MANAGEMENT OF AIDS

A THESIS

BY

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SUMMARY

This thesis traces the origins of AIDS right from America through Europe to Africa. In essence, it is a comparative analysis of the occurrence of AIDS internationally and the efforts governments of the world are making in the fight against the disease, in the midst of the large number of people who have died or likely to die after contracting the disease. The thesis, whilst recognising the efforts being made in the prevention of the disease, provides some possible solutions in the management of AIDS.
CHAPTER I

INTRODUCTION

This thesis introduces and defines AIDS, its origin and development, the method of spreading the disease and the stages of AIDS. It covers the importance, the scope and the purpose of this research in relation to the sexual transmission of the disease. It looks further into major health issues that is the basis of this study on AIDS.

1.1 BACKGROUND OF THE PROBLEM

What is AIDS

The word A-I-D-S stand for Acquired Immune Deficiency Syndrome. Scientists have named the AIDS virus, Human T-Lymphotropic Virus Type III/Lymphadenopathy Associated virus (HTLV-LAV) or HIV(HUMAN IMMUNODEFICIENCY VIRUS). As a result, these names have been used interchangeably to call the virus. AIDS is a sexually transmitted disease of the blood in which the AIDS virus attacks and weakens a person's ability to fight infections. The AIDS virus attacks a person's immune system - the body's defense against sickness. People who have AIDS develop cancers, pneumonia, nervous and brain disorders because their immune system has been compromised and are highly susceptible to infections and opportunistic diseases. Although, researchers are working hard, till now (1988), there is no cure or vaccine for AIDS. While AIDS probably occurred in the United States as early as 1978, the first cases were reported in the medical literature in 1981. These reports noted the occurrence
of an unusual form of pneumonia caused by a parasite, pneumocystis carinii, and of cases of Kaposi's sarcoma, a rare form of cancer (Center for Disease Control, Atlanta, Georgia, 1981).

The AIDS virus launches a direct attack on helper T Cells (or T Lymphocytes, as they are also known), invading them in much the same way that the hepatitis virus homes in on cells in the liver. Once ensconed in the T cell, explains Lane (1986) of the National Institute of Health (Bethesda, Maryland), the virus prevents this vital cell from doing its job as "the initiator of all the immune system response". It turns the T cell off from being a lymphocyte and on to being an AIDS virus factory. Literally, the infected person is open to any kind of infection.

The figure 1.1 below shows the status of the immune system and onset of AIDS virus attack on the immune system.
1. When viruses enter a healthy body, they are detected and identified by macrophage cells. The macrophage cell alerts a T cell.

2. The T cell is activated and multiplies into several kinds of T cells. Helper T cells stimulate the B cells.

3. The B cells multiply and produce antibodies that attack and kill the invading virus.

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**AIDS VIRUS ATTACK**

1. When the AIDS virus attacks, it infects the helper T cells, first blocking their ability to recognize foreign substances, then changing the T cells into AIDS-virus factories.

2. Because the T cells no longer perform their infection-fighting role, invading viruses can roam free. Meanwhile, the damaged T cells produce AIDS virus, which invades other T cells.

Source: Time Magazine (1987)
Since the first reported cases in June 1981, by Center for Disease Control in Atlanta, Georgia, AIDS has baffled the experts. Dr. Gotlieb, an immunologist in the University of California, Los Angeles (UCLA) was among the first physician in the country to notice something strange among his patients in the winter of 1981. The first 4 cases were infected with an unusual lung disease called Pneumocystitis carinii Pneumonia (PCP), an "opportunistic infection" that strikes people when their immune system is weakened. Though tests showed their immune systems were severely depressed, all four were young men around 30 years old who had previously enjoyed excellent health. They admitted to be homosexuals, three of them with a history of many partners.

After these published reports in 1981, by Center of Disease Control, the CDC began getting reports from doctors in San Francisco and New York City who were seeing cases of PCP – in young homosexuals. Other infections were observed and were noted. Some patients developed the purplish lesions of Kaposi's Sarcoma, a rare skin cancer. They had other infections as well: Candida Albicans - a fungus that coats the mouth and throat, making it difficult and painful to speak or eat; Herpes, a virus; Toxoplasma Gondii and Cryptosporidium which causes diarrhoea.

By late August 1981, less than 3 months after the initial report, the Center for Diseases Control in Atlanta, Georgia had received reports of one hundred cases of AIDS. It was being called the "Gay Plague" because most of the cases were homosexuals. At present, the AIDS virus is not only found among homosexuals but also in heterosexuals.
The Methods of Spread of AIDS are:

(a) Through Sexual Intercourse – either heterosexual or homosexual intercourse can pass on the virus to their partners,

(b) Shared Hypodermic Needles and syringes – it is common among drug-addicts using unsterilized needles and syringes,

(c) Pregnant Mothers to Newborns – an infected mother can pass on the virus to her child, before, during and after pregnancy,

(d) Blood Transfusion – contaminated blood and blood products can pass on the virus to non-infected contacts.

There are currently two known Types of AIDS. These are:

(a) AIDS Related Complex (ARC). This is caused by a condition caused by the AIDS virus in which the patient has specific set of clinical symptoms and is antibody positive for AIDS. Its signs and symptoms include, loss of appetite, weight loss, fever, night sweats, skin rashes, fatigue, lack of resistance to infection and swollen lymph nodes.

(b) AIDS – This is a condition in which there is a positive antibody for the AIDS virus, a suppressed immune system and an indication of additional infections. The signs and symptoms are, persistent cough and fever associated with shortness of breath or difficult breathing – probable onset of Pneumocystis Carinii pneumonia, and multiple purplish blatches and lesions on the skin – signs of Kaposi's Sarcoma.
1.2 STATEMENT OF THE PROBLEM

As of November 1, 1981, the Federal Centers for Disease Control in Atlanta, Georgia (CDC) had received reports of 45,436 Americans with AIDS, 25,933 of whom had died. (Stars and Stripes, 1987). The CDC estimates that the disease will strike 270,000 Americans and will kill 179,000 by the end of 1991. The Director of World Health Organization (WHO) in Geneva, Dr. Mahler estimates that there has been 100,000 cases world-wide in the past 5 years and that 5-10 million people are now infected with the AIDS virus. In 1991, there will be as many as 3.5 million AIDS cases and 100 million infected with the virus. (Foreign Service Journal, May 1987).

According to the above statistics as reported by the Centre for Disease Control (CDC) and World Health Organization (WHO), the AIDS virus is spreading at a very alarming rate. The AIDS virus is fatal and it may not manifest itself in a person up to 10 years. The AIDS epidemic has brought about fears world-wide especially in the public sector. Therefore, the central question being raised is, why is the AIDS virus spreading fast, and how can it be managed and controlled effectively before it wipes out the human race?

1.3 PURPOSE OF THE STUDY

The purpose of the study is to examine and analyze the factors that have led to the development of AIDS in the United States of America, and compare this data to the world-wide data on incidence of AIDS. It is expected that the researcher will be able to present to management and health officials, solutions allowable with in the framework
of the study in curtailing the spread of the deadly virus. It
also examines information, ignorance and the high incidence of AIDS
among the high risk groups. In particular, the following questions
are addressed:

The major questions which this thesis is addressing itself are:

(a) How is AIDS spread?

(b) Is it spreading because the public lacks the information about
the disease or is it because the method of information dissemin-
ation is not sufficient and relevant?

(c) Is the public understanding the severity of the disease? Is
the information passed very sophisticated that the public
cannot understand it properly?

(d) Is the public taking too many chances or continues to risk
their lives because of misconceptions that AIDS cannot be
contacted unless one belongs to the high risk groups?

1.4 IMPORTANCE OF THE STUDY

The importance of the study is to bring about a better under-
standing of the underlying processes that cause the transmission
of the AIDS virus. It is also intended to highlight ways and means
of managing AIDS which health organizations can use in minimizing
its spread. As a student and health professional, the author is very
much interested in understanding the AIDS epidemic, so she can
better serve her community as a resource person. It is through
understanding the problem that the author can give accurate infor-
mation about AIDS. As long as there is no cure for AIDS, it is
by educating the public that the health personnel can help arrest the transmission of this killer disease.

1.5 SCOPE OF THE STUDY

This thesis includes facts about the cause, method of spread, types of AIDS, signs and symptoms and the significance of proper management of communication and information about AIDS and how information must be appropriate to be effective. It also include recommendations for effective management of AIDS.

