MINISTRY OF HEALTH

TANZANIA

GUIDELINES FOR MONITORING AND EVALUATION DURING MID-TERM PLAN III 2000 - 2002

NATIONAL AIDS CONTROL PROGRAMME

October 2000

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LIST OF ABBREVIATIONS

AIDS	-	Acquired Immune Deficiency Syndrome
AMREF	-	African Medical and Research Foundation
ANC	-	Antenatal Clinic
DHS	-	Demographic and Health Survey
DMO	-	District Medical Officer
ELISA	-	Enzyme Linked Immunosorbent Assay
HIV	-	Human Immunodeficiency Virus
HMIS	-	Health Management Information System
KABP	-	Knowledge, Attitude, Behaviour and Practices
KAP	-	Knowledge, Attitude and Practices
M&E	-	Monitoring and Evaluation
MUCHS	-	Muhimbili University College of Health Sciences
NACP	-	National AIDS Control Programme
NIMR	-	National Institute for Medical Research
RMO	-	Regional Medical Officer
RPR	-	Rapid Plasma Reagin
STD	-	Sexually Transmitted Disease
TAC	-	Technical AIDS Committee
TANESA	-	Tanzania-Netherlands Project to Support HIV/AIDS Control in Mwanza Region
TDHS	-	Tanzania Demographic and Health Survey
TKAPS	-	Tanzania Knowledge, Attitude and Practices Survey
UNAIDS	-	Joint United Nations Programme on AIDS
WHO	-	World Health Organisation

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We extend our heartfelt thanks to all of the experts and partners who took time from their busy schedules to put in three days of hard work at the M&E workshop. Last, but not least, we congratulate the National AIDS Control Programme management and staff whose able co-ordination and collaboration made the development of this document a success.

I. INTRODUCTION

The National AIDS Control Programme (NACP) in Tanzania uses Medium Term Plans (MTP) to outline its programme implementation strategy once every five years. The third and most recent plan[1] includes the priority programme areas for monitoring and evaluation (M&E) and covers the period from 1998-2002. The national M&E plan presented in this document, designed in conjunction with MTP-III, focuses on strengthening of existing methods of surveillance and M&E in Tanzania. This plan was developed with the help of a multidisciplinary team working together to reach consensus on the selection of appropriate M&E indicators within the context and resource constraints specific to the Tanzanian programme.

As the national success stories in countries like Uganda and Thailand have shown, good national M&E systems need to help answer three key questions:

1. What is the trend in HIV prevalence, especially among young people (as a proxy indicator of incidence)?
2. If HIV prevalence among young people changes, can this be attributed to changes in sexual behaviour?
3. If sexual behaviour changes, can this be attributed to interventions?

In outlining the main elements of a national M&E strategy for MTP III, these guidelines build as much as possible upon existing M&E efforts in Tanzania and expand these efforts in important ways. To enable a better linking of traditional and behavioural data for monitoring trends in HIV prevalence, procedures for implementation of "second-generation" surveillance are introduced. UNAIDS, WHO, USAID and MEASURE *Evaluation* have collaborated with partners throughout the world to define best practices in M&E of national AIDS programmes. Common M&E indicators, data collection instruments and study protocols developed or recommended by the UNAIDS/WHO/USAID/MEASURE *Evaluation* global initiative are incorporated and adapted to the Tanzanian context.[2]

Detailed surveillance and M&E plans are presented for six priority programme areas: ANC-based HIV/RPR surveillance, behavioural surveillance of youth in the ANC areas, STD prevention and care, condom availability and accessibility, voluntary counselling and HIV testing, and blood safety.

[1] Ministry of Health, Tanzania. National AIDS Control Programme. Medium Term Plan III: 1998-2002.
[2] See UNAIDS/WHO, "Evaluation of a national AIDS programme: A methods package" (May 1999), and UNAIDS/MEASURE Evaluation, "National AIDS programmes: A Guide to Monitoring and Evaluation," (July 2000).

II. MAIN ELEMENTS OF M&E AND SURVEILLANCE STRATEGY

MTP III calls for a comprehensive and multi-sectoral response to HIV infection, and identifies 11 priority areas (see Appendix I: Medium Term Plan III Priority Areas). The overall M&E objective of the MTP III M&E and surveillance strategy, to monitor the implementation of AIDS prevention and control activities in Tanzania and assess the effect of these activities, is specified in the following set of objectives:

- To monitor the spread of HIV and STDs in the country
- To monitor trends in sexual behaviour, especially among youth
- To collect data on HIV sero-prevalence and data on behavioural trends in a manner allowing for linkage of these data to the maximum extent possible
- To monitor and assess the quality of facility-based STD care
- To monitor the availability, accessibility, acceptance, quality and use of VCT services among the sexually active population
- To monitor and assess the safety of blood transfusion services with respect to HIV screening of donors and donor blood and reduction in unnecessary transfusions
- To document various programme efforts and to the extent possible, link such programme efforts to behavioural changes and assess the effects and impacts of programme interventions

M&E unit, Co-ordination, Resource Mobilisation, and Dissemination

Strengthening of the Monitoring and Evaluation Unit at NACP

The MTP III strategy calls for establishment of a full-fledged Monitoring and Evaluation unit at the NACP. The M&E unit needs to be staffed with three appropriately trained and qualified personnel: an Epidemiologist, a Biostatistician and a Behavioural Scientist. The Epidemiologist will serve as Principal co-ordinator and will have responsibility for overall supervision of the unit. Four main functions for the M&E unit have been identified:

- Monitoring and evaluation of HIV/AIDS programme components: this includes monitoring of programme inputs, process and outputs. Data from government and non-government programmes should be included.

