What is needed to eliminate new HIV infections in children?

Prevention of transmission of HIV from mothers to infants has become a preventable disease in most western countries because of the use of effective HIV treatment called antiretroviral therapy (ART) that HIV positive pregnant mothers use. However, in many sub-Saharan African countries, transmission of HIV from mothers to children continues, resulting in a large number of children becoming infected with HIV. A majority of children who are HIV positive were infected during pregnancy, delivery or breastfeeding, as the virus can be transmitted from the mother to the infant during all these periods.

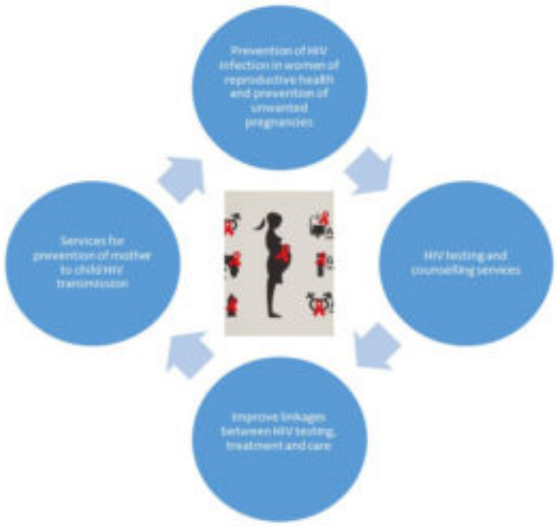

Fig. 1. 4-Pronged approach for prevention of mother to child HIV transmission

Although we know how to prevent transmission of HIV from mothers to infants, children continue to be infected because either the mother is unaware of her HIV status during pregnancy, or if she knows she is infected, she does not take ARTs in time to prevent transmission to child, or if she initiates ART, she either stops or takes the treatment irregularly.

Comprehensive health services need to increase rates of HIV testing and initiation of ARTs among all pregnant women, especially in settings where a high number of pregnant women are infected. Both health and community level approaches are needed which include training health personnel in different tasks, getting CD4 test results immediately, involving male partners in testing and treatment, and focusing on rural populations where access to these services is limited in many settings.

The efficient spending and distribution of resources is very important in settings with a high number of people infected with HIV. One component to help in allocation of resources for HIV prevention

and treatment is the use of the disability-adjusted life year (DALY) averted which is a measure of the how much a particular intervention costs for each year of life saved from the disease. The World Bank has described health interventions that cost less than US$100 per year of life saved as highly cost-effective for poor countries. Studies in African countries have found that ART given to pregnant women for 18 months cost about $34 for every year of life saved.

We need more studies in poor, rural settings where delivery of health services is poor to better understand what combination of HIV prevention interventions as well as resources are necessary to prevent HIV in that setting. In addition, we need longer follow up studies of HIV infected individuals so we can understand how the social environment impacts on the lives of these individuals and better understand the long term impact of HIV infection and treatment on other illnesses, growth patterns, mental health, impact on family, and death.

In order to prevent HIV transmission from mothers to infants, we need to focus on primay HIV prevention in mothers and use a 4-pronged approach as shown in the Figure 1.

HIV prevention in women as well as children needs to be strengthened at 4 levels as shown in the Figure 1.

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Publication

Using PMTCT to raise overall health and development.
Coovadia H, Moodley D
Lancet HIV. 2016 May