

Pediatric Spectrum of HIV Disease (PSD) Annual Summary Report 1988-2003

September 2004



Los Angeles County Department of Health Services
Acute Communicable Disease Control

Los Angeles Pediatric Spectrum of HIV Disease (PSD) Annual Summary Report September 2004

Table of Contents

Introduction 3
Executive Summary4
Table 1. Reported Children by CDC Classification and Residence at Diagnosis of HIV 5
Table 2. Reported Children by Transmission Category 5
Table 3. Reported Perinatal Children by Race and Mother's Risk Factor 5
Table 4. Reported Children by Race/Ethnicity and AIDS Classification
Table 5. Reported Children by Transmission Category, CDC Classification and
Gender 6
Table 6. Reported Children by Transmission Category and Race/Ethnicity 6
Table 7. Reported Children by Primary Caretaker and Transmission Category 6
Table 8. Reported Perinatal Children by Primary Caretaker and Race/Ethnicity 6
Table 9. Reported Case-Fatality Rate by CDC Classification
Table 10. Reported Diagnoses for Cases with an AIDS Defining Illness
Table 11. Reported AIDS Cases by Age at Diagnosis and Transmission Category
Table 12. Reported AIDS Case-Fatality by Half-Year Diagnosis
Figure 1. AIDS Cases by Year of Diagnosis and Transmission Category
Figure 2. Distribution of CDC-defined CD4 Immunosuppression Categories and
HAART 9
Figure 3. Percent of Infected Children and Adolescents with Undetectable HIV Viral
Load* Ever and at Last Medical Contact by Year, 1996-2003
Table 13. Reported Children Currently Followed* by Age at Last Contact and Mode
of Transmission10
Table 14. Reported Children Currently Followed* by Hospital** and CDC
Classification11
Table 15. Reported Children by Latest Hospital ** and Latest CDC Classification
Table 16. Reported Children by CDC Classification and Enrollment Year 11
Table 17. Percent of Perinatally Exposed Children Born 1995-2003 with Maternal
ZDV by Birth Year 12
Table 18. Type of Delivery Among the Perinatally Exposed Children Born 1995-
2003 12
Table 19. Perinatally Exposed Children Born 1995-2003 by Latest CDC
Classification and Birth Year12
Figure 4. Rates of Perinatal HIV Transmission and Maternal Zidovudine (ZDV*) for
Reported Babies Born in LAC, 1995-200313
Figure 5. Percent of LAC Mothers and Newborns with ZDV* by Prenatal Care, 1995-
2003 13
PSD PUBLICATIONS

Introduction

The Pediatric Spectrum of HIV Disease (PSD) study is a U.S. Centers for Disease Control and Prevention (CDC) sponsored medical records-based project. It is designed to evaluate trends in pediatric HIV exposure and infection as well as the clinical course and treatment utilization of children infected with and perinatally exposed to HIV infection being cared for in Los Angeles County (LAC). LAC is one of 6 sites in the U.S. that was selected to participate in the study beginning in 1989. Data are collected from the medical records of HIV-infected and exposed children at one of the 9 pediatric HIV-specialty clinics in LAC including Long Beach and Pasadena: Cedars-Sinai Medical Center, Childrens Hospital of Los Angeles, Harbor-UCLA, Kaiser Permanente Hospitals of Southern California, Long Beach Memorial Miller Children's Hospital, Los Angeles County-USC Medical Center, Martin Luther King Jr./Drew Medical Center, and UCLA.

Trained nurses and research analysts review medical records for basic demographic data: HIV risk information; AIDS-defining conditions; other infections and conditions, treatment and prophylaxis; and laboratory data that includes CD4 lymphocyte counts and viral load measurements. The medical records of individual patients are abstracted every 6 months. The mean number of months of follow-up in PSD of infected children is 6½ years.

This annual report describes 2008 children (including those who are now adolescents) with pediatric HIV infection and or exposure in LAC including all the cumulative AIDS cases reported before 1988. Because the proportion of exposed but uninfected children reported changed over time with enhanced prenatal HIV testing of pregnant women, the demographic characteristics are given for the 729 children who are infected or of still indeterminate status (Tables 1-8). In order to classify as many children as possible into the infected or uninfected categories, the national and local PSD project added a Reviewed Uninfected classification which used the following criteria: No positive HIV culture, HIV DNA, HIV RNA, or HIV p24 antigen ever; at least 2 negative DNA PCR tests; and at least 1 negative DNA PCR over 8 weeks of age (56 days). Tables 9-13 and Figures 1-3 focus on infected children and adolescents and those with an AIDS diagnosis. Tables 14 and 15 describe children currently followed in LAC, and Tables 16-20 describe the entire cohort.

Active data collection for PSD has ended on September 30, 2004. We will continue to analyze the data through the coming year. A list of publications on the national and Los Angeles County PSD data is also included. If you have any questions regarding the PSD study, please contact Dr. Laurene Mascola at the Acute Communicable Disease Control Program at 213-240-7941 or Dr. Toni Frederick at 323-226-2495.

Continued surveillance of HIV-infected and exposed children will continue by the HIV-Epidemiology Program of the LACDHS. If you have further questions regarding pediatric HIV reporting, please contact Azita Naghdi at the HIV Epidemiology Program at 213-351-8516.