- HIV/AIDS/STD and behavioural surveillance: this includes HIV data from antenatal clinics, STD clients, blood donors and others, and AIDS cases from health facilities; behavioural data are obtained from national and sub-national surveys of the general population and specific groups (such as youth).

- Co-ordination of AIDS-related research: community studies may provide data on HIV and behavioural trends and include data for monitoring programme efforts.

- ♦ Strengthening of the Health Management Information System: co-ordination with other health information components of the Ministry of Health is essential. Most important among these is the MTUHA health management information system.

Co-ordination and Resource Mobilisation

Well-designed systems of data collection and analysis are at the heart of M&E activities. An HIV/AIDS/STD reporting system needs to draw from many sources, including AIDS case reporting, HIV prevalence monitoring and research studies. Collaboration with other institutions and integration of data from research studies is essential, as it is not realistic for the M&E Unit to collect all relevant information. Data from many sources will be included in the NACP annual reports, and further integration and utilisation of data from the different sources are required.

To enhance co-ordination of M&E activities, a Monitoring and Evaluation workgroup will be formed. The main function of the workgroup is to oversee co-ordination and supervision of M&E activities and to assist in preparation of the annual report, but workgroup members also will be involved in data collection, data analysis and report writing. The workgroup will meet twice each year. One meeting will be held to review and discuss findings from the annual report (programme implementation and HIV surveillance), and the other to discuss progress, M&E constraints and possible solutions.

The workgroup will have a total of ten members, with membership allocated as follows:

1. Programme Manager, NACP
2. Principal Co-ordinator of M&E Unit/NACP
3. Two behavioural scientists
4. An Epidemiologist
5. One member from each of the following programmes:
   Condom Availability and Accessibility,
   STD Prevention and Care,
   VCT, and Blood Safety
6. One member from the Health Sector Technical AIDS Committee (TAC)

Representatives of the international and national research communities, international organisations and donors may participate as observers upon invitation.

Resources are needed for equipment, regular supervision of the surveillance system, large and small-scale surveys, data processing, producing reports, organising workshops and seminars, and dissemination. Resources for M&E will be mobilised from both within and outside the country. Ideally, between 5-10% of all resources for the national AIDS programme should be allocated to monitoring and evaluation.

Dissemination and Reporting

(1) The Monitoring and Evaluation guidelines will be distributed to all participating or interested agencies, organisations and institutions.

(2) To make M&E results accessible to collaborators and users within the government and private sectors, as well as the communities supplying surveillance data and the general public, M&E reports will be produced annually and disseminated widely.

(3) HIV surveillance reports will be produced in two formats aimed at two different audiences. The main document, intended for use in program planning and monitoring,

will provide detailed account of progress of the epidemic. An accompanying document, needed for advocacy purposes, will summarise data on HIV prevalence and behavioural changes in user-friendly graphics.

(4) Dissemination efforts will take advantage of national occasions and large meetings (such as the annual ROM's conferences and political meetings) to publicise annual surveillance data and M&E reports.

(5) Dissemination efforts will include non-governmental organisations, international agencies and donor agencies.

III. PROGRAMME AREAS

1. HIV/STD AND SYPHILIS SURVEILLANCE

Objectives

1. Determine HIV prevalence rates among pregnant women attending antenatal clinics (ANC), and estimate HIV incidence in the younger age group
2. Determine prevalence of treponemal sero-reactivity (sero-syphilis) in antenatal clinic attendees
3. Determine behaviour patterns among youth living near the ANC surveillance clinic catchment areas
4. Strengthen the capacity of the epidemiological and behavioural surveillance system

ANC-based HIV/RPR Surveillance Strategy

This section describes an ANC-based HIV and RPR surveillance system. The following section describes related sexual behaviour surveys of youth living near the ANC sentinel sites.

- Strengthen or establish HIV and RPR/Syphilis ANC Sentinel Surveillance systems in six regions of mainland Tanzania.
- Establish four antenatal clinic sites in each of the selected regions. Sites will be selected to include one urban, one semi-urban or roadside, and two rural sites.
- Use HIV/STD data from other sources, such as research studies and large-scale population-based surveys, to validate estimates of HIV prevalence from ANC sentinel surveys.

In addition, all research studies in Tanzania involving HIV data collection will be asked to report annually to NACP. Findings from these studies will help in assessing the overall trends in Tanzania. Research sites such as Kagera and Mwanza (Kisesa) may be able to provide data from *both* population-based data and data from ANC clinics in the study area. Including HIV and other STD data collection as part of other national surveys, such as the next TDHS, will be discussed. The main rationale for including HIV testing in a national survey is that Tanzania is too large to set up a national surveillance system that adequately covers all urban, semi-urban, and especially rural populations. As community studies in Kagera and Mwanza region have shown,[3] there is likely to be substantial variation within the country by place of residence.

[3] See for example, Killewo J, Nyamuryekunge K, Sandstrom A, et al., Prevalence of HIV-1 infection in the Kagera region of Tanzania" a population-based study. AIDS 1990: 1081-5. Barongo LR, Borgdorff MW, Mosha F et al. The epidemiology of HIV-1 infection in urban areas, roadside settlements and rural villages in Mwanza Region, Tanzania. AIDS 1992, 6: 1521-8. Boerma JT, Urassa M, Senkoro K, Klokke A, Zaba B, Ng'weshemi JZL. 1999. Spread of HIV infection in a rural area in Tanzania. AIDS 13: 1233-1240.

Indicators

- HIV prevalence among all antenatal women
- HIV prevalence among antenatal women aged 15-24 (and parity 0-1)
- Syphilis prevalence among antenatal women aged15-24 (RPR testing)

Data Collection

ANC surveillance will be carried out in six of the 20 mainland regions. The selection of six regions (and districts) out of twenty regions and more than one hundred districts is a constraint on the surveillance system, but the careful choice of regions and sites will allow for monitoring the epidemic within the resources available for that purpose.

