase from 30% to 45% with prolonged breastfeeding.⁴

In the United States, perinatal HIV transmission is the most common route of HIV infection among children and is now the source of almost all AIDS cases in children.⁵ An estimated 9,101 children have been diagnosed with AIDS and more than 90% of these children have been perinatally infected as of 2005. In addition, the majority of children diagnosed with AIDS were among children of minority races or ethnicities. For diagnoses occurring in 2005, 70% of perinatal infections occurred among African Americans in the United States.

Table 2: Perinatal HIV/AIDS among Children in the United States in 2005

	Total
Estimated number of children <13 years of age at diagnosis living with HIV/AIDS	6,051
Estimated number of children <13 years of age at diagnosis who died of HIV/AIDS	46
Estimated number of children < 13 years of age diagnosed with AIDS	67

IV. OVERVIEW OF PERINATAL HIV TRANSMISSION IN TEXAS

Patterns of perinatal HIV transmission in Texas are similar to the national trends. In Texas, HIV-positive women have delivered 4,570 children since the beginning of the epidemic through the end of 2005 (Table 3). Of all children born to HIV positive women, 16% have become infected with HIV and close to half of all HIV-infected children have developed AIDS. HIV positive women have delivered more than 2,400 infants between 1999 through 2005 in Texas. Among all infants born to HIV positive women, there has been a reduction from 7.8% (n=24) perinatal HIV transmission in 1999 to 1.5% (n=5) in 2005 (Figure 5 and Figure 6). This decline in perinatal HIV transmission represents an overall reduction of 80% from 1999 to 2005.

Table 3: Current HIV Status of Children Born to HIV-infected Women, as of July 2007, Texas

Perinatally HIV-Infected Children (Statewide)	N
HIV-infected, non-AIDS	360
AIDS	349
<i>Diagnosed before 13 years</i>	325
<i>Diagnosed at 13 years or older</i>	24
Total HIV-infected Children	709
Children with Perinatal HIV Exposure (Statewide)	N
HIV-uninfected	2,452
Indeterminate status	1,409
Total Children	4,570

Figure 5: Current HIV Classification of Children (n=4,570) Born to HIV-Infected Women in Texas, 1974-2005

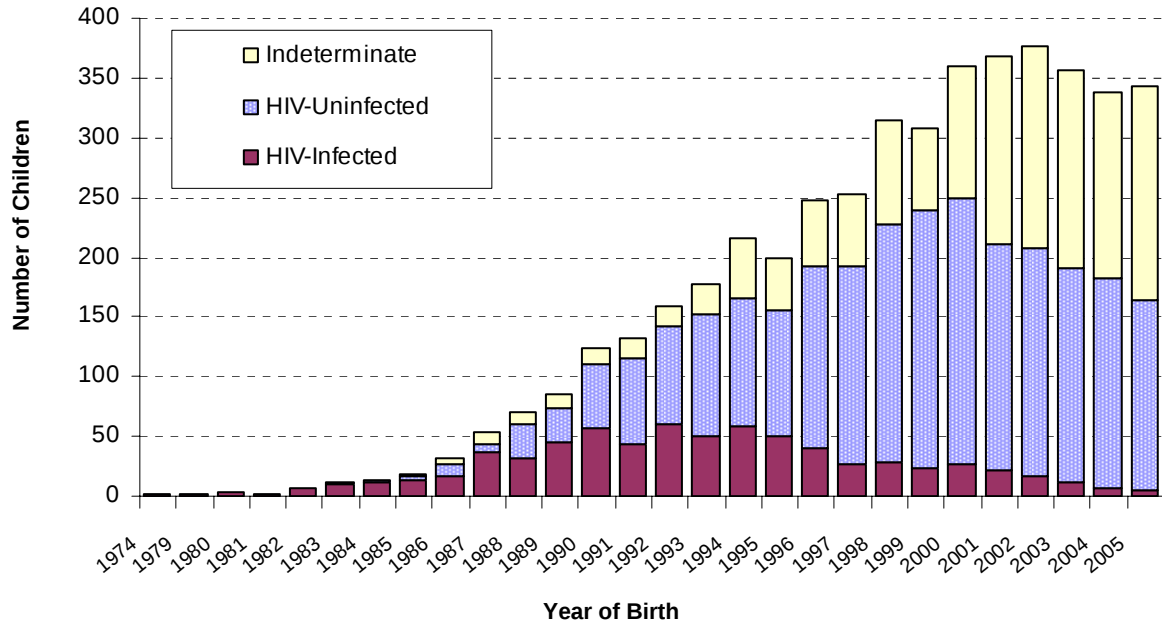


Figure 6: Children Classified as HIV-Infected (n=709) and Born to HIV-Infected Women in Texas, 1974-2005

