The Variations in Worldwide AIDS Epidemic: A Call for a Political Will and Strategy for
an Appropriate Human Resource Development

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The estimate of the number of HIVs up until late 1994 showed the highest prevalence in Africa, followed by SEA and Latin America. The prevalence in Europe is lowest. In a recent estimate by the WHO (Professor Bernard) the prevalence of HIV in 1994 was highest in Africa, followed by the American region, the Eastern Mediterranean, Southeast Asia, and the Western Pacific. The prevalence per 10k in Europe is comparatively low. The countries were classified according to the prevalence of HIV into high, moderate and low prevalence countries (i.e., an HIV prevalence rate above 50/10,000 population = high, above 25/10,000 = moderate and above 12.5/10,000 = low prevalence countries). Up to 57 of 169 countries have high prevalence while 86 had low prevalence. Most countries in the African region had high prevalence while most countries in Europe had low prevalence. Therefore, the magnitude of AIDS/HIVs differed greatly between continents and countries in the continents.

There were one million reported cases of AIDS between 1970-1994. The estimated number of AIDS was 4.5 millions, a 4-5 times underestimate (WHO/SEARO data, 1994). The US had the highest reported cases while the African countries were estimated to have more than 70% of the 4.5 million AIDS cases to date. This reflects the difference in the capacity of the reporting system between countries and continents. Most of the AIDS cases are in the younger productive age group.

AIDS and HIV epidemics have had an effect on the economy of the household, productive enterprises, and countries as a whole. Economic effects resulted mainly from the high cost of treatment, the diversion of resources from investment, and a loss in active young adults. The loss of productivity can be considered an indirect economic loss to countries. In addition, there will be a rise in the death of children less than five (World Bank Development Report 1993). About 5-10 million children is expected to be orphaned by the year 2000 (Lancet 1992; 336: 221-224). This will strain the social cost of the countries.

There are three main modes of transmission: sexual, parenteral and perinatal (Lancet 1996; 384:99-106). Homosexual transmission has prevailed in North American, Latin America, and Europe. The rates of HIV/AIDS in these regions are becoming stabilized. Heterosexual transmission prevailed in Southeast Asia, India and many developing countries. In these countries, there have been a large number of commercial sex workers (CSWs) and patients infected with sexually transmitted diseases (STDs). The heterosexual transmission has had an impact on women. The proportion of HIV in women increased from 25% in 1990 to 45% in 1995. Parenteral transmission mainly occurred in intravenous drug users (IVDUs) occurring mainly in developed countries, Southeast Asia, and Latin America. The IVDUs can be considered a subculture in a bigger society. Unlike the spread in heterosexual transmission, the HIV transmission in IVDUs tends to stabilize. Perinatal transmission can occur in utero or during delivery. Postnatal transmission occurred mainly through breast feeding.

Since heterosexual transmission has been the main mode of transmission for HIVs, the control of heterosexual transmission is critical for the control of HIV/AIDS. For this reason, there is a danger for HIV/AIDS to prevail in Asia and Africa where the estimated curable STDs are highest compared to other region (WHO 1995 data). Thus, available data have suggested that the prevalence of HIVs among CSWs in Asia has been rising rapidly (WHO/SEARO 1994).

There has been migration of CSWs across the border from Myanmar, Cambodia, South China, Laos to Thailand and from VN to Cambodia and then to Thailand. These CSWs get into the country illegally. They have to settle with low paying jobs as direct CSWs, mostly against their will (Asian Research Center for Migration 1996, Chulalongkorn University). Migrations also occur across borders for jobs in construction, factories and logging. Workers come to Thailand from...
Myanma, Cambodia, VN and Laos. The Thais go to Malaysia, Singapore, Cambodia and Laos. Big projects attracted workers from South China, VN, and Thai (Asian Research Center for Migration 1995).

Heterosexual transmission of HIV related also to other factors in addition to CSWs. In Africa, there is a variation in the prevalence of HIV. There is an area called the AID belt where the prevalence is highest. This area does not coincide with the prevalence of HIV. There is an area called the AID belt where the prevalence is highest. This area does not coincide with areas where there is a high prevalence of sterility from STD, late marriage, polygyny, short duration of post partum abstinence, matrilineal society, and society where women can develop her own business and keep a separate budget (Caldwell et al. Scientific American, March 1996). The AIDS belt coincides well with the region where most men are not circumcised. Plummer et al (1991) observed that the lack of circumcision and the presence of chancroid associated with an increase in HIV prevalence.

International travel is one of the major modes of transmission. There were six million tourists having come to Thailand in 1994 (Data from the Tourism Authority of Thailand). Many were from east Asia including Japan and Malaysia. About 3000 women from Japan went to Phuket per month. Beach boys in Phuket may have some contribution to the transmission of HIV/AIDS. The beach boys were young and attractive men who tried to earn income by trying to attract single foreign female clients into a romantic relationship. Sairudee (1995) interviewed 59 beach boys and reported that many Japanese women were easiest to have romance and have sex with the beach boys. This is by no means a representative sample. It only helped illustrate another possible mode of heterosexual transmission of HIVs.

When the young Australian tourists who planned to visit Thailand were asked about their planned sexual behaviors in Thailand, only 34% gave a "definite no. Of those who said "YES, 82% planned to use condoms. A quarter of those who said "YES" might have sex with Thai girls and some of them with a bar girl (Med J of Aus 1993; 158: 530-535).

