

THE PROGRAMME TO CONTROL STD/AIDS IN MOZAMBIQUE

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List of acronyms used in the text

NCP STD/AIDS National Control Programme against STD/AIDS

STD Sexually Transmitted Diseases

AIDS Acquired Immune Deficiency Syndrome

HIV Human Immunodeficiency Virus

IEC Information, Education and Communication

NGO Non-Governmental Organisation

CSM Condom Social Marketing

WHO World Health Organisation

GPA Global Programme on AIDS

USD United States Dollars
TB Tuberculosis
KAP Knowledge, Attitude and Practice

1. INTRODUCTION

1.1 The National Control Programme against STD/AIDS (NCP STD/AIDS) In Mozambique

The National Control Programme against STD/AIDS in Mozambique began in 1988 as the National Control Programme against AIDS, and its original structure was based on the main objectives as defined by the GPA:

Epidemiological surveillance of HIV and AIDS
Prevention of sexual transmission
Prevention of perinatal transmission of HIV
Diagnosis, treatment and counselling of AIDS cases
Operational research
Information, education and communication.

After several revisions, as from 1995 the NCP STD/AIDS was set up with the following components:

Management
Information, education and communication
Epidemiological surveillance
Laboratory support
Care for patients and counselling
Condom social marketing.

The NCP STD/AIDS has a central body, located in the Ministry of Health, and a nucleus in each province (11 in all).

The NCP STD/AIDS undertakes planning and management tasks at central level, coordinating, monitoring and assessing provincial plans, and providing technical assistance to the sectors involved in the programme.

The NCP STD/AIDS draws up short and medium term plans, coordinates the activities of the various components of the programme, multisectoral activities, establishes cooperation protocols with Mozambican and international NGOs, financing agencies, social, religious and mass media

associations or groups.

The NCP makes supervisory visits annually to monitor and assess the activities of the provincial nuclei and to offer technical advice.

2. JUSTIFICATION

2.1 Why is the AIDS epidemic so important ?

Despite growing public interest, the HIV and AIDS epidemic has continued to expand since the first cases were registered in 1981, becoming the most serious public health problem faced by humanity in recent decades.

WHO has received notifications of AIDS cases from 190 countries, and it is estimated that over 17 million people are infected with HIV (90% of these are in developing countries). More than four million people, both adults and children, have developed AIDS, and by 1995 the number of deaths had reached more than two million.

Although in numerical terms the HIV epidemic is currently less serious than others (malaria, for example), the impact that it produces is much greater, because it affects the most productive sector of a country, and requires heavy social and health expenditure.

World expenditure on AIDS prevention is currently more than 1.5 billion USD. Of this sum, less than 200 million USD is spent in developing countries (which are the worst hit countries).

For example, in 1992 Thailand spent 45 million USD (75% of which came from the state budget), while in all of sub-Saharan Africa only 90 million USD was spent, and just 10% of this came from African governments.

A recent WHO study suggests that developing countries should spend between 1.5 and 2.9 billion USD a year on AIDS and STD prevention programmes. Even then, the number of people newly infected over the next decade will be in excess of 9.5 million.

There are several factors that explain the true importance of AIDS now:

a) The first factor is the natural history of the disease

AIDS is a disease that develops silently over several years: those who are infected are unaware that they are carrying the virus, and they spread the infection to others. Symptoms appear only after a variable number of years, and so far anyone who enters that phase dies shortly afterwards.

The projections made by WHO show that during the 1990s there will be: - between 10 and 15 million new infections

- between five and 10 million children infected perinatally.

For the year 2000, the prediction will be:

- 30 to 40 million people (men, women and children) infected with HIV

(90% of these will be in developing countries)

10 million cases of AIDS

more than five million children, under 10 years old, will be orphaned.

In sub-Saharan Africa, where it is estimated that more than 10 million people are infected with HIV, there are countries where one in every four adults is infected. So far, this is the only region in the world where the number of women infected is greater than the number of men (11-12 women for every 10 men).

In some capital cities, one out of every three women of reproductive age is seropositive, with serious repercussions on infant mortality.