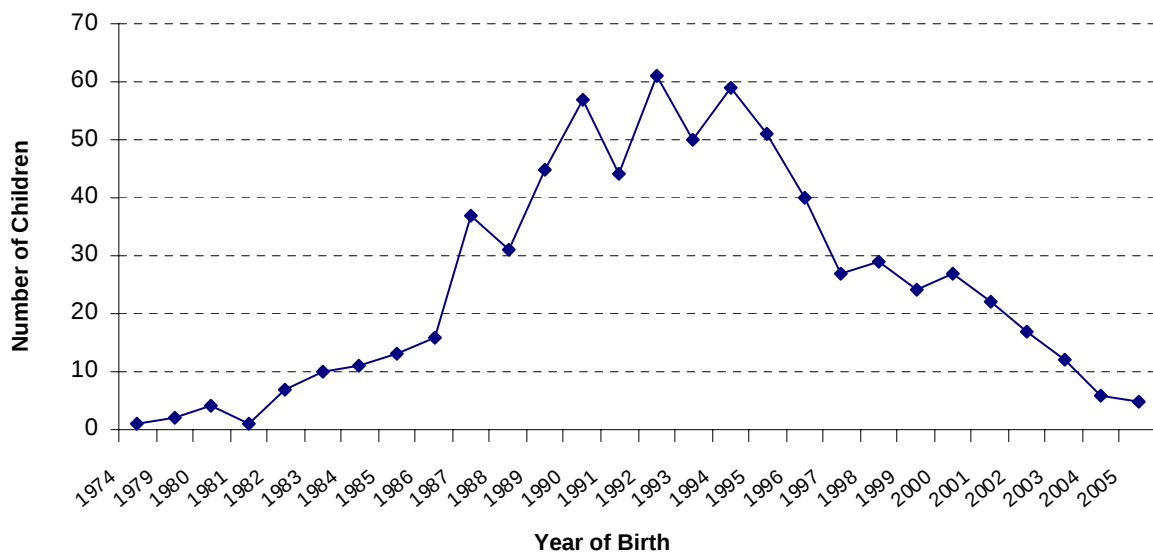
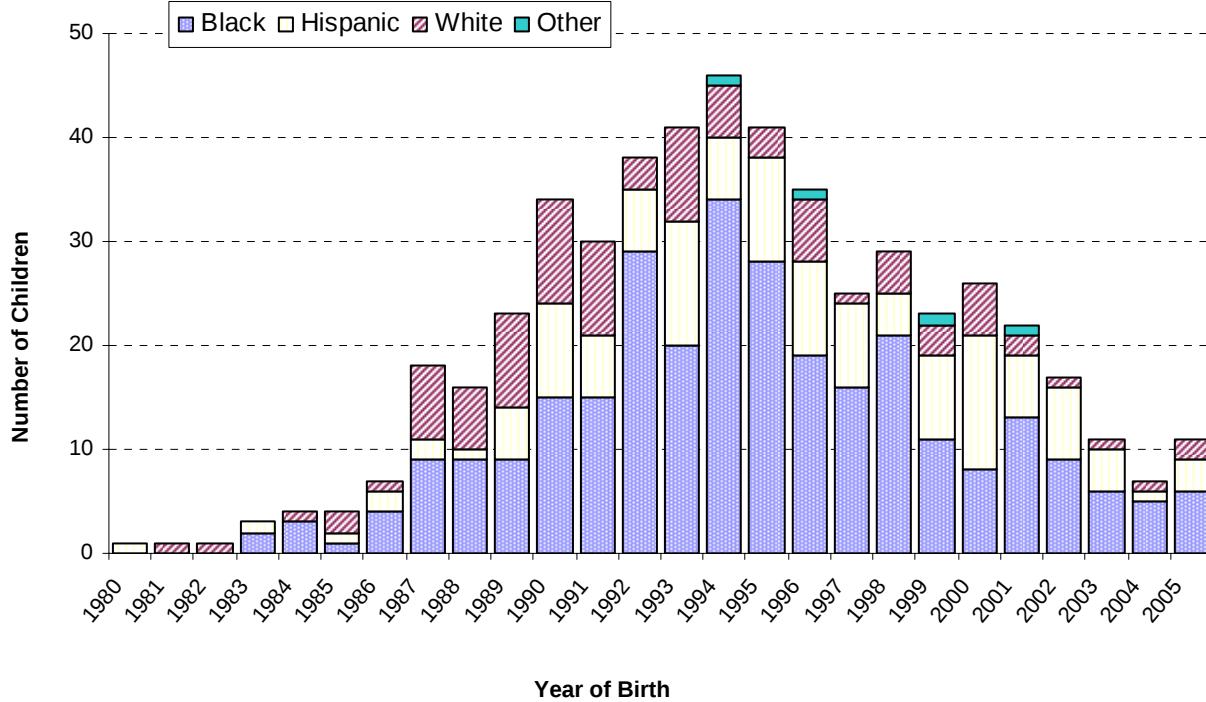


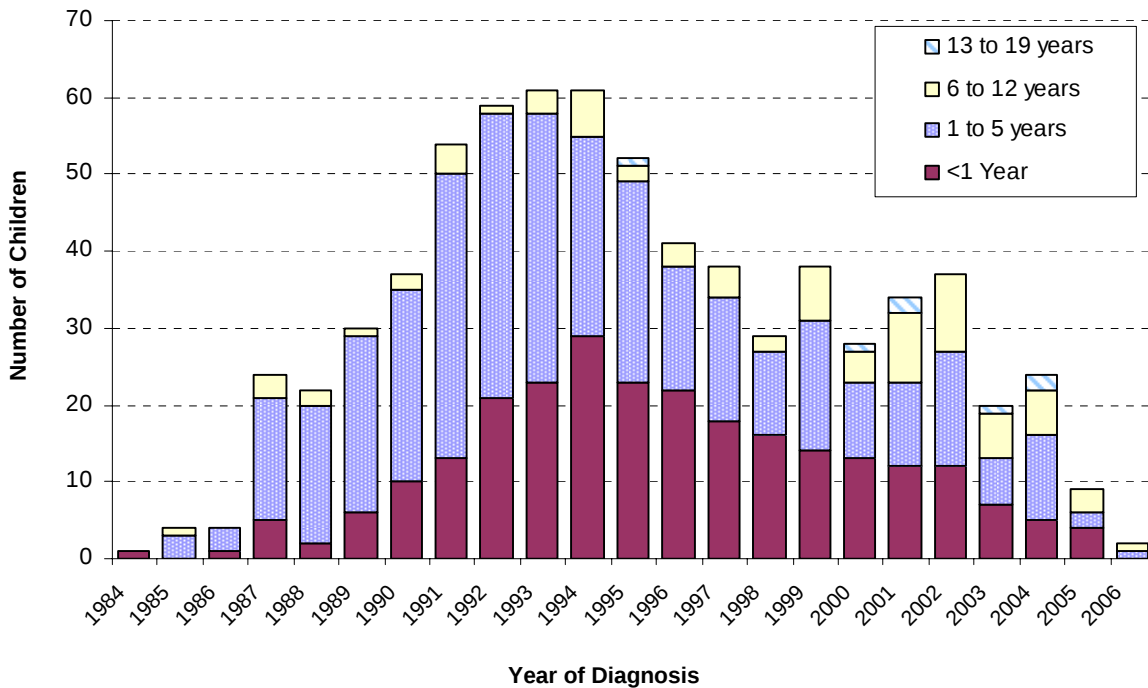
Figure 7: Racial/Ethnic Distribution of Living* Perinatally HIV-Infected Children (N=514) by Year of Birth, 1984-2005, Texas



*Living between 1/01/2005 and 12/31/2005.

