INTRODUCTION

AIDS is not confined to the three well-known epidemics in the US, Europe and central Africa. It is already a serious problem in Trinidad, Haiti, the Bahamas and other Caribbean countries; in Brazil, Costa Rica and elsewhere in Latin America; in parts of West Africa; and in Australia. And there are signs that it is beginning to grow alarmingly in some Asian countries such as Japan, the Philippines and India.

New material in this report confirms that the AIDS virus has now reached more than 127 of the world’s 159 countries. All the figures have been updated, and the section on Latin America has been extended. The dossier also contains details of the new AIDS strategy developed by WHO.

Most of those already carrying the AIDS virus live in the Third World. And researchers are becoming increasingly convinced that the great majority of those infected with the virus will eventually die of AIDS. There is as yet no cure, no vaccine, and no early prospect of either.

In the US, the worst-hit city so far is New York, where one in 15 people is now thought to carry the virus. But in some central African capitals, up to one person in five is infected. Most of them are in their twenties and thirties, as many women as men. These are their nations’ breadwinners, many of them educated professionals. The impact of their gathering death march will scar Africa for a generation.

By 1991, only four years away, the US government estimates that 179,000 Americans will be dying of AIDS. The direct US health costs will be over $8 billion in that one year alone, a price which will strain even America’s vast resources and humanity.

But the far less well-equipped health services of Brazil, Tanzania, Rwanda, Zambia, Haiti, Uganda and Zaire today contemplate a crisis which is several times worse. The cost of testing one person for the AIDS virus is more than the annual per capita health budget in many developing countries. The impact of AIDS on Third World development will be profound.

An AIDS epidemic is like an iceberg: a few hundred proven cases of AIDS indicates that thousands of people are already carrying the virus. In Europe and North America, the numbers of cases of AIDS, at least until recently, have been doubling every nine or 10 months.

Our main protection, until a vaccine can be developed and made widely available, is education. People must be informed about AIDS and how it is spread, so that they may protect themselves.

Since the first edition of this dossier, in November 1986, there has been a dramatic and encouraging response to AIDS in many countries, both by voluntary organisations and by governments. But effective action is still hampered by a lack of accurate information.

This Panos dossier is a contribution toward that education process. We have tried to use ordinary language: this is not intended as a scientific text. We have drawn on the best medical advice, but our document is often imprecise and incomplete, for better facts and figures are not yet available. It is not comprehensive — but I believe it is the most adequate global review of AIDS yet published.

Jon Tinker
President
THE PANOS INSTITUTE

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Further updated editions of this dossier will be published by Panos, and it will be expanded and published as a Panos Paperback in 1987.

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This is the reprinted second edition of Aids and the Third World, printed January 1988. While we have endeavoured to bring the information up-to-date in the eight page insert, between pages 42-43, the reader must be aware that the body of the text has not been updated since March 1987.
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CHAPTER 1
WHAT IS AIDS?

AIDS is a disease caused by a new and deadly virus: HIV (the human immunodeficiency virus). HIV can remain in the body for years, perhaps even decades, before any damage shows up as visible symptoms. Once the disease called AIDS develops, it has so far always proved fatal. At present, there is no cure for AIDS, and no vaccine is available to protect against it.

The term AIDS (Acquired Immune Deficiency Syndrome) strictly speaking refers only to the last, fatal stage of the HIV infection, which is often also called "full-blown AIDS".

In non-medical literature the term AIDS is also used, rather more loosely, to refer to earlier stages of HIV infection, and to the virus epidemic which had by March 1987 reached at least 127 of the world’s 159 countries. Such a widespread epidemic is called a pandemic.

For the virus which causes AIDS, the internationally accepted name is now HIV. The HIV virus was previously called HTLV-3 (the American name) and LAV (the French name); these terms are used less and less often in medical journals or by the media.

In general usage, the terms HIV, the AIDS virus, HTLV-3 and LAV mean the same thing. But for the French and American scientists who discovered that a virus causes AIDS, the names still have a special significance.

The French (under Professor Luc Montagnier at the Institut Pasteur in Paris) and the Americans (led by Robert Gallo at the National Cancer Institute in Maryland) are fighting a battle in the American courts to determine who first discovered the virus. They want to know which of their laboratories is legally entitled to millions of dollars in royalties for the AIDS blood tests which they have separately developed from viruses taken from French and American AIDS patients.

The HIV virus

Viruses are the smallest of all disease-producing organisms; much smaller than bacteria, and far too small to be visible through an ordinary microscope. Influenza, polio and the common cold are each caused by a particular virus.

A virus can only reproduce within the living cell of a larger organism. Once inside, the virus may kill the host cell, alter its functioning, or simply "sleep"; remaining hidden within the host cell, inactive but alive, sometimes for a very long time.

The human body defends itself against viruses by employing a team of white blood cells which first identify and then neutralise the virus invaders. They patrol the blood and body looking for viruses and other invading organisms. A specialised group of defenders, the lymphocytes, can recognise the precise identity of an invader. When they find one, they produce chemicals called antibodies which neutralise the viruses, each antibody recognising only one specific virus.

After an antibody has stopped that particular virus from multiplying, the lymphocytes stop producing that antibody. But they remember how to produce it, should the invader return. Antibodies and the cells producing them are the human body’s "memory" of past invaders; the presence of a particular antibody in the blood shows that the virus was once there. This memory makes a powerful, often impregnable, defence against any new attack by the same virus.

The lymphocytes can take a while to identify the invading virus, and then to produce enough antibodies to overwhelm it. Meanwhile, the virus may be
BLOOD TESTS FOR THE AIDS VIRUS

The body defends itself against virus infections by manufacturing antibodies. The individual gradually becomes a walking "antibody list" of the infections to which he or she has been exposed. Over 95% of individuals who have been exposed to HIV are thought to produce antibodies against it.

To detect these HIV antibodies in the blood, a number of different tests have been developed, notably in the US, UK, France and the Netherlands. First invented in 1983, the test kits became commercially available in 1984. None of them is infallible.

People infected by HIV do not produce antibodies for a period varying from six weeks to as long as six months. The virus is present in their blood, but the blood tests cannot detect it because they are designed to register the presence of HIV antibodies rather than HIV itself. Blood tests carried out on recently infected people will therefore give false-negative results. A very small minority of people appear never to produce antibodies against HIV.

Blood tests can also give false-positive results: they may indicate that a person has been exposed to the virus when in fact he or she has not. A few people (in Europe about 1 in 4,000) seem to have HIV-like antibodies without any HIV infection. But false-positives occur much more commonly when the tests detect antibodies which the body has developed to deal with other invaders, and then confuses them with HIV antibodies.

So it is not uncommon for blood tests to fail to produce clear-cut results, and skilled interpretation is necessary. African blood samples in particular have been known to give a high number of false-positive results. The usual procedure in such a case is to confirm any HIV-positive results with a second, different test. Such confirmatory testing has been used since 1985, and is now routine. Its use has made blood testing for HIV antibodies more reliable, and researchers are continually refining their techniques, increasing reliability still further.

Blood testing, particularly when a number of repeat tests must be used to ensure genuine results, is inconvenient and expensive. With the cost of a single test kit set between $3 and $5, confirmatory testing can be prohibitively expensive in Africa and other parts of the Third World. Currently all HIV blood tests must be sent for analysis to a laboratory with special equipment and highly skilled technicians. So patients in rural African clinics where laboratories are unavailable cannot be tested to see if they are infected by the AIDS virus. A cheap and accurate "bedside blood test", which can be performed in field conditions and without laboratory back-up, is urgently needed.

In February 1987, one group of researchers issued a preliminary report that they had discovered how to make such a rapid, easy and economical test for use in developing countries. Unlike currently available blood test kits, the new test requires no special equipment or refrigeration. It has been tried on 263 patients from Africa, America, Asia and Oceania, apparently with acceptable results, and promises to be much cheaper than the kits now in use.

Two American companies have developed a special type of test kit which, instead of detecting antibodies to HIV in the blood, detect the virus itself. Such a test would be very useful, since it would make it possible to tell if a person were infected by the AIDS virus immediately after it had been contracted, and before the body had had time to produce HIV antibodies. But the new kits are complicated and cumbersome, and even in well-equipped London hospitals doctors believe they would be impractical for blood donor screening. They may, however, prove valuable for research into AIDS treatment drugs.
multiplying in the body, altering the chemistry of its cells, and making the victim ill. If the lymphocytes work fast enough, their antibodies eventually overwhelm the virus. The presence of antibodies in the blood is normally a healthy sign: it means that the lymphocytes are responding to the viral attack. If they do not, the virus may be able to kill or badly damage its victim.

Collectively, the lymphocytes make the body immune to fresh invasions of viruses. They are a key part of our immune system.

When an individual’s immune system has conquered a virus, he or she acquires a natural immunity to the disease caused by that virus. A pool of individuals who are “naturally immune” to the infectious diseases to which they have been exposed is normally found in both human and animal communities. With most infectious diseases scientists can study this natural immunity to learn how best to combat the virus itself.

With AIDS there is no known naturally immune population, because the very people who produce antibodies against HIV are those who are likely to develop the full-blown disease. Their antibodies are present in too small a number, and are ineffective against the AIDS virus.

The body’s anti-virus lymphocyte defence team includes a number of different members, including “T-lymphocytes” and “killer” cells. An important type of T-lymphocyte is the T4 helper cell, which the HIV virus directly attacks. To understand why AIDS is so deadly, we need to understand the role of the T4 cells, and their relationship to the killer cells.

The killer cells are specialised assassins, and left to themselves they might not only kill invading bacteria and viruses, but other cells vital to the body’s functioning. To do their job they must first be able to distinguish between healthy body cells and disease organisms. And when their job is finished - when the invader is defeated — the body’s supply of killer cells must be dumped down. The T4 helper cells are instrumental in achieving both these tasks.

The T4 helper cells act as “mission control” to the immune system cells. They help with invader identification, and determine the level and quality of the body’s immune response. These T4 helper cells are crucial in producing resistance to disease. They are also the primary targets of the HIV virus.

HIV has evolved a sophisticated means of identifying, infecting and killing the T4 helper cells, thus disrupting communication among the body’s lymphocyte defence system, and progressively disabling the body’s defence against disease.

Though infection by HIV is followed by the production of HIV antibodies, these antibodies are ineffective in neutralising the HIV virus. Nevertheless, the HIV antibodies can be detected in blood tests. Since detecting the virus itself is extremely difficult, testing for HIV antibodies is now the standard way of finding out if a person is an HIV- carrier. A test which shows that HIV antibodies are present in the blood is called HIV-positive or seropositive.

An HIV-positive blood test does not mean someone has AIDS. But it does mean he or she has HIV antibodies. Since we know that the HIV virus is not destroyed by these antibodies, virologists assume that anyone with HIV antibodies is at risk of developing AIDS (see Chapter 2).

AIDS: the disease

The HIV virus gradually disables the body’s immune system. The victim becomes increasingly vulnerable to almost any infection — by another virus, a bacterium, a fungus or a parasite. These “opportunistic” infections mainly occur in the skin, the lungs, the digestive system, the nerves and the brain. The HIV-infected person suffers a long period of illness and disease. Medical treatment — for pneumonia, for example — may for a time make the symptoms less unpleasant. But eventually the AIDS patient will die, usually within two or three years of diagnosis.
It seems likely that a number of "co-factors" — other infections, the use of alcohol or other drugs, sexual behaviour (including multiple partners), or pregnancy — may accelerate the HIV infection from one stage to the next, possibly by stimulating the virus to replicate and infect more cells.

In theory (but not always in practice), there are five stages in the development of the HIV disease:

* initial HIV infection
* PGL: persistently enlarged lymph glands
* ARC: AIDS-related complex
* full-blown AIDS
* AIDS dementia

Not every victim goes through each stage. Some patients show no obvious signs of illness before developing full-blown AIDS, or AIDS dementia. Others may live for some months or even years with no symptoms beyond enlarged glands in the neck.

The typical symptoms of each of these five stages are summarised below. This is based largely on North American and European experience; the disease varies considerably from one part of the world to another.

**Initial HIV infection:** Within a few weeks of HIV entering the body, some people experience a temporary "seroconversion illness", which may resemble influenza or glandular fever (infectious mononucleosis). This is usually followed by a period in which no further symptoms appear.

**PGL (which stands for persistent generalised lymphadenopathy):** Enlarged lymph glands, in the neck, armpit or groin, can follow this initial bout of illness, and may be accompanied by fevers, night sweats, loss of weight and oral thrush (a fungus infection inside the mouth).

**ARC (which stands for AIDS-related complex):** The HIV virus has by now damaged the immune system considerably. Many infections occur. Symptoms include fatigue, unexplained diarrhoea lasting longer than one month, loss of more than 10% of body weight, fevers and night sweats. Oral thrush, PGL, or enlarged spleen may be present.

**Full-blown AIDS:** The immune system is collapsing. Major life-threatening infections invade the body. These vary among patients and among countries. Pneumonia caused by the parasite *Pneumocystis carinii* is common in the US, as is a skin cancer called Kaposi's sarcoma. In parts of Africa a wasting condition called "slim disease", linked to persistent diarrhoea, is common. The AIDS patient is usually extremely thin, grossly fatigued, and has multiple infections such as shingles, thrush, herpes and tuberculosis. Full-blown AIDS is always fatal; few victims live longer than three to four years.

**AIDS dementia (or AIDS dementia complex):** The HIV virus can pass through the blood-brain barrier, which "filters" out substances in the blood which might damage the brain. Once past this barrier, HIV can destroy certain brain cells, causing symptoms ranging from mild confusion, memory loss, deteriorating thought processes and inappropriate behaviour to personality change, premature senility and incontinence. The normally young victim may require complete care for as long as he or she lives. It is possible that numbers of people, some in responsible positions, may develop AIDS dementia with no sign to outsiders other than forgetfulness or behavioural changes. But this lack of overt symptoms could conceal more serious brain deterioration and eroded mental capacity. The results of this in, for example, an airline pilot, a surgeon, or a military or political leader could be disastrous.
HIV triggers other epidemics

If someone is infected in childhood with tuberculosis (TB), his or her immune system usually conquers the infection with no visible ill-effects, but may not completely eliminate the TB bacteria. The TB bacteria often remain dormant, with the patient showing no signs of the disease but nevertheless becoming a lifelong carrier. A TB carrier may remain well for life, or may develop active TB when his or her immune balance is upset — for example if infected by other organisms or if weakened through malnutrition.

TB is common in most Third World cities, and far more people are carriers than develop the lung disease which can end in coughing blood.

When HIV infects a TB carrier, the resulting immune weakening allows the TB bacteria to mount an active attack. The carrier then develops the lung or other tissue damage which can eventually be fatal.

But the chain of events does not end here. The tubercular patient has now become contagious, capable of passing on TB to his or her contacts — especially in damp, poorly-ventilated conditions.

So an epidemic of TB may be loosed in an apparently healthy community by an HIV carrier who may have no AIDS-related symptoms. The patient’s doctor might see nothing but typical tuberculosis, and not think of testing for HIV — even if the test were available locally.

TB is on the rise among AIDS victims in the United States, where until the mid-1970s its incidence was decreasing. It seems also to be occurring more in HAti and in Africa, where there is good reason to suppose that HIV has been the trigger. Forty per cent of TB patients tested in a study in Kinshasa, Zaire, were found to be HIV carriers. In the same period, roughly 6-8% of healthy adults were HIV-positive.

AIDS reflects and magnifies the diseases that are prevalent in a particular locality. Where TB carriers are already present, for example, then more, and much more serious, cases of the disease are likely to appear.

The presence of HIV can also increase the damage done by the malarial parasite in the body. It can cause brain damage in people whom the malarial parasite has infected for the first time. Such damage is rare among adult Africans, but it now seems that people infected by HIV are more likely to suffer brain damage during recurrent bouts of malaria. Children especially may now be at risk from this more destructive form of an already damaging and common disease.

HIV, by causing epidemics of infectious diseases besides AIDS, poses a multiple challenge — one which is likely to continue for many decades — to health systems wherever it spreads.

AIDS: an epidemic of stress

How do people react to knowing they have a mysterious, invariably fatal disease? Different individuals, different cultures will respond in their own way.

"They just seem stunned, as if all the years of war, which they had somehow survived, have led only to this: another hell of dying or watching others die of this miserable disease." That is how a Uganda medical worker describes her patients' reactions to AIDS.

Fear of AIDS does not always make people more careful of catching it. An expatriate medical researcher in a central African country described the following events: "One night, after I had been doing blood tests in a rural area with some local medical colleagues, they went off with some of the girls from the town. They slept with them, and only one of them used a condom. In the morning I asked them how they could possibly have taken such a risk, since we all knew that the prevalence of HIV was quite high in the region. They laughed, saying that you couldn’t give up living just because you might get a disease." One of the
WHERE DID AIDS BEGIN?

"AIDS is not an African disease", stated the lead article in a recent issue of an African magazine. Instead of assuming that AIDS came from Africa, the author said, it "might not be far-fetched to trace it to the insouciant sexual permissiveness which has engulfed the entire Western society". This sentiment, echoed in other African publications, has also been expressed in Asia, the Middle East and the USSR (see Chapter 7). Around the world, the question of "who started the AIDS epidemic" generates a lot of heated argument, and has already cost some countries a good deal of money.

In the American literature on AIDS, the account of the origins of the disease most often given is that it first took hold in Africa, spread from there to Haiti, and was picked up in Haiti by vacationing American homosexuals. Confirmed blood tests revealing the presence of HIV-like antibodies in samples of African blood going back to the early 1960s are often cited as evidence that AIDS was common in parts of Africa long before it surfaced in the US.

In one study, by means of confirmatory tests on blood samples stored since the early 1970s, 67% of children living in the West Nile district of Uganda were shown to be carrying such antibodies. In another study the AIDS virus, one indistinguishable from it, was found by repeated testing to have existed in central Africa as early as 1959. Despite this apparent evidence for the presence of the AIDS virus in Africa in the 1960s and 70s, there were no reported cases of AIDS over the period. The validity of all these data has been questioned by some researchers.

If the AIDS virus was present in Africa 15 or more years ago, why wasn't AIDS being diagnosed by African doctors? Sometimes it has been suggested that the disease could have been missed due to the lack of sophisticated medical surveillance in many African countries. A second suggestion is that the virus was present, but in a less virulent form which did not actually cause the disease. Another explanation is that decades ago the AIDS virus may have "crossed over" from monkeys to humans living in isolated tribal groups in rural central Africa, with the disease going undetected until recent rural-urban migration brought it to the cities (see Chapter 5).

A few researchers have shown how easy it is to overstate the case for the early and widespread existence of the AIDS virus in Africa. Among blood samples from more than 900 old Ugandan people tested for the AIDS virus in one study, none was HIV-positive, suggesting that the AIDS virus was not widespread in that country until very recently. Another large blood survey of 6,015 Africans from rural parts of nine countries, but excluding most of those which currently have the largest AIDS epidemics, yielded only four HIV-positive results. On the evidence of blood test survey results, researchers in Zambia believe that AIDS is new to Zambia. These results are not often cited in discussions about the "African origins" of AIDS; why not?

The short history of the AIDS epidemic has been one in which everyone blames someone else for starting the epidemic. American news media have pointed the finger at Africans, Haitians and homosexuals; some Europeans, the Japanese and other Asians have blamed the Americans; and Africans have accused Europeans. Each group or country has sought to portray itself as the innocent victim of a disease brought by outsiders with inferior moral standards, as if the apportioning of blame would somehow turn back the clock to the days before AIDS existed.

In fact very little is known about the origins of the AIDS virus, and even less about the way in which early carriers of the virus unwittingly spread it within and between countries. What is known is that the first cases of AIDS began to appear at roughly the same time in Africa, Haiti, and the US: in 1980-81. Before this time, no one seems to have observed the disease, although by looking back through medical records we can establish that AIDS was probably present a few years earlier.

AIDS is a highly sensitive issue, which can cost a country millions of dollars in lost tourist revenue. Its potential for upsetting political relations has been recognised by the US foreign and diplomatic service, which has instituted a policy of requiring serving diplomatic personnel and their families to have regular blood tests for HIV. It is the prospect that American diplomats could infect foreign nationals with HIV, and then be blamed for the consequences, which has led to this decision, not easily taken as it infringes the cherished civil liberties of American citizens.

The "origins" question remains highly contentious, and may never be answered; after centuries of scholarship historians are still in dispute about the origins of the medieval European syphilis epidemic. But it provokes intense irritation among Africans, who believe the AIDS epidemic to be new and unprecedented on their continent, and resent the implication that Africa is to "blame" for the world AIDS epidemic.

What is most important is not where the AIDS epidemic came from, but where it is going. This is dealt with in Chapter 3.
commonest psychological responses to a situation which seems unacceptable is to deny that it exists. So it is not surprising that health officials and governments in many countries frequently insist that the AIDS epidemic is being exaggerated, and that in any case, it is a "foreign" disease. When a Japanese female prostitute recently died of AIDS, a national newspaper concluded that "her death was a result of an infatuation with Europe". In the southern Austrian city of Klagenfurt, all foreigners who want a work permit will have to supply a doctor's certificate stating that they are HIV-free.

Soviet spokesmen have stated that AIDS is "a social problem which can be closely linked to the sexual freedom tolerated in the West, and which is unnatural for our society" (see USSR section, Chapter 7). Officials in the Middle East insist that Islamic prohibitions against homosexuality will protect their countries from AIDS (see Middle East section, Chapter 7).

But for those who have come into contact with HIV, the psychological strain is terrible. Italy, the US and the UK have all recorded a number of suicides by people who discovered they were HIV-positive, and even by some healthy people who thought they might have contracted the virus. Reports from Haiti and parts of Africa suggest an increase in voodoo or other traditional practices by AIDS victims and their families, who have despaired of conventional medical treatment.

A Rwandan nurse relates how one of her patients, who had already lost one child to AIDS, and who had contracted the infection from her husband, took her new baby in her arms and began to walk home. "At the point where she should have turned off the main road she walked steadily on, her eyes focused straight ahead. When her family finally caught up with her she had walked nearly 50 kilometres and the baby was hungry and dehydrated. She still hasn't recovered. She just sits and stares, and occasionally fusses with her child. I think she knows that she's going to die, that her husband is going to die, and that her child will probably die. She doesn't see any point in pretending that life can be normal again."
CHAPTER 2

THE HIV VIRUS: ANY TREATMENT? ANY CURE?

Diseases caused by viruses can be relatively harmless (like the common cold), or lethal (like smallpox). Viruses many produce symptoms a short time after infection (as is the case with influenza), or may take decades to produce a fatal disease (like leukaemia).

Researchers now think that a number of degenerative diseases such as rheumatoid arthritis and multiple sclerosis may be caused by "slow viruses". These diseases have a long time lapse between infection and the first symptoms. Once a slow virus is in the body, it causes the progressive destruction of its target body cells. In animals, a group of slow viruses (most prominently maedi visna in sheep) are always fatal.

AIDS is certainly a slow disease, and the HIV virus which causes it appears to combine the worst characteristics of other slow viruses (also called lentiviruses).

* Some of them take a long time, often 10 or 20 years or more, to produce diseases which are virtually always fatal.

* Over much of this period, even though the virus is progressively damaging the body, the victim may appear well, and may be unaware that anything is wrong.

* Victims may pass on the infection to others for the rest of their lives, even when they are symptom-free.

* These slow viruses can infect the brain and nervous system, causing symptoms ranging from mild confusion to chronic dementia.

It is still commonly believed that only a proportion of those infected by HIV eventually develop AIDS. But leading researchers are becoming increasingly pessimistic about HIV carriers’ chances. On present trends, they fear, virtually every HIV carrier may sooner or later die of AIDS.

Will all HIV carriers eventually die?

Medics have been aware of AIDS for barely six years, and most of the careful statistical research goes back only three years. This is not long enough to study an infection which we think can remain "silent" for a decade or more.

Until the latter part of 1986, most AIDS research suggested that between 10% and 30% of HIV-infected individuals would within five years develop full-blown AIDS and then die.25

The latest report by the US National Academy of Sciences concludes that between 25% and 50% will die within five years — and goes on to say that there is nothing to suggest that the percentage will not go higher. In writing this report the Academy’s panel of scientists from all the health disciplines performed an extensive review of the currently available statistical evidence on HIV carriers and AIDS victims.26

In late 1986 the results of a study by researchers at Frankfurt University showed that of a group of 543 people (most of them the sexual partners of AIDS victims) studied since 1982, only 30 HIV-carriers remained healthy after three years.

