

Spread of AIDS in India exceeds all the experts' predictions

by Madhu Gurung

The Second International Congress on AIDS in Asia and the Pacific concluded in New Delhi on Nov. 12, 1993. Among other things, the magnitude of the danger posed by AIDS in India, as concluded by the meeting, came as a crippling blow to the Indian government, whose policies to combat AIDS seem minuscule compared to the need of the hour. Although Asia's first HIV (human immunodeficiency virus, the virus which causes AIDS) cases were not reported until the mid-1980s, during the short period since, the estimated number of cases has climbed to about 2 million, accounting for nearly one-sixth of the world's HIV infection. By the mid-1990s, it is now estimated, more Asians than Africans will become infected each year.

According to a United Nations Development Program report, the three worst affected countries in Asia are Thailand (estimated to have 1 million HIV cases), Myanmar (Burma, with an estimated 450,000 cases), and India, with 150,000 cases. Furthermore, according to the most recent official projection, Thailand will have between 2 to 4 million cumulative cases of HIV infection by the year 2000 (in a population of 60 million), while India will have 5-6 million. The situation elsewhere in Asia currently appears less severe but, given the similar social and sexual behavior, the situation may soon be explosive.

Hazy but frightening picture

According to the data collected by India's National AIDS Control Organization (NACO), the cumulative total of Western Blot-determined seropositive cases from Oct. 1, 1985 through to March 31, 1993 is 11,849 out of a total of 1,659,412 samples screened over that period. Within the high-risk groups that have been targeted for testing, the figure represents a seropositivity rate of 7.14 per 1,000. There has been a consistent increase in the prevalence of HIV infection in the country from 1985 through 1993. It is widely assumed that the number of recorded cases of HIV infection is deceptively low because of lack of diagnostic and testing facilities, small test samples, and, above all, inadequately trained physicians. Heterosexual promiscuity has been identified as responsible for the majority of these infections, as is the case worldwide, except in the Indian state of Manipur, which is located on the international drug trafficking route adjacent to the Golden Triangle. In Manipur, seropositivity within the

high-risk group was reported at 23% in 1990, 45% in 1991, and had reached an astounding figure of 56% in 1993.

HIV infection rates among female prostitutes have shown a similar explosive growth (see **Figure 1**). In India, the HIV rates among prostitutes in Vellore, Tamil Nadu, increased from 0.5% in 1986 to 34.5% in 1990. Among Bombay's female prostitutes, the corresponding figures have increased from about 1% in 1986 to 18% in 1990. Currently, 35% are HIV infected. What is worse is that it is evident that the virus has spread beyond prostitutes and their most frequent clients: migrant laborers, truckers, and students. Among the new victims are salesmen, executives, and Armed Forces personnel, housewives, and, sadly, newborn children.

According to one calculation by Dr. Khorshed Pavri, project director of India's Center for AIDS Research Control, Bombay's red-light district alone is adding three to four new HIV-infected people every hour. This means, of the world's 400 new HIV victims every 15 minutes, one is from Bombay.

Of 522 reported AIDS cases, various probable means of infection have been estimated: multi-partner sex (75.3%), blood transfusion (12%), and sharing non-sterilized equipment by intravenous drug users (6.5%) (see **Table 1** for the HIV breakdown). Almost 90% of the cases are attributed to those who are below 50 years of age, and more than two-thirds to those between 20 to 40 years of age.

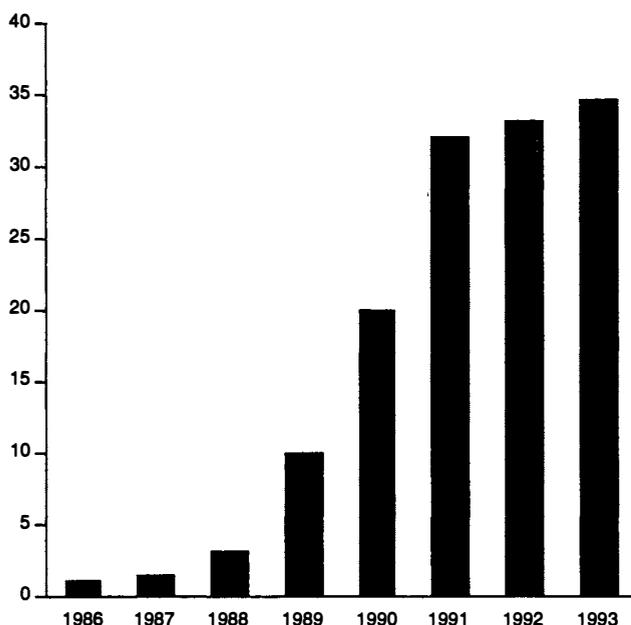
Authorities have come to realize that the real problem will arise when the 150,000 individuals who have been identified as infected start developing a debilitating range of afflictions called AIDS-related symptoms. In India, the major symptoms so far have been uncontrolled diarrhea, pneumonia, and tuberculosis. Surprisingly, there are no data available regarding these AIDS-related diseases.