1.6 METHODOLOGY FOR ANALYSIS

Data was collected from secondary sources, i.e. from numerous reports and readings on AIDS. Most reports in the study concentrate on AIDS in the United States of America since it has the most cases and variety of documentation on AIDS. However, the study also analyzes data obtained from other countries and compares these data with the American data on the incidence, growth and development of AIDS.

This also uses the secondary sources based on health information given by the United States Surgeon General, and other health agencies. This report has been documented based on different health issues about AIDS from 1985-1988. Numerous readings based on newspapers and magazines articles were used. For technical definitions, medical articles and readings were used for documentation proposes.
CHAPTER II

LITERATURE REVIEW

This chapter introduces the different documentations about AIDS in the medical journals and provides a better insight to the understanding of the immune system when ravaged by the AIDS virus. It also talks about the tests for AIDS in individuals who are being screened for the presence of AIDS antibodies.

A research conducted by Haseltine (1985) revealed that the AIDS virus has a unique genetic component that allows it to reproduce itself as fast as any other kind of virus. (Journal Cell, 1985). In the process of rampant replication, the AIDS virus destroys its home, the T Cell. Thus, it is a peculiar feature of this disease as it progresses. The helper T cells disappear and the AIDS virus takes over, causing the immune system to be depressed and making a person susceptible to any kind of infection.

Lane (1985) of National Institute of Health, Maryland, explained that the AIDS virus directly attacks the helper T cell (T lymphocytes) and prevents the cell from doing its job as "the initiator of all the immune system response". He concluded that the T cell is turned off from becoming a lymphocyte and instead the cells are changed into AIDS virus factories.

Haseltine and Lane (1985) say that, in normal circumstances, the body's immune system responds to an infection by producing antibodies against the disease. When viruses enter a healthy body, they are detected and identified by macrophage cells (a cell that engulfs or fights any foreign substance). The macrophage cell alerts a T cell
(a lymphocyte which is responsible for the phenomena of cellular immunity). The T cell is activated and multiplies into several kinds of T cells. Helper T cells stimulate the B cell (a lymphocyte which is responsible for the production of humonal antibodies). The B cell multiplies and produces antibodies that attack and kill the invading virus. Based on this theory of immune response, Haseltine and Lane (1985) have explained the effects of the HIV virus on the cells.

Gotlieb (1981) an immunologist from the University of California, Los Angeles (UCLA), one of the first physicians in the United States of America to report the first cases to the Federal Centers for Disease Control (CDC), found out that his patients were suffering from an unusual lung infection called Pneumocystitis Carinii pneumonia, whose typical victims were cancer patients and transplant recipients. The four cases showed that their immune systems were severely depressed whereas their previous health histories were excellent. The patients were homosexuals with history of multiple partners. His reports to the Center for Disease Control (CDC) in Atlanta, Georgia, was the first of published cases of AIDS, a new ailment. Due to Gotlieb's early recognition of a new illness, it paved way for other physicians to report such cases to CDC. On the other hand, reports in Africa found out that AIDS was almost entirely a heterosexual disease in the Central African countries of Zaire, Rwanda and Burundi; where it affected women and men in equal numbers. Similarly, a Canadian researcher 1981, working in East Africa, found out that prostitution seemed to have played a key role in the transmission of AIDS in African and many of the affected males were
heterosexuals who had a large number of sexual partners, whilst virologist Myron Essex of the Harvard School of Public Health, United States of America, reported that as many as one out of every 20 people is infected (though not necessarily ill) in Africa's Aids-belt which includes parts of Kenya, Uganda and Tanzania. He pointed out that conditions especially in Third World countries that may have promoted the disease which include use of re-use of unsterilized needles in many small clinics and possibly, even local rituals that involved sacrifice and the exchange of blood.

Whitside (1985) reported that squalid conditions, poverty and semi-tropical environment could have played a role in the high incidence of Aids in Haiti and Bell Glade (FLORIDA) where 46 cases of AIDS were reported in a population of 19,000 people. It has the most cases of AIDS in the United States of America. He also suggested that unhygienic practices and a high rate of tuberculosis could have contributed to the high number of AIDS cases in that part of the country.

The prevalence of the AIDS virus in Central Africa has led, Essex et al (1985) to speculate that the disease originated in Africa. They believe that the disease originated from the African green monkey found especially in Central Africa. In sampling the blood of 200 green monkeys from this region, Essex found that 70% were infected with a virus similar to the one that causes Aids in humans. Curiously, the virus did not seem to harm the monkeys, a fact that might hold important clues for further research. Essex suspected that in the past 20-40 years, the virus had tended to spread
from monkeys to man – other viruses had made this leap – notably jungle yellow fever virus and the green monkeys often live and one in close association with people and frequently bite them. How the disease could have travelled from Africa to United States and Haiti, and found predominantly in homosexuals is not yet clear. Further research may be needed to unravel this mystery. However, one intriguing clue, reported by Pio: (1985), Institute for Tropical Medicine, Antwerp, Belgium, is that several thousands of Haitians lived in Kinshasa, Zaire, from the early 1960's to the mid-1970's and most of them, have since moved to North America and Europe.

The United States Department of Health Surgeon General (1986) reported that the AIDS virus can be transmitted only through sex, use of infected or contaminated needles and syringes, through contaminated blood and infected mothers to new borns. The report further noted that men who have sexual relations with other men are especially at risk – about 70% of AIDS throughout United States are male homosexuals and bisexuals. Infections result from a sexual relationship with an infected person. The risk of infection increases according to the number of sexual partners one has, male or female, the more partners one has, the greater risk of becoming infected with the AIDS virus.

According to the report from the Surgeon General of the United States Public Health Service (1986) on the spread of AIDS, the AIDS virus is found in several fluids and a person acquires the virus during sexual contact with an infected person's blood or semen and possibly vaginal secretions. The virus then enters a person's blood stream through the rectum, vagina or penis. Small (unseen by the naked eye) tears in the surface lining of the vagina or rectum may
occur during insertion of the penis, fingers, other objects, thus opening an avenue for entrance of the virus directly into the blood stream; therefore, the AIDS virus can be passed from penis to rectum and vagina and vice-versa without tear in the tissue or the presence of blood. It also follows that oral sex with an infected person can transmit the virus. The report further points out that drug abusers who inject drugs into their veins are another population group at high risk and with high rates of infection by the AIDS virus. Users of intravenous drugs make 25% of the cases throughout the country. The Aids virus is carried in contaminated blood left in the needles, syringes, or other drug-related implements and the virus is injected into the new victim by reusing dirty syringes and needles. Even the smallest amount of infected blood left in a used needle in a syringe can contain live AIDS virus to be passed on to the next user of these dirty implements. He further states that contaminated blood and blood products pose a great threat in spreading the disease, definite risk in Third World countries because blood donations are often not screened. Some persons with hemophilia (blood clotting disorder that makes them subject to bleeding) have been infected with the AIDS virus, either through blood transfusion or the use of blood products that help their blood clot. This group represents a very small percentage of the cases of AIDS throughout the U.S.A. On the other hand, if a woman is infected with the AIDS virus and becomes pregnant, she can pass the AIDS virus to the unborn child. Approximately one third of the babies born to AIDS-infected mothers will also be infected babies, will eventually develop the disease and die. Several of these babies have been born to wives of hemophiliac men infected with AIDS virus by way of contaminated blood products. Some babies have also been born to women infected
with the AIDS virus.

The Department, however, points out that the AIDS virus is not spread or transmitted by casual contact such as kissing, hugging and shaking hands, through insects such as mosquitoes, pets such as dogs, cats and domestic animals or tears and saliva in humans. Although, AIDS virus has been found in tears and saliva, no assistance of transmission from these body fluids has been reported. Furthermore, according to the Surgeon General of the United States Public Health Service (1986), casual contact in the home, in the school and in the work-place do not pose any threat in the transmission of AIDS. For instance, studies have been done and are continuing on "House Mates" patients, i.e. parents, relatives, and live-in friends - where one or more individuals have Aids or AIDS-related complex (ARC). These situations in which these people lived were described as chaotic and untidy. They shared eating utensils, bottles, and even toothbruses. They slept in the same beds. In over 2 to 6 years of study, none has developed AIDS or even a positive antibody test. The same result has been reported in other studies of friends or family members who have cared for AIDS victims.

