
County of Los Angeles • Department of Health Services
Acute Communicable Disease Control
Special Studies Report 1999

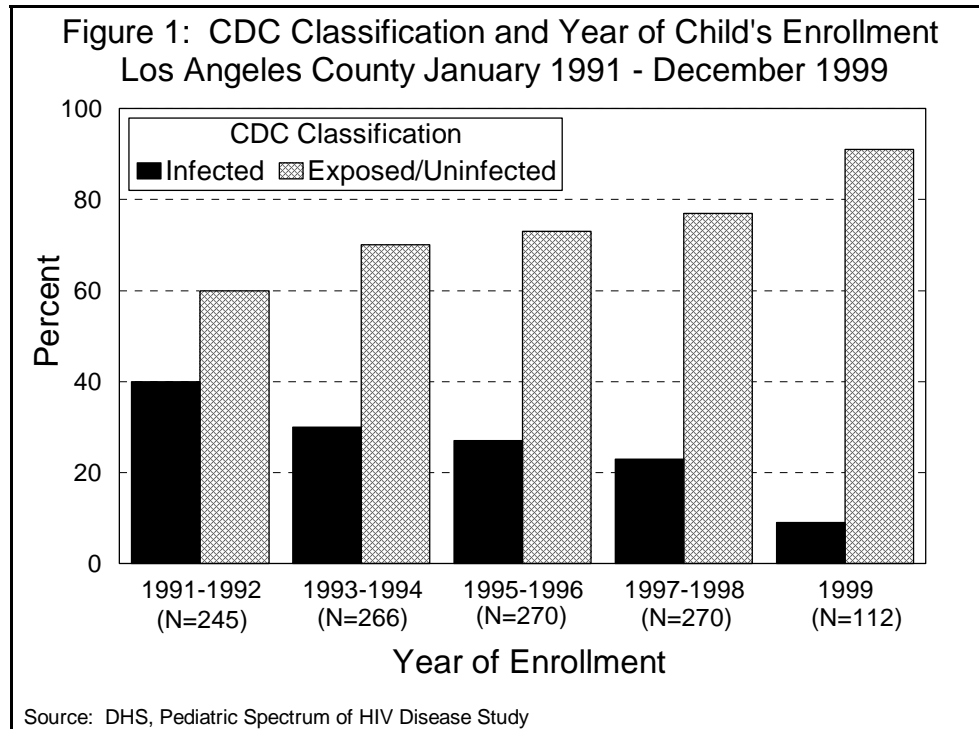
PEDIATRIC HIV DISEASE - PEDIATRIC SPECTRUM OF DISEASE

In March 1988, the Los Angeles County (LAC) Department of Health Services began conducting active surveillance for children HIV-exposed and infected under the age of 13 years as part of the Centers for Disease Control and Prevention's national Pediatric Spectrum of Disease (PSD) research project. Case ascertainment included all children who had died with an AIDS or HIV-diagnosis and all who were still alive and in medical care. As of December 31, 1999, with active case surveillance at the 10 major LAC pediatric referral centers, a total of 1,547 HIV-exposed and infected children had been reported to PSD. This number includes 1,348 LAC resident children and 199 nonresident children receiving care in LAC (including those who had died). PSD collects information at baseline, when the child is initially evaluated for HIV and then every 6 months for the life of the child. Children who reach adolescence are followed until they are transferred to an adult AIDS clinic. Currently, 344 children and adolescents are under HIV care in LAC.