In four countries of central and eastern Africa - Uganda, Tanzania, Rwanda and Zambia - during the first four years of the epidemic, breakdown by age groups showed that people aged between 20 and 40 were most affected. Now, 12 years later, young people less than 25 years old account for over 75% of the total number of infections. 60% of the infections occur in women aged between 20 and 25.

The same scenario as in Africa is now appearing in Asia: in Thailand, for example, in Chiang Mai, 20% of young men are infected (one in five), and eight per cent of young women (one in 12) are HIV positive.

b) AIDS is an extremely expensive disease

For many countries in a precarious economic situation, AIDS is yet another additional burden on the health budget.

The World Bank estimates that, in the 10 worst hit sub-Saharan African countries, lost production per capita is an average 0.6% per year; the impact on the production of families, of companies and in agriculture, linked to the heavy health expenditure, cuts back the possibility of investing resources in the economy. At the individual level, the death of young people leaves families without economic support.

One African study, in a rural area in Tanzania, showed that 89% of deaths of people aged 25-36 were due to AIDS. As a result, the families of the dead were plunged into poverty.

A further study, carried out by the World Bank in Tanzania, showed that in 1991 for every person suffering with AIDS the government spent about 60 USD on treatment and funeral expenses - the equivalent of the annual per capita income in the countryside.

c) Preventing AIDS also prevents other transmissible diseases

Efforts to limit the spread of HIV also help reduce the spread of other STDs and of tuberculosis. Globally 250 million people a year contract an STD, and the chance of acquiring HIV is to three to five times greater in this population than in the public at large.

As for tuberculosis, currently over four million people are doubly infected, and this resurgence of TB will also lead to a greater incidence of the disease among the non HIV-positive population as well.

d) Costs and benefits of measures to reduce the spread of the epidemic

Studies undertaken in nine developing countries and seven developed countries suggest that for each case of AIDS that is prevented there are savings in health expenditure alone (direct costs) of about twice the per capita GNP, and even five times the per capita GNP in many urban areas, and savings of 5-10 times per capita GNP in relation to the indirect costs.

In Thailand, for example, with a reduction of 20% in the epidemic, the state would save in the health sector costs in the order of 1,250 USD per capita, out of a total of 560 million USD.

e) The difficulties of prevention

One of the greatest problems faced in prevention is the fact that this disease is related with the human reproductive system. In most societies there are taboos surrounding this subject, as it touches on the privacy of human beings.

In preventive work it is also necessary to learn to deal with marginalised population groups (in many cultures this includes homosexuals) and with people who live from illegal practices.

Without political support or an intervention at government level it is difficult to implement preventive programmes effectively.

For many years, and in many countries, the stigma and discrimination that surrounds the AIDS problem prevented those in government from regarding preventive projects as priorities until the epidemic had spread into the public at large.

f) Impact of HIV/AIDS on the health system

As a chronic and fatal disease, which is associated with serious but treatable diseases, HIV/AIDS demands great attention on the part of the health system at various levels.

Unfortunately these needs arise at a time when the health sector is economically extremely vulnerable. On the other hand much health activity continues to prioritise primary health care which takes into account the provision of services as close as possible to where people live and work.

The impact on the health of the public of refugees returning to Mozambique from countries with known high rates of HIV infection worsens still further the weakening support provided at the level of primary health care, because of the lack of an adequate number of health units, or because of the poor supply of medicines.

Family or community based health care will have special relevance for HIV/AIDS patients for whom periods of illness will alternate with periods when they feel well, and who will require

hospital care intermittently. Unfortunately, for reasons previously explained, in many countries, including Mozambique, these levels of the health system are not sufficiently equipped to bear the impact of HIV/AIDS.

Currently, the impact of this disease is beginning to be felt, as can be observed just by taking as an indicator the rate of occupation of hospital beds by patients infected with HIV. In some tertiary or fourth level hospitals, this rate of occupation ranges from 30% to 80%, particularly in countries with a high prevalence of the disease.

Some preliminary data in Mozambique show that in some rural hospitals these patients are now beginning to occupy 15% to 20% of the beds.

A further phenomenon, which has not yet been seen in our country, is the impact of HIV/AIDS on health workers: having to deal with young patients who are incurably ill makes health workers depressed and lowers their morale, quite apart from the fact that many of them know that one day they will be in the same circumstances, which will affect still further the small number of existing staff.

