



Symposium 5.1

The Asian HIV AIDS Epidemic

Dr. Dilip Mathai

Professor of Medicine, Head, Department of Medicine
Christian Medical College (CMC)
Vellore Tamil Nadu, India

HIV infection is present in more than 40 million people globally and 90% of these are adults with equal sex distribution. This epidemic has caused 25 million deaths since 1981. In 2005 there were 3 million deaths among which 570000 were children, showing that the devastation continues. In Africa alone there are 12 million AIDS orphans and in Botswana, the AIDS deaths have reduced life expectancy at birth to 34 years. World wide efforts to contain HIV infection have not been very successful and the infection has increased five-fold in the last 15 years. The numbers are still growing with over 5 million detected to have the infection in 2005 of which 12% have been in children.

Around 60% of the world's population lives in Asia. At present, S.E. Asia has 7.2 million people living with HIV/AIDS (PLWHA). It has registered the second highest prevalence rates after sub-Saharan Africa. Four countries: India, Thailand, Myanmar and Indonesia collectively bear 99% of the total HIV burden in the region. People under 25 years account for half of all new HIV infections. Estimates in the Asian region show that 40% of female sex workers and 5% of injecting drug users and men who have sex with men, and 11% of the bridge population are infected with the virus. India currently has 5.2 million PLWHA and report HIV in all the 38 States and Union Territories. Of those infected, 92% live in less than one-third of these regions. India has limited mapping and HIV size estimation with little or no behavioral or biological survey data that is available for half its population. The current national prevalence rate is 0.9%, with the state of Andhra Pradesh being highest with 2% and Nagaland, Maharashtra, Karnataka and Manipur each >1.0%. Females constitute a third among them and it occurs a decade younger than the male (probably due to detection in the women during the first pregnancy which occurs soon after an arranged marriage). The spread is mainly heterosexual. Prevention of perinatal transmission is a huge task, as India has 24 million births each year. The transmission of HIV in Manipur and Nagaland (states that border Myanmar) are however predominantly via injecting drug users. Other ways are via unrecognized invasive procedures like acupuncture, tattooing etc. These have the additional danger of transmitting Hepatitis B and C as well.

HIV infection has the potential to grow rapidly from its low level because of poverty, gender inequality and social stigma. Behavioral surveillance in Tamil Nadu and Karnataka (two bordering southern states in India) suggest that among the HIV infected males, one-sixth are seen in the rural population, one-tenth among factory workers and in urban slums. Two percent of the rural workers report contact with commercial sex workers. Sex workers reporting condom use (at last sex with clients) are varying in the region: Thailand 100%, Vietnam 96%, Nepal 67, Indonesia 43% and Bangladesh street 25%. The statistics of one of the Indian States Tamil Nadu, when compared to a country in the region such as Thailand, shows the potential to spread in perspective, if preventive efforts are not mounted. Tamilnadu with a population of 66 million, is currently estimated to have between 130000 PLWHA's, while the latter with similar population currently has 580000 PLWHA's. India has localized epidemics of HIV infection. These could ignite sub epidemics in other currently low prevalence parts of the country. The interplay of such forces could result in a substantial increase in epidemics in several pockets of India.

The study of the Asian HIV epidemic is important mainly to plan care and support and for implementing enhanced preventive efforts. What should be the role of planners and frontline physicians in the face of this current epidemic? What are the preventive steps that need to be taken in containing it?

The burden of providing care and support to the HIV affected will be quite heavy on the public health infrastructure of these countries in the region due to the existing additional medical problems. Over three quarters of the opportunistic infections seen globally occur among the HIV infected patients of this region. HIV infections will have greater severity and lethality because of the concurrent TB, Hepatitis B (India alone has 50 million affected with this hepatotropic virus) and malnutrition. Besides, other infections such as: *Penicillium marneffi*, leishmaniasis, malaria and Hansen's disease are unique to this region. Overall in the developing countries,

6.8 million people are in immediate need of life saving anti retroviral drugs (ARV). Actually only less than 25% are receiving it. The overall lower, 21000 deaths, seen in Thailand is due to greater availability of antiretroviral therapy (ART), while in Tamil Nadu about the same number of deaths have occurred due to lack of it. This is because less than 15000 PLWHA's are currently receiving ART. With the roll out of free ARV drugs at multiple Indian centers, improper usage and poor clinical monitoring could mean resistance build up to several of the commonly used less expensive first line antiretroviral drugs. Besides this, MDR TB, azole-resistant candida and cryptococcus are likely to occur in the Asian region even as care and survival improves with access. All these would mean an increased need in trained human resource capacity and sophisticated laboratory support.

Physicians and other health care workers who have repeated and close access to patients will now have a major role to emphasize preventive aspects of primary acquisition and secondary transmission of HIV. Like in other infectious disease conditions, the HIV infected person often does not recognize that he or she is infected and continues to spread the infection. They would need to screen their patients for HIV risk, promote behavior change and condom use. They have to be prudent in their choices of preventive therapy. Scientific advances although suggest benefits with male circumcision in the primary prevention of HIV and STDs is not practical in a region with deep rooted religious sentiments and massive large scale operations would not be possible in such resource limited settings. Other methods that include universal testing of all patients for the early detection of HIV infection to prevent further transmission and prompt STD detection and treatment and follow up of its microbial cure with sophisticated testing to prevent amplified transmission of the virus though needed, are expensive. Until then, screening of pregnant mothers and tests required for safe blood transfusions should receive the highest clinical practice priority as a preventive measures.

In Asia, HIV is not just a health problem, but a social and financial one. Implementing an effective response to HIV presents extraordinarily complex challenges, due to the region's size, diversity, mobility of the population at risk, and the highly stigmatized nature of HIV. To control HIV, countries within the region must address high priority gaps in their national HIV efforts such as increasing prevention coverage of high risk populations.

Recently in India over 2.5 billion USD have been budgeted for the National AIDS control program III for use during the five years, beginning 2007. Two-thirds of this will be spent for prevention. This includes targeted intervention, blood safety, communication, advocacy and social mobilization. Another USD 500 million will be available for condom use promotion. (Currently only 500 million condom pieces are distributed via social marketing.) The planned expansion of access to free ART centers to over 300 (by end of 2005 there were only about 50 centers in India), decreasing to 0.5% (halving) HIV rates among maternal women in two high prevalence Indian states, decrease in stigma surrounding HIV with better awareness, and a massive response from several national and international agencies are all good signs in bad times for the future of a single Asian nation that poses as the biggest threat with one billion people. Hopefully these efforts would continue in all countries in the region.