The six surveillance regions were selected based on the following criteria:

- Availability of data on HIV prevalence and trends
- Presence of ongoing cohort and other population-based studies
- DHS classification of regions into ecological and geographical zones – One region was selected from each of the six zones of Tanzania Mainland (see table)[4].

Geographic Zone	**Region Selected for Surveillance**
Coastal Zone	Dar es Salaam
Northern Highland Zone	Kilimanjaro
Lake Zone	Kagera
Central Zone	Dodoma
Southern Highland Zone	Mbeya
Southern Zone	Mtwara

A total of 24 ANC sites will be selected, with 4 sites in each of the six selected regions. The criteria for ANC site selection are listed below. The aim is to include one urban site, one semi-urban/roadside site, and two rural clinics. (Note: In Mbeya region, there will be one urban, one semi-urban/roadside, one rural and one border site.)

- Presence of an established ANC sentinel site or sites within the region (e.g., as is the case in Mbeya, Kagera)
- In rural areas, selected clinics will be those located in health centres or other lower level facilities, such as a dispensary or an independent ANC
- Accessibility by road

[4] Tanzania Demographic and Health Survey, 1996. Tanzania Bureau of Statistics, Dar es Salaam, 1997.

The study will use a cross-sectional design. The study sample will be drawn from all pregnant women coming to a selected ANC sentinel site for a first visit (for any pregnancy) during the data collection period. Enrolment in the study will continue over a period of three consecutive months (one quarter) each year. It is expected that a three-month period will suffice for enrolment of a sample size of 350 to 400 pregnant women per site. The third quarter (July to September) of the year has been designated as the annual quarter in which to undertake surveillance surveys in all sentinel sites.

A non-replacement sequential sampling technique will be used.[5] To obtain 350 new antenatal women within a three-month period requires a health facility with about 1400 new ANC women per year. This implies a large catchment area for the facility of about 40,000 people. For the rural sites, smaller numbers of new ANC clients are likely, because the catchment populations are smaller. Therefore, each rural facility should have at least 150 new ANC clients in the three-month data-collection period.

Data on each enrolled woman will include socio-demographic characteristics (age, education, parity, marital status, residence or migration indicator), distance between the woman's residence and the clinic, and HIV test results. The socio-demographic data allow for comparing / matching the pregnant women in ANC surveillance sites with behavioural data collected in a population with a similar socio-demographic profile. A triplicate data collection form currently in use will be amended to accommodate the new data requirements.

A one-page form will be used to describe the site in terms of its location (near highway, bars, etc.) and size (number of new ANC clients per year, STD patient load), etc. This will help in interpretation of results.

Data security procedures will include password protected access to electronic data, and storing paper copies of test results and data collection forms in a secure room and a locked filing cabinet. Back-up copies of electronic data also will be stored securely in locked storage units.

Data-collection forms kept at the NACP will be stored securely. To ensure confidentiality, access will be restricted to the Principal Co-ordinator and other persons nominated by him. The Principal Co-ordinator will supervise data entry and validation, data management, and analysis.

Specimen Collection

Venous blood for haemoglobin and syphilis (RPR) testing will be drawn from women at booking, using a vacutainer and needle. Specimen for HIV testing will be labelled only with the patient's age and sex and the name of the clinic. The remaining blood specimen will be spread on a filter paper, and allowed to dry before shelf storage. To enhance the protection and safety of personnel, clinic staff will be trained and protective gear will be supplied.

To protect confidentiality, data-collection forms containing HIV test results will not be sent back to the clinics. One copy will be retained in a secure file at the regional laboratory. Regional Laboratory Technologists (RLT) will be responsible for shipping the other two copies of completed data-collection forms to the Regional Medical Officer (RMO) and to the National AIDS Control Programme (NACP) Secretariat on a weekly or monthly basis. The NACP Secretariat will provide funds for Courier postage.

[5] Appendix 2 provides a sample size calculation table based on estimated STD prevalence and desired precision (95 per cent confidence interval calculation).

Quality Control

Quality control procedures will be implemented to monitor the quality of the test kits and reagents, and the reliability of test results produced in the regional laboratories. A sample of surveillance specimens that have been tested at the regional labs will be sent for re-testing at a national reference laboratory (to be identified/established). To select the quality sample, surveillance specimens submitted to the regional laboratory would be grouped by clinic of origin so those specimens from a specific sentinel site form a batch. From each batch, every tenth specimen will be selected for the quality control sample. At least twice each year, a sample of control specimens, together with their respective laboratory test result, will be sent for re-testing (ELISA) at the reference laboratory.

Data Analysis

Analysis of ANC surveillance data will include HIV prevalence estimates stratified by age group (with a focus on 15-24 years), number of treponemal reactive sera by RPR titre level and age distribution. As described in the following section, analysis also will incorporate behavioural surveillance indicators by age/sex/school, and a comparison of ANC data with data collected in the general population of the clinic catchment area.

Responsibilities and Reporting

The Principal Co-ordinator will oversee production of the annual surveillance report. The HIV/RPR surveillance section of the report will be developed by the surveillance subcommittee of the M&E workgroup at its annual meeting in April. At this meeting, the workgroup will review results from the previous year, assess data quality, interpret results and discuss the HIV/RPR section of the annual report.

2. MONITORING OF SEXUAL BEHAVIOUR

Background

There is a relatively rich database with which to assess trends in sexual behaviour in the general population. For example, there have been four national population-based surveys, including a KABP/partner relations survey in 1991, three DHS surveys with an AIDS module.[6] Several research studies have involved large-scale behavioural surveys as well.[7] Some of these studies were focused on youth/adolescents, and several included qualitative behavioural studies. NACP is building a partial database of these studies and already incorporates relevant findings in the annual report.