Among persons living with HIV and perinatally infected, 57% (292) are Black, 24% (125) are of Hispanic origin, and 18% (93) are White (Figure7). Even though the majority of persons living with HIV and who were perinatally infected are Black, the composition in the last 5 years has been gradually changing. From 1995-1999 25% of persons were of Hispanic origin and from 1999-2005, 36% were of Hispanic origin. From 1995-1999, 62% of persons were Black and from 1999-2005, 50% were Black.

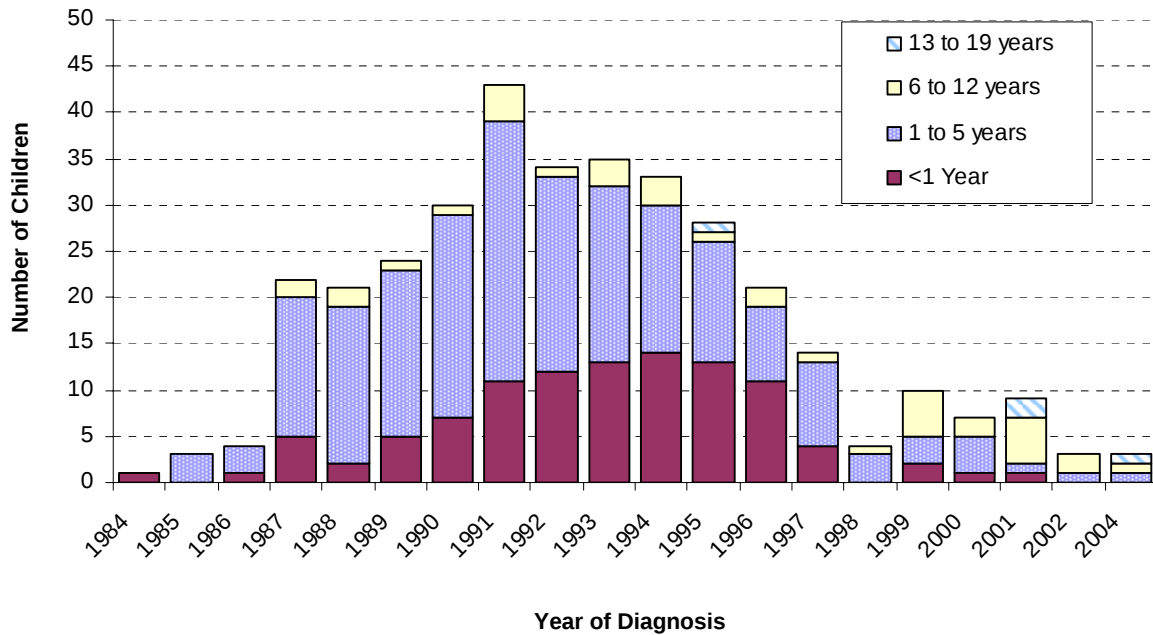
Figure 8: Age at HIV Diagnosis of Perinatally HIV-Infected Children (N=709) by Year of Diagnosis, 1984-2005, Texas



Perinatal HIV infections peaked in 1993 (n=61) and 1994 (n=61), and the numbers have dramatically decreased since that period (Figure 8). This decline in the number of children diagnosed with HIV is likely due to the increased use of antiretroviral therapy during pregnancy, labor and delivery and neonatally by the child.

Despite the availability of PCR testing, which is used to determine the child's HIV infection status as early as 4 months of age, more than 60% of children remain undiagnosed until one year of age or older from 1999-2005. Additionally, among all perinatal exposures, close to one third of children remain undiagnosed (indeterminate HIV status).

Figure 9: Age at AIDS Diagnosis of Perinatally HIV-Infected Children (N=349) by Year of Diagnosis, 1984-2005, Texas



A decline in the number of perinatally infected children who have been diagnosed with AIDS is evident in Figure 9. Not only are fewer children being diagnosed with AIDS at less than 13 years of age, but fewer are also being diagnosed with AIDS at less than 1 year of age.

Geographic Breakdown of Perinatal Exposures

The subsequent tables (Table 4) provide a breakdown of births to HIV-infected women and non HIV- infected women by geographic area of residence at birth.

Table 4: Live Births to Texas Women and HIV Positive Women by Year of Infant Birth and Area of Residence at Birth, 2001-2005*

