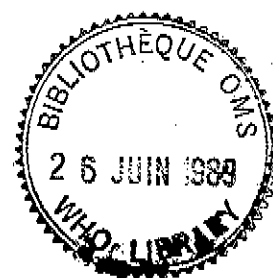

SPECIAL
PROGRAMME
ON
AIDS

REPORT OF THE FIRST REGIONAL
CONFERENCE ON AIDS
IN AFRICA

BRAZZAVILLE
11-13 NOVEMBER 1986



WORLD
HEALTH
ORGANIZATION



REPORT OF THE
FIRST REGIONAL CONFERENCE ON AIDS IN AFRICA
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I. INTRODUCTION

The action plan for AIDS control in the African Region of WHO (6 March 1986) acknowledged that AIDS had become an important public health problem in Africa and that national and international vigilance backed up by specific measures would be required to limit the spread of HIV.

The First Regional Conference on AIDS in Africa was organized by WHO in Brazzaville, People's Republic of the Congo, from 11 to 13 November 1986. The list of participants from African countries and of specialists from countries affected by HIV and related retrovirus infections features in Annex 3.

The purpose of the Regional Conference on AIDS in Africa was to implement resolutions addressed to WHO and the Member States by the Governing Bodies of the Organization (the Executive Board, the World Health Assembly, and the Regional Committee of WHO). It should enable WHO and the Member States to carry out their programmes, especially in exchange of information, improvement of scientific knowledge, and practical experience in AIDS control.

The first African participants chosen for this conference were the Chairmen of National AIDS Control Committees, as well as other decision-makers whose daily work has a bearing on the AIDS control programme. This choice was motivated by WHO's desire to help countries to set up without delay the priority programmes in the plan of action for AIDS control in the African Region, adopted at Brazzaville in March 1986.

Following a series of plenary sessions, the conference took the format of workshops. The plenary presentation of the Regional Director for Africa, Professor G. Monekosso is reproduced in Annex 1. The presentation by Dr J. Mann, Responsible Officer for the Control Programme on AIDS is reproduced in Annex 2.

The President of the conference was Dr Itoua-Ngaporo (Congo); the Vice-President was Dr F. Mhalu (Tanzania); and the rapporteur was Dr J. Schwalbac (Mozambique).

The objectives of the conference were to:

- (i) examine and update scientific data on the biology and immunopathogenesis of HIV infection and AIDS in the world, and on related laboratory problems;
- (ii) examine and update clinical, therapeutic and epidemiological information on HIV and related retroviruses in Africa;
- (iii) consider both experience acquired in Africa on AIDS and activities involving:
 - (a) epidemiological surveillance and the examination of risk factors through prospective studies;
 - (b) definition, clinical diagnosis and therapeutic trials, the screening test and confirmatory tests for HIV infection;
 - (c) laboratory testing and confirmatory tests;
 - (d) prevention of sexual transmission;
 - (e) the education of healthcare professionals.
- (iv) exchange of available information on AIDS in Africa;

- (v) specific recommendations on AIDS prevention and control addressed to countries, to the Regional Office for Africa and to WHO headquarters, Geneva.

II. RECOMMENDATIONS FOR A PLAN OF ACTION FOR AIDS CONTROL IN THE AFRICAN REGION OF WHO

1. The Acquired Immunodeficiency Syndrome (AIDS) and other manifestations of LAV/HTLV-3 infection are becoming a major public health concern in many areas of the world, including Africa. For this reason, AIDS represents a potential hindrance to the attainment of Health of All by the Year 2000. National and international alertness and preparedness are urgently required, as no country can consider itself immune to infection with LAV/HTLV-3. At present neither therapeutic agents nor vaccines are available for the treatment or prevention of AIDS. Infected persons may develop AIDS, AIDS-related complex, or may remain entirely healthy, yet capable of transmitting the disease to others ("healthy carriers"). Therefore, actions should be undertaken to limit the further spread of LAV/HTLV-3, including public education and information, assurance of safe blood and blood products, and avoidance of non-sterile needles, syringes, or other skin-piercing instruments.
2. A comprehensive strategy on AIDS starts at the operational level with creation of a National AIDS Committee, a Task Force or the like. This Committee, with representatives from health, social service, education and other relevant sectors, would have coordinating, advisory and operational functions. The National Committee would develop details of a national strategy, which would include three major components: (i) initial assessment of the LAV/HTLV-3 situation in the country, along with evaluation of existing resources; (ii) strengthening of the health infrastructure in order to support epidemiological, laboratory, clinical, and preventive activities and (iii) education and information programmes regarding AIDS and its prevention, directed to the general public, risk groups in the population and healthcare workers at all levels.
3. The initial assessment should determine the prevalence of AIDS and LAV/HTLV-3 infection through epidemiological surveillance and serosurveys of selected populations. In addition, the ability of the existing health infrastructure to support epidemiological surveillance and studies, laboratory testing, clinical case identification and management should be evaluated.
4. The health infrastructure should be strengthened: training of personnel, provision of equipment and reference materials may be required to assist in establishing and maintaining surveillance activities. In addition, resources may be required for epidemiological research to determine risk factors, modes of transmission and other locally relevant epidemiological factors. Laboratory capability and resources to support epidemiological and clinical diagnosis must be established.
5. Quality control assurance, proficiency testing and establishment of appropriate infection control methods in the laboratory should be considered. To ensure self-reliance within the African Region, a number of Collaborating Centres on AIDS would be designated to support these activities and to perform confirmatory testing. Clinical training and education will ensure familiarity with AIDS and other manifestations of LAV/HTLV-3 infection for healthcare workers at all levels. In addition to training and reference materials to assist clinical diagnosis, case management and infection control techniques must be developed and information widely disseminated. Education and provision of equipment or other materials may be required to support activities related to prevention of LAV/HTLV-3 transmission by contaminated blood, blood products or blood-contaminated needles or instruments.

6. Education and information to the general public and to risk groups within the population is essential. At the operational level, general guidelines and available knowledge regarding risk factors and modes of LAV/HTLV-3 transmission must be converted into specific, useful educational materials suitable to the local or national audience. The general public should be made fully aware of the nature of AIDS and LAV/HTLV-3, the modes of transmission and its importance as a health concern. Emphasis should be placed on the feasibility of preventing LAV/HTLV-3 infection and on the fact that AIDS is not transmitted by casual contact with infected persons. Healthcare personnel should be encouraged to educate patients and members of the general public about AIDS and ways of avoiding LAV/HTLV-3 infection.
7. AIDS is an evolving international health concern. Within the African Region, Member States together with their Organization, should undertake:
 - (i) initial assessments at the national level;
 - (ii) strengthening of the health infrastructure in order to support epidemiological, laboratory, clinical and prevention activities;
 - (iii) educational and informational programmes to the general public, risk groups and healthcare workers;
 - (iv) mutual collaboration in the fight against AIDS in all its forms in the context of TCDC: exchange of information including reporting of AIDS cases, as well as experience and experts, collaboration between laboratories, provision by more technologically advanced countries of technical support and training to researchers in other countries, etc.
 - (v) exploration by WHO of means to enable Member States to effectively control AIDS.

III. WORKSHOPS

Workshops were held in English and French on the following topics: 1) surveillance and serosurveys; 2) risk factors and prospective studies; 3) prevention and control; 4) education of healthcare professionals; 5) case management including patient contact and family counselling; 6) laboratory screening and confirmatory testing; and 7) blood and blood products.

A summary of the discussions prepared by the rapporteur of each group follows.

1A SURVEILLANCE AND SEROSURVEYS (English Group)

What is being done:

Zaire

- Community based volunteer HIV screening service run by project SIDA.
- Surveillance system largely confined to the capital city of Kinshasa.
- Decision to inform patient is left up to doctor of patient.
- This programme has run since 1984.

Ghana

- A surveillance form has been designed.
- Surveillance system using either immunofluorescence or ELISA confirmation was established in March 1986.
- WHO case definition is used in surveillance system.

- To date only two of 900 blood samples tested have been positive - both in people who have been outside Ghana.

Liberia

- Awareness of AIDS as public health problem began six months ago and with this awareness came public demand for HIV surveillance.
- Facilities for ELISA testing with Western blot confirmation exist in Liberia.

Uganda

- National Committee for Prevention of AIDS has been established.
- Surveillance system has been established using WHO case definition. This case definition has not been specific enough for Africa, as there are so many other diseases which clinically may mimic AIDS.
- Massive public awareness/concern for AIDS in the community has stimulated demand for surveillance system. Movement around the country and the region have been shown by the surveillance system to be the most important risk factor.

