

# Aids and children

[Family](#), [Children](#)



HIV/AIDS is relatively a new disease, and was first recognized in the year 1980, following an outbreak of the opportunistic infection *Pneumocystis carinii* pneumonia in a group of New York homosexuals. The incidences of Kaposi's sarcoma (a malignancy of the blood vessels) were also observed to occur more than 50 times in young homosexuals.

Gradually, it was observed that the condition was an infectious disease, and tended to spread wherever infected blood/semen was involved including blood transfusion, intravenous drug usage and unprotected sexual activity (whether homosexual or heterosexual).

The condition was gradually observed to affect the immune system, causing a huge number of opportunistic infections and malignancies. By the year 1982, AIDS was also observed in several children belonging to New York, San Francisco, Miami and New Jersey.

The condition was relatively unknown before the 1980's and following this, it became one of the most common and deadly infectious diseases. Although, HIV/AIDS began in a developed nation which could handle the ill-effects of the disease, it slowly began to spread to developing and poor nations, and the effect on such individuals is even more devastating (Mandell, 2005 & Borkowsky, 2004).

HIV/AIDS has not only been a problem in the reproductive age group, but has also caused serious problems in the pediatric age groups. In the US, more than 9300 children (as on December 2002) have been affected with the disease. The number of cases of individuals affected with the disease is still on the rise.

There may be several differences in the opportunistic infections, malignancies and symptoms that occur in children and adults. In children, HIV/AIDS can either spread through vertical transmission (from infected mother to child) and from other means (including child sexual abuse, IV drug abuse, infected blood transfusion, etc).

If we look at vertical transmission of HIV/AIDS, the disease can be transmitted by three different methods, which occur at three different times:

- prenatally it is transmitted across the placenta from the infected maternal blood, during delivery it may be transmitted from contaminated material secretions and after delivery it may occur due to consumption of contaminated breast milk.

Some of the factors that play an important role in the transmission of HIV/AIDS from infected mother to child include the severity of the infection of the mother, the maternal viral load, trauma to the child during delivery, the mode and the duration of breastfeeding.

Children below the age of 13 years can develop lymphoid interstitial pneumonia, pulmonary lymphoid hyperplasia and recurrent bacterial infections. The risk of a serious drop in the CD T4 lymphocytes below 200 is less in children compared to adults. In children with HIV/AIDS, the CD T4 cell count can play a major role in determining the prognosis of the disease.

Children usually have a rise in the number of lymphocytes. This may be observed in normal children and infants. If the CD4 count in children affected with HIV/AIDS drops down, it can suggest a serious impairment.

Children suffering from HIV/AIDS may also develop a serious form of

pneumocystis carinii pneumonia (PCP) and can develop serious respiratory problems.

This condition may also be fatal if proper preventive measures and treatment are not followed (CDC, 1996, Mandell, 2005 & Borkowsky, 2004).

Another problem that can be frequently observed in children who develop HIV/AIDS from infected mothers (vertical transmission) is the chances of co-infection with other STD's including hepatitis B, hepatitis C, etc. These conditions are transmitted in a similar manner (mainly IV drug usage, unprotected sex, blood transfusion, vertical transmission, etc).

Often when a person is infected with HCV, the infection takes a long time to develop and progress (about 20 years). However, in co infection with HIV, there may be an acceleration of both the conditions often leading to severe disease in the infant or childhood stage of life.

When the mother is co-infected with HIV/AIDS and hepatitis C infection, the chances of the child getting infected with HIV is much higher than if the mother is infected with HIV alone. In cases of infection with HIV, the infection spread in 16 % of the cases, whereas in co-infection cases, it spread 26 % of the total number of cases (England, 2006).

## The Problem

### 1. Incidences of HIV/AIDS in children

The exact incidences of HIV/AIDS in children may be far more than anticipated. On December 31, 2002, more than 9300 children were reported

to suffer from AIDS. A majority of these cases are due to infection from the infected mother.

In a study conducted in 1997 in the US, more than 91 % of the cases were due to infection from the mother to the child, 2 % were due to transfusion of infected blood and 8 % developed the condition due to an undetermined risk. 1 of the children who was a part of the study had a clotting disorder.

Most of the children who were infected with HIV/AIDS had parents who were using IV drugs. In most cases, the mother practiced unprotected sex. There is a lot of racial differences in the rates of HIV/AIDS. Individuals belonging to minority and weaker sections of the population are at a higher risk of acquiring the infection compared to the mainstream population.

There is a tendency that children across the various racial groups would have the same incidence rates of HIV/AIDS as their mothers. In a study conducted, it was found that 63 % of the children affected with HIV/AIDS were African-Americans and 26% were Hispanics. 18 % belonged to the White groups and 1 % was from the other racial groups.

Out of every 100, 000 children in the US who developed HIV/AIDS, 6. 4 % were Blacks, 2. 3 % were Hispanics, 0. 4 % were Whites and 0. 7 % were other racial groups. In most HIV affected children, the disease is diagnosed at the age of 18 months.

In most children affected with HIV (about 80 % of all cases), AIDS develops by the age of 5 years. Most cases of HIV/AIDS was recorded in New York (1900 cases), followed by Florida (1200 cases), New Jersey, California and Texas. Between the years 1984 to 1992, there was a rise in the incidence of

HIV/AIDS due to the ignorance of the disease from various populations including Blacks and homosexual groups.

In the year 1992, the number of HIV/AIDS cases were as high as 905, which declined to 663 in 1995 (a drop in about 27%) mostly attributed to greater awareness and education. However, across various ethnic and racial groups, greater amount improvements occurred in the Whites (39 % drop), followed by Black (26 % drop) and Hispanic (25 % drops).

Another reason for this drop had been the sudden discovery of the effect of Zidovudine (an antiretroviral drug) in helping to reduce the vertical transmission of HIV/AIDS from infected mother to child. In 1994, a series of clinical trials effectively demonstrated that the disease vertical transmission could be reduced by about 65 % if Zidovudine was given early during the pregnancy of the infected woman.

Hence, recommendations were raised for mandatory testing, counseling and ARV therapy for pregnant women. Following more active implementation of this program following 1995, the number of HIV/AIDS cases due to vertical transmission dropped to 92 in 2002. This was a significant drop, cutting the incidence rates by 10 times within a period of ten years (Mandell, 2005, Yogev, 2004, CDC, 1996, CDC, 2008).