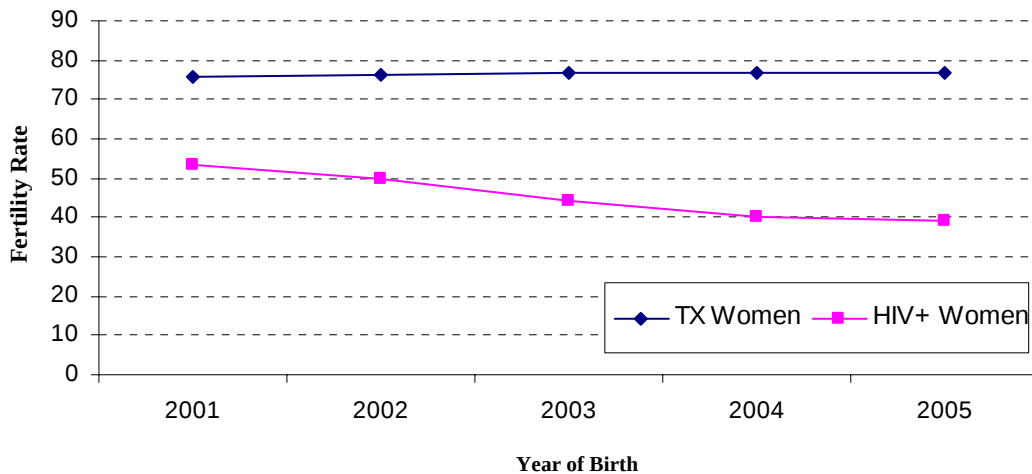
	2001			2002			2003			2004			2005		
Residence Area At Birth	Births (All of Texas)	HIV+ Women Delivering	Number of Infected Children	Births (All of Texas)	HIV+ Women Delivering	Number of Infected Children	Births (All of Texas)	HIV+ Women Delivering	Number of Infected Children	Births (All of Texas)	HIV+ Women Delivering	Number of Infected Children	Births (All of Texas)	HIV+ Women Delivering	Number of Infected Children
<i>Austin TGA</i>	22,381	18	2	22,478	9	1	22,768	12	0	23,485	13	0	23,834	12	0
<i>Dallas EMA</i>	65,927	76	3	66,629	78	2	67,283	78	2	67,892	69	1	68,442	86	1
<i>Fort Worth TGA</i>	29,835	17	3	30,454	29	1	31,227	18	0	31,349	15	0	31,652	16	0
<i>Houston EMA</i>	75,340	167	10	77,936	180	7	79,664	160	3	80,443	167	2	81,262	158	2
<i>San Antonio TGA</i>	26,443	9	1	27,748	9	0	27,788	8	1	28,353	8	0	28,943	24	0
<i>East Texas</i>	32,849	41	1	34,042	34	1	33,883	37	2	34,284	32	1	34,173	20	0
<i>U.S.-Mexico Border</i>	50,375	15	1	50,926	15	1	51,635	21	1	52,667	9	0	53,045	8	0
<i>All Other Texas</i>	61,942	18	0	62,156	10	1	63,126	11	1	62,968	15	1	64,186	12	1
<i>Unknown</i>	-	8	1	-	12	3	-	11	2	-	10	1	-	7	1
Total-Texas	365,092	369	22	372,369	376	17	377,374	356	12	381,441	338	6		343	5

*Final number of births by residence area is currently not available for year 2005.

Fertility Rates

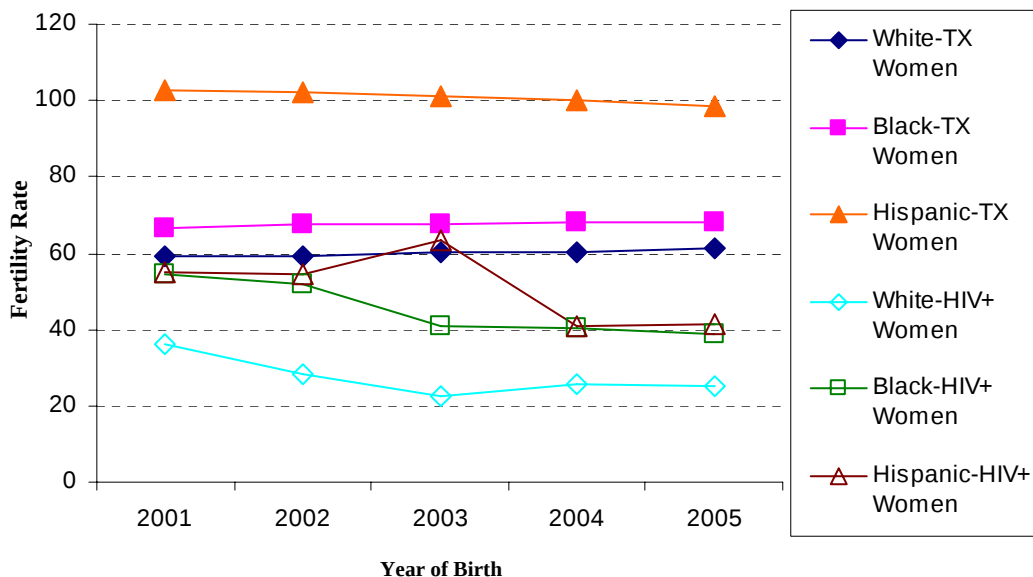
In Texas, there has been a gradual increase in the overall fertility rate from 2001 (75.7 per 1,000)* to 2005 (76.8 per 1,000)*. However, fertility rates among HIV positive women in Texas have declined despite a relatively constant number of women delivering each year. Among HIV positive women residing in Texas, the fertility rate has decreased from 53.4 to 39.3 per 1000 women between 2001 and 2005 (Figure 10). On average, the overall fertility rate among women in Texas has been 1.7 times greater than that of HIV positive women.

Figure 10: Comparison of Fertility Rates* among Texas Women and HIV+ Women



*Fertility Rates are calculated based on live births per 1000 women aged 15-44 years of age.

Figure 11: Fertility Rates* for Texas Women and HIV+ Women by Race/Ethnicity



*Fertility Rates are calculated based on live births per 1000 women aged 15-44 years of age.

In Texas, fertility rates have been highest among Hispanic women, followed by Black women and then White women (Figure 11). On average, the fertility rate of Hispanic women was 33% higher than the fertility rate of Black women between 2001 and 2005. Among HIV positive women, Hispanic women also had the highest fertility rates. However, the fertility rate among Black HIV positive women has generally been no more than 7% lower compared to Hispanic HIV positive women, with the exception of 2003, when the fertility rate for Hispanic HIV positive women was 36% higher than that of Black women. Between 2001 and 2005, the fertility rate for White HIV positive women has been consistently lower than that of Hispanic and Black HIV positive women.