Kenya

- National AIDS Committee has been set up.
- Several serosurveys have been done in various populations:

Seroprevalence

(a) Pregnant women in large urban hospitals	... 2%
(b) Blood Units	... 0.5%
(c) Prostitutes	... 59%
(d) Men at STD clinics	... 18%

- No serosurveillance in general population.

Gambia

- No national AIDS programme.
- Medical Research Council laboratory has collected some blood from populations, data is pending.

What are the main issues

Research

Ethiopia

Diagnostic facilities exist but economic reasons preclude their being used.

Gabon

- Needs help in sampling methodology because of very low seroprevalence; does not make sense to spend a lot of money to end up with a lot of negative data.
- What are the best populations on which to conduct surveillance and how should they be sampled.

Zaire

Need to identify methodology which can be used throughout the Region.

Prevention/Control

- Ethical issue - are the patients entered into a surveillance programme told of their results.
- What populations should be entered into surveillance programmes?
 - (a) blood banks;
 - (b) who must organize and direct which populations to be surveyed.

- System must be simple or it will not be used.
- Requirements before system surveillance can be set up:
 - (a) economic commitment;
 - (b) political commitment;
 - (c) social commitment.
- Must integrate surveillance with family planning and STD activities; sexual education - some countries do and others do not. WHO should see what is being done. Uganda seems to have an ambitious programme.

1B SURVEILLANCE AND SEROSURVEYS (French Group)

What is being done

Most African countries have set up AIDS monitoring systems:

- by setting up national AIDS prevention committees; and
- by conducting serological and epidemiological surveys.

It should nevertheless be noted that:

- four countries have not yet set up AIDS control programmes and have no epidemiological data on the disease;
- some other countries have simply based their studies on clinical data;
- in some of the serological surveys conducted there were many false positives, which shows the need for reliable tests in the future;
- there is a need for sub-regional coordination and for a WHO collaborating centre for AIDS screening in each sub-region;
- it is necessary to test:
 - . all sexual risk groups (prostitutes and highly promiscuous people);
 - . all blood donors;
 - . all who are exposed to ritual practices such as scarification and tattooing;
- there should be compulsory declaration of confirmed AIDS cases.

Critical points in research

Aids prevention and control: Good research, training and AIDS control requires:

- good coordination of sub-regional and international cooperation in research on AIDS;
- for AIDS control, AIDS information campaigns aimed at medical and paramedical personnel and the public;
- the choice of appropriate procedures.

A number of countries, such as Senegal, have conducted serological and epidemiological surveys leading to isolation of the HTLV-4 virus, enabling them to assist other countries in conducting similar surveys.

Prevalence among sexual risk groups and people who have received several transfusions has been determined in most countries.

A number of countries have studied mother-to-child transmission.

Short-term research priorities for Africa

- Continuation of research into HTLV-4.
- Research on AIDS prevalence in different age groups.
- Research on AIDS prevalence in risk groups including persons exposed to traditional practices such as scarification and tattooing.

What the countries in the group have done

- (i) Most African countries have set up AIDS monitoring systems and activities are coordinated by national AIDS prevention committees.
- (ii) Serological and epidemiological surveys, most of them using the ELISA test, sometimes confirmed by Western Blot or immunofluorescence, have been conducted in certain countries. Specific population groups, especially blood donors have been tested.
- (iii) In other countries such as Chad, Gambia, Guinea, Liberia and Niger, AIDS has only recently been recognized as a public health problem. These countries have therefore still to set up national AIDS prevention committees, and they do not have epidemiological data on HIV infection.
- (iv) Lacking the resources to conduct laboratory tests, most countries point out that their epidemiological data are still based mainly on clinical evaluation (WHO/Bangui definition).

Recommendations to WHO

WHO should give African countries financial support in their national AIDS control and research programmes for the purposes of:

- equipping the AIDS screening structures;
- supplying screening and confirmatory tests for AIDS;
- implementing health education programmes;
- training biologists in AIDS diagnosis techniques;
- providing assistance in supervision of the national programmes.

2A RISK FACTORS AND PROSPECTIVE STUDIES
(English Group)

What is being done? What do we know?

Risk factors:

- (1) Major risk factors include:
 - (a) heterosexual contact with a large number of partners or sexual contact with a person who is infected with HIV;
 - (b) prostitution is a risk factor due to the large number of sexual partners;
 - (c) perinatal transmission from an infected mother;
 - (d) blood transfusion.
- (2) Economic hardship, rapid urbanization and population disruption have resulted in increases in prostitution in some areas, thereby increasing the risk of HIV transmission.
- (3) No social group or class is free of risk or at risk per se; rather the risk is strictly related to the numbers of sexual partners or the likelihood of unprotected sexual contact with an infected partner.
- (4) Attendance at sexually transmitted disease clinics identifies persons potentially at risk of HIV infection and transmission.
- (5) Preliminary data suggest that genital ulcer disease (e.g., chancroid, etc.) is associated with HIV infection.

2B RISK FACTORS AND PROSPECTIVE STUDIES
(French Group)

Sixteen delegates spoke on behalf of their respective States: Cameroon, Central African Republic, Chad, Congo, Cote d'Ivoire, Gabon, Guinea, Guinea-Bissau, Madagascar, Mauritania, Mozambique, Niger, Rwanda, Senegal, Togo and Zaire.

- (1) What is being done
Serological and epidemiology surveys:
- on risk groups;
- on the population at large.

Nine of the 16 Member States had conducted such investigations, mostly with varying degrees of external assistance. At 0 to 1%, seropositivity in the general population was lower in West Africa than in Central Africa, where it ranged from 0 to 7%. In the risk groups, prevalence varied between 0 and 60 or 80%.

- (2) Studies of certain groups of cohorts over a period of time

Eleven of the 16 Member States practise this kind of investigation on a variety of seropositive groups: prostitutes, people who have had several blood transfusions, tuberculosis sufferers, etc.

- (3) Clinical surveillance

All 16 speakers said that in their countries physicians had been instructed and that clinical surveillance was a priority.

As yet there are few clinical cases in West Africa.

- (4) Education for health

Four of the 16 Member States said that they had initiated a health education programme for their population and information programmes for risk groups.

- (5) Laboratory

Seven of the 16 Member States possess a laboratory capable of running the diagnostic tests (ELISA at least) required in epidemiological surveys.

- (6) Risk factors identified

- (a) Sexual promiscuity

This is indisputably the major cause of the spread of the disease.

It was pointed out how difficult it is to give a general definition of prostitution in Africa: whereas it is declared and professional in certain parts of West Africa, elsewhere it tends to be occasional, diffuse and even clandestine.

- (b) Blood transfusions

Recognized everywhere as a definite risk factor, their relative rarity means that they are usually not a major cause of dissemination of the infection. All diseases whose treatment requires transfusions increase the risk (sickle cell anemia) and serious, drug-resistant malaria.

- (c) Parenteral transmission

Drug injections, minor surgery and traditional incisions are common. The low prevalence of seropositivity among children, which is significantly lower than among adults, seem to indicate that drug infections are not a major factor in the spread of the disease.

- (d) Foreign travel

Several studies are in progress. Early results do not confirm it as a risk factor.

- (7) Problems

All the speakers stressed that their countries had embarked on or were about to initiate national AIDS monitoring programmes.

The problems are essentially of two orders:

- (a) Lack of staff qualified in:
 - laboratory techniques;
 - epidemiology techniques;
 - health education.
- (b) Insufficient equipment for:
 - laboratories;
 - health education.

(8) Proposals

WHO assistance is sought in the following areas:

- (a) Training of personnel in:
 - laboratory techniques;
 - epidemiology surveillance;
 - health education techniques.
- (b) Technical assistance from WHO consultants to enable the national services to conduct certain evaluations.
- (c) Assistance of WHO consultants in national training and retraining seminars.
- (d) Provision of laboratory reagents and equipment.
- (e) Provision of health education material tailored to suit the different countries.
- (f) Definition of risk groups.

3A PREVENTION AND CONTROL (English Group)

Prevention requires anticipatory action based upon knowledge of the natural history, to make the onset or further progression of a disease unlikely.

What is going on now

1. Establishment of National Advisory Committee for Prevention/Control/Surveillance of AIDS

By 1986, many countries had established national AIDS committees with membership typically including representatives from government, university, the military and physicians in practice. Those committees have been charged with:

- (i) advising the government on the existence and magnitude of the problem of AIDS and HIV infection;
- (ii) surveillance;
- (iii) professional training and public education;
- (iv) establishing other control measures such as preventing blood product infection by screening blood donors and excluding high risk donors;
- (v) reviewing, of proposed research projects on HIV infection.

Task forces or subcommittees have been assigned to one or more of these areas in some countries.