A number of longitudinal studies can provide data to complement those from nationally representative surveys in monitoring trends and patterns of sexual behaviour in specific population sub-groups. Sexual behaviour among youth has been a central concern in longitudinal studies undertaken by TANESA, AMREF & Mema kwa Vijana projects in Mwanza region, and several others based in Arusha (MUTAN) and Dar es salaam. Smaller qualitative studies also have focused on specific population subgroups in particular communities. Some of these have aimed to describe the contexts in which certain sexual behaviours occur. Although cross-sectional studies, showing the feasibility of such a linkage, have been done so far there has been no direct linkage between the ANC-based HIV surveillance and behavioural trends assessment.

Objectives of Sexual Behaviour Surveillance

To assess trends in sexual behaviour in the general population and particularly in young people aged 15-24

Challenges in Monitoring Sexual Behaviour

1. Using self-reported behaviour to monitor behavioural changes is a notoriously difficult task, and attempts to monitor sexual behaviour at the individual level have met with limited success. Furthermore, individual-level indicators provide only limited information on sexual networks. Individuals with many sexual partners may not be able to name their sexual contacts and may underreport.
2. Although there is a great deal of social science research on AIDS in Tanzania, monitoring of behaviour modification has posed substantial methodological difficulties and limited attempts to document trends.
3. Behavioural research aimed at youths usually focus on in-school youths. The sexual and reproductive health of out of school young people is not well known.
4. Sample surveys on sexual behaviour are fairly expensive and repeated surveys are rarely done.

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[6] Tanzania Demographic and Health Survey, 1991/1992 (Tanzania Bureau of Statistics, 1993); Tanzania Knowledge, Attitudes and Practices Survey, 1994 (Tanzania Bureau of Statistics, 1995); Tanzania Demographic and Health Survey, 1996 (Tanzania Bureau of Statistics, 1997).

[7] Killewo J, Dahlgren L, Sandstrom A. Socio-geographical patterns of HIV-1 transmission in Kagera Region. Soc Sci Med 1994, 38: 129-134. Barongo LR, Borgdorff MW, Mosha F et al. The epidemiology of HIV-1 infection in urban areas, roadside settlements and rural villages in Mwanza Region, Tanzania. AIDS 1992, 6: 1521-8. Shao J, Brubaker G, Levin A et al. Population-based study of HIV-1 infection in 4,086 subjects in Northwest Tanzania. J Acq Imm Def Syndr 1994, 7: 397-402.

5. As noted above, little has been done towards linking HIV sentinel sero-surveillance with behavioural changes in vulnerable groups, such as women attending antenatal clinics and their spouses.

Behavioural Surveillance in the General Population

Strategy

Behavioural surveillance of the general population living near the 24 ANC sentinel sites is not feasible under current resource constraints. Therefore, the best and most cost-effective available option for collecting general population data is to add a module to the TDHS planned for 2001-2. Previous national surveys also can provide additional insight into national trends in the past decade.

Indicators of Sexual Behaviour among the General Population (15-49)

- **Knowledge of HIV prevention methods**:
  Percentage of all respondents who, in response to prompted questions, correctly identify as means of protection against HIV infection (1) having no penetrative sex, (2) using condoms, and (3) having sex only with one faithful uninfected partner
- **No incorrect beliefs**:
  Percentage of all respondents who correctly respond that a person who looks healthy can have HIV and who also correctly reject the two most common local misconceptions about AIDS transmission or prevention
- **Sexual negotiation**:
  Percentage of respondents who believe that, if her husband has a STD, a wife can either refuse to have sex with him or propose condom use, among all respondents aged 15-49 in a population based survey who have heard of STDs
- **High-risk sexual behaviour**:
  Proportion of respondents who have had sex with a non-marital, non-cohabiting partner in the last 12 months, among all respondents reporting sexual activity in the last 12 months
- **Condom use at last high risk sex**:
  Percentage of respondents who say they used a condom the last time they had sex with a non-marital, non-cohabiting partner, among those who have had sex with such a partner in the 12 months

Behavioural Surveillance among Youth (15-24)

Strategy

In order to reduce the cost and maximise the quality of data, behavioural surveillance will aim at youths (15-24) and be limited to youths living near ANC sentinel surveillance sites in two of the six surveillance regions. Behavioural surveillance surveys will be carried out in each of the four ANC sentinel sites in the two selected regions (total of eight ANC sites).

Behavioural surveillance among youth will focus specifically on behavioural patterns most likely to result in HIV infection or its prevention, and on monitoring trends over time in these behaviours. Sexual behaviour surveys, therefore, will involve both quantitative and qualitative data collection, including structured questionnaires, rapid data collection techniques, and small-scale in-depth studies.

Ten indicators of sexual behaviour among youth will be tracked in the selected sites. These refer to the onset of sexual activity (and thus indirectly to sexual abstinence); the frequency and extent of pre-marital sexual activity; condom use, multiple partnerships, and exchange of sex for gift or money.