This study, based on a computer model, predicts that 50% of HIV carriers will develop full-blown AIDS in five years, and 75% in seven years.27

As time goes on, researchers are beginning to realize that the chances of developing AIDS are greater in the second five years after infection than in the first. Dr James Curran, a senior epidemiologist at the US Centers for Disease Control in Atlanta, Georgia, now says that “As time goes on, only a minority of
infected people will remain healthy. I feel less optimistic about a normal life-span for any infected person. 28

Another study, this time at the Walter Reed Army Institute of Research in Maryland (US) followed a group of HIV carriers for as long as three years. The researchers found that nine out of 10 carriers progressed to a more serious set of symptoms during the course of the study. This suggests that the view that there may be a large group of people who remain symptom-free is false. 29

Richard Tedder, one of Britain's leading virologists, who has studied HIV both in Europe and in central and west Africa, says: "The more we learn about this virus, the worse it gets. There is simply nothing good that can be said about it, and I see nothing on the horizon which gives us any reason to believe that the infection, once contracted, does not lead to AIDS, though in some cases this may take a very long time." 30

Many medical experts, including many virologists, now believe that, when we have studied AIDS longer, the death toll among HIV carriers will rise toward 100%. Why then do they not say so?

There are two reasons for their caution. The first is scientific: there is no proof. Until we have watched a large number of HIV carriers for as long as 10 or 20 years, we cannot know for sure how many will develop AIDS, and when. The belief that all will eventually die is based partly on the fact that as every year goes by, more people who contracted the virus three or four or five years ago do indeed develop the disease. And it is based partly on the studies of the HIV virus itself, and on its similarity to slow viruses. But beliefs are not scientific, so prudent virologists have rarely aired them in public.

The second reason is a humane one: a concern for the morale of those who already have AIDS, and for those who are carrying the HIV virus. A great many doctors and others who treat HIV-infected people take the view that until such time as irrefutable statistical evidence can be gathered to show that the majority of HIV carriers will develop AIDS, no one should state that this could be so. To state a belief that they will all eventually die is to deprive the victims of hope, and this the medical profession is very unwilling to do.

We do not wish to do so here, but feel that, unless those who make and influence decisions understand what foreboding the AIDS virus creates among the researchers who specialise in studying it, they will not act soon enough to prevent more people from becoming infected.

What hope of an AIDS vaccine?

The body defends itself against viruses by using its lymphocytes to produce antibodies. This natural defence does not work against HIV.

One way of "artificially" protecting the body against viruses is to use a vaccine: either a dose of killed virus, or a dose of a mild strain of the live virus. Neither is sufficient to cause illness, but enough to stimulate the lymphocytes to produce appropriate antibodies themselves.

Can this be done with the HIV virus, to immunise uninfected people against AIDS? The short answer is "perhaps". But few virologists think this will happen in much under 10 years; some believe it may not be possible at all. HIV mutates rapidly, producing descendant strains which may require different vaccines.

There are a number of possible approaches to a vaccine. The first possibility is that an AIDS vaccine might be made from the protein "skin" or envelope of the HIV virus. Researchers have recently discovered that a portion of the envelope — the signature protein — may remain unchanged from strain to strain. If this portion of the envelope could be separated, its genes could then be spliced into the harmless vaccinia virus used in the smallpox vaccine, to create an HIV vaccine.

A second approach might be to produce a vaccine which would target the core of HIV, since the core genes appear to vary less than those for the envelope.
"The hepatitis vaccine is so expensive that the British government is reluctant to make it routine treatment"

A third approach would be to try to remove the portion of the HIV virus which contains the genetic information that tells it to multiply, leaving the rest of the HIV intact, but unable to reproduce.

A fourth avenue could open up if individuals infected by a virus similar to HIV should prove to be resistant to HIV itself, but this line of research is at present only hypothetical.

The fifth approach, to make a vaccine from a solution of killed HIV virus, might be simpler. The technique is well-established for other vaccines, but there is a risk that some of the "dead" viruses could revive in the body, and cause AIDS instead of preventing it. Nevertheless some virologists believe this method should be tried with volunteers.

Laboratory work on some of these possibilities has just begun. Scientists are not sure how long it will take to produce an effective vaccine in the laboratory, but with some dissenting voices, they remain optimistic that it will eventually be possible.

The first human tests of an AIDS vaccine have begun in Zaire, where scientists appear to be ahead of teams in the US, France and the UK. The test vaccine is designed to stimulate cells in the immune system to recognise and kill lymphocytes which are infected by the AIDS virus. Animal tests, followed by the inoculation of a few uninfected human volunteers, have shown that the vaccine is free from short-term toxic effects, and that it seems to be able to stimulate the production of a class of antibodies which can kill the virus. Though it has the support of the Zairean government, this research has been criticised by other scientists because it is being carried out secretly, without the support of WHO. Those carrying out the research have not yet published their results, so it is too early to judge how important their work may be, and a number of unanswered questions hang over it.

If a promising vaccine were developed, it would first have to be tested on animals: probably on chimpanzees, which are scarce and expensive but the only non-human primate easily infected with HIV. Then human trials would be needed, which would pose formidable practical and ethical problems. Who would be the first to be tested? How would the effectiveness of the vaccine be ascertained in a period of time shorter than the full HIV incubation period? The sexual behaviour of those vaccinated would have to be closely monitored for years. There might be severe side effects. To develop a set of internationally applicable guidelines for the testing of AIDS vaccines is a task for WHO, which has played a similar role with respect to other infectious diseases.

After human trials, the delivery of the vaccine would be highly complex. Drug companies might not be anxious to market the new product: there would be immense potential for expensive lawsuits. What would the new vaccine cost? Could it be distributed on a mass scale, or would selective high-risk groups be chosen for inoculation? Who would do the choosing? Would distribution in Third World countries be more difficult?

In Haiti and several African countries nearly everyone might have to be vaccinated; the expense would be enormous. But to deny such a vaccine might be considered genocide. The vaccine against hepatitis B, which has become available over the past year, provides an example of just how costly such bio-engineered products can be.

The hepatitis vaccine is not "made" like a drug, but "grown", like a microbial culture. Laboratory growing of the microorganisms used in a vaccine takes a lot of time, expensive equipment and materials, and immense skill. At present it costs about $180 per person to immunise against Hepatitis B. The vaccine is so expensive that the British government is reluctant to make it routine treatment even for high-risk homosexual men. An AIDS vaccine is likely to be similarly dear, at least in the first years of development, which would make its mass use in poor countries problematic.
A SURfeit OF AIDS VIRUSES

In 1983, when the cause of AIDS was discovered, it was possible to refer to "the AIDS virus". But since that time two more viruses have been identified: one which definitely causes AIDS, and one which appears not to. The new viruses appear similar to HIV in their structure, but they are quite distinct from it.

One of the new viruses was isolated by American researchers from the blood of apparently healthy Senegalese female prostitutes and hospitalised non-AIDS patients in Dakar. They called this virus by the American name HTLV-4.33 The researchers tested old blood samples as far back as the mid-1970s, and found that HTLV-4 was present, though, they said, there had been no cases of AIDS. As many as half the prostitutes in one unidentified (for political reasons) country in the region are carrying HTLV-4, with 38%, 7% and 0% in three nearby countries.36

In its structure HTLV-4 closely resembles a virus found in wild African green monkeys. The monkey virus STLV-3, does not seem to cause AIDS in the animals it infects (see section on STLV, Chapter 5). The monkey virus and HTLV-4 are similar in this respect. Could it be, ask scientists, that HTLV-4 is a "middle generation" virus in an evolutionary chain which started with a monkey virus and arrived at the AIDS virus?37

Subsequent to the discovery of HTLV-4, Swedish scientists reported that four women (from the Gambia and the Ivory Coast) living in Sweden tested seropositive for HTLV-4. The Gambian woman was ill, showing signs of an AIDS-like immunodeficiency.38 The Swedes also reported finding HTLV-4 in a woman patient from Guinea-Bissau, who died of a condition similar to the African form of AIDS known as "slim disease".39 Their research raised further questions. Was the Swedish virus really HTLV-4, or was it a similar, but separate, relation of the AIDS virus? And did their discovery cause AIDS?

A new virus which definitely does cause AIDS was isolated from eight AIDS or pre-AIDS patients in Cape Verde, Guinea-Bissau and Senegal by French researchers from the Institut Pasteur. They reported their findings in July 1986 and called their discovery by the French name LAV-2.40 As yet there have been no published reports detailing the prevalence of LAV-2 in these countries, but it is clear that LAV-2 makes people ill in the same way that the AIDS virus does. LAV-2 is also present in central Africa, having been isolated from patients in the Central African Republic.41

Virologists assume that when the necessary detailed analysis of their genetic structure is performed, it may turn out that HTLV-4 and LAV-2 are one and the same. The detailed analysis has not yet been done because of the poor state of relations between the French and American researchers involved.

More importantly, there is no scientific consensus on exactly what evidence would prove that viruses isolated by different laboratory teams in different places and at different times are in fact "the same". Viruses are a bit like fingerprints in that no two specimens taken from different sources are exactly alike. So to come to a verdict that two virus samples which look similar actually are the same, scientists must refer to a set of agreed and standardised criteria. Such criteria have not yet been set out for the AIDS virus and its relatives.

In February 1987, under the auspices of WHO, leading international virologists met to compare notes. They decided that it was essential to devise a set of criteria determining the relationships between the AIDS virus (HIV), the two new viruses (HTLV-4 and LAV) and the monkey virus (STLV-3). WHO is setting up a working party to do this, with international collaboration from virologists in a number of different laboratories.

The discovery of one, possibly two, new AIDS viruses in addition to HIV is an indication of the worrying speed with which the AIDS "bug" may evolve to form related but separate viruses. Any of these new viruses could, in future, be even more harmful than HIV, a prospect no one wants to think about.

Complicating an already over-complicated picture is the finding that the original AIDS virus, HIV, and the new one, LAV-2, can simultaneously infect the same person. The possibility of such cross-infection on a large scale raises difficult problems. Can blood tests reliably distinguish between the two viruses? Will the presence of two viruses in a single victim lead more surely, and more rapidly, to the development of AIDS? How could a vaccine be devised to protect against the simultaneous presence of two AIDS viruses?

These questions do not just affect Africa. The first European cases of AIDS caused by LAV-2 were recently reported in France, one in a patient who had never been to Africa, and is thought to have been infected in 1983.42 More such cases may be expected. French blood donors will have to be screened for LAV-2, and leading French virologist Luc Montagnier reports that a blood test for it will soon be marketed.43
"There is no scientific consensus on exactly what evidence would prove that viruses isolated in different places and at different times are in fact 'the same'"

Barring a totally unprecedented breakthrough, most virologists think that even limited marketing of an effective HIV vaccine is at least several years away. Pessimism ensues from the fact that, in the blood of its victim, HIV mutates at a rate hundreds or thousands of times faster than many other viruses. The chances of effective vaccination against such a moving target may be slim.

And it must be stressed that a vaccine could only stop new people being infected with the HIV virus. It would have no effect on the tens of millions who by then will probably be HIV-positive.

What hope for treatment?

As yet there is no cure for AIDS. Instead of treating the disease itself, treatment consists mainly of fighting the symptoms of the "opportunistic" infections which take advantage of the victim's damaged immune system: pneumonia, yeast or fungal infection, tuberculosis, cancer, diarrhoea. But when the treatment stops, the same or a different infection eventually returns.

As yet there are no antiviral drugs which permanently rid the body of HIV. There are two reasons:

* HIV "hides" in the body cells it infects. To kill it, a drug would have to kill these cells, damaging the patient and his immune system even more.

* The virus can infect brain cells, where most antiviral drugs cannot follow, because they are "filtered out" by the blood-brain barrier.

Instead of focusing on antiviral agents, much research is now being directed towards drugs which prevent the virus from reproducing and spreading to more body cells. AIDS patients would have to take these drugs for life — but many of the drugs tested so far have serious side effects, even in the short term. The US government is providing $100 million to 14 research centres for intensified clinical trials from mid-1986.

At present azidothymidine (AZT) and ribavirin appear the most promising drugs. Both cross the blood-brain barrier, can be taken by mouth, and in limited trials have proved sufficiently effective for further trials to be conducted. Patients are being treated experimentally with AZT in a number of centres in the US and Europe, but at present only very limited quantities of the drug are available, and then only for a limited group of patients who fit strict medical criteria laid down by the manufacturer.44

However effective it may prove, unless it can be produced far more cheaply, its cost will prohibit its widespread use for the hundreds of thousands of African AIDS victims. The cost of the recommended dose of AZT — 6-10 tablets — for a single AIDS patient in the US would be $10-20 per day. As the treatment must be continued for long periods, if not the lifetime of the patient, only countries with the most well-financed health systems can afford it at the present price.45

In clinical trials AZT has produced side effects, including anaemia severe enough to necessitate blood transfusions in a quarter of the patients who received it for 4-8 weeks. Patients on a lower dose, but for a longer period of time, required multiple transfusions.46 A requirement for repeated blood transfusions over extended periods would rule out any large-scale use of AZT for AIDS patients in poor countries, particularly where blood supplies are not screened for the AIDS virus.

Can the HIV-damaged immune system be repaired, or its cells replaced, restoring the AIDS victim's resistance to infections? Use of biological substances such as the repair treatments interferon and interleukin-2, and immune replacements including lymphocyte transfusions, bone marrow transplants and thymic implants, have been tried on a few patients with some success.47

Treatments that do not eliminate the HIV virus from the body are only temporary victories. Ideally, a combination of antiviral and immune repair/replacement treatments may within a few years offer better results. But there
is no doubt that such sophisticated treatments will be too expensive for most of the world's HIV carriers, who live in developing countries.

So in the absence of a vaccine — perhaps a decade or even more away — the only effective weapon against the AIDS epidemic is prevention. This means stopping people from becoming infected with the virus in the first place. AIDS prevention is dealt with in Chapter 4.

"AZT may be the most expensive drug yet produced, costing each patient in the region of $20,000 per year"
CHAPTER 3
HOW DOES AIDS SPREAD?
AND HOW FAR WILL IT GO?

As this dossier has already indicated, HIV, the virus which causes AIDS, is probably the nastiest microbe ever to have hit humankind.

The disease it causes seems always to be fatal; the virus can give no sign of its presence for years; there is so far no vaccine and no cure; and it is mainly spread from person to person by sexual contact.

But there is one "good" thing to say about the AIDS virus: it is not very infectious. Unlike influenza or tuberculosis, it is not spread by coughs and sneezes; unlike malaria or plague, it is almost certainly not spread by insects; unlike cholera it is not spread through contaminated food or water; unlike smallpox, it is not spread by casual skin contact.

Transmission methods are discussed more fully in Chapter 4. In general, the virus can be passed from one person to another:

* by penetrative sexual contact (vaginal, anal or oral)
* by sharing unsterilised hypodermic needles (by i-v drug abusers, or careless medics)
* by blood from one person entering a cut or wound on another (as may occur in ritual tribal scarring in Africa, during female circumcision or in traditional medicine)
* by a blood transfusion with contaminated blood
  * from mother to baby before, during or after birth

The epidemiology of AIDS

Epidemiology is the study of the incidence and spread of a disease, both internationally and within communities. Understanding how AIDS spreads is important in order to predict where it will occur next, and to identify where education and preventive measures would be most effective. So far, the HIV virus seems to have followed two rather different epidemiological patterns.

**Pattern I**, where HIV is found first in haemophiliacs, blood transfusion patients, male homosexuals, i-v drug abusers and certain immigrants. This characterises HIV's progress in the US, Europe, and parts of Asia and Latin America.

**Pattern II**, where HIV is found mainly in sexually active adults of either sex, as in central, east and southern Africa.

There are now strong indications that countries which started with Pattern I will eventually move into Pattern II. For several years, HIV infection in Haiti followed Pattern I, with male homosexuals and drug abusers accounting for a majority of cases. Recently there has been a pronounced shift in the pattern, with heterosexual intercourse now responsible for 80% of new AIDS cases. HIV was first found in Haiti in the coastal resorts where sex, drugs and tourists — probably bringing the virus with them — met. It appears that the virus has now "leaked" out of the initial groups of homosexuals and drug abusers where it was first seeded, and into the population at large.¹

Concern is growing sharply that Haiti's transition from Pattern I to Pattern II is being followed in North America and Europe.

In the US, most of the emerging AIDS cases which are accounted for by heterosexual transmission of HIV are in young women. As men still account for over 93% of HIV-infected individuals in the US, this suggests that the virus is
IMMUNITY TO AIDS: DO MONKEYS HOLD THE KEY?

In their effort to arrive at a better understanding of HIV and its effects, scientists have searched for an animal model for AIDS among non-human primates (monkeys and chimpanzees) in captivity and in the wild.

An early stage of this search began when American researchers noticed that captive rhesus monkeys became ill with an AIDS-like condition. They took blood samples from the sick animals and found a virus which turned out to be similar to the AIDS virus. They called the monkey virus STLV-3 (simian T-lymphotrophic virus).48

Next, the researchers looked for an animal reservoir of HIV, or a similar virus, in the populations of green monkeys which live in close proximity to humans in parts of central and east Africa. Because other viruses have been known to make the leap from animals to humans — including the yellow fever virus — it seemed reasonable to suppose that the AIDS epidemic could have started when HIV was transferred from wild monkeys to human hosts.

In samples of blood from wild green monkeys, these researchers found a virus similar to STLV-3 which infected the captive monkeys.49 Blood tests on a variety of African primates found that about 50% of African green monkeys were carriers of STLV-3. But unlike their captive counterparts, the wild monkeys infected with STLV-3 did not become ill. Did the wild monkeys then possess some form of natural immunity to STLV-3? In precisely what way had the virus mutated to become more virulent in its human hosts?

Pursuing answers to these questions, scientists have continued to study captive monkeys and have found that whereas rhesus macaques infected with STLV-3 develop an AIDS-like condition, another type of African monkey, the sooty mangabey, does not.50 It is not known why the mangabeys seem not to develop AIDS-like symptoms. Neither is it known why chimpanzees, when infected with the AIDS virus, remain free from the full-blown disease.

If mangabeys and chimpanzees do possess some form of immunity to AIDS, then an understanding of how this immunity has evolved could provide clues to a means of immunising humans against HIV. So the study of primates, both captive and wild, has become part of the larger effort of AIDS research.

"One important factor determining the spread of HIV is the sexual contact rate"

currently crossing from the homosexual community into the population at large. A major channel for this transmission is communities of i-v drug abusers.

How many sexual partners?

What is as yet undetermined is the speed with which HIV could establish itself among heterosexuals in the Pattern I countries, and the factors which could influence this.

One important factor determining this speed is the sexual contact rate: the average number of different sexual partners per year per individual member of the population.

The rapid spread of HIV both in the American gay (male homosexual) community and in urban African populations over the past few years is in part due to the high sexual contact rate of these populations.

In Africa, where heterosexual transmission is predominant, as much as 40% of the population is in the most sexually active age range (15-40 years), a higher proportion than in most other regions. Because of the high birth rate, the sexually active proportion of the African population is steadily growing.

There are indications that the contact rate among young heterosexuals in Pattern I countries is also increasing. In the US, the proportion of girls under 15 who have
"A rising proportion of AIDS cases are occurring in drug abusers"

had sex has trebled in two decades, and the rate for boys has trebled since 1960. Nearly 25% of 15-19 year old US girls have had sexual intercourse before the age of 16.

The incidence of sexually transmitted diseases (STDs) is another measure of sexual activity. In Britain the number of cases seen in STD clinics has trebled over the past 15 years. US figures show a similar increase since 1980, with cases rising from four to 12 million. Admittedly, more people may now be seeking treatment for STDs, but this factor alone does not seem to account for the increase in the number of new cases. The steepest increase in many countries is among young women aged 16-24.

A second factor affecting the diffusion of HIV into the heterosexual community is the rate of efficiency with which the virus is transmitted during individual acts of sexual intercourse.

Scientists have guessed, though not proved, that HIV is transferred more efficiently between male partners than between men and women, and they have theorised that female-to-male transfer may be the least efficient. But recent evidence raises the possibility that HIV may be transmitted heterosexually in either direction with equal efficiency.

Some epidemiologists have estimated that the likelihood of HIV transmission during a single heterosexual encounter may be quite low, possibly less than 1% per contact. If this is so, individuals with a low contact rate would have a small risk of contracting HIV.

Researchers have long suspected that the sexual transmission of HIV is made more likely where one or both partners suffers from another STD. Venereal infections often involve sores or other abnormalities in the sexual organs, which may provide HIV with a pathway into the bloodstream.

STDs constitute a major medical and social problem in developed countries; this is even more the case in parts of Africa and some other parts of the Third World. The rate of gonorrhoea per 100,000 population in Kampala (Uganda) is 10,000 and in Nairobi (Kenya) it is 7,000. In London (UK), the figure is 310, and in Atlanta (US) it is 2,510.53 The widespread presence of untreated gonorrhoea in Africa may partially account for the Pattern II heterosexual spread of HIV on the continent.

The drug connection

Heroin and other drug addicts frequently inject direct into their veins — and share dirty needles. This is another major pathway for spreading AIDS. In the US, so far, most of the heterosexually infected AIDS victims appear to have been Black or Hispanic women who were the partners of i.v drug addicts. Sixty per cent of the heroin addicts in New York City are thought to be HIV-infected, and officials predict that 100,000 American addicts will develop AIDS by 1991. Most of the American children who have developed AIDS after being infected at birth are Black or Hispanic, and the children of i.v drug abusers.

HIV-positivity rose from 6% among Italian heroin addicts in 1980 to 76% in 1985. And WHO reports that in Europe overall a rising proportion of AIDS cases are occurring in drug abusers (3% in 1985, 14% in 1986). Doctors believe that even

![Cartoon strip depicting the drug connection and the spread of AIDS through drug use.](https://example.com/cartoon_strip)
one usage of a shared needle constitutes a serious risk of exposure to HIV in such a community.

Moreover, i-v drug addicts are increasingly seen as a major channel for the diffusion of HIV into the heterosexual population at large. In the US, three-quarters of those who have contracted AIDS heterosexually have done so through contact with i-v drug abusers. As many as 30-70% of addicts in southern Spain, France and much of Italy have been reported to be infected with HIV. The Italian data are particularly alarming because needles and syringes are freely available in Italy.34

The sentinel groups

In the US and Europe, HIV is moving out of the original "high risk" or "sentinel" groups. The barriers to this transit are far less substantial than the neat categories of "homosexual" and "heterosexual" seem to indicate. It is now more appropriate to talk about "high risk behaviour", rather than high risk groups.

At least in Anglo-American society, sexual behaviour has been shown to be far more variable than is generally thought. "Gay" does not always mean that a man is consistently or exclusively homosexual; and men who are primarily heterosexual do have occasional homosexual sex.

In Britain, a government survey showed that around half of all married men have had episodes of homosexual sex in the past. In San Francisco roughly one fifth of gay men said that they had slept with at least one woman at some time in the last five years. These women, the sexual partners of high risk men, are increasingly often becoming infected with HIV.

Where will AIDS go next: three scenarios

What can we expect next from the AIDS virus? In the probable absence of a cure or a vaccine, there are perhaps three scenarios for the future spread of AIDS: the "doomsday" scenario and its opposite the "containment" scenario; and what at present looks the most likely outcome, the "business-as-usual" scenario.

The doomsday scenario

The doomsday scenario assumes a combination of worst possible outcomes: that people remain unconvinced of the threat posed by HIV and do not change their sexual behaviour, and that HIV mutates into new and more dangerous forms. Already, a fifth of the population of some central African cities is infected with HIV. That number of people will almost certainly die, even if the virus does not infect a single additional person.

But HIV will infect millions of additional people unless sexual behaviour is drastically — and rapidly — altered. Epidemiologists believe that while the US and Europe face deaths measured in the millions, some African countries may face severe regional depopulation. A few go so far as to suggest that the worst-hit parts of Africa may lose 50% of their population.

A pessimistic scenario like this would five years ago have been dismissed as science fiction. But HIV has demonstrated, by means of its rapid mutation, an ability to outstrip both the human immune system and the scientists who study it. Now there are many sober, competent scientists who are afraid that doomsday could happen.

