

## Editorial

# Mother-To-Child Transmission of HIV

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## Abstract

The UNAIDS Fast-Track approach aims to achieve fewer than 500 000 people newly infected with HIV by 2020. Elimination of mother to child transmission is the first step for this. The number of new HIV cases reported annually is decreasing and some countries have eliminated the mother-to-child transmission. Antiretroviral therapy (ART) intervention must be preceded by antenatal HIV testing. High uptake of antenatal HIV testing facilitates prevention of mother-to-child HIV transmission (PMTCT).

## EDITORIAL

One of the ambitious targets which the UNAIDS Fast-Track approach aims is to achieve fewer than 500 000 people newly infected with HIV by 2020 [1]. This has refocused the global attention on the issue of mother-to-child transmission of HIV, which is defined as the transmission of HIV from a HIV-positive mother to her child during pregnancy, labor, delivery or breastfeeding [2]. Elimination of mother to child transmission decelerates expansion of HIV epidemic and reduces emergence of new cases among children. It is considered the first defense circle for containing the HIV epidemic.

Of the estimated 1.4 million women living with HIV globally, there is 15-45% risk of transmitting the disease to their offspring in the event of becoming pregnant. However, it is consoling to know that there is a decreasing trend in the number of new HIV cases reported annually. In developing countries like Tanzania for example, currently mother to child transmission has decreased to 18 percent of the new HIV infections [3]. According to a recent estimate, globally 220,000 children were newly infected with HIV in 2014, with a decline of 58% from what was estimated for 2000 [4]. Besides, some countries have successfully eliminated the mother-to-child transmission with Cuba becoming the first country to receive WHO validation [5].

Evidences abound that antiretroviral therapy of HIV-positive pregnant women and their infants after birth as an intervention is a reliable armor to prevent HIV infections through vertical transmission.

Many women become pregnant without knowing their own HIV status so that its vertical transmission becomes inevitable. This emphasizes the importance of HIV screening in pregnancy which is currently being increasingly discussed in the literature [6,7]. Moreover, any antiretroviral therapy (ART) intervention during pregnancy must be preceded by antenatal HIV testing.

Besides, knowing a woman's HIV status during pregnancy also allows interventions to improve her own health. Such a situation has emphasized the need for affordable, easily available screening test kits with high sensitivity and specificity for use as a screening tool. Evaluation of commercially available test kit such as HIV/syphilis Duo rapid test kit (SD Bioline) to assess its performance and operational characteristics was done recently in Nepal [8]. This test kit was found to meet the long felt need for a good screening tool for day to day use with opportunity for simultaneous diagnosis of HIV and syphilis.

Universal approach to antenatal HIV testing using test kits achieves the best health outcomes and is cost-saving or cost-effective in the long term throughout the entire range of HIV prevalence settings. It is also a prerequisite for quality maternal and child healthcare and for the elimination of mother-to-child transmission of HIV. This is included in the WHO global criteria for elimination of mother-to-child transmission (EMTCT) of HIV and syphilis, 2014 which has as requisite  $\geq 95\%$  coverage of HIV testing among pregnant women along with  $\geq 90\%$  of ART coverage of HIV-positive pregnant women for WHO validation [9].

The HIV epidemic continues to be a major threat for global health. In 2011, about 34 million people were living with HIV and 2.02 million of whom were 0-15 years old children requiring antiretroviral therapy (ART) [10]. This number has expanded to 36.7 million, currently [11].

Prevention of mother-to-child transmission of HIV, by diminishing emergence of new HIV cases, brings down the health care cost of HIV control which is strategically fishable even in the context of countries with resource limited settings and for ensuring a future generation to begin life free of HIV infection. In fact, failure to provide facilities for antenatal screening of HIV by health facilities can be an impediment to successful HIV control. International guidance endorses HIV testing and counseling

offered to all women attending antenatal, delivery and postnatal services in generalized HIV epidemics [12]. Such measure aligns with measures endorsed by the American Medical Association (AMA) and is supported by recommendations and guidelines by National Centers for Disease Control and Prevention (CDC), American Academy of Pediatrics, American College of Obstetricians and Gynecologists (ACOG), and U.S. Preventive Services Task Force (USPSTF) sponsored by the Agency for Healthcare Research and Quality (AHRQ) [13].

However, such recommendations of universal antenatal testing in areas of high HIV prevalence and antiretroviral therapy for all HIV positive pregnant women for prevention of mother to child transmission through scaling up services is a great challenge for resource limited countries. This holds true In the global perspective also, with its entry point as the universal antenatal HIV testing.

In the global perspective too, the prevention of mother-to-child transmission of HIV is a great challenge for the control of HIV epidemic and the universal antenatal HIV testing is its entry point. However, there is much debate emerging regarding the cost-effectiveness of universal antenatal HIV testing [14], despite the need for such a strategy in the high prevalence regions where risk of acquiring primary HIV infection during pregnancy is higher.

Non contentiously, early detection of antenatal HIV is the first step leading to intervention. The high uptake of antenatal HIV testing in the high-income countries like UK, has facilitated early prevention of mother-to-child HIV transmission (PMTCT) intervention measures and lowered the transmission rate successfully but resource limited countries like Nepal have lagged behind, where in 2014, there were 498 women needing PMTCT and the number of new child infections due to MTC was 178. This is expected to elimination level with universal antenatal screening and ART.

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