2. Surveillance

(i) Passive Surveillance of AIDS

Some National Advisory Committees have received criteria for diagnosis of AIDS, developed teaching materials for education of health professionals on the diagnosis of AIDS and conducted seminars on AIDS for physicians and nurses (who in turn conducted seminars for other health professionals at the

regional/district level); developed forms for reporting AIDS and established legal requirement for case reporting. Cancer registries have been used in some countries to monitor Kaposi's Sarcoma. The use of death certificates to monitor AIDS related death was not discussed.

(ii) Active surveillance

Systems for active case detection are so far limited to a few hospitals in very few countries (e.g., Zaire). There is no known community-wide active case detection for AIDS or HIV infections in Africa.

(iii) Serologic surveys

Many countries have undertaken point-prevalence surveys for antibody to HIV in selected high risk groups (e.g., prostitutes) in selected/clinical populations (e.g., tuberculosis cases) and in non-high risk urban residents (e.g. blood donors, antenatal clinics). There have been insufficient studies of rural areas in general; few, if any, population-based sample seroprevalence studies, and most important, no large scale population-based or representative cohort studies have been undertaken to define the incidence of HIV infection, or the morbidity or HIV infection relative to that of other diseases in Africa.

3. Education and Training of Health Professionals

National committees have given the highest priority to education and training of professionals and of the general public. The most active of the committees have already developed educational materials for health professionals, emphasizing WHO criteria for the AIDS case definition, treatment and prevention strategies. Central workshops have been held for regional directors of health, laboratory technicians and nurses, who have been given responsibility for establishing regional educational programmes. Technicians in some countries in central hospitals have been trained in-country or out of the country to perform ELISA screening tests for antibody to HIV and sufficient funds have been provided by the government to permit serologic testing. Other countries have surveyed laboratory capabilities and concluded that no laboratory has yet the facilities, equipment, funding and expertise to conduct serology testing.

4. Education of the Public

There has been considerable variation in the emphasis given to public education. A few countries have not acknowledged the existence of the problem and have policies that discourage informing the public about AIDS. Some institutions do not even inform or counsel individual patients who are known to be infected with HIV. On the other hand, a growing number of countries have developed information materials for the public and these are being translated into local languages. These materials define AIDS in easily understood terms, describe the importance of the epidemic, and provide the following behavioural messages:

- (i) use condoms with high risk exposures;
- (ii) avoidance of exposure to contaminated needles or sharing of needles. Some public education programmes have made extensive use of newspapers and television to promote these messages, and have developed educational materials on AIDS for schools. It has been observed that the news media have provided inappropriate hysterical messages about AIDS in the absence of responsible public education programmes, but this type of reporting has decreased after the introduction of factual public education.

5. Upgrading STD services

Recognizing the potential importance of STD control programmes in controlling AIDS, some countries have "resuscitated" (i.e. upgraded) STD services.

What are the critical issues and constraints

1. Political commitment

Some governments have been unwilling to recognize the existence of the problem.

2. Economic/Financial issue

Financial constraints have prevented blood donor screening in all but a few demonstration areas.

3. Governmental policies

Certain policies (e.g., not permitting wives to accompany migrant workers) foster the spread of sexually transmitted diseases.

4. Lack of appropriate technology

Serodiagnostic tests are expensive, technically difficult and require special equipment. Therapies for opportunistic infections and AIDS-related disorders are often unavailable or prohibitively expensive. New therapies for HIV infection are not available in Africa.

5. Resistance to health education

There is considerable resistance to the principle goals of health education for AIDS prevention which are modification of sexual behaviour and modification of contraceptive behaviour.

6. Competing priorities

Other programmes (e.g., agriculture, defense) have had a higher priority than health in general and other communicable diseases have had higher priority than AIDS in particular. The growing cost of AIDS (e.g., direct medical cost, years of life lost) has not been compared to the costs of other communicable diseases.

What should be done?

1. By WHO

- (i) There was a strong consensus that WHO should take a stronger position of leadership and advocacy for national and international programmes for AIDS prevention and control. Governments must be encouraged by WHO as well as groups within, to establish active programmes; this should be done even in countries which do not yet have a major problem because these countries eventually will have a major problem. It was even suggested (facetiously) that the amount of funding provided to each country by WHO should be proportional to the number of cases reported from that country.
- (ii) Help define the natural history and epidemiology of HIV infection in Africa.
- (iii) Technical help is needed with serologic testing, including regional centres for confirmatory testing. Some countries might benefit from help with public health education and communication.
- (iv) Funding is needed for serologic testing for screening blood donors.
- (v) WHO should help to standardize serologic tests and methods for sampling populations for serologic testing, so as to permit comparisons between countries and evaluation of trends in prevalence of HIV infection. WHO should continue to standardize reporting of cases using standard criteria and reporting forms.

2. By the countries

Countries should implement prevention and control using current technology:

- (i) Form national AIDS Advisory Committees for surveillance prevention and control.
- (ii) Conduct surveillance to define the problem and focus control activities.
- (iii) Coordinate professional education on HIV diagnosis, treatment and prevention.
- (iv) Conduct on-going programmes for public education, emphasizing reduction in the risk of transmission of HIV.
- (v) Reduce risk of transmission by blood transfusion by professional peer review to prevent inappropriate use of blood products, by discouraging blood donation by persons at high risk of HIV infection, and by serologic screening of blood donors.

- (vi) Design and implement infection control programmes, in hospitals and clinics emphasizing sterilization of needles, syringes and medical instruments, and preventing reuse of unsterilized needles, syringes and equipment. These programmes should encompass not only physicians and nurses, but also traditional birth attendants and traditional healers.
- (vii) Design and implement programmes to prevent transmission of HIV by traditional practices such as scarification, circumcision, cupping, ear piercing and tattooing.
- (viii) Integrate AIDS control and STD control programmes by increasing efforts to reduce the prevalence and risk of general infections (e.g., genital ulcer) in high risk individuals, since such infections may increase the risk of transmission of HIV.
- (ix) Integrate AIDS control into family planning programmes. Promote effective family planning and contraception by seropositive individuals. Promote use of condoms by promiscuous individuals, especially prostitutes and their clients.

Prevention

I. Epidemiologic studies underway

Tanzania: large collaborative study with Sweden will soon begin.

Kenya: prospective studies in pregnancy and other epidemic studies going on with American and Belgian collaboration.

Zaire: Project SIDA with many long-term epidemiological studies going on with Belgian and American collaboration.

Lesotho: a large scale serosurvey in high risk group is planned.

Zambia: many studies planned including a study to evaluate the risk factor status of HIV-infected blood donors.

Gambia: risk factor surveys to begin soon in collaboration with the Medical Research Council (Great Britain).

II. Important epidemiological research issues

The group felt that WHO member countries in the African region with or without collaboration of other scientists should:

- (a) determine why HIV infection rates vary in:
 - countries contiguous to countries with much higher rates;
 - different regions within countries;
 - different population groups (e.g., tribes).
- (b) determine how better information on sexual habits and practices can be obtained reliably and confidentially; experienced social scientists and physicians should be consulted in this regard;
- (c) determine whether local customs such as scarification and circumcision are associated with unsterile practices and HIV infection;
- (d) determine whether polygamy per se is associated with an increased or decreased risk of HIV infection;
- (e) conduct more research on homosexuality and bisexuality in Africa;
- (f) describe and quantify the role of injections and immunizations in HIV transmission;
- (g) conduct studies to determine attitudes on condom usage and methods to increase the availability, distribution and use of condoms;
- (h) determine other methods to reduce the risk of sexual transmission in an individual;
- (i) conduct long-term cohort studies in African countries to better determine the national history and modes of transmission of HIV infection;
- (j) study further the interaction of HIV with other infections in children and adults in the tropics;

- (k) study the role of breast-feeding and the use of breast milk as a risk in the transmission of HIV;
- (l) determine better the health worker's and patients' attitudes and practices on the use of injections.

Recommendations for WHO

WHO should:

- (a) advise national health authorities to conduct studies and surveys to answer the questions noted above;
- (b) provide technical and financial assistance to Member States in the Region for these studies and surveys;
- (c) collect and disseminate on a timely basis to Member States:
 - information on risk factors;
 - descriptions of ongoing epidemiological studies underway in the Region.

3B PREVENTION AND CONTROL

(French Group)

Having listened to the speakers, the francophone group on prevention noted the following important points in response to the questions raised.

