An Ongoing Tragedy

The Acquired Immune Deficiency Syndrome (AIDS)...

by Bindu T. Desai

It is not yet known how widely AIDS, which bids fair to be the next century's major health concern, has affected India's population. If it were to acquire epidemic proportions in India, it would be devastating, given the low health status of our population and consequent lower body resistance, especially of women and children, and the lack of a functional health care system.

The low priority given by our government to people's health needs is evident in the fact that even easily preventible and curable diseases are still rampant in India, especially affecting the poor and the rural populations. Government's generally callous and ill informed attitude to health problems extends also to AIDS.

Here, Bindu Desai, consultant neurologist in a large inner city hospital in Chicago, who has observed the epidemic over the last decade, writes about the social, ethical, medical and political dilemmas it presents, and particularly about its effects on women. She deals at length with AIDS in the US because the largest numbers of reported cases are in that country. She also discusses the situation in India, the plans and policies of health authorities, and suggests what needs to be done.

Maria Sanchez is a 27 year old Hispanic woman who lives in Newark, New Jersey. Newark is one of the poorest cities in the United States. It presents a dismal picture of joblessness, poverty, drug addiction, homelessness and crime, so common to all the major cities of the USA especially to that portion known as the inner city. The "inner city" is largely made up of "people of colour" - black and Hispanic, with neighbourhood after neighbourhood consisting of rundown and abandoned buildings, with an air of desolation so widespread as to seem overwhelming, where the likelihood of finding a job is virtually nonexistent, where gangs proliferate, spreading fear and violence and injury, and where drug addiction provides some with temporary relief from harsh reality only to lead to catastrophe and even death later.

Maria came to Newark from Puerto Rico at the age of five. She has been married to Jose for the past six years. Jose dropped out of school and had never got any job. He became a drug addict or intravenous drug abuser (IVDA) in his midteens. Too poor to afford clean needles, Jose injected himself sharing needles with other addicts in a "shooting gallery." Through these contaminated needles Jose got infected with the Human Immunodeficiency Virus (HIV), the virus that leads to AIDS. Maria contracted HIV from Jose, and passed it on through the placenta to her two children, Ernesto, who would die of a meningitis common in AIDS at age three and Linda, dead from lung complication of AIDS at age 18 months. Jose died of AIDS six months ago and today Maria was told that the 25 pounds she lost in the past three months and her feeling listless and weak was because she now has the AIDS related complex or ARC...

Lucy Evans is eight years old and lives in New York City. She is the lone survivor of a family where her father, mother and brother have all died of AIDS in the past three years. Lucy is shy and withdrawn. She tells health workers that she also wants to die so that she can join her family in heaven...

Roberta Jones lives in Salt Lake City, Utah. She grew up in a very conservative family and nurtured no ambitions except to marry her childhood sweetheart Richard. The Joneses were the epitome of a successful American family: a stable marriage, a beautiful home, solid godfearing, churchgoing citizens, parents to several lovely bright children. That idyllic world shattered today... Richard who had become very thin and lately seemed to tire very easily told Roberta he had deceived her in their marriage. Richard was bisexual. He had had sex with several men over the past few years. Now he was ill, ill with AIDS. Roberta was shocked, angry and distraught...

Susan Taylor, a widow of 62, was so proud of her son William. She lived in a small farming town in Iowa. William had left for San Francisco many years ago. He was a promising young architect and now, approaching 31, seemed set for a brilliant career. Susan had wanted her son to marry, settle down and raise a family - she had teased him that she was anxious to become a grandmother! Whenever William came home at Christmas or Thanksgiving she never hesitated to enquire about his girl friends and whether he had met one he cared for enough to marry. Her son had laughed at these questions and promised that whenever he did decide to marry she would be the first to know. Now Susan was flying to San Francisco where William had been admitted to a hospital with a serious lung infection. She learns

from her son that he has AIDS. William, very short of breath, gaunt, pale, feverish and sweaty, can barely mumble to Susan who breaks down and sobs inconsolably...

Ann Delaney and her husband Tom lived in Arcadia, Florida, for 15 years. Their three sons, ages 10, nine, eight, were born in town. All three sons suffered from a rare blood disease (haemophilia) and were now infected with HIV. They had contracted that virus through the contamination of blood products used to treat their blood disease. As the knowledge of their infection became known through the community, they found their playmates no longer wanted to be near them. Parents, at the school the three attended, were incensed. They demanded and obtained an order from the school forbidding the three boys to attend classes. The Delaneys decided to sue the school for discriminating against their sons. They received death threats on the telephone; they were asked not to attend church services by their minister. A federal judge ordered that the boys be reinstated at school. A few days later a fire destroyed the Delaney home forcing them to move out of town....

So AIDS has an impact on the lives of all women, as wives, mothers, daughters, lovers, friends.

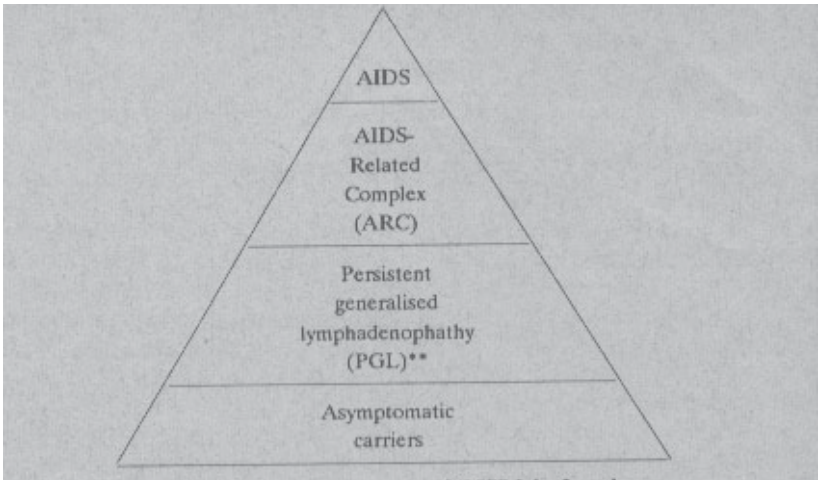


Figure 1: The spectrum of HIV infection
** Swollen lymph gland

History of AIDS

Eight years ago, in mid 1981, the medical world became aware of a puzzling illness. The Morbidity and Mortality Weekly Report (MMWR) of the Centers for Disease Control (CDC) in Atlanta, Georgia, described outbreaks of an unusual kind of pneumonia (PCP caused by a parasite Pneumocystis Carinii) and a rare skin cancer called Kaposi's Sarcoma (KS) in young, previously healthy "gay" (homosexual) men. The outbreaks had occurred in cities on both coasts of the United States, Los Angeles in the west and New York city in the east. Some of the young men had repeated infections, many had a number of different infections, and of the 15 described nine were dead. By the end of 1981, 160 persons had had similar illnesses. It was named Acquired Immune Deficiency Syndrome (AIDS). People who got it had been healthy in the past, they had been born with a normal set of defences against infection and some types of cancer, that is, they had a normal immune system. Largely made up of the White Blood.Cells (WBC) with a very important role being played by a specific type of WBC - the T^4 lymphocyte, this system allows the body to trap and destroy agents of disease like bacteria, viruses, fungi and parasites.

Ordinarily, the parasite Pneumocystis may be present in the trachea or windpipe. It is unable to cause disease because the immune system recognises the parasite as "nonself" and uses several ways including secreting certain proteins to isolate and render the parasite harmless. Persons with AIDS (PWA) were found to have very few WBCs and hardly any T^4 lymphocytes. Thus they were now "immunocompromised." The causes for this immunedeficiency were not known in 1981 and not discovered till 1983. What did become obvious immediately was that many

There is an interesting side to the history of the discovery of the AIDS virus. Like other aspects of AIDS, it sheds light on otherwise rather closely guarded activities, in this case illuminating the way scientific establishments work, scientists share and hide results, seeking honour and fame while achieving quite astounding discoveries. As the American team's discovery of the AIDS virus was accompanied by a blaze of publicity it led people to believe that Dr Gallo's team had discovered the AIDS virus. The French team naturally became very annoyed and a controversy began between two prestigious laboratories and scientific teams in France and the US. The French felt they had lost on two counts: on gaining sufficient recognition for their discovery of the AIDS virus and on failing to obtain patent rights for their techniques of detecting antibodies to the AIDS virus in the blood. The French team, which had shared its findings with Dr Gallo, felt cheated out of the honour of discovery and the royalties that would accrue in millions of dollars from the AIDS blood test. They sued the US scientists and the US government. After years of wrangling a settlement was reached out of court, signed by the prime minister of France and the president of the United States. The settlement gave equal credit to both teams of scientists for the discovery of the virus and allowed the royalties from the blood test to be shared between them.

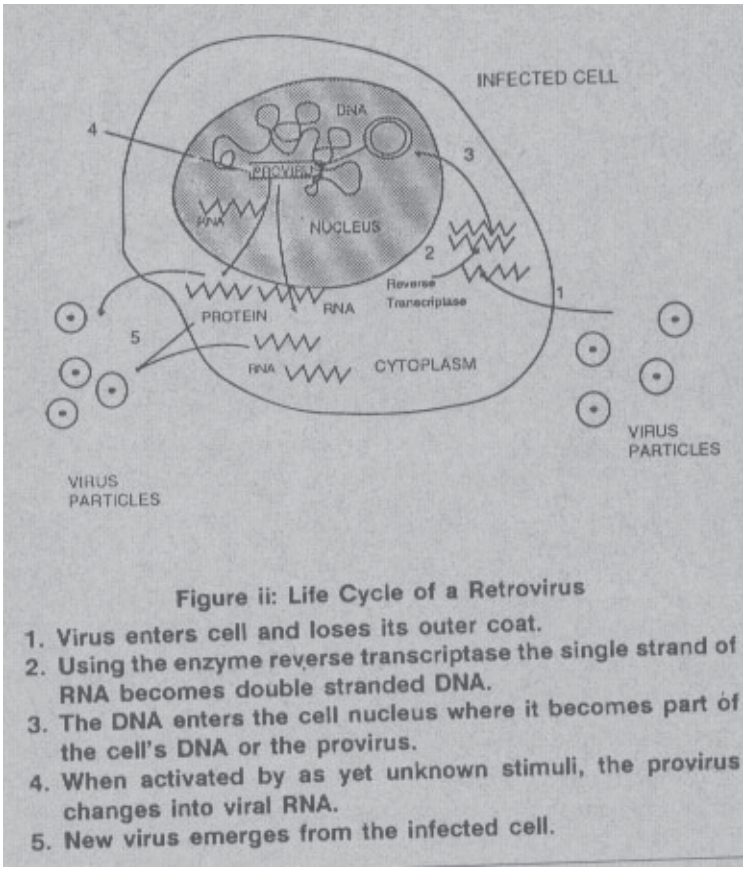


Figure ii: Life Cycle of a Retrovirus

1. Virus enters cell and loses its outer coat.
2. Using the enzyme reverse transcriptase the single strand of RNA becomes double stranded DNA.
3. The DNA enters the cell nucleus where it becomes part of the cell's DNA or the provirus.
4. When activated by as yet unknown stimuli, the provirus changes into viral RNA.
5. New virus emerges from the infected cell.