CDC CLASSIFICATION

Of the total 1,547 children reported to PSD, 581 were HIV-infected, 882 were perinatally exposed but uninfected, and 84 were exposed and of indeterminate HIV status due to the persistence of maternal HIV antibody. Of the 581 HIV-infected children, 299 or 51% had an AIDS-defining condition and met the CDC classification criteria for AIDS¹. Of these, 23 were diagnosed with an AIDS defining illness after 12 years of age. An additional 18 infected children 13 years or older met the adult AIDS definition with a CD4 lymphocyte count <400 μ L. In 1999, 112 HIV-exposed or infected children were reported to PSD of whom 3% had an AIDS diagnosis at last medical contact, an additional 6% were infected but without AIDS, 40% were of indeterminate status, and 51% were uninfected. Of the 11 infected children reported in 1999, only two were identified at birth and four were non-LAC residents at the time of their HIV diagnosis. The proportion of infected children has decreased from 40% of the total children reported in 1991-1992 to only 9% in 1999 (Figure 1).

County of Los Angeles • Department of Health Services
Acute Communicable Disease Control
Special Studies Report 1999

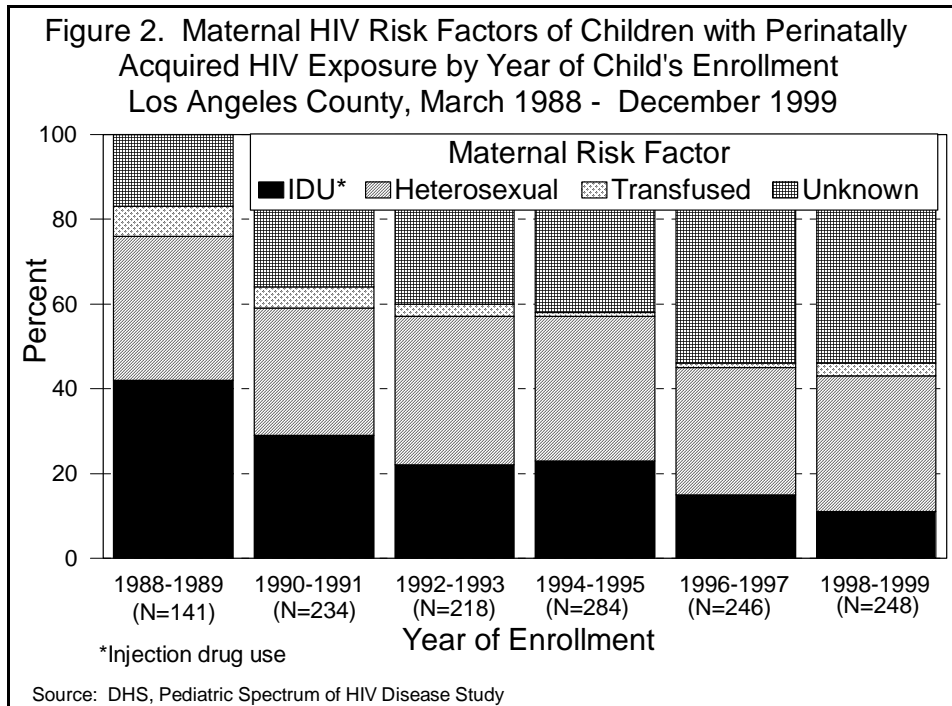


MODE OF TRANSMISSION

Among the 665 HIV-infected children and adolescents, including 84 children with still indeterminate HIV status, 492 (74%) had perinatally acquired (PA) infection from an HIV-infected mother, 124 children (19%) were infected from a contaminated blood transfusion, and 39 (6%) were children with hemophilia or a coagulation disorder. Two children were infected due to breastfeeding. Among the PA group, 23% had a mother who was an intravenous drug user (IDU), 12% had a mother who had sex with an IDU, 24% had a mother who had sex with an HIV+ or high-risk male, 4% had a mother infected through a blood transfusion, and 37% had a mother whose risk factor for HIV infection could not be identified. Sexual abuse is suspected as a risk factor for four children and confirmed for one child.

The proportion of perinatally exposed children whose mother's risk factor for HIV was IDU has decreased from 42% in 1988-89 to 13% in 1999 (Figure 2). Correspondingly, the number of children infected due to an HIV-infected mother with unknown risk has increased each year from 17% in 1988-89, to 53% in 1999.