2.2 SCALE OF THE PROBLEM IN MOZAMBIQUE

To assess the scale of the HIV/AIDS epidemic in a country and to decide how to use scarce resources in the interventions regarded as priorities, three criteria must be taken into consideration:

- 1) The prevalence of HIV;
- 2) The risk of future spread based on the prevalence of STDs, and
- 3) The impact of AIDS

1) Prevalence of HIV

The first study carried out in Mozambique in 1987, in the population aged 15-44, in the 10 provincial capitals, showed that the HIV prevalence (confirmation with the Western Blot test) was 3.3%.

Since it is well known that in Africa the main modes of HIV transmission are sexual and perinatal, in the same year other studies were undertaken, in various population groups (soldiers, displaced people, blood donors and pregnant women) to identify which groups were most affected by the epidemic.

The results showed that the prevalence among pregnant women was 1%, among blood donors 0.8%, and among the other groups (soldiers, displaced people and patients suffering from STDs) it was between 3.4% and 3.8%.

Breaking this data down by groups and by place of study, we find that:

a) In Tete (Table 1) the prevalence among soldiers and among those displaced by the war was twice as great as in the public at large and three times as great as among blood donors.

TABLE 1

Studies of HIV prevalence in Tete, 1987

Population Group		HIV+
Displaced by the war	1122	3.4%
Soldiers	599	3.7%
General public	679	1.9%
Blood donors	33	0

b) In Maputo (Table 2) the HIV prevalence found among patients suffering from STDs is slightly greater than among the general public, and three times greater than among pregnant women and blood donors.

Group: studied

988
1989
1990
199
1992
1593
1
94
i

TABLE 2

Studies of HIV prevalence in Maputo, 1987

Population Group	No	HIV+
STD patients	190	3.7%
General public	537	3.2%
Pregnant women	500	1
Blood donors	419	0.7%

Other operational studies have been carried out (using ELISA tests and rapid tests) in various places and contexts in the succeeding years (Table 3)

TABLE 3
HIV prevalence by years and groups, Mozambique 1988-1994

TABLE NOT FORMATTED FOR WEB VERSION

In 1990, epidemiological surveillance among the sexually active population began to be implemented through Sentinel Posts (P.S.) throughout the country. Currently 5 P.S. are operating in STD clinics and 4 in pre-natal clinics.

Analysis of the data over the last four years (Table 3) shows that:

a) Among STD patients

- * the P.S. in the south continue to show a relatively low HIV prevalence (less than 5%);
- * the P.S. in the centre show prevalences of 37.3% (Tete), 31% (Chimoio) and 13.1% (Quelimane), and the P.S. in the north did not operate in 1993 and 1994

PREVALENCE OF HIV AMONG STD PATIENTS IN SENTINEL POSTS (%)

SENTINEL POST	1990	1991	1992	1993	1994	1995
Maputo City	1.6	2.2	2	2.7	3.8	-
Quelimane City 7.1	0.8	1.7	-	13.1	-	-
Tete City	-	-	13.1	-	37.3	-
Chimoio City	-	-	16.1	-	30.8	-

b) Among pregnant women

- * the P.S. in the south showed a prevalence of 1 % in 1987, 1.2% in 1992, and 2.7% in 1994;
- * the P.S. in the centre showed, in 1994, a prevalence of 10.7% in Chimoio and 18.1 % in Tete;
- the P.S. in the north showed, in 1994, a prevalence of 10.5%
-

PREVALENCE OF HIV AMONG PREGNANT WOMEN AT SENTINEL POSTS (%)

SENTINEL POST	1990	1991	1992	1993	1994	1995
Maputo City	-	-	1.2	-	2.7	-
Quelimane City -	-	-	-	10.5	-	-
Tete City	-	-	-	-	18.1	-
Chimoio City	-	-	-	-	10.7	-

c) Among tuberculosis patients

A study undertaken in 1994 (Table 3) showed that:

- in the centre of the country HIV prevalence is 30.3% in districts along the Beira Corridor and 20.4% in districts outside the corridor (n/c);
- in the southern region, HIV prevalence is 10.3% in districts along the Limpopo Corridor, and 11.8% in n/c districts;
- in the northern region, HIV prevalence is 9.9% in districts along the Nacala Corridor, and 2.9% in n/c districts.

d) In the blood banks, epidemiological surveillance has noted HIV prevalence in tests of 8% in 1990, 7.6% in 1991, 8.8% in 1992, 9.8% in 1993 and 10.3% in 1994.