Writing on AIDS in schools and work-places, the American Red Cross says that not one case of AIDS is known to have been transmitted in a school, day care or foster care setting. AIDS is not spread through the kind of contact children usually have with each other such as touching, hagging or sharing meals or bathrooms.

On the other hand, according to the Science Magazine, (July 1987), the possibility of spread of AIDS by insects is remote. Quoting a meeting
hosted by the office of Technology Assessment in Washington D.C., the
magazine says that;

"...if insects were a factor, sig-
nificant number of children would
also be infected with the virus;
but they are not, even though chil-
dren get their fair share of insect-
bites".

However, at the theoretical level, according to Jaffe (1987),
there are 2 ways in which a blood insect can spread a disease: biolo-
ically and mechanically. Biological transmission occurs when an
insect injects blood infected with the virus which replicates inside
the host eventually finding its way to the insect's salivary glands.
Saliva may then be secreted by insects during feeding to keep blood
from coagulation. Unlike some particularly nasty viruses such as
yellow fever, dengue, and encephalitis, there is no evidence to-date
to suggest that the AIDS virus replicates inside insects, and thus
biological transmission of AIDS is impossible. The possibility of
mechanical transmission lies in the volume. The scientists say, bio-
logy is quantitative - the mouth of a mosquito or bed bug does not
hold enough residual blood to give an infectious dose. Jaffe et al
(1987), estimated the chances of inoculating a single unit of blood
from a mosquito to be one in 10 million. There has been no evidence
to indicate that HIV virus is being transmitted by insects. It remains
that the high risk groups are homosexuals and intravenous drug users.
In Africa, the disease afflicts men and women equally.

On progression of the disease, the Surgeon General (1987) says
that after infecting a person the virus progresses through three
stages. These stages are:
a) Asymptomatic Carrier Stage – where the person feels fine but can spread the disease through close interpersonal contact.

b & c) Infection to the fully manifested and uniformly fatal AIDS.

Such viral and parasitic diseases as malaria, amoebiasis, hepatitis and Epstein-Barr virus infection (monoculeosis virus) have been cited as possible precipitating factors.

Similarly, it has also been suspected that the immune stimulation from vaccination may activate a latent HIV infection into destructive activity. Immunizations and vaccinations are discouraged for patients with suppressed immune deficiency. It should be noted that concerns about vaccination of adults with HIV infection differs in children with HIV. For children exposure to common childhood disease is inevitable and vaccination is preferable to disease. In addition to the possible role of infection and vaccination, other factors, such as drugs, alcohol, poor nutrition, stress and fatigues, may also contribute to the problem.

The proportion of people with the HIV infection who will progress from the symptomless state to fully manifested AIDS is unsettled. Only 2 years ago, the data indicated that 5-10% of people with antibodies to the AIDS virus would progress to the disease. More recently, the United States Public Health Surgeon General and National Academy of Science, produced estimates of 20-30%, 25-50% respectively. In November 1986, a German group estimated that as many as 75% of those currently infected with the HIV will develop AIDS over 7 years. Similarly, it was recently noted that a group from San Francisco, only 38% remained asymptomatic after 6 years of follow-up – (United

After a person becomes infected with the virus, the disease may either remain stable for a variable period of time or progress. Progression occurs because the virus attacks the body's defense against infection and cancer. With immune system damage or compromised, people become vulnerable to the life threatening diseases which constitute the medical problem of AIDS. Once a person becomes infected with HIV, he or she is a lifelong carrier and can infect others.

According to the United States Surgeon General, AIDS is diagnosed by the appearance of pneumonia and other persistent infections, and by tests that show damage to the immune system and by positive tests for antibodies to the AIDS virus. These tests are:

(a) ELISA TESTS

This is a blood test that detects any antibodies the body produces in response to the AIDS virus. Any antibody present binds to viral proteins on a plastic surface—a chemical reaction then produces a colour change. Running the test takes about 3 hours. If the result of the Elisa is negative, test stops, since there are almost no false negatives. Among the people likely to have AIDS, false negatives occur only if the test is given within a few weeks after infection, before the body has begun to produce antibodies. If the Elisa result is positive, it is repeated using the same blood. False positives are extremely rare. Two positive Elisa tests are signal for a more precise test, usually the Western Blot.
(b) WESTERN BLOT

Viral proteins are blotted on to a special paper - a specific pattern will appear on the paper if AIDS antibodies are present. It is the specific test for the HIV antibody. A negative Western blot means that the person probably is safe, but to be sure, the tests should be repeated in 3-6 months.

Conclusion

According to several reseachers, the AIDS virus emerged in 1981 in the United States in the patients who were homosexuals. So, we can imply that the mode of transmission at the very beginning was through sex and was due to some sexual practices. It it also emphasized that the spread of AIDS can also be through contaminated blood products, dirty syringes and needles, and through newborns from infected mothers.

In the other side of the world - as in the African continent, the mode of transmission is also sexual but in heterosexual community. However, the signs and symptoms remain the same and the method of spread is identical.
CHAPTER III

INTERNATIONAL COMPARATIVE ANALYSIS ON AIDS

This chapter analyzes reports from 1985 to 1987 on the occurrence of AIDS in the United States, compared to other countries in Europe and Africa. It highlights some of the possible reasons why AIDS cases are in much larger numbers in the United States in relation to countries of Europe and Africa. It is interesting that similarities do exist in the transmission of the AIDS virus globally and that the number of mortality cases is increasing and until the cure of AIDS is found, AIDS will continue to remain the number one killer of the 80's.

3.1 AIDS IN THE UNITED STATES

According to the table below, the 3 cities which have the most cases of AIDS are New York, San Francisco and Jersey Cities. These cities have high concentrations of homosexuals, bisexuals, and drug users and therefore account for the large number of cases. The actual number is difficult to determine because sexual preference is not a measure for statistical data. It remains to be seen and epidemiologists agree that congested urban areas remain the greatest threat. Due to a larger urban population, undetected cases can threaten the city by frequent social contacts through sex and drugs which are more readily available in inner cities. Most visitors frequent these big cities and casual affairs are very common in the red light districts. There is also a concentration of low income families whose income is much below the poverty level and may have the AIDS virus but have donated blood for money, or in exchange for
<table>
<thead>
<tr>
<th>City</th>
<th>Rate (per 100,000)</th>
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<tr>
<td>New York</td>
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<tr>
<td>San Francisco</td>
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<td>Chicago</td>
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The United States is 13 cases per 100,000 people. Excluding these metropolitan areas the rate is 5 per 100,000 people.

Note: Figures are cumulative from June 1981 to December 1986, for metropolitan areas reporting at least 300 cases.

money, or in exchange for money to transport their drug habits. In New York City, it is estimated that 60% of intravenous drug users and 70% of homosexuals and bisexuals carry the virus. It is known that San Francisco has a large gay-community and nationally, it remains that 73% of homosexuals/bisexuals are infected with the virus.

Although Los Angeles has only reported 32 AIDS cases per 100,000 people, the city has reported an increasing number of HIV cases. It was in 1981, that Gotlieb, a virologist, reported the first 5 known cases of HIV infection to Center for Disease Control in the summer that year. The first cases were young males infected with pneumocystis carinii pneumonia and were active homosexuals. Another port city is Miami, where a large number of drugs are frequently reported, and it could be the reason why there is a large concentration of HIV infected cases. One method of HIV virus contamination is the sharing of dirty needles and syringes among drug users, Also note that in Miami, there is a large community of Haitians who were thought to be the HIV virus carriers at the beginning of the epidemic. The state of Florida is known for their beaches and is a haven for tourists and possibly have had sexual encounters with infected persons for example, prostitutes and vice-versa, and could have contributed to the spread of AIDS. As you can see, the AIDS infection can be found throughout the United States but it will not remain for long in large urban areas.