Figure 12: Fertility Rate* by Region and Year of Birth-All Women. TX

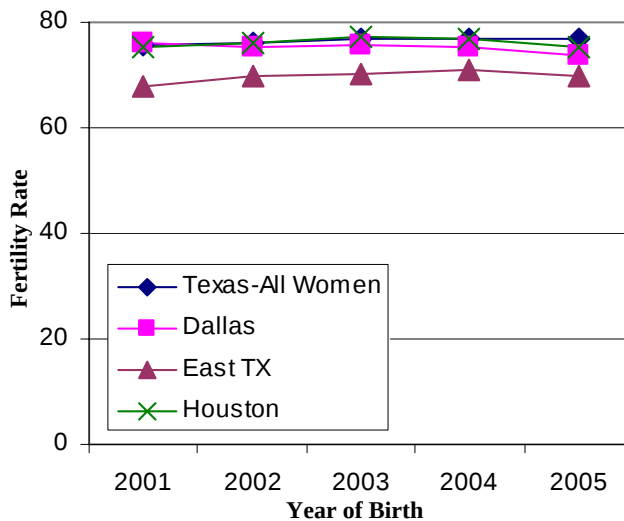
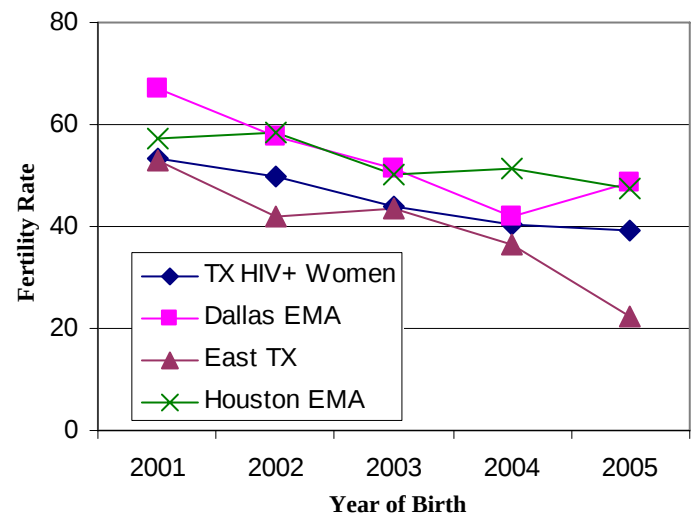


Figure 13: Fertility Rate* by Region and Year of Birth-HIV+ Women, TX



*Fertility Rates are calculated based on live births per 1000 women aged 15-44 years of age.

Figures 12 and 13 provide a comparison of fertility rates by geographic area. The figures compare fertility rates for women from the general Texas population to HIV positive women in Texas. The comparisons are based on geographic areas with at least 20 births per year (2001-2005), which included the Dallas EMA, Houston EMA, and East Texas. The overall Texas population of women had higher fertility rates than HIV positive women, regardless of the geographic area. Women from the general Texas population in the Dallas EMA and the Houston EMA had the highest fertility rates from 2001 through 2005.

V. ENHANCED PERINATAL SURVEILLANCE DATA

As of January 2008, a total of 2,261 mother-infant pairs, representing 2,196 pregnancies, had been reported through EPS from 1999-2005. However, there are an additional 207 mother-infant pairs that have been reported into HARS but for which no EPS data has been collected. These 207 mother-infant pairs have limited information available but have also been included in this report. Within this time period, 116 infants were diagnosed with HIV.

This section describes the population of HIV-infected women who gave birth to live infants from 1999-2005. This information can be used to further focus perinatal prevention efforts in Texas. The data are presented by child's birth year to allow the reader to better understand the characteristics of this population for each year.

Demographics of Women Delivering Perinatally HIV Exposed Infants

The racial/ethnic distributions of HIV-infected women who resided in Texas and delivered an infant between 2001 and 2005 show that Black women were disproportionately represented in this group. Sixty-two percent of women who delivered an infant between 2001 through 2005 were Black, 21% were Hispanic and 13% were White. From 2001-2005, close to half of all women who delivered an infant were 25-34 years of age, and 35% were 18-24 years of age. Heterosexual contact was the most commonly reported (70%) mode of exposure among women who resided in Texas and delivered an infant from 2001-2005, while a smaller percentage of women (11%) reported intravenous drug use.

The demographic breakdown of HIV positive women delivering in Texas follows in Tables 5 and 6.

Table 5: Select Demographics for All Texas Women Delivering and for HIV+ Women Delivering, Texas, 2001-2005

2001				2002			2003			2004			2005		
	Number of Women Delivering	Number of HIV+ Women Delivering	Rate	Number of Women Delivering	Number of HIV+ Women Delivering	Rate	Number of Women Delivering	Number of HIV+ Women Delivering	Rate	Number of Women Delivering	Number of HIV+ Women Delivering	Rate	Number of Women Delivering	Number of HIV+ Women Delivering	Rate
Race/Ethnicity															
White	136,877	54	3.9	135,598	50	3.7	135,812	42	3.1	133,994	44	3.3	134,523	47	3.5
Black	39,902	228	57.1	40,827	236	57.8	40,909	200	48.9	41,306	204	49.4	41,531	221	53.2
Hispanic	170,005	64	3.8	176,486	71	4.0	180,536	88	4.9	185,679	63	3.4	189,378	75	4.0
Other/Unk	13,180	7	5.3	14,075	16	11.4	14,381	22	15.3	14,659	21	14.3	14,338	7	4.9
Age Group															
Under 15	1,063	0	-	995	0	-	960	0	-	967	1	-	898	0	0
15-17	18,564	9	4.8	18,605	10	5.4	18,159	4	2.2	18,176	4	2.2	17,972	5	2.8
18-24	136,538	156	11.4	138,960	120	8.6	138,660	125	9.0	139,586	107	7.7	139,591	103	7.4
25-34	166,685	147	8.8	170,314	180	10.6	174,539	168	9.6	176,459	170	9.6	178,746	190	10.6
35-44	36,796	40	10.9	37,773	49	13.0	38,959	40	10.3	40,079	36	9.0	42,221	49	11.6
Unk	0	1	-	0	14	-	0	15	-	0	14	-	-	3	-

*The number of women delivering (for the entire state of Texas) by race/ethnicity and age group are based on provisional data from the DSHS Vital Statistics Unit.