Executive Summary

Pediatric HIV and AIDS continue to be a serious public health issue, both locally and worldwide. Since the mid-90's, the number of incident HIV and AIDS cases in LAC has decreased from 32 cases in 1998 to only 8 in 2001 and 14 in 2002. This may be due to medical advances, especially treatments that reduce the likelihood of perinatal transmission of HIV infection, coupled with advances in detection and maternal education. In 2003, 22 infected children were reported including 6 who were born in 2003. This was the greatest number of infected children reported in 5 years. New cases occur primarily among mothers who were never tested during their prenatal care, and those who received little or no prenatal care; these mothers tend to be at highest risk for HIV infection and subsequent transmission of HIV to their babies. These numbers also reflect a continuing trend of children with HIV coming to LAC from foreign countries and neighboring counties for treatment and follow up, as well as missed opportunities for perinatal prevention from babies born to women in earlier birth cohorts.

To try to increase the number of pregnant women tested for HIV during prenatal care, HIV was added to the list of routine prenatal tests mandated by California law (California Health and Safety Code Sections 125085, 125090, 125105, and 125107). The woman must sign a consent form for the HIV test and has the right to refuse the test. However, making it a part of routine care should encourage practitioners to make sure all pregnant women are tested. If there is no documentation of the test in the medical chart, the woman is to be tested during labor and delivery, again with her consent. The OraQuick rapid test is available for rapid testing during labor and delivery so that treatment to prevent HIV transmission can be initiated for the woman and the baby if the test is positive. LAC is seeking ways to inform practitioners of the new prenatal HIV testing law. As noted in Figure 5 in this summary, among the reported births in LAC from 1995-2003, only 53% of the infected mothers with no prenatal care and 21% with unknown prenatal care received antiretrovirals at labor and delivery indicating that rapid testing at labor and delivery is not uniformly practiced to prevent perinatal HIV transmission.

In 2003, 108 HIV-exposed infants were born in LAC and reported to PSD. Eighty-six percent of their mothers received antiretrovirals during pregnancy, 89% received antiretrovirals during labor and delivery, and 83% received both. As of September 2004, 5 of these babies were HIV-infected for a transmission rate of 5%: Only 1 was identified during prenatal care and prescribed antiretroviral treatment. Continued monitoring of pediatric HIV exposure and infection will help to evaluate the effectiveness of the new law in preventing new perinatal infections.

Almost half (45%) of the cohort of children currently followed in PSD are now 12 years of age or older. They are less likely to experience an AIDS-defining condition, have severe immunosuppression and more likely to have received HAART than earlier cohorts. In 2001-2003 only 9% had severe immunosuppression. Since 1998, at least 40% of the infected cohort experienced at least one undetectable viral load each year.

Pediatric HIV/AIDS

- Incidence of pediatric HIV and AIDS has declined considerably—14 cases in 2002, from a peak of 32 cases in 1998.
- The number of children with HIVinfection reported in 2003 (n=22) was the greatest in 5 years.
- Children with HIV infection are living into their teens, receiving HAART therapy, and in 2001-2003 only 9% had severe immunosuppression.



THOMAS L. GARTHWAITE, M.D.
Director of Health Services and Chief Medical Officer
JONATHAN E. FIELDING, M.D., M.P.H.
Director of Public Health and Health Officer



BOARD OF SUPERVISORS

Gloria Molina First District

Yvonne Brathwaite Burke

Second District

Zev Yaroslavsky Third District

Don Knabe

Fourth District

Michael D. Antonovich Fifth District

DATA SUMMARY JUNE 1, 1988 THROUGH DECEMBER 31, 2003 Pediatric Spectrum of HIV Disease (PSD)

Table 1. Reported Children by CDC Classification and Residence at Diagnosis of HIV

at 2 lagiles is 0 i iii								
	L.A. County		Non-	LAC	Cumul	ative	Enrolled	l in 2003
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
AIDS	307	(17)	67	(29)	374*	(19)	3**	(2)
Infected non-AIDS	206	(12)	58	(25)	264	(13)	19	(14)
Indeterminate	73	(4)	18	(8)	91	(5)	<u>25</u>	(18)
SUBTOTAL [%]	586	[80]	143	[20]	729	[100]	47	[6]
Uninfected/Seroreverters	1186	(67)	93	(39)	1279	(64)	92	(66)
TOTAL [%]	1772	[88]	236	[12]	2008	[100]	139	(100)

Table 2. Reported Children by Mode of Transmission Category

,,	Cumulative				
Mode:	No.	(%)			
Transfusion recipient	126	(17)			
Hemophilia/coagulation disorder	39	(5)			
Perinatally acquired	550	(75)			
Mo. has AIDS/HIV+	2	210			
Mo. injection drug user (IDU)	j	120			
Mo. had sex with AIDS/HIV+ man	j	121			
Mo. had sex with IDU		60			
Mo. transfused		19			
Mo. had sex with bisexual		17			
Mo. had sex with hemophiliac or transfused man		3			
Other/Unknown	14***	(2)			
TOTAL	729	(100)			