Thus, the United States average is 13 cases per 100,000 people. As of September 30, 1987 the Center for Disease Control in Atlanta, Georgia reported 42,354 cases and approximately 21,000 people have
died from AIDS since 1981. According to conservative estimates by 1991, 270,000 people will be affected and 179,000 people will have died from AIDS - (CDC, 1986). New cases will involve more heterosexuals and more babies will be affected with AIDS while in their mothers' wombs. Statistical reports - (American Red Cross, 1986) say that transmission of the HIV virus among homosexuals/bisexuals is 73%. It remains that the HIV virus contaminations is still high among these groups but the heterosexuals should not be excluded. Since June 1981, when the disease was first diagnosed, the total of heterosexual cases was 1,375 out of a total of 35,477 or roughly 3% (Cosmopolitan, 1/88). That percentage includes 661 victims with no known cause of the disease but who contracted AIDS in another country where heterosexual transmission of AIDS is believed to play a role. This puts the number of American heterosexual cases of 714 and reduces the 3% to some 2% (Cosmopolitan January 1988). It appears that HIV infections remain low in heterosexual group and it remains prevalent among the gay/bisexual community in the United States. This could be attributed to the sexual practices among homosexuals. Anal intercourse is a high risk activity, regardless of whether the recipient of the penis is a man or woman, heterosexual or gay. This is because of hemorrhoidal vessels are very near the surface of the anus, because the mucosa is delicate, and because the insertion of the penis in an orifice so small and tight is often traumatic, bleeding and/or lacerations may occur. The deposition of infected seminal fluid into the bleeding lacerations is introducing the virus into the bloodstream. Having multiple partners and engaging in sex with unknown partners places that person in a risky situation and is vulnerable in getting
the AIDS virus. For instance prostitutes who have histories of intravenous drug use, are potentials for the transmission of the AIDS virus, not only they are high risk groups but sharing of intravenous needles and syringes among them are common. Intravenous drug use which entails injection with a contaminated needles is another high risk activity. Blood transfusions, previously a source of transmission, are generally thought not to be a risk factor for new cases, since all donated blood is now tested for the AIDS virus. It should be noted, however, that there can be a time lag - sometimes longer than a year - during which the virus, although present in the blood may not be detected by the test.

Another reported method of acquiring the virus is through the exchange of body-fluids of semen and vaginal secretions. There is no documented evidence that anyone has ever became infected through tears and saliva. Another mode of transmission is through new borns from infected mothers during neonatal period. Almost 4,000 babies will have contracted the disease by being exposed to the virus while in their mothers' wombs, a conservative estimate by 1991.

Knowing the facts about AIDS now, and the massive public education in the United States has somewhat suppressed the irrational fear of AIDS as compared to when it was just discovered. We know that AIDS cannot be spread through casual contact like kissing and shaking hands. AIDS cannot be spread through food, eating utensils, the air, toilet seats and through sneezing and coughing. Public education is essential so we can increase public awareness, thereby reducing the risks of spreading the disease.
The number of AIDS cases reported in the United States is the highest in the world, not only because of its large population, but partly due to efficiency in reporting new cases to a centralized agency, like the Federal Center for Disease Control in Atlanta, Georgia and methods of monitoring the disease are sophisticated compared other countries. Due to early report of a mystery of a new ailment to the Federal Agency, in 1981, the other physicians throughout the country were immediately alerted and reporting of cases were well coordinated. It is extremely important to have a centralized station where all these cases are recorded continuously so that health officials are well aware of any new developments. Although the U.S. Government was a little slow in responding to a new health crisis, a large group of concerned citizens immediately focused on the new problem. The media played a big role in bringing the attention of the people and the government to this health crisis. In no time, public feeling for medical research was appropriated. The Americans have taken a conscious effort in finding the cause and cure of this new epidemic. The government and the health professionals have made a total commitment in suppressing the disease. The public is now aware of any new development about the virus and the media has been very efficient in bringing a new information about HIV. Because of high quality medical care, new cases of the HIV virus are immediately known so case reporting and diagnosis are very efficient. Therefore, this contributes to effective control of cases and monitoring of the HIV cases.
FIGURE 3:2 BREAKDOWN OF AIDS IN UNITED STATES OF AMERICA

<table>
<thead>
<tr>
<th>CASES</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homosexuals / Bisexuals</td>
<td>73</td>
</tr>
<tr>
<td>IV Drug Users</td>
<td>17</td>
</tr>
<tr>
<td>Blood Products</td>
<td>2.5</td>
</tr>
<tr>
<td>Infected Mothers to New borns</td>
<td>1</td>
</tr>
<tr>
<td>Unknown Cases</td>
<td>7.5</td>
</tr>
</tbody>
</table>

Source: A Video "AIDS" Beyond Fear, American Red Cross, 1986

N = 11

From the table above, it clearly shows that homosexuals/bisexuals still remain the high risk group and is due to sexual transmission. The HIV virus has to be introduced into the bloodstream to cause an infection. Reported exposure to an infected sexual partner increase the risk of getting the AIDS virus. Bisexual partners have been known to have caused infection among heterosexuals. The first cases of AIDS victims were young men who were active homosexuals. This high percentage of AIDS cases among this group can be traced to sexual transmission and promiscuous sexual practices. The second biggest risk group is the intravenous drug users who share contaminated needles and syringes. Since AIDS is a blood borne disease, it can easily be transmitted directly into the bloodstream through contaminated needles and syringes. The risk is greater because when contaminated needles and syringes are used among drug users, infection is almost inescapable. When one's judgement is impaired secondary to drug use, one is liable to engage in sexual practices that one may not, if one is sober. When a drug user has the infection and engages in sex, he is a carrier of the HIV virus and this source of contamination is common. The prostitutes
are known drug-users, so the potential of being HIV carriers is high. The heterosexual community can be contaminated through sexual practices and partners that are carriers. The percentage of intravenous drug use carriers may be small but when its plugged into the total United States population it can run into thousands.

The other source of contamination is through blood transfusions that have not been screened properly for the presence of the HIV virus. Although mandatory blood screening has been enforced since 1985 in the United States, there remains a small percentage of people who have been infected through contaminated blood. It could be higher in number if the enforcement of compulsory blood screening was not done. But it is said, according to some sources that the HIV virus may not show immediately in the blood when tested and there is a possibility that the blood donated can become contaminated. The blood screening procedure must be very accurate, the fact that the cases are small and only 2.5% according to Figure 3:2. Most children who are hemophiliac (clotting problem) and are AIDS antibody positive had become infected from contaminated blood and blood products. These are the cases that were affected before blood screening was done.

The next affected group are new-borns to infected mothers. Although it is a low percentage presently, it can increase if there are more infected mothers at child-bearing ages. The transmission of the HIV virus occurs during pregnancy from infected mothers to new-borns. This is the only known sources of contamination to the new-borns. It is advised that mothers who are at great risk to have their blood tested for HIV virus and if positive to postpone pregnancy and consider other alternatives. The mortality rate among these new-borns is 100% up to
2 years of age. The unknown cases in the table which is 7.5% were partners that have contracted HIV virus outside the United States. Misreporting in the United States is also not common. To protect the names of certain individuals who died of AIDS, the death certificates have been altered, showing other causes of death. Another published report described men who claimed to have caught AIDS from infected female prostitutes, a group known to have a high incidence of the disease. Yet, closer investigation revealed that men had contracted the virus through homosexual anal intercourse and reported the causes differently to spare family embarrassment and blame it on easy target risk group.

3.2 AIDS CASES IN OTHER DEVELOPED COUNTRIES

The AIDS case load in Europe is relatively small when compared to the number of cases in the United States, (see table below) but there is a concern that the epidemic will spread.

<table>
<thead>
<tr>
<th>DEVELOPED COUNTRIES</th>
<th>%</th>
<th>DEVELOPING COUNTRIES</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>88</td>
<td>Brazil</td>
<td>31</td>
</tr>
<tr>
<td>France</td>
<td>4</td>
<td>Uganda</td>
<td>18</td>
</tr>
<tr>
<td>Canada</td>
<td>3</td>
<td>Haiti</td>
<td>13</td>
</tr>
<tr>
<td>West Germany</td>
<td>2</td>
<td>Rwanda</td>
<td>11</td>
</tr>
<tr>
<td>Britain</td>
<td>1</td>
<td>Kenya</td>
<td>4</td>
</tr>
<tr>
<td>Italy</td>
<td></td>
<td>Zaire</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>N = 48,118</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ivory Coast</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Lesotho</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>N = 6,492</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
It is reported that there is a doubling of cases in a trend similar to the rise of the disease in the United States and in Africa a few years ago. A significant number of homosexuals are afflicted with the HIV virus and the AIDS infection is spreading fast among the European drug addicts who use contaminated needles and syringes. The spread of AIDS is similar in the United States and it is transmitted through direct sexual contact, contaminated blood and blood products, sharing of contaminated needles and syringes and to the new-borns through infected mothers. The mode of transmission is no different in the United States. The HIV virus has been detected in other body fluids like saliva and tears but not a single case of transmission by those fluids has been documented. Nearly all known cases involve contact with the semen or blood of an AIDS victim. It remains to be a sexually transmitted disease and has to be introduced directly into one's blood-stream to contract the infection.