Indicators of Sexual Behaviour among Youths (15-24)

(1) **Reported onset of sexual activity (Median age at first sex)**
The age by which half of all young (aged 15-24) single people surveyed have had penetrative sexual intercourse

(2) **Reported premarital sex**
Percent of young single people (aged 15-24) who have had sex in the last 12 months among all young single people surveyed

(3) **Condom use during premarital sex**
Percent of young single people (aged 15-24) who report using a condom at the most recent act of sexual intercourse, among all young people surveyed

(4) **Multiple partnerships**
Percent of young single people (aged 15-24) who have had sex with more than one partner in the last 12 months, among all young single sexually active people surveyed

(5) **Reported condom use with non-regular sex partner(s)**
Percent of young single people (aged 15-24) who have had sex in the last 12 months and used a condom at last sex with a non-marital, non-cohabiting partner, among all young single sexually active people surveyed

(6) **Age mixing in sexual relationships in past 12 months.**
The percent of women aged 15-19 who have had non-marital sex with a man 10 years or more older than themselves in the last 12 months, among all those who have had non-marital sex in the past 12 months

(7) **Violence and threats.**
- 7.1. Percent of young men (aged 15-24) who report a belief that violence or threats of violence are a good way of persuading a girl to have sex with them, among all young men surveyed
- 7.2 Percent of young women aged 15-24 who report that they have experienced violence or been threatened before agreeing to have sex with a man of any age, among all young women surveyed

(8) **Sexual negotiation skills.**
- 8.1. Proportion of all respondents aged 15-24 who report a belief that a woman can refuse to have sex with a man (including her husband) or insist that he use a condom, among all young people surveyed
- 8.2. Proportion of young women aged 15-24 who have ever successfully refused to have sex without a condom or successfully insisted on condom use before agreeing to sex, among all young women surveyed

(9) **Sex in exchange for gifts**
Percent of young single people (aged 15-24) who participated in non-marital sexual intercourse involving an exchange of gifts or money in the past 12 months, among all young single sexually active people surveyed

(10) **Condom use at first sex**
The proportion of young people aged 15-24 who used a condom the first time they ever had sex, among all those who have ever had sex

Data Collection

One round of sexual behaviour surveillance surveys among youth living near the eight ANC sentinel surveillance sites in two regions will be completed by December 2002. The sample will be drawn from youths aged 15-24 years living near ANC sentinel sites in two of the six surveillance regions. The ward in which an ANC sentinel site is located will serve as the primary sampling unit. Using a multistage sampling methodology, a number of "vitongojis" (lowest administrative unit) will be selected within each ward. All households with youths 15-24 years within the selected vitongoji will be listed, and a random sample of households drawn. Interviewers will visit each selected household and all youths in the household will be eligible for interview. Sampling procedures will follow the multi-stage cluster sample design for general population surveys as described in recent UNAIDS/WHO and Family Health International Publications.[8]

Data collection instruments will be developed with technical support from NACP, NIMR and MUCHS. The structured questionnaire will be based on the UNAIDS general population survey and the Family Health International BSS for Youth questionnaire. All instruments will be translated into Kiswahili.

A qualified social science researcher from NACP or a collaborating institution will supervise the data collection. Interviewers will work in teams, with males interviewed by males and females by females. Six field workers (3 men / 3 women) will be recruited to serve as interviewers in each region, and will receive one week of field training. In the region selected for the pilot test, interviewer training will precede the pilot test.

Qualitative data
A small sample of youths living near the sentinel surveillance clinics will be selected for in-depth analysis using rapid data collection techniques, including in-depth interviews and focus group discussion. The purpose of the in-depth studies is to provide more detailed information on sexual behaviour, and more importantly, to provide insight into patterns of sexual networking.

Data Analysis

The NACP will take responsibility for data entry, validation and analysis of both the qualitative and quantitative data. As noted above, the M&E workgroup and other collaborators will provide technical support for instrument development, recruitment and training of field workers, data collection, data analysis, and linking of behavioural findings with ANC sero-surveillance data.

Responsibilities

Overall supervision will the responsibility of the Monitoring and Evaluation Unit, with technical support provided by behavioural scientists at NACP, NIMR, and MUCHS.

[8] See UNAIDS/WHO "Evaluation of a national AIDS programme: A methods package," (May 1999), and "Guidelines for Repeated Behavioural Surveys in Populations at Risk for HIV," Family Health International (August 2000).

3. STD CARE AND PREVENTION

Background

Syndromic management of STDs increases the potential coverage of care in circumstances where prevalence is high and resources are limited. However, this approach requires a large investment in training nurses and other health care providers, and the success of that training, as it relates to changes in the provision of adequate care to patients seeking care for STDs, needs to be monitored. Equally important is the availability of adequate supplies of drugs and other necessary materials. Furthermore, STD care is an entry point for condom promotion and referral for voluntary HIV testing, and it is important to monitor the extent to which these aspects of STD service provision are functioning.

Objectives

To document trends in the prevalence and incidence of STDs, and monitor coverage and quality of improved STD treatment and prevention measures

Challenges

1. Health management information system (HMIS) was not designed to track specific STD issues.
2. Lack of baseline information on the quality of STD care (one national assessment, carried out in 1994 based on WHO/GPA PI-6 and PI-7).
3. Lack of funds for regular supportive supervision, in-service training and feedback.
4. Approximately 40% of the estimated 1.5 million new cases of STD in Tanzania seek care from private/informal health care provider.

Strategy for Monitoring

The STD control programme focuses on strengthening STD treatment practices in health facilities using the syndromic approach. A facility survey is the principal method for assessing the quality of STD services prior to and following implementation of such a programme. Such a facility survey was carried out in 1994 and needs to be repeated on a regular basis.

Indicators

- **Appropriate diagnosis and treatment of STDs** - Percent of patients with STDs at selected health care facilities that are appropriately diagnosed and treated according to national guidelines, among all STD patients at those centres
- **Advice to STD patients on prevention and referral to HIV testing services** - Percent of STD patients who are given advice on condom use and partner notification and who are referred for HIV testing
- **Drug supply at STD clinic** - Percent of STD clients served by health facilities that have a current supply of essential STD drugs and report no stock-outs lasting longer than one week in the preceding 12 months
- **Care seeking behaviour and trained providers** - Percent of men and women reporting symptoms of STDs in the last 12 months who sought care at a health facility or other service provider with personnel trained in STD care, among all respondents aged 15-49 in a population-based or targeted survey

Data Collection

Data for the first three indicators are gathered in a survey of health facilities providing STD services. Providers are assessed on history taking, examination and treatment of patients. Data are collected in provider interviews, client exit interviews, supply inventories, and through direct observation of provider-client interaction. Appropriate diagnosis and treatment is assessed in accordance with national guidelines. Data for the fourth indicator come from a population-based survey.