Universal condom use is one of the strategies of the Thai government to reduce the spread of HIV. It was piloted in 1989 and implemented in 1991. The police tried to monitor and enforce its use through the STD surveillance of female STD. The use rates increase from 25% in Jun89 to 94% in Jun93. The STD rates decline in government and private facilities. The rates of HIVs also decline in military conscripts, from more than 7% in 1992 and 1993 to about 3% in 1994 (Mastro et al, AIDS 1995; 9: 523-525). However, there are reasons to believe that the condom use might not be truly "universal. The low rate of condom use was observed in low class CSWs, the construction workers and the poor truck drivers. The seroconversion rates of HIVs among the sex workers were on the rise from 1.4% in June 1989 to 20% in December 1993 (AIDS 1995; 9: 523-525). Many CSWs will not use condoms if they were entertaining "regular customers' or if they drink or if they believe that healthy people has no risk for HIV transmission. People will use condoms if the rate of entertainment was 100 Baht or 4 USD per hour or if the number of clients per night was low and the male clients believe that he could have infected with HIVs from a healthy looking female (AIDS 1993; 7: 887-891).

The ease of transmission of HIVs relates to the occurrence of genital ulcers after the prostitute visits. The odd ration for HIV was highest among those who had genital ulcer diseases (AIDS 1995; 9: 177-181). The data from a Study in Africa suggested that an integrated HIV/STD service can be beneficial to STD clients. Treatment of STD can result in a 42% decline in HIV Incidence (Lancet 1994; 344: 243-245).

HIV infected men can transmit the infection to their spouse. The HIV prevalence in pregnant women is on the rise in Thailand, India and Myanma (WHO/SEARO 1994). There was a difference in attitude of Thai housewives who were HIV positive and those who were HIV negatives. Those who were HIV positives were not confident to discuss with their partners about the HIV disease. They were also less likely to tell their partners first if they were infected (J Med Assoc Thai 1995; 78 (7): 355-361).

The perinatal transmission varies between 13-52% depending on the stage of maternal disease, viral titer, Vitamin A concentration, the presence of chorioamnionitis, premature rupture of the membrane, and low level of antibodies to the V3 loop of GP120 (NEJM 1995; 333: 298, NEJM 1995; 331: 1173, Lancet 1992; 340: 585). The rate of transmission during breastfeeding is 10-20%. This has had an implication on the advisability of the mothers to breastfeed, particularly in Africa where there is a need to transfer protective antibodies from breastmilk against infections. Antiviral prophylaxis is shown to reduce perinatal transmission from 25% to only 8%. In Thailand, the MOPH intends to use antiviral agents to prevent perinatal transmission regardless of the ability of the patient to pay.

A significant mode of transmission is through the parenteral injections among the IVDUs. There is a variation in the prevalence of HIVs among the IVDUs in different major cities of the world, ranging from less than 10% in London to more than 70% in Milan, Italy (Scientific American 1994; 56-63). Many of the treatment modalities for the Drug Dependent victims have worked. However, countries will need a political will and resources to make decision. An appropriate decision is one which involves the client in the decision making process.

There is a pressure of the HIV's clients toward the FDA to accelerate drug approval. The drugs have been approved much more rapidly for serious diseases compared to all new drugs. If the pressure for accelerated approval is high, the society might run the risk of having to use drugs which may do more harm than good (Scientific American 1995; 272: 26-34).
HIV's seroprevalence increased among patients with TB in Bombay, Bangkok and Chiangmai. This is one example of the interaction between HIV virus and other microorganism which will pose important challenges to the health system of both developed and developing countries (WHO/SEARO 1994).

The prevalence of mental disorder was investigated using the DSM-III criteria in many cities of the world using a standard instrument. The prevalence of mental disorder is high among the symptomatic HIV individuals particularly in Bangkok and Brazil. How would the health system responded to such an increase in mental disorders (Arch Gen Psychiatry 1994: 51: 39-61).

There have been many types and subtypes of HIV viruses. HIV-I subtype B viruses predominate in IVDUs in Thailand and homosexual men in North America and Europe. The HIV-I subtype B had changed as disease progressed. The HIV-I subtype E has predominated in CSWs and male STD patients. All of the HIV-I subtype E in asymptomatic patients were NSI or Non-syncytium inducing. Up to 16 of 22 of AIDS cases with HIV-I subtype E were shown to be syncytium inducing with characteristic amino acid sequence in V3 of gpl20 proteins. This suggested that the virus may be able to diverge as disease progress and will have an important implication to vaccine development and the rate of transmissions by different modes (J of Virology 1995: 69: 4649-4655).

From the above discussion, if the aim of HIV/AIDS control is not only to give years to life but also to give life to years, then participation of stakeholders in the control of the diseases will be crucial. The stakeholders include the professionals (health and non-health), the lay provider, the non-government organization, the temple establishment, the families and the HIV/AIDS patients themselves. There is a need for an efficient support system to integrate the function of these stakeholders. The target of the work is toward the individuals as well as the promotion of social acceptance of HIV/AIDS patients. The complementary roles between the various groups must be promoted.

In conclusion, the HIV/AIDS infections have spread at different rates in various parts of the world, some more alarmingly than others. Most of the infected have been in the productive age groups and therefore, will continue to incur a significant loss to the society. The reasons for HIV/AIDS spread vary between countries and between regions in a nation, requiring different approaches to problem identification and problem solving. International spread can occur in many ways. Good controls require skills of educators, virologists anthropologists, lawyers, economists, mass media and epidemiologists. Each nation will need to develop a political will, a prime mover, a national mechanism, a capacity strengthening plan and resource commitment to solve its problems. International networking will also be crucial since none will be free from HIV/AIDS threats unless all nations could control the spread of the epidemics.