The containment scenario

If the doomsday scenario is the worst possible outcome, the containment scenario is the most optimistic. It assumes that through luck and a variety of preventive measures — individual, national and global — we can rapidly slow and ultimately
The cost of treating 10 American AIDS patients is greater than the entire budget of Zaire’s largest hospital

stop the HIV epidemic. It assumes that medical research will develop a marketable vaccine within a decade; that effective treatments or even a cure will be found; and that people will quickly adopt safe sexual practices.

But even on the most optimistic assumptions, HIV will touch the lives of most of the world’s people in the coming decade. The financial costs alone will be staggering.

By 1991, estimates the US National Academy of Sciences, 179,000 Americans will need treatment for AIDS, and this will cost $8-16 billion (a billion is a thousand million) per year. By the end of the century AIDS will have cost more than America’s combined military expenditure on the first and second World Wars. Hospitalisation costs of close to $50,000 per AIDS patient are already common, a fact which has led some insurance companies to exclude those in AIDS “high risk” groups from their policies.

In the South, AIDS patients face a starkly different future. Once diagnosed (which usually happens later in the course of the disease than in the North), there is little medical care available for them. At Zaire’s largest hospital, AIDS patients are discharged after diagnosis; hospital beds are too scarce to fill with those whose outcome is hopeless. American and British health planners are moving toward more out-patient and community-based care for AIDS patients, to cut down on expensive stays in hospital.

The cost of treating 10 American AIDS patients is greater than the entire budget of Zaire’s largest hospital, where as many as half the patients admitted are found to be carrying the AIDS virus.

The "business-and-usual" scenario

Whatever the cost, containment is the best available option. But on the present performance of governments around the world, the most likely outcome is the business-as-usual scenario.

This assumes that individuals and governments will pay lip service to the crisis, but that they will delay taking adequate preventive action on the grounds that the situation cannot possibly be as serious as is suggested.

In the UK, the pool of HIV-infected people was allowed to rise to the present estimated 30,000 to 50,000, before the government heeded doctors’ warnings that a prevention campaign was essential. The central government in Brazil has had a similar late-awakening, deciding on an AIDS control programme only after the country totaled the third largest number of AIDS cases outside Africa.

AIDS is too serious a threat to be left to government action — or inaction. In the next chapter, this dossier explains what governments can and should do; how individual action plays the most important role in stopping the spread of HIV; how NGOs (non-governmental organisations) have successfully helped slow the spread of the virus by encouraging less risky sexual behaviour; and how women’s groups and family planning associations may play a critical role.
CHAPTER 4
PREVENTION MEANS PROTECTING YOURSELF

"So far, education is the best AIDS medicine we have. Spread it around," says an AIDS worker in Brazil.

Preventing the further spread of the HIV virus can, until a vaccine is developed, only be done by preventing transmission. There are some actions which only governments or health authorities can take:

* Screening blood supplies, to remove blood contaminated with the HIV virus.
* Supplying free self-destruct syringes to i-v drug abusers, and to mass vaccination programmes, so that it is physically impossible to re-use needles.
* Ensuring that every citizen receives information on HIV and on how it is spread.

But most preventive action depends on the individual. He and she must adopt safe sex practices, and must avoid those few other activities which can transmit the disease.

Safer sex: what is it?

"Unless it is possible for you to know with absolute certainty that neither you nor your sexual partner is carrying the AIDS virus, you must use protective behaviour. Absolute certainty means not only that you and your partner have had a faithful monogamous sexual relationship for at least five years, but that neither you nor your partner has used illegal intravenous drugs," wrote the US Surgeon General in November 1986. Though sober in the extreme, this advice is good all over the world, especially where the HIV virus is already present.

The key to personal action against AIDS is safe sex. Just what forms of sex are safe, and unsafe?

The HIV virus has been detected in saliva, but there is no evidence that kissing can transmit the virus. So far as is known, deep kissing (where the tongue enters another person's mouth) is not a risky activity. But some US education campaigns have cautiously listed deep kissing as only "possibly safe", and advised people that for complete safety they should limit themselves to "dry kissing", on the lips or body only.

The most dangerous common form of sexual activity is, without any doubt, penetrative sex, in which the man's penis enters the vagina or the anus (rectum) or mouth of a woman, or enters the anus or mouth of another man.

Very small tears in the surface lining of the vagina or rectum may occur during insertion of the penis, fingers or other objects, thus opening an avenue for entrance of the virus directly into the bloodstream. The AIDS virus can be passed from penis to rectum and vagina or vice versa without a visible tear in the tissue, or any bleeding.

There are very good reasons for supposing that a condom reduces the risk enormously.

HIV is definitely present in the semen and vaginal juices of HIV-positive people. So oral sex (in which the mouth comes into contact with semen or vaginal secretions) should be avoided. Semen should never be swallowed, and a male should not ejaculate in his partner's mouth.

This is especially important where either partner has sores on the sex organs, or bleeding or sores in the mouth.

Forms of sex which can involve bleeding (bondage, sado-masochism or intercourse during menstruation etc) are probable high-risk activities.

"Moreover...condoms don't just prevent babies..." A "safe sex" cartoon from West Germany, stressing that condoms are not just contraceptives, they protect against disease. [Cartoon: Deutsche AIDS-Hilfe]
HOW TO AVOID AIDS: WHAT YOU CAN DO

LEARN as much as you can about the HIV virus which causes AIDS, and the ways it is and is not transmitted. Tell others.

SHAKING HANDS, hugging, kissing, coughing and sneezing will not transmit the virus, nor will sharing drinking glasses, dishes, spoons, towels or bed linen. You do not get AIDS from food, public toilets, furniture, or telephones, from sharing seats on a bus or train, or from being near or touching an AIDS victim. There is no evidence that insect bites give you AIDS.

TO BE SAFE, use a condom. The condom should be worn during sexual intercourse — from start to finish — whether vaginal or anal penetration is used.

USING A CONDOM: this is particularly important if you suspect that either you or your partner may have been exposed to the virus through previous sexual contacts, whether homosexual or heterosexual, through use of intravenous drugs or unsterilised needles or syringes, or by means of a transfusion from a blood bank which does not screen its donors by administering blood tests for HIV.

ALWAYS INSIST that your sexual partner uses a condom unless you are absolutely sure he is not an HIV-carrier.

DON'T have many sexual partners: it increases your risk of encountering an HIV-carrier who will infect you.

DON'T have sex with male or female prostitutes or intravenous drug abusers: they have a high risk of being infected, and can pass the infection on to you.

NEVER share unsterilised needles or syringes. Mothers must make sure that the needle used to vaccinate their child has been sterilised.

WOMEN who are HIV-positive and then become pregnant risk progressing quickly to fatal AIDS and/or having an AIDS baby.

BLOOD-TO-BLOOD contact with a person carrying HIV (for example through a cut, a sore or a wound, if you have a similar break in the skin) carries a small risk of transmission. Medical or other workers whose job makes them vulnerable should take precautions.

EVERY KNIFE or other cutting implement which has been in contact with someone else’s blood must be sterilised. This means changes in traditional medicine, in methods used by birth attendants, and tribal ceremonies, and in tattooing. Sharing a toothbrush if you or the other person has bleeding gums is not a good idea.

MAKE SURE that the children in your care understand how to protect themselves from HIV infection well before they are likely to start having sex.

As the risks of various methods of transmission are studied more carefully, advice on safe sex and on other practices to avoid is becoming clearer and more specific.
In the US, this advice is seen by some as too negative, so some campaigns have focused on what is safe, encouraging and describing various forms of massage, kissing and safe sex-games.

Education: early signs of success

In many countries information produced and distributed by organisations of homosexual men has been the best and until recently the only source of information on AIDS. Two of these organisations are the Gay Men’s Health Crisis (GMHC) in New York (founded in 1982), and the Terrence Higgins Trust in London (founded in 1983).

Their experience of raising awareness about the HIV virus is probably the most extensive available. Though they aim their message predominantly at gay men, their methods — sticking to the facts, using blunt everyday language, emphasising individual responsibility and self-respect, and involving group members in all aspects of the prevention programme — may be applicable elsewhere.

Evidence of how communities threatened by AIDS can mobilise their resources also comes from US gay men’s organisations. In the financial year 1985-86, volunteers in San Francisco gave 130,000 person-hours of unpaid time, answered over 30,000 telephone enquiries, and distributed nearly 250,000 leaflets on AIDS prevention. Home-based care was provided to 165 patients at an average cost of $94 a day, greatly reducing hospital costs to patients. The New York-based GMHC raises half of its $3.6 million budget from voluntary sources, enabling it to employ over 50 paid staff.

Does such education work? Because of the long incubation period of HIV, a dramatic reduction in new AIDS cases cannot be expected just yet. But US studies in San Francisco, New York, Los Angeles, Denver and Pittsburgh, and similar research in Canada, the UK and France, have shown that the sexual behaviour of gay men has indeed been altered by education.

And the rate of spread of HIV infection has definitely fallen.

In San Francisco, the annual rate at which gay men were becoming HIV-positive fell from 17% in 1982-84 to 4% in 1984-85, while the incidence of rectal gonorrhoea (an STD found almost exclusively among homosexual men) has fallen by 71% between 1983 and the end of 1985.
CONDOMS

Condoms (rubber sheaths) are a vital component of safe sex, and will be a key element in AIDS education and prevention.

Current use of the condom is very unevenly spread worldwide. According to the most recent comprehensive survey (made before general awareness of AIDS), 27% of all condom users are in Japan (where the contraceptive pill is rare), 38% in the rest of the developed world, and 18% in China. But Latin America and the Caribbean account for only 3% of world condom use, and Africa and the Middle East only 1%. 35a

Condoms are not always easy to obtain in the Third World, and they can often be old and defective. This is especially so in rural areas, and also in many cities. Cultural and religious attitudes are a major factor. In Brazil, for example, condoms are associated with prevention of disease, and the production of one before intercourse is said to imply the insulting suggestion that one’s partner is unclean. Other arguments used against condoms are that they reduce sensitivity during sex, are inconvenient, are liable to break, and promote sterility.

Laboratory tests have proved that the HIV virus cannot penetrate either latex or lambskin condoms, although care must be taken to use them properly. In Zaire, out of eight prostitutes who reported that at least half their clients used condoms, none were HIV-positive, while of 377 prostitutes who reported much less use of condoms, 32% were HIV-positive. 36

But condoms are not foolproof. They must be used properly to be effective. And the International Planned Parenthood Federation (IPPF) estimates that 0.1% of the most reliable, and 1.0% of the least reliable condoms burst during lovemaking. And in a study of couples where one partner was HIV-positive, one of the 12 spouses who used condoms during the study became infected. 37

Correct use of condoms is associated with a significantly lower probability of acquiring gonorrhoea, but had no effect on the chances of catching chlamydia infection. 38 The organism that causes chlamydia infection is one quarter the size of the bacterium which causes gonorrhoea, so perhaps it is small enough to pass through the pores of some lower quality condoms.

HIV is one half the size of chlamydia organism, so to be on the safe side condoms used against it should be of high quality and have a very fine texture. A further precaution is to combine condom usage with the application of a spermicide such as Nonoxyl-9, which is thought to kill the virus as well.

In North America and Western Europe, more and more homosexual men are using condoms in anal intercourse, and this seems to be a factor in the slower spread of HIV among gays. In the same countries over the past decade the use of condoms by heterosexuals has declined, as more and more women have started to use the pill or IUDs. But in the past year condom sales have risen by 10% in the US, suggesting a swing toward their use in the population as a whole.

There are substitutes for the condom as a contraceptive: the pill, diaphragms, coils. There is no substitute for a condom as a protection against AIDS — other than not having penetrative sex.

In London (UK) in mid-1986, 77% of gay men questioned claimed to follow "safer sex" guidelines, and 48% said they were having fewer partners, compared to a year before. The city's incidence of STDs among homosexual men has fallen, while among heterosexuals it continues to rise.
Education: mixed results with large populations

The experience of AIDS education within the gay community has shown that AIDS campaigns can be highly effective when targeted at a specific risk group, and when members of that group are involved in designing and conveying the message. How to communicate the AIDS prevention message to the wider heterosexual population is a task about which less is known, and which may be more difficult. The results of such campaigns in both North and South have been mixed, and there is much that must be learned in order to improve them.

When Kenya's minister of health bluntly cautions his fellow citizens to "graze at home", he is warning them about the link between promiscuity and HIV infection.

Kenya's AIDS education programme, like those of Uganda, Tanzania and Zambia, has focused on the mass distribution of government leaflets and posters to public buildings and places of work, and to bars, airports, clinics and offices. Zambian television has featured "photo-in" programmes on AIDS, with viewers telephoning their questions and comments to the doctors and officials in the studio. How successful has this first stage in the campaign against AIDS been?

Inevitably, misconceptions about the disease are still common in Kenya and other countries. A Nairobi prostitute thinks that "if AIDS was here, all the bars would be closed". A Kenyan bus driver says he sleeps only with plump women, because "fat women cannot have slim disease". In rural Zambia some AIDS victims believe that the only way to cure themselves is to sleep with a "fresh" (i.e. uninfected) partner.

Fear follows ignorance, and even trained medical staff are not immune: Kenyan nurses, who deal with all manner of communicable diseases, have demanded a special "risk allowance" to compensate for the dangers they believe exist in caring for AIDS patients. An American doctor tells the press how he disinfects the receiver of public telephones before speaking into them.

In late 1986 the British government launched a major AIDS awareness drive with television, radio, newspapers and leaflets carrying the slogan: "AIDS: don't die of ignorance". Just prior to this campaign a poll of 1,050 people found 49% thought sharing a glass with an HIV carrier could transmit the virus. Only 39% thought this impossible, but 97% knew sexual intercourse can transmit AIDS.
Twenty-seven per cent of Britons said they were very worried or fairly worried about catching AIDS. Young women were the most concerned: 39% of women aged 18-34 were worried, compared with 27% of men of the same age group.

This concern showed itself in a wish for government action. Some 66% thought the government should undertake more public education; 63% wanted compulsory testing of everyone; 82% wanted compulsory testing for everyone entering the country; and 38% thought all HIV carriers should be isolated (49% disagreed).

In a poll taken after the first weeks of the new campaign, about half of the people sampled said they thought that the campaign was ineffective, that it would not reach the people it needed to reach because it was not explicit enough. But another survey showed that 80% of those who had been reached now thought they knew enough about AIDS to "avoid catching it".

In areas where AIDS is common, vaccination programmes which reuse needles could spread the HIV virus from child to child. And there is a risk, so far unexplored, that in children already carrying the AIDS virus a vaccination could trigger off the very disease it is intended to prevent. (Photo: UNICEF 18681-UGANDA/David Heiden)
This mixed response to AIDS education activities has also occurred in the United States, where some groups, particularly homosexuals, prostitutes, and younger students, have become concerned to learn about "safe sex" and how to practise it. But in a major poll commissioned by the Wall Street Journal newspaper, 92% of those questioned said that they had not altered their sexual behaviour because of AIDS.

It is difficult to know just how successful AIDS campaigns have been in advance of evidence of a drop in the number of people becoming infected.

But it will be years before this becomes evident, so opinion polls and other survey techniques will be very important in continuously monitoring the impact of AIDS education.

As AIDS spreads into the heterosexual community at large, the generalised threat which it presents triggers off reactions of fright and the desire to seek safety behind harsh legal barriers. In the summer of 1986 a right-wing group called PANIC (the Prevent AIDS Now Initiative Committee) gained enough signatures to put Proposition 64 on the California state ballot. This proposed that AIDS become a compulsorily notifiable disease. It would have empowered public health departments to place AIDS victims and possibly HIV carriers in quarantine, and have opened the door to selective compulsory blood tests. The Californian voters rejected Proposition 64 by a margin of two to one on 4 November.

In Britain, West Germany and other countries the notion of compulsory testing as a defense against the spread of AIDS is raised repeatedly. That such testing would have to be repeated every three months or so in order to constitute an effective screening measure, and that this would be extraordinarily expensive and impractical, seems not to have dawned on those who promote it.

But in the absence of clear and credible government action to combat AIDS, combined with effective public education, the fear or even panic which AIDS can cause may give rise to undesirable political pressures. There is a particular danger that AIDS will be used by racist or authoritarian groups to justify measures against immigrants, foreigners and ethnic or other minorities.

**Rwanda leads the Third World in AIDS education**

Rwanda embarked in 1985 on what is so far the best-coordinated AIDS education campaign in the Third World. In the capital of Kigali, where up to 18% of blood donors are HIV-positive, all sexually active adults, as well as the infants of the many HIV-positive mothers, are now at risk. But rates are lower in the countryside, and there is hope that the virus can be prevented from spreading through the entire population.

Though AIDS had been epidemic in Rwanda for some time, in late 1985 knowledge of the disease in the general population was poor. Two-thirds of 33 adult Rwandans interviewed in September that year had heard about the disease, but only one third knew how it is transmitted. Many admitted to being frightened, but none had changed their sexual practices.59

In 1985 the Rwandan Red Cross started an AIDS education programme in partnership with the Norwegian Red Cross. The first such campaign in Africa, it involves a stage-by-stage raising of awareness about HIV and how it is transmitted.

A key component is feedback from the man and woman in the street. In 1986, after the broadcasting of a 10-programme national radio series on AIDS, interviewers questioned 1,250 Rwandans in and around Kigali.

The vast majority (70%) said they were "very afraid" of AIDS. Most of them understood very well that the AIDS virus is transmitted sexually and through contaminated blood, but they retained a number of mistaken notions. Some 65% believed that mosquitoes were a principal source of infection; 63% were afraid of contamination from public toilets; 47% were wary of sharing drinking glasses with strangers; and 45% wouldn't want to breathe too close to an infected person.
"I’ll do a lot for love, but I’m not ready to die for it."

These misconceptions persisted despite three-quarters of those questioned having heard some of the radio programmes. This emphasises that broadcast media are better at creating general awareness than at conveying facts. Based on what was learned from this survey, a leaflet is to be distributed to libraries, clinics, government offices and schools. A second public opinion survey will be performed in mid-1987 to assess its effectiveness.

Further stages of the programme will include the integration of AIDS into the school curriculum, and additional efforts to reach women: the segment of the population most afraid of, but least well informed about AIDS.

Only 1% of those questioned in the Rwandan opinion poll said that they had received their information on AIDS from a doctor or other medic, while 86%
learned from the radio or friends. The Rwandan experience emphasises that AIDS education cannot be left solely to the medics; there are not enough of them. Rwanda has just one doctor for every 36,000 inhabitants; Uganda has one per 25,000; Tanzania one per 18,000; Zaire one per 16,000; India one per 3,000. These figures are national averages which conceal the fact that most doctors are found in cities, leaving people in the countryside with fewer than the average.

Rwanda provides a good example of how to go about organising an AIDS education campaign. But in some other African countries, this sort of approach has not been possible. Uganda, with one of the highest rates of HIV infection in the world, has attempted to inform its people about AIDS and how to stop it. Under the slogan "love carefully", posters and leaflets have been widely distributed. But the information programme has been hindered by the material shortages and human chaos which are the aftermath of a lengthy civil war. Uganda currently lacks funding, rural transportation, manpower and equipment; even paper for leaflets and posters has been in short supply.

The mosaic social structure of African countries may also make mass information programmes more difficult. In Uganda the 14 million people speak 22 different languages, and the government's anti-AIDS campaign has so far been translated into only 10 of them.

Women: half the problem, half the solution

Throughout the world women are on average less well-educated than men, less confident about their information, and with fewer contacts outside the home to reinforce their knowledge. In a number of African HIV-endemic countries, women are a focal point of risk from the virus. They may unknowingly contract it from their husband, especially where there is a tradition of male sexual freedom; they are exposed through the blood transfusions which they frequently must have during childbirth on account of anaemia resulting from multiple pregnancies; and economic circumstances often drive them into prostitution, where their risk of infection rockets.

There is a real danger that these factors will be overlooked in AIDS education programmes, especially if, as is commonly the case, those deciding on the programmes are predominantly male. This is exactly what happened in other areas of health education until, aware that many of their expensive programmes were failing, policy-makers became convinced of the potential for a new approach: a mother-and-child revolution in primary health care. Since the late 1970s, more and more Third World countries have been adopting this approach — and getting results. The programmes work because, more than any other segment of the population, women are motivated for change: change that means fewer births but more surviving children; change that means better health and hygiene for both family and community.

Can this passion for a better life be harnessed in AIDS prevention campaigns? One programme in Kenya, among the poorest and least accepted members of society — the low class prostitutes — shows what can be done.

Kenya's programme for educating prostitutes about AIDS gained the women's trust through the efforts of an experienced nursing administrator. Some of the women have begun to ask their customers to use condoms. This is not easy in Kenya where, as in many other places, men often resist the use of condoms and women tend to go along with them. A common assumption is that, if one sexual partner introduces a condom, he or she is diseased. "If they ask me to wear one, I go on to the next girl", says one Kenyan man. There is now a new sense of community spirit and self-respect among some of the prostitutes, which may enable them at least to save their uninfected children from HIV, through teaching them how to avoid high risk behaviour.
A simple example shows how women can influence a health campaign. For many years medical authorities have tried to ensure that unsterilised needles — and other unhygienic equipment — are not used in Third World clinics. These efforts have often failed for a variety of reasons, including lack of supplies, ignorance and habit. But in recent years more and more women have picked up the notion that unsterilised needles can cause disease when a child is brought to the clinic to be vaccinated. Nowadays mothers can be seen cross-questioning clinic staff, to ensure that a clean needle is used — and the staff are responding. For their children and communities, women have a habit of concern: and it is this concern which can make AIDS prevention work. More programmes designed for women, and carried out by women, are needed.
Family planners: a network in place

Experience in many health education campaigns has shown that it is not enough just to distribute information from a single source. People generally do not respond to new ideas until they have heard them from several independent and different sources, and had a chance to discuss them with family or friends.

So AIDS leaflets distributed by governments, though essential, must be complemented by a range of other information. Here non-governmental organisations (NGOs) can play a crucial role, by providing factual information in a more "friendly" and accessible way.

One NGO network which already exists in most developing countries is the Red Cross, and several African national Red Cross societies are starting work on AIDS. Another group with long specialist experience in dealing with sexual matters is the family planning network. Having gained the trust of women and families in many countries, these associations are ideally placed to promote AIDS education through their clinics and classes.

Recognising their key role, in early November the International Planned Parenthood Federation (IPPF — an international coalition uniting family planning groups in 123 countries) decided to throw its weight behind the global anti-AIDS campaign. Member groups around the world will be encouraged by IPPF to target special messages about AIDS to young people, teachers, parents and others. Clients at all family planning clinics, say IPPF, should be warned of the risks of AIDS and given special help to protect themselves through the use of condoms.

The hard-to-reach groups

How can governments best inform and influence their citizens about AIDS? The answer will be different in every country, but the best formula will coordinate a mix of individual, community and health authority action within agreed common goals. The campaigns will have to be sustained, probably for a decade or more, and must reach and involve every group in society, including the most inaccessible: the illiterate, the refugees, the homeless and the rejected.

One social group, drug addicts, is especially difficult to reach. Some programmes to educate them about the risks of sharing dirty needles have been noticeably unsuccessful. But in Amsterdam, health authorities and the "junkies union" initiated a programme in which clean needles and leaflets about AIDS were distributed free in return for used needles. In 1985, some 100,000 syringes had been provided, only two cases of AIDS had been diagnosed in addicts, and 60-80% of addicts were in touch with the programme. However, in most countries "free needle" experiments have been resisted by the police, and they may be too expensive for most Third World countries with a large number of addicts.

In Africa refugees may well pose a particularly difficult group. One in every two of the world's 10 million refugees is an African. And war, civil war, lack of rural opportunity, political insecurity, apartheid, drought and famine continually create new African refugees.

There are an estimated 232,000 Angolans in Zaire, still waiting to go home. Half a million Ugandans left their country during the Amin years. Somalia received 1.3 million Ethiopian refugees, 36% of its total population. Such huge movements of people break up families and trigger a rapid increase in promiscuity, which can fuel the HIV epidemic.

Educating children about AIDS

As soon as children reach the age at which they can start sexual activity, they are at risk from the HIV virus. It seems inescapable, then, that AIDS education will have to start before children reach puberty.
The US Surgeon General, in a major report published in November 1986, proposed that AIDS education - and this means sex education — should start in American schools from the age of eight. Sex education for children is an emotion-charged subject in some countries, on the grounds that it encourages children to have sex.

**How easy will it be?**

The Third World provides some hopeful signs of what can be achieved once people recognise the magnitude of a threat to health.