Table 3. Reported Perinatal Children by Race and Mother's Risk Factor

			Afr	ican						
Mother's	W	hite	Ame	erican	Hisp	anic	Other/U	nknown	TC) TAL
Risk factor:	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Unknown, but has										
HIV/AIDS	16	(19)	103	(49)	87	(37)	4	(25)	210	(38)
IDU	34	(40)	56	(27)	24	(10)	6	(38)	120	(22)
Transfusion	3	(4)	5	(2)	11	(5)	0	(0)	19	(3)
<u>Heterosexual</u>	_32	(38)	47	(23)	116	(49)	6	(38)	201	(37)
TOTAL	85	[15]	211	[38]	238	[43]	16	[3]	550	(100)

^{*}Includes 80 diagnosed at ≥ 13 years of age; 67 met CD4 criteria and 13 met clinical criteria for AIDS.

^{**}Includes 2 infected at birth but AIDS diagnosed at ≥13 years of age.

^{***}Includes 4 suspected and 1 verified case of sexual abuse.

Table 4. Reported Children by Race/Ethnicity and AIDS Classification

			Classif	ication:					ĺ	
	AIL	OS	Non-AIDS		Indeterminate		Cumu	ılative	Enrolled in 2003	
Race:	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
White	86	(23)	51	(19)	11	(12)	148	(20)	14	(10)
African-American	118	(32)	87	(33)	45	(49)	250	(34)	47	(34)
Hispanic	157	(42)	116	(44)	30	(33)	303	(42)	78	(56)
Asian	10	(3)	6	(2)	3	(3)	19	(3)	0	(0)
Other/Unknown	3	(1)	4	(2)	2	(2)	_ 9	(1)	0	(0)
TOTAL [%]	374	[47]	264	[53]	91	[12]	729	(100)	139*	(100)

Table 5. Reported Children by Transmission Category, CDC Classification and Gender

		Classific	ation:			Gender:			
	AI	AIDS		Non-AIDS		Male	Female		
<u>Transmission:</u>	No.	(%)	No.	(%)	No.	(%)	No. (%)		
Transfusion Recipient	109	(29)	17	(5)	74	(20)	52 (14)		
Hemophilia/coag									
disorder	30	(8)	9	(3)	37	(10)	2 (1)		
Perinatal**	227	(61)	323	(91)	252	(68)	298 (83)		
Other/Unknown	8	(2)	6	(2)	7	(2)	7 (2)		
TOTAL [%]	374	(100)	355	(100)	370	(100)	359 (100)		

Table 6. Reported Children by Transmission Category and Race/Ethnicity

			Ai	rıcan-								
	W	hite	Am	erican	Hi	spanic	Asi	an	Other	/Unk	Cum	ulative
<u>Transmission:</u>	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Transfusion Recipient	39	(26)	33	(13)	47	(16)	6	(32)	1	(11)	126	(17)
Hemophilia/coag												
disorder	21	(14)	2	(1)	12	(4)	4	(21)	0	(0)	39	(5)
Perinatal**	85	(57)	210	(84)	239	(79)	8	(42)	8	(89)	550	(75)
Other/Unknown	_ 3	(1)	5	(2)	5	(2)	1	(5)	0	(0)	14	(2)
TOTAL [%]	148	[20]	250	[34]	303	[42]	19	[3]	9	[1]	729	[100]

Table 7. Reported Children by Primary Caretaker and Transmission Category

			Mode:		
		Trans-	Hemophilia/	Other/	
	Perinatal**	fusion	coag disorder	Unknown	Cumulative
Primary Caretaker:	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Biologic parents	353 (64)	109 (87)	32 (82)	5 (42)	499 (68)
Other relatives	78 (14)	2 (2)	1 (3)	2 (17)	83 (11)
Foster care	50 (9)	3 (2)	0 (0)	1 (8)	54 (7)
Adoptive parents	39 (7)	3 (2)	1 (3)	4 (33)	47 (6)
Other/Unknown	30 (5)	9 (7)	5 (13)	2 (17)	46 (6)
TOTAL [%]	550 [75]	126 [17]	39 [5]	14 [2]	729 [100]

Table 8. Reported Perinatal Children by Primary Caretaker and Race/Ethnicity

			Afri	can-						
	Wl	nite	Ame	erican	His	panic	Othe	r/Unk	Cumu	ılative
Primary Caretaker:	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Biologic parents	52	(61)	119	(56)	170	(71)	12	(75)	353	(64)
Other relatives	11	(13)	36	(17)	29	(12)	2	(3)	78	(14)
Foster care	9	(10)	27	(13)	13	(6)	1	(6)	50	(9)
Adoptive parents	8	(9)	17	(8)	14	(6)	0	(0)	39	(7)
Other/Unknown	_ 5	(6)	12	(6)	12	(5)	1	(6)	_30	(5)
TOTAL [%]	85	[16]	211	[38]	238	[43]	16	[3]	550	[100]

^{*}Includes the uninfected

^{**}Two due to breast-feeding.