Table 6: HIV+ Women Delivering by Year of Delivery and Mode of Exposure, Texas, 2001-2005

	2001	2002	2003	2004	2005
Mode of Exposure					
Blood/Blood Product	2	2	1	2	1
Heterosexual Contact	234	253	253	233	251
Intravenous Drug Use	54	47	35	25	28
Pediatric*	1	1	2	3	1
Not Specified/Unknown	62	70	61	69	69

*Pediatric refers to any pediatric mode of exposure including mother to child HIV transmission, transfusion transplant recipient and other/unknown pediatric mode of transmission.

Preventive Factors to Reduce Perinatal HIV Transmission

The risk of perinatal HIV transmission can be lessened through preventative factors such as receipt of prenatal care, receipt of antiretroviral therapy (ART), timing of HIV diagnosis, and through avoidance of breastfeeding.

Prenatal Care

Preventing HIV transmission from mother to child is also dependent upon receiving prenatal care because it increases women's access and adherence to ART and provides an opportunity for women to be tested for HIV.² A woman who receives prenatal care is also more likely to receive counseling from her prenatal care provider regarding breastfeeding practices.

Table 7: Prenatal Care of HIV-Infected Women, by Year of Infant Birth, 1999-2005, Texas

	Year of Infant Birth													
	<u>1999</u>		<u>2000</u>		<u>2001</u>		<u>2002</u>		<u>2003</u>		<u>2004</u>		<u>2005</u>	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Any Prenatal care														
Yes	241	81	271	79	298	84	311	83	258	73	238	72	272	78
No	21	7	22	6	24	7	24	6	31	9	12	4	21	6
Unknown	37	12	48	14	31	9	38	10	63	18	82	25	57	16
Prenatal care visits														
1-2 visits	46	17	66	21	80	24	45	13	58	18	46	14	59	18
>=3 visits	194	70	205	64	217	66	265	76	200	62	192	60	213	65
Unknown	38	14	48	15	32	10	39	11	63	20	82	26	57	17
Subtotal	278	14	319	16	329	17	349	18	321	16	320	16	329	17
Total	299		341		353		373		352		332		350	

Among HIV positive women delivering an infant with documented receipt or non-receipt of prenatal care (n=2,044), 93% of women visited a prenatal care provider at least once during their pregnancy (Table 7). Among women with documentation of the initiation of prenatal care (n=1,285), more than half of women (57%) began prenatal care in the first trimester, 31% began prenatal care in the second trimester, and 12% began prenatal care in the third trimester. Among women who did not receive prenatal care (n=155), 9% of the infants became infected, compared with only 4% of infants becoming infected among women who received any prenatal care.

In order to further assess the adequacy of prenatal care, the Kessner Index was used for this report. In epidemiologic studies, the Kessner Index is the most widely used index for categorizing adequacy of prenatal care. The Kessner Index is based on the month of pregnancy that prenatal care started, the number of prenatal care visits, and the length of gestation. The Kessner Index classifies prenatal care as adequate, inadequate, intermediate, or unknown and adjusts for the fact that women with short gestations have less time to make prenatal care visits.

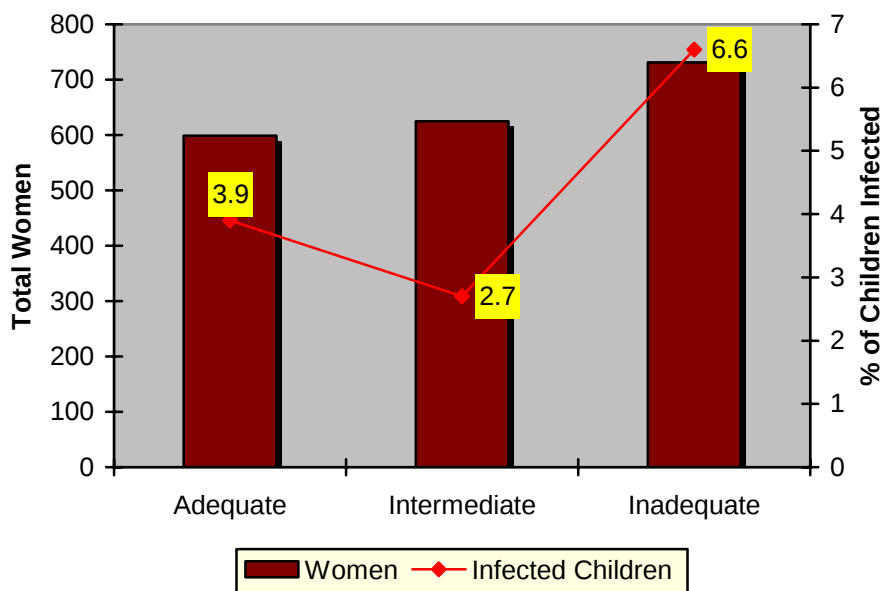
Table 8: Adequacy of Prenatal Care based on the Kessner Index for HIV-Infected Women, by Year of Infant Birth, 1999-2005, Texas*

Kessner Index	Year of Infant Birth													
	1999		2000		2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Adequate	86	33	75	27	97	31	126	39	75	27	86	37	99	35
Intermediate	83	32	85	30	91	29	101	31	99	35	83	36	87	30
Inadequate	89	34	123	43	130	41	100	31	107	38	63	27	100	35
Subtotal	258		283		318		327		281		232		286	
Total	258		283		318		327		281		232		286	

*Women with unknown level of prenatal care based on the Kessner Index have been excluded.