It should be stressed that these figures represent the national average. The figures are subject to several limitations, since often groups at high risk were included in blood donation, either because of the urgent need for blood, or because of the ease of access to these donors.

e) The number of AIDS cases officially diagnosed in the country is so far 2,600, of whom 826 were diagnosed up until June 1993, and 1,774 between January 1994 and December 1995.

2) Prevalence of STDs

STDs are one of the main causes for adult medical consultations in Mozambique. They account for about 25 to 30% of the pathologies attended to in health units throughout the country.

In Maputo city in 1992, for example, 41,558 people with STDs were observed. Genital ulcers were found in 14.7% of the men and in 6.3% of the women.

In general there are more cases of urethritis than genital ulcers, with the exception of the northern provinces, where there are more ulcers than cases of urethritis.

Most cases of STDs occur in young people. In Zambezia, for instance, in 1993, 29% of STD patients were less than 20 years old. In Pemba, in 1990 and 1991, 45% of STD patients were aged between 15 and 24.

Comment

According to the epidemiological surveillance data and the projections estimated by the WHO (figure 3), Mozambique is currently a country with an intermediate HIV prevalence, of between 5 and 10%. This means that among the sexually active population (about 8 million) there are probably between 400,000 and 800,000 individuals who are HIV positive.

While so far the number of registered cases of AIDS throughout the country is low, the statistics show a sharp increase in the incidence of HIV infection in certain communities and certain parts of the country, where there will be an explosion of AIDS cases in the coming years.

In the central region, for example, and more specifically in the districts that border Zimbabwe and Zambia, as well as in the north, in the districts bordering Malawi, we find the highest rates of HIV prevalence.

In these areas most of the elements that increase vulnerability to HIV are present: a high STD

incidence, interchange with countries where there is a high HIV prevalence, a larger number of returned refugees, inadequate social and health infrastructures. These factors, together with the economic crisis, unemployment, low levels of education and uncontrolled urbanisation, help increase the risk of contracting HIV infection/AIDS.

In the southern region, the spread of HIV remains at lower levels than in the rest of the country, and is still confined to high risk population groups. But the sharp spread of STDs among young people is a factor that favours the rapid spread of HIV.

A further factor which is affecting the spread of HIV throughout the country is the increase in prostitution, particularly in the main cities and in border regions. This largely affects girls and women at the start of their reproductive capacity. Two important factors emerge:

1) HIV infection/AIDS is progressing in specific groups with high risk behaviour, as well as in the general public;

2) The heterogeneous nature of how HIV prevalence is distributed will determine that the AIDS epidemic will present itself in a dispersed form in the country.

Given this whole panorama, useful actions in the health and social areas have been defined so as to ensure, in the priority localities, overall care for patients suffering from AIDS and support for their families and for orphans.

But in the short term the greatest effort should be channelled towards prevention through activity that will include the extension throughout the country of the correct diagnosis and treatment for STDs and specific programmes for children and young people.

Today the results of education are clear: the spread of the epidemic is less rapid in countries where information has been oriented in a pertinent way and in parallel with other educational activities. In these countries the media have made

the public sensitive to the problem and have also involved politicians and leaders in efforts at solving the AIDS problem.

In Africa, the rapid spread of AIDS has been the result of public ignorance. Most people, whether or not they are illiterate, have been unaware of, or still do not know about, the problem, or are ill-informed.

Education and information are a further effective and available means of prevention, so as to limit the spread of the HIV/AIDS epidemic.

3. MEDIUM TERM PLAN

Aims, strategies and strategic components

In many countries, even those where there is a high HIV prevalence among the public, AIDS control programmes are inadequate because they are short of money and staff, and because they

are limited to the Health Ministry with little or no participation from other social sectors. There have been few experiences in the world such as that of Thailand, where governmental and non-governmental agencies were involved in the Ministry's programme in a climate of frankness and hope.