"opportunistic" infections occurred in AIDS, the lowered resistance of the body allowing organisms the "opportunity" to cause disease. Also in AIDS rare and serious kinds of cancer were seen. Cancers like KS which are generally slow growing and localised to one part of the body behaved differently in PWA; here, they grew rapidly, spread through the body and even killed.

Among the first group of PWA reported to the CDC were several intravenous drug abusers (IVDA), individuals who inject "street" drugs like heroin or cocaine directly into their bloodstream. Scientists speculated whether it was the drugs that led to the marked decrease in T^4 lymphocytes. AIDS was soon reported in patients with haemophilia, a disorder of the blood clotting mechanisms. These patients required treatment with repeated blood transfusions or blood products. Women came down with AIDS as did some of the infants these women had borne. AIDS also occurred in a few individuals who had received blood transfusions during surgery in the past few years. In about two years the pattern by which AIDS spread had become clear. It was a new disease and it was spreading very fast. It appeared to be a viral illness, a virus that selectively destroyed the T^4 lymphocyte. AIDS spread in a manner similar to other sexually transmitted diseases, that is, it spread by sexual intercourse or by blood to blood spread as in blood transfusions, or by needles contaminated with blood as in IVDAs or via the placenta from mother to child. Viruses that attacked lymphocytes hence became the objects of intensive research.

In January 1983, researchers at the Pasteur Institute in Paris received tissue from the swollen lymph gland of a young homosexual man who was otherwise well. By then, it was known that swollen lymph glands preceded the onset of AIDS by several months (see figure I). The researchers, Francoise Barre-Sinoussi, Jean Cherman and Luc Montagnier, wanted to study lymphocytes from such glands, to see whether these cells differed from lymphocytes found in normal glands. The lymphocytes were isolated by cutting up the lymph gland tissue and spinning it in a centrifuge. Once the lymphocytes were separated Barre-Sinoussi added several chemicals and growth factors to promote the growth of these cells. Every three days or so she tested the fluid at the top of the test tubes containing the lymphocytes, for signs of viral activity. She was looking for an enzyme reverse transcriptase - an enzyme which is not present in human beings but which is present in a type of virus known as the retrovirus (see figure II). On January 25, 1983, she discovered the presence of reverse transcriptase from these lymphocytes and recorded in her laboratory notebook that enzyme activity was very low and thus inconclusive. Two days later she looked again and found that the activity had increased, 10 days later it peaked and began to fall. This virus, the researchers thought, is different from another retrovirus that was known to infect lymphocytes - the Human T cell Leukemic/Lymphotrophic Virus I or HTLV I. HTLV I caused lymphocytes to multiply. This virus killed lymphocytes. They took fluid containing the virus which they named the Lymphadenopathy Associated Virus (LAV), and added it to a test tube containing fresh healthy lymphocytes. Soon these lymphocytes were also dead. The French team took photographs of the virus and published their discovery in the journal *Science* in May 1983. A similar virus was discovered by Dr Robert Gallo and his team from the National Cancer Institute in the United States and named the Human Leukemic/ Lymphotropic Virus III. Their results were published in May 1984 along with a new blood test that could detect antibodies to the virus (see figure III)

The Aids Virus

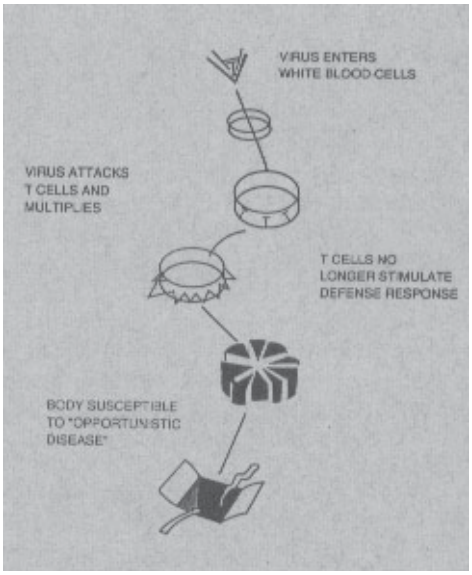
The Human Immunogenic Virus is a complex organism. Viruses are basically nucleic acids or genes wrapped in a coat of protein. In most cells the DNA (deoxynucleic acid) which lies in the nucleus of a cell carries a message to RNA (ribonucleic acid) which then translates the message into an appropriate protein. This is called the central dogma of molecular biology: DNA RNA protein. However, in the 1960s scientists discovered viruses that caused tumours and behaved in a different way. Here the RNA secreted an enzyme reverse transcriptase that then modified DNA. In other words the message was being carried backwards hence these viruses became known as retroviruses. Till the early 1980s retroviruses were known to cause tumours and infection in cats, birds, mice, horses and other animals, but not a single one was known to affect human beings. HIV is further different from other retroviruses which have only three genes; HIV has eight. HIV can change its outer appearance to deceive the body's immune system. Note that the body does attempt to deal with HIV. Antibodies are secreted which, though ineffective in killing HIV, must play some as yet unknown but useful role. HIV enters the human body through a break in the skin or through the blood or semen. Semen by itself temporarily suppresses the immune system. It needs to, otherwise the body would reject semen and prevent fertilisation. It appears that HIV does not enter the body by itself, but through infected cells. The virus proceeds to multiply using its RNA to influence human DNA to code for its viral proteins. HIV can remain dormant, converting a part of human DNA in the lymphocyte into its DNA - the proviral form. When the lymphocyte tries to divide in order to respond to an antigen (see figure II) the proviral DNA uses the cell's protein making machinery to create more viruses. Ultimately the lymphocyte dies, literally bursting with viruses which are now released and proceed to infect other cells. Thus the cycle goes on.

In 1986 the viruses LAV and HTLV III were renamed the Human Immunogenic Virus or HIV as it belongs to a separate family of viruses, one which destroys lymphocytes but which may remain in the body for a long time, from seven to 10 years, that is, have a long latent period before causing disease. In 1985 the AIDS virus was isolated from brain tissue which means that HIV penetrates into the brain where it can cause grave damage.

AIDS as an Epidemic

Each year the number of AIDS cases has grown rapidly as also the number of countries reporting it. In 1982 the US had 788 cases, in 1986 30,000, and at the end of March 1989, 90,990 of whom 52,435 or 58 percent are dead. Nearly a million people are believed to be infected with HIV in the US with the World Health Organisation (WHO) estimates ranging between five to 10 million worldwide. AIDS has been reported from 144 countries with the Americans comprising about 70 percent of the total so far.

How many people infected with HIV go on to have AIDS? We do not know the final figures as yet, because the disease is so new but we do know that the likelihood increases with the passage of time. The infection is lifelong, the body does not appear capable of destroying the virus or of rendering it harmless. After three years of infection about four percent of people infected with HIV develop AIDS, after five years 14 percent and after seven years about 40 percent. Some scientists estimate that nearly 75 percent of all those carrying HIV will eventually develop AIDS.



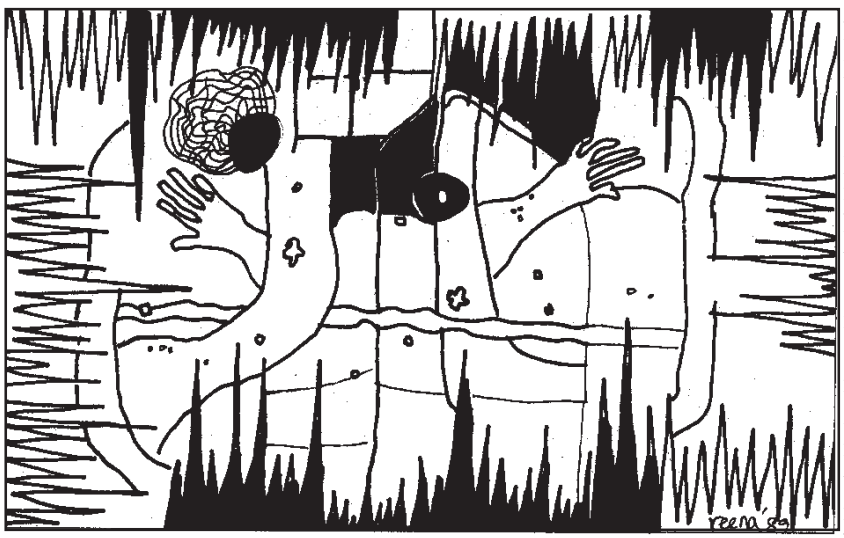
FigureIII: How HIV leads to AIDS

Theories of Origin

Why did the AIDS virus arise now? Where did it arise? Was it present but undetected before? How did it spread so fast? Answers to these questions are as yet unknown. There has ben a fair amount of speculation, some of it based on results from blood tests, that HIV arose in Africa. Unfortunately the efforts to deduce the origin of HIV have often been marked by attempts to stigmatise rather than study. Western media, particularly the tabloids and some medical journals, have succeeded in creating the impression that AIDS originated in Africa, that the "dark continent" filled with this "deadly virus" is poised to lose several million of its people to it. Often basing their claims on dubious statistics, they have come up with several theories including spread of AIDS by mosquito bites, by contact with the African green monkey, by some sexual practices peculiar to Africa.

Firstly, one must note that there cannot be a single common feature that encompasses an entire continent. Africa

is made up of 50 countries as diverse as Morocco in the northwest to Mozambique in the southeast. The mosquito bite theory has proven false as few children were infected with HIV in mosquito infested areas of Africa and the United States. A virus spread by mosquitoes would not overwhelmingly affect adults. Now the monkey theory: if there were close contact between humans and monkeys, common sense suggests it would be less likely to occur in peasant societies living in huts where monkeys are a destructive nuisance. It could, on the other hand, be more likely to occur in a laboratory setting where scientists spend weeks to months experimenting on monkeys! While blood tests for AIDS have been highly positive among samples collected from Zaire and Kenya, the more specific blood tests have largely turned out negative. It is sadly obvious that some countries in central Africa will have many AIDS cases but so will other countries on other continents, notably the United States. There is no evidence to date that proves AIDS began in Africa. Though a few blood samples appear to date the disease as far back as the late 1950s there is little doubt that AIDS in its epidemic form began in the late 1970s.