1. AIDS control and prevention activities by country.
2. Absence of confirmatory tests:
 - lack of reagents for ELISA test;
 - logistical problems and shortage of resources for epidemiological surveys;
 - minimization of AIDS problem in certain countries;
 - disagreement over preventive measures to be taken in relation to confirmed cases.
3. Activities recommended to each country:
 - all countries should set up a national AIDS research committee to coordinate national research work;
 - screening of blood donors;
 - checking donated blood before transfusion;
 - health education activities.
4. WHO could help to:
 - set up at least one laboratory per country where ELISA tests can be done;
 - provide reagents for ELISA and Western Blot on a regular basis;
 - set up blood banks;
 - make regular acquisition of drugs to control opportunistic infections.
5. The political will is in evidence almost everywhere, and only three out of 10 countries have not yet set up a national anti-AIDS committee.
6. Epidemiological surveys with a view to prevention have already begun in most countries.
7. The most commonly used test is the ELISA; its confirmation has not yet been systematic, and many countries must send samples abroad for testing.
8. Only four countries screen blood donors and check donated blood: Cameroon; the Central African Republic; the Congo and Rwanda. Other countries find it difficult to set up blood banks.
9. In most countries, health education activities are under way.

4A EDUCATION FOR HEALTH PROFESSIONALS

(English Group)

Education of health care workers (HCWs) in most African countries represented at the conference is currently conducted through seminars, workshops and distribution of pamphlets and posters. Some countries have already instituted projects that deal specifically with the issue and all the other countries have similar projects planned.

The major issues identified for HCWs education include: proper sterilization of needles and syringes; proper sterilization of surgical equipment; use of disposable injection equipment and their disposal; glove and disinfectant use and proper laboratory techniques. Teaching HCWs counselling techniques for terminal patients and their families to limit transfusions as much as possible was also stressed.

The problems in educating HCWs are of two types:

- (a) problems with undertaking health education itself;
- (b) problems with implementing "safe" practices.

Problems with undertaking health education programmes have generally been overcome but include acquiring appropriate materials, apathy and resistance of government officials, lack of support from superiors, and the difficulty of reaching all those who could be potentially exposed to contaminated materials (including custodial staff).

Problems with implementing safe practices amongst HCWs mainly consist of economics; specifically, lack of disposable needles and syringes, lack of sterilization for surgical equipment and injection equipment, and poor availability of soap and gloves.

It should be noted that there was no agreement on what the risk was for HCWs, although it was thought different in Africa than in the United States.

Recommendations

The following recommendations were directed towards African governments:

- (i) they should be advised on the need to organize seminars and workshops, and provide other educational materials for HCWs;
- (ii) AIDS education should be a part of the curricula of all HCW training institutions.

The following recommendations were directed at WHO:

- (i) continue to provide Member States with educational material (including appropriate ways to handle contaminated materials and corpses);
- (ii) provide continued economic support for educational projects;
- (iii) study AIDS transmission in health care settings in Africa.

4B EDUCATION FOR HEALTH PROFESSIONALS

(French Group)

Burkina Faso

Article published in a periodical for health workers (5 000 copies, end 1985). Discuss at meeting of provincial directors: planned training of national committee. Establish procedures.

Requirements

Initial material: dossiers for physicians (the present material) plus simpler documentation for the public.

Cameroon

Distribution of WHO information in the provinces. Press and television used.

Yaoundé (Cameroon)

- Educational role of all health personnel
- Diffusion of information to nurses through "PINOTE".
- Circulation of results of local surveys.

Proposes:

- posters.

Proposes to

- train technicians
- run a seminar.

Central African Republic

AIDS is officially acknowledged through education programmes on the radio.

Note to explain clinical definition to physicians and to inform sufferers. Advice on simple treatment.

A note on blood transfusion has been prepared

No paramedical worker may prescribe, the head of department alone has this power.

Chad

- No programme.
- Documents

Congo

Only laboratory staff who have been informed (because they were worried).

Three doctoral theses in medicine; meeting in Brazzaville hospital between physicians and personnel.

National conference planned for January 1987.

Proposes:

- helping to organize this national conference.

Niger

No education in the strict sense or even discussions with physicians, hospitals or maternal and child health care centres. Informing health and civil authorities. Requires WHO documents.

Senegal

The national AIDS committee has a prevention/communication group in conjunction with the Ministry of Education, the Ministry of Social Affairs, the Ministry of Tourism and the Ministry of the Armed Forces.

Proposes:

- training of technicians, teachers and laboratory assistants.

Requires:

- WHO documents and assistance in preparing documentation in Senegal which takes customs and religions into account
- measures to counteract the effects of the Western press.

Uganda

A brochure for physicians has already been prepared.

Proposes:

- national seminar
- provision of educational material.

Zaire

Proposes:

- activists.

Achievements:

- seminar, national congress. Specific documents for laboratory.

Summary

Achievements

Vary greatly from one country to another: from nothing, to publication of brochures and organization of seminars and national congresses.

Proposals and recommendations

Technical documents:

- for physicians (WHO brochures)
- for technical personnel: posters

Training of specialists:

- either abroad or with the help of mobile teams who travel to the countries
- assistance in organization of national seminars
- establishment of WHO collaborating centres
- general financial assistance.

The current state of affairs

This varies considerably from one country to another:

- (a) some have only faced up to the problem and its practical aspects very recently (Chad);
- (b) other countries have prepared information for physicians, generally in the context of information activity aimed at health and political authorities. This usually uses WHO brochures, which are seen as satisfactory (Burkina Faso, Cameroon, Congo and Guinea).
- (c) a number of countries have developed more advanced institutions:
 - preparation of programme brochures for the country (Burkina Faso, Rwanda) as part of the OCEAC bulletins series;
 - note from Ministry of Health and procedural rules for blood transfusion (Central African Republic);
 - organization of seminars and national congresses (Congo and Zaire, planned for 1987);
 - organization of a prevention group involving several ministries (national education, social affairs, armed forces, etc.).

Recommendations to WHO

In the first place, the group looks for increased financial assistance. This could take a number of forms:

1. Preparation and distribution of technical documents
 - for physicians: the brochure already prepared by WHO has been well received, but several countries have difficulty in distributing it in large quantities;
 - for technical personnel: the main need is for posters of the "what to do" and "what not to do" variety. Technicians in several countries have expressed concern at the risks they run. They want practical official recommendations.
2. Training of specialists to help convey information to the health professionals.
3. Assistance in the organization of national seminars for physicians, paramedical staff and health education specialists.
4. Several countries have also asked that several WHO collaborating centres be set up.

5A CLINICAL SESSION

CASE MANAGEMENT INCLUDING PATIENT CONTACT AND FAMILY COUNSELLING (English Group)

Representatives from Sierra Leone, Kenya, Swaziland, Zimbabwe, Seychelles and Uganda participated in this discussion. There was uniform concern regarding the problems associated with case management of AIDS patients and in the counselling of family members. Experience in these matters was variable. However, some countries such as Uganda and Kenya, have more experience in the management of cases than others, simply because more patients have been identified and treated in those countries than in Sierra Leone, for example. In Kenya, a sophisticated programme of counselling

asymptomatic and symptomatic patients has been developed. For asymptomatic patients a three-step process of general discussion followed by group discussions and ending with a person-to-person discussion has proved useful.

There was uniform agreement that countries should evaluate what impact the risk of infection will have on the individual. Our other general theme was the desirability and need to focus counselling efforts on high-risk groups such as prostitutes. It was acknowledged that there are problems associated with reaching these population groups.

The problems associated with the clinical care of these patients were discussed. In those countries with heavy case loads, i.e., Kenya and Uganda, AIDS patients are admitted to general medicine wards. They are treated for their opportunistic infections and provided with supported care. In some situations, patients are placed in special wards if they require special treatment. One such example is the clinical management of sepsis or other severe opportunistic infections. The hospital/clinic staff should be trained to avoid accidental contamination of blood or tissues. It was recommended that the procedures used for the collection and processing of materials from patients with hepatitis B virus (HBV) were adequate for this.

Experimental therapies have been evaluated in Africa, but not on a systematic basis.

There is a need to evaluate these therapies locally. Attempts at immuno/restorative therapy have been considered but not yet evaluated.

The care and disposal of the dead bodies of AIDS patients were discussed. Many cultures differ in their burial practices and these differences must be considered in the development of recommendations regarding the disposition of these cadavers. Although the risk is low, families of patients must be counselled on the need to avoid unnecessary exposure to blood or other fluids from these cadavers.

Concern was expressed by the participants regarding two major points. The counselling of family members and AIDS patients remain an important problem. Physicians often do not have the time to discuss fully the diagnosis with their patients and, moreover, often do not know how to communicate this information to these patients. The World Health Organization should review this problem. It is recommended that training of physicians and other health care workers in the dissemination of this information be provided.

The study of new treatments for AIDS patients also needs to be evaluated in Africa. The World Health Organization needs to provide recommendations to the Member States on this issue. It is possible that regional treatment centres may have to be established.