AIDS is not just a health problem, and without political and social resources and support the epidemic will spread rapidly. Immediate, concrete and pragmatic action is obligatory, so as to progress with the task of reducing social risk, against HIV/AIDS and for health, directing the greatest of efforts to the population according to their various needs.

3.1 Aims of the NCP STD/AIDS

3.1.1 General

- Prevention of HIV infection;
- Provision of health care to patients suffering from AIDS and to seropositive individuals.

3.1.2 Specific

- Prevent the transmission of HIV through blood;
- Prevent the transmission of HIV through STDs;

Ensure counselling for seropositive individuals and for patients suffering from AIDS;

- Ensure the functioning of STD/AIDS nuclei and district and provincial levels;
 - Ensure monitoring and assessment of the disease through epidemiological surveillance of STD/HIV/AIDS;
- Assess the impact of HIV on tuberculosis patients;
- In terms of human and material resources, prioritise the districts at greatest risk from the spread of HIV.

3.2 Strategies

A combination of strategies is necessary to confront the epidemic:

- Information/Education activities and preventing sexual transmission, with particular stress on the participation of every segment of society and the organisations and institutions that support the programme;
- Assistance for people with AIDS, strengthening medical consultations and counselling, and making essential drugs available;
- Epidemiological surveillance, stimulating clinical, epidemiological and behavioural research;
- Testing blood and blood products at all blood transfusion centres in the country.

3.2.1 Information, education and communication (IEC) and preventing sexual transmission

Informing and educating the public, especially the most vulnerable groups (e.g. soldiers, young people, displaced people) is an important strategy in the prevention of AIDS/STD.

One notes that the major problems in education are: the negative reaction of other social sectors in accepting that AIDS is a disease affecting everybody, the prevalence of sexual habits with a high risk of transmission, and reluctance to use condoms. These problems, together with inadequate resources, consistently limit activities and success in preventing AIDS/STD.

Thus there is a need for an inter-sectoral approach, for a decentralisation of educational activities (more dynamic and autonomous activity by provincial nuclei), for greater coordination with the sectors involved in the NCP (NGOs, churches, schools, the media, companies etc.), and for greater production of educational material.

However, behavioural changes essential for controlling the spread of AIDS do not arise merely from information. Intervention actions are essential, whether undertaken by the government or as the fruit of community initiatives, in which each individual identifies the problem as his or her own and learns how to handle it.

Thus children and young people will be chosen as priority groups (half of all HIV infections occur among people less than 25 years old), to receive education/information inside and outside of school. Another priority group consists of women who are particularly prone to infection and are epidemiologically more vulnerable (because of the custom of marrying or having sexual relations with old men, or because their subordination to and dependence on men prevents them from choosing appropriate protective methods, or because they have chosen prostitution as a means of survival).

Stress will be placed on the most popular forms of communication (radio, theatre groups, mobile brigades and music). The production of local materials will be stimulated, as well as the training of prevention activists so as to strengthen educational activities in places where other means of communication cannot penetrate.

Particular stress will continue to be laid on encouraging marital fidelity and on the use of condoms in casual sexual relations, in order to reduce the risk of spreading HIV and STD infections.

Spaces will be opened so that each social sector may be involved, and so that all may have access to informational/educational services. Any group whose ties are based on feelings of trust, mutual support and a common destiny will be regarded as an integral part of the common programme - religious associations, support groups for people with AIDS or who are seropositive, the network of governmental, non-governmental and inter-governmental organisations, even any company, from the corner shop to the largest of corporations, groups of street children, sex workers or drug users.

3.2.2 Integration of STD services with the AIDS Control Programme

It is well known that the presence of STDs increases the probability of HIV infection. Studies have shown that a good programme to diagnose and treat people suffering from STDs can reduce the risk of HIV transmission by more than 40%.

In Mozambique, particularly in Maputo city, one notes a low level of HIV transmission (compared with other countries) because there is a national control programme and a strategy based on correct diagnosis and treatment following established norms.

But it is necessary that some of the funds intended for the control of AIDS should be channelled to the diagnosis and treatment of STDs which in themselves are a major public health problem.