One theory about the origin of AIDS and HIV suggested the possibility of a form of biological warfare experimentation that went haywire. Though biological warfare and unethical experimentation with human beings have occurred in the past four decades, no credible evidence or even sets of clues have come forth to lend substance to the germ theory so far.

After carefully following the controversy about the origin of HIV, there appears to be no clear explanation. Is it an event that is part of the larger human condition? We have had horrendous widespread epidemics in the past, the black plague in Europe in the thirteenth century, the ravages of illness among the original inhabitants of the new world following the European conquest in the sixteenth century, and so on. HIV could have existed in a small population that had developed adequate immunity to it after many generations. In the past 25 years there has been considerable disruption of agricultural communities worldwide, with the havoc caused by increased commercial farming. The landless have flocked to cities where they are forced to exist in unbelievable squalor. Could AIDS have spread this way from a previously enclosed community now split in a myriad of urban shanty towns? Time may reveal some answers but I suspect the origin of AIDS and the sudden appearance of HIV may remain forever shrouded in mystery.

How AIDS Spreads

As the first medically reported cases spread in the US, epidemiologists gained some insight into its possible cause. After the initial cases among drug abusers and gay men, it spread to women via male drug addicts or bisexual men. Women drug addicts could also get infected using contaminated needles. Among gay men it initially appeared among so called "fast lane" gays, that is, men who had multiple sexual partners. As the numbers of persons infected with HIV grew so did the likelihood of acquiring it. We now know of several ways in which HIV spreads. In the US homosexual or bisexual men and IVDA by men or women accounts for 90 percent of AIDS. These three categories form what is termed the "high risk group." Nearly 90 percent of PWA are men between the ages of 20-50, seven percent are women and a little over one percent children. Among the women with AIDS, half had a history of IVDA, 20 percent had sexual contact with a male IVDA with AIDS, 10 percent with a bisexual male, and 10 percent had received blood transfusions.

An increase in the number of sexual contacts increases the risk of contacting HIV infection with infection more likely to pass from the male to the female rather than vice versa because the AIDS virus cannot survive easily in the normally acidic secretion of the vagina. While live HIV has been isolated from blood, semen, vaginal secretion, saliva, urine, breast milk and tears, mere presence of the virus does not appear to result in infection. "Free" HIV or HIV that exists outside a cell does not appear to be infectious. Also HIV is rarely detected in saliva compared to blood (one out of 83 for saliva or one percent compared to 28 out of 50 blood samples or 56 percent.)

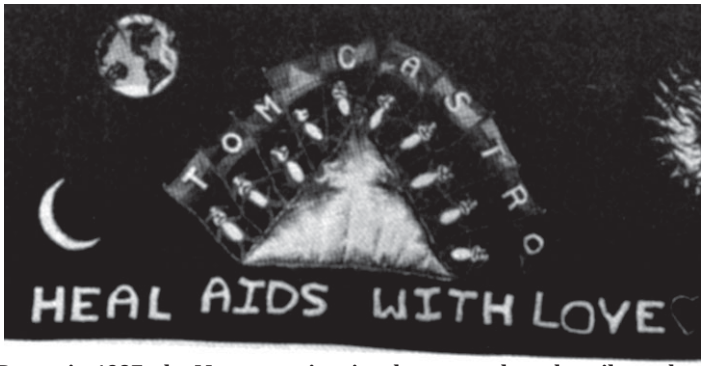
Furthermore, to date there are no reports of persons contracting HIV by routine household contact. Friends and relatives who have cared for a loved one with AIDS have not come down with the disease. In fact HIV infection appears difficult to acquire. While receiving one

blood transfusion contaminated with HIV may be certain to result in infection, it is not known whether the virus is acquired by a single sexual contact. Presence of other venereal diseases, or local infection in the penis or vagina increases the risk of getting HIV. Once the virus enters the body, infection is lifelong though the individual may stay well for months to years before showing signs of the disease. Certain forms of sexual intercourse appear more likely to result in infection, especially anal receptive intercourse where damage to the thin walls of the rectum leads to tears and allows HIV to directly enter the bloodstream.

The AIDS Syndrome

AIDS is the last stage of infection with HIV (see figure I). Initially when an individual gets infected with HIV one of two things may occur: most people do not feel ill, that is, they are asymptomatic. A few develop an acute illness which may consist of severe headache and fever or skin rash or muscle fatigue, joint pains, sore throat. This flu-like illness passes away in a few days. Then the lymph glands swell and subside. After an indefinite period the individual begins to have persistent fever, loses weight, feels listless and weak. This stage is called ARC or the AIDS Related Complex. The full blown syndrome of AIDS is diagnosed when one of the following occurs: the patient develops opportunistic infections that involve the throat, the lungs, the brain, or any other organ, a skin cancer develops - Kaposi's Sarcoma or other cancers called lymphomas, occur; or HIV itself affects the brain or spinal cord causing loss of memory, paralysis.

AIDS has been called dreaded and deadly. It is both. No organ of the body is protected from the devastation of the disease. The suffering and pain borne by the individual patient is considerable, sometimes agonising to watch, always unrelenting in its onslaught with death coming almost as a release. The disease does not kill right away. Infections occur and subside with treatment. Here, modern medical science helps only to a limited extent. All the antibiotics, antifungal and antiviral agents in use depend on the body's immune system to clear up most of the effects of an infection. As the immune system itself is compromised in AIDS, (see figure III) drugs can temporarily suppress one infection only for another to appear a few weeks to months later. It becomes almost like walking on eggshells with complications mounting and a single AIDS patient having an average of five to seven infections during the course of illness. Add to the debilitating effect of severe illness the side effects of powerful drugs and one gets an idea of the enormous suffering and misery borne by PWA. Each day brings forth new problems; if for a few weeks a lung infection has finally been brought under control, there now develop several abscesses in the brain, with an increase in pressure in the brain so that the patient can no longer see clearly or walk steadily. In addition to the debilitating effects of infection, some PWA develop Kaposi's Sarcoma, a skin cancer which can give rise to bulky, painful, even disfiguring nodules, adding to the stigma of the disease.



Begun in 1987, the Names project is a huge patchwork quilt made of panels contributed by thousands of people across the USA. Each panel commemorates a person who died of AIDS. The quilt is displayed at protest demonstrations, and at AIDS Day meetings each year. This panel is for Tom Castro, a housepainter.

Once AIDS is diagnosed the outlook for survival is bleak: about half are dead in one year, over 95 percent by three years. For women with AIDS the outlook is bleaker with nearly 70 percent dead after one year and 95 percent after two. There is no specific treatment for AIDS. A drug Azidothymidine (AZT) may prolong life in some patients but does not cure AIDS.

Social Aspects of AIDS

AIDS was first reported in two groups already stigmatised and marginalised in the popular imagination: homosexual men and drug abusers. Indeed, for a time, AIDS was known as GRID or Gay Related Immune Deficiency. The reports of AIDS in "fast lane" gays or men who had multiple sexual partners reinforced the feeling of a just punishment being delivered to those who were supposed to have transgressed either god's or nature's laws. Fundamentalists were quick to call it god's wrath and indeed this feeling persists among many devout and otherwise compassionate religious leaders today, a factor which has prevented a section of the black church in the US from mounting an effective campaign to combat AIDS. In the early eighties AIDS was a mysterious, deadly killer.

A few thoughtful voices did point out that homosexuality has always existed in human society, so there was something new causing AIDS, not merely the sexual activities of gay men. As AIDS began to spread in people with haemophilia, in women and children, it became clear that this was a blood borne infection similar to other venereal diseases. Early in the epidemic, several "high risk" groups were identified - gay men, intravenous drug abusers and Haitians. The last were a curious

Aids Blood Test

Once it became clear that a virus was responsible for the chain of events that may end with AIDS it became possible to check for the presence of the virus in the body. The virus could be detected directly as Barre-Sinoussi had done by cutting the lymph glands of an infected person and promoting viral growth in the lymphocytes. Such a method is tedious, expensive and highly specialised. As HIV infection does result in antibodies being secreted in the blood, it became more practical to test blood for the presence of these antibodies. The antibodies were directed against various parts of the virus, its outer coating, the inner core of protein. Two types of tests are performed to detect antibodies to HIV in the blood. The first is called an ELISA (Enzyme-Linked Immunosorbent Assay). It is carried out in three stages. Initially particles of HIV are attached to a plastic sheet. Drops of human serum (the fluid that separates at the top of a tube of clotted blood and contains proteins and antibodies) are now added to the plastic sheet. If the serum being tested contains antibodies to HIV they will attach themselves to the particles of HIV already on the sheet. Now an antibody is added. This antibody is produced beforehand by injecting human immunoglobulin (the basic antibody protein) into a goat. The anti-antibody from the goat contains an enzyme which will change colour if a chemical is added to it. In the last stage of the ELISA test a chemical is added to the plastic sheet containing the particles of HIV, the serum being tested and the anti-antibody or labelled goat antibody. If the serum being tested contains antibodies to HIV the addition of a chemical will give rise to a colour in this mixture. The individual whose serum was being tested is then said to be HIV positive or seropositive. The ELISA test is repeated several times. It can yield both false positive and false negative results. False positive results mean that the test shows antibodies in the absence of HIV and false negative that the test fails to show antibodies even when HIV is present. False positive results occur in about one of 200 specimens. For this reason, a second type of test is done, one that confirms HIV infection. Known as the Western Blot test, it is complex, labour intensive and highly sophisticated. This test "blots" antibody to HIV on a strip of nitrocellulose. First HIV proteins are separated according to their size or molecular weight by electrophoresis. These proteins are then transferred or "blotted" to a sheet of nitrocellulose. To this nitrocellulose sheet are added drops of serum to be tested for HIV and the preparation is left overnight. HIV antibody in the serum interacts with the separated viral proteins or antigen on the strip. The next day anti-antibody is added and presence of antibodies specific to HIV proteins noted. Antibodies should be present to HIV proteins of size 24,000, 41,000 and 120,000 daltons for a Western Blot test to be called positive. False negative tests occur early in HIV infection as antibodies can remain undetected anywhere from five weeks to six months after acquiring the virus. Such negative tests lead to a false sense of security that one is free of HIV. The presence of HIV antibodies in the blood does not predict whether or when AIDS will develop, with most HIV positive individuals remaining well for periods of three to seven years. The "AIDS Blood Test" does not diagnose AIDS, but detects the presence of antibodies to HIV in the blood. A positive test does mean that the individual has been exposed to HIV and is able to transmit it to others.

addition, overnight changing AIDS in the US media's eyes from a "gay plague" to a "Haitian" disease. Haiti was seen as the source of AIDS and some Haitians in the US lost their jobs and were evicted from their homes.