The percentage of women receiving either adequate or intermediate prenatal care based on the Kessner Index and excluding unknowns, remained relatively unchanged from 66% in 1999 to 65% in 2005. During this same time period, the percentage of women receiving inadequate prenatal care remained relatively unchanged (Table 8). Among HIV positive women delivering from 1999-2005, approximately ten percent more White women received adequate prenatal care compared to Black or Hispanic women. Hispanic women (33%) were more likely to receive inadequate prenatal care than any other race or ethnicity, 31% of Black women received inadequate prenatal care and 23% of White women received inadequate prenatal care.

Figure 14: Adequacy of Care among HIV+ Women Delivering and Proportion of Infected Children in Texas, 1999-2005*



*Women with unknown level of prenatal care based on the Kessner Index have been excluded.

In Texas, 3.3% of infants born to HIV positive women who delivered between 1999-2005 and received adequate or intermediate prenatal care based on the Kessner Index became infected with HIV. On the other hand, close to 7% of infants born to HIV positive women who received inadequate prenatal care became infected with HIV (Figure 14). When comparing adequacy of prenatal care within racial/ethnic groups, the highest percentage of HIV-infected infants occurred among women receiving an inadequate level of care : among Black women 46% of infants were infected; among Hispanic women 42% of infants were infected; and among White women 36% of infants were infected.

Antiretroviral Therapy

The transmission of HIV from mother to child can be decreased through the administration of antiretroviral therapy (ART) at the recommended periods: during pregnancy, at labor and delivery, and neonatally by the child (Table 9.) For purposes of this report ART is defined as any type of antiretroviral medication including combination drugs, entry and fusion inhibitors, integrase inhibitors, non-nucleoside reverse transcriptase inhibitors, nucleoside reverse transcriptase inhibitors or protease inhibitors.

Among women with documented receipt or non-receipt of ART during the prenatal period, an average of 84% of women received ART from 1999-2005. In birth year 1999, 84% of women received ART during the prenatal period and in 2005, 83% of women received ART during the prenatal period.

Among women with documented receipt or non receipt of ART during labor and delivery, an average of 86% of women received ART from 1999-2005. In birth year 1999, 88% of women received ART during labor and delivery and in 2005, 85% of women received ART during labor and delivery.

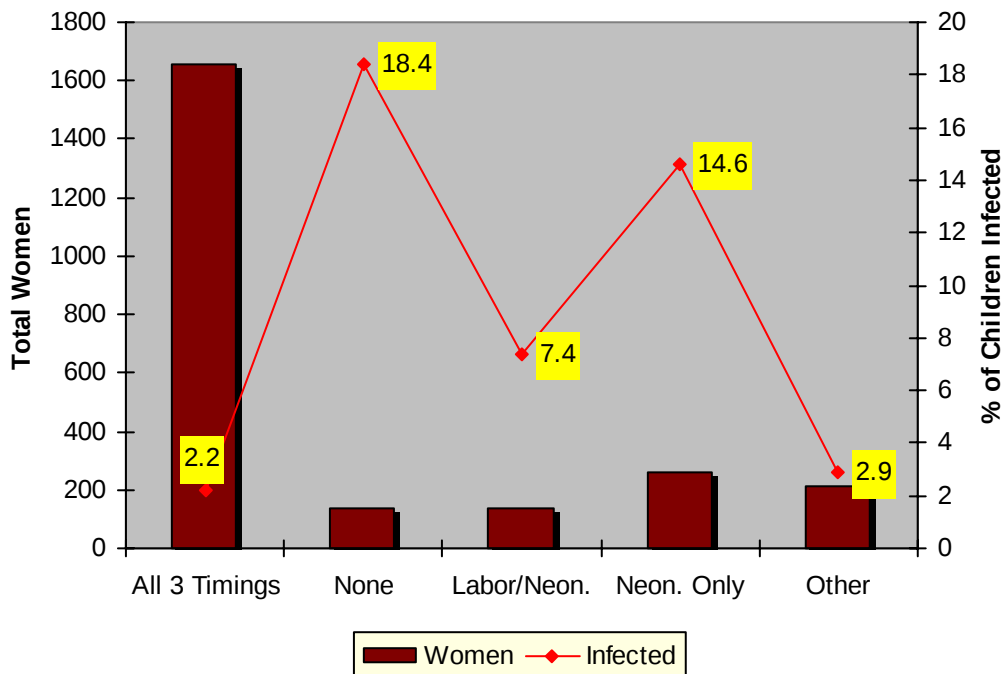
Among infants with documented receipt or non receipt of ART, an average of 97% of infants received ART neonatally from 1999-2005. In birth year 1999, 98% of infants received ART neonatally and in 2005, 98% of infants received ART neonatally.

Table 9: Receipt of antiretroviral therapy* by HIV-infected women and HIV-exposed infants, by timing of receipt and year of infant birth, 1999-2005, Texas

	Year of Infant Birth													
	<u>1999</u>		<u>2000</u>		<u>2001</u>		<u>2002</u>		<u>2003</u>		<u>2004</u>		<u>2005</u>	
Receipt of antiretroviral therapy	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Prenatal period														
Yes	238	79.6	264	77.4	292	82.7	293	78.6	270	76.7	239	72	264	75.4
No	45	15.1	58	17	57	16.1	65	17.4	55	15.6	28	8.4	53	15.1
Unknown	16	5.4	19	5.6	4	1.1	15	4	27	7.7	65	19.6	33	9.4
Intrapartum Period														
Yes	236	78.9	255	74.8	283	80.2	299	80.2	276	78.4	252	75.9	275	78.6
No	33	11	52	15.2	51	14.4	54	14.5	47	13.4	25	7.5	48	13.7
Unknown	30	10	34	10	19	5.4	20	5.4	29	8.2	55	16.6	27	7.7
Neonatal Period														
Yes	268	89.6	300	88	318	90.1	345	92.5	316	89.8	296	89.2	329	94
No	7	2.3	12	3.5	7	2	8	2.1	12	3.4	4	1.2	7	2
Unknown	24	8	29	8.5	28	7.9	20	5.4	24	6.8	32	9.6	14	4
All Three Periods	205	68.6	227	66.6	251	71.1	266	71.3	239	67.9	222	66.9	249	71.1
Total	299		341		353		373		352		332		350	

*Receipt of ART is defined as having received any type of antiretroviral medication including combination drugs, entry and fusion inhibitors, integrase inhibitors, non-nucleoside reverse transcriptase inhibitors, nucleoside reverse transcriptase inhibitors or protease inhibitors.