Table 9. Reported Case-Fatality Rate by CDC Classification

	Total			Case-Fatality
CDC Classification:	Cases	Alive	Dead	Rate
AIDS	374	166	208	56%
Infected non-AIDS	264	256	8	3%
<u>Indeterminate</u>	91	83	8	9%
TOTAL	729	505	224	31%

Table 10. Reported Diagnoses for Cases with an AIDS Defining Illness (Cases can have more than 1 diagnosis)

	Cumulative (n=327)	New Diagnoses in 2003
AIDS Defining Illness:	No.	<u>No.</u>
Pneumocystis carinii pneumonia	132	0
Other opportunistic infections	221	3
Mycobacterium avium complex	78	1
Candidiasis, esophageal	72	2
CMV disease	50	0
Cryptosporidiosis	18	0
Candidiasis, bronchi, trachea, lungs	17	0
Herpes simplex	10	0
CMV retinitis	10	0
Cryptococcosis	10	0
M. tuberculosis	6	0
Progressive multi-focal leukoencephalopath	ny 5	0
Histoplasmosis	4	0
Toxoplasmosis of brain	4	0
Isosporiasis	3	0
Atypical mycobacterium	2	0
HIV-associated encephalopathy	90	1
Bacterial infections	72	0
HIV wasting syndrome	65	1
Lymphoid interstitial pneumonitis	53	0
Cancers	13	<u>1</u>
TOTAL	646	6

Table 11. Reported AIDS Cases by Age at Diagnosis and Transmission Category Mode:

]	Hemophilia/coagula	ntion			
Age at Diagnosis	Transfusion	disorder	Perinatal	Other/Unk.	Cumulative	
(in years)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
<1	6 (6)	0 (0)	91 (40)	0 (0)	97 (26)	
1-2	12 (11)	0 (0)	60 (26)	1 (13)	73 (20)	
3-4	16 (15)	0 (0)	15 (7)	0 (0)	31 (8)	
5-6	8 (7)	0 (0)	15 (7)	1 (13)	24 (6)	
7-8	11 (10)	3 (10)	9 (4)	0 (0)	23 (6)	
9-10	10 (9)	5 (17)	8 (4)	0 (0)	23 (6)	
11-12	14 (13)	4 (13)	3 (1)	3 (38)	24 (6)	
13+	32 (29)	18 (60)	26 (11)	3 (38)	79 (21)	
TOTAL	109 (100)	30 (100)	227 (100)	8 (100)	374 (100)	
Mean/Median Age (in months)	99/112	165/167	45/19	133/153	72/50	

Table 12. Reported AIDS Case-Fatality by Half-Year Diagnosis

	No. of	No. of	Case-	Cumulative Cas
Diagnosis Date	Cases	Deaths	Fatality Rate	Fatality Rate
1982 JanJune	1	1	1000/	1000/
July-Dec.	1	1	100%	100%
1983 JanJune	2	2	100%	100%
July-Dec.	2	2	100%	100%
984 JanJune	3	3	100%	100%
July-Dec.	1	1	100%	100%
005 1 1		4	(70/	070/
985 JanJune July-Dec.	6 8	4 7	67% 88%	87% 87%
July Dec.	O	,	0070	
986 JanJune	3	3	100%	88%
July-Dec	10	10	100%	92%
987 JanJune	9	9	100%	93%
July-Dec.	9	7	78%	91%
988 JanJune	7	4	57%	87%
July-Dec.	13	9	69%	84%
989 JanJune July-Dec.	11 15	9 13	82% 87%	84% 84%
July-Dec.	13	13	0/70	0470
990 JanJune	10	9	90%	85%
July-Dec.	7	7	100%	85%
991 JanJune	16	12	75%	84%
July-Dec.	15	12	80%	84%
992 JanJune	17	11	65%	82%
July-Dec.	10	8	80%	82%
993 JanJune	13 11	9 7	69%	81%
July-Dec.	11	/	64%	80%
994 JanJune	27	14	52%	77%
July-Dec.	21	13	62%	75%
995 Jan-June	19	9	47%	73%
July -Dec.	15	3	20%	70%
996 Jan-June	13	4	31%	69%
July-Dec.	10	2	20%	67%
•				
997 Jan-June	10 7	0	0% 0%	65% 64%
July-Dec.	/	U	070	0470
998 Jan-June	4	0	0%	63%
July-Dec.	5	1	20%	62%
999 Jan-June	4	1	25%	62%
July-Dec.	4	1	25%	62%
000 Jan-June	4	1	25%	61%
July-Dec.	5	0	0%	60%
-				
001 Jan-June	3	0	0%	59%
July-Dec.	5	0	0%	59%
002 Jan-June	4	0	0%	58%
July-Dec	4	0	0%	57%
2003 Jan-June	6	0	0%	56%
July-Dec	2	0	0%	56%
•	2	^	007	
2004 Jan-June	3 374	0 208	<u>0%</u> 56%	56% 56%

