SURVELLANCE ON AIDS CASES IN ETIllOPIA

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SUMMARY: The surveillance system for AIDS cases was introduced in Ethiopia at the beginning of 1989. This was preceded by the preparation of clinical surveillance guidelines and training for physicians at the national and regional levels. The guidelines contained descriptions of the referral system, the activities to be carried out, and recording/reporting forms to be used for this purpose. The trained physicians were given the responsibilities of carrying out the surveillance in their respective hospitals and to maintain regular reporting on the activities .A review of the surveillance activity of the last two years, revealed that 526 (82.7 %) of the patients were reported in 1989 and 1990, after the introduction of the system. Moreover, there was marked improvement in the quality of the reports on the patients. However, from the report presented by different supervisory AIDS, it was identified that the surveillance system was not properly introduced in several health institutions outside Addis Ababa. This indicates the need for regular training and support to the physicians involved in AIDS case surveillance, and for periodic revision of the surveillance system.

INTRODUCTION

Reporting of AIDS cases in most developing countries of sub Saharan Africa is thought to be incomplete. Three main reasons can be mentioned. First, systems for surveillance and reporting are not developed in many countries. Secondly, many AIDS cases are not seen by qualified medical staff, go unrecognized, and thus unreported. Thirdly, there may be difficulties of case diagnosis in the absence of sophisticated diagnostic facilities (I).

The health services in Ethiopia have a six tier pyramidal system; the community health services are at the broad base of the pyramid, followed by health stations, health centers, district, regional and central referral hospitals, and, finally by specialized hospitals at the apex (2). Based on this network, the guidelines on AIDS case passive hospital based . surveillance were developed by the Departments of AIDS Control, in collaboration with WHO Staff at the end of 1988. The guidelines contained a detailed description of the activities, including the referral system, responsibilities of health workers, and recording/reporting formats to be used. The guidelines were finalized and endorsed by leading clinicians from Addis Ababa and regional hospitals, at a training workshop conducted in February 1989. The major objectives of the surveillance were :identification of AIDS cases among the population seeking medical aid, and monitoring of AIDS epidemic. Assessment of the sensitivity and specificity of the case definition was among specific objectives. In March 1990, on the basis of the experiences gained, the guidelines
were further modified. This paper describes the development of the AIDS case surveillance system in Ethiopia and its nation-wide implementation in 1989-1990.

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THE AIDS CASE SURVEILLANCE GUIDELINES

Target population
The surveillance is conducted by all medical institutions. The target population includes all persons who attend these institutions for medical aid, be it ambulatory care, or those already admitted for inpatient treatment.

Target area
The surveillance encompasses the area under the domain of all health institutions operating in the country.

Institutions involved
The surveillance activities are coordinated at the national level by the Division of Clinical Aspects of AIDS, of the Department of AIDS Control. The HIV reference laboratory is located at the National Research Institute of Health (NRIH).

Due to various constraints, at the moment, the diagnosis of AIDS cannot be finalized in every institution. According to the activities, the health institutions involved in the surveillance are divided into two categories:

1) The institutions which identify suspect AIDS cases, and diagnose AIDS provisionally, are called "non-referral institutions", and this category includes all medical services units (in and outpatients).
2) The institutions confirming AIDS diagnosis are called "referral institutions".

The institutions using both case definitions (WHO and CDC/WHO), within the framework Of the surveillance, will report cases diagnosed on the basis of the W!IO definition.

General principles of the surveillance
The AIDS case surveillance in Ethiopia is a passive hospital based surveillance. A Physician from each referral hospital trained on AIDS diagnosis is titled Physician Responsible for AIDS Diagnosis (PRAD). He/she confirms suspect cases referred to the hospital, and prepares technical reports on AIDS patients for the director of the hospital. AIDS is diagnosed in suspect patients only after a comprehensive investigation by all relevant methods available at the hospital is completed.

The referral system for AIDS cases is shown in table 1. A person suspected to suffer from AIDS, by any health worker, is referred to a hospital physician who has been trained in AIDS diagnosis. In case the physician, after investigation in the hospital, supports the provisional diagnosis, he/she will refer the patient to the PRAD in the referral hospital. In case the patient cannot reach the referral hospital, his/her referral record and a sample of his/her serum will be sent to the respective PRAD for consultation and diagnosis.