* In El Salvador in 1985, three separate days of ceasefire were observed by both sides in the civil war, so that 250,000 children could be immunised.
* Over the past five years, Brazil has virtually eliminated polio by immunising 20 million children from one end of the country to the other.

Part of a global mother-and-child health drive, these programmes indicate what can be achieved once priorities are agreed and communicated. It is these same programmes which are likely to form the core of AIDS prevention in Africa and other developing countries.
CHAPTER 5
AFRICA: AIDS AND THE SHRINKING DEVELOPMENT DOLLAR

At least one million Africans, mostly in central Africa, will probably die of AIDS in the next decade.

This simple statement, probably a considerable underestimate, cannot do justice to the complexity, variety and urgency of the AIDS epidemic in Africa. Some countries are facing an immediate crisis; elsewhere there is so far little evidence of infection, giving scope for preventive measures.

Africa’s battle with AIDS will be fought at a time when the national income of many African countries is falling sharply, debt is mounting, and foreign aid is being cut back. In Zambia for example, real per capita income over the last decade has declined by 45%, with health spending down 20%. Yet AIDS will challenge Zambia’s battered health system as no other disease.

In one of the world’s worst AIDS-affected countries, Uganda, health ministry estimates indicate that 10% of Kampala blood donors and 13% of mothers attending pre-natal clinics in the city are HIV carriers. The prevalence of the AIDS virus in Kampala is thus roughly equal to that in New York City. But whereas Uganda’s annual national income is $230 per capita, that of the US is $15,390.

Most African governments have chosen not to publicise the AIDS situation. Uganda is a notable exception. The Museveni government has opened its doors to the world’s media, and a portrait of the impact of AIDS on a country recovering from a decade of civil war is emerging.

Infection rates in Kampala seem to be following, with a delay of about two years, those in the southwest of Uganda, where AIDS is most widespread among the population. The government has reacted quickly and decisively to contain further spread of the virus, spurred on by evidence that, in some districts north of Kampala, the level of infection may be as low as 1%. Health ministry officials are committed to vigorous public education, and they have the active co-operation of other government ministries in this effort.

But other African governments have an understandable reluctance to reveal the scale of the problem before being able — and being seen to be able — to do something about it. They have legitimate fears of reducing tourist revenue, of damaging foreign investment, of stimulating fear and racism in donor countries.

The “facts” of HIV in Africa are fragmentary and incomplete. They emerge from roughly five years of unsystematic testing for the virus, which has been found in in at least 23 countries.

How many people are infected? Nobody really knows for sure. The best estimates, based on the results from blood tests on sample groups varying in size from dozens to thousands of people, are that several million Africans are HIV carriers. But tests in city hospitals and larger rural clinics have left vast rural areas as yet unstudied, and the statistical picture of AIDS in Africa is still a sketchy one.

In the absence of mass blood testing, it is impossible to know with certainty how many people are infected. Even in the US, where each year 12 million blood donors are screened, the detailed picture of HIV infection is not clear. Acknowledging that a degree of uncertainty is unavoidable, the National Academy of Sciences still recommended that the US government allocate $2 billion (a billion is a thousand million) per year for AIDS research, education and prevention.

Blood surveys in central and parts of east Africa have revealed that among the general population (in pregnant women and blood donors) the prevalence of HIV ranges from 1% to 18%; for blood donors in the United States the prevalence is
HIT-AND-RUN: EARLY AIDS RESEARCH IN AFRICA

Once the HIV virus was isolated and identified as the cause of AIDS, American researchers came to central and east Africa to search for its origins. By studying stored blood samples that were sometimes decades old, they tried to discover if the virus had been present among Africans before the outbreak of AIDS in the US. Their reasoning was that if it had, then maybe some African populations had a natural resistance to AIDS, a fact which might be crucial for vaccine and treatment research.

One survey, for example, seemed to show that 50% of the people in the Turkana region of Kenya were HIV-positive.72 There were other similar reports.

Later investigation has shown that these very high HIV-positive figures were unreliable. The tests used were scoring too many “false-positive” results (see Chapter 1), sometimes recording the presence of HIV antibodies when in fact there were few or none. It has been suggested that in areas where malaria is endemic, high rates of false HIV-positive results occur.73

But, having obtained their blood samples, sometimes without the knowledge of the government involved, the researchers departed to do their tests in laboratories back home. They were mainly concerned with the relevance of their findings to the mounting alarm over AIDS in America. Some had no real links with Africa, and seemed unaware of the impact that the publication of their findings would have there.

This impact was profound. Articles in medical journals were subsequently re-reported and sensationalised in the American and European press. This jaundiced the relationship between foreign AIDS scientists and their African hosts, dealing a prolonged blow to medical cooperation.

African governments felt that Africa was somehow being accused of starting the worldwide AIDS epidemic. When these results were later shown to be unreliable, they felt victimised. They objected to the suggestion that African medics had failed to recognise that AIDS had been present in their countries for decades. They also reacted strongly to what they saw as the stigma of homosexuality cast on them by the “gay plague”, and their claims that homosexuality is rare in Africa are supported by scientific evidence.74

They also resented speculation that “abnormal” African sex practices were the reason why at present AIDS mainly affects homosexuals in America, but heterosexuals in Africa. As a direct result of these resentments, a number of African states with an AIDS problem refused to allow subsequent researchers to publish their results or to discuss them publicly, particularly with the Western media. Those AIDS researchers still working in Africa are now often chary of journalists, often feeling unable to divulge facts or become involved in discussions, even where these could promote a better understanding of AIDS as it affects Africans.

Despite the prolonged acrimony that resulted from the early episodes of “cowboy” blood testing, and despite the fact that their results were proved wrong with subsequent confirmatory testing, researchers involved have not withdrawn their early results. Their false numbers are still sometimes quoted in the media to give credence to the idea that AIDS is an old African disease.75

It is now possible to distinguish between true and false positive results on stored blood samples, by using confirmatory tests.76 Nevertheless, with some of the presently used commercial blood tests, false-positivity is a greater problem with samples, both stored and fresh, from Africa than with those from Europe.77 To date, no satisfactory explanation for this has been found. It may be that the greater genetic variability of the AIDS virus in Africa could at least partly account for it.

A further explanation may be that most Africans have been exposed to diseases, such as malaria, which provoke the formation of antibodies that can “confuse” the blood test. The presence of such confusing antibodies necessitates the use of a second, or even a third, confirmatory test; but once this is done, a reliable result can nearly always be established.

Confirmatory tests are now used routinely by researchers in Africa, and the reliability of the results obtained increases with the number of surveys that are done. So the early “hit-and-run” blood testing, though regrettable, does not invalidate later results.
0.04%, 65 while for American military volunteers from areas with the highest AIDS rates it is 0.2%. 66

The highest rates of HIV infection in the US are found among high-risk groups in New York and San Francisco. In the former 64% of intravenous drug addicts were found to be carriers, and in the latter 68% of homosexual men. 60 By comparison blood surveys of female prostitutes, a high risk group in many central African cities, found an HIV prevalence ranging from 27% to 88%. 61

How does AIDS spread in Africa?

Medical studies suggest that heterosexual activity, blood transfusions, transmission from mother to infant, and probably unsterilised needles, account for the spread of AIDS in Africa. 82

Research is gradually defining the high-risk activities for Africans. The first is having a large number of sexual partners. The others are sex with a prostitute or with someone who has had multiple partners, being a prostitute, and being the sexual partner of an HIV-infected person. 83

Among Nairobi prostitutes, the presence of the AIDS virus in the blood is associated with other sexually transmitted diseases: gonorrhoea, genital ulcers and syphilis. Lower class (i.e. cheaper) prostitutes, who tend to have a larger number of sexual contacts, have higher rates of HIV infection. 84

It is not yet clear to what extent medical injections with unsterile needles help to spread HIV in Africa, though there seems to be a link. In some studies HIV carriers have reported a history of frequent medical injections. 85 In Africa, as in other parts of the Third World, the injection has come to symbolise the power of modern medicine. Patients often demand an injection instead of pills. Re-use of disposable needles, without adequate sterilisation, could transfer the HIV virus from one patient to another.

Blood transfusions also contribute to the spread of HIV. There is evidence to link HIV infection with previous blood transfusions: among children made anaemic by malaria, for example. Few African countries yet screen blood donors for the HIV virus, and in some countries blood supplies are contaminated.

As in Europe and North America, neither casual contact (shaking hands or kissing an AIDS carrier), nor blood-sucking insects such as mosquitoes, seem to play any role in spreading the HIV virus. If casual contact or insects did spread AIDS, HIV infection would be more or less evenly distributed throughout the population. This is not the case. Sex is the main transmission route for AIDS in Africa. 86

AIDS: mothers and children

The speed of the epidemic is shown by studies in Nairobi, Kenya, between 1980 and 1986. Blood tests were taken of men and women attending an STD clinic. In 1981, only 1% of men were HIV-positive; six years later, 18% were positive. Among female prostitutes, the figure increased from 4% to 59% over the same period. 87

In the same study, among pregnant women attending a prenatal clinic, the prevalence of HIV rose from zero to 2%, suggesting that AIDS will soon show up among babies and young children in Kenya. This has already happened in Kinshasa, Zaire, where at prenatal clinics HIV infection among pregnant women rose from 0.25% in 1970 to 8% in 1984-85. Blood tests on 4,710 healthy people in Kinshasa recently showed a peak prevalence at under one year of age and among young adults 16-29 years. In Kinshasa, in other words, infants and the most sexually active age group are jointly the most infected with HIV. And in Rwanda, roughly 20% of AIDS victims are now children. 88
In some central African cities, 8-14% of women attending pre-natal clinics are infected with the HIV virus. Half of their babies will be born with the virus. Zambia fears it may have 6,000 “AIDS babies” in 1987, half will die before their first birthday. So far, in the US less than 4/10 babies and children have developed AIDS since the epidemic started.

What happens when a woman carrying the HIV virus becomes pregnant? It seems that pregnancy makes an HIV-positive woman more likely to develop full-blown AIDS in the next few years. But the virus can also infect her child.

Zambian doctors fear that the country may have as many as 6,000 babies and infants with AIDS by 1987.89 (The US, by contrast, has well under 400.) With many of their parents dead or dying, caring for them will be a major task.

A pregnant woman carrying the AIDS virus has roughly a 50/50 chance of passing on the infection to her child. There are three main ways in which this could happen:

* HIV can be passed to the unborn child in the womb
* HIV can be passed to the baby at the moment of birth
* HIV could be passed to the baby through breast-feeding.

Research suggests that most infected babies were already HIV-positive before they began breast-feeding. But in a single case, breastmilk has been reported to contain the AIDS virus.90 What is not yet known is whether mother’s milk is a major route of transmission of HIV to uninfected children. World Health Organization (WHO) experts believe that HIV-contaminated breast milk is unlikely to prove a principal route for the transmission of the virus from mother to child.91 But the research to back up their assumption is an urgent AIDS research priority for Africa. Why?

First, because in poor communities of the Third World, bottle-fed babies are twice as likely to die, on average, as breast-fed babies. Babies die when contaminated water is used in their bottles; from unsterile bottles; from malnutrition when their milk powder is over-diluted to save money; and when cheaper cereals are substituted for milk. Since breast-feeding has an important contraceptive effect, bottle-feeding also results in more closely-spaced births increasing the risk of infant mortality from under-nutrition and diarrhoeal diseases.92

Second, because the multinational companies which sell powdered milk have used aggressive selling techniques to cash in on the lucrative Third World market. Europe’s milk “lake”, the result of over-production, is turned into milk powder and sold to mothers in developing countries.

For more than a decade, WHO, NGOs and African governments have fought the multinationals, campaigning to persuade mothers to breast-feed rather than use commercial powdered milk formulas. So the possibility, however remote, that
AIDS THREATENS TRUCKTOWN

In a Nairobi slum — let’s call it Trucktown — over 600 women live in two decrepit-looking apartment compounds. They earn their money from the only employment they can find: prostitution.

There are no fathers, no male wage-earners in Trucktown. The women earn the equivalent of about 50 US cents from each of their customers, who only come during the day. Many of the men are truck drivers passing through on their way from Mombasa. They stop for a “tea break” and are soon on the road again.

Each woman averages 1,000 sexual partners a year. She suffers from sexually transmitted diseases, so often visits the STD clinic. In 1980 the Trucktown women had their blood tested for the AIDS virus: none of them had it. They had never heard of AIDS.

In 1983, they were tested again, and 53% of them were carrying HIV. Now, over 80% are thought to be HIV-positive. 89

Today, the women do know about AIDS, and realise that most of them are likely to develop it. They have organised meetings to find out more, and have begun to use condoms.

Following the latest round of blood tests, they were asked if they wanted to know their own results. Not one of the women asked for the results of her test.

For the women of Trucktown, and for many of their children, knowledge about AIDS has come too late. The HIV virus has already moved in through the men who visit, and then out into a wider and wider circle of people. Prostitution is a major conduit for the spread of HIV in East Africa, 86 but in Trucktown there are few other alternatives. Unemployment is high in Nairobi, and even educated women cannot find jobs to support themselves and their children.

After some time, many of the women will return to their villages, taking their children, and the AIDS virus, with them. To date there is little evidence that HIV has spread from town to the Kenyan countryside, 90 but it is just a matter of time before new communities will become infected. Only the knowledge of how not to pass on the virus can contain this spread before it affects more and more Kenyans.

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<th>children could become infected with HIV at the breast is disquieting, because it could give the milk powder multinationals a ready-made selling point.</th>
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| Is the possible risk that mothers could pass on the AIDS virus to their babies enough to outweigh the undoubted risk of feeding with powdered milk? At present, the considered expert answer is “no”. But the evidence to back up this argument is urgently needed.

Vaccination

There is potentially a greater problem for WHO, UNICEF and African health authorities. A decade of campaigning has led to many highly successful child immunisation programmes — against measles, whooping cough, polio, tetanus and other avoidable and often fatal diseases.

Babies carrying the AIDS virus are likely, even before they show any symptoms of AIDS, to have an immune system working less effectively than normal: they may be "immunologically suppressed". Some virologists are seriously worried that early childhood vaccination, particularly where a "live vaccine" is used, as is the case with polio, could cause the child the very disease which the inoculation is supposed to prevent. But there is no evidence of this happening in children so far. 93

Save the Children estimates that each year 3.45 million children die from diseases which vaccines can prevent. And current vaccination campaigns are
thought to save the lives of one million Third World children each year. Once again, studies are urgently needed to determine the relative risks. If a mother or her child is HIV-positive, should the child be vaccinated or not?

Moreover, child vaccination programmes in poor countries are frequently carried out by means of re-usable needles which are not always properly sterilised. If some of the vaccinated children are already carrying the AIDS virus, there is a potential risk that an HIV-contaminated needle could spread the virus to uninfected children. This possibility also needs further research.

Both the breast-feeding and vaccination campaigns are part of a real success in African and Third World health care delivery: the "mother and child" health revolution. The possibility (and at present it is only a possibility) that these drives could be helping to spread AIDS and diseases like polio is an agonising one for many organisations such as WHO and UNICEF, and for thousands of doctors. It could become an appalling dilemma for millions of mothers.

AIDS and the economy

There are more funerals in central Africa these days. And besides increasing in number, they are now different in character. Before AIDS it was often the children or the very old who died. Now it is the young adults.

These young men and women in their twenties and thirties are the breadwinners of today and tomorrow. They support the young and the old — and the nation's economy. Without them the family unit can crumble, leaving old people too frail to till the land, and children without parents to fend for themselves in the towns.

In one of the most heavily-affected countries, medical workers tell of a family in which the grandparents are caring for more than a dozen grandchildren. Both sets of parents have died, one after the other, of AIDS. When the elderly grandparents die, or become too weak to look after them, the children will be left on their own.

Funerals are a family event, and the African family includes quite distant relatives, both by blood and by marriage. Family members will often travel long distances to comfort the bereaved, to make arrangements for orphaned children and the old, to provide financial support. In the absence of a state welfare system, the African family looks after its own, with no member abandoned in time of need.
Funerals can take several days, involving time off work or away from the farm. Since every family has a death sooner or later, employers normally allow time off for funerals without question.

AIDS is changing all this. In one central African country, so many people have been dying of AIDS that the government is talking of the need to curtail the tradition of family funerals. Time off work may soon have to be limited to immediate blood relatives.

Employers play a key role in Africa’s welfare system. Company clinics and sick pay combine with the “safety net” provided by the extended family. These companies make a substantial investment in each of their skilled employees: long periods of training at home or abroad, sickness benefits, and other payments to the worker’s family.

As early as 1983, some companies in Zaire, including the nation’s major banks, realised that these would be impossible to sustain if the number going down with AIDS were to continue or increase. In late 1985, one large bank in Kinshasa had so many of its staff sick with AIDS that this was noticed by a medical reporter from The New York Times newspaper.24

A consortium of companies took the unusual step of donating $100,000 to the international AIDS research programme sponsored by the Zairean ministry of health. Since their 1983 donation, some of the companies’ worst fears have been confirmed. Each new survey of HIV infection in Kinshasa and other centres shows a further rise.

Mining is a key economic activity for many central African states, sometimes providing the bulk of their foreign exchange. But prices have been low for some years, and at least one large corporation is looking at the present level of HIV infection among its workers with alarm. If as many workers develop AIDS as now seems likely, the sick pay could bankrupt the company.

AIDS in Africa does not only threaten individual lives. The survival of whole industries and national economies may be at stake.
What are African governments doing about AIDS?

African governments are starting to fight AIDS. But, like most governments in the rich countries, many are acting slowly and ineffectively. Health officials in some countries with few AIDS cases are reluctant to jump on what they see as an AIDS bandwagon. The time lag between infection and the occurrence of full-blown AIDS makes it easy to argue that the dangers have been exaggerated.

One of the earliest governments to react in terms of research was Zaire. A three-year-old HIV research programme based in Kinshasa is a model of the kind of North-South collaboration which will lead to more effective AIDS control. It is operated by a team of foreign and national medical researchers in close cooperation with ministry of health officials, and with leading US and European HIV research centres. It is called “Project SIDA”, after the French name for AIDS. (The Swedish aid agency is coincidentally also called SIDA.)

Zaire’s Project SIDA is producing some of the most useful research in Africa, which will help Zaire, and all of Africa, to plan the best response to the AIDS epidemic. It is working to:

- develop a better diagnostic definition of AIDS for use in situations where blood tests are impracticable;
- ascertain the relative importance of methods of transmission, such as the frequency and types of sexual activity, injections, ritual tribal scarring, and blood transfusions;
- determine the effect of HIV infection on pregnant women and on their babies;
- examine the HIV risk of immunisation programmes.
- assess the effectiveness of condom use in preventing HIV infection.

Few African countries affected by AIDS have yet started comprehensive blood donor screening, in order to prevent the virus from contaminating their blood transfusion systems. The need is urgent. In Rwandan hospitals about one child in three receives a blood transfusion against malarial anaemia. And nearly 20% of Rwanda’s HIV-positive children were infected by transfusions.

Since spring 1985, Rwanda has been screening its blood, with the active help of the Rwandan and the Belgian Red Cross Societies.
1. GLOBAL SPREAD OF THE AIDS VIRUS

In the 10 months since the second edition of this dossier was published the number of countries reporting cases of AIDS to the World Health Organization has increased by 25% from 102 to 129, while the number of cases has risen from 45,700 to 73,601. At present approximately 65% of the total reported global cases are in the United States. While the degree to which underreporting from countries with weaker surveillance systems occurs is difficult to gauge, WHO has indicated that the actual number of AIDS cases may total 150,000.

WHO estimates that 10 million people worldwide may already be infected by the AIDS virus (known as the human immunodeficiency virus, or HIV-1), and that 10 times that number may become infected by the end of the century. Though Africa is the hardest-hit continent, the situation in North America and the Caribbean is serious, while Latin America appears to be on the threshold of an epidemic which — depending on the speed and effectiveness with which control measures can be implemented — may eventually be equally devastating. Asia thus far seems to be the least-affected region, though this fact may reflect the later arrival of the AIDS virus in that part of the world.

In the section that follows, the number of reported AIDS cases for each reporting country is calculated per million population. The figures for reported cases are those given by WHO in December 1987, unless otherwise indicated.

AFRICA

In 1982 one country reported cases of AIDS to WHO; one more began reporting in 1983 and another in 1984. In 1985 seven, and in 1986 23 countries reported cases. Currently 37 countries are reporting cases. Underreporting is common due to lack of adequate surveillance resources.

Researchers and the world media have repeatedly suggested that the origins of the AIDS virus are to be found in Africa. The assumptions behind these assertions and the resulting resentment felt by many Africans are analysed in the Panos Institute dossier Blaming Others: Racial and Ethnic Aspects of AIDS (publication Spring 1988).
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No other country has reported cases.

* The figures for Botswana and Lesotho are from Panos sources; the figure for Cameroon was published in New African, August 1987; the figure for Ghana was published in Global Disease Surveillance Report, November 1987 and attributed to the Chairman of the National Technical Committee on AIDS; the figure for Namibia was published in Global Disease Surveillance Report, August 1987, and confirmed by a Panos source.
AMERICAS

CARIBBEAN: In 1982 two countries in the Caribbean reported cases of AIDS to WHO; currently 20 countries in the region report cases. High-risk behaviour varies from island to island. In Haiti, the Dominican Republic and Martinique, for example, the pattern of transmission appears to be predominantly heterosexual, while in Trinidad and Tobago 75% of cases are attributed to homosexual/bisexual men. In Bermuda the primary cause of transmission is intravenous drug abuse. Contaminated blood is also believed to have been the cause of infection in cases in Dominica, the Dominican Republic and elsewhere in the region. On a per capita basis, the figures available show that a number of countries in the region rank among the most seriously-affected in the world.

<table>
<thead>
<tr>
<th>COUNTRY</th>
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No other country has reported cases.

* Figure from the Pan American Health Organization.

NORTH AMERICA: Currently 65% of cases in the USA and 80% of cases in Canada are in homosexual/bisexual men with no history of drug abuse. Four per cent of cases in the USA and 2.3% of cases in Canada are attributable to heterosexual contact with people at risk from AIDS. Twenty-two per cent of cases in the USA, but only 3% in Canada have connections with drug abuse. In the USA 25% of cases are in black men and women and 14% in Hispanics, although these groups comprise only 12% and 6% respectively of the general population.

Seventy-nine per cent of pediatric cases in the USA are from minority ethnic groups.
### NORTH AMERICA

<table>
<thead>
<tr>
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Neither Greenland nor St Pierre & Miquelon have reported cases.

* Center for Disease Control figure

### LATIN AMERICA

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### ASIA

In 1982 and 1983 only one country reported AIDS cases to WHO; by December 1987 cases had been reported from 19 out of the region's 42 countries. Of these, only four countries (Israel, Japan, Thailand and Turkey) have reported more than 10 cases.
Apart from Israel, where contaminated blood and homosexual behaviour are almost equally responsible for infection, the primary mode of transmission in the Middle East has been through contaminated blood products. In Japan and Turkey blood has also played a major role, but in Thailand all cases so far have been in homosexual men. Given the large number of tourists who visit South-East Asia for sexual purposes, there is a strong possibility that AIDS could spread in the region through heterosexual and homosexual prostitution.

### ASIA

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<tr>
<td>Turkey*</td>
<td>25</td>
<td>51,400,000</td>
<td>0.49</td>
</tr>
</tbody>
</table>

* Ministry of Health figure

### OCEANIA

Cases have been reported from five countries and one US territory in Oceania. In Australia and New Zealand 80% of cases were contracted homosexually. Nine percent of cases in Australia are attributed to contaminated blood, 1% to heterosexual contact and under 1% to drug abuse.

### OCEANIA

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>CASES</th>
<th>POPULATION</th>
<th>CASES PER MILLION</th>
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<td>Tonga</td>
<td>1</td>
<td>97,000</td>
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* Figure attributed to Health Ministry spokesman in Global Disease Surveillance Report, October 1987.
EUROPE

In 1982 nine countries reported cases of AIDS to WHO; 27 countries are currently reporting cases, of which only nine (including the USSR) report fewer than 10 cases. In Northern Europe the primary mode of transmission is through homosexual contact, although an increasing number of cases are due to drug abuse. In Spain and Italy drug abuse accounts for more than 50% of cases.