Figure 1. AIDS Cases by Year of Diagnosis and Transmission Category

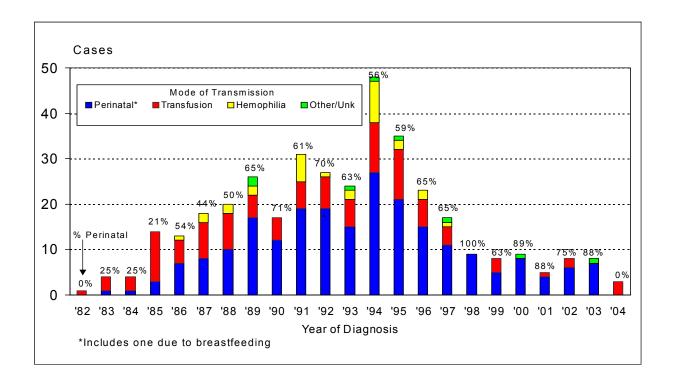


Figure 2. Distribution of CDC-defined CD4 Immunosuppression Categories* and HAART

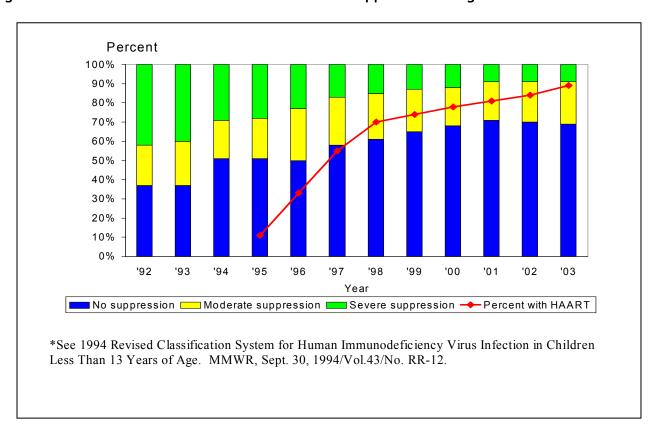


Figure 3. Percent of Infected Children and Adolescents with Undetectable HIV Viral Load* Ever and at Last Medical Contact by Year

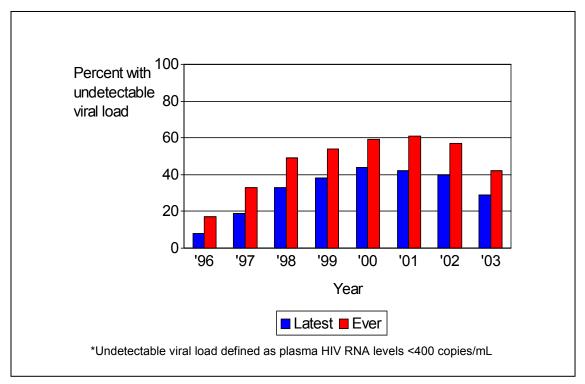


Table 13. Reported Children Currently Followed** by Age at Last Contact and Mode of Transmission

Mode: Other/ Age at last Perinatal Transfusion Hemophilia Unknown Cumulative (%)(%)(%)Contact: No. No. No. No. (%)No. (%) 0-5 mos. 22 (0)(0)22 (8)0 0 0 (0)(7) 6-11 mos. 3 **(1)** 0 (0)0 (0)0 (0)3 (1) 12-23 mos. 6 (0)(2) 0 (0)0 0 (0)6 (2) 7 2 yrs. 6 (2) (0)0 (0)1 (13)(2) 3 yrs. 3 0 3 (1) (0)(0)0 (0)(1) 4 yrs. 6 (0)0 (0)0 6 (2) (0)(2) (0)5 5 yrs. 5 (2) 0 (0)0 (0)0 (2) 6-7 yrs. 0 27 26 (10)(0)(0)1 (13)(9)0 8-9 yrs. 37 (14)(0)(0)(0)37 (12)10-11 yrs. 51 (19)(3) 0 (0)1 53 (13)(17)0 0 12 yrs. 18 0 (0)(0)(7) (0)18 (6)85 (32)5 13+ yrs. 30 (97)(100)(63)121 **TOTAL** 268 (100)31 (100) (100)308 (100) (100)Mean/Median Age (in months) 121/129 240/247 284/284 162/193 135/135

^{**}Includes only infected and indeterminate children still alive and not lost to follow-up. Does not include uninfected/seroreverters.

Table 14. Reported Children Currently Followed* by Hospital** and CDC Classification

CDC Clas		
Infected	<u>Indeterminate</u>	<u>Total</u>
10	2	12
109	2	111
19	1	20
5	3	8
65	6	71
14	1	15
31	4	35
32	4	36
285	23	308
	Infected 10 109 19 5 65 14 31 32	10 2 109 2 19 1 5 3 65 6 14 1 31 4 32 4

Table 15. Reported Children by Latest Hospital ** and Latest CDC Classification

	CDC Classification:								
<u>Hospital:</u>	Infected	<u>Infected Indeterminate Uninfected Total</u>							
Cedars-Sinai	42	4	52	98	7				
Childrens	265	14	156	435	9				
Harbor General	34	5	80	119	6				
Kaiser hospitals	23	5	28	56	6				
LAC+USC	84	22	446	552	61				
Martin Luther King, Jr.	24	10	92	126	12				
Mem. Cntr. of Long Beach	63	12	216	291	11				
UCLA	75	15	206	296	27				
Other Hospitals (n=8)	28	4	3	<u>35</u>	0				
TOTAL	638	91	1279	2008	139				