P.R. Dasgupta, the director of NACO, admitted to this reporter that the collection of such data is a problem in India, because "the morbidity and mortality rates were already so high." But despite the high existing mortality rate, what cannot be ignored is that AIDS-related deaths are adding to mortality already.

The Indian approach

In India, the National AIDS Control Organization was set up in 1987 as a separate organization by the Ministry of

FIGURE 1
HIV prevalence among prostitutes tested
 (percentage)



Health and Family Welfare to implement an effective control strategy. It has been strengthened and consolidated since 1992 at an estimated cost of 2.23 billion rupees for 1992-97. It has received a soft loan of \$84 million from the World Bank and some technical assistance from the World Health Organization. It has a number of coordinating bodies under it, parallel to which are the empowered committees, state AIDS cells, and state technical advisory committees. NACO has drawn up an extremely ambitious work plan (see interview). It is another matter whether it will get the kind of recognition required from the bureaucracy and the public.

Another organization working actively toward achieving a breakthrough in AIDS research, and the organization which pioneered India's AIDS Surveillance Program in the mid-1980s, is the Indian Council of Medical Research (ICMR). Their program includes long-term research, otherwise known as the Preparation for AIDS Vaccine Evaluation, or PAVE, initiated by the National Institute of Allergy and Infectious Diseases in the United States. The National AIDS Research Institute, which is primarily manned by people on deputation from the National Institute of Virology (NIV) in Pune, India, was also set up by the ICMR. A high-level team of experts from the U.S. National Institutes of Health (NIH), headed by Dr. Robert Bollinger, will work with Indian AIDS researchers to prepare the ground for testing the AIDS vaccines which are in various stages of development and testing in the developed countries. Research groups across the world are presently working toward the goal of perfecting 14 differ-

TABLE 1
Breakdown of sero-positives

Category	Sero-positive	% of total
Heterosexually promiscuous	6,104	43.67
Homosexuals	41	0.30
Blood donors	2,226	15.38
Dialysis patients	119	0.88
Antenatal mothers	65	0.48
Recipient of blood, blood product	292	2.17
Relatives of HIV patients	122	0.91
Suspected ARC/AIDS	625	4.60
Intravenous drug users	1,823	13.43
Others	2,559	16.85
Total	13,976	

Source: National AIDS Control Organization, Ministry of Health and Family Welfare, Government of India

ent AIDS vaccines.

The preliminary program, the run-up to the trials of the vaccines, has been formulated by the ICMR in collaboration with NIH. The latter is reportedly willing to foot part of the research bill and has already allocated \$800,000 for the project. Referring to the astronomical pace at which the dreaded disease is spreading throughout India, Dr. S.P. Tripathy, director general of ICMR, has made it clear that "we cannot be slow in our responses."

Besides the human cost, the delay in AIDS research may affect India adversely in the wake of the recent completion of the General Agreement on Tariffs and Trade (GATT) round of talks. The Intellectual Property Rights stipulations directly affect the cost of producing medicines not already made and patented in India. According to the Indian Pharmaceutical Manufacturers Association, the lifesaving drugs patented abroad will cost much more in India when the new GATT regime comes into existence.

Medical officials in India are also working on adapting diagnostic technology for domestic production, thereby bringing down the currently high cost and technical requirements of testing. In this regard, a glimmer of hope came from the late-1993 visit of Dr. Jean-Claude Shermann who, along with two other French scientists, had isolated the AIDS virus back in 1983. Shermann's visit to India was sponsored by the Cambridge Biotech Corp., based in the United States. Cambridge Biotech Corp. markets HIV detection kits in India through its tie with Cambindia Biotech. According to Cambindia officials, plans are afoot to undertake manufacture of the detection kits in India. Testing may thus be simplified by having cheaper and less sophisticated test kits manufactured domestically. But unfortunately, a large portion of the World Bank loan to combat AIDS is tied directly to the import of

costlier kits, and cannot be used for indigenization efforts.