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>CASES</th>
<th>POPULATION</th>
<th>CASES PER MILLION</th>
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<td>Yugoslavia</td>
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</tbody>
</table>

The number of countries imposing AIDS-related restrictions is growing slowly despite the view of the World Health Organization's Special Programme on AIDS that demanding proof that travellers are not infected can only briefly, if at all, delay the spread of the disease. Where testing for Human Immunodeficiency Virus (HIV) is a requirement, a positive result almost always means deportation or refusal to issue the relevant visa. In the past year there has been a shift in emphasis from testing on arrival to testing in the traveller's country of origin, making the impact of such regulations difficult to gauge.

In researching travel restrictions and AIDS, Panos has found that one branch of government, eg the Foreign Ministry, may not inform another, eg the Ministry of Health, when announcing new restrictions, or the government may not inform its embassies abroad. The decision may be taken in secret and not announced at all, or different levels of government may come into conflict over new regulations, as has been the case with the federal government of West Germany and the state government of Bavaria. Panos has often come across conflicting information, sometimes from different people in the same embassy. Official statements have been made and then withdrawn or "forgotten". Sometimes, therefore, it is not clear exactly what a particular national policy on AIDS and travel is.

The information presented below has been checked, wherever possible, with the relevant authority in the country or, where that was not possible, with the country's embassy in London, as well as with other authorities working with AIDS.

BELGIUM:
Foreign students receiving a scholarship from the Ministry of Foreign Affairs, Foreign Trade and Development Co-operation are tested for HIV.

BULGARIA:
All foreigners staying longer than one month and all Bulgarians returning from working abroad are tested for HIV.

CHINA:
All foreigners staying longer than one year are tested for HIV. Although visitors staying for less time are not tested, those discovered to be carrying the virus are immediately placed in isolation and deported.

COSTA RICA:
Foreign students and all applicants for residence are tested for HIV.

CUBA:
Foreigners (but not tourists) and Cubans returning from endemic areas are required to be tested on arrival for HIV. If negative, the test is repeated six months later.

CZECHOSLOVAKIA:
Foreign students are tested for HIV.

GERMANY, FEDERAL REPUBLIC:
All students receiving a scholarship from the Ministry of Economic Co-operation are tested for HIV. In the state of Bavaria, all foreigners applying for a residence permit, excluding nationals of the European Community and all other western European countries, must undergo a test for HIV.

INDIA:
All foreign students are required to be tested.

IRAQ:
All foreigners entering Iraq and staying longer than five days (and all Iraqis returning from abroad) must undergo testing.

KUWAIT:
Numerous reports indicate that foreigners applying for a work permit are tested, although the embassy in London denies this.

SAUDI ARABIA:
Foreigners seeking a work permit for longer than one month are required to prove they are HIV-free.
SOUTH AFRICA:
Applicants for work permits are tested for HIV. All foreigners and South African citizens may be tested on demand.

SOVIET UNION:
Foreign students are automatically tested for HIV. Any other foreigner or Soviet citizen may be tested on demand.

UNITED ARAB EMIRATES:
Press reports indicate that all foreigners applying for work permits are tested although the embassy in London denies this.

UNITED STATES:
All applicants for immigrant visas are tested.

A number of countries are considering restrictions on some or all foreign visitors. Among them are Andorra, Israel, Japan, the Republic of Korea and Papua New Guinea.

Australia, Finland and the Philippines appear to have dropped plans to introduce restrictions specifically relating to AIDS or HIV.

In some countries existing regulations covering the exclusion of foreigners with transmissible diseases have been used to deny the entry of people with AIDS or HIV infection. Reports of such cases have come from Canada, Greece and the United Kingdom.

AIDS: THE GLOBAL SPREAD

This map, which shows reported cases of AIDS per million population, is based on cases notified to the World Health Organization and through other official sources up to 23 December 1987. Reported cases may be fewer than the actual number of cases and some countries do not report at all.

© Panos Institute, London and Washington
Map drawn by Philip Davies
SISTER NELLIE IN KAMPALA

The city of Kampala is swelling, as refugees who fled the capital during the past bloody years return. Gone are the marauding soldiers of Idi Amin and subsequent regimes. But the returnees are bringing another, more silent, predator into the city: HIV, the virus that causes "silm disease". Everyone in Kampala knows AIDS. Most people have seen friends or relatives die of it.

Sister Nelezinha Carvalho is a Ugandan who trained as a medical lab technician in Britain. She heads the laboratory of St Francis General and Maternity Hospital, which is less well equipped than the science lab in an English secondary school. It regularly runs out of essential supplies, and there have been frequent power blackouts.

In late 1985, as the people began to return to Kampala, Sister Nellie and the doctors at her hospital noticed that AIDS had begun to appear among their patients. Worried that the hospital's blood transfusion supply would be contaminated by HIV, she arranged to go to London to be trained in screening blood.

When she flew back to Kampala in May 1986 she brought with her a dozen bulky boxes: all the equipment necessary to perform the tests. There was a compact 2,000 ($3,000) electronic blood test analysis machine. But Uganda's supplies were so depleted after the war that Sister Nellie also brought back rubber gloves, lab coats, test tubes, bottles and plastic tubing.

She quickly tested the hospital's stored blood: 14% was infected with the AIDS virus. For months she was the only medic in Kampala performing blood analysis for HIV. Even the city's large state-run hospital lacked the facilities.

Without gloves, she and her assistant William Wnale routinely handle specimens of contaminated blood, washing all the lab glassware by hand. If a test-tube broke, and cut a finger, they could be infected by the virus. A dilute solution of bleach is one of the best ways to kill the AIDS virus, but for several months they could not obtain it. They both know the risks, and accept them. At least their patients are now protected from contracting AIDS while having a baby or an operation.

Sister Nellie would like to restore her lab to its pre-war state, and has a shopping list of essential equipment which she can only buy abroad. Her order of sisters cannot afford these things, so she is dependent on donations.

The AIDS epidemic requires more lab technicians, and she is responsible for training them. But her students struggle against severe handicaps. A dozen or more pupils often have to share one outdated textbook.

Since Sister Nellie's story was told (in the first edition of this dossier), she has been the subject of international media interest, interviewed by press, radio and television. Despite this time-consuming attention, her hospital remains as short of funds and supplies as ever, while the number of AIDS patients increases.

"Her hospital remains as short of funds and supplies as ever, while the number of AIDS patients increases"
Many African countries may need outside assistance, technical as well as financial. The Swedish aid agency SIDA, for example, sent missions to six African countries in October-November 1986 to see what help was needed to combat AIDS; blood screening was one of the activities it was considering assisting.

A few multilateral, bilateral and NGO development agencies are beginning to realise that fighting AIDS in Africa needs funds and resources far beyond what African countries can supply for themselves. (Because of its traditional role in blood banks, the Red Cross movement has a key role to play in screening blood against HIV.) But this realisation is slow to develop among agencies, and for the most part has not yet crystallised into policies. AIDS will not be tackled by
development policies based on what Africa was like yesterday. AIDS is changing Africa's tomorrow.

Above all, the key action against AIDS is public education, and Uganda, Kenya, Ghana, Tanzania and Zambia at least have all started campaigns. Rwanda's education campaign is described in Chapter 4.

The growth of AIDS in Africa

A European AIDS researcher, recently back from a central African capital, commented: "I walked down the street and it suddenly hit me that on the basis of our test results about one in four of the people walking beside me was carrying the virus. It staggered me. How would I react if this was Paris, London or Washington?"

In Kigali, Kampala, Lusaka and Kinshasa, the people dying of AIDS, and the far larger number who are already infected and who will eventually die, are mainly young: in their early twenties to late thirties. They are the skilled urban professionals in whom their countries have invested so many resources and so much hope: in the Zambian Copperbelt 68% of the men who tested HIV-positive are skilled professionals.

This young elite represents Africa's first post-Independence generation to come to power. In several capitals they are already heavily infected, and will die in increasing numbers. The political, social, economic and psychological impact of this gathering death-march cannot be underestimated.

The following summary ignores figures based on suspect testing procedures. The picture is sketchy, but suggests some ominous trends.

1981: Blood tests on female prostitutes in Nairobi, Kenya show 4% to be HIV-positive.

1982: In Rakai, southwest Uganda, a new condition appears, and is named "slim disease". Doctors in Rwanda notice an increase in symptoms which they later associate with AIDS.

1983: 38 AIDS patients diagnosed within three weeks at Mama Yemo Hospital in Kinshasa, Zaire. Cases estimated to be appearing in the city at an annual rate of 17 per million people. Mid-1983: marked rise in AIDS symptoms in Kigali, Rwanda.

1984: Blood test results from 84 female prostitutes at STD clinics in Kigali, Rwanda show 80% HIV-positive, compared to 15.5% of general blood donors. Among healthy Africans, 12.5% are HIV-positive.

1985: 332 AIDS cases reported in eight months to March in Kinshasa, Zaire, and considered an underestimate. Annual incidence of AIDS in Zaire as a whole put at 550-1,000 per million people. By early 1985 only a few cases of full-blown AIDS are seen in Nairobi. But 66% of low-income female prostitutes, 31% of high-income female prostitutes, 8% of male STD clinic patients, and 2% of medical personnel show positive when tested for HIV.

AIDS in Africa in 1986

The following picture is in no way complete. Where WHO figures are quoted, they are the total number of cases reported to WHO by 12 February 1987, and may cover several years.

Benin: Two cases reported to WHO.

Botswana: The first two cases of AIDS diagnosed in March 1986. Six cases reported to WHO.

Burundi: The minister of health reported in June 1986 that 54 cases of AIDS had been diagnosed and the disease was a "very serious problem". Many of Belgium's AIDS patients are thought to have originated in Burundi.
Cameroon: Eight AIDS cases diagnosed in year to May 1986. A study found 1% of non-AIDS hospital patients and 8.1% of prostitutes were HIV-positive.107 26 cases reported to WHO.

Central African Republic: Random two-year survey of 327 people found 4% HIV-positive, with over 19% among female prostitutes. 202 AIDS cases reported to WHO.

Chad: One case reported to WHO.

Congo: 5% of 368 randomly selected subjects in Brazzaville were HIV-positive.108 250 cases reported to WHO.

Ghana: The first AIDS death reported in May 1986. 73 cases reported to WHO.

Ivory Coast: 118 cases reported to WHO.

Kenya: 109 cases reported to WHO.

Lesotho: One case reported to WHO.

Malawi: 13 cases reported to WHO.

Mozambique: One case reported to WHO.

Nigeria: 7.7% of 65 healthy adults tested in Lagos were HIV-positive, with blood transfusion a major cause.109 No cases notified to WHO, though there have been reports of several suspected AIDS cases.110

Rwanda: for details see Chapter 4.

South Africa: 41 cases reported to WHO; in October 1986 the doubling time for AIDS cases was six months.111

Swaziland: Authorities are reported to be considering mass national blood screening for HIV.112

Tanzania: In the rural Kagera district, a group of AIDS patients was matched by age and sex with 34 control subjects, the latter showing 32% HIV-positive. Of 78 barmaids, 37% were HIV-positive.113 Tanzania is believed to have a rural AIDS epidemic similar in extent to Uganda’s. According to the ministry of health the Kagera region is particularly hard hit, with isolated AIDS cases seen in hospitals in Arusha, Iringa, Kilimanjaro, Mara, Mwanza, Shinyanga, Singida, and Tanga. 41% of barmaids and hotel workers in Bukoba, 10% of a “small sample” of Dar es Salaam blood donors, and 7% of “individuals” in Musoma tested HIV-positive in 1985.114 699 cases reported to WHO.

Tunisia: a young male bisexual drug abuser was the country’s first reported case of AIDS-related complex.115 Two cases reported to WHO.

Uganda: HIV antibodies found in 11% of 370 Kampala blood donors, in 14% of antenatal clinic patients, in 27% of those admitted to Kampala’s Mulago hospital, and in 30% of 100 outpatients at Kitovu hospital in Masaka.116 In 1986, in the southwest Rakai District cases were reported to be occurring at the rate of one per day.117 766 cases reported to WHO.

Zaire: Of 254 non-AIDS hospital patients in Kinshasa, 8% of men and 6% of women were HIV-positive. Younger patients were more likely to be infected; 14% of children under four were HIV-positive. 6% of 2,384 staff at Manka Yemo Hospital, Kinshasa, were positive. 11% of 368 hospitalised children were HIV-positive, as were 1% of their brothers and sisters, and 8% of their mothers. 27% of 376 female prostitutes were HIV-positive, as were 27% of 159 tuberculosis patients. AIDS patients at one large Kinshasa hospital are now discharged immediately after diagnosis: beds are given instead to patients who may recover.118 Zaire does not report its AIDS cases to WHO.

Zambia: 250 cases reported to WHO. At Lusaka’s hospital, 8% of 272 maternity cases, 17% of healthy people coming to hospital for medical checkups, 30% of STD clinic patients, were HIV-positive. In the Copperbelt, 23% of patients at an STD clinic, 10% of women attending an antenatal clinic, and 13% of blood donors were HIV-positive. But none of 142 people attending rural clinics was positive. A large Lusaka-based survey of blood donors found 15% seropositive, with the percentages rising by age: secondary school students 6%, college students 10%, and workers 18%. In Ndola in the Copperbelt, 13% of donors were HIV-positive.119 Ndola had
reported 10 AIDS deaths by January 1986, and 28 of 100 STD patients tested at the
trropical disease research centre were HIV carriers. In Livingstone, southern
Zambia, there were six suspected AIDS deaths. In May of that year the minister of
health banned all medical officers from issuing independent statements on AIDS; all
such statements must now come from the director of medical services. 250 cases
reported to WHO.
Zimbabwe: Six cases reported to WHO.
AIDS cases have also occurred in: Algeria, Egypt, Ethiopia, Gabon,
Madagascar, Mali, Morocco and Namibia. HIV or LAV-2 infection has also been recorded in Cape Verde, Guinea Bissau,
Gambia, and Senegal (see Chapter 2).
CHAPTER 6
THE GLOBAL STRATEGY

The battle against AIDS is being fought simultaneously on many fronts; its success will depend on the achievement of the most exceptional degree of international cooperation.

AIDS threatens every country and every society. The main preventive action must be taken by hundreds of millions of individuals, educated and informed by governments and voluntary organisations.

There is, of course, a marked contrast between resources available in different parts of the world. While the US government has allocated $2,000 million to AIDS research and control, a hospital dealing with AIDS in Kampala cannot obtain bleach to disinfect its test tubes.

Africa desperately needs a quick and simple bedside blood test for diagnosing HIV infection. But international pharmaceutical companies have recently been focusing instead on the $22.5 million market created by Japan’s decision to screen its blood donors.

Clearly, there have to be global priorities and a global strategy, an exchange of information and experience, a clearinghouse for the latest research, somewhere where governments and their health ministries can check their own HIV situation against that in other countries.

The role of WHO

The World Health Organization (WHO) in Geneva performs this function. WHO held its first headquarters meeting on AIDS in Geneva in November 1983. After the first international conference on AIDS (in Atlanta, Georgia, USA in April 1985), WHO established a network of collaborating research centres on AIDS. Representatives from these centres met in Geneva in September 1983, and recommended that WHO establish a global AIDS programme in Geneva.

In January 1986 WHO’s executive board endorsed the WHO global strategy document, and in August 1986 Dr Jonathan Mann, one of the world’s leading AIDS experts, took charge in Geneva of WHO’s Special Programme on AIDS (SPA). He is on leave from the US Centers for Disease Control (CDC) in Atlanta, Georgia, and has been closely involved in AIDS research and control in Zaire.

By March 1987 SPA had begun to take shape, with a team consisting of Dr Mann, six other medics and related professionals, and seven support staff. Other members of the WHO secretariat, in Geneva and at WHO’s six regional offices, from director general Dr Halfdan Mahler downwards, also spend time on AIDS.

Organisationaly, SPA is an unusual creature. Reporting directly to Dr Mahler, SPA as a special programme is not subject to the normal bureaucratic constraints which apply to other parts of WHO. And reflecting WHO’s wholehearted commitment to the battle against AIDS, SPA has been allowed to build up its present team largely by means of internally “borrowing” staff from other departments, a procedure almost unheard of within WHO.

The first edition of this dossier, published in November 1986, drew attention to the contrast between WHO’s designation of AIDS as an epidemic of "unprecedented urgency" and its official organisational response: three years after its first meeting on AIDS, WHO’s global AIDS coordinating office consisting of one medic, one secretary, and an official budget of only $580,000 a year. Shortly after that first edition went to press, Dr Mahler told the New York Times that the
threat posed by AIDS was more serious than was generally thought, and that he himself had been guilty of underestimating it. WHO's 1987 expanded strategy document repeats this point: "The global response to HIV has been characterised by a series of delays."

Dr. Mahler's comments anticipated a global wave of publicity about AIDS, marking a new level of concern among governments about the danger posed by the AIDS pandemic. In the new SPA strategy, WHO's commitment to global AIDS prevention and control is coupled with a detailed programme outline, complete with staffing requirements, and a first year budget requirement of S37 million. Though this money is not yet "in the bank", still to be officially handed over by WHO's donor governments, the new international awareness of the magnitude of the threat posed by AIDS makes funding quite sure.

Dr. Mann aims rapidly to build up a team of 20 public health professionals in Geneva by the end of 1987, with an increase of five staff per year to a total of 40 in 1991. Their efforts during 1987 are to be complemented by the work of more than 20 designated regional and national personnel. By 1991 these latter are to total 125.

In the six months he has been in charge, Dr. Mann has established an impressive network of collaboration with researchers, governments and donors. His efforts have started to galvanise the international system into action. Though relatively few governments have developed adequate national AIDS control programmes, each month more of them initiate programmes and contact WHO for help and advice. WHO's SPA is clearly gathering the momentum which many AIDS experts, both in developed and developing countries, felt it should have had earlier on.

WHO's AIDS programme is, in important respects, charting new territory. The extraordinary scope of the AIDS epidemic — its uncertain future course, the manner in which it threatens hard won health gains in the developing world, the absence of effective treatment and a vaccine, the age group (20-40 years) from which the disease selects most of its victims and its universally fatal course, the sexual nature of its transmission and the urgency of public education — combine to make AIDS a global health challenge for which there is no adequate historical parallel. In combining all these factors AIDS is unique, says Dr. Mann, and the battle against it will necessitate "infusing new scope and meaning into the concepts of global collaboration, cooperation, and international leadership".

The WHO global AIDS strategy

WHO's strategy defines the work of SPA as:

* helping governments: to develop national AIDS control strategies;
* AIDS education: helping to develop, implement and monitor activities which teach people how to prevent further spread of the HIV infection;
* Research and development: coordinating, promoting and supporting AIDS research in medical, social, behavioural and other fields;

Helping countries to fight AIDS

During 1987, WHO proposes to help 50 countries with the types of assistance they most urgently require in order to get their AIDS control efforts rolling. WHO is currently helping about a dozen African and several Latin American, Middle Eastern and Asian countries to beef up their AIDS control efforts.

Once a government realises that AIDS is a serious national problem, either now or in the near future, and approaches WHO for help, several steps will immediately be taken:
Countries will be chosen on the basis of their official commitment to a sustained national programme of AIDS prevention

* assessment, taking three to eight weeks, both of the extent of HIV infection and of the resources available to combat it;
* education of health workers, through strengthening the existing educational framework;
* public education, through the strengthening and rapid implementation of existing health education programmes;

Following this "emergency" assistance, WHO works with national authorities to develop or strengthen the country's AIDS control action plan, offering short-term (one-three years) help in the following areas:

* further assessment of the extent of HIV infection in the country;
* systematic surveillance, to monitor the appearance of AIDS cases and HIV infection;
* medical measures: assembling laboratory, hospital and other resources for the screening of blood, the prevention of HIV transmission through unsterile and shared needles;
* preventive education, directed toward the general public, specific risk groups and medical workers.

Once these activities are under way, WHO aims to provide longer term support in the monitoring and assessment of the wider impact of AIDS on the country's social and economic life. WHO also seeks to promote country participation in the global AIDS prevention and control network, with emphasis on collaboration, information exchange, and full access to new data, strategies, materials and technology.

Perhaps most important, the long-term goal of WHO's assistance is to assure the successful integration of AIDS prevention activities into the existing national primary health care structure. This means, wherever possible, avoiding the development of completely new AIDS institutions competing for funding with the existing public health care framework.

Countries will be chosen as candidates for assistance on the basis of their official commitment to a sustained national programme of AIDS prevention, the seriousness of their AIDS epidemic, their degree of need for WHO's help, the extent to which AIDS control activities within their borders will contribute to a greater understanding of the AIDS epidemic, and the ability and willingness of the government to work cooperatively with NGOs. In choosing the 50 countries WHO will attempt to achieve a geographic balance, so that no area where HIV poses a problem will be neglected.

Global AIDS control

There are several tasks for which WHO is uniquely equipped and which it intends to carry out. One of these is the publication of international guidelines on aspects of AIDS prevention, including: blood test surveys, sterilisation of equipment, the protection of health care workers from infection by HIV, the prevention of sexual transmission of HIV, the medical assessment and follow-up of HIV-positive people, counselling of HIV-positive people and their relations, and in education, control strategy and epidemiological assessment.

A second task for WHO is the production of prototype materials on AIDS prevention and control, which national bodies and NGOs can then use as models for the production of their own information.

A third is the establishment of an active information exchange system to support national AIDS control efforts.

In addition, WHO will coordinate and support research in a number of key areas including: sexual behaviour and condom use; blood screening; new types of blood tests; HIV transmission, spread and risk factors; prevention of HIV spread by i-v drug abuse; mathematical modelling of the AIDS epidemic; and social and economic impact assessment.
WHO is also well-placed to promote international consensus on a number of important and often politically sensitive issues, some of which are posed by intense competition between scientists and laboratories from different countries involved in AIDS research. The issues on which WHO will seek to establish agreement are:

* clinical trials for an AIDS vaccine;
* trials of AIDS drugs and other treatments;
* HIV infection and international travellers;
* HIV and employee health issues;
* issues relating to blood screening for HIV;
* international exchange of blood samples and virus cultures.

One of WHO’s top international scientific priorities during 1987 is to establish a network of laboratory “banks” for the storage and exchange of blood and HIV samples. Such samples, from different geographic regions and different periods of time, are vital because they provide clues to the evolution of HIV and the eventual development of a vaccine. They will also serve as “reference criteria”, standards against which medicals from developing countries, where laboratory storage facilities are in short supply, can evaluate the results of the blood tests and other analyses they perform on HIV-infected patients. A WHO working group is studying the best way to set up the laboratory banks, which will be accessible to all WHO member countries on an equal basis.

To support its work on global AIDS prevention, WHO intends to organise three international bodies. The first of these, a new body called the “global commission on AIDS”, will consist of 20-30 scientists and public health professionals, who will advise WHO’s SPA staff on technical and scientific issues related to HIV and its spread. A second new group, the “committee of participating parties”, will assist WHO’s director general on SPA administrative and organisational matters. Thirdly, an expanded version of the existing international network of collaborating centres on AIDS will support SPA staff in their activities.

Considerable progress in implementing the WHO global strategy has already been achieved. But in many Third World countries, developing and implementing such a plan of action may be materially and technically impossible without outside assistance. “Until we get the resources we need, it is a question of trading lives for lives”, says a prominent Ugandan doctor involved in AIDS control.

WHO is helping tackle this by channelling funds and bringing together key personnel from donor agencies, national governments, and scientific establishments. But this is an enormous task for which the SPA is still understaffed.

Is there enough information?

In the key area of centralised information on AIDS — a principal objective of the WHO programme — SPA is working hard to make essential improvements.

WHO still had, by early March 1987, no centralised, regularly updated and easily obtainable information on:

* education programmes in different countries;
* national policies in different countries;
* results of blood tests showing the level of HIV infection in different countries.

The only global data being collected in a systematic way by WHO in Geneva are the numbers of patients officially diagnosed as having AIDS (and notified as such by governments to WHO), and records of the legal measures being taken by governments to control AIDS.

WHO publishes a regular update of the number of reported AIDS cases. However, these figures themselves are not a reliable guide to the size and extent of the global AIDS epidemic. Some governments do not report promptly, or accurately, and many do not report at all. The reasons range from the logistic problems of collecting and transmitting such data in some developing countries to
"Despite the growing cooperation, a single question hangs over the global battle against AIDS: will it be enough?"

deliberate political censorship, based on fears that reporting cases of AIDS will damage tourism, investment and national prestige.