Table 16. Reported Children by CDC Classification and Enrollment Year CDC Classification:

	AIDS	Infected Non-AIDS	Indetermina	te Uninfected	Total
Enrollment Year	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
1988 - '90	206 (53)	46 (12)	16 (4)	116 (30)	384 (100)
1991 - '92	57 (23)	41 (17)	9 (4)	137 (56)	244 (100)
1993 - '94	44 (17)	38 (14)	2 (1)	182 (68)	266 (100)
1995 - '96	24 (9)	50 (19)	9 (3)	186 (69)	269 (100)
1997	11 (8)	18 (14)	6 (5)	95 (73)	130 (100)
1998	10 (7)	22 (15)	0 (0)	110 (77)	142 (100)
1999	4 (4)	7 (6)	8 (7)	95 (83)	114 (100)
2000	7 (7)	7 (7)	6 (6)	78 (80)	98 (100)
2001	3 (3)	5 (5)	4 (4)	93 (88)	105 (100)
2002	5 (4)	11 (9)	6 (5)	95 (81)	117 (100)
2003	3 (2)	19 (14)	25 (18)	92 (66)	139 (100)

^{*}Includes only infected and indeterminate children still alive and not lost to follow-up. Does not include uninfected/ seroreverters.

^{**}Defined as current hospital or hospital at time of death, or hospital at time when lost to follow-up.

Table 17. Percent of Perinatally Exposed Children Born 1995-2003 with Maternal ZDV* by Birth Year

	Birth Year:								
	'95	'96	'97	'98	'99	' 00	'01	'02	' 03
	(n=142)	(n=103)	(n=110)	(n=109)	(n=102)	(n = 95)	(n=99)	(n=110)	(n=112)
	No.(%)	No.(%)	No.(%)	No.(%)	No.(%)	No.(%)	No.(%)	No.(%)	No.(%)
a. Mom in prenatal care	96(68)	73(71)	91(83)	91(83)	91(89)	88(93)	88(89)	98(89)	92(82)
b. Mom received ZDV									
during pregnancy	91(64)	66(64)	82(75)	92(84)	82(80)	78(82)	82(83)	92(84)	96(86)
c. Mom received ZDV									
during labor/delivery	82(58)	61(59)	79(72)	92(84)	88(86)	83(87)	86(87)	98(89)	98(88)
d. Mom received ZDV durin	ng								
pregnancy and L&D	78(55)	54(52)	77(70)	88(81)	79(77)	75(79)	80(81)	90(82)	92(82)
e. Infant received neonatal									
ZDV	97(68)	85(83)	89(81)	100(92)	93(91)	91(96)	91(92)	104(95)	103(92)

^{*}Defined as ZDV or other antiretrovirals

Table 18. Type of Delivery Among Perinatally Exposed Children Born 1995-2003

			Deli	very Typ	pe:			
	Vag	Vaginal		C-Section		known	T	otal
Birth Year	No.	(%)	No.	(%)	No). (%)	No.	(%)
1995	103	(72)	28	(20)	11	(8)	142	(100)
1996	63	(61)	32	(31)	8	(8)	103	(100)
1997	84	(76)	18	(16)	8	(7)	110	(100)
1998	73	(67)	33	(30)	3	(3)	109	(100)
1999	47	(46)	54	(53)	1	(1)	102	(100)
2000	38	(40)	55	(58)	2	(2)	95	(100)
2001	39	(39)	57	(58)	3	(3)	99	(100)
2002	53	(48)	52	(47)	5	(5)	110	(100)
2003	51	(45)	58	(52)	3	(3)	112	(100)

Table 19. Perinatally Exposed Children Born 1995-2003 by Latest CDC Classification and Birth Year

CDC Classification:									
	A	IDS	Non	-AIDS	Inde	termin	Total		
Birth Year	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No. (%)
1995	5	(4)	22	(15)	6	(4)	109	(77)	142 (100)
1996	7	(7)	15	(15)	2	(2)	79	(77)	103 (100)
1997	5	(5)	9	(8)	5	(5)	91	(83)	110 (100)
1998	2	(2)	4	(4)	0	(0)	103	(94)	109 (100)
1999	1	(1)	6	(6)	8	(8)	87	(85)	102 (100)
2000	2	(2)	3	(3)	6	(6)	84	(88)	95 (100)
2001	3	(3)	5	(5)	4	(4)	87	(88)	99 (100)
2002	0	(0)	3	(3)	9	(8)	98	(89)	110 (100)
<u>2003</u>	0	(0)	6	(5)	22	(20)	84	(75)	<u>112 (100)</u>
TOTAL	25	(3)	73	(7)	62	(6)	822	(84)	982 (100)

Figure 4. Rates of Perinatal HIV Transmission and Maternal Zidovudine (ZDV*) for Reported Babies Born in LAC, 1995-2003