Figure 15: Receipt of Antiretroviral Therapy among HIV+ Women Delivering and Proportion of Infected Children in Texas, 1999-2005*



In Texas, 69% of HIV positive women who delivered an infant between 1999-2005 received ART at all three opportunities for intervention: during pregnancy, at labor and delivery, and neonatally by the infant. When ART was received during all three periods, only 2.2% of infants became infected with HIV (Figure 15). Eighteen percent of infants became infected when ART was not administered at any of the three recommended periods (Figure 15).

White HIV positive women delivering between 1999-2005 were more likely to receive ART at all three intervals. Seventy-seven percent of White women received ART at all three intervals; 69% of Hispanic women received ART at all three intervals and 68% of Black women received ART at all three intervals. Hispanic women (7%) were more likely to not receive ART at any interval compared to Black (5%) and White (4%) HIV positive women delivering between 1999-2005. Among Black women receiving no ART at any interval, 18% of infants were infected compared to 21% among both White and Hispanic women.

Timing of HIV Diagnosis

Awareness of HIV serostatus is important in decreasing perinatal HIV transmission. By knowing a woman's HIV status, the provider can recommend proper treatment and assure her HIV clinical history is properly monitored until the birth of the child.

Table 10: Timing of HIV Diagnosis for HIV Positive Women Delivering, 1999-2005, Texas

	Year of Infant Birth													
	<u>1999</u>		<u>2000</u>		<u>2001</u>		<u>2002</u>		<u>2003</u>		<u>2004</u>		<u>2005</u>	
Timing of HIV Diagnosis	HIV+ Women	% Infected Infants	HIV+ Women	% Infected Infants	HIV+ Women	% Infected Infants	HIV+ Women	% Infected Infants	HIV+ Women	% Infected Infants	HIV+ Women	% Infected Infants	HIV+ Women	% Infected Infants
Before This Pregnancy	157	3.2	165	3.6	189	3.2	216	4.2	227	1.8	228	1.3	230	0.4
During This Pregnancy	94	4.3	125	5.6	133	9.0	131	3.1	103	3.9	83	2.4	89	1.1
At Delivery or After Delivery	35	42.9	38	34.2	27	14.8	24	12.5	21	28.6	18	5.6	30	10.0
HIV Infected-Unknown When Diagnosed	13	0.0	12	0.0	4	0.0	2	100.0	1	0.0	3	0.0	1	0.0
Mom Refused HIV Testing	0	---	1	100.0	0	---	0	---	0	---	0	---	0	---
Total	299		341		353		373		352		332		350	

Among women delivering, the majority were diagnosed as HIV positive prior to the current pregnancy (59%), followed by women diagnosed during pregnancy (32%) and last by women diagnosed at or after delivery (8%). Increasingly a higher proportion of women are being diagnosed before pregnancy (53% in 1999 and 66% in 2005). Further, a lesser proportion of women are being diagnosed at or after delivery (12% in 1999 and 9% in 2005). As shown in Table 10, most women were tested for HIV before the current pregnancy or during pregnancy. On average, as few as 3% (68/2170) of children born to HIV positive women diagnosed prior to delivery from 1999-2005 became HIV-infected. However, the percentage of children born to women who were diagnosed at or after delivery and were HIV-infected was 23% (45/193).

Tables 11 and 12 provide more detailed information about the timing of HIV diagnosis among women diagnosed before becoming pregnant and women diagnosed during pregnancy:

Table 11: Timing of HIV Diagnosis for Women Diagnosed Prior to Current Pregnancy, Texas, 1999-2005*		
Timing of Diagnosis	Total	Percent
>9 Months to 1 Year Before Delivery	43	3
>1 Year to 2 Years Before Delivery	255	18
>2 Years to 5 Years Before Delivery	576	41
More than 5 Years Before Delivery	432	31
Unknown	106	8

*Percent Totals May not add up to 100 due to rounding.

Table 12: Timing of HIV Diagnosis for Women Diagnosed During Pregnancy, Texas, 1999-2005		
Timing of Diagnosis	Total	Percent
0 to 3 Months Before Delivery	160	21
>3 Month to 6 Months Before Delivery	289	38
>6 Months to 9 Months Before Delivery	259	34
Unknown	50	7

Finally, among all HIV positive women delivering, Hispanic women were two times more likely to be diagnosed at or after delivery than Black or White women. Among HIV positive women delivering, 14% of Hispanic women were diagnosed at or after delivery, 7% of White women were diagnosed at or after delivery and 6% of Black women were diagnosed at or after delivery. White and Hispanic women delivering an HIV-infected infant were more likely to be diagnosed at or after delivery compared to Black women. Among HIV positive women delivering an HIV-infected infant, 50% of Hispanic women were diagnosed at or after delivery compared to 43% of White women and 30% of Black women.

AIDS Diagnosis

Among HIV positive women that delivered between 1999-2005, 41% (n=973) have been diagnosed with AIDS. 36% (n=354) of women were diagnosed with AIDS before their current pregnancy, 20% (n=199) were diagnosed with AIDS during pregnancy, and 43% (n=420) were diagnosed with AIDS after delivery. The percentage of women progressing to AIDS within one month after HIV diagnosis is 21% (n=203) and the percentage of women progressing to AIDS within one year of HIV diagnosis is 14%

(n=134). Fifty-six percent of women that progressed to AIDS within one year of HIV diagnosis are Black, followed by Hispanic women (26%), and White women (15%).

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