Facility surveys

A sample of 10 health facilities will be chosen from each of the six surveillance regions in Mainland Tanzania (total of 60 clinics). In each region, four of the 10 (40%) facilities will be antenatal sentinel sites. The remaining six facilities will include regional and district hospitals, a private hospital, a government health centre and a dispensary and a big pharmacy at a regional town. Except in the case of regional hospitals, selection of facilities should take into account proximity to a sentinel surveillance site, accessibility by road and distance from the regional town.

The facility survey, to be carried out once between 2000 and 2002, will include provider interviews and direct observation of provider-client interaction. To the extent possible, data from previous surveys, such as the 1999 facility survey, will be used to generate trend data.

Standardised instruments, study protocols and sampling designs for facility-based STD care and prevention programme assessment have been developed and tested. These will be adapted and used for the Tanzania STD service evaluation (See Revised Guidelines on evaluating STI services, UNAIDS/MEASURE *Evaluation,* July 2000).

Population surveys

DHS surveys will supply general population data on men and women reporting symptoms of STD and on health services utilisation.

Responsibilities

The NACP M&E Unit, in collaboration with STD programmes, will be responsible for monitoring the quality of STD services and carrying out the STD facility survey.

4. VOLUNTARY COUNSELLING AND TESTING SERVICES

Background

Voluntary counselling and HIV testing (VCT) is recognised as an increasingly important area of HIV prevention and care. When fully functional, high quality VCT services provide an early entry point for care and support, promote safe behaviour and help reduce stigma. VCT is a relatively new service in Tanzania, and the challenges listed below continue to prevent a high uptake of VCT services in many places. This is expected to change as the epidemic progresses and new interventions are promoted.

Objectives

To monitor the availability of VCT, and to determine the accessibility and quality of voluntary HIV counselling and testing services

Challenges

1. Lack of information on community-level awareness of VCT and its benefits.
2. Counselling as a service is still new, and no cadre in health or other public service areas has specialised for counselling in Tanzania.
3. Affordability – counselling services are not provided free of charge. This may be a barrier to use and lead to participation bias among sampled users.

Strategy

M&E for VCT will rely on data from both population-based and facility surveys. Standardised protocols and data collection instruments have been developed and will be used to measure the indicators listed below.

Indicators

- Percent of survey respondents aged 15-49 who have ever voluntarily requested an HIV test, received the test and received their results
- Percent of survey respondents aged 15-49 who voluntarily requested an HIV test, received the test and received their results in the last 12 months
- Percent of districts that have at least one VCT centre staffed by trained counsellors and providing specialised HIV counselling and testing services free or at affordable rates
- Percent of post-HIV-test counselling sessions at voluntary counselling and testing facilities that meet international standards for quality counselling
- Percent of clients served by VCT services that meet the minimum conditions deemed necessary to provide quality counselling and HIV testing services

The first indicator measures past and recent use, the second reflects the availability of VCT at the district level, and the third relates to the quality of VCT services.

Data Collection

A question will be included in the next TDHS (scheduled for 2001 or 2002) to obtain data on the percent of the population that has ever used VCT services.

The availability of VCT services in districts will be assessed through a mail survey. A short questionnaire will be sent by post to all Regional Medical Officers (RMOs) and District Medical Officers (DMOs). The RMOs and DMOs will be asked to fill the forms and post them back to NACP.

For the quality assessment, a sample of ten facilities providing VCT services will be chosen from each of six surveillance regions in Mainland Tanzania (total of 60 VCT facilities). Eighty percent of the sample (48 facilities) will be government, private and NGO/CBO facilities at the regional and district level, and the remaining 20% (12 facilities) will be lower level rural facilities. Facility selection will take into consideration proximity to ANC sentinel surveillance sites, accessibility by road and distance from the regional town. Data collection techniques will include client and provider interviews and direct observation. Ideally, three to five pre-test counselling sessions should be observed per site (with different counsellors, where applicable). Counselling skills will be scored against a standard checklist of items reflecting the minimum standards for quality post-HIV-test counselling.

Data on the indicator reflecting minimum quality standards will be obtained from a random sample of providers of counselling and testing services (including NGOs and private clinics). Facilities will be visited and services assessed against a checklist of the structural elements deemed necessary to provide quality counselling and testing services. These elements include trained staff, adequate privacy for counselling, systems for maintaining confidentiality, a directory of services for referral, and adequate conditions for quality control of specimen tests. The quality assessment will be carried out once between 2000 and 2002.

Responsibilities

NACP, in collaboration with providers of VCT (such as NGOs), and Regional and District Medical Officers.

5. BLOOD SAFETY

Background

Efforts to reduce the transmission of HIV associated with blood transfusions focus on HIV antibody screening, blood donor selection, prevention of avoidable transfusions, and quality control in laboratories and blood banks.

Objectives

To monitor HIV blood safety in hospitals providing blood transfusion services.

Challenges

- Blood transfusion services in Tanzania are not centralised.
- There are many private and NGO blood banks not usually included in public sector statistics.
- Many transfusions take place in the private sector, increasing the likelihood that records of the total number of transfusions will be incomplete.
- Universal quality control is not yet in place.