County of Los Angeles • Department of Health Services
Acute Communicable Disease Control
Special Studies Report 1999



DEMOGRAPHICS

Among the 665 HIV-infected and still indeterminate children and adolescents reported, 34% were Black, 42% Hispanic, 21% White, 3% Asian, and 1% other/unknown. Of the 112 HIV-exposed and infected children reported in 1999, 37% were Black, 50% Hispanic, and 9% White.

The distribution of HIV-infected and indeterminate children by gender shows slightly more males than females (52% vs. 48%) due to the disproportionate number of transfusion-associated and hemophiliac cases among males.

Most children (72%) had a biologic parent as their primary caretaker at the latest medical contact: 21% lived with another relative or were in foster care, 3% with adoptive parents, and 4% in other or unknown living arrangements. The PA group was more likely to be living in foster care or with another relative than the transfused and hemophiliacs (26% vs. 5%, and 3%, respectively). Within the PA group, the Hispanics were the least likely to be in foster care or living with another relative (15% vs. 37% for Blacks and 32% for Whites).

County of Los Angeles • Department of Health Services
Acute Communicable Disease Control
Special Studies Report 1999

CASE FATALITY AND SURVIVAL

The cumulative fatality rate for AIDS cases was 65% (194/299). Fifteen (4%) of the children not meeting the AIDS case definition have died. The mean age at AIDS diagnosis for the PA cases was 29 months (median 14.0 months) compared to the mean age at AIDS diagnosis of 88 months for the transfused cases (median 88 months), and 160 months for the hemophiliacs (median 143 months). Estimated median survival from AIDS diagnosis to death or date of last medical contact was 52 months for PA cases and 28 months for the transfused cases and 22 months for the hemophiliacs (Kaplan-Meier product-limit estimates).

Among the 344 HIV-infected and indeterminate children still alive and still followed by PSD, 17% were less than 2 years of age, 33% were between 2-7 years, 26% were 8-12 years, and 23% were 13 years or greater. Twenty-seven of the 80 children aged 13+ years met the pediatric criteria for AIDS and an additional 18 met the new adult criteria for AIDS with a CD4<200.

PRENATAL ZDV AND PERINATAL TRANSMISSION

Beginning in 1994, zidovudine (ZDV) use during pregnancy, labor, and delivery became a recognized means to prevent perinatal HIV transmission. Of the 536 infants born in 1995-1999 to HIV-infected women and reported to PSD, 395 (74%) of their mothers received ZDV during pregnancy; 79% received prenatal care. Similarly, 361 (73%) received ZDV during labor and delivery. In 1999, 88% received prenatal care, 93% received antiretrovirals either during pregnancy or labor and delivery, and 76% of the mothers received both. Compared to the 20-25% transmission rate observed before 1994, the overall rate of transmission for all children born in 1995-99 and reported to PSD was 10%.

UNIVERSAL OFFERING OF PRENATAL HIV TESTING AND COUNSELING

As of January 1, 1996, all prenatal providers are legally required to offer HIV testing and counseling and document the offering in the patient's medical record. Statistics from six health centers who directly report to Acute Communicable Disease Control (ACDC) showed a 74% acceptance rate for 1999. One HIV-positive woman was identified in 1999. ACDC continues to evaluate risk assessment data on pregnant women who test HIV positive. Seventy-nine women since 1989 have been identified in LAC clinics; 56 (71%) reported risk assessment information to ACDC. Twenty-eight (50%) of these women could not identify any known risk factor for HIV infection. Women identified as HIV positive are referred to tertiary care centers to receive specialized care for themselves and their unborn infants.

County of Los Angeles • Department of Health Services
Acute Communicable Disease Control
Special Studies Report 1999

REFERENCE

Centers for Disease Control and Prevention Appendix: Revised Surveillance Case Definition for HIV Infection. *MMWR* 1999;48(RR-13):29-31.