Summary of Workshop on Case Definition and Clinical Studies

1. What is currently being done.
 - (a) Only three countries: Ghana, Uganda, and Zaire indicated that they were presently using the WHO case definition.
 - (b) Two countries: Uganda and Kenya suggested that the WHO definition should be used.
 - (c) Zaire has shown that the case definition identified 62% of hospitalized seropositive patients as AIDS (sensitivity 62%), and eliminated 90% of serologically negative patients (90% specificity). 74% of all hospital patients with a seropositive test will have AIDS.
 - (d) In Ghana, where STD clinics have been restarted to assist with AIDS surveillance, the case definition has been successful in identifying 56 cases of serologically confirmed AIDS.
 - (e) In Uganda a study of 200 seropositive cases is underway to evaluate the clinical manifestations.
 - (f) In Zaire the case definition for children was very specific (86%) but not very sensitive (37%).

2. Problems

- (a) The sensitivity of the clinical definition is low, especially for children.
- (b) Not all countries have facilities to screen suspected cases nor to carry out validation studies of the case definition.
- (c) Education of physicians on the diagnosis of AIDS is generally inadequate.

3. Recommendations

- (a) WHO should assist three or four interested countries in conducting validation studies of the WHO case definition in order to more carefully determine its sensitivity, specifically for both adults and children.
- (b) Several changes in the current definition were suggested:
 - (i) change the frequency of herpes zoster to one episode during the past five years;
 - (ii) persistent cough in the absence of TB;
 - (iii) clinical progressive herpes simplex alone.
- (c) WHO should assist each country to set up a serological laboratory for HIV antibody testing.
- (d) Assist laboratories in purchasing reagents and standardize the serological tests for AIDS.

5B CLINICAL SESSION

CASE MANAGEMENT INCLUDING PATIENT CONTACT AND FAMILY COUNSELLING

(French Group)

Representatives from Benin, Cameroon, Chad, Congo, Rwanda and Zaire participated.

The session began with a description of the experience of individual countries in treatment of the disease and related problems, and this was followed by consideration of how to treat the patient's contacts and how to advise the families.

This session raised many questions and posed serious ethical problems; only a few replies and recommendations could be made.

1. The practice of treatment in the countries

Experience is limited mainly to treatment of opportunistic infections, especially with co-trimoxazole for *Pneumocystis carinii*, isosporiasis and cryptosporidiosis, or Vinblastine for Kaposi's sarcoma, and Amphotericin B for cryptococcosis.

The group endorsed the Brazzaville project which prepared flowcharts for various clinical manifestations: pneumonopathies, cerebral infections or long-term fevers or chronic diarrhoea, for an approach to treatment which was viable in Africa because it placed the emphasis on tractable infections.

The group agreed that AZT was too costly and rare a drug. At least one centre might be set up in Africa with the technical and financial resources required to administer this drug.

2. Problems

We have already touched on financial problems which preclude the use of certain drugs.

The group believes it is practical and economically advisable to re-use needles and syringes after they have been sterilized.

The isolation of patients in hospitals was discussed. It was concluded that there were no grounds for isolating patients not only because of the low infectivity of the disease, but also because AIDS patients are distributed among a number of departments such as cardiology, neurology, gastroenterology, etc. Emphasis should be placed on education of medical and paramedical personnel, as well as of the patients themselves and their families. Information on the mode of transmission, risk factors and prevention should be made available.

There is a shortage of laboratory facilities not only for serological diagnosis of HIV, but also for the detection of certain opportunistic infections.

3. Contacts with the patient and advice to the family

What should patients be told? What should spouses and family be told? And what should be said to asymptomatic seropositive patients?

The patient's physician is responsible for advising the patient, taking account of his personality, emotional state and psychology. It might also be worth defusing the situation a little by using terms other than AIDS, such as HIV infection.

The group believes that the spouses of patients must be summoned for tests and given explanations and practical advice, particularly on the risk involved in pregnancy. Opinions over asymptomatic seropositive cases are divided. Some maintain that if they are blood donors, they should be told the truth. Others think it would be wiser to leave the choice to the patient's physician.

As yet there are more questions than answers: for example, should seropositive women be asked not to have any more children?

Recommendations

The group requests that WHO:

- (i) provide urgent aid to all African countries to enable them to look after cases;
- (ii) assist all countries to set up adequate blood banks;
- (iii) establish a number of treatment centres with the capacity for monitoring and assessing different methods of treatment, with all that this implies in terms of qualified staff;
- (iv) furnish logistic assistance in preparation and distribution of Congo flowsheets for the treatment of the various syndromes.

Critical points and constraints in research, prevention and control

A number of countries such as Zaire have undertaken interesting research based essentially on urban clinics (Kinshasa), and other countries such as Rwanda are ready to conduct the epidemiological investigations required for better identification of risk factors, and they are envisaging better adapted control measures.

As regards prevention and control activities which follow on from monitoring, every country which has undertaken serological and epidemiological surveys has encountered practical problems: should the results be made known to seropositive persons? Which groups should be monitored most closely - blood donors or prostitutes?

Health education has been recognized as the only means available to countries for controlling or at least forestalling the propagation of AIDS; unfortunately, the change in behaviour which educational activity seems to achieve is difficult to measure.

Most of the countries in the group have an AIDS prevention committee one of whose tasks is to ensure good epidemiological surveillance. The same difficulties are encountered everywhere, and their principal cause is the lack of financial resources for research and for better organization of serological and epidemiological surveys.

6A LABORATORY
LABORATORY SCREENING AND CONFIRMATORY TESTING
(English Group)

1. What is the present status of laboratory screening for HIV infection?

Eight countries (Ethiopia, Kenya, Lesotho, Mauritania, Seychelles, Tanzania, Zambia, Zimbabwe) reported either no laboratory screening for HIV or very limited testing was being performed, mostly for research. Only one country, Zimbabwe, has instituted nationwide blood bank screening for HIV. In Zambia, comparative studies of the sensitivity and specificity of several different commercial ELISA kits were being performed with limited testing of blood donors and in patients attending STD clinics.

Primarily due to financial constraints, most countries have depended on the ELISA and have requested Western blot confirmation from either commercial biotechnical companies or for collaboration with the United States or Europe. Consequently, laboratory screening has been very limited in these countries and while blood bank screening would be desirable, it has not become a reality.

2. What are the major issues or problems?

- (i) It was generally agreed that the cost of laboratory screening including the purchase of kits, equipment, technicians, training and confirmatory testing was presently prohibitive for routine use in most countries.
- (ii) Most countries do not have blood banks where screening can be performed over several hours with present ELISA tests before transfusion.
- (iii) There is lack of information about sensitivity and specificity of different ELISA kits for testing for HIV in Africa.
- (iv) No information is available regarding the effectiveness of the tests in detecting LAV-2 and HTLV-4 and important blood screening.
- (v) There is an urgent need for a rapid and inexpensive test for HIV which can be done in 15 minutes and costs less than 35 cents (US).
- (vi) It is not clear in some countries whether screening for HIV is more important than for hepatitis B, syphilis or malaria and that priorities based on financial constraints should be developed.

3. What should each country do about laboratory screening for HIV?

- (i) Each country should do a cost effectiveness analysis for routine HIV screening of blood donors and other high risk population, and compare with present programmes for screening of hepatitis, syphilis and malaria.
- (ii) Each country should establish laboratories or reference centres where new rapid tests can be tested, compared to present-day ELISA, and where ELISA-positive specimens can be confirmed by Western Blot or another test.

4. What should WHO do about laboratory screening for HIV?

- (i) It was recommended that WHO should actively coordinate or assist the development of rapid inexpensive tests which would be utilized in most African countries.
- (ii) WHO should establish a panel of African reference sera which could be used for laboratory proficiency testing and comparison of new diagnostic assays.

- (iii) WHO should support and/or coordinate research activities in investigating the role of other human retroviruses causing the disease and problems in the interpretation of HIV screening tests.

6B LABORATORY
LABORATORY SCREENING AND CONFIRMATORY TESTING
(French Group)

A number of questions were asked:

1. Should patients be tested for HIV?
In endemic regions, the WHO/Bangui clinical definitions suffices, and serology is not necessary. In regions where AIDS is still marginal or has newly appeared, the ELISA test should be made and the results confirmed. Confirmation by a test such as Western Blot is not necessary for this diagnosis.
2. Problems of quality control and subregional reference centres.
A borderline sample must be included for the purposes of internal quality control. Subregional reference centres should also be set up to train technicians for tests such as the Western Blot. These subregional reference laboratories should be able to provide an external quality control programme through exchange of positive and negative sera.
3. Is it necessary to test for the virus and LAV-2?
In regions where both viruses are endemic, it would be better to test for both HIV and LAV-2. Combined tests on the market are being examined.
4. The problem of transfusion.
It is absolutely essential that transfusion centres be provided with screening facilities. These centres must be well organized and transfusions must be limited to cases where they are strictly necessary. A simple, sensitive and inexpensive serological test must be developed.
5. Should seropositive persons be informed of the results?
Two trends emerged. One advocates silence and would not inform healthy carriers of the virus, for psychological and sociological reasons. The other holds that the seropositive person should be told in order to limit the spread of the virus.