Suspect AIDS patients referred to the regional PRAD are subjected to additional medical examinations, including HIV testing in the hospital, or through the outpatient department.
The patients with confirmed AIDS diagnosis, after counselling and temporary treatment, return to their original residence with the recommendations on home care and further counselling.

Activities

All institutions involved in AIDS diagnosis will carry out the following surveillance activities:

1. Identify patients suspected of AIDS according to the AIDS clinical case definition.
2. Carry out examinations by available techniques in order to negate or reconfirm "suspect diagnosis".
3. Follow-up the finally diagnosed cases of AIDS on the basis of feedback received from the PRAD. The follow-up includes the arrange ments for counselling and home care.

In case an AIDS diagnosis cannot be negated:

4. Refer the patient to the PRAD at the referral hospital. (In case the patient cannot be sent to the referral hospital, the case record and serum sample of the patient may be sent there. The physician responsible for AIDS diagnosis from the referral hospital may be called for

Table1. Referral system for AIDS case surveillance in Ethiopia

Personnel	Institution	Activity
1. All health workers	All health institutions	Identifying suspect AIDS cases Refer to the closest hospital
2. Physician	Non-referral institution	Investigate the patient in order to negate or support provisional diagnosis. Refer to the referral hospital if suspect diagnosis could not be negated.
3. Physician Responsible for AIDS Diagnosis(PRAD)	Referral hospital	Investigate the patient and confirm AIDS diagnosis based on the WHO case definition. Refer confirmed cases to the original hospital. Report confirmed cases to DAC.
4. PRAD	Hospitals with advanced diagnostic facilities.	Investigate end diagnose AIDS on the bas is of both WHO and CDC/WHO revised case definition. Refer confirmed case to the original hospital. Report to DAC all cases diagnosed by WHO criteria.

consultation after the records have been studied).

5. Report on the surveillance activities every six months and at the end of the year. The surveillance activities of the referral hospital include those listed for the other institutions, and also include the activities related to final diagnosing of the patients referred to them, as follows:
6. Arrange for physical, medical and laboratory examinations considered necessary for AIDS diagnosis.
7. Finalize the diagnosis. The PRAD has to confirm or negate a proposed diagnosis of AIDS. If the patient for some reasons cannot attend the referral hospital, the PRAD will have to pay a visit to the institution which referred the patient's records. In case it is

felt that additional investigation is required the PRAD may choose to arrange for transportation of the patient to the referral hospital.
8. Provide temporary hospital care if necessary and treatment of the patient.
9. Prepare recommendations for treatment and follow-up of AIDS patients.
10. Transfer the AIDS patient to the original medical institution or place of living.
11. Arrange for training and supervisory visits to the institutions which have AIDS patients under their care.
12. Receive and compile reports from non-referral hospitals on AIDS case surveillance.
13. Report on the hospital activities related to the AIDS case surveillance, to the Department of AIDS Control.

Staff involved in the surveillance
Practically all medical staff of medical service units are involved in the surveillance of AIDS cases. One of the physicians working at a referral hospital (preferably an internist or specialist on infectious diseases) is identified and assigned for technical assistance to the regional health department, or to the directors of hospitals in Addis Ababa, in coordination of the AIDS case surveillance activities. This physician is called "Physician Responsible for AIDS Diagnosis (PRAD)", and his/her activities include:
1) Training of medical staff at his/her own hospital, and arrangements for training of medical staff at all health institutions in the region.
2) Providing all medical institutions in the region with training material supplied by DAC.
3) Providing the link between health institutions and the regional HIV diagnostic laboratory.
The PRAD is the only person at the referral hospital authorized to send blood specimens for HIV serological investigation for the purpose of AIDS diagnosis.
4) Arranging for hospitalization and diagnosis of suspect AIDS patients referred from other institutions.
5) Informing the patients on confirmed AIDS diagnosis and counselling them.
6) Participating in developing the social services for AIDS in the region.
7) Supervising the activities related to the AIDS case surveillance in the medical institutions of the region.
8) Monitoring the reporting system.