These are information blockages over which WHO has no direct control. But by its active leadership on the international stage, SPA is changing the climate of opinion about AIDS. Whereas a year ago only 55 countries reported their AIDS cases, now 91 countries are doing so, in the main not because they have just discovered that they have AIDS victims, but because they now feel freer to make it public.

But far more urgent than improving data collection on confirmed cases of AIDS is to establish a system for collecting and disseminating information on the worldwide extent and spread of the HIV virus. This is a priority area for SPA, and as national programmes and regional networks get off the ground, mechanisms for information exchange between groups are being set up.

For example, on a practical level, AIDS control experts in most countries are worried about the potential of intravenous drug abuse as a channel for the spread of HIV. The international pooling of information on the best way of approaching this problem is a task which WHO is seeking to coordinate.

Such sharing of information is essential if humanity is to keep even one step ahead of the virus. It is a remarkable commentary on international cooperation that there is at present no central source of data on worldwide HIV infection. The information in this Panos dossier, with all its inadequacies, is perhaps the most comprehensive global picture yet made available.

Overall, failures in reporting by governments mean that WHO has so far been unable to build up an accurate picture of the AIDS pandemic, which severely limits its ability to predict its future shape and to effectively advise governments on AIDS control. As SPA gathers momentum, however, more governments are coming to realise that openness and cooperation both within and between countries are essential if the global battle against AIDS is to be won.

There is a general feeling, among both national and international agencies, that WHO has properly taken the lead in global AIDS control, and that its Special Programme on AIDS is now moving quickly and in the right direction. Around the world national governments, often assisted by WHO personnel, have begun to respond, urgently and intelligently, to the AIDS crisis. But despite the growing cooperation, a single question hangs over the global battle against AIDS: will it be enough?
CHAPTER 7
AIDS WORLDWIDE

The AIDS pandemic is the most serious disease threat in many generations. But there is only inadequate information on the extent of its spread. Global statistics are collected by the World Health Organization (WHO) but, as explained in Chapter 6, they are incomplete.

The number of AIDS cases reported to WHO (indicated here both in the regional tables and the brackets after each country name), taken on its own, is an unreliable guide to the extent of the AIDS infection in particular countries. For a number of reasons, many countries do not, or are unable, to give an accurate report on the number of cases appearing within their borders.

African states have reported a total of 2,561 AIDS cases, the United States has reported 30,839; yet blood studies confirm that the number of HIV carriers on the African continent is greater than in the US, and probably many times greater. One of the most heavily infected central African countries, Zaire, has not reported any AIDS cases to WHO; blood surveys show as many infected people in Uganda as there are in the US. The argument that the United States is the world’s worst AIDS affected country because it reports the highest number of cases is false. To the number of reported cases needs to be added data from blood test surveys before any reliable assessment of the situation in a given country can be made. The results of such surveys are detailed below.

To gain a more accurate picture of the spread of AIDS, numbers of cases must also be related to population size. Calculating the number of AIDS cases per 100,000 population gives an indication of the relative seriousness of the AIDS epidemic as between countries with very large and very small populations. On the basis of AIDS cases per 100,000 population, the following are the 10 leading AIDS-affected countries. Since the number of reporting countries from Africa is limited, they are not included here.

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>POPULATION</th>
<th>DATE REPORTED</th>
<th>REPORTED CASES</th>
<th>REPORTED CASES/100,000</th>
</tr>
</thead>
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<tr>
<td>Bermuda</td>
<td>55,000</td>
<td>June 1986</td>
<td>42</td>
<td>76</td>
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<td>French Guyana</td>
<td>73,000</td>
<td>Nov 1985</td>
<td>32</td>
<td>44</td>
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<tr>
<td>Bahamas</td>
<td>235,000</td>
<td>June 1986</td>
<td>68</td>
<td>29</td>
</tr>
<tr>
<td>United States</td>
<td>238,000,000</td>
<td>Feb 1987</td>
<td>30,839</td>
<td>13</td>
</tr>
<tr>
<td>Guadeloupe</td>
<td>130,000</td>
<td>Dec 1986</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>Haiti</td>
<td>6,590,000</td>
<td>Nov 1986</td>
<td>785</td>
<td>12</td>
</tr>
<tr>
<td>Trinidad &amp; Tobago</td>
<td>1,200,000</td>
<td>June 1986</td>
<td>108</td>
<td>9</td>
</tr>
<tr>
<td>Saint Lucia</td>
<td>120,000</td>
<td>June 1986</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Denmark</td>
<td>5,140,000</td>
<td>Jan 1987</td>
<td>131</td>
<td>2.5</td>
</tr>
<tr>
<td>Australia</td>
<td>15,700,000</td>
<td>Jan 1987</td>
<td>382</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Panos has supplemented WHO data with material from other sources, including press reports and AIDS experts. In the information presented in this chapter, wherever possible, a source is cited. But sometimes we have obtained information on the condition that it is not attributed. And sometimes the only available data is imprecise.

The absence of information on a country does not mean that HIV infection is not present. Africa is covered in Chapter 5. WHO figures are cases of AIDS reported by 13 February 1987.
"Brazil has the third largest number of reported AIDS cases in the world"

* The term "gay men" refers to homosexual men;
* ARC means AIDS-related complex;
* STD means sexually transmitted diseases;
* i-v means intravenous;
* HIV-positive and seropositive means carrying HIV;
* "sera" are blood samples;
* a notifiable disease is one which doctors are compelled by law to report to the national health authority.

Source names have been abbreviated:
* AA — AIDS Alert
* A-F — AIDS-Forschung
* AN — AIDS Newsletter
* BHTD — Bureau of Hygiene and Tropical Diseases
* BMJ — British Medical Journal
* CDC — Centers for Disease Control
* CDWR — Communicable Diseases Weekly Report
* FEH — Far East Health
* JAMA — Journal of the American Medical Association
* GDSR — Global Disease Surveillance Report
* MMWR — Morbidity and Mortality Weekly Review
* PICA — Paris International Conference on AIDS
* VEN — Virus Exchange Newsletter
* WER — Weekly Epidemiological Record

In the tables that appear below, countries with less than 10 reported AIDS cases are not included.

CENTRAL AND SOUTH AMERICA

ARGENTINA (69): 33 cases were reported by September 1985, one in an i-v drug addict, the rest in homosexual men. By April 1986 the number had risen to 52 (with 25 deaths), all male, 48 homosexual and three haemophiliacs (and one unspecified). Of the sexually-transmitted cases eight had had no contact with foreigners. One source [GDSR, Oct 1986] claimed that in September 1986 70 deaths in "AIDS-affected males" had occurred, though the official number of cases was only 58.

BELIZE: No cases reported by the end of 1986.

BOLIVIA (1): One death from AIDS was reported in 1985; no further cases have been notified.

BRAZIL (1,012): Brazil has the third largest number of reported AIDS cases in the world, and has moved up from sixth to third place in less than a year.

This is a country with an exceptionally young population (50% are under 21 and 70% under 30) and a history of uninhibited sexual activity and tolerance. Many men are bisexual and in the large cities there are homosexual bars as well as cinemas and public saunas where sex is quickly and easily found. Compared to Europe and North America, however, fewer men and women are openly homosexual and the small gay movement is only active in the northeastern state of Bahia. Travestis (transvestite men who live as women and take hormones to develop their breasts but generally without losing their male genitalia) are a significant factor in prostitution in urban centres, their clients generally being heterosexual men. At first few appeared to have been infected, but by the end of 1986, 15 cases of AIDS had been confirmed, and in one study 39% were HIV-positive [The Independent, 14 Jan 1987]. The virus appears to be spreading very rapidly within groups of prostitutes.
<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>POPULATION</th>
<th>DATE REPORTED</th>
<th>REPORTED CASES</th>
<th>REPORTED CASES/100,000</th>
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</thead>
<tbody>
<tr>
<td>French Guyana</td>
<td>73,000</td>
<td>Nov 1986</td>
<td>32</td>
<td>44.0</td>
</tr>
<tr>
<td>Brazil</td>
<td>136,000,000</td>
<td>Dec 1986</td>
<td>1,012</td>
<td>0.7</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>2,600,000</td>
<td>June 1986</td>
<td>12</td>
<td>0.5</td>
</tr>
<tr>
<td>Mexico</td>
<td>79,000,000</td>
<td>Dec 1986</td>
<td>249</td>
<td>0.3</td>
</tr>
<tr>
<td>Venezuela</td>
<td>18,400,000</td>
<td>Dec 1986</td>
<td>69</td>
<td>0.4</td>
</tr>
<tr>
<td>Argentina</td>
<td>30,600,000</td>
<td>June 1986</td>
<td>69</td>
<td>0.2</td>
</tr>
<tr>
<td>Chile</td>
<td>12,100,000</td>
<td>June 1986</td>
<td>12</td>
<td>0.1</td>
</tr>
<tr>
<td>Guatemala</td>
<td>8,400,000</td>
<td>Oct 1986</td>
<td>10</td>
<td>0.1</td>
</tr>
</tbody>
</table>

"Condom use was much discussed in the media at the beginning of 1987"

The first six cases of AIDS in Brazil were diagnosed in 1982, all in homosexual men, most of whom had visited New York. With the death of Markito, a famous fashion designer, in 1983, the disease first came to the attention of the general public. Seventeen more cases were diagnosed that year, followed by 126 in 1984 and another 252 in 1985. The vast majority of cases were in São Paulo, which has long offered a network of bars, cinemas and public saunas where homosexual activity takes place. It was not until 1985 that AIDS began to appear regularly in other states, notably Rio Grande do Sul, Minas Gerais, Pernambuco and Bahia.

Blood for transfusions is not universally screened, and has also played a significant part in the spread of AIDS. One source claimed it was the source of infection in 150 of the 550 cases confirmed by 24 January 1986 [GDSR, Feb 1986]. By the end of that year at least 13.3% of confirmed cases (the actual figure varied according to source) were feared to have arisen as a result of transfusion with contaminated blood products. Of haemophiliacs tested in Rio de Janeiro, 73% were HIV-positive, [O. Globo, 21 Dec 1986]. One expert, Peggy Pereira, estimated the chances of catching AIDS through transfusion as one in 1,000, a figure considered extremely high in comparison with figures in the US and Europe [Jornal do Brasil, Jan 1987].

Originally considered a minimal risk, i-v drug addiction as a factor in AIDS transmission began to soar in the Santos area of São Paulo state in the second half of 1986. In July/August, 14 cases of AIDS were reported among addicts; the figures rose to 30 by September/October.

At the end of 1986, when the federal Health Minister signed an order making AIDS a notifiable disease, 982 cases had been officially recognised. The government itself suggested that 1,200 would be a more realistic statistic, while at least one Red Cross official considered that the true figure was nearer double that. The discrepancy is explained by the fact that many doctors, at the request of patients who did not wish to be identified with the stigma of AIDS, withheld notification.

Of the official figure, 20-22% were reported to be bisexual (against 45% homosexual, 13% haemophiliac and 2% i-v drug addicts), through whom the disease could be expected to quickly enter the general population. A sample of 36,000 blood donors in Rio de Janeiro and São Paulo showed 0.25% (250 per 100,000) were infected; other surveys have shown 1.5% of prisoners in Rio de Janeiro, 1.5% of healthy blood donors in a Rio slum and 3% of army conscripts to be HIV-positive [The Independent, 14 Jan 1987]. Tests carried out at the Oswaldo Cruz Foundation show a seropositivity rate of 30% homosexual and bisexual men, 50-70% among haemophiliacs, 1% in drug addicts and 0.08% in blood donors. In January 1987 there were estimated to be 120,000 HIV-carriers in the country as a whole.

Despite extensive newspaper coverage, initial federal government reaction to AIDS was slow, the Health Minister at one point commenting that other diseases
such as leprosy and meningitis demanded greater attention. At the end of 1985 there was a brief television campaign: Socrates — a member of the country's football team and therefore a national hero — encouraged people to reduce the number of their sexual partners. But the federal government failed to act until the end of 1986, before which the only health education initiatives had been taken by gay organisations in São Paulo and the state of Bahia. A national television and radio campaign is scheduled to begin in February 1987, with a budget of $2.75 million [Jornal do Brasil, 14 Jan 1987]. A further $27 million was allocated by the health services for medical care [Jornal do Brasil, 14 Jan 1987].

Meanwhile, the health authorities in individual states began their own campaigns, that of Minas Gerais (with a population of 14 million and an area the size of France) having the highest profile. Posters urged passers-by to decrease the number of partners and use condoms, while giving a phone number to answer the public's enquiries. (Condom use, long restricted to no more than 1% of the population, was much discussed in the media at the beginning of 1987.) Many private hospitals are refusing to take AIDS patients, and the number of available beds in state hospitals is limited. Reports of patients sharing a bed or being turned away from the few hospitals that specialised in AIDS care were not uncommon.

The conservative faction of Brazil's powerful Catholic church has condemned education campaigns which advocate condom use; but some of the bishops have urged a compassionate attitude toward AIDS victims.

CHILE (12): The first four cases were reported in 1984.

COLOMBIA (5): The first four cases were reported early in 1984.

COSTA RICA (12): The first two cases were reported in 1983. Screening of some blood donors yielded 0.3% HIV-positive by mid-1986 [Villarejos et al, Posters 363, PICA, June 1986].

ECUADOR (7): The first four cases had appeared by the end of 1985.

EL SALVADOR (2): The first case was reported in November 1985 in a man who had recently returned from the US.

FRENCH GUYANA (32): The first cases were reported early in 1983. By the end of 1985 the total had reached 32 (17 men, 15 women), all immigrants, 30 from Haiti, one from Dominican Republic and one from France. Drug abuse and blood transfusions were not a means of transmission [Vigneron-Meleder et al, Posters 362, PICA, June 1986].

GUATEMALA (10): The first case was confirmed early in 1985.

GUYANA: No cases reported by the end of 1986.

HONDURAS (6): The first case was reported early in 1985.

MEXICO (249): The first two cases had an onset of symptoms in 1980. Four cases were reported in 1982, 13 in 1983, 18 in 1984 and 69 in 1985, with 12 further cases identified without date. Of cases with known origin, 47% came from the Federal District, (which includes the capital, Mexico City), 15% from the state of Jalisco and 8% from the state of Baja California Norte. Of the 128 cases reported by 20 May 1986, 123 were men (109 homosexual - two of which were also i-v drug addicts) [WER, 1986, (61) 25 (195)].

One survey in mid-1986 found 22.4% of an unknown number of homosexual men to be HIV-positive [GDSR, June 1986]. A survey of Acapulco prostitutes
revealed 6.7% (14 of 210) HIV-positive, compared with 0.7% (one of 136) prostitutes in Tijuana [GDSR, Aug 1986]. A Guadalajara hospital official was quoted in mid-1986 as saying the country had 600 AIDS cases, a figure several times higher than official statistics. The official may have been referring to seropositivity rather than actual cases of AIDS [GDSR, Sept 1986]. A national AIDS committee was set up in 1986. Its tasks included public health education and control of blood banks to prevent transmission through blood transfusion [WER, 1986, 61(25), 196].

NICARAGUA: No cases reported by the end of 1986.

PANAMA (9): The first case was reported in late 1984.

PARAGUAY: No cases reported by the end of 1986. A survey of 51 prostitutes, drug addicts and homosexuals showed 14 seropositives.


SURINAME (2): One case reported to WHO in 1984, one in 1985 and none in 1986. Other sources [BHTD] quote three cases (two deaths).

URUGUAY (7): The first case was reported in 1983. In February 1986 55 individuals of unstated risk factor were reported HIV-positive [GDSR, Feb 1986].

VENEZUELA (69): The first cases were reported in 1984. Of the 32 cases registered to January 1986, 30 were men (26 homosexual or bisexual; two blood recipients and two heterosexual Haitians). One of the women was a Haitian prostitute; the other had no known risk factor. All 26 gay/bisexual men reported sexual contact with homosexual men from the USA and Caribbean [Perez et al, PICA, Poster 519]. Blood tests on 1,108 people from different regions, including Indians, showed seropositivity in 2.5% of the general population, including 4% of aboriginals, 4% of patients with Chagas disease and up to 29% of acute malaria patients. But none of 169 randomly chosen blood donors from seven cities was seropositive. It has been suggested that the wide distribution of HIV-specific antibodies among various Venezuelan populations may indicate that HIV or a closely-related virus is indigenous to the country. Alternatively, the blood tests done so far may have produced a high number of false-positive results [Merino et al, poster 364, PICA, June 1986]. Another unconfirmed and undated study showed 0.31% (11 of 3,500) of blood donations in Maracaibo HIV-positive [GDSR, March 1986].

CARIBBEAN

With the exception of Haiti, cases in the area by the end of 1986 were predominantly in homosexual men and i-v drug addicts. The Caribbean has for a long time been a holiday destination for US tourists, with gay men favouring Puerto Rico, Haiti and the Dominican Republic. As a stepping-stone between South America and Florida, the area has also been at the centre of illegal drug-trafficking. This has primarily involved marijuana and cocaine, but has led to the easy availability of other injectable drugs such as heroin. Blood transfusion has played a minor role in the transmission of AIDS. Meanwhile heterosexual contact has begun to play an increasing role, particularly in Haiti and Puerto Rico.
"With the exception of Haiti, cases in the area by the end of 1986 were predominantly in homosexual men and i-v drug addicts"

<table>
<thead>
<tr>
<th>COUNTRY</th>
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<th>REPORTED CASES/100,000</th>
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<tr>
<td>Bermuda</td>
<td>55,000</td>
<td>June 1986</td>
<td>42</td>
<td>76</td>
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<tr>
<td>Bahamas</td>
<td>235,000</td>
<td>June 1986</td>
<td>68</td>
<td>29</td>
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<td>Haiti</td>
<td>6,590,000</td>
<td>Nov 1986</td>
<td>785</td>
<td>12</td>
</tr>
<tr>
<td>Guadeloupe</td>
<td>130,000</td>
<td>Dec 1986</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>Trinidad &amp; Tobago</td>
<td>1,200,000</td>
<td>June 1986</td>
<td>108</td>
<td>9</td>
</tr>
<tr>
<td>Saint Lucia</td>
<td>120,000</td>
<td>June 1986</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>3,900,000</td>
<td>Feb 1987</td>
<td>312</td>
<td>8</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>6,000,000</td>
<td>Dec 1986</td>
<td>127</td>
<td>2</td>
</tr>
</tbody>
</table>

ANGUILLA: No cases reported by the end of 1986.

ANTIGUA: No cases reported by the end of 1986.

BAHAMAS (68): Two cases were reported to WHO early in 1985, with more by mid-1986. Of the total of 68, 21 have died [WER, 61/39, 301]. Of 877 blood donations 0.6% (five) were HIV-positive in late 1985 [GDSR, Feb 1986].

BARBADOS (4): Four cases reported to WHO in 1985, none in 1986. Other sources quote the Ministry of Health confirming 11 AIDS deaths (one in 1984, six in 1985, four up to April 1986) with three further patients being treated at Queen Elizabeth hospital [GDSR, May 1986].

BRITISH VIRGIN ISLANDS: No cases reported by the end of 1986.

BERMUDA (42): The first cases were recorded in 1984. Of 27 cases confirmed by November 1985, 22 were i-v drug abusers; the rest were in unspecified high risk categories [GDSR, Feb 1986]. In May 1986, 30 of 33 cases (21 fatal), were i-v drug abusers [GDSR, July 1986]. In mid-1986, health officials stated that 25% of the country's more than 300 plus i-v drug abusers would die of AIDS in the next few years [GDSR, Oct 1986].

CAYMAN ISLANDS: No cases reported by the end of 1986.

CUBA (1): A national AIDS prevention programme was set up in early 1986. The first case was notified later that year; the patient, who died a few months later, was reported to have caught the disease abroad [GDSR, May 1985]. Several cases have been reported in Cuban homosexual men recently settled in the USA.

DOMINICA: One case resulting in death (infant blood transfusion) was reported in 1985. None reported since.

DOMINICAN REPUBLIC (127): The first case was reported in 1982. By 30 June 1986, 62 had been recorded with 30 deaths. A survey found 1.12% of blood donors and 5% of female "sexual workers" were seropositive.

GRENADA (2): Two cases, both fatal, were reported in 1984. None reported since.

GUADELOUPE. (16): Cases were reported regularly between 1982 and 1985. None reported in 1986.
HAITI (785): The first cases of AIDS in Haitians were discovered in New York in 1981. Almost all were in heterosexuals, although some patients admitted to having had homosexual relations for money. In 1983, 157 AIDS cases were reported in Haiti, including retrospective cases. In 1984 124 new cases were confirmed, of which 23 were fatal.

Of 200 Haitian male immigrants to Florida in 1981-2, 9.5% were seropositive. In 1986, 6% of 533 mothers of infants under two receiving vaccinations were seropositive; among the infants the rate of HIV infection among Haitian immigrants to the United States overall has been calculated to be 820-1,000 per million people, similar to that in parts of Central Africa and 50-100 times higher than the incidence of AIDS in Europe. Heterosexual transmission is now the main channel for the spread of HIV [N. Clumeck, Medizin Verlag, 1986].

In a standardised study of 34 AIDS patients, the major identified risk factors were bisexuality (38%), followed by blood transfusion (21%) and i-v drug abuse (6%), with 35% unidentified. AIDS patients also reported more frequent medical injections than controls and, among the women, greater heterosexual activity. Researchers noted that medical injections are frequent and often given for people who “feel unwell” by “phicurists” — drugists or non-medical market vendors [J.W. Pape et al, JAMA 291 (1), January 1986].

JAMAICA (5): The first two cases were recorded in 1983.

MARTINIQUE (6): The first case was recorded in 1983, with a total of six cases (five of whom had died) by mid-1986 [AN, 14/343]. Testing in July-Dec 1985 revealed 50% (11 of 22) of homosexual men, 3.6% (six of 193) of heterosexual men seen for sexually transmitted diseases and 33% (five of 15) of prostitutes were HIV-positive. Among low risk groups, 0.3% (four of 1,434) were seropositive [Chout et al, poster 361, PICA, June 1986].

MONTserrat: No cases had been recorded by the end of 1986.

PUERTO RICO (312): (Case numbers are included in US figures.) 273 cases were recorded by 29 September 1986 (CDC); 40% of these cases are classified as having “no known” risk factor. This includes the heterosexual partners of drug addicts and the children of seropositive women and suggests a high “second generation” spread.
Drug addicted women who work as prostitutes have been reported 30% seropositive [El Mundo (San Juan), 27 July 1986].

ST CHRISTOPHER AND NEVIS (1): The first case was recorded in 1985.

ST LUCIA (10): The first case was reported in 1984.

ST VINCENT & GRENADINES (3): The first case was reported in 1985.

TRINIDAD & TOBAGO (108): The first case was recorded in 1983. 108 had been recorded by mid-1986. Of 106 healthy homosexuals tested, 15% were seropositive. The major risk factor for HIV infection was contact with homosexual men from North America [Bartholomew et al, poster 360, PICA, June 1986].

TURKS & CAICOS ISLANDS: No cases had been reported by the end of 1986.

SOUTH & EAST ASIA

Cases of AIDS began to appear in 1985. Blood testing for HIV is uncommon for several reasons. The lack of cases encouraged health authorities to assume that AIDS is an African or Western disease. Secondly, the cost of blood screening is prohibitive. Thirdly, to be seen to take action would be to invite the assumption that AIDS was already a problem — which would discourage the tourism on which many economies depend. The AIDS cases diagnosed by the end of 1986 were almost all in homosexual men and haemophiliacs. The source of infection in the former could mostly be traced to contact with foreigners. The worst-affected country in the area according to official statistics is Japan, but information from other countries, notably India and the Philippines, suggest that HIV is spreading quickly throughout the region.

A major problem for many countries in the area is the prostitution which goes hand in hand with tourism. The Philippines and Thailand in particular have been “sex holiday” destinations for men, both heterosexual and homosexual, from the West and Japan. It may be that prostitutes of both sexes who specialise in foreigners are likely to pick up the disease from, and transmit it to their clients rather than to their co-citizens, since they may experience some degree of rejection by their family or village. Though this factor may slow the spread of the virus outward from the infected urban groups, it seems unlikely to contain it. I-v drug addiction is on the increase. At a recent meeting of the World Health Organization Dr Halfdan Mahler (WHO director-general), said that “AIDS is knocking on the door of Asia”.

AFGHANISTAN: No cases reported by the end of 1986.