AIDS appeared in Haiti at the same time as it did in the US. Port-au-Prince in Haiti had been a very popular resort for American gays, and homosexual prostitution was probably the cause of AIDS in the majority of Haitians with this disease. Haitians were soon dropped as a high risk group. The "Haitian" episode in AIDS illustrates the unseemly haste with which the media, the fundamentalist preachers, the powerful pillars of the church, the self righteous, the hypocrites, and the dogmatists jumped in to stigmatise anyone, group or race or nation or continent that was powerless or already considered "immoral" or "depraved" or "deviant" or somehow deserving of their misery.

Meanwhile, as the epidemic gathered strength its effects on American society became wider. Reactions to the disease were mixed. By and large there was no panic, and groups were formed to deal with the human suffering and to limit the spread of the disease. Mothers and sisters and lovers and friends gave enormous love and care to the afflicted, responding in a manner that was humane and affectionate. Others could not deal with the awful reality, sometimes, of the rapidly fatal illness, at other times, of their son's or husband's or brother's homosexuality, and cut off all ties.

Among the IVDA group, especially in the inner city, AIDS was yet another and not necessarily the biggest burden of lives that know little respite from poverty, homelessness, crime and despair. Though for many years the US government was lethargic in dealing with the AIDS epidemic, its health agencies and its medical establishment were in the forefront of research and in countering myths about this disease. Once it became known that AIDS was a viral infection, measures to prevent the disease received attention, and a massive educational campaign was mounted across the US

to warn people against "unsafe" sex and the dangers of sharing needles which may be contaminated with HIV. Systematic research began into the prevalence of HIV, the likelihood of developing AIDS after being infected with HIV, the passage of HIV from mother to child. Groups within the gay community often sponsored and encouraged participation in these studies.

Courage and compassion came from many unlikely sources. The surgeon-general of the United States took a forthright stand promoting education, including advising the use of condoms, in a well produced booklet that was sent to every household in the US. The surgeon-general Dr C.Everett Koop addressed the people honestly. He wrote that "AIDS has brought fear to the hearts of most Americans -fear of disease and fear of the unknown." His report, he went on, will inform Americans about AIDS, about how it is transmitted and how it can be prevented. He added: "It will help you understand your fears. Fear can be useful when it helps people to avoid behaviour that puts them at risk for AIDS. On the other hand, unreasonable fear can be as crippling as the disease itself." He dealt squarely with the prejudice and irrationality that surrounded AIDS. He said: "Some Americans have difficulties in dealing with the subjects of sex, sexual practices and alternate lifestyles. Many Americans are opposed to homosexuality, promiscuity of any kind, and prostitution." But he felt he had to deal with all of those issues. He was especially concerned about adolescents exploring their own sexuality and wanted teenagers to know enough about AIDS so that they would not be at risk of acquiring the AIDS virus. The booklet included explicit information about the types of sexual contact that carried a high probability of transmitting HIV. He chided those who felt that some people with AIDS "deserved" their illness. Stating "we are fighting a disease, not

people", he urged education to prevent the spread of AIDS "while at the same time preserving our humanity and intimacy." His report represents an excellent example of a conscientious public health official discharging his responsibility.

Yet, American society was not as open in dealing with AIDS as were some Scandinavian countries which began distributing free needles to drug abusers to avoid recourse to contaminated needles. They also addressed sexuality and sexual relations openly. Condoms were advertised in an attractive way with slogans like "When you go out, make sure you look your best" with a picture showing a condom with a red ribbon around it!

How Can You Get AIDS From Sex?

* The virus can be spread by sexual intercourse whether you are male or female, heterosexual, bisexual or homosexual.

* The virus can enter the body through the vagina, the penis, the rectum or mouth.

AIDS brought into the open a lot of the latent and not so latent prejudice, bigotry and humbug that surrounds the subject of sex generally and homosexuality especially. The virus meanwhile continued to cross social barriers, affecting all classes, races and professions including the Catholio clergy. lic clergy. **AIDS, then, does not affect "them", it affects us, all of us. It is not the affliction solely of the poor, the "deviant", the prostitute, it can and does reach every segment of society**.

What has happened to people with AIDS at work? Again, as at home, the response has been mixed. Some corporations not known for their humanity, have adopted very understanding policies. Emphasising that AIDS does not spread by casual contact, these companies have

conducted educational sessions about AIDS. Workers with AIDS were encouraged to work as long as they could. Disclosure of AIDS to their fellow employees was left to the individual's discretion, and flexible work schedules as well as transfers to a less demanding job were all included as options. Not all employers were so considerate. Neither were the health insurance companies, which cried loud and long that they would do their best to limit their losses from AIDS. The head of the US insurance industry's association more or less admitted that the insurance companies as constituted could not pay for health expenditure that their clients with AIDS would incur, notwithstanding all the premiums they had collected in the past. With cries of bankruptcy and financial ruin as their ploy they used every tactic possible to pay as little as they could and restricted insuring single men, "redlining" or declining to insure individuals who lived in "gay" areas of a city. They made blood tests for HIV antibodies mandatory before a person could get health insurance.

Some employers dismissed an employee once he or she had AIDS, in other instances fellow workers refused to work with a PWA. Among health care workers, legal battles have been fought by nurses and physicians with AIDS who were dismissed or suspended once their disease became known. Challenging their employers, a nurse in North Carolina and a physician in Chicago argued against being discriminated on the basis of a handicap (AIDS). Stating that they did not represent any danger to their patients as they were functioning under guidelines issued by the Center for Disease Control (CDC), both health care workers won their suits against their employers. Teachers, airline employees, school children have also challenged and won suits against discrimination at work or school. In some cases the legal issues were resolved after the petitioner's death.

An individual with AIDS, besides having to deal with the physical ravages of the illness, the certainty of death in a few years, possible rejection by friends and family, discrimination at work and problems with health insurance, may also have to face loss of their home. Persons with AIDS have been evicted from their homes, occasionally their homes have been attacked or set on fire. **The number of homeless people with AIDS is rising, especially in New York City where of nearly 100,000 homeless people, about 8,000 have AIDS or ARC.** As an estimated 400,000 New Yorkers are currently testing positive for HIV the number of homeless with AIDS or ARC may rise in that city to 150,000 by 1991.

Attitudes to AIDS among doctors have paralleled those of the society at large. A few doctors have refused to treat PWA. About one fourth of a group of doctors surveyed felt it was not unethical to refuse to treat a PWA. Leading medical journals and medical societies, however, have reiterated the ethical and professional duty of doctors to provide proper care for PWA. Most physicians have discharged their duties responsibly and worked with dedication and compassion. But about 20 to 30 percent of physicians feel that the patient deserves his or her illness, a feeling that does not occur with cancer or heart or liver disease. Dentists have almost unanimously refused to care for PWA, in spite of ample evidence to show that the likelihood of contracting HIV is very low even when accidental needle-sticks have resulted in exposure to HIV infected blood or body fluids (5/1200 or 0.4 percent). AIDS remains a stigma even after death. Undertakers may refuse to accept the body. In some instances, they refuse to bury the individual, advising cremation instead.

AIDS then has brought out the best and the worst in society. The discrimination surrounding AIDS has been recognised as a major human rights issue by the United Nations. The WHO has sought help from human rights organisations to protect PWA from discrimination, harassment and loss of livelihood. Further, there is the question of AIDS in prisons where the numbers of PWA are gradually rising in tandem with those outside. The WHO seeks to avoid feeding fear and ignorance. It realises that AIDS represents something very different from other public health hazards like small pox or diptheria. For one thing, AIDS is not acquired by casual contact. For another, people infected with HIV may remain well for months or years.

How does one NOT get AIDS?

You won't just "catch" AIDS like a cold or flue because the virus is of a different type.

AIDS is NOT spread by sharing

clothing	toilets
food	spoons, glasses, cups
dishes	toys
towers	wash basins

AIDS is NOT spread by:

Hugging playing, shaking hands, coughing, sneezing, kissing

You won't get AIDS through everyday contact with people at work or at school. You won't get AIDS by donating blood.

Also, resources to combat AIDS are limited and need to be spent where they are likely to yield the greatest benefit. There is a need to address squarely the genuine fears of the public.

Some states like Cuba have embarked on mass testing of the entire populace for HIV and on segregating those who test positive in sanitaria. The Cuban government evidently feels that the rights of these HIV positive individuals have to be curtailed to protect the majority. They maintain that no coercion is used in placing individuals in the sanitaria and that medical care and visits to families are allowed. Measures such as Cuba's do not have universal applicability for several reasons: political, social, ethical and practical. In societies like the US groups have successfully fought measures to quarantine HIV positive individuals. They see in this measure an unjustifiable curtailment of personal liberty. **They argue, and in this writer's opinion correctly, that what is required is not punitive measures, but education and counselling. Any testing that implies punishment or stigma will drive underground precisely those for whom it is intended.**

HIV testing is no panacea. A person may remain negative for HIV for up to six months after being infected. Therefore, mass testing automatically implies regular retests to make sure no new cases have appeared. The possibilities of blatant misuse of a test endowed with the power to imprison or isolate people are endless. Already, there are several instances where requests for testing for HIV have risen when anonymous testing was carried out and dropped when compulsion was attempted. The WHO resolution adopted in May 1988 urges a "spirit of understanding and compassion for HIV infected people and people with AIDS through information, education and social support programmes", which will be more effective in combating AIDS as a public health menace than mass testing campaigns, quarantine or deportation. Despite the WHO's efforts to discourage travel restrictions, many countries including India have adopted policies of testing certain visitors. A WHO resolution that especially condemned discrimination against PWA was watered down by pressure from the United States and Saudi Arabia.

Women and AIDS

Though in the US women represent nine percent of the cumulative number of 85,590 cases of AIDS reported by the CDC at the end of January 1989, their numbers are growing and, as a recent editorial in the *Journal of the American Medical Association* stated, "The era when human immunodeficiency virus (HIV) disease will pose a major threat to women's reproductive health no longer looms in the future." In New York City, one of every 80 births occurs in an HIV infected woman, with some areas of the city like the Bronx reporting two out of 100 pregnant women having antibodies for HIV.

Of the women with AIDS, nearly three fourths belong to minority communities and half are black. While white men who develop AIDS often belong to the more privileged sections of society in terms of profession, educational status and class, women at highest risk for HIV infection are among the most disadvantaged groups in society - poor, unemployed, inner city dwellers.