Recommendations for countries

1. Each country should set up a laboratory capable of making the ELISA test and, if possible, a confirmatory test.
2. Each country should establish a policy for the use of serological tests.
3. Countries should ensure the quality of serological analyses.
4. In regions where HIV and LAV-2 are endemic, sera should be tested for antibodies of both viruses.
5. Screening of donors of seropositive blood is one of the major tasks confronting HIV serology laboratories.
6. Each country should decide whether or not its seropositive citizens are to be informed of their condition.

Recommendations for WHO

1. WHO should set up a network of collaborating laboratories on AIDS at the subregional level.

2. WHO should assist countries to set up HIV serology laboratories.
3. WHO should help train laboratory staff for AIDS serological tests.
4. WHO should help develop an external quality control system for HIV serology.
5. WHO should help countries buy serological tests at low cost.
6. WHO should stimulate and coordinate the development of simple and inexpensive HIV screening tests.

7A BLOOD AND BLOOD PRODUCTS
(English Group)

Current practices

A wide diversity of approaches to blood banking was reported. Zimbabwe uses a centralized service that distributes blood products from two facilities to the rest of the nation. All blood is screened for HIV and excluded when seropositive. Zambia has "mini-blood" banks at the larger facilities and hospitals, often with a rapid turnover of blood products. Replacement is through family and friends as well as recruited volunteers. Screening is available in Lusaka and Ndola only. Lesotho uses a centralized facility, relying on volunteer donors, but no screening is routinely done. Likewise, Gambia and the Seychelles have centralized facilities but no screening. In addition, donors suspected to be at high-risk for any reason (including foreigners) are excluded from donating.

All countries intended to screen when resources were available, but all (except Zimbabwe) complained that screening was costly and would be difficult to distribute nationwide without help.

The exclusion of suspected donors was vigorously discussed. The identification of risk-groups will require some local surveillance, but some general criteria can be formulated. Certainly, ill persons and groups at high risk of HIV positive such as those that are sexually active with many partners, should be excluded. These would include prostitutes and persons with STD histories, as well as truck drivers, smugglers and others with extensive travel histories. The available data suggests that HIV infection is probably higher among prisoners and among the military in some countries. The advisability of a policy needs reconsideration perhaps on the basis of local studies. Interestingly, in a study in Zaire, the HIV prevalence among paid donors was equal to that of voluntary donors. The risks associated with accepting blood from the spouse of an AIDS patient were discussed.

The appropriateness of current medical practices about both transfusions and other paraneural exposures needs reconsideration in view of the very serious consequences of HIV exposure. Several clinicians expressed concern that present practices - even when they comply with accepted medical standards (from areas where HIV is not a problem) - may be creating a greater danger to the patient than his/her indication for blood. The magnitude of this problem will depend on the HIV prevalence in blood donors as well as current medical practices, and policies should be formulated at a local level.

Blood banks and laboratory staff dealing with blood need formal education to review the risks and procedures. Those appropriate for hepatitis are adequate for HIV. But because of fear and misinformation among staff, an appropriate training programme will be useful. Particular attention to appropriate disposal of HIV or blood-contaminated

equipment should be paid since theft of disposed or contaminated equipment might occur. WHO should provide formal assistance with simple and economical methods for reliably decontaminating materials which must be reused. This may include syringes and needles.

The adequacy of current screening tests is acceptable. All of the licensed ELISA test (\$2 a test) are probably sensitive enough to provide a safe blood supply. All positive blood must be discarded and the subject told not to donate again. Screening should be done twice but other confirmation (\$18 a test) is probably too expensive in this setting. The major issues as to choice of screening test will be cost, stability and ease of use. Many representatives complained of lack of trained personnel, supplies and instruments to read tests and they conceded that if these were provided, it would be difficult to support except at larger facilities. A simple, economical, stable test requiring no instrumentation is needed and is under development.

The predictive value of screening tests is low when prevalence is low. Thus, an HIV-screening test positive person may not truly be HIV-infected. Without question, this subject's blood should not be used. He should be advised not to donate again. But whether any further messages about his/her personal status should be passed is unclear and will depend in part on the capacity of the facilities to provide confirmation and other tests for follow up.

1. Recommendations to countries

- (a) Establish blood banks with the capacity of detecting HIV antibodies in blood donors.
- (b) Inform donors found to be seropositive about the implications of such a finding and provide information on risk reduction measures for the prevention of sexual transmission of HIV. Such information should be provided orally and in printed form.

2. Recommendations to WHO

- (a) Provide technical and financial assistance to Member States in the implementation of screening programmes for the detection of HIV infection among blood donors.
- (b) Provide and disseminate technical review of the stability of tests - both licensed and newly developed - on African sera.
- (c) Disseminate new information on technical policy developments in a timely manner.
- (d) Develop a simple panel of reference sera to be distributed for monitoring the capability of screening programmes to detect positive sera accurately.
- (e) Promote the development of simple and inexpensive screening tests for use in African settings.

7B BLOOD AND BLOOD PRODUCTS

(French Group)

At present, only three countries test donated blood for HIV antibodies, and then only in the capitals.

The ELISA test is used to detect HIV antibodies. Western Blot is not used to confirm results. Not all countries have a proper national blood transfusion centre. The following table shows whether or not countries have a national transfusion centre and the estimated number of donations for each year.

Country	National blood transfusion centre	Syringe	Blood donations per annum
Cameroon	-		50 000
Central African Republic	+	+	7 000
Congo	+	+	12 000
Ivory Coast	+		86 000
Gambia	+	+	
Guinea	+		10 000
Guinea Bissau	-		
Madagascar	-		10 000 - 11 000
Mauritania	+		?
Rwanda	+	+	?
Togo	+		?
Seychelles	+		
Zaire	-		72 000
Zimbabwe	+	+	

A simple sensitive reliable and less expensive HIV antibody test must be developed.

In blood banks, plasma will be considered positive when HIV antibodies are detected in two successive ELISA tests. Every result which is positive or borderline in a first HIV antibody test will be checked in a second ELISA test. A confirmatory test such as the Western Blot is not indispensable for transfusion centres.

On the other hand, a confirmatory test such as Western Blot becomes indispensable when the blood donor is informed of a seropositive result. Such a test could be done in a single, national centre which would conduct all the tests for a country.

The informing of seropositive donors calls for information brochures, medical consultations and a data file.

ADDRESS BY PROFESSOR G.L. MONEKOSSO, WHO REGIONAL DIRECTOR FOR AFRICA

Ladies and Gentlemen,

It is my privilege to open this working meeting on the Acquired Immunodeficiency Syndrome which is otherwise known as AIDS. This privilege is a sorry honour for it must be asked whether we are not faced with the modern equivalent of the Great Plague. What was scheduled to be a regional technical meeting has now become an international gathering because of the number of participants from the four corners of the earth who have expressed their desire to join us. We trust that this will not affect the scientific rigour of these three working days.

We therefore greet all participants, including the pioneers of aetiological and biological research on the virus and all those working tirelessly with the aim of halting or at least slowing down the march macabre of AIDS.

We have overcome plague. We have overcome smallpox and no longer do we see the terrible goddess of smallpox, SHITALA MATA, astride her donkey, scattering the pustular seeds that she carries on her head, sprinkling the healing holy water with her right hand and holding in her left the broom that stirs the cinders of the epidemic. It is hard to believe that we have no weapons with which to combat this retrovirus, which is a heretic in molecular biology, at a time when we have reached the era of genetic technology.

This disease, which was unknown until 1981, is spectacular in more than one respect. It is a fact that not a few are disturbed to find someone like Rock Hudson, the famous ladies' man, dying a frightful death, as a homosexual, of the AIDS virus. Whatever the truth of this matter, we are faced with a major public health problem. This new morbid phenomenon, which has surprised, if not disarmed the scientific community, has brought certain countries into the limelight.

In the fields of science we should beware of distorted or false information, for it can wreak havoc with fragile economic structures, delay the progress and hold up the advance of the researchers working quietly in their laboratories. Without passion or emotion, we must report coldly on the objective facts, as in the time when it was believed that people caught poliomyelitis after swimming in cold water (to paraphrase one journalist). We should bear in mind the statement by WU LIEN TEN on the subject of plague (League of Nations document, 1926: A Treatise on pneumonic plague): "In my opinion, plague has existed since time immemorial, originating either within or around the central plateau of Asia. To those who allege that its original site was Central Africa, I reply that admittedly it is an ancient site. But if we could go back sufficiently along the course of history we might perhaps find that African plague was imported from Asia".