Since many STDs are asymptomatic it is difficult for sick people to resort spontaneously to medical assistance. Thus our attention should be directed towards the young and sexually active population who go to health services for any reason (antenatal clinics, mother and child care, inoculations, tuberculosis consultation, family planning etc).

In these places, apart from detecting cases of STDs, health education will be promoted, including the prevention of the most frequent mother-and-child pathologies (with particular stress on malaria, tuberculosis, parasitic diseases etc), the use of condoms, and counselling.

3.2.3 Care for individuals with HIV/AIDS

People infected with HIV frequently need clinical care as a result of intervening pathologies. If the care is not sufficient or appropriate, their state of health deteriorates rapidly, leading to the need for more expensive and more specialised care. Faced with this, strategies must be implemented that seek to reduce the costs of treating AIDS patients:

- prophylactic treatment of some infections (*Pneumocystis carinii* and TB, for example);
- implementation of home or community care in liaison with primary health services;
- early diagnosis and treatment of intervening pathologies with low cost drugs.

3.2.4 Counselling

Counselling is an essential support service for the general public, for seropositive individuals and for their relatives.

For the public, counselling is aimed at helping individuals to decide what alterations should be introduced into their life style to prevent HIV infection (preventive counselling).

For HIV positive individuals, or those whom it is suspected might be infected, such as blood donors, pre-test and post-test counselling is not only an information service, but also a service of support and trust.

AIDS is a fateful disease: its effects on the infected individual have been clearly described: shock, rejection, anger, isolation, fear and eventually acceptance. Thus it is fundamental that the staff working in this area should be adequately prepared, and should have specific attitudes so as to communicate with and give guidelines to the target group. Assisting infected people demands two important joint activities: establishing a dialogue with the relatives or the community, and promoting selfhelp groups. Experiences from other countries show that people with HIV/AIDS can be responsible for their own well-being if they have emotional support and resources at hand. To this end many seropositive individuals and their relatives come together to form self-help groups, in which institutionalised counselling becomes our own". The groups help people affected by HIV/AIDS to keep control over their own lives, by supplying emotional and practical support, raising funds, waging campaigns against discrimination, and increasing the capacity of individuals to obtain what they need in accordance with their personal situation (a loan of money, taking care of the children, financing small businesses which provide the possibility of self-employment etc.).

3.2.5 Epidemiological surveillance and research

The "epidemiological surveillance" component is based on the following: strengthening the sentinel posts so as to follow in time and space the evolution of HIV prevalence in the target groups (STD patients, pregnant women, TB sufferers, blood donors).

For pregnant women, sentinel posts have been set up in the cities of Maputo, Chimoio, Tete and Nacala. For STD patients sentinel posts are in the cities of Maputo, Beira, Chimoio, Tete, Quelimane and Pemba.

As for blood donors, all units where transfused blood is tested are regarded as sentinel posts. In the context of research, at the general level there is a need for better definition in several areas:

- better study of the sexual behaviour of the population;
- knowledge of the level of understanding and attitudes towards AIDS, particularly among young people; research into perinatal transmission and AIDs in children; studies of the costs and benefits of prophylaxis for certain opportunist infections or for the treatment of intervening infections, etc.

3.2.6 Reduction of transmission via blood

It is estimated that only 5% of HIV infections are due to blood transfusions. Nonetheless it is necessary and imperative to ensure maximum safety in the blood that is transfused.

Reducing the risks of infection via blood also imposes a stricter policy of the criteria for transfusions: prevention of pathologies that provoke anaemia, particularly in women and children, selection of blood donors, early and appropriate treatment of pathologies such as malaria and intestinal parasites,

I greater use of auto-transfusions for programmed surgery. HIV transmission through sharp instruments, both inside health units and outside (drug abusers, witchdoctors, barbers, traditional midwives etc) can be prevented through information and education and through using properly sterilised equipment.

3.3 Norms for decentralising HIV epidemiological surveillance, for diagnosing AIDS cases, and for screening blood donors

At the start of the Programme to Control AIDS and STDs six years ago, several strategies were established for diagnosing cases, for epidemiological surveillance and for screening blood donors for HIV.