AIDS in women is overwhelmingly associated with IVDA or through sexual contact with a male infected with HIV. Even among women prostitutes, use of intravenous drugs is a major determinant of HIV infection. **Women prostitutes who are not drug users are more likely to be infected by HIV positive men than to pass**

CONFIDENTIAL TESTING

When a disease like AIDS unfortunately gets obscured by a cloud of moralistic prejudice, it tends to go underground. Persons who suspect that they may be infected are afraid that if they get themselves tested, they may be stigmatised, ostracised, even lose their jobs and residences - not just if they turn out to be infected but even if it gets known that they were tested.

It is in the best interests of all concerned for an infected person to get to know as early as possible that he or she is infected, and not to live for years in ignorance.

In order to encourage people to get tested, it is essential that government hospitals make arrangements for confidential testing for AIDS. It should be possible for any one to go into a clinic and request a test, and be given the results, without having to disclose details about themselves like their name and address which could be used against them. Aids Action Now, a nonfunded group in the US which focuses on government policies with respect to AIDS, has taken the position that confidential or anonymous testing should be available to people as part of a comprehensive public health policy on AIDS.

The issue is also relevant to India, especially now, when a great deal of ignorance and fear surrounds the issue and when negligence could lead to an epidemic while a sensible policy might still stem the flood, since the numbers of infected persons in India are probably still small. Writing in *The Sunday Mail*, Arvind Kala reported that a gay friend of his who went to a government hospital in Delhi to have a test came away without having it there because the hospital insisted that he fill the usual form for outpatients. He was unwilling to do so, lest this be used against him, to reveal his gay identity. He had the test privately and was found to be negative. However, many people might not be able to afford a private test, and might choose not to have the test at all rather than to jeopardise their livelihood. This will mean that the disease may remain undetected for years and be passed on to many other persons before it surfaces in the form of symptoms.

the infection to men. AIDS among women brings into sharp focus the larger societal inequalities of race, class and gender. For intravenous drug abusers, getting hold of drugs is a greater priority than worrying about the risk of HIV. Such a woman may have unprotected sex to get money for her drug habit. Also, a woman drug user who is HIV positive may die of her addiction before she dies of AIDS.

Measures suggested to combat AIDS like enlarging drug rehabilitation programmes, increasing access to prenatal care, educating people about high risk sexual behaviour all require a firm commitment by government to allocate the resources necessary for these programmes. Such a commitment is virtually absent in the successive Republican administrations of presidents Reagan and Bush with their very slow response to the AIDS epidemic.

Well meaning advice is offered to women who do not have the means to use it. For instance, women in the inner city are urged to use condoms, seek prompt antenatal care, participate in drug rehabilitation programmes. What does a poor woman do when she barely has enough money to purchase food? Condoms and spermicides which act as a barrier to HIV are available free only at family planning clinics, but these clinics are rarely used by inner city women. The number of antenatal clinics and drug treatment centres serving the inner city are woefully inadequate. So the AIDS epidemic in American cities adds to the already considerable burden borne by these poverty stricken communities.

HIV positive women have a 30 to 50 percent chance of delivering a baby who carries the virus. While HIV infection itself does not get worse because of pregnancy, the effects on the baby are not predictable at birth. Health care workers have differing views on what advice should be offered to a HIV positive pregnant woman. Some believe that all HIV positive women should be advised to abort their foetus, and in a few instances recommend simultaneous sterilisation. Others recommend careful counselling without encouraging a particular course of action, presenting the available information to the woman involved and leaving the decision of continuing the pregnancy to her. Such neutral, nongoal directed counselling is recommended by women activists who work with AIDS for several reasons. A majority of women infected with HIV belong historically to precisely those communities (black or Hispanic) that have in the past been subject to forced sterilisation and other violations of their right to reproductive choice. Often the woman with HIV is asymptomatic and wants to have her child. When counselling is offered, studies show that about half of HIV positive women decide to abort. Counselling has to focus on the risks of HIV to the mother and the unborn while giving assurance that whatever decision the woman makes she will be provided with the medical care necessary for her and her child's well-being.

Women have suffered anxiety, guilt, fear and denial because of AIDS. The possibility that she may have infected her children weighs heavily on a woman who has abused drugs or had several sexual partners. A mother of a gay son or an IVDA with AIDS may have a deep feeling of responsibility and believe that she has somehow failed her child. Women may be faced with several psychological shocks all at once, discover that their child or spouse or lover is ill with an incurable stigmatised illness and have to come to terms with a personal sense of betrayal, anger, anguish and helplessness. For some women, occasions of joy bear instead worrisome news, as with women who discover they are infected with HIV when they undergo a blood test during pregnancy.

There are innumerable examples of the courage and fortitude, strength and resourcefulness of women who have AIDS and women who have been touched by it. Though there are instances of breakdown and a refusal to deal with the illness in a friend or relative, **many surveys of PWA reveal that women, whether in the family or as coworkers or friends, have been the most reliable caregivers in this epidemic.** We see families coping with a human tragedy, witnessing lives cut short in youth by a cruel disease, parents anxiously hoping their children remain well as they become sicker, mothers nursing sons, friends, lovers and relatives cherishing memories of someone dearly beloved soon to be "hid in death's dateless night..."

Testing: The Ethical Problems

As with everything else related to the AIDS epidemic the availability of a blood test became immediately "a blessing and a blight", confronting societies with difficult ethical and moral questions. It was an obvious blessing because blood banks, for whom it was meant, could use it to assure the public of transfusions with blood free of HIV. Right away several problems became obvious. Should the blood donor consent to testing for HIV? Should the results remain confidential, the property of the blood banks alone or should the donor be told if seropositive and given counselling? Should the families and/or sexual partners of the HIV positive individual be informed? Should the medical staff involved in caring for this person know the test results and what about the insurance companies? Some of the dilemma arose because of the particular nature of HIV infection, an infection that cannot be treated, bears a stigma and can lead to societal discrimination. It does not merely inform a person that they carry the virus, it literally places them under a sword of Damocles as it were. Yet the test carried benefits besides assuring a safe supply of blood. It could reveal the full extent of the epidemic and clues regarding future spread. For an individual, though, the ethical issues and violation of privacy remained crucial. Debates raged, with time and experience resolving some of

the dilemmas.

The "key words" in the testing controversy are "routine" testing, "anonymous" testing, "confidential" testing and "mandatory" testing. "Routine testing" is a euphemism for mandatory testing. The word "routine" serves to soothe people that nothing out of the ordinary is being done, no compulsion is being used and no harm is intended. It takes away the sting associated with the word "mandatory" though a test that can result in great physical and psychological harm to a person can hardly be termed "routine." Grossly insensitive to the possibility of discrimination from "routine" testing, the US government now screens all new military recruits and active duty personnel, prisoners in federal prison, foreign service personnel at the State Department, the Peace Corps and Job Corps and all prospective immigrants. These measures have been taken despite recommendations to the contrary by eminent health officials and the WHO.

"Anonymous" testing finds favour with many in the health establishment. Its advantages include the lack of adverse effects to the individual being tested, wider knowledge about the prevalence of AIDS and study groups that are representative of the population as a whole. Its disadvantages are that the individuals took no part in the decision to undertake the test, they neither sought it nor can they later be identified and counselled. Thus they gain no benefit from the test.

"Confidential" testing refers to testing individuals who seek to know their HIV status or agree to it after being informed of the nature of the test and the implications of a positive result. The assurance of confidentiality relieves the individual's anxiety that knowledge of HIV status will not be passed on to anyone - friend or family or employer. The person who seeks testing is generally more open to counselling about the risk of transmitting HIV to others, the dangers of sharing needles or of unprotected sexual contact. The disadvantage of confidential testing is that people who think they are at risk for HIV infection may be reluctant to take the test. They may be unprepared to face the possibility of being HIV positive and fearful of its consequences. As long as HIV infection remains untreatable, stigmatised and carries with it the risk of discrimination at work and at home, there will be opposition to undergoing the blood test. The US government, so keen to undertake "routine" testing, has not brought forth any legislation that forbids

Preventing Sickness or Punishing People?

The Indian government's obsession with legislation as the remedy to all problems, and most governments' punitive attitude to AIDS victims are epitomised in the pronouncements and activities of Dr A.S.Paintal which could be dismissed as absurd, if he were not a very powerful man, the director general of the Indian Council of Medical Research.

A doctor is committed to practise the art of healing, Dr Paintal, however, prefers the art of policing. His proposal for a complete ban on sex between Indians and foreigners and between Indians and visiting nonresident Indians was turned down by the law ministry on the ground that it would violate the individual's right to privacy. Undeterred, Paintal has now suggested a law banning extramarital sex between an Indian and any individual who is seropositive for AIDS. According to this law, it would be the duty of the individual to ascertain that the partner is free from AIDS.

It is virtually impossible for an individual to ensure that a partner is not seropositive. In fact, the partner may not know it either, as many individuals are carriers for AIDS without knowing it. The law assumes that sex with an AIDS infected marital partner is "safe", or rather, that if your spouse has AIDS you are dutybound to get it too. This is also the assumption behind the ubiquitous government ads in the press, on hoardings and over the radio, which advise people to stay "within the *lakshmanrekha* of marriage" as the only sure way to avoid AIDS, conveniently forgetting that if your spouse has AIDS this would be a sure recipe to get it. Many women get AIDS from their husbands and pass it on to their unborn children. Paintal is obviously unconcerned with the fate of such women and children. His purpose is not to alleviate or cure pain, but to punish. His proposed law lays down that any prostitute having sex with a foreigner or a nonresident Indian (she would presumably have to ascertain the residence of each customer) would be liable to punishment.

Even more important than the antihuman thrust of Paintal's proposals is their sheer impracticality. Such a law would be impossible to implement unless the government were to ban foreign tourism in India and also ban all travel by Indians outside the country, including diplomatic travel. If travel continues, implementation of the law would require a 24 hour guard set on each foreigner or nonresident Indian. Paintal also conveniently forgets the category of Indians residing in India who visit foreign countries as students, officials or tourists. They too would have to be constantly watched by policemen. A month spent abroad is quite enough to pick up AIDS. You don't have to be "nonresident" in order to do so.

Having miserably failed to eradicate dowry and prostitution by legislating them out of existence, the government now wants to try the same paper protection against AIDS. Like an ostrich burying its head in the sand, government fails to realise that AIDS is not a criminal who can be punished or locked up nor are AIDS victims criminals. A disease can be combated only with scientific not with punitive methods.

-Manushi

The AIDS Prevention Bill, 1989

On August 18, 1989, government introduced an AIDS Prevention Bill in the Rajya Sabha.