Blood supply poorly screened

While promiscuity has been identified as a major source for the spread of the HIV virus, it is, however, not the only source in India. Despite warnings, the country's blood distribution system remains unsafe. A *Times of India* article on Dec. 11, 1993 reported that two government hospitals in New Delhi, ignoring the AIDS danger, continue to get their entire supply of blood through public tenders. The report created a public outcry. But in India, as in many developing countries, the buying and selling of blood is a highly developed industry where many people view themselves as recipients of blood and themselves seldom act as donors. Most of the blood is donated by "professional" donors, some of whom make a living out of the process. As NACO Director P.R. Dasgupta explained, the "professionals" are often brought in by the patients' relatives. The relatives refuse to give blood needed by the patient, and instead hire a professional donor and bring him in under a false name, claiming he is a relative of the patient.

Despite the risks involved in a "commercial" blood collection system, the practice cannot be stopped overnight, since about half the blood used in large urban hospitals is obtained from such a network. Moreover, the shortage of blood in this nation of more than 800 million souls is a problem of serious dimensions: Of the annual nationwide requirement of 50 million units of blood, barely 1.9 million units are available at any given time.

The major problem is that the blood is largely untested. On paper, the testing of every single bottle of blood for HIV has been mandatory since as far back as March 1989, but this statutory requirement has clearly not been adhered to. Even now, an estimated 85% of the blood supplied is not being tested for HIV.

At the same time, it has been found by the All India Institute of Medical Science, India's premier medical institution, that the incidence of HIV infection among "professional" donors is double that of voluntary donors. While Indian authorities and others have generally been keen to blame the "professional" blood donors for the spread of HIV, they seem reluctant to specify why untested blood is allowed to be used in the first place. The well-entrenched nature of the commercial blood donation system does not explain why blood that has not been tested is being used. Clearly, the control points needed to police this, whether at the hospital or within the blood collection organizations, do not exist or are not adequately staffed. The high percentage of seropositivity detected among blood donors is a clear indication of the urgency of enforcing the law requiring the testing of *all* blood.

Coupled with this problem of gross violation of blood-handling procedures is the carelessness with which surgery is conducted in many hospitals. Reports indicate that the lack of adequate measures during surgical operations has helped

to enhance the rate of HIV infection, through contaminated blood or unsterilized needles. According to a Bombay study, 6 out of 996 surgical outpatients became infected as did 28 of the 2,406 patients in the medical outpatient department. Another impediment in the way of supplying non-infected blood is the inability to screen blood supplies in smaller cities and towns due to the high costs involved. NACO is actively trying to rectify this shortcoming. However, as long as it does not accomplish its task, this will remain an unending source of infection.

The potential for rapid growth in HIV infection has been further enhanced because of the societal taboo that exists in most Asian countries against discussing sexual matters. There is a decided lack of sex education among the youth and, as such, there is very little awareness of the danger associated with sex and HIV. NACO, like similar institutions around the world, has concentrated its campaign on making people aware of AIDS dangers associated with sexual habits and has put an emphasis on the use of condoms. There are plans for NACO, with the help of the World Health Organization, to soon begin marketing condoms at an affordable price. At the same time, a large proportion of Indian women, because of their lower level of education and lack of access to educational material, remain vulnerable to sexually transmitted diseases. India's movement of population is very fluid. As a result of industrialization and urbanization over the past four decades, a large part of the rural population has moved into big cities, creating slums where, due to inadequate sanitary conditions, morbidity, and mortality are higher. The conditions prevailing in these slums leave people increasingly vulnerable to HIV and other deadly viruses.

The economic impact

In addition, AIDS has potentially staggering economic consequences. The economic impact of AIDS derives in part from the large number of projected cases, each of which is very costly. The HIV-related illness tends to strain the resources of those affected and the families who have to bear the brunt of medical costs. The costs of the HIV epidemic will tell most heavily on the poor in Asia unless the government plans ahead to provide some sort of financial help to those afflicted with AIDS. The latest U.N. Development Program estimates indicate that the lifetime medical care in Thailand for an AIDS victim could cost as much as \$1,000-1,500; in India, \$900-1,400; and in Indonesia, \$1,300.

However, this is only a fraction compared to the loss of income caused by AIDS-related morbidity and mortality. Thailand is the only country in the region to estimate the upcoming costs of HIV and AIDS in terms of public and private expenditure. Thai officials found that health care costs would grow from \$1.7 million in 1991 to \$65 million by the year 2000. India has not made such economic estimates, nor does it have a policy to meet the financial demands HIV will carry.