Strategy for Monitoring

NACP monitors the distribution of testing kits and receives regular reports from hospital about the number of blood transfusions and HIV (rapid) test results by sex and age. Data are reported in the Annual Report. Reporting rates in past years have varied from about 23 to 77%. The existing monitoring system can be strengthened at relatively low cost by reviewing and adjusting the current reporting forms and procedures, and increasing efforts to achieve higher reporting rates by hospitals.

Alternatively, a smaller number of sentinel hospitals could be designated in various parts of the country for monitoring purposes.

Indicators

- Percent of blood units transfused that have been screened for HIV according to national or WHO guidelines
- Number of blood units transfused in the previous 12 months, per 1000 population
- Percent of hospitals with functioning blood bank, that does not pay blood donors, and does not recruit donors from among relatives of the patient
- Percent of hospitals with national blood policy guidelines and following national guidelines practices

Data Collection

Data sources: District Medical Officers, Medical Directors of hospitals, Hospital laboratory and/or blood bank records and reports. Data will be collected from all hospitals that transfuse blood.

Data will be obtained from the laboratories that provide blood donations and transfusion services. Information on donors will include the number of donors per month, type of blood donor (paid, organisational, or relative of patient) and number of donors screened for HIV according to National/WHO guidelines. Laboratory records will provide data on the number of blood units dispatched for transfusion, and whether or not the blood was screened for HIV.

For data on the third and fourth indicators, a list of hospitals in all districts of the Mainland Tanzania, categorised by provision of blood transfusion services (part of indicator 3) and availability of national blood policy guidelines and practices (indicator 4), will be compiled by DMOs.

Data on blood safety will be collected once between 2001 or 2002.

Responsibilities

NACP will collaborate with RMOs, DMOs and Hospital Managers. NACP will be in charge of reviewing and strengthening the monitoring system, based on existing procedures, and will compile and report data in the annual report. Hospitals will have responsibility for monitoring blood transfusion practices and reporting results to NACP on a timely basis.

6. MONITORING OF CONDOM AVAILABILITY AND ACCESSIBILITY

Objectives

To enhance availability and accessibility of condoms to the general population and special population groups (particularly women and adolescents)

Challenges

- Diversity of condom sources: Given deregulation of condom importation in the country, there are multiple condom importers and distributors. This diversity makes it difficult to track the nation-wide quantity of condoms available for distribution.

- Information on condom availability and distribution below the district level, i.e. at the ward and community levels, and the commercial sectors distributing to these levels, is inadequately maintained, out of date, and thus largely unavailable.

- Most condom outlets and other service delivery points are not accessible or user friendly to certain segments of the population, for example, youths and women.

Monitoring Strategy

1. Track and document condoms procured and distributed during the previous 12-month period. To achieve this, it will be necessary to identify all major condom importers and distributors in the country. Key informants will be identified and interviewed to uncover all possible sources of condom procurement, distribution and storage. Sources of condoms to be tracked will include

    - Public sector (distributed free)
    - Social marketing programmes
    - Commercial sector

2. A study to assess user friendliness at the outlets/service deliver points based on a convenience sample of delivery points

3. Document all condoms procured and distributed to the possible lowest level

Indicators

1. Number of condoms per capita – total number of condoms available for distribution nation-wide during the preceding 12 months, divided by total population aged 15 – 49 (availability)

2. Proportion of condom retail outlets and service delivery points in a convenience sample that have condoms in stock at the time of survey, (accessibility)

3. Proportion of condoms in central stock, condom retail outlets, and service delivery points that meet national and international (WHO) quality specifications, among all condoms assessed (quality)

4. Proportion of women aged 15 – 49 years and adolescents aged 15-19 years in a convenience sample who report satisfaction when questioned about their perception and or experience with respect to condom accessibility

Data Collection

Condom availability

Information on condom procurement and importation will be collected from major sources that procure and distribute condoms. Key informants from the Ministry of Health (Family Planning Unit and NACP), Medical Stores Department and Social Marketing Programme will be interviewed to uncover all possible sources of condom manufacture, import, distribution and storage. Data will be collected from major commercial distributors, major international donor agencies, condom storage facilities, and all government, parastatal and NGO bodies involved in acquiring and distributing condoms.

Condom accessibility

A retail survey will be conducted once between 2000 to 2002 to provide information on condom accessibility. Such outlets can include bars and night clubs, different classes of retail shops (for example pharmacies, supermarkets, convenience stores, market stalls, petrol stations), STD clinics, and other service provision points. Outlets that provide services to people who may find it difficult to access condoms at conventional sites – for example teenagers – should be included. The indicator is calculated at the number of sites with condoms currently in stock, divided by the total number of sites surveyed. The survey will use a convenience sample.

The sampling frame for retail outlets used in Condom Availability Indicator can be used for monitoring accessibility indicator. Indeed, condoms may be sampled for quality assessment from retail outlets during the retail survey. Care should be taken in the handling and storage of condoms during sampling and testing, to ensure that no deterioration in quality is attributable to the sampling and testing procedure itself. Quality testing will be done in a central location, using standard procedures.

Two districts, one urban and one rural will be selected on a convenience basis from each of the six sentinel surveillance regions (Section I). In each urban district, 40% of all neighbourhoods will be selected, and in rural settings at least 25% of all communities/villages will be selected. A proportional number of outlets classified by type of outlet will be determined.

The retail survey of commercial outlets and service delivery points will be done separately but simultaneously. A list of all service delivery points where free/public sector condoms are distributed will be established before determining the number and selecting service delivery points to be interviewed. A common tool will be used to collect data from public and NGO service delivery points and retail/commercial outlets.