By analogy, this sets in its context the problem of AIDS, especially in view of our present inadequate understanding of its true origin. Besides, now is not the time for polemics but for action, because we have to deal with a formidable opponent.

Annex 1

What is the AIDS situation and how does the World Health Organization propose to react to the scourge?

A. The Disease

This is one of the very few fatal diseases in our time the so-called horizontal transmission of which has been clearly shown. In our present state of knowledge, it is believed to be sexually transmitted and bloodborne. The agent responsible is a retrovirus of which the epidemiological dynamics, in regard to its extension, remain uncertain. The groups at risk are ineluctably victims; however, it remains very difficult to predict its future extension within the general populations. Some people think that even if the virus gradually spreads, the infected subjects will only develop the disease really, in the absence of a co-factor of risk. Others fear that there will be a very slow propagation that will ultimately spread to a considerable proportion of the population, in the absence of a vaccine.

This disease poses a problem to human society in general from the moment when it affects our modus vivendi and our freedoms, or our so-called freedoms, that have been won after a hard fight. The two groups of high-risk subjects are homosexuals and drug-addicts, both of them having been placed beyond the pale of society.

It was at a time when the homosexual community was well-ensconced, liberating itself and multiplying its relationships, that the disease struck. It was also at the time when drug-addiction was ravaging society that the punishing needles carried the fatal virus. Finally, we may add that in the wake of sexual freedom, gained through contraception, or simply in consequence of traditional customs, that AIDS struck at heterosexual individuals, in ratio to the number of contacts and changing partners. Once it had begun to put into question the modes of our intimate lives, society began to quake upon what it had believed were its firm foundations.

However, there are always innocent victims, such as those born of mothers infected with or carrying the virus, those who receive frequent blood transfusions and, in our Region, those with tribal marks. The clinical form is polymorphous and is an indication of lymphoneurotropism of the virus with paralysis and independent deviation of the immune system. Regarding the brain, apart from primitive or secondary opportunist infections, a viral presence and multiplication in situ would appear to be recognized.

Despite the most scientific epidemiological investigations, one cannot dispel from "superstitious minds the idea that AIDS represents a form of supernatural punishment. People find the association of sex, forbidden things and death fascinating", as Jean-François Bach (of INSERM) said.

B. The Role of WHO

The African continent, already suffering from the burden of all its ills and disasters, has been marked by this disease for three years. Therefore, in agreement with the Member States, WHO in general desires to challenge this scourge, just as it did in the past with smallpox until total eradication from the globe was achieved. It is deploying all its resources in a full commitment to combat AIDS, in the framework of a far-reaching, in-depth and long-term policy, since the virus can infect human beings in a chronic manner and throughout their existence, and if the epidemic becomes a pandemic, the world of medicine will be left without a curative treatment and without a vaccine, at least until 1990.

Annex 1

REAL EPIDEMIOLOGICAL SURVEYS are being prepared in collaboration with our experts and under the aegis of State authorities. Short-term covert studies by impromptu teams of random population samples can only yield dubious results and have so far made matters more confused.

We intend to process and analyse in detail the compulsory notifications of clinical diseases and confirmed or suspected fatalities from AIDS. All data will be sifted by the AIDS Unit experts at the Regional Office for Africa of WHO. The latter will work with their colleagues from Headquarters in Geneva and international institutions specializing in the subject. The data bank so compiled will cover all continents since the disease has been declared in 75 countries of the world. Collaboration from bilateral and multilateral agencies will be a valuable contribution.

Furthermore, in the countries of the African continent and within the limits of our means, although they should be increased by extrabudgetary resources, certain activities will be strengthened, in particular:

- (a) laboratory structures, in order to detect seropositive cases, silent carriers and false positive cases; in this manner, other diseases especially sexually transmitted diseases, will also be dealt with.

At another level, we shall endeavour to strengthen:

- (b) the therapeutic arsenal (palliative and symptomatic) for acute clinical episodes, despite awareness that there is no curative treatment;
- (c) courses in appropriate laboratory technique are being organized for reliable case-finding. Training is being extended beyond laboratory technicians to health and paramedical personnel in the broadest sense of the term;
- (d) education and prevention campaigns are being launched by using all information media. This will in no way hinder the basic health policy we are implementing over the continent but on the contrary will enhance it. Education, prevention, disease diagnosis, access to healthcare and essential drugs are precisely those of primary healthcare, as ratified at the Alma-Ata Conference. We shall not swerve from our appointed path, to accelerate progress towards Health for All by the Year 2000 in which our fight is being fought at the village and district levels, where our anti-AIDS work will be intensified and where the masses of the people live and die. Promiscuous living, bad hygiene, malnutrition, diarrhoeal diseases, recurrent infections, not to mention the spread of urban diseases to the rural populations, are all factors weakening a fragile immune system which will be further paralysed by the virus itself. Once the earth has been tilled, the epidemic is ready to spread like wildfire. Therefore, in the general framework of a village health policy, not neglecting action in urban and periurban areas, measures should be taken to make the disease less contagious.

Education and healthy living conditions, whether environmental, personal, sexual or social, should be used to lay the foundations of health. We must not forget to process blood products for blood transfusion or proper sterilization of used medical instruments. Let us not forget the great example set by postwar Britain. Weakened by infectious diseases and before the widespread use of antibiotics, the rising morbidity rates were halved by preventive health measures alone.

Annex 1

CONCLUSION

The composition of this retrovirus comprises the strict minimum necessary for its penetration into the host cell and its replication. In order to halt this process there is a need:

- (a) to accelerate progress in genetic engineering, in order to fulfil the hopes for the discovery of an AIDS vaccine;
- (b) to give fresh impetus to the anti-viral pharmacopoeia.

Life is an endless struggle and medicine is fighting to maintain this fragile and precious life to which every living being, however underprivileged and deprived, is profoundly and rightly attached. Such is the capricious biological cycle of disease. Just as the solution to the cancer problem seems to be dawning, AIDS has appeared, yet perhaps the slow viruses and their vaccines will give us the answer to the one and the other.

To win this fight, WHO, in its role as free, objective arbiter, and by deploying all its resources, is launching an appeal for universal solidarity and awareness, and asking the leaders of the people of the African continent and of other continents, the United Nations agencies and bilateral and multilateral agencies, for their assistance. Only by joint, concerted and rational efforts can comfort be given to suffering mankind whose very existence is being threatened.

Having outlined the disease, and touched on WHO policy in general and its regional offices in particular, especially the African regional office, I trust that this meeting will enrich us all. I sincerely hope that the working sessions will be fruitful and that joint discussions and exchanges of knowledge will cast some light on the path to AIDS control and the path to health itself.

Ladies and Gentlemen, thank you for your kind attention.

AIDS - AN INTERNATIONAL PERSPECTIVE

Presented by Jonathan M. Mann, MD, MPH
Responsible Officer, Control Programme on AIDS
World Health Organization, Geneva, Switzerland

For a brief period in 1981, AIDS appeared limited to a single nation and a single group within the general population, characterized by a specific sexual orientation. While most people today recognize that AIDS involves many countries, few are aware of the truly global scope of the problem, and sadly, many remain ignorant about the risk factors associated with HIV infection and therefore may not realize that HIV infection is a threat to most, rather than a relatively few, of the world's citizens.

I would like to review with our current knowledge about AIDS as a global health problem and summarize the World Health Organization's perspectives on HIV infection and on its prevention and control.

The number of reported cases of AIDS and countries reporting AIDS have increased dramatically. As of December 1982, 711 AIDS cases were reported to the World Health Organization (WHO) from only 16 countries. However, by 19 September 1986, 31 646 AIDS cases were reported to WHO from 100 countries representing all continents.

AIDS cases reported to WHO by 19 September 1986

Continent	No. of Cases	No. of Countries
Africa	1 008	15
America	27 166	44
Asia	52	12
Europe	3 127	27
Oceania	293	2
Total	31 646	100

Reticence in reporting of cases from some areas, combined with under-recognition of AIDS and under-reporting to national health authorities, has meant that the number of reported AIDS cases represents only a fraction of the total cases to date, these are estimated to be in excess of 100 000. Therefore, WHO considers the number of countries reporting AIDS cases to be more indicative of the geographical extent and more relevant to an assessment of the scope of the HIV pandemic than the number of officially reported cases. In addition, due to the long incubation period (up to six years or longer) from HIV infection to the development of clinical disease, the number of AIDS cases provides, at best, an inaccurate and at worst, a misleadingly optimistic view of the real extent and intensity of HIV infection. Worldwide, WHO estimates that between 5 and 10 million persons or more are currently infected with HIV.