The statement of the objects and reasons makes clear that the Bill's main aim is to vest more coercive powers in the government while curtailing people's rights. The Bill empowers state governments to designate authorities who will be empowered "to demand information from infected persons." This information includes tracing of possible sources of the infection (section 9) that is, the patient will be forced to reveal the identities of past sexual partners - a blatant violation of the right to privacy, and a way of empowering authorities to harass innocent persons.

The Bill also requires doctors to "report" AIDS patients and drug addicts to the authorities. This involves in violation of medical ethics. The Hippocratic oath, taken by all doctors when they qualify, requires them to keep confidential any information given to them by patients or acquired by them in the course of treatment.

Third, the Bill proposes to set up "surveillance centres", a term which indicates that the Bill views AIDS patients as criminals. The Bill empowers the authorities not only to forcibly interrogate but also to test any AIDS victim or drug addict and confine them to a hospital. This involves giving health authorities power even more arbitrary than those wielded by the police. And who are these authorities? Any person the state government "may deem fit." These authorities virtually have the right to imprison AIDS victims and deny them the ffindamental right to freedom of movement. Worst of all, citizens' right to chasllenge governmental injustice is snatched away in section 11, another infringement of the Constitution: "No suit, prosecution or other legal proceeding shall lie against the designated health authority or any person for anything which is in good faith done or intended to be done under this Act." This will allow authorities to victimise even noninfected persons and then plead that they had good intentions.

The measures proposed are unrealistic and unnecessary. For instance, many HIV infected persons continue to lead normal lives for years before they develop AIDS, any many AIDS patients prefer to be nursed at home by dear ones than to be confined to hospitals. This Bill denies the patients any choice, thereby reducing him or her to a nonhuman status. Even the legal rights provided to most criminals (right to consult a lawyer, right not to reveal information that may be used against you, right to bail) are nowhere provided here.

The Bill does not provide any safeguards or guarantees to AIDS victims. It does not guarantee provision of medical care or drugs like AZT to those who cannot afford to pay for them. It does not propose to penalise employers who throw out AIDS infected employees or educational institutions who expel AIDS affected students or house owners who refuse to rent accommodation to AIDS victims. The inhumanity of the Bill is evident in its bypassing of all the questions related to the AIDS patient's survival and dignity.

The Bill is likely to be completely ineffection in preventing the spread of AIDS because its approach is punitive and diseases cannot be prevented by punishment. Simple but direly needed measures which government can implement, such as use of disposable injection needles, are nowere mentioned in the Bill.

The Bill assumes without supporting data that the "high risk groups" in India will be the same as they have been in the US, thus disregarding the very different African experience. In addition to drug addicts, the Bill mentions "sexually promiscuous men and women" as a "high risk group" and claims that 330,000 of them have been screened. For "surveillance purposes, the category makes little sense because few promiscuous people would inform the government of their habits. It is only victimised minorities like prostitutes and gay men who would be visible and therefore vulnerable to forcible screening.

The only real effects of the Bill are likely to be, first, an increase of powers wirlded by the central government which, under section 12, is empowered to make all the specific rules for implementation of the Bill; and, second, a proliferation of bureaucracy, as indicated in the financial memorandum attached to the Bill, which proposes to spend a pitiful 255 lakhs on compating AIDS. Out of this 100 lakhs is to be spent on salaries of counsellors" and a meagre Rs 155 lakhs on health education, reatment and social support to AIDS victims!

We hope all those working in the field of health and all concerned citizens will campaign for the withdrawal of this ill informed and inhuan Bill.

—Manushi

discrimination against PWA. President Reagan, while calling on "Society to respond equitably and compassionately to those with HIV infection and their families" showed no inclination to use his considerable power to require equitable treatment. Rather it was left to those already ill to press lawsuits fighting discrimination.

Testing for HIV has become more widespread with many groups pushing its use. Activists in the gay community have encouraged confidential testing and met with some success. Several groups of HIV positive men have taken part in studies that will provide answers to the way HIV infection is acquired as well as the rate at which it progresses from the asymptomatic stage to ARC and AIDS. Researchers have begun extensive studies on the prevalence of HIV in pregnant women and their offspring. While answers regarding the effects of HIV on pregnancy, the risk to the offspring do need to be sought, there has been an unfortunate tendency to target these women for studies as they represent an easily reached group - women coming for pregnancy tests and regular check ups during pregnancy. Also one suspects that research objectives sometimes have little to do with the wellbeing of the woman or her child and more to do with furthering the researcher's career!

The State and the Individual

Governments at the state level in the US, have considered several laws regarding HIV testing. Some have required HIV testing before the issuance of a marriage licence. The premarital HIV test affords a prime example of misplaced zeal. Two states, Illinois and Louisiana, enacted laws requiring premarital screening for HIV. The law proved to be ineffective, was repealed in Louisiana and a repeal is being considered in Illinois. The law largely failed because it targeted a group that has a very low likelihood of being HIV positive. For instance, though 700 out of every 100,000 Americans may be infected with HIV, 630 of those 700 are either homosexual or bisexual or intravenous drug abusers - groups that are not likely to seek a marriage licence. The tests, then, were aimed at a group which may have 70 out of 100,000 people infected. The actual figures in Illinois were lower, premarital testing revealing only five individuals positive for HIV out of 44,726 or 11 out of 100,000. People likely to be positive for HIV or not wanting the burden or inconvenience of the test simply went to neighbouring states to marry!

Let us list the many dilemmas raised by HIV testing in terms of some deceptively simple questions. What is the purpose of testing? Is it unreasonable to want to know how many people are infected with HIV? Should someone who tests positive for HIV be asked to name all their sex partners in the past five to seven years? Should these partners be contacted and warned about this result? Should the HIV positive person be quarantined so that they could not infect other people? Should they no longer be allowed to work? Should their employers be informed of their HIV status? Should their insurers? What about their wives? Should any pregnant woman be tested for HIV? If she is HIV positive should she be strongly advised to abort? Should blood be collected for HIV testing without the person knowing about it? Should a baby born to an HIV positive mother have blood taken with or without the mother's consent? Should prisoners be tested for HIV? Should prostitutes? Should HIV testing be "routine", "anonymous", "confidential" or "mandatory"? Should a doctor or dentist know about HIV status? What about nurses, laboratory technicians and other health workers? To pose these questions is to highlight the enormous emotional and ethical load that HIV antibody testing carries with it.

The purpose of testing remains a central issue. A test that detects an incurable illness is not to be undertaken lightly. A test that carries with it a high risk of discrimination and stigma needs its purposes to be very clearly defined. A test that may lead to the violation of an individual's basic rights should never be done in a cavalier manner. Opinions differ, especially with regard to the question of an individual's right versus the larger public health.

Experience to date shows that voluntary testing with assurance of confidentiality does more to check the spread of HIV than "mandatory" or "routine" testing which offers many opportunities for coercion and misuse.

The purpose of HIV testing must be to help the individual likely to test positive for it. It is the person with an HIV positive status whose life is changed irrevocably as a result. No one else has to face that poignant and cruel reality. The larger society is not at risk from an HIV positive person except by sexual contact or through blood. Blood is now tested for HIV and contaminated blood rejected. Confidential records are maintained which identify HIV donors, ensuring that blood products from such an individual are not distributed in the future.

Sexual relations between consenting adults are hardly an area which the state should police. What individuals can do to protect themselves against HIV must become widespread knowledge. HIV testing should be available with pre and post test counselling to those who are willing to test for the virus. On a personal level the questions regarding HIV testing become easy to answer once you think of what it would mean if you or someone you loved tested positive for HIV. You would hate to have insults hurled at you or for panic to occur. Indeed, when you think about it you quickly realise that what you would want for yourself or your loved one is what anyone would want, whether HIV positive or not: to be treated with respect and dignity, to hold a job without fear or suspicion, to enjoy friends and family as always and to be cared for when sick.

AIDS in India and South East Asia

The AIDS epidemic has barely affected India or indeed Asia, with Asia and the Pacific accounting for less than one percent of AIDS cases reported to the WHO. But this may be the quiet before the storm. As Doctor Jonathan Mann, director of WHO's global AIDS programme, warned: "The Asian epidemic is just beginning." Remember that in AIDS what we see today represents infection that may have been acquired five to seven years ago.

In Thailand the first death from AIDS occurred in 1984. So far 11 cases have been reported, 10 have died. Though only about 5,000 people out of 55 million had tested positive for HIV by January 1989, Thai officials were worried because over 10 percent of the increases (593) had occurred in the past month alone. WHO estimates that 25,000 individuals are infected with HIV in Thailand. Among intravenous drug abusers the rate of seropositivity has jumped from one to 43 percent in 18 months. Dr James Chin of the WHO likens these figures to a bomb exploding. Thailand with four million tourists, 65 percent of them male, has a burgeoning "sex industry." Some male tourists from West Germany and Japan come to the country on specifically designed sex tours. As the *New York Times* correspondent Steven Erlanger noted wryly "sex is a business not easily trifled with here, and customers have to be pleased." One way to protect against HIV infection during sexual intercourse is to use condoms. A survey of males frequenting Thai prostitutes revealed that less than one in 20 used condoms, a prostitute had an average of 60 customers a month and homosexuals continued to practise oral and anal sex. Thus, "high risk" behaviour for transmission of HIV is very prevalent in the tourist and resort cities of Bangkok, Hat Yai, Chiang Mai and Pattaya. The rate of HIV positivity is still low among women prostitutes because not many of them are intravenous drug users. The Thai government states that 40,000 out of 100,000 prostitutes have had blood tests for HIV with only two out of 1,000 being positive. However, independent observers feel the government has deliberately underestimated the numbers of prostitutes or "sex workers" who may total 500,000 in Bangkok alone. Afraid to drive away the tourists who provide the biggest source of Thailand's foreign exchange, the government has been reluctant to discuss the AIDS epidemic publicly.

But the rising numbers of HIV positive individuals has brought about some change in attitudes. 1989 has been designated "Combat AIDS Year" with plans to launch an education campaign and to tighten procedures for screening blood at blood banks. AIDS has also occurred in prostitutes who work around US bases in the Philippines. Both these countries have strong military ties to the United States and get regular visits by thousands of American army and navy personnel on furlough. Several strands of late twentieth century geopolitics come together here: the U.S. with its worldwide imperial reach having huge permanent bases in Asian countries; the dire poverty and social inequalities of these nations; the recourse to prostitution, sometimes as the sole means of supporting a large family; the spread of a drug culture fed by organised mafias in league with governments whose officials profit from the huge gains made through the trade; the availability of rapid transport by jet aircraft from continent to continent; the surplus wealth in rich countries like Germany, which is spent by male tourists on exotic journeys and sex adventures with no regard to the cultural, physical and social devastation it leaves behind; and the local elites who find in the growing "opportunities" these paradise resorts offer to the poor a way to stave off any demands for reform or restructuring of their society.