Information to be collected includes

- Identification data – region, district, village, type of outlet, etc.
- Source of condom supply to the region, district and outlet
- Frequency of supply - quarterly/annually
- Condom unit cost (from the supplier, from service outlet)

- Incidences of non-stocking and/or stock-outs of condoms (quarterly, annually)
- Reasons for non-stocking and stock-outs of condoms
- Condoms on visible display in retail outlets and service delivery points
- Estimated ratio of number of condoms to clients by sex and age

Responsibilities

NACP will collaborate with condom importers and distributors to obtain data on condoms that are being imported and distributed in the country. NACP will also collaborate with the Social Marketing programme, the National Bureau of Statistics and district representatives or DMOs to implement the retail outlet/facility surveys. NACP will co-ordinate and facilitate this activity. In monitoring the quality of condoms, NACP will collaborate with the Tanzania Bureau of Standards.

SCHEDULE OF ACTIVITIES

ACTIVITY	YEAR											
	2000				2001				2002			
	1st Qrtr	2nd Qrtr	3rd Qrtr	4th Qrtr	1st Qrtr	2nd Qrtr	3rd Qrtr	4th Qrtr	1st Qrtr	2nd Qrtr	3rd Qrtr	4th Qrtr
SURVEILLANCE OF HIV/STDs			X				X				X	
SEXUAL BEHAVIOUR SURVEILLANCE						X	X					
M&E OF STD CARE AND PREVENTION												
Assessment of service quality						X	X					
Assessment of service utilisation					X	X	X	X				
M&E OF VCT												
Service Quality assessment					X	X						
Service Utilisation					X	X	X	X				
M&E OF BLOOD SAFETY												
Laboratory data	X	X	X	X	X	X	X	X	X	X	X	X
List of hospital providing blood transfusion services							X	X				
M&E OF CONDOM AVAILABILITY AND ACCESSIBILITY												
Availability	X	X	X	X	X	X	X	X	X	X	X	X
Accessibility								X	X			

APPENDIX 1

NACP MEDIUM TERM PLAN III: PRIORITY AREAS

The Tanzanian NACP was established in 1985 with a short-term plan, followed by two medium term plans. The third Medium Term Plan (MTP III) for 1998 to 2002 has recently been presented to the donors. This strategic plan has included a more comprehensive and multi-sectoral response to HIV infection, and is budgeted at $18.6 million for four years. The following priority areas are identified in MTP-III:

1. *Provide appropriate STD case management services*: establishment of syndromic management in hard-hit districts, strengthen and expand STD surveillance, strengthen management and co-ordination capacity at all levels, promote reproductive health education in hard-hit districts, promote health seeking behaviour

2. *Reduce unsafe sexual behaviour among highly mobile population groups* (such as truck drivers, petty traders, minors and seasonal workers): peer educator training and support, reach highly mobile groups in their respective areas, make use of available entertainment areas and facilities and use of existing religious institutions

3. *Reduce STD/HIV transmission among commercial sex workers*: promote health-seeking behaviour among CSWs, improve and expand access to STD services for CSWs, promote income-generating activities among CSWs

4. *Prevent unprotected sexual activity among the armed and security forces* (Civil Military Alliance): establish baseline data on condom use among the target groups, promote and provide condoms, establish regular voluntary counselling and testing services, provide STD case management services and promote positive sexual behavioural change

5. *Reduce vulnerability of youth to HIV/AIDS/STD*: take advantage of existing youth meeting point in the communities to reach the out-of-school youth, incorporate AIDS/STD education in school curriculum, involve parents in AIDS/STD prevention efforts in schools, promote AIDS/STD education in school extra-curricular activities, strengthen and promote use of school libraries, use peer educators in influencing behaviour change at post-secondary school level

6. *Maintain safe blood transfusion services*: update status of blood transfusion in all health units where BT is performed, develop a national BT service, provision of materials, training

7. *Reduce poverty leading to sexual survival strategies*: initiate income-generating activities for low-income women who earn money from sex, promote the rights of women, provide girls with opportunities to have access to vocational training

8. *Promote acceptance of persons living with HIV/AIDS*: encourage and support counselling and voluntary HIV testing for communities and to improve access to care for PLHAs, government to regulate and create a favourable environment to ensure availability of relevant and effective drugs at affordable cost, to expand and improve HBC services, focusing on districts with high HIV prevalence, to address stigma within the community and health facilities

9. *Reduce unprotected sex among men with multiple sex partners:* promote abstinence, fidelity and condom use

10. *Improve educational opportunities especially for girls*

11. Reduce vulnerability of women in adverse cultural environments

For each priority area, MTP III lists an objective with a percent change of existing practices (e.g. improvement by 30%) until 2002 is indicated in the report, but no baseline data are available for most objectives. Monitoring and Evaluation (M&E) and HIV surveillance have been included within the MTP III, but only limited resources were budgeted for M&E. There will be monitoring of inputs, outputs and physical implementation of activities. Two major evaluation exercises (programme reviews) are planned in 1999 and 2002 at district and national levels are planned. A special workshop was held to work out the research priorities for MTP-III.

APPENDIX 2
Table for Calculating Sample Size

Required sample size, based on estimated STD prevalence desired level of precision, using a 95% confidence interval calculation

Lowest estimated prevalence of STD	*Precision ± 0.5% Sample size*	*Precision ±1. 0% Sample size*	*Precision ± 1.5% Sample size*	*Precision ± 2.0% Sample size*	*Precision ± 2.5% Sample size*	*Precision ± 3.0% Sample size*
1%*	1,522					
2%	3,012	753	335			
3%	4,472	1,118	497	280	179	
4%	5,901	1,476	656	369	237	164
5%	7,299	1,825	811	457	292	203
10%	13,830	3,458	1,537	865	554	385
15%	19,592	4,898	2,177	1,225	784	545
20%	24,586	6,147	2,732	1,537	984	683
30%	32,269	8,068	3,586	2,017	1,291	897