Each PRAD benefits from the annual training at the national HQ and from the field supervisory visits of DAC AIDS. PRADs will receive technical documentation and periodicals on AIDS and related surveillance activities.

All referral institutions are provided by DAC with additional protective means (masks, aprons, gloves) and disposable syringes, to be used by the staff involved in investigation, treatment and care of suspected/confirmed AIDS patients.
Table 2. Number of AIDS cases reported by Addis Ababa and regional hospitals before and after commencement of the surveillance

Reporting institutions	No. of cases reported (%)	
	1986 -Nov.1989	Dec 1989- Nov.1990
Addis Ababa Hospitals	280(98.2%)	557(87.6%)
Regional Hospitals	5(1.8%)	79(12.4%)

Staff training
Group training of all medical personnel working in various health institutions in the country is carried out annually.

A training round starts from the national level for the PRADs and some physicians from larger hospitals in the regional capitals and Addis Ababa. The training moderators for the national level are the staff from DAC, members of the Programme and the Technical Advisory Committees as well as WHO consultants. Those trained at the national level will conduct training workshops at their regional capitals for physicians from all hospitals of the regional capital, and chief medical officers from the district and other health institutions. The " physicians represented at the regional level training, in turn, will train the remaining physicians at the health institutions where they work, as well as all paramedical staff.

The training workshops are also used for provision of training materials and record forms, for the peripheral health institutions. Individual in-service training is carried out by PRADs and members of mobile AIDS from the national headquarters, during their supervisory visits to the peripheral health institutions.

Recording and reporting
Details on the social and medical history of each suspected case is documented in the usual hospital individual case record. Referrals of AIDS suspect cases by health institutions, which have no physician does not require any special record form. The following referral records are used by the hospitals:

1.lndividual record on suspect AIDS case.
-The physician in charge of a non-referral hospital, during investigation of a suspect case, fills in the individual record for AIDS suspect case. This record is forwarded with the patient (or sent under confidential cover) to a PRAD in the referral hospital.
2. Individual record on confirmed AIDS case.
-This record is filled in by a PRAD, for each patient, at the time of clinical investigation of the suspect patient. It is filled in three copies: one copy remains at the referral hospital, second is to be sent to the physician who referred this patient, and the third to the Chief of DAC. This record for each patient is expected to reach DAC within 10 days after the diagnosis is confirmed.

-The medical staff involved in AIDS case diagnosis and management are expected to maintain confidentiality.

3. Each PRAD will maintain a list of all confirmed AIDS patients. The minimum information in this list will include name, age, sex, dates of reference, and death.
4. Request for HIV laboratory tests.
-This request will be accepted by the HIV laboratory only if it is signed by a PRAD.
-All referral records are addressed by name to the physician concerned, and marked "confidential".

At the DAC, all reports are forwarded to the statistical unit. Data from the reports are entered into computer and analyzed monthly. Relevant information is included in the reports for national

officials, WHO, and other participating parties, as well as feedback to the regional staff. All institutions involved in the surveillance may request DAC to analyze cases reported by them for the variables they like.

Assessment of the surveillance

The mobile teams of DAC and PRADs will pay periodic visits to the peripheral institutions for assessment of the activities. They will assess availability of AIDS educational materials, knowledge of medical staff on AIDS diagnosis and on the surveillance system. The observations are recorded in the AIDS surveillance assessment record, and submitted to the Chief of DAC on completion of every visit. The analysis of these reports is included in the quarterly activity reports of DAC.

IMPLEMENTATION OF THE SURVEILLANCE

Prior to the implementation of the AIDS case surveillance activities nationwide, in 1989, a training seminar was arranged for health workers at the national level; this was soon followed by regional level trainings. Similar training sessions were carried out again in February 1990. The agenda included various aspects of HIV infection/ AIDS in general, diagnostic approaches, clinical surveillance, and counselling techniques. During the first national level training in 1989, CDC/WHO clinical case definition was accepted to be used by the hospi:als in Addis Ababa, and WHO clinical case definition was accepted to be used in regional hospitals. However, during the first year of the surveillance, it was found difficult to use CDCI WHO case definition even in Addis Ababa hospitals. This defmition required sophisticated diagnostic and laboratory facilities, which to a large extent were not available in the country. For this reason, during the second round of national training for health workers, in February 1990, the WHO clinical case definition was accepted for nationwide use.