The picture is only slightly different in India. A handful of AIDS cases have occurred and the rate for seropositivity among people tested remains low at two to three per 1,000. But AIDS has already aroused considerable controversy in India with health authorities, eminent scientists and the

media at times seeming more intent on creating an atmosphere of panic rather than on calmly discussing the problems AIDS poses.

The government of India, in a most controversial decision, embarked on testing all foreign students for HIV. As a large number of students came from **African countries the decision to test was suspected of being based on prejudice and racial bias rather than on a sound concern for public health**. African students faced hostile attitudes from fellow students and communities and were singled out for social boycott. The government claimed that no prejudice was intended and the test was not directed at African students alone, but at all foreign students. Government policies further required that individuals testing positive would be repatriated to their country of origin. Also, all foreigners who reside in India for more than a year have to undergo testing for HIV.

In late January, reports from Bombay claimed that one of every six prostitutes was infected with HIV. The government of India has created a special cell in the Directorate General of Health Sciences to coordinate work related to AIDS.

Blood Transfusion

There are concerns about AIDS that need to be addressed urgently. A safe supply of blood for transfusions is essential for good medical care and for allaying the anxieties of patients who need blood. A surveillance programme is being carried out in select institutions in major cities in India. While any imported blood or blood product is required to carry a HIV negative certificate, mandatory screening of donated blood has been postponed for many reasons: lack of infrastructure and financial support, the expense and time required to test for HIV, blood banks already overstretched by great demand, shortage of personnel and equipment and that HIV infection is largely nonexistent in large parts of India. Professional blood donors being screened for HIV and seropositivity have shown a rise from 0 in 1987 to 0.3 per l,000 in 1988 to 1.5 per 1,000 six months later.

Insufficient and misleading message

What can be done to assure a safe blood transfusion for everyone? If facilities to test for HIV are not available, friends and relatives should be encouraged to donate blood. This advice may sound impractical and troublesome. Often, people are reluctant to give blood at all. Here we have to combat groundless fears and ignorance. **There is no risk of contracting HIV by donating blood.** Also, donating blood does not harm the donor if it is done at well spaced intervals. The AIDS epidemic is making us address several issues of sexuality which were never discussed openly before. Along with this comes the realisation that donating blood has greater social merit than ever before as it reduces the blood bank's dependence on professional blood donors.

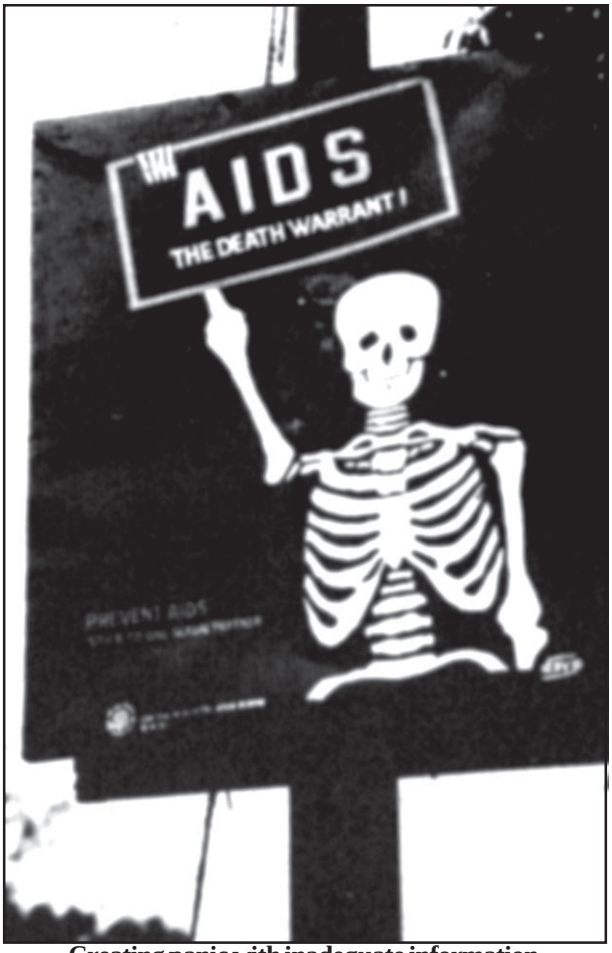
When all is said, there is a risk of acquiring HIV from blood transfusions. For instance, in an emergency there may be no time to recruit friends and relatives to donate blood. Even with elective surgery people may not be willing or able to give blood. In the US, individuals are choosing to give their own blood if surgery can be postponed for a few weeks. In India facilities to store blood for such a long period may not be available. Therefore the risk of acquiring HIV from transfusions will remain, though that risk can be kept to a minimum. The WHO is gearing up to supply many countries with kits to test for HIV yet it may be some time before blood banks in India can screen all blood for the virus.

Earlier this year antibodies to HIV were found in some samples of a blood product (anti-Rh D immunoglobulin) needed by individuals who belong to the Rh negative blood group. These contaminated blood products were discovered in samples manufactured in India. Several people had already received the HIV antibody positive immunoglobulins. Patients and the public were alarmed at these developments as they had been told by the health authorities that adequate safety measures were being taken to assure HIV free blood and blood products. Reacting to the uproar caused by the discovery of antibodies to HIV in the anti - Rh (D) immunoglobulin, the Drug Controller of India withdrew all bloodbased products and ordered that all existing stocks be destroyed. Further all blood and placental products made in India such as anti-Rh (D), antihepatitis B, rabies and tetanus immunoglobulin as well as some blood clotting factors were banned from sale.

The rules for importing these products were liberalised and placed under an Open General Licence for

individuals as well as hospitals. The health ministry later revised these rules providing for stricter testing for HIV antibodies with each unit of blood and again of the pooled plasma. Also during manufacture the company had to include techniques proven to render HIV inactive. These rules were instituted after the government found that none of the nine companies that manufacture blood products in India had either properly tested their donors for HIV infection or recorded their serological status. The ban on sale of Indian made blood products has led to a severe shortage because importing HlV free products is almost prohibitively expensive.

A section of the Indian medical establishment feels that the banning of all indigenously manufactured blood products should be replaced by a strict monitoring system that ensures the quality of these products. Here again the Indian experience with the HIV epidemic parallels its experience with the larger issue of "dumping" of substandard products in poor countries by so-called respectable multinationals from Europe. Behring Diagnostics, a subsidiary of the West German pharmaceutical company Hoechst, had sold in India, at a discount price, three lots of defective ELISA AIDS test kits. The kits had been recalled from the European market by the West German Drug Control Authority, the Paul Ehrlich Institute, because customers in Europe had complained about "cloudiness" in the chemicals used for the ELISA test. Hoechst India Ltd admitted that the recalled lots were sold in India but only after "strict quality control." One wonders why, if this were true, the kits were not resold in Europe. The Behring Diagnostic kits were being used by the Serum Institute of India Ltd., a blood products manufacturing company in Pune. The company said that they began suspecting the Behring kits when blood from known seropositive donors repeatedly showed false negative results for HIV antibody after testing with the kits. The Serum Institute contacted the Paul Ehrlich Institute in Germany and only learnt in March 1989 that the kits had been recalled from the European market. However, the Serum Institute in Pune had carried out thousands of tests with these defective kits since August of 1988.



Creating panic with inadequate information

India uses about one to five million units of blood each year and represents a substantial market for AIDS tests kits. Presently ICMR is spending Rs. 2,500,000 each month on importing the kits. Though ICMR generally purchases the AIDS test kits through the WHO, it bought the Behring kits at a discount last February because according to it other kits were not available and there was an immediate need to monitor blood supply. Several lessons must be learnt from the contaminated immunoglobulin tragedy and the discount test kit scandal. It is absolutely crucial that India and other poor nations demand strict international quality control of pharmaceutical and blood products. Import of life saving blood products must be channelised through reputable agencies like the WHO and all nations notified immediately of blood products or test kits that are recalled for any reason. At a national level heavy penalties should be imposed on companies that do not adhere to regulations requiring surveillance for HIV. The AIDS epidemic will make greater demands for vigilance from all sections of society especially from the citizenry at large who ultimately pay a heavy price for any bungling by the health authorities and the medical establishment.

Alarm Not the Answer

While the educational material dispersed by health authorities in India has been accurate, clear, helpful and well designed, the same cannot be said of statements of eminent scientists like Dr Paintal or of the media's coverage of AIDS. Dr Paintal literally wanted government to police every bedroom in India when he asked for a law banning sex with foreigners! How was this law to be enforced? Dr Paintal said he was so alarmed about the spread of AIDS in India that he felt no measure, however restrictive of personal liberty, could be avoided in the face of the grave danger posed by HIV to the public health. Dr Paintal's alarm may be sincerely felt. AIDS has alarmed health authorities and whole societies where it has occurred. Alarm by itself will not solve the crisis AIDS brings. Calls for quarantine, deportation, tattooing, policing and isolating HIV positive persons have come from around the

world. But the mere fact that HIV can lead to AIDS, a lethal disease, does not mean that we should lose our sense of proportion or our respect for our own laws and ideas or for the rights of individuals. It is the virus we need to deal with; we should not brand people who carry the virus "enemies of society."

In Drs Bayer's and Healton's words, "a nation's response to AIDS must be informed by epidemiologic, economic and technological factors, but the course nations choose to pursue within these constraints can vary and will be profoundly influenced by political and moral values." In an essay titled "Controlling AIDS in Cuba: The Logic of Quarantine" published in the prestigious *New England Journal of Medicine,* April 13,1989, they continue "The Cubans have made their orientation (quarantine) clear. It stands as a counterpoint to those of nations for which the imperatives of prevention, however important, are not the only values to be considered in the struggle against AIDS." They have enunciated the most important issue in the debate over prevention. How far are we prepared to go to prevent the spread of HIV?

The truth appears paradoxical: no measures, however punitive will decrease the risk of the spread of HIV to zero; similarly no amount of protection, safe sex, abstaining from IV drug use will reduce the risk to zero. Cases of HIV positivity will continue to occur. We can make earnest and committed attempts to keep the risk as low as possible. We should however be careful that at the end of these attempts we do not lose our essential humanity and do not create a monstrous edifice which, historical experience bitterly teaches us, will become yet another capricious and arbitrary force controlling our lives. Already in India we know of a poor man with AIDS who absconded from his hometown because nobody would talk to or interact with him. The AIDS epidemic will pass; our reaction to it should reveal a great deal about our compassion and caring, not our thoughtlessness and ignorance.