In the second phase of the medium term plan it was decided to extend this work to the districts, though limited financial, human and material resources have restricted this approach.

At the meeting on HIV epidemiological surveillance held in Dakar, Senegal, in December 1991, the use of expensive algorithms such as Western Blot was identified as one of the major obstacles to its implementation in Africa.

Early on, the importance of the laboratory component was identified in Mozambique, both in diagnosing AIDS cases, and in HIV epidemiological surveillance, including in blood donors. However the problem of access to and developing capacities at the periphery was not dealt with. With the use of more recent and effective tests, useful, timely and useable information can be produced at the various levels of health care.

The discovery of the HIV virus and of its role in the development of AIDS focused attention on serological tests as substitutes for evidence of the current or past presence of the virus.

In reality, the serological tests, even when described as confirmed, detect the presence of antibodies. Since these are specific, they presuppose previous contact with the virus.

The long latent/incubation period has increased the usefulness of these tests because they allowed the classification of infected people. As for AIDS cases, evidence of the presence of antibodies provides greater security in classifying this fatal syndrome.

The existence of factors which make attempts to classify the disease unclear (tuberculosis, malnutrition, high rates of infectious disease) has increased the usefulness of this diagnostic instrument.

However, in managing a programme the various levels and their needs must be taken into consideration. Given the existing resources, a balance must be struck between access to actual and potential patients and the level of precision in the diagnosis, bearing in mind the overall development of the system. Thus researchers, recognising the magnitude of the HIV/AIDS problem and the potential gains from an early diagnosis, have looked for a more sensitive indicator (the relation of T4/T8 cells). For most African countries, the identification of AIDS

cases is based on clinical criteria in isolation, or with the addition of serological tests.

Advances in the quality of the tests have increased the options, for formulations that are less sophisticated and less dependent on equipment, and . even less expensive.

For the choice of a laboratory test, or combination of tests that may be more appropriate, three important criteria are used:

* The objective in testing for HIV in a particular population group; * The sensitivity and specificity of the laboratory tests used; * The prevalence of HIV infection in that population group.

Decentralising epidemiological surveillance implies defining the infected person or the clinical case in the province itself. That is, the work must be oriented so that the serum samples from the sentinel population or the suspected clinical cases are analysed in the laboratories of the provincial blood banks.

1. Referring to the first criterion, there are four basic purposes for which tests for antibodies against HIV are made:

- a) Safety in blood transfusions: screening blood and blood products.
- b) Surveillance: anonymous testing of serum with the purpose of monitoring the prevalence and the trend of HIV Infection over time, in a given population group.
- c) Diagnosis of HIV Infection: the voluntary serological test on people who have no symptoms, or on people with symptoms and clinical signs suggestive of HIV infection or AIDS.
- d) Research: the voluntary serological test on individuals for epidemiological, clinical, virological or other studies related to HIV.

2. As for the second criterion, sensitivity and specificity are two factors that determine the quality of a test in its ability to distinguish between those who are infected and those who are not.

Tests with a high sensitivity will give few false-negative results. Thus only tests with the highest possible sensitivity should be used, for instance, in guaranteeing the safety of blood transfusions. A test with a high specificity will give few false-positive results, and should be used to minimise the rate of false-positives in, for instance, diagnosing HIV infections in individuals.

3. Finally, the third criteria, the prevalence of HIV in a given population.

TABLE NOT FORMATTED FOR WEB VERSION

Sensitivity = $a/(a+c)$

Specificity = $d/(b+d)$

Positive predictive value = $a/(a+b)$ Negative predictive value = $d/(c+d)$

Thus the NCP STD/AIDS has defined three strategies

A. To ensure safety of blood transfusions, the strategy will be applied under which the serum of all donors must be tested with an ELISA or rapid test. In Mozambique blood bank laboratories which have the ELISA reading apparatus will use the ELAVIA MIXT or GENELAVIA MIXT test. In the other laboratories the HIV-SPOT rapid test will be used.

With a positive result from the ELAVIA MIXT, GENELAVIA MIXT or HIVSPOT test, the donor's blood must be rejected and eliminated.

THE REMAINING TABLES, CHARTS AND DESCRIPTIONS ARE NOT FORMATTED FOR WEB VERSION