A total 808 AIDS Cases were reported to DAC from different hospitals, from 1986 to the end of January 1991. Of these, only 110 (13.6%) were reported up to the end of March 1989, i.e. before the commencement of the surveillance. This increase in the number of reported cases may be considered as a result of the increasing morbidity. On the other hand, the percent of cases reported by regional hospitals has increased from 1.8 before November 1989, to 12.4 during the period after the surveillance was initiated (table 2, fig. 1 and 2). According to the places of residence, 27 regions had one or more patients in their areas. Out of 636 AIDS patients, 239 (37.6%) resided outside the city of Addis Ababa; 79 of them (33.1 %) were diagnosed in the regional hospitals. Though two thirds of the peripheral patients were diagnosed in Addis Ababa, there is a significant improvement in reporting from the regional level.

For comparison, in Uganda, from July 1987 -July 1988, reports had been received from 33 out of 79 hospitals and from 3 out of 102 health centers and 1 leprosy centre. The patients reported from these hospitals were residents of 32 of De 33 (97%) districts in the country (1).

According to the estimates based on HIV prevalence in 1989, some 7000 cumulative cases have occurred in Ethiopia from 1984 through 1990 (4). Through the AIDS case surveillance, nearly 800 cases have been reported in the same period, making the surveillance efficiency at 11.4%. This indicator grew several fold in the last two years.

Supervisory teams from DAC travelled to a number of regions for assessment of the surveillance activities, using the formats and methods designed for the purpose. A marked improvement was reported in the reporting system: more data about individual confirmed cases were documented since the surveillance started. There was less delay in reporting.

There was more concern among health workers about this new health problem, and the awareness of health workers concerning HIV infection/AIDS, as a result of which the diagnostic approach has increased. The teams also identified a number of operational problems, including:
-delay in training that postponed implementation of the surveillance in some areas;
-lack of mobility of trained staff for supervision and training purposes;
-lack of training materials;
-transfer of physicians trained on AIDS case surveillance;
These field observations provided a valuable basis for monitoring the surveillance on a day-to-day basis, and during the national training.

CONCLUSION

Data on AIDS cases is an essential part I of the knowledge on the magnitude of the HIV/AIDS epidemic used for planning, epidemic monitoring, and intervention evaluation.

Being a new component in the Health Services of Ethiopia, the AIDS case surveillance requires permanent monitoring and expansion. During the initial two-years of implementation of the surveillance activities, referral points have been established at all hospitals in Addis Ababa and at the regional capitals. The next step will be further decentralization to all hospitals and health centres operating in the country .

FIGURE 1. LOCATION OF AIDS REFERRAL HOSPITALS AND THE ORIGIN OF AIDS CASE REPORTS, 1989

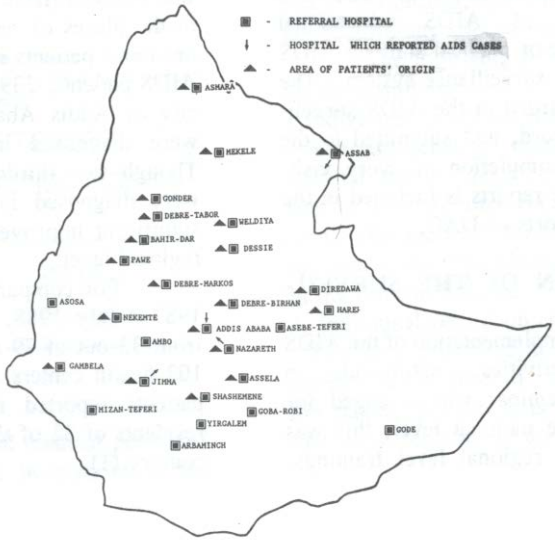

FIGURE 2. LOCATION OF AIDS REFERRAL HOSPITALS AND THE ORIGIN OF AIDS REPORTDS, 1990.

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