The Indian Media

The rather sensational manner in which the media has dealt with AIDS was revealed in two instances: the death of a prostitute in Bombay in June 1988, and the case of an orthopedic surgeon suspected of being HIV positive in Kottayam in December last year. Every daily newspaper in Bombay published a picture prominently displaying the

Profiting from Misery

We have noted that HIV has been steeped in controversy from its discovery to its origins. It should not be surprising then that AZT, the only drug shown to have any benefit against this virus, was also covered with controversy. Here we confront practices that are held to be normal or routine for the drug industry, practices that are generally kept well hidden from the public eye. AZT prolongs life in some PWA, but does not cure the disease. Tested as an anticancer drug in 1964, its anticancer properties were discovered at a laboratory funded by the US government. AZT was not used in the treatment of cancer because it caused damage to blood cells and the bone marrow. AZT blocks the enzymes reverse transcriptase and was thus tried in AIDS to block the replication of HIV which uses the same enzyme to multiply (See Figure II). The drug was tried on PWA and found to create a sense of wellbeing as well as to prolong life. Further, the drug could cross the blood-brain-barrier thereby reaching viurses lodged in the brain and spinal cord.

Burroughs-Wellcome was the drug company that manufactured and would market AZT. Even though early reports said the drug would cost about $80 a month for one patient, when it finally became available on the market the company charged nearly $800 for a month's supply. Burroughs-Wecome claimed it had spent considerable amounts on research for this drug to justify the high price of AZT. However, all the original research had been done at the American taxpayer's expense. The drug company refused to allow its account books to be reviewed to verify their claim of some $100 million spent for research and development of AZT over and above normal costs. AZT has been very good business for Burroughs-Wellcome with the value of their shares quadrupling on the London stock exchange. Burroughs-Wellcome has put a high price on AZT for the usual business reasons: to reap a big profit while no other drug is available against AIDS. Also, as PWAs are not likely to take AZT for a long time before they succumb to the disease, a high monthly cost is necessary for the company to extract the maximum gains while their "temporary monopoly" lasts.

A drug that causes serious side effects but helps a little in a devastating illness is therefore priced out of reach of nearly all those who are ill with it. The drug company behaves in its usual cynical manner and manipulates the price to an outrageous level. The US government promises to pay for those who cannot afford AZT and then pays for it out of the meagre allocation of research funds for AIDS, research that will be essential for effective treatment to become possible in the future!

Though Burroughs-Wellcome was severely critised by health activists and sections of the medical establishment, the US government did not even consider punishing the drug company for profiting from human misery nor was it willing to undertake the production and marketing of AZT and other drugs at a cheaper or subsidised rate. The sacred right of private profit could not be medled with, no matter how grave the health crisis.

prostitute's corpse as though it were a prize trophy being exhibited. No scientific or public health purpose was served by this display of journalistic tastelessness and crudity. A woman died of a cruel disease, she had died young from a disease acquired in the course of her profession. Imagine if she had been a soldier who died in active combat, her death would be mourned as a tragic even heroic end in pursuance of duty. Her body would hardly have been photographed naked and captioned in a lurid way. It was left to her fellow prostitutes to bring back a semblance of the dignity and sombre tone generally seen when a young person dies. They mourned her death with love and covered her body with flowers.

Coverage of the Kottayam orthopedic surgeon was initially marked by a similar journalistic hyperbole: "Terror stalks the Corridors of Ward 17' screamed one headline, "Nurses anxious over AIDS case", said another. With utter disregard for the privacy and sentiments of the surgeon said to be sick, press coverage contributed to the hysteria and panic that ensued. Luckily, saner attitudes were displayed by many health officials and by the public. Letters poured in to the editors of newspapers conveying disgust and anger at the press coverage. A woman teacher, Renuka Nayar, wrote "Does not the stricken patient have any right to anonymity?" Calling it a poignant moment, she asked: "Has no thought been given to the trauma of the patient both physical and mental.... and to his family consisting of young and sensitive children to whom this ridiculous publicity could spell social ostracisation and mental anguish?" "Indeed", she went on, referring to Kerala's high literacy, "despite (this) and the funds sunk into generating a public awareness of AIDS we have a long, long way to go." Others reminded the hospital and its staff of their professional, legal and ethical obligations.

One hopes the press learns from this experience. The media has a very important and powerful role to play in education about AIDS. Indeed, the media can help in creating a response to AIDS that is effective, sane, humane and civilised. An irresponsible attitude, spreading fear and sowing panic, will hurt all of us.

AIDS: The Next Decade

We do not know for sure how many people around the world are affected by

Callous Neglect

While wasting money on misleading advertisements, government neglects the simple measures that need to be taken to prevent the spread of AIDS. Recently, supplies of a drug administered to pregnant women were found to be AIDS infected at a government hospital in Delhi. The drug had already been administered to several women when the discovery was made.

The AIDS virus is transmitted by the contact of body fluids of an infected person with those of a healthy one. Use of an injection needle already used by an infected person is thus very dangerous. The use of disposable needles is an essential precaution to control the spread of AIDS. However, most government clinics have failed to implement this measure. Recently, for example, Pankaj Butalia, a Delhi University lecturer, wrote to *The Times of India* to recount his experience while getting a blood test as part of the medical check-up required to get a driving licence. He was required to go to one of the doctors on the transport authority appointed panel. The doctor, in a south Delhi clinic, was about to use an already used and dilapidated looking needle for the blood test. When Butalia protested and asked for a new needle, the doctor said he could not afford to buy a new needle each time as he was paid only Rs 30 by the government for a check-up. He told Butalia not to give him a lecture on medical ethics. Even though disposable syringes cost only Re 1, few clinics use them for injections. Many people are not even aware of the need for this precaution and would not be able to question the doctor. So, while Paintal and his ilk go around trying to police people's private lives, government doctors may well be injecting AIDS daily on a large scale, in public, with not a whimper of protest from the ICMR headed by Paintal.

— Manushi

the AIDS virus, with estimates ranging from about 10 million today to 50 to 100 million in five years. We do know that each year more countries are reporting cases with AIDS and unfortunately we can be sure that the numbers of cases will dramatically increase throughout the 1990s.

AIDS has cast a shadow of fear all over the world because the epidemic has shaken quite a few of our deeply held beliefs, among them the "conquest" over infection. Indeed, after the end of World War II a kind of complacency settled over the West. The scourge of infections was consigned to history. Improvement in living standards, in sanitation and nutrition, coupled with the ever increasing number of antibiotics relegated infectious disease to a minor health hazard. Had someone written a novel in the late seventies describing a viral illness that would kill affluent, young, white men in Europe and America, that would spread worldwide, that would present ethical, legal and professional dilemmas, few would have judged the writer as being sane! With the AIDS epidemic reality has quickly outstripped fiction. Medical establishments all over the world have been more energetic in AIDS research and education than other more pressing public health issues. Media attention focuses on AIDS for a variety of reasons from the macabre and lurid to the serious and responsible.

Yes, AIDS will represent a huge burden for the health services of all countries, rich and poor. As always, the burden will fall disproportionately among nations and within them. Medical care costs for AIDS are expected to reach $8.5 billion in 1991 in the US alone. In poor countries, the costs will be even higher and may exceed the health budgets of many small countries. AZT, the only drug known so far to prolong life in a PWA, costs $ 10,000 a year. The loss to society of thousands of young persons in the prime of their lives (54,000 deaths from AIDS in the US in 1991) will remain incalculable, with AIDS expected to be the leading cause of death for people between the ages of 25 and 44 years in 1991. The American health system comes under greater strain as the numbers of PWA seeking care in overcrowded and underfunded public hospitals increase. AIDS has been a cruel jolt to middle class white families who have discovered that the US has no safety net for those with a chronic or disabling illness. The strains on nations with rudimentary health systems will of course be much greater.

We are dealing with a global health emergency, one that may well emerge as a catastrophe of the late twentieth century. Many developments of the past two or three decades will contribute to the spread of AIDS. The ability to travel around the globe in a day, the need to seek employment in distant countries and cities, the large scale disruption of rural societies, the migration of the dispossessed to urban areas, the concomitant growth of "dormitory towns" with an increase in prostitution, inflation and costlier food with lowering of real wages, indifferent nutritional status leading to relative immuno-compromise will all provide a fertile ground for the spread of HIV.

The Dominican Republic provides an example that illustrates all of the factors just listed. In 1985 there were few individuals seropositive for HIV. In 1986 HIV seropositivity was found in about two percent of prostitutes tested in the capital city Santo Domingo. By the end of November 1988, 80 women classified as "international prostitutes" were tested for HIV. Most of the women were in their twenties, and had been prostitutes in 27 countries, from Scotland to Libya, to Greece, to the Caribbean countries. Though nearly all had visited only one place, one woman reported liaisons in six countries. Half of the 80 women were seropositive for HIV compared to one percent of all Dominicans tested. Promised work as hostesses or waitresses, their jobs included prostitution. The Dominican Republic, a poor country, heavily in debt, with few employment opportunities for its people, sees its citizens migrate to earn a living. Now, some of its women, travelling overseas to seek a livelihood, may face a potentially lethal hazard. For prostitutes the AIDS epidemic presents a venereal disease unlike any other. The person infected with HIV carries no outward sign of disease, thus deceiving the carrier as well as the person who may get infected.

Extensive research is underway to find a vaccine that will protect against HIV infection. An effective vaccine will not be easy to discover. HIV, like many other viruses, evades the immune system of the body by a variety of techniques. Its outer coating can change very quickly so that a vaccine directed against one form of the virus may not work against all forms. Also, there is more than one strain of HIV. Already HIV Type I and HIV Type II are known. Nevertheless, a vaccine against HIV may come before the discovery of any drug that cures the infection. Viral infections are notorious for being difficult to treat but relatively less difficult to prevent.

For the last decade of this century and perhaps for the early part of the next, the AIDS epidemic will be with us, continually confronting us with illness, suffering and early death. No one among us will emerge completely untouched by this disease. Howsoever peripherally, all of us will be affected, whether as travellers, as concerned citizens, as relatives, as health professionals or as one who is infected with the virus. In its brief history the epidemic has already revealed a great deal about us, about our societies, our strengths, our weaknesses, our prejudices and our ability to overcome them. As with all the epidemics of the past we have not wholly conducted ourselves with generosity or compassion though we can see very clearly the need to do so. We may not be able to control this strange and puzzling retrovirus, but we can certainly limit the misery and agony it can cause.

Dedicated to the memory of my dearly beloved friend and colleague D. Alan Bouffard, M.D., born August 28, 1944, died of AIDS May 25, 1988.