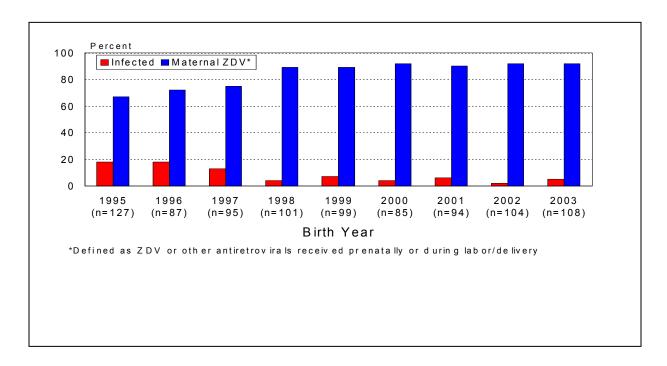
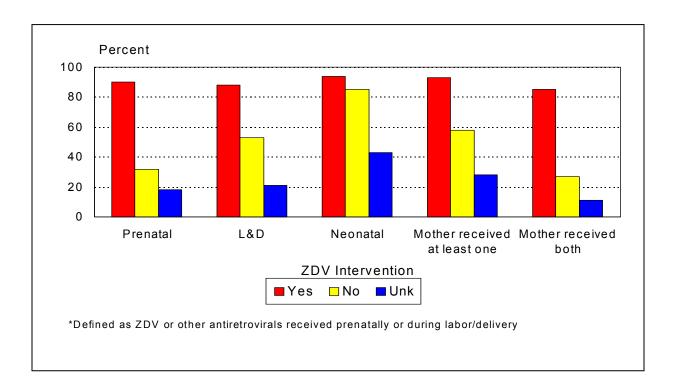


Figure 5. Percent of LAC Mothers and Newborns with ZDV* by Prenatal Care, 1995-2003 (n=900)



PSD Publications

- Morris, A, Lundgren JD, Masur H, Walzer, PD, Hanson DL, Frederick T, Huang L, Beard CB, Kaplan JE. "Current epidemiology of *Pneumocystis* Pneumonia." Emerging Infectious Diseases, Vol. 10, No. 10, October 2004.
- McConnell M, Byers R, Frederick T, Peters V, Dominguez K, Sukalac T, et, al. "Trends in antiretroviral therapy use and survival rates for a large cohort of HIV-Infected children and adolescents in the United States, 1989-2001." JAIDS, accepted for publication, date unknown.
- Dominguez KL, Lindegren ML, d'Almada PJ, Peters VB, Frederick T. Rakusan TA, et al. "Increasing trend of cesarean deliveries in HIV-Infected women in the United States (1994-2000)." JAIDS, 2003; 33-232-238.
- Frederick T. "Advances in pediatric HIV testing: Assembly Bill 1676." The Public's Health 2003; 3(9); 4-5. Available at: www.lapublichealth.org/wwwfiles/ph/ph/ph/TPHNovDec2003.pdf
- Peters V, Liu L, Dominguez K, Frederick T, Melville S, Hsu H, et al. "Missed opportunities for perinatal HIV prevention among HIV-exposed infants born 1996-2000. Pediatric Spectrum of Disease Cohort." Pediatrics, 2003; 111-5; 1186-1191.
- McConnell M, Zorilla C, Febo I, Ortiz I, Orengo JC, Miranda S, Santiago M, Rodriguez A, Rullan J, Dominguez K, Fowler MG, Greenberg A. "Pregnancy in perinatally HIV-Infected adolescents and young adults --- Puerto Rico, 2002." MMWR, February 28, 2003 / 52(08); 149-1519.
- Frederick T. "More children with HIV infection reported in Los Angeles County: A call for increased awareness." The Public's Health 2002; 2(10); 1,7. Available at: www.lapublichealth.org/wwwfiles/ph/ph/ph/TPHNovDec2002.pdf
- Dominguez K, Bertolli J, Fowler M, Peters V, Ortiz I, Melville S, Rakusan T, Frederick, et al. "Lack of definitive severe mitochondrial signs and symptoms among diseased HIV-Uninfected and indeterminate children ≤5 years of age, Pediatric Spectrum of HIV Disease Project (PSD),USA." Annals of the New York Academy of Sciences. PREVENTION AND TREATEMENT OF HIV INFECTION IN INFANTS AND CHILDREN. November 2002; 918-236-246.
- Arbona SL, Melville SK, Hanson, IC, Squires JE, Doyle M, Doran TI, Patel JA, Handal GA, Hauger SB, Murphey KD, Dominguez K. "Mother-to-child transmission of the human immunodeficiency virus in Texas." Pediatric Infectious Disease Journal, 2001:20:602-6.
- Abrams EJ Weedon J, Bertolli J, Bornschlegel K, Cervia J, Mendez H, Lambert G, Singh T, Thomas P. "Aging Cohort of Perinatally HIV-infected Children in New York City." Pediatric Infectious Disease Journal, May 2001; 20(5):511-17.
- Thomas P, Bornschlegel K, Singh TP, Abrams EJ, Cervia J, Fikrig S, Lambert G, Mendez H, Kaye K, Bertolli J and the New York City Pediatric Spectrum of HIV Disease Consortium. "Tuberculosis in HIV-infected and HIV-exposed children in New York City." Pediatric Infect Dis J, 2000, Vol. 19, No 8, 700-706.
- Frederick T, Thomas P, Mascola L, Hsu HW, et al. "HIV-Infected Adolescents: A Descriptive Study of Older Children in New York City, Los Angeles County, Massachusetts, and Washington D.C." Pediatr Infect Dis J, June 2000: 19;551-555.
- Schulte J, Burkham S, Squires JE, Doran TI, Hamaker D, Pelosi J et al. "Immunization status of children born to human immunodeficiency virus (HIV)-infected mothers in two Texas cities." South Med J 2000; 93(1):48-52.
- Kaplan JE, Hanson D, Dworkin M, Frederick T, et al. "Epidemiology of HIV-Associated Opportunistic Infections in the United States in the Era of Highly Active Antiretroviral Therapy (HAART)." Clinical Infectious Diseases, 2000 Apr.; 30 Suppl 1; S5-14.
- Hsu H, Pelton S, Williamson J, Thomas P, Mascola L, Ortiz I, Rakusan T, Melville S, Bertolli J and the Pediatric Spectrum of HIV Disease Project. "Survival in children with perinatal HIV infection and very low CD4 lymphocyte counts." J AIDS, 2000;25:269-275.
- The Perinatal Safety Review Working Group. "Nucleoside Exposure in the children of HIV-infected women receiving antiretroviral drugs: Absence of clear evidence for mitochondrial disease in children who died before 5 years of age in five United States cohorts." J AIDS, 2000;25:261-268.