In Britain, only 700 cases have been reported with incidence doubling every year. France has had 1,980 cases reported, more than any other European country. West Germany is next with 1,032 cases. AIDS is clearly a pandemic – a disease that affects every one and has no cure. According to Dr. Assad of World Health Organization (1985), the virus was carried to Europe by homosexuals of various nationalities and from there to the Middle East and Asia. Since the AIDS virus incubation period can be as short as 6 months or as long as 5 years or more, the disease can be widely spread before those initially infected know they are victims. The AIDS cases outside the United States may be relatively small at the moment but can be a huge reservoir of future cases.
In countries with large homosexual population but little AIDS, the epidemic is just beginning. In West Germany, the suspected agents for the spread of the disease include American military personnel, some of whom frequent bars and bath houses. The dangers of multiple homosexual contacts are enormous and very risky. It also applies to heterosexual contacts and this sexual practice increases the risks of contracting the HIV infection.

The most likely reason why there are less cases in Europe is because the HIV infection came much later than the United States and presently, the cases are just increasing. Not all European countries have reported the cases and cases are from each country versus United States, giving a national average and statistics. As many more Western countries institute mandatory testing of all donated blood, potential AIDS victims can be received and monitored. Blood testing could be very expensive for most countries to carry out on a large scale. Misreporting of the cases can be another reason and a problem. Hospitals and laboratory facilities may not be well equipped as in the United States where the first cases were reported in 1981.

The spread of the virus through international travel seems impossible to control. Once the disease is present, the number of victims multiplies rapidly. Dr. Mahler (1986) of World Health Organization (WHO) in Geneva estimated that there are 100,000 cases of AIDS worldwide in the past 5 years and that 5-10 million people are now infected with the AIDS virus. But in 1990, it is estimated that there will be 3.5 million cases and 100 million infected with the virus.
Among the countries that have reported AIDS cases, Brazil in South America ranks second, having 2,013 cases, which represents 3% of the cases in a sample of nine developing countries. This could be due to a population that is both exceptionally young and sexually tolerant where sexual practices can cause spread of AIDS faster, than anywhere outside Africa. According to the United States Surgeon General, 1986 - the AIDS virus can remain latent in one’s body but because of repeated viral and bacterial infections to the system, it quickly tends to surface out and become active. In Africa and developing countries, because of poor socio-economic conditions, lack of health care facilities, a person is prone to contacting AIDS and made worse by unsafe health practices. In tropical countries where repeated bouts of malaria and hepatitis is common, the liver is subjected to constant infection that leaves a person vulnerable and susceptible to opportunistic diseases. The unsafe health practices in these countries also contribute to the spread of the HIV virus. In the rural hospitals where medical facilities are obsolete and lacking, instruments, like needles and syringes are not properly sterilised and have been reused on patients and this practice is a source of contamination. It is a direct source of contracting the HIV virus since it is introduced into the blood stream. Since blood from donors is not tested and screened for the HIV virus, it poses a great threat to individuals who need the blood.

Another source comes from improper handling of contaminated body fluids, for example, not wearing gloves when handling blood, and body secretions and spillage into open cuts and wounds can cause transmission of the HIV virus. Surgical instruments, if not sterilised properly when used in surgery, can introduce the HIV
virus directly into the bloodstream during an operation. As more facts about AIDS are known, public awareness must be emphasized to prevent the spread of the HIV virus. When governments recognize the AIDS epidemic as a serious threat to the socio-economic development of their countries, perhaps it will become a health priority and prevention of the spread of the HIV virus, can be controlled more efficiently and effectively.

The countries in Africa reporting the most cases as seen on the tables are Uganda, Tanzania, Rwanda, Kenya, Zaire. It is reported that in Africa, heterosexual intercourse is a documented mode of transmission of the AIDS virus, the implication being that it is just a matter of time before the disease will spread throughout the world in this manner. The number of cases in Africa are much lower compared to the ones reported in the United States. If the source of the HIV virus, as reported earlier was in Africa, why are the cases not large as in the developed countries? Some of the reasons could be that governments have refused to recognize that the HIV virus is present and has ignored the problem. Misdiagnosing and under-reporting of cases are common so that cause of death is not clear. The HIV virus is not a health priority, concentration is on how to feed the hungry and the growing population rather than fighting the fatal disease. Some of these countries do not have the financial resources to conduct research and investigation of the HIV virus. Blood screening is not available and could be very costly. It is for the above reasons that the World Health Organization (WHO) is claiming that there are more cases in Africa than what is being reported. There is no central government agency that handles all the
the new cases of the HIV virus and reporting could get lost in the bureaucracy. The public is not massively educated and cases are underreported because no one has heard of the disease.

According to Gould (1988), a physician in New York, Metropolitan Hospital, reported that cultural differences may play part in the transmission of the AIDS virus. African nurses, who came from various countries to attend a three-months conference on Family Planning at the hospital confirmed that homosexuality was not talked about or even acknowledged. If the African nurses were reluctant in talking about homosexual practices in their countries, could we assume that possibly AIDS infection was from homosexual activities. It is reported, (Cosmopolitan, 2/88) that heterosexual intercourse in Africa show marked differences from the way it is usually practised in the United States. Example: Anal intercourse is often used as a means of preventing pregnancy and the more anal intercourse, the more risks of AIDS. Some sexual practices can cause vaginal lacerations through which the AIDS virus could gain entry into the bloodstream. In some areas of Africa, Clitoridectomy (surgical excision of the clitoris) is still practised as a tribal custom and the vagina sewn up to insure chastity, so that sex, when it occurs for the first time often involve serious tearing and laceration in an organ that has already been scarred and weakened, thus creating access to bloodstream. In the Muslim countries where this practice is common, no cases of HIV virus have been reported. The only reason could be due to failure of government agency to report cases because they do not want to recognize the existing problem. Still another factor pertinent to Africa is that family members may all receive injections from a clinic routinely,
using non-sterile needles or syringes. Infected couples, not knowing this, may therefore mistakenly report contracting the AIDS virus from heterosexual intercourse. Another source of infection is from infected blood transfusions. It is not mandatory in Africa to screen blood donors for the AIDS virus. Because of lack of health personnel and inefficient way of reporting deaths, it is possible that there are more cases of AIDS in these countries than being reported. For instance, because of lack of diagnostic centers, identification of the disease may be neglected and cases are not confirmed through diagnostic procedures. Many times the governments refuse to recognize the presence of this fatal disease in their countries. Because of media sensationalism by western press, some of these countries just refused to cooperate in determining the cases and the sources of contamination in their countries. It is bad publicity for countries where tourism is a major industry. On the other hand, the United States has a large group of homosexuals and declared themselves so in the open. In some countries where this lifestyle is ostracized, one may not find readily, sources of contamination in this high risk group. Or it is possible that there may be only a few number of cases in African countries like Lesotho, reporting only one case? Considering the health practices and procedures that are known in the western world in many African countries, one may be made to believe that there are a number of cases unreported.

According to the World Health Organization in 1982, only 711 AIDS cases have been reported from 16 countries. By September 9, 1978 a total of 59,563 AIDS cases had been reported from 123 countries (see table below). An additional 21 countries have told WHO that so far they have no AIDS cases to report. These countries
include, Iran, Iraq, Saudi Arabia and other Muslim countries.

**FIGURE 3:4 NUMBER OF AIDS CASES BY CONTINENT, 1987**

<table>
<thead>
<tr>
<th>CONTINENT</th>
<th># OF CASES</th>
<th># OF COUNTRIES REPORTING CASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>5,814</td>
<td>35</td>
</tr>
<tr>
<td>Americas</td>
<td>45,935</td>
<td>40</td>
</tr>
<tr>
<td>Asia</td>
<td>182</td>
<td>18</td>
</tr>
<tr>
<td>Europe</td>
<td>6,998</td>
<td>29</td>
</tr>
<tr>
<td>Oceania</td>
<td>634</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>59,563</td>
<td>123</td>
</tr>
</tbody>
</table>


The number of cases to date represents only a fraction of the total cases. Some of the reasons include:

- Reticence in reporting cases from some areas,
- Under-recognition of AIDS, and
- Under-reporting to national health authorities.