In the Americas, 90% of cases are reported from the United States, where the epidemiological characteristics may be considered typical of "Western" AIDS. The United States government estimates that between 1 and 1.5 million US residents are HIV-infected and that approximately 270 000 AIDS cases will likely have occurred by 1991. Several other countries contribute substantially to the AIDS case total for the Americas, including: Brazil (754), Canada (638), Haiti (501), Mexico (161), and Trinidad

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and Tobago (108). With the exception of Haiti and possibly other Caribbean areas, the epidemiological pattern is "Western", involving primarily homosexual and bisexual males and/or intravenous drug abusers. The epidemiological pattern in Haiti appears somewhat intermediate between the "Western" and the "African" pattern to be described shortly. Finally, an additional 27 countries in the Americas have each reported from 1 to 68 AIDS cases.

In Europe, as of 30 June 1986, 3 041 AIDS cases were reported from 23 countries, notably including France (806), the Federal Republic of Germany (588), the United Kingdom (490) and Italy (300). Four countries in the region have officially reported no AIDS cases (the German Democratic Republic, Hungary, Poland and the Soviet Union). Rates of cumulative reported cases per million population among countries reporting cases in Europe vary from a high of 21.2 in Switzerland to 0.1 in Yugoslavia. When AIDS cases among Europeans only are considered, the typical "Western" epidemiological pattern is observed. However, 8% of cases diagnosed in Europe are Africans or from the Caribbean Islands, and of these very few are homosexual or bisexual men, intravenous drug abusers, haemophiliacs or blood transfusion recipients. Based on current trends in Europe, an estimated 25 000 to 30 000 AIDS cases are expected by 1988.

The African and Asian AIDS situations are radically different. In Africa, the epidemiological situation is characterized by epidemic HIV infection in Central, Eastern and parts of Southern Africa, and there is increasing evidence regarding a second focus of human retroviral infection (HIV-2 previously known as LAV-2, HTLV-4) in Western Africa. No area of the world is more affected by HIV than Africa, in terms of the proportion of the healthy population infected and numbers of AIDS cases. In contrast, HIV has only started to appear in Asian populations, and the opportunity for primary prevention is vast, and vital to the future of that Continent.

In Africa, the geographic scope and intensity of HIV infection is difficult to assess, due to limited infectious disease surveillance and laboratory serodiagnostic capabilities and lack of a widely accepted and practical clinical case definition for AIDS. Nevertheless, minimum estimates involve one million Africans currently infected with HIV and 10 000 cases of AIDS among Africans annually.

Surveillance data from several areas demonstrates that the sex ratio of HIV infection and AIDS in Africa is approximately equal. For example, in Kinshasa, Zaire, where a Zairian-American-Belgian research project has been underway since mid-1984, the mean age of AIDS cases was 34 years, nearly 90% of cases were 20 to 49 years old, and men were significantly older than women (means of 37 vs 30 years). The seroepidemiology of HIV infection in Kinshasa demonstrates a bimodal age-specific curve. The first peak is among infants, about 8% of whom are seropositive, and of whom an unknown percentage have passive maternal antibodies rather than being HIV-infected. Then, only 1-2% of healthy children 1 to 14 years old are seropositive. The second peak, also of 8% seroprevalence, occurred among adolescents and young adults 16-29 years old. This peak was followed by a gradual decline with age, to 6% among 30-49 year old and 4% among those 50 years of age or older. HIV seroprevalence rates among healthy adults in other countries in the AIDS-epidemic regions of Africa have ranged from 4% to over 30%, although many of these studies have involved rather small populations. Studies in Rwanda and Zaire in 1983 suggested annual AIDS incidence rates of about 200 to 800 per million population. During 1984-85, AIDS incidence in Kinshasa, Zaire was estimated to be 500 to 1 000 per million, and a seroincidence rate of 0.74% per year was documented among over 500 Kinshasa residents.

While the basic modes of HIV transmission in Africa are identical to those in the developed world (e.g., sexual, parenteral, perinatal), several important regional variations must be noted. The dominant mode of HIV transmission in Africa is sexual, involving heterosexual and bidirectional transmission of the virus. Not surprisingly, HIV seroprevalence rates among African women prostitutes are quite high, generally ranging from 25-90%. The importance of blood transfusions for HIV transmission in Africa is suggested by the high HIV seroprevalence among healthy blood donors characteristic of the region. While intravenous drug abuse is virtually unknown in Africa, medical injections and other skin-piercing manipulations using nonsterile equipment (e.g., scarifications for medical purposes) represent analogous routes of exposure to HIV. Finally, as a heterosexually transmitted agent, HIV infects pregnant women, resulting in perinatal transmission. While the efficiency of perinatal transmission is presently unknown, in areas of Africa where 10% of pregnant women are HIV seropositive, up to 5% of all newborns may be HIV-infected. Pediatric AIDS, particularly difficult to recognize where malnutrition, pneumonia and gastrointestinal infection are common pediatric problems, is an increasing problem in Africa. Finally, interactions between HIV induced immunosuppression and endemic diseases in Africa such as tuberculosis further complicate the epidemiological and public health control situation.

In Asia, a small number of AIDS cases have been reported from India, China, Taiwan, Hong Kong, Japan and Thailand. These cases have either been related to imported blood and blood products, or to sexual transmission to female or male prostitutes. Serosurveys have demonstrated an extremely low or absent HIV seroprevalence in general populations yet have documented infections in certain risk groups. While extensive transmission to the general population from the small number of blood and blood product-related cases is unlikely, the potential for introduction of HIV into Asia through sexual transmission and its subsequent dissemination must be taken extremely seriously. Accordingly, primary prevention is vital to protect Asia from HIV to the maximum extent and for as long as possible.

The HIV situation globally is extremely dynamic yet a conceptual foundation for global HIV control can be formulated:

1. HIV infection is an international health concern;
2. infection with HIV is an adverse health outcome of profound personal and public health importance;
3. neither vaccine nor therapy for widespread use is likely to become available for at least several years;
4. the HIV global control effort will be long-term;
5. HIV prevention and control must be part of primary healthcare;
6. HIV infection represents an unprecedented challenge which will require unprecedented solutions.

The design of the WHO Control Programme on AIDS reflects a consensus on the fundamental components of AIDS control, as most recently expressed at the World Health Assembly in May 1986. According to this perspective, AIDS control will require coordinated and complementary actions at the international and national levels.

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At the international level, the primary WHO headquarters and regional responsibility is coordination, involving:

1. exchange of information on HIV epidemiology, legislation and policies introduced by Member States;
2. preparation and distribution of guidelines for the diagnosis, surveillance, prevention and control of HIV directed towards the general public, groups at increased risk, and healthcare workers;
3. assessment of commercially available antibody (or other) test kits and stimulation of research towards development of tests for field use in developing countries;
4. advice to Member States on the provision of safe blood and blood products;
5. coordination of research on therapeutic agents, vaccines, and simian retroviruses;
6. cooperation with Member States in the development of national programmes/actions for the prevention and control of HIV.

At the national level, a plan of action for AIDS control is required, regardless of the current level of HIV transmission. Once the HIV epidemiological situation is assessed at the national level, the four major components of the national prevention and control programme can be designed. These four basic programme components include:

1. a surveillance system;
2. laboratory support capability;
3. education/information for healthcare workers;
4. prevention efforts directed to the general public and to risk groups in the population.

The Control Programme on AIDS at WHO Headquarters has been organized, funding has been obtained, and the necessary resource is now available to assist Member States in the design and implementation of their national AIDS control programmes.

AIDS has created manifold and serious challenges to medical and public health practice and even to the fabric of society. If we follow the logic of our epidemiologic knowledge, HIV prevention will require long-term changes in sexual behaviour. We cannot imagine a more difficult, serious or complex endeavour. Yet we can afford even less a complacency, or pessimistic resignation regarding the individual and societal capacity to alter behaviour in response to a clearly perceived threat. Let us be as clear and scientific as possible in our analysis of HIV as a public health problem. Let us unite our resources, material and intellectual, in the confrontation with this virus and its associated disease states. Let us apply the lessons of the past, our heritage of public health knowledge, together with the new creativity and vision the present situation demands. AIDS may be, as some have already claimed, the plague of our century - yet I believe we have something yet to say about the matter. We are working together on AIDS during one of those rare moments in history, at the beginning, really, of a major new public health challenge facing the entire world. Our responsibility is accordingly heavy, our opportunity to make a difference similarly great. In actions we take, or fail to accomplish during the next few years, we will indeed be judged, and will deserve to be judged, by future generations.

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