- Lansky A, Jones JL, Burkham S, Reynolds K, Bohannon B, Bertolli J. "Adequacy of prenatal care and prescription of zidovudine to prevent perinatal HIV transmission." J Acquir Immune Defic Syndr 1999; 21(3):223-227.
- Nielsen K, McSherry G, Petru A, Frederick T, et al. "A Descriptive Survey of Pediatric Human Immunodeficiency Virus-infected Long-term Survivors." Pediatrics, 1997, Vol. 99, No. 4.
- Von Seidlein L, Gillette SG, Bryson Y, Frederick T, Mascola L, Church J, Brunell P, Kovacs A, Deveikis A, Keller M. "Frequent Recurrence and Persistence of Varicella-Zoster-Virus Infections in Children Infected with Human Immunodeficiency Virus Type 1." Journal of Pediatrics 1996; 128:52-57.
- Obiri GU, Thomas P, Caldwell B. "Trends in age at the first medical evaluation of human immunodeficiency virus infection among infants born to infected mothers. New York City Pediatric Spectrum of HIV Disease Clinical Consortium." Arch Pediatr Adolesc Med 1996; 150(8):787-789.
- Simonds RJ, Lindegren ML, Thomas P, Hanson D, Caldwell B, Scott G et al. "Prophylaxis against pneumocystis carinii pneumonia among children with perinatally acquired human immunodeficiency virus infection in the United States." N Engl J Med 1995; 332:786-790.
- Mao C, Harper M, McIntosh K, Reddington C, Cohen J, Caldwell MB et al. "Invasive pneumococcal infections in human immunodeficiency virus-infected children." J Infect Dis 1996; 173(4):870-876.
- Lobato MN, Caldwell MB, Ng P, Oxtoby MJ. "Encephalopathy in children with perinatally acquired human immunodeficiency virus infection." J Pediatr 1995; 126((5 Pt 1)):710-715.
- Davis SF, Byers R, Lindegren ML, Caldwell MB, Karon JM, Gwinn M. "Prevalence and incidence of vertically acquired HIV-infection in the United States." JAMA 1995; 274(12):952-955.
- Frederick T, Mascola L, Caldwell B, Eller A, O'Neil L, and the Los Angeles Pediatric AIDSConsortium.

 "Progression of HIV Disease Among Children HIV Infected Perinatally or through Neonatal Blood Transfusion." Pediatric Infectious Diseases, Dec. 1994; Vol. 13, No. 12: 1091-1097.
- Simonds RJ, Oxtoby M, Caldwell MB, Gwinn M, Rogers MF. "Pneumocystis carinii pneumonia among US children with perinatally acquired HIV-infection." JAMA 1993; 270(4):470-473.
- Hsu HW, Moye J Jr, Kunches L, Ng P, Shea B, Caldwell MB et al. "Perinatally acquired human immunodeficiency virus infection: extent of clinical recognition in a population-based cohort." Pediatr Infect Dis J 1992; 11(11):941-945.
- Caldwell MB, Mascola L, Smith W, Thomas P, Hsu HW, Maldonado Y et al. "Biologic, foster, and adoptive parents: care givers of children exposed perinatally to human immunodeficiency virus in the United States. The Pediatric Spectrum of Disease Clinical Consortium." Pediatrics 1992; 90(4):603-607.
- Kovacs A, Frederick T, Church J, et al. "CD4 T-Lymphocyte counts and *pneumocystis carinii p*neumonia in pediatric HIV infection." JAMA, 1991; 265:1698-1703.
- Frederick T, Mascola L. "Frequency of twinning in pediatric HIV infection" (letter). Lancet 1991;337:851-852.
- Mascola L, Frederick T. "Increasing HIV Seroprevalence Rate Among Childbearing Women in LA County." Impact (Perinatal Advisory Council of Los Angeles Communities), Dec. 1991; Vol. Vii, No. 3.