BANGLADESH: Although no cases of AIDS had been reported by the end of 1986, fear of the disease was reported to have gripped the country’s middle-class, aided by reports of an AIDS case in the neighbouring Indian state of West Bengal. Many Bangladeshis were quoted as believing that AIDS could be transmitted through casual contact, but a source at Dhaka Medical College pointed instead to the dangers of transmission through injections and the need for disposable syringes [BHTD].

BURMA: No cases reported by the end of 1986. In September 1985 none of a tested group of 35 homosexuals, 63 prostitutes and 16 habitual drug users in Rangoon were HIV-positive [GDSR, July 1986].
CHINA (1): One case, in a foreigner, was reported in 1985. In a 1986 blood survey none of 569 individuals tested in Guangdong province (adjacent to Hong Kong) were HIV-positive [JAMA, 86, 256, 2343-4]. Four of 18 haemophiliacs treated with imported Factor VIII blood concentrate between 1982 and 1984 were HIV-positive in 1986, while none of 310 sera, including 83 patients with leukaemia, tested HIV-positive [WER, 1986 61(29),226]. All foreign students face mandatory screening.

CHINA (TAIWAN) (1): AIDS was added to the list of notifiable diseases in June 1985 and the first case, in a young homosexual man from Taipei, was diagnosed in January 1986 and died six weeks later. The patient reported approximately 100 sexual partners, the last foreign partner being two years before diagnosis [WER, 1986, 61(20) 154]. Testing of blood donations on a sample basis began in 1986. None of 15,000 sera (which did not include donations from paid blood donors) was confirmed positive [WER, 1986, 61(41) 317].

HONG KONG (3): The first three cases were reported in 1985. Screening of blood supplies began in August that year, with only 0.003% (two of 58,563) of routine blood donations showing the presence of the virus. Of samples taken from predominantly high-risk groups, 0.008% (53 of 68,584) were HIV-positive. These included 38 haemophiliacs, a quarter of Hong Kong's known haemophiliac population [GDSR, March 1986].

INDIA (5): The first cases were reported in 1986; by September of that year 18 had been reported by one source [GDSR, Sept 1986], although only two were notified to WHO (both had received blood transfusions in the USA [AN, 2(1)24].

Fifteen prostitutes in the southern state of Tamil Nadu, at least six of whom claimed to have had no contact with foreigners, were confirmed HIV-positive by the middle of 1986. At least one prostitute was showing AIDS-like symptoms. The infected women were reported as being indefinitely detained in a remand centre because they would not give up prostitution, their sole means of support. Screening in Tamil Nadu in 1986 revealed 2.9% (30 of 1,025) of female prostitutes and 0.2% (three of 1,581) of men and women attending an STD clinic to be HIV-positive. In the same survey none of 70 homosexual men, 14 i-v drug abusers, 259 blood recipients and 1,429 others (including blood donors) were seropositive. HIV infection has a foothold in southern India, but has not yet become widespread [John et al, The Lancet, Jan 1987, p. 160-1]. Imports of blood products without certificates showing HIV-negativity have been banned and screening of blood donors began in several cities in April 1986. The Health Minister of Tamil Nadu, Dr H. Handa, asked the government to test all tourists, particularly those visiting Goa, Mahabalipuram but apparently no action has been taken [AN, 8/206].

There have been unconfirmed reports that a "large number" of homosexuals in Kashmir were "infected" with AIDS [GDSR, Sept 1986]. But a Delhi-based blood survey of 1,505 people (348 female prostitutes, 700 STD patients, 325 prisoners, 89 suspected AIDS cases, 26 drug addicts, 11 blood donors, six patients who had surgery abroad) found that none were seropositive [S. Kumari et al, Journal of Communicable Diseases, 18 (2) 1986 (77-80)].

Towards the end of the year it was announced that all foreign students (about 18,000 a year, mostly from Africa) would have to undergo an AIDS test [The Guardian, 25 Sept 1986]. Amongst those immediately expelled on being found HIV-positive were six students in Madhya Pradesh (all men from Kenya) and three students in Kerala; as with other HIV-positives, they had been placed under immediate police surveillance [India Today, 31 Jan 1987].

INDONESIA: No cases had been reported by the end of 1986.
62 AIDS WORLDWIDE

"In its first 48 hours of operation, Tokyo’s AIDS hotline received 150,000 calls"

IRAN: No cases had been reported by the end of 1986. 10 out of 100 haemophiliacs but none of 505 others at risk were discovered to be HIV-positive [WER, 1986, 61(19), 145].

JAPAN (25): The first case was reported on 22 March 1985. Of the first 11 cases reported by 31 October 1986, all were male (one foreign), six were homosexual and five were haemophiliacs [WER, 1986, 61, 27]. Heat treatment of imported blood started in 1986, as did the universal screening of blood donations [WER, 1986, 61(23) 179]. Only six (three apparently from unknown risk group [GDSR, Oct 1986]) out of 900,000 blood donors in Tokyo and Osaka registered HIV-positive in the first half of 1986 [Nature, 2 Oct 1986].

The Ministry of Health and Welfare published a leaflet on AIDS in October 1985 for wide distribution (although one source claimed that distribution was concentrated on Yokosuka and Kanawaga Prefecture, where many foreigners live, confirming the impression that AIDS was still seen as a “foreign” disease [GDSR, Feb 1986]). Consultation centres were set up and a network of laboratories to carry out diagnostic testing established [WER, 1986 61(23), 179]. In late 1986 the budget for medical research was quoted at $6 million [AN, 18/448].

In January 1987 the death of a Tokyo prostitute, the country’s first heterosexual and first woman AIDS patient, caused near panic with 150,000 telephone calls registered in the first 48 hours of operation of Tokyo’s AIDS information line. The 52 telephone lines available were scheduled to be doubled. Official statistics quoted 26 cases and 2,500 HIV-positives, but other authorities estimated that between 4,000 and 11,000 Japanese were HIV carriers [The Guardian, 30 Jan 1987].

KAMPUCHEA: No cases reported by the end of 1986.

NORTH KOREA: No cases reported by the end of 1986.

SOUTH KOREA: The first case, in a US citizen, was reported in 1985, although none was reported to WHO by the end of 1986. Two (one homosexual man, one bisexual woman) out of 6,674 in high-risk groups were HIV-positive in 1986 [GDSR, Oct 1986].

LAOS: No cases reported by the end of 1986.

MACAO: In August 1986 a newspaper report claimed that two prisoners had AIDS; this was immediately denied by the prison director [GDSR, Oct 1986]. No cases had been reported to WHO by the end of 1986.

MALAYSIA: No cases reported by the end of 1986, although another source [AN, 4/121] reported a case in December 1985. Five of 7,729 blood samples from presumed high-risk groups were confirmed HIV-positive with the status of a further 35 “pending” [GDSR, Oct 1986]. Malaysian authorities, fearing an explosion of i.v. drug abuse, have cracked down on heroin smuggling and in the past year have executed a number of smugglers. I.v. drug addicts could constitute an avenue of entry for the AIDS virus if the government is unsuccessful in controlling drug abuse.

MALDIVES: No cases reported by the end of 1986. It has been suggested that as a tourist resort the islands are at risk.

MONGOLIA: No cases reported by the end of 1986.

NEPAL: No cases reported by the end of 1986.
PAKISTAN: One unconfirmed case was reported in 1985. By the end of 1986 no cases had been reported to WHO.

PHILIPPINES: The first (unconfirmed) AIDS death was reported in October 1985 [GDSR, Dec 1985], although no cases had been reported to WHO by February 1987. Of 4,172 "hospitality women" with maximum exposure to foreigners — men from a US naval base — 0.17% were HIV-positive. Of 682 other individuals, including 385 professional blood donors, 46 homosexual men and other hospitality women, none were seropositive [VEN, 1986, 3(1), 13-14]. WHO is assisting Manila City Health Department in blood screening; further screening is also being carried out at the US naval base.

Angry Filipina prostitutes who work near the naval base, at Subic Bay, have accused American servicemen of infecting them with HIV. 17 of them were found to be seropositive during screening conducted by the US military. The women are demanding compensation as potential AIDS victims. Their community women's group, called Gabriella, is compiling material for a class action law suit against the US government. 500 of the women have signed a petition demanding that servicemen carry certificates that they are HIV-free (the women must already carry cards which show them to be free of other STDs) [Gabriella, Nov 1986].

Health officials in the Philippines are worried that US army screening has not uncovered the full extent of HIV infection among hospitality women, since only those registered with the Olongapo City health office took the test. The number of unregistered prostitutes far exceeds the number of licensed ones.

SINGAPORE (1): The first case was reported [Straits Times] on 26 Sept 1986. Other sources that year claimed five people had AIDS. The government announced it would place "people exposed to AIDS under surveillance to keep them from spreading the disease" and legal penalties against anyone knowingly passing on AIDS were apparently being considered [AA, Jan 1986]. The Health Ministry prepared to distribute 100,000 booklets in 1986 to educate the public, while a drastic reduction in the incidence of sexually transmitted diseases was attributed to the fear of AIDS and herpes [FEH, June/July 1986].

SRI LANKA (1): No cases reported by the end of 1986, although a UK visitor diagnosed with AIDS was deported in November that year. One reliable expatriate source (who wishes to remain unidentified) reported that unpublished serological tests had shown HIV to be present among male prostitutes. News coverage of this claim drew the response from the ministry of health that blood surveys of risk groups, including some in the southern part of the country where tourism is concentrated, had found no HIV carriers. Sri Lanka has deported at least one foreign AIDS victim.

THAILAND (6): The first case was seen in 1984. Four of the six cases confirmed by May 1986 were in foreigners. One report suggested that by January 1986 six patients had died and there were a further nine cases, including two prostitutes, in Bangkok [GDSR, April 1986], but this was not confirmed by WHO figures. One of 101 male prostitutes and none of 602 others (including female prostitutes, blood donors and i-v drug abusers) tested HIV-positive [VEN, 1986, 3(1), 14]. None of 6,357 Thais applying for Saudi work permits in January-April 1986 were HIV-positive. The nationality of 70 workers from southeast Asia expelled by the United Arab Emirates because they were HIV carriers in November 1986 is not known, but it is thought that a number of these may have been Thai. The Red Cross in Bangkok tests 50% of all blood donations on a random basis; by mid-February 1987 all of 4,000 tests had proved negative. An education campaign had not been launched because it might "create alarm".
"Patients of Middle Eastern origin with AIDS have been treated by doctors in London and the United States"

One expert, Dr Praphan Bhanupark, was quoted as saying that there were 500 male prostitutes working in 26 gay bars in Bangkok and Pattaya, many of whom had a wife or girlfriend, and most of whom could be expected to have contact with 200 foreign visitors a year. Tests on prostitutes of both sexes are being conducted on a limited random basis.

VIETNAM: No cases reported by the end of 1986.

NORTH AFRICA & MIDDLE EAST

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<th>COUNTRY</th>
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Very few Middle East countries have reported cases to WHO. With the exception of Israel, most of those reported have been attributed to blood transfusion. Little information on the extent of homosexuality and i-v drug abuse as a means of transmission is available. At the first AIDS conference held in the region, the Kuwaiti Minister of Public Health claimed that the disease "will remain out of our region if we stick to the guidance of our Islamic religion". He added that Islam prohibits the practice of homosexuality, which he saw as "the basic cause of the disease". The WHO regional director and former Saudi Arabian health minister, Hussein Gezairy, was quoted as saying: "I see in this disease, which is essentially spread through abnormal sexual relations not permitted by any of the major religions, a reminder to the peoples of the world to return to religious principles and practices and refrain from irresponsible promiscuity". Patients of Middle Eastern origin with AIDS have been treated by doctors in London and the United States.

ALGERIA: No cases reported by the end of 1986.

BAHRAIN: No cases reported by the end of 1986.

EGYPT: Newspapers reported one case in a man who had returned from abroad at the end of 1986. No cases, however, were reported to WHO.

IRAQ: No cases reported by the end of 1986. It was reported in September 1986 that visitors would have to carry HIV-free certificates, but it is not clear if this has been implemented.

ISRAEL (34): The first case appeared in 1980. None of 5,000 blood specimens but 50 of 1,000 "possible AIDS connections" were found HIV-positive in early 1986 [GDSR, June 1986]. Three cases were reported in Ayalon prison at Ramat in mid-1986 [GDSR, Aug 1986].

KUWAIT: One transfusion-related case was announced early in 1986 and all blood donations are now screened [New Scientist, 30 Jan 1986]. An AIDS research centre is being established at Kuwait University in collaboration with WHO.

LIBYA: No cases reported by the end of 1986.

MOROCCO: No cases reported by the end of 1986.
OMAN: No cases reported by the end of 1986.

SAUDI ARABIA: Six transfusion-related cases resulting in death were reported early in 1986 and all blood donations are now screened [New Scientist, 30 Jan 1986]. Any donor found to carry the virus is promised free treatment [New Scientist, 10 April 1986]. A 1986 announcement that visitors would have to carry HIV-free certificates authenticated by their governments seems only to have been applied to migrant workers from Africa and southeast Asia. Dr Kazem Behbehani, chairman of the Kuwait AIDS Committee, has said that for reasons of cost and inadequate scientific know-how, such measures would be impossible to implement [Jordan Times (Reuter), 3/4 April 1986].

SYRIA: No cases reported by the end of 1986.

TUNISIA (2): The first two cases were reported in 1986.

TURKEY (2): The first two cases were reported in 1985.

UNITED ARAB EMIRATES: One transfusion-related case was reported early in 1986 and all blood donations are now screened. In November 1986, screening of 70,000 immigrant Asian workers revealed that one in 1,000 were HIV-positive [The Guardian (Reuter), 14 Nov 1986]. The Crown Prince of Abu Dhabi has donated $2.7 million to the health ministry for the purchase of equipment to detect AIDS [Kuwait News Agency].

YEMEN: No cases reported by the end of 1986.

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN: No cases reported by the end of 1986.
WESTERN EUROPE

AUSTRIA (54): The first cases were reported in 1984. Of the 34 cases (18 dead) diagnosed by April 1986, 22 (65%) were homosexual men, seven i-v drug abusers, three haemophiliac and one unspecified [A-F, Dec 1986]. In February 1987 0.07% (200 of 300,000) blood tests were HIV-positive. The fact that tests had been carried out secretly on all hospital patients and applicants for municipal jobs in Vienna aroused controversy, as did the statements by the magazine Der Wiener, which referred to AIDS patients as "terrorists and murderers", accusing them of intentionally spreading the disease [The Guardian, 4 Feb 1987]. In the southern Austrian city of Klagenfurt, foreigners applying for work permits must present a medical certificate that they are HIV-free [BHTD].

BELGIUM (207): The first cases were reported in 1983. Of the 139 cases reported by the end of 1985, 70% (95) were in patients of African origin, of whom Zaïreans accounted for 58% (81) [WER, 1986, 61 (17), 126]. Wealthy central Africans who are ill often seek treatment in Belgium, which accounts for the proportion of African AIDS cases there. All these cases were believed to be the result of heterosexual transmission. Belgium spent $2.25 million on research and blood screening in 1985 but reduced that sum to just $800,000 in 1986 [AN, 18/448].

CYPRUS (1): The first case was reported to WHO in October 1986.

DENMARK (131): The first case was seen in 1980. Of the 68 cases reported by the end of 1985, 91% were in homosexual men [WER, 1986, 61 (17), 126]. Mandatory screening of blood donors began on 1 January 1986; preliminary results in March showed an HIV prevalence of 0.01% [GDSR, May 1986]. That year the Internal Affairs ministry claimed there were about 10,000 seropositives in the country [AN, 4/121]. Studies showed a rise in seropositivity among healthy homosexual men in Copenhagen from 8.8% of 250 in December 1981 to 23% of 173 between June 1982 and March 1983 (BHTD, unpublished data). A two-year follow-up of 40 infected men showed none developing AIDS and only one

<table>
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<th>COUNTRY</th>
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developing ARC; none of 101 prostitutes in a late-1986 study was HIV-positive, a fact attributed at least in part to their use of condoms [BMJ, 1986, 293].

FINLAND (14): The first cases were reported in 1984. Eight of the 10 cases reported by the end of 1985 were in homosexual men [WER, 1986, 61 (17), 126]. Fact sheets on AIDS were sent to every home in 1986. HIV tests are available to all and routine for pregnant women. By January 1986 80 HIV-positive individuals had been identified, of whom 30 had symptoms and 10 were seriously ill [GDSR, April 1986]. Foreign workers may be screened for HIV [BHTD, unpublished data].

FRANCE (1,253): Cases were first recorded in 1983. Homosexual men accounted for 68% of cases by the end of 1985 [WER, 1986, 61 (17), 126]. Seropositivity studies have shown rates in blood donors varying between 0.019% in the north of the country and 0.109% in Paris, the respective rates in a group of 2,062 haemophiliacs being 16.2% in the north and 71.7% in Paris [GDSR, Sept 1986]. Another study has shown 0.25% seropositivity in blood donors in Paris, Nice and Marseilles [BHTD, unpublished data]. In 1986 screening in prisons showed 57% of i-v drug abuser prisoners were HIV-positive, while authorities estimate HIV prevalence in the prison population as a whole at 5-20% [GDSR, May 1986].

Traces of a new AIDS virus, LAV-2, but not HIV were found in the blood of a homosexual couple, one of whom had AIDS, while the other was symptom-free; the one with AIDS was believed to have been infected in 1983 [Brucker et al, The Lancet, Feb 1987, p. 223]. In one survey 3.7% (five of 134) prostitutes, and all of 12 male transvestite prostitutes, were found HIV-positive in 1986 [The Independent, 10 Jan 1987].

Despite recording the highest number of cases in Europe, the French public's attitude to AIDS early in 1987 was reported to be "more intrigued by the drama of the disease than its dangers". Most people still considered AIDS to be a homosexual problem. Alain Pompidou, the son of the former President, is head of the national AIDS committee but so far only $2 million has been allocated to a public education campaign in 1987 [BBC Radio 4, International Assignment, 24 Jan 1987].

GERMANY, WEST (875): The first cases were seen early in 1982. By the end of 1985 homosexual men still accounted for 78% of all AIDS cases [WER, 1986, 61 (17), 126]. Of cases reported by 30 May 1986, 3% (five of 488), had no identifiable risk factor [GDSR, Aug 1986]; this proportion rose to 3.6% (21 of 588 cases) by 29 August [GDSR, Oct 1986]. Berlin (which has the largest homosexual community) has reported 21% of the country's AIDS cases, although the city of Frankfurt had the highest proportion per capita (142.6 per million inhabitants). In 1983 10% of 927 i-v drug abusers tested HIV-positive; the proportion had risen to 24% in 1985 [Deutsche Medizinische Wochenschrift, 1986, 11 (15) 567-570]. There are an estimated 150,000 i-v drug addicts in the country, of whom 30% are women, according to one specialist [AN, 11/293]. 20% of prostitutes were HIV-positive according to a government survey in late 1985. In West Berlin 48.5% of tested prostitutes (many of whom were drug addicts) were seropositive. Cases of AIDS were doubling every eight months in November 1986, in which year the government spent $6.3 million on research and $4 million on a public education campaign [AN, 18/448]. One source [A-F, Dec 1986] reported that the prevalence of HIV among blood donors was 0.17%.

GREECE (35): The first case was registered in 1983. Of the 13 cases reported by the end of 1985, one was haemophilic, six were homosexual men, and six fell into the no-known risk group [WER, 1986, 61 (17), 126]. Seropositivity was reported in 1986 as ranging from 0.02% in blood donors to 45% in haemophiliacs, with 3.4% among prostitutes and 2.1% among drug addicts [GDSR, June 1986].
GREENLAND: No cases reported by the end of 1986. According to one source none of 1,500 blood samples from Greenlanders being treated for STDs was HIV-positive; according to another, the first HIV-positive individual was identified in October 1985 [AN, 4/121].

ICELAND (4): The first cases were reported in 1986. The government is reported to have launched a vigorous media campaign on AIDS, featuring a series of newspaper adverts picturing various couples and detailing in explicit language how they could transmit the virus, and how to prevent this. It is rumoured that the government is considering a programme to screen the entire population (some 200,000 individuals) for HIV.

IRELAND (14): The first cases were reported in 1985; half were in homosexual men, the other half were in i-v drug addicts, some of whom were also homosexual [WER, 1986, 61 (17), 126]. In early 1986 15% of 300 prisoners who volunteered for tests were seropositive [The Daily Telegraph, 31 Jan 1986].

ITALY (460): The first case was seen in June 1982. To date, 59 AIDS victims have died. 44% of all cases to 31 December 1985 were i-v drug abusers (56 men and 18 women), 12 cases were in children under five years old (including eight under one year old). All the pediatric cases were the children of drug abusing women. 40% (67 cases) came from the Milan area [WER, 1986, 61 (9) 64]. By mid-1986 the percentage of i-v drug abuse cases had risen 51% (29% were homosexual, while 6% were in the children of drug addict mothers). Although cases continued to double every 6-8 months, by the end of 1986 only a "low-key" publicity campaign was being considered [AV, 18/448]. In early 1987, 21 children were believed to have developed AIDS, all from drug-addicted mothers.

One expert calculated that 10,000 Italians were infected [The Independent, 5 Jan 1987]. In February 1987 it was announced that condoms were to be distributed to the 1,000 inmates of Bologna's (men-only) prison. Italian bishops have recommended total abstinence as the only way to control AIDS. There have been a number of reports of suicides by people who thought they might have AIDS. [The Guardian, 2 Feb 1987].

LUXEMBOURG (6): The disease was made notifiable in May 1984 and the first case was recorded in 1985. Blood donations have been tested as a matter of routine since December 1985.

MALTA (5): Cases were first registered in 1986. Two were haemophiliac (one pediatric), three in homosexual men (one from the United Kingdom).

NETHERLANDS (218): The first case was seen in 1982. By the end of 1985 there had been 98 cases with 69 deaths, with 91% (89) of cases found in homosexual men. Only 0.004% (15 out of 350,000) blood donors surveyed between June 1985 and July 1986 were seropositive. In Amsterdam there has been a campaign specifically directed at drug addicts to prevent the spread of AIDS; as well as information it included free sterile needles and syringes in exchange for those used and free condoms to addicted prostitutes. Initial studies showed HIV infection stabilised at a relatively low (5% of addicts, 23% of addicted prostitutes) proportion, indicating that this campaign may be working. There are an estimated 7,000 addicts in the city [The Lancet, 21 June 1986 (1435)].

NORWAY (35): The disease was made notifiable in August 1983 and the first cases were identified in 1984. By the end of 1985, 15 of 17 cases were homosexual men [WER, 1986, 61 (17) 126]. In early 1986 health officials projected 350 cases by 1989 [GDSR, April 1986].
PORTUGAL (46): The first case was seen in 1983. By the end of 1986 11 of 18 cases were homosexual men, one was in a haemophiliac and the rest were of unidentified origin [WER, 1986, 61 (17), 126]. Testing of drug addicts early in 1986, before that category registered in case numbers, revealed that 23% (19 of 83) men and 22% (seven of 32) women were HIV-positive [Lecour and Sears, A-F, Oct 1986 (538)].

SPAIN (242): The first case was identified by 1981. Cases up to 3 December 1985 were 43% i-v drug abusers, 26.5% gay or bisexual men and 20.5% haemophiliac [Boletin Epidemiologico Semanal, 1985, 40, 316-318]; similar percentages were confirmed in March 1986 [GDSR, July 1986]. It was reported in early 1986 that two out of every 1,000 Spanish soldiers were HIV-positive; an army education campaign was begun [GDSR, April 1986]. At the same time 0.06% (24 of 45,523) blood donors were HIV-positive (in Madrid 0.09% — 13 of 14,522). Testing of high-risk groups in 1986 showed 68% seropositivity in haemophiliacs, 64% in i-v drug abusers, 60% in the children of HIV-positive women and 13% in homosexual and bisexual males without a history of drug abuse [GDSR, April 1986]. In mid-1986 more than a third of prisoners in a Majorca prison were said to be HIV-positive [The Daily Mirror, 18 Sept 1986].

SWEDEN (93): The first cases were reported in 1983. AIDS was classified as a venereal disease on 1 November 1985, [GDSR, Feb 1986] allowing enforced medical custody of HIV-positive individuals if they did not obey given instructions [AN, 18/455]. Health officials at that time predicted 2,000 cases and 200,000 HIV-positive by 1990.