**Aids Cases In Kenya**

Since this thesis was compiled in Nairobi, it is of interest that AIDS infection in Kenya must be discussed as a separate section. It might be a valuable tool in further gathering of information on AIDS in the future. According to the table (Table 3:3) Kenya as of June 1987 had reported 286 cases. The AIDS infection has been recognized in Kenya since 1984. According to reports, (Kenya Red Cross) by the Ministry of Health, the prevalence of antibody to the virus is 65% in lower socio-economic prostitutes, 30% in upper socio-economic and 8% in men at the Nairobi Special Treatment Clinic, 2% of pregnant women in Pumwani Hospital in Nairobi have the HIV antibody. But these
cases could be higher in number because blood test screening among high risk groups have not been stressed and can be very costly. The personal, social and economic costs of the HIV epidemic are enormous. Not knowing about the outcome of the disease and in some places, rejections by the family and the community can cause great stress in those infected with HIV. The family structure is threatened both by the infection and by the loss of mothers and fathers.

In Kenya, the AIDS virus infection is called the "Slim Disease" because of severe weight loss. It remains a heterosexual problem and is mostly sexual transmission. Prostitutes are high-risk groups and 65% of the women have the HIV virus. Unsafe health practices in the rural areas contribute to the transmission of the HIV infection. Clinics do not use sterilized needles and syringes and can be a source of transmission of the HIV virus. The use of non-medical personnel who perform surgical procedures or practice illegal medicine is another source of contamination. Certain ritual ceremonies may use blood and this is directly introducing the HIV virus into the bloodstream. Polygamy in Africa is a tribal custom and if sexual practices condone multiple partners, then this is a source of contamination.

All you need is one infected person and you have a definite cause for concern. Personal hygiene in places where there is congestion and poor sanitary conditions can contribute to transmission of the disease and repeated infestations of infection render a person susceptible to any infection. Poor medical care and health practices are among the problems that plague any third world countries. For instance, draining wounds and ulcers from an infected person can be a source of contamination.
Public education in the rural areas can be very difficult. Most literature on AIDS are in English and Kiswahili and in the rural areas they have their own dialects, so education can be a problem. Some of these places may not be accessible by public transportation, so to reach these people poses a major problem. Health priorities are not concerns in some areas where other problems exist like food and shelter shortages. Health concepts may differ from the western world and financial resources are limited. These are a few reasons perhaps why AIDS may be under-reported in these parts of the world.
CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

The AIDS epidemic remains a pandemic problem and unless preventive measures are taken vigorously by all governments, it will remain a major killer in the 80's and 90's. It is a health issue and it has claimed many lives in all the continents regardless of race, color, sex and religion. It's not a disease of who you are but what you do. The HIV virus can be transmitted through the following:

(a) Direct sex,
(b) Sharing of contaminated needles and syringes,
(c) Contaminated blood and blood products, and
(d) To the newborns through infected mothers.

The HIV virus cannot be transmitted through casual contact like kissing, shaking of hands, use of public toilets and pools, use of public telephones and eating food.

The study shows that the most afflicted group in the United States are homosexuals and bisexuals. In Africa, the mode of transmission is among the heterosexual community. Although separated by continents, similar patterns in the transmission of the HIV virus have occurred. The HIV virus has to be introduced directly into the bloodstream to cause an infection. Repeated exposure to the HIV virus, either through sex or blood and blood products increase the risks of getting the disease. It can be expected that as long as HIV carriers remain underground/undetected and engage in sexual
practices, spread of the disease will be greater. Governments must focus health concern either by doing massive public education or by supporting health groups financially to find a cure for the fatal disease. Governments must cooperate altogether in reporting and diagnosing new cases and consolidate global help so that a unified front is present in combating this incurable epidemic. It is tragic that up to now there are several countries in the world which continue to deny and refuse to cooperate in reporting HIV cases. According to latest reports (2-88) a new type of HIV virus called type 2 has come out. So, not only a new strain of the HIV virus has surfaced but there has been no found cure although researchers are working very hard on the treatment of HIV cases.

The World Health Organization is doing a tremendous job keeping all the countries informed of the latest statistics and treatments for HIV virus. Countries must not hide behind glass doors but must come forward and ask for help if HIV cases are present among their population.

Finding a cure can be a long process but this is where patience and tedious work are necessary in order to save a whole new generation. On the basis of these conditions, the following are recommendations which have been carefully though out for the control and management of AIDS internationally.

4.1 MANAGING OF AIDS AS A HEALTH CRISIS

1. Massive Public Education

Accurate information and education are the only weapons we have against AIDS. With proper information and education as many as 20,000
people could be saved in 1991 from death by AIDS. Be prepared. Learn as much about AIDS as you can. Learn to separate scientific information from rumour and myth. Get accurate information from health professionals.

Education through dissemination of accurate information can be done by health officials, schools and health-conscious groups. It need be organized and systematically controlled. The use of posters, visual aids, pamphlets, the media, video tapes, billboards are ways of creating awareness of the disease. Educational programmes and preventive campaigns must be directed at the general public as well as high-risk groups. It must be explicit if they are to be effective. It must be government-funded to have government involvement.

It is of great importance that there should be adequate knowledge and understanding about AIDS and HTLV-I/II/LAV among the public generally as well as among those who are directly involved with infected people. The Education service should ensure that school staff and pupils are informed about the virus and its transmission.

Schools can contribute to the general level of knowledge and awareness about AIDS through the health education which they offer to their pupils. The majority of secondary schools can be encouraged to study about sexually transmitted diseases within their program of health education. Other secondary schools and primary schools usually address the issue as it arises in the course of other work, in response to questions from pupils. Schools should consider how certain approaches will be undertaken to cover the disease among school-children, an issue about which many parents will have strong

* See p.59 (Glossary of Terms)
feeling. Considerable care and sensitivity are needed to match the
teaching of the maturity of the pupils involved. The basis of any
teaching offered should be the presentation of straightforward,
factual information about the virus and about modes of transmission
of infection in order to balance the incomplete, inaccurate impression
which pupils may have gained from other sources. It should be made
clear that on current epidemiological evidence, normal, social and
occupational contact that occurs in school, or living in the same
house with an AIDS sufferer or HIV carrier, poses no risk of infection
to others, provided normal precautions are allowed.

Schools should see it as part of task, in the content of per-
sonal and social education, to consider with pupils some of the
broader questions associated with the transmission of infection,
including the health risks of promiscuous sexual behavior, whether
heterosexual or homosexual. Pupils should not, however, be left with
the impression that AIDS and HTLV-III/LAV infection can be contracted
only through forms of sexual behavior. There should be reference to
the risks to injecting drug misusers, possibly linked with teaching
aimed specifically at preventing drug misuse and also to the possi-
bility of hemophiliacs and others having acquired the virus through
contaminated blood products. With more senior pupils, it may be
possible and desirable to introduce a balanced discussion about the
implication of AIDS for society at large and the lifestyles of
individuals.
SAMPLE OF PREVENTIVE MEASURES IN HEALTH EDUCATION

1. No sex at all

2. Sex with only one person who is not infected. Both partners remain faithful.

3. Use condoms.

4. Do not have sex with prostitutes or intravenous drug users.

5. Avoid sex with people who have had many partners or who have had sex with promiscuous people.

6. Ensure access to supply of safe blood in emergencies.

7. Ensure that vaccination or medical injections are carried out with properly sterilized hypodermic needles.

8. Safe health practices.

A massive educational campaign is the only theory conceivable at the moment that can help. To not do it would be criminal. To argue that it is difficult and expensive and therefore we should not do it would be self-defeating.

GOVERNMENTS' ROLE IN PREVENTING AIDS SPREAD

The governments must make it a priority in terms of health education, research and funding. The presidents have to be involved and committed. Governments must need to focus public attention on the problem and to give campaign much needed direction and coordination. Part of the reason of federal foot-dragging, critics charge is that AIDS still strikes largely at groups outside society's mainstream. "The Reagan Administration has continually tried to
combat AIDS because of budget problems and wishful thinking that the disease would just go away - according to Representative Henry A. Waxman (D.Calif.)."

Others - including the media - have shied away from confronting the AIDS problem. The Health Education Resource Organization - a Maryland-based clearing house for AIDS information reports that the media have been very reluctant to permit "safe sex" advertisements or billboards and in newspapers for fear of offending public sensitivity.

