



HIV-Positive Children Surviving and Thriving

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The death rates of children living with HIV have decreased ninefold since combination antiretroviral (ARV) therapy became widely available in the mid-1990s, according to results from a [large pediatric HIV study](#) published in the December 15 issue of the Journal of Acquired Immune Deficiency Syndromes. But there's still tremendous room for improvement: Young people with HIV continue to die at 30 times the rate of youth of similar age who do not have HIV.

"A wonderful change has occurred: Most HIV-infected children now reach adulthood," said Lynne Mofenson, MD, an author of the paper and chief of the Pediatric, Adolescent and Maternal AIDS branch at the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD). "Will these children have a normal lifespan? Unfortunately, we don't have all the answers yet. Currently, we don't have the means to prevent all the complications of HIV infection."

Numerous studies have demonstrated that adults with HIV are living longer because of improvements in ARV therapy in the past 15 years. However, limited information has existed about the effectiveness of combination ARV treatment with respect to the survival of children with HIV. The current analysis delineates the effects of ARVs on the rates and causes of death for children and adolescents living with.

The Pediatric AIDS Clinical Trials Group (PACTG) conducted the study (PACTG 219/219C), and Michael Brady, MD, of the Nationwide Children's Hospital in Columbus, Ohio, was the lead author of the report.

Between 1993 and 2006, Brady and a large roster of colleagues tracked 3,553 U.S. children and adolescents living with HIV. Of those children, 298 died. Growing numbers of children with HIV began receiving combination ARV therapy between 1994 and 2000, and death rates declined annually during that period.

In 1994, the authors report, the mortality rate for HIV-infected children and adolescents younger than 21 years old in the United States was 7.2 deaths per 100 person-years—a rate based on the number of children in the study and the total number of years each child was followed. By 2000, that rate had plummeted to 0.8 deaths per 100 person-years and remained stable through 2006, the last year included in the study analysis. The average age at death for the youth in the study more than doubled from 8.9 years in 1994 to 18.2 years in 2006.

Nearly 60 percent of all deaths in the study occurred before 1997, before the widespread availability of combination ARV therapy for children. Moreover, children who died were almost four

times as likely to have never received treatment as those who survived.

Though survival improved dramatically during the 13 years of study follow-up, the death rate for children with HIV remained about 30 times higher than that of similarly aged U.S. children who do not have HIV. Multi-organ failure and kidney disease, the authors write, are now major causes of death for children and adolescents living with HIV. Infections also continue to cause deaths in this group. However, the type of infections has changed, from those traditionally associated with AIDS to those more common in children without HIV.

“The findings are very encouraging, but they still show a need for improvement,” said Alan Guttmacher, MD, acting director of NICHD. “For both adults and children, combination antiretroviral therapy is highly effective in preventing the opportunistic infections and other complications resulting from HIV infection. We must now better understand and pursue treatments for children and adolescents to address the other conditions resulting from HIV infection.”

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<http://beta.docker.poz.com/article/hiv-children-survival-17761-1665>