At the end of 1985, 85% of cases were homosexual men, with haemophiliacs comprising most of the rest [WER, 1986, 61 (17), 126]. Screening of a group of 32,282 individuals (with a high proportion in high-risk groups) between 1 November 1985 and 31 March 1986 found 935 HIV-positive; 30.8% of these were i-v drug abusers, 9.8% had received blood products and 1.1% were heterosexuals with no known risk factor [GDSR, June 1986]. Of 260,000 blood donations, 0.002% in 1985 were confirmed seropositive [GDSR, April 1986]. In mid-1986 a survey of 3,900 men and women in Stockholm indicated that men were reporting that their sexual habits had changed because of the disease [AN, 12/323].

SWITZERLAND (192): The first two cases were seen in 1980; leaflets on the disease were sent to all households in March 1986 [A-F, Dec 1986]. Of the 138 cases reported by 30 June 1986, 10% (14) were women, 65% (90) were homosexual men with no history of drug abuse, 14% (19) were men and women with a history of drug abuse and 2% (three) were children. Although all blood donations and blood imports are now tested, it is estimated that 20% of haemophiliacs are infected with HIV [WER, 1986, 61 (37), 286]. Switzerland continues to have the highest per capita rate of AIDS in Europe.

UNITED KINGDOM (638): The first three cases were identified in 1982 and to the end of January 1987, there had been 293 deaths. There were 28 new cases in 1983, 77 in 1984, 167 in 1985 and 335 in 1986. Of these 89% were homosexual men, 1% drug abusers, 0.4% drug abusers and homosexual, 4% haemophiliac, 2% transfusion recipients, 3% heterosexual, 0.4% children and 0.2% other. Of all cases, 78% were in the London region.

Seropositivity studies show the virus spreading throughout the country. In 1984 13% of homosexual men attending a STD clinic were HIV-positive; in 1985 the rate was 24% [GDSR, April 1986]. The screening of two million blood donors between October 1985 and July 1986 showed HIV positivity nationally to be 0.002%. Over 4,000 individuals were confirmed seropositive by the end of 1986, although estimates as to the total infected varied from 30,000 to 100,000.
In Scotland very high rates of HIV infection were observed in i-v drug abusers; 60.6% of all seropositives were in Edinburgh, a fact attributed to the frequent sharing of needles among Edinburgh's heroin addicts. The city police have for some time discouraged the free distribution of sterile needles to addicts. Almost 30 HIV-infected babies had been born in Edinburgh by the end of 1986 [Scottish Home and Health Dept., Sept 1986].

In late 1986 the government launched a $30 million press, radio, and television education campaign. The slogans "AIDS: Don't die of ignorance" and "AIDS: How big does it have to get until you take notice?" drew attention both to the disease and to the leaflets sent to every household early in 1987. These gave detailed information on AIDS and its means of transmission. Although the campaign was criticised as not being explicit enough on sexual matters and by others, notably the churches, for not placing greater emphasis on the morality of one sexual partner for life, abroad it was held up as a model for other governments to follow.

Government opinion polling showed that the campaign had failed to impress, or change the sexual behaviour of more than half of the sampled population. Those surveyed thought that the message had not been explicit enough. But health minister Norman Fowler, after a well-publicised visit to AIDS hospitals and researchers in New York and San Francisco, stressed once again the seriousness of the UK epidemic and his commitment to do something about it.

I-v drug addiction is fuelling the second wave of the UK AIDS epidemic, and ministers expect at least 4,000 deaths by the end of 1989. Treatment of one AIDS patient costs about $25,000. They are worried about the ability of the health service to absorb these costs. Close attention is being paid to the hospice system in San Francisco (see USA section). Meanwhile, the burden of care outside hospitals fell primarily on the Terrence Higgins Trust with its "buddy system" of volunteer help, modelled on the system used by gay organisations in the USA.

Ministers are said to be considering the institution of a system of automatic HIV screening for blood samples taken from patients with non-AIDS illnesses.

EASTERN EUROPE

National AIDS programmes involving the setting up of special laboratories, the screening of blood and limited public education campaigns, have been started in most Eastern European countries. Seropositivity in Eastern Europe was first detected in 1985 and cases of AIDS appeared the following year. With the exception of Yugoslavia, where drug addiction is the major transmission route, seropositivity was generally restricted to haemophiliacs and homosexuals. AIDS cases have also been reported in individuals from Africa, generally students.

ALBANIA: No cases reported by the end of 1986.

BULGARIA: No cases of AIDS had been reported by the end of 1986. A national programme which includes establishing laboratories to screen blood and the education of health care workers has been set up. "Concrete measures for health information activities are carried out among the population at present," the Health Ministry told WHO in April 1986.

CZECHOSLOVAKIA (6): The first suspected case of AIDS was in a man from the Congo in 1983, followed by a Czech bisexual who died in March 1984. Seropositivity tests were not performed, however, and the cases were not confirmed. The first confirmed AIDS case occurred in 1984 and died in Bratislava in March 1985. The patient was a 36 year old bisexual man who is believed to have been infected on visits to Paris. Two more cases, reported in 1986, were in a 21 year old homosexual man from Prague who had frequently travelled abroad and his
36 year old partner. Of 2,000 blood tests from various risk groups examined by the end of February 1986, only two were seropositive.

In January 1984 standardised instructions on how to deal with suspected AIDS cases were issued, AIDS laboratories were set up and a pilot study to screen risk groups and blood donations was initiated. The government also announced plans to educate the general public through television, radio and the press [Masar & Walter, paper presented to WHO meeting, Graz, Austria, April 1986 & WER 1986 61(8), 59].

EAST GERMANY (1): The first case, a haemophiliac who died of AIDS, was reported in December 1986 [The Independent, 23 Dec 1986]. The government had earlier stated that there were "a few" seropositives in homosexual men and nationals from central Africa. The Ministry of Public Health set up a national AIDS committee in 1983. Consultation centres have been established to "look after carriers of antibodies as well as to advise the citizen and the medical staff". [Sonnischen, paper presented to WHO meeting, Graz, Austria, April 1986].

HUNGARY (1): The first two AIDS cases were reported by the end of 1986, one as a result of blood transfusion, the other in a homosexual man. There are also six or seven further cases of ARC of unidentified risk [Pers. comm., Nov. 1986, source wishes to remain unidentified]. Following the discovery of 40 HIV-positives (of whom half were haemophiliacs) in 1985, screening of blood donors began in January 1986 [AN, 4/121]. By the end of 1986 the number of HIV-positives had risen to 100-110.

POLAND (1): The first death of an AIDS patient was reported in October 1986 [The Guardian, 8 Oct 1986]. 14 out of 8,262 samples taken between June 1985 and March 1986 were HIV-positive; these included 2% (4 of 199) of homosexuals tested, 1.5% of haemophiliacs (7 out of 482), 0.3% of prostitutes (2 out of 668), and one baby, the child of one of the prostitutes. A further survey revealed that of 68 drug addicts and 7,000 hospital patients and low-risk blood donors, none were HIV-positive [Magdziak, paper presented to WHO meeting, Graz, Austria, April 1986]. 15 of 30,000 individuals (0.05%), many from high-risk groups, were found HIV-positive according to an August 1986 report [GDSR, Aug 1986].

An article in the influential magazine Polityka in late 1985 argued that Poland needed an officially recognised gay movement to promote the ideas of gay liberation as developed in the west and to educate homosexuals and the general public on AIDS. A lengthy, often supportive correspondence followed the article, but no such organisation has as yet been set up. [Eastern Europe Information Pool Report, HOSI, Vienna, July 1986].

ROMANIA (2): One AIDS case was reported to WHO in 1986.

USSR (1): 12 cases, seven of which were from Africa, were reported to PICA in June 1986 by Professor Viktor Zhdanov. The first case was said to be in a 14 year old girl, detected in September 1984. The Ministry of Public Health, however, denied that any of the cases conformed to the US Centers for Disease Control definition of AIDS [WHO, AIDS Surveillance in Europe, report no. 10]. No figures have been given for seropositivity. WHO was notified of one case in November 1986.

In 1985 the Deputy Minister of Public Health, Piotr Burgasov, was quoted in Literaturnaya Gazeta as saying that the possibility of a massive spread of AIDS in the Soviet Union does not exist because homosexuality is severely punished under the Soviet Penal Code. Until recently Soviet officials also denied the existence of drug abuse within the USSR, but it is now officially admitted that drug abuse, including heroin addiction, is a growing problem. (Radio Moscow has also quoted
"A BBC report claimed that AIDS in Australia was spreading faster than anywhere else in the western world except the USA."

the theories of a few British and US doctors that AIDS is an artificial virus created by the US military in defence department laboratories [AN, 16(412)]. Soviet and US government scientists met in 1986 to consider ways of cooperating on AIDS research.

YUGOSLAVIA (8): The first two cases were reported to WHO in 1985, one in a homosexual and one in a person from Namibia; a haemophiliac was diagnosed with AIDS in 1986. Of 24,219 seropositives tested by March 1986, 0.9% (219) were HIV-positive. Of these 75% were i-v drug abusers. One-third of the drug abusers tested were HIV-positive, as were 2.5% of the homosexuals, and 12.6% of the haemophiliacs. A national AIDS committee was set up in December 1983. In November 1984 the testing of blood donations was initiated in more than 40 towns, and in September 1985 universal blood donor screening was initiated. Leaflets and a book intended for the general population have also been published [WHO, AIDS Surveillance in Europe, report no. 10].

OCEANIA

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>POPULATION</th>
<th>DATE REPORTED</th>
<th>REPORTED CASES</th>
<th>REPORTED CASES/100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>15,700,000</td>
<td>Jan 1987</td>
<td>382</td>
<td>2.4</td>
</tr>
<tr>
<td>New Zealand</td>
<td>3,300,000</td>
<td>Nov 1986</td>
<td>22</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Cases in Australia and New Zealand have both followed the western pattern, predominating among homosexuals and haemophiliacs (although there have also been a few well-publicised cases arising from semen donation in Australia). With the exception of French Polynesia, which includes the tourist destination of Tahiti, there have been no reports of seropositivity or AIDS cases elsewhere in the area; lack of testing could be a reason for this. (Hawaii included in US statistics.)

AUSTRALIA (382): The first case was seen in 1982. Of the 159 cases (of which 70 had died) notified by January 1986, 89% (414) were homosexual men. No cases solely due to i-v drug abuse were reported by that time. Four of the cases were children under the age of 10. The majority (69%) were in the state of New South Wales where the capital Sydney has a large homosexual community. The proportion of seropositives was: Victoria 13%, Queensland 10%, Western Australia 6%, the New Territories 1% (2 cases) and Tasmania 1% (1 case). By the end of April 1986, the number of cases had risen to 203 [WER, 1986, vol. 61, no. 22, p. 168].

In August 1986 it was reported that cases were doubling every 8 months and 23% (80 out of 350) patients seen each week at one STD clinic in Sydney were HIV-positive [AN, 12/525]. A BBC report in January 1987 claimed that AIDS in Australia was spreading faster than anywhere else in the western world except the USA and predicted 3,000 cases by 1990 [BBC Radio 4, International Assignment, 24 Jan 1987].

Although a federal government AIDS task force has been set up and spending on research and education reached $7.2 million in 1986 [AN, 18(448)], by the end of that year there had been no mass education campaign. AIDS was still largely viewed as a problem for homosexuals. Only the states of Queensland and Victoria had initiated AIDS publicity campaigns. In a move that some saw as contradictory, the state of Queensland simultaneously promoted the use of condoms to prevent the spread of AIDS, while banning public condom vending machines to prevent promiscuity. [BBC Radio 4, International Assignment, 24 Jan 1987].
FRENCH POLYNESIA: No cases had been reported by the end of 1986. A 1985 serological study found 80 homosexual men, 29 female prostitutes and 33 recipients of blood transfusions HIV-positive. Blood donations are now screened and the exposed population monitored to prevent the spread of the disease [WER, 1986, 61(26)].

NEW ZEALAND (22): AIDS was made a notifiable disease in August 1983. All of the 10 cases seen between 1983 and 1985 were allegedly infected abroad. Of the 19 reported by mid-1986, all were male, 16 were homosexual, one was both homosexual and a drug abuser; the other two had unidentified risk factors [BHTD].

NORTH AMERICA

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>POPULATION</th>
<th>DATE REPORTED</th>
<th>REPORTED CASES</th>
<th>REPORTED CASES/100,000</th>
</tr>
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<tbody>
<tr>
<td>United States</td>
<td>238,000,000</td>
<td>Feb 1987</td>
<td>30,839</td>
<td>13.0</td>
</tr>
<tr>
<td>Canada</td>
<td>25,000,000</td>
<td>Nov 1986</td>
<td>809</td>
<td>3.2</td>
</tr>
</tbody>
</table>

CANADA (809): At least one case has been retrospectively identified as having occurred in 1979. Blood screening conducted by the Canadian Red Cross up to the end of 1985 indicated that 0.025% (45 of 182,324 samples) were HIV-positive [GDSR, March 1986]. A mid-1986 report gave the national average prevalence of HIV as 0.04%, ranging from under 0.01% in Saskatchewan to 0.07% in Quebec [GDSR, Aug 1986]. Of 755 cases recorded by mid-October 1986, 92% were from the provinces of Ontario, Quebec and British Columbia; 92% were male (of whom 81% were homosexual) [CDWR, 1986, 12(30), 129-30]. By July 1986 only 0.3% of cases were i-v drug abusers, compared with 17% in the US [AN, 12/320; Toronto Star, 14 Aug 1986]. Government response to the AIDS issue has been low key, with education being carried out mainly by gay organisations and the media.

UNITED STATES (30,839): The first AIDS cases were almost simultaneously recognised in New York and Los Angeles towards the end of 1980. Looking back through medical records, it was possible to identify cases of the disease as far back as October 1978. The number of cases appearing each year grew as follows: 1980:76; 1981:260; 1982: 958; 1983:2,758; 1984:5,503; 1985:9,221. By late 1985 the rate at which new cases appeared began to slow, the probable reasons for this being the saturation of the homosexual community by the HIV infection and the sexual practices within that community. Nonetheless, the US Health Department predicts a cumulative total of 270,000 cases by 1991, with more than half the victims dying by that year.

By late 1986 AIDS cases by risk factor broke down as follows: 1.4% of all cases were in children, 80% of whose parents either had AIDS, were a high-risk group, or were transfusion recipients. Of the adult male cases (94% of total), 70.3% were homosexual, 14.5% were i-v drug abusers, 8.5% both homosexual and drug abusers, 2.1% were heterosexual, 2.1% were blood-related cases and 2.5% had no known risk factor. Of the adult female cases (6% of the total), 52.1% were drug abusers and 26.7% had contracted the disease heterosexually. The black and hispanic communities were disproportionately represented — 25% of cases by 8 September 1986 were among blacks who constitute 12% of the general population, while 14% were hispanics, who constitute 6% of the population. Although homosexual transmission predominated, it was closely followed by drug abuse. Heterosexual transmission appeared to be a more significant factor among blacks and hispanics.
"One poll found that AIDS has had no effect on the way 92% of people conduct their sex lives" than in the white population, probably due to the high rates of i-v drug addiction in these communities. There is evidence that education measures largely aimed at the white population are not effective in reaching blacks and Hispanics. [MMWR, 24 Oct 1986, vol. 35 (42), 656-658, 663-666].

How quickly is HIV spreading into the general heterosexual population? One study has estimated that one in 15 of all San Franciscans are HIV-positive [BBC, Panorama, 26 Jan 1987]. Unpublished data from the New York City public health department indicates that a similar proportion of New Yorkers is infected. Tests on over 300,000 military volunteers carried out between October 1985 and March 1986 showed an average seropositivity of 0.15% — a high figure in comparison with the 0.04% HIV prevalence detected by blood bank screening programmes (where donors in high-risk groups are discouraged). Furthermore, the military study showed a ratio of seropositive men to women of 3:1, compared to 13:1 in AIDS cases at the time. This suggested a second generation of infectees — the sexual partners of those in current high-risk categories, particularly drug abusers — many of whom would in the next two or three years themselves develop the disease.

The federal government has been criticised for its slow and piecemeal response. By early 1987 there was still no federally-backed public education campaign, although the Surgeon-General, in a report in November 1986 had recommended a wide-ranging series of measures, including education on sexual matters and AIDS to begin at the age of eight. A comprehensive report prepared by a committee of the National Academy of Sciences recommended that a new office, responsible to the Secretary of Health, be established to promote and assess AIDS education, and that a major national AIDS campaign be launched. It urged the trial distribution of free

Some education campaigns have targeted special groups: a US leaflet for prisoners.
sterile needles to addicts, vigorous AIDS surveillance with strict confidentiality, and the expenditure of $1 billion annually on AIDS control. The committee opposed mandatory blood testing and urged that discrimination against AIDS victims or seropositive people would be counterproductive.

The US Public Health Service has estimated that the direct cost of care for 174,000 AIDS patients projected to be still alive in 1991 will be between $8-16 billion in that year alone. It has proposed a special commission to study ways of financing AIDS health care. Early education campaigns were launched by voluntary, almost exclusively gay, organisations. Raising public awareness has in many cases been taken over by city authorities, the most famous campaign being that of Los Angeles: adverts read "L.A. cars, like a mother" with a diminutive mother-figure keeping a watchful eye over her handsome, and presumably gay, sons.

There has been hostility to sexually-explicit advertising, particularly from the main churches, whose conservative elements oppose the promotion of condom use. But after 10 years of declining use, condom sales have risen 10% in the past year, with women making half the purchases. One controversial condom advert shows a young woman with the caption "I'll do a lot for love, but I'm not ready to die for it". A number of newspapers, including the New York Times, refused to carry the ad. Some health educators remain pessimistic about changing attitudes to condoms, maintaining that "We're a generation away from accepting condoms" [Time, 16 Feb 1987, p.28].

Although students interviewed by the media have frequently stated that the AIDS scare has made them very wary of casual sexual encounters, one poll found that AIDS has had no effect on the way 92% of people conduct their sex lives [Time, 16 Feb 1987].

AIDS, BLOOD TESTS AND INTERNATIONAL TRAVEL

The fear of AIDS has caused a number of governments to discuss, plan and/or implement the screening of visitors for HIV. The World Health Organization has called a meeting of experts, to be held in early March 1987, in order to discuss the need for and type of precautions which may be required.

Many of the countries already implementing measures already have sizeable AIDS epidemics within their borders; in this case it makes little sense to screen visitors. Other countries with restrictive regulations screen only visitors, and often only particular types of visitors (e.g. students). Where nationals of the country travel abroad, often to areas where AIDS is well-established, and remain unscreened, restrictions placed on visitors are of little practical value in preventing HIV infection.

But the most serious practical flaw in compulsory screening schemes is the fact that, between infection by HIV and the point at which the bloodstream begins to carry detectable antibodies against it, a time lag of weeks or months elapses. Thus in any such scheme many people who are carrying the virus will escape detection. And unless the target groups for restrictive immigration measures are retested every three months or so, the number escaping detection will be even higher.

The value of restrictive measures appears to be largely political rather than medical. In some cases they have been implemented by politicians against the advice of health officials, many of whom fear that such measures merely tend to keep sick people, or those who fear they might have contracted HIV, from seeking medical help.

On the international level, one problem which is going to arise increasingly is the question of the protection of the rights and health of travellers who are HIV-positive. With millions of people infected and millions more likely to become
infected, there is need for an international consensus on how travelling HIV carriers should be treated.

The following countries are openly considering, or have already decided on restrictive policies towards infected travellers; many others may be secretly considering such decisions. The information has been compiled from a variety of press and other sources. In each case an attempt has been made to verify the information by contacting the relevant national authority, but in a number of cases this was not possible since these authorities were sometimes purposefully vague. People contemplating travel to any of the countries below should not decide to be tested for HIV solely on the basis of information included here; a more complete statement of policy by the relevant national officials should be obtained before such a decision is made.

"Screening" of visitors may be carried out either by demanding a certificate which states that the person carrying it is HIV-negative, or by making blood tests on arrival mandatory.
<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>TYPE OF VISITOR</th>
<th>TYPE OF RESTRICTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Visitors suspected of having AIDS or being HIV-positive</td>
<td>Currently considering some form of restriction</td>
</tr>
<tr>
<td>Austria (Klagenfurt only)</td>
<td>Foreign workers</td>
<td>Must be certified HIV-negative</td>
</tr>
<tr>
<td>Belgium</td>
<td>Foreign students</td>
<td>Compulsory screening</td>
</tr>
<tr>
<td>China</td>
<td>Foreign students</td>
<td>Blood test on arrival; deportation if HIV-positive</td>
</tr>
<tr>
<td>Finland</td>
<td>Foreign workers</td>
<td>Screening to be introduced</td>
</tr>
<tr>
<td>India</td>
<td>Foreign students</td>
<td>Compulsory screening; deportation if HIV-positive</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Visitors suspected of having AIDS or being HIV-positive</td>
<td>Refused entry</td>
</tr>
<tr>
<td>Iraq</td>
<td>Visitors suspected of having AIDS or being HIV-positive</td>
<td>Blood test on arrival</td>
</tr>
<tr>
<td>Japan</td>
<td>Visitors suspected of having AIDS or being HIV-positive</td>
<td>Currently considering some form of restriction</td>
</tr>
<tr>
<td>Kuwait</td>
<td>Applicants for work permits</td>
<td>Must be certified HIV-negative</td>
</tr>
<tr>
<td>Philippines</td>
<td>Applicants for more than one year residence</td>
<td>Must be certified HIV-negative</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>Applicants for work permits</td>
<td>Must be certified HIV-negative</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>Visitors with AIDS or HIV positive</td>
<td>Deportation</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>Foreign workers</td>
<td>Screening; deportation if HIV-positive</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Visitors suspected of having AIDS</td>
<td>Refused entry</td>
</tr>
<tr>
<td>West Germany (Bavaria only)</td>
<td>Foreign students and visitors</td>
<td>Compulsory screening; possible registration of HIV-positives</td>
</tr>
</tbody>
</table>
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1. By March 1987, 91 countries had reported AIDS cases to the World Health Organization. Countries where HIV had been found to be present brought the total of those affected to more than 100.
5. Both the World Health Organization and the US Centers for Disease Control have produced "case definitions" of AIDS. These are sets of guidelines outlining symptoms and signs which physicians can use when attempting to diagnose AIDS.
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65. T.C. Quinn, ibid.
76. J. Desmyter, op. cit.
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SOURCES OF INFORMATION ON AIDS

Single copies of this dossier are available free to Third World journalists and Third World NGOs, but Panos cannot answer individual questions on AIDS. The following sources should be consulted:

The WHO Special Programme on AIDS (Avenue Appia 1211, Geneva 27, Switzerland; Tel: 91-21-11) publishes regular lists of the AIDS cases reported to WHO.

AIDS collaborating centres are or will be designated by WHO in most regions. Names and locations can be obtained from WHO regional offices: Alexandria, Egypt (Tel: 49-300-90/97); Brazzaville, Congo (Tel: 81-38-60-65); Copenhagen, Denmark (Tel: 29-01-11); Manila, Philippines (Tel: 521-84-21); New Delhi, India (Tel: 331-7804/23); Washington D.C., USA (202-861-3200).

The US Centers for Disease control (1600 Clifton Road, Atlanta, Georgia 30333, USA; Tel: 404-329-3311) publish a Weekly AIDS surveillance report giving a detailed statistical breakdown of US AIDS cases.

National AIDS committees have been set up in many affected countries to coordinate AIDS control and prevention policies.

Blood banks, often located in large teaching hospitals, may be able to supply information about blood test surveys and donor screening.

National Red Cross organisations are often knowledgeable about AIDS, particularly as it affects blood transfusion systems.

National family planning organisations can advise on condom use and availability and many will soon be offering information specifically on how best to avoid the risk of AIDS.

CURRENT INTERNATIONAL INFORMATION

The AIDS Bureau of the London School of Hygiene and Tropical Medicine (Keppel Street, London WC1E 7HT) compiles and distributes two of the most useful sources of international information; and "AIDS newsletter" which contains a round-up of AIDS information, both official and unofficial, and a monthly bibliographical update. At present both periodicals are obtained by subscription, which are expensive, but the bureau hopes soon to be able to reduce the rates for Third World subscribers.

The bureau also makes available its computerised AIDS Database for doctors and researchers who need critical bibliographies of the articles published on AIDS to date. Details are available on request.

Gay Men's Health Crisis (Box 274, 132 West 24th Street, New York City 10011, USA) and the Terrence Higgins Trust (BM AIDS, London WC1 3XX, UK) can supply samples of their AIDS education leaflets.