Today social issues have hampered progress in other quarters as well. Fearing that AIDS carriers will be deprived of jobs, health insurance and other basic rights, gay activists have fought mandatory screenings.

In other foreign countries where AIDS is present, government officials have denied that it exists or if it does - it is not priority classification.

Research fund for funding the cure and the vaccine to prevent it, must be a government concern and must be highly supported. The AIDS issue is a matter of greater urgency and requires presidential leadership. A National Commission must be organized to monitor the prevention and spread of the infection, and must be responsible for the investigations and updating of any information that is most current and accurate in the health, medical and scientific fields.

Delegation of responsibility from a centralized organization is more efficient than having decentralized authority especially when it deals with health crises.
In response, the World Health Organization (WHO) is mounting the most ambitious program in its history, a global strategy to prevent and control the spread of AIDS. WHO hopes to raise $200 million in fiscal year 1988 for its AIDS control strategy. By the 1990s, WHO plans to spend about $1.5 billion annually in the fight against AIDS. One of the first challenges facing WHO is overcoming what Doctor Jonathan Mann, director of the control program, calls the "stigmatization" of AIDS, that is, the persistent tendency of people and governments to try to fix responsibilities for the epidemic on others. In the United States, for example, the homosexual community has been blamed for introducing the virus into the general population. While in Europe, Africans have been held responsible.

A Soviet report that HIV was created in a United States Chemical Warfare Lab has received wide-coverage in Eastern Europe and Asia. The death, a few months ago of a Japanese prostitute with AIDS has sparked a backlash against Westerners that may result in legislation denying Japanese visas to foreigners suspected of carrying the virus.

Concern over proposals for similar legislation in Britain and other countries that would screen visitors from abroad for the virus led WHO to convene a conference on international travel and HIV in early March 1987. After discussing such issues, at the expense of testing millions of travellers, as well as the political and ethical dilemmas involved in refusing entry to citizens who have become infected abroad, the participants concluded that "HIV screening of international travelers would retard only briefly the spread of
HIV both globally and with respect to any particular country”.

WHO will also take the lead to coordinating an international network among scientists to share information and encourage aggressive research on the epidemiology of AIDS and possible therapeutic agents and vaccines. The organization is now in the process of setting up a "Virus Bank" that will give scientists who have been unable to obtain samples of HIV or related viruses, unimpeded cases to the materials they need for research. In April 1987, it will sponsor another conference on the conditions required for volunteers to undertake the first human "challenge tests, or tests in which a potential vaccine is challenged by a live strain of HIV". This should spread the process of determining how tests are to be conducted once a vaccine is ready.

For the time being, World Health Organization (WHO) will be concentrating most of its energies on public education and primary health care measures designed to stop the spread. The organization recommends that every country move immediately to develop a national action plan to collect statistics on the disease, a laboratory and report capability, educational programmes for health care workers and prevention campaigns directed at the general public, as well as high risk groups.

It has not been easy, however, to convince governments to launch massive campaign urging their citizens to avoid casual sex while at the same time advising the undeterred to use germicide which kills the virus, and condoms which can prevent its transmission. Few governments in the third world have either the money or technology to get the message out to all their people. And few
governments that have the money or technology also have the political courage to brave the storm that this message might create.

Even assuming that WHO is able to overcome all the political and technical impediments to its AIDS control program, the question remains whether education can radically change the intimate behaviour of enough individuals so that the cause of the epidemic is halted.

4.3 School Policy On AIDS

Schools need to adopt policies and procedures regarding HIV infected students, faculty or parents before faced with the event. Recent history clearly demonstrates the irrational hysteria that can erupt when HIV infected individual becomes associated with a school.

1. A school priority is to provide the community with accurate information about AIDS, its causes, its effects and its prevention.

   (a) Divisional Heads will coordinate efforts to provide information to students about AIDS.

   (b) Information on AIDS will be presented to students through the existing curriculum especially classes which deal with health-related subjects.

   (c) All school personnel will receive up to date information by way of memo, faculty speakers and workshops.

2. The school will deal with the victims of AIDS on a case-by-case basis:
(a) Response to individual cases will be reviewed by a task-force, including the Administration, Council composed of the headmaster and the division heads and the chairman of the Board of Trustees.

(b) In dealing with individual cases, the task-force will, if necessary consult and be guided by the opinion experts in the medical, legal and social welfare committees.

3. The school will make every effort to ensure each person's privacy and to keep records confidential. The school also recognizes the importance of the community's need to know about the possible incidences of the disease, it will consider the advice of expert testimony in the matter.

4. If a person with AIDS continues to participate in the school, the school will provide support for that individual.

(a) Regarding students, the school will give consideration to continuing to educate children with AIDS in an unrestricted environment.

(b) If this is not possible, the school will provide support of the child's continued education including assistance to families for individual tutoring, counseling references and educational planning.

(c) Should a member of the faculty or staff be excluded from the school because of AIDS, it is recommended that the individual has the opportunity to receive continued health benefits with a medical leave of absence, within the terms of the school's existing health care policies.
Infection Control

Guidelines To Be Followed For Infected Children

1. Personal Hygiene

1.1 Razors, toothbrushes or other implements which could become contaminated with blood must not be shared.

1.2 Minor cuts, open or weeping skin lesions and abrasions, should be covered with water proof or other suitable dressings.

1.3 Sanitary towels must be burnt in an incinerator or the procedure for disposal of infected waste followed.

1.4 Tampons may be flushed down the toilet.

2. Accidents involving external bleeding.

2.1 Normal First Aid procedures should be followed which should include the use of disposable gloves when possible.

2.2 Wash the wound immediately and copiously with soap and water. Apply a suitable dressing pressure pad if needed.

2.3 Seek medical care as soon as possible

2.4 Splashes of blood from HIV positive child on to another child.
   - splashes of blood on the skin should be washed off immediately with soap and water.
   - Splashes of blood into the eyes or mouth should be washed out immediately with copious amounts of water.
2.5 After accidents resulting in bleeding, contaminated surfaces - e.g. table or furniture should be cleaned liberally with household bleach, freshly diluted. Such solution must not come into contact with the skin.

NOTE: Bleach can corrode metal and burn holes in fabrics if used for long or in the wrong concentration and must never be used on skin.

3. General Hygiene

3.1 Cleaning
- normal cleaning methods should be used
- no special disinfectant is necessary for either the bath or toilet
- use disposable clothes
- use separate cloths for furniture, for bathroom and for toilet.

3.2 Spillages of blood and vomit should be cleaned up as quickly as possible. Ordinary household bleach freshly diluted 1:10 in water (preferably hot) should be gently poured over the spill and covered with paper towels.

3.3 If practiced, the diluted bleach should be left for 30 minutes before wiping out with disposable paper towels.

3.4 Individual papers may be discarded down the toilet. However, if many are used, it is preferable to treat them as infected waste.

3.5 Clothes and linen that are stained with blood or semen should be washed in a washing machine at 95°F for 10 minutes or boiled before laundering.
State And Local AIDS Task-Force

Many state and local jurisdictions, where AIDS has been seen in the greatest number have AIDS Task-forces with heavy representation from the field of public health, joined by others who can speak broadly to issues of access to care, provision of care and the availability of community and psychiatric support services. Such a task-force is needed in every community with the power to develop plans and policies, to speak, and to act for the good of the public health at every level.

State and local task-forces should plan ahead and work collaboratively with other jurisdictions to reduce transmission of AIDS by far-reaching information and educational programs. As AIDS impacts more strongly on society, they should be charged with making recommendations to provide for the needs of those afflicted with AIDS. They also will be in the best position to answer the concerns and direct the activities of those who are not infected with the AIDS virus.

The responsibilities of state and local task-forces should be far reaching and might include the following areas:

(a) Ensuring enforcement of public health regulations of such practices as ear piercing and tattooing to prevent transmission of the AIDS virus.

(b) Conducting AIDS education program for police, firemen, correctional institution workers and emergency medical personnel for dealing with AIDS victims and the public.
(c) Ensuring that institutions caring for children and adults who soil themselves or their surroundings with urine, stool and vomitus have adequate equipment for clean-up and disposal and have policies to ensure the practice of good hygiene.

The best way to stop the spread of AIDS is not through compulsory testing but by encouraging high-risk people to seek testing on their own and helping them change their sexual behaviors. "Mandatory testing would deter people from seeking care and services for fear that their names would end up on a list somewhere", says Thomas Stoddard of the Lambda Legal Defense and Educational Fund, a gay-rights group in New York.

WHO SHOULD BE TESTED FOR AIDS?

1. If you had more than 3 or 4 sexual partners in any one of the last five years.

2. If you are planning a pregnancy

3. If you have had sexual contact with someone you have since learned has AIDS

4. Uses drugs or is bisexual, or of your doctor recommends it

If you had a blood transfusion between the fall of 1978 and May 1985, there is a very slim risk that you have been exposed to the virus. Test is advisable if:

1. More than one transfusion was performed

2. The procedure was carried in New York, San Francisco or another city with a high incidence of AIDS, or
3. The transfusion occurred toward the end of the 1978–85 period, when the risk of contaminated blood was greater because of the building up of AIDS carriers.

**Blood Screening And Confidentiality**

The greatest public health problem lies in the large number of individuals with a history of high-risk behavior who have been infected with spreading the AIDS virus. Those with high-risk behavior must be encouraged to protect others by adopting safe sexual activities, and by the use of clean equipment for intravenous drug use. If a blood test for antibodies to the AIDS virus is necessary to get these individuals to use safe sexual practice, they should get a blood test.

Because of the stigma that has been associated with AIDS, many afflicted with the disease or who are infected with AIDS virus are reluctant to be identified with AIDS. Because there is no vaccine to prevent AIDS and/or cure, many feel there is nothing to be gained by revealing sexual contacts that might also be infected with AIDS virus. When a community or a state requires reporting of those infected with the AIDS virus to public health authorities in order to trace sexual and intravenous drug contacts – as is the practice with other sexually transmitted diseases – those with AIDS virus go underground out of the mainstream of health care and education. For this reason, current public health practice is to protect the privacy of the individuals infected with the AIDS virus and to maintain the strictest confidentiality concerning his/her health records.

Compulsory blood testing of individuals is not necessary. The problem could be unmanageable and cost prohibitive. It can be expected that many who test negatively might actually be positive due to recent
exposure to the AIDS virus and give a false sense of security to the individual and his/her sexual partners concerning necessary protective behavior. The prevention of behavior described in this report, if adopted, will protect the American public and contain the AIDS epidemic. Voluntary testing will be available to those who are involved in high-risk behavior.
SUPPLEMENTARY RECOMMENDATIONS FOR DEVELOPING COUNTRIES

Due to a large number of potential cases of AIDS in the rural areas because of under-reporting and misdiagnosed cases, it is imperative that governments must take the initial step in recognizing the problems. A country's problem is without support if government and its heads of state do not actively consider a health crisis as a priority. In other words, political willingness from heads of states must be there to have an effective HIV epidemic control. The following are some of the recommendations:

1. The Ministry of Health must coordinate programs and create committees to set up technical and operational activities in providing information to the public which includes:

(a) development of materials for seminar participants.

(b) communication through radio and television. Information must be simple, consistent and easily understood. Local dialects in certain areas must be used.

(c) brochures and posters and communication of health education messages through a number of channels.

(d) special campaigns addressed to target groups (prostitutes, drug users and active men or women).

(e) campaign for training trainers.

(f) seminars for parents, teachers, students, religious and political leaders.

(g) seminars for modern and traditional health workers in all districts including private practitioners and midwives.
(h) in-service training of staff.

2. The Ministry of Health must appoint a Central Agency whose sole responsibility is to collect data on AIDS cases and potential cases and study this data for statistical reports. Epidemiological study must be on-going and must have the active cooperation of other health agencies. Surveillance of cases must be done to monitor the increase in number of AIDS cases.

3. Health Education must be organized at District levels. Health Inspectors must be in charge of health education, surveillance and staff administration, and promotion of community organization and participation.

Health Assistants are needed to coordinate health activities such as environmental improvement, nutritional education and home visits. Traditional Health Workers must be included in health activities since they primarily help patients in the rural settings. Communication must be simple and realistic and must be in their dialects so that people can understand fully the implications of the deadly virus.

4. The Ministry of Education must be involved in teaching school children, teachers, parents and the community about the AIDS. The Ministry of Health must work closely with Ministry of Education since these agencies are very valuable and instrumental in reaching the public and informing them about the AIDS virus.
5. A Research Fund must be established to help scientists in that country find the cause and cure of the AIDS virus particularly to that country. Scientists must coordinate their findings with the international health agencies to unify efforts in controlling the epidemic.

6. Health programs for the care and management of the infected persons, their sexual partners, families and other groups must be established and coordinated.

7. Establishment and development of in-country laboratory capabilities. Effective blood screening and diagnostic procedures are needed through training of laboratory workers. Evaluation of diagnostic methods must be checked thoroughly and regularly. Laboratory and health workers must be taught proper handling of laboratory specimens.

These recommendations will have greater impact if they are handled effectively now. It must be integrated to fit with existing primary health care priorities and health care strategies.

AIDS prevention will strengthen primary health care in various areas like health prevention and education, health promotion and sanitation, and training of health care professionals in the prevention and control of communicable diseases.
SUMMARY OF FINDINGS

After having presented the different tables on the occurrence of AIDS globally, I conclude that the AIDS epidemic is concentrated in the United States of America with a total cases of 42,354 as reported in June 1987 by Center for Disease Control in Atlanta, Georgia. It is estimated that the number of deaths is approximately half of this total number since AIDS was discovered in 1981 in the United States. Likewise in Europe and Africa the number of cases reported is much below a total of 12,813, than the reported cases in the United States. It is estimated that this figure will double in a couple of years as long as the epidemic is not controlled.

The mode of transmission remains to be sexual, in the heterosexual and homosexual groups and through sharing of contaminated needles and syringes, through infected mothers to the newborns and through use of contaminated blood and blood products. There has been no reported cases of transmission through casual contact or either through insects or saliva and tears.

In the United States, concentration of the AIDS cases is among the homosexual/bisexual which comprises 73% of the total number of cases. Although it has reached the heterosexual community, it remains low, and in small number. But these findings must not give a false sense of security that the number of cases will remain low in the heterosexual group, instead, caution must be taken and preventive measures must be followed.
In Africa, where the mode of transmission is the heterosexual group, health education must be stressed enough in these groups. Although the total reported cases remain low compared to the United States, it is present in these countries and reporting and diagnosing of the AIDS cases must be accurate. The number of AIDS cases continues to increase everyday and until a cure is found, one can expect doubling of cases.

Those countries who have not reported a single case of AIDS and have continuously denied AIDS cases in their countries, may have possibly stopped the spread if it is accurate, and it would be beneficial for other countries to know the reasons and possibly apply these measures. But if cases are present, these countries must face the problem and work on a health solution that enforces cooperation among health authorities. It is traumatic and a tragedy if cases exist and are ignored.
AIDS – School Health Information. Combined Health Information Data Base. U.S. Centre for Disease Control (1987)

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GROSSARY OF TERMS

Acquired Immune Deficiency Syndrome (AIDS):
A condition that reduces the body's ability to fight disease, leaving it vulnerable to infections.

AIDS - Related Complex (ARC):
ARC patients have some symptoms of AIDS, but not the "full-blown" disease. Symptoms may include unexplained swollen glands or fever, weight loss, or persistent diarrhea.

Hemophilia:
A blood condition found in males in which even minor bodily injuries can be followed by prolonged bleeding.

HTLV-III:
The virus that causes AIDS, sometimes referred to as HIV or LAV.

HTLV-III Antibody Test:
A test performed on all donated blood that reveals the presence of antibodies to HTLV-III. If antibodies are detected, the blood is destroyed.

Immune System:
A system within the body that makes the body resist disease-causing organisms such as germs, viruses or other infections.

Intravenous Drugs:
Drugs injected by needle directly in a vein.

Opportunistic Infection:
An infection that is not a threat to a healthy immune system but that can be fatal to a person who has AIDS.
Risk Groups:

Individuals at risk include homosexual and bisexual men (or men who have had sex with another man since 1977); people who inject illegal intravenous drugs or who have done so in the past; persons with symptoms of AIDS or AIDS-related illnesses; male or female prostitutes and their sex partners; sex partners of persons infected with the AIDS virus or at increased risk of infection; persons with hemophilia who have received clotting factor products; and infants of high-risk or infected mothers.

Virus:

Submicroscopic organisms that grow and reproduce only inside living cells and that can cause disease.