

**FEDERAL MINISTRY OF HEALTH  
DEPARTMENT OF PUBLIC HEALTH  
NATIONAL AIDS/STD CONTROL PROGRAMME**

**NATIONAL HIV/SYPHILIS  
SERO-PREVALANCE SENTINEL  
SURVEILLANCE SURVEY  
PROTOCOL FOR NIGERIA**

**FOR  
WOMEN ATTENDING ANTENATAL CLINIC**



**The National Action Committee On Aids (NACA);  
The Centre For Diseases Control, (CDC); The  
World Health Organisation (WHO), The Department For  
International Development (DFID) And UNAIDS**

**MAY 2001**



**FEDERAL MINISTRY OF HEALTH IN  
COLLABORATION WITH THE NATIONAL  
ACTION COMMITTEE ON AIDS;  
THE CENTER FOR DISEASE CONTROL (CDC);  
THE WORLD HEALTH ORGANIZATION (WHO),  
DFID AND UNAIDS**

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SURVEY PROTOCOL FOR NIGERIA**

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### Introduction

The purpose of HIV/Syphilis sentinel Sero-surveillance is to track HIV infection levels in populations accessed through "watch-post" institutions. These institutions are selected because they provide access to populations that are either of particular interest in the epidemic, or representative of the larger population.

In general, sentinel institutions are already drawing blood for other purposes. Where blood is taken for other purposes, leftover blood can be stripped off all identifying markers and tested for HIV infection without the consent of the individual concerned. This method is particularly applicable for Antenatal clinic attendees, Tuberculosis, Psychiatric, prison inmates and STD patients respectively.

Surveillance systems set up to track the course of the HIV epidemic, test all samples taken in a specified time frame, usually point prevalence is adopted since it takes a minimum of six to eight weeks for all sites to generate enough acceptable and statistically meaningful results.

Active Surveillance system can be used to assess and generate public response to the HIV epidemic. The data can also be used for planning, monitoring of the success of intervention as well as for advocacy.

As at end of 1999, Nigeria had over **2.6 million people** living with HIV. This estimate was made using the 1999 sentinel survey done in 37 states. So far, four (4) active surveillance surveys using sentinel groups have been conducted on National basis in selected states. The first survey was done in 1991 in 9 states; the second survey was done in 1993/94 covering 17 states (64 sentinel sites), the third survey was done covering 21 states (72 sentinel sites) in 1995/96 while the fourth survey was done in two sites per state in 37 states of the Federation in 1999.

The current state of the epidemic in the country required 1-2 years sentinel sero-prevalence surveys in all sites with an expansion of sentinel sites in some of the large cities like Lagos, Kano and Ibadan etc with population more than 10 million. This additional sentinel sites obviously increased the total number of sentinel sites from 72 to 85 sites.

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## Women Attending Antenatal Clinic



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## Women Attending Antenatal Clinic



### Objectives

The general objective of conducting the survey is to provide information that leads to prevention and eventual control of HIV/AIDS.

#### **The specific objectives are:**

1. To monitor the spread of HIV and STIs in the country.
2. To determine the prevalence of HIV infection among women attending Antenatal clinics using specific selected demographic characteristics and geographical location.
3. To monitor trends of HIV infection among women attending Antenatal clinic.
4. To determine the incidence of HIV/Syphilis infection in 15-19 and 20-24 years in three sentinel sites per geo-political zone.
5. To determine the incidence of HIV using special laboratory methodology on the samples generated.
6. To make estimates and projections on HIV in the country.



### Methodology

#### **Sentinel Population**

The sentinel population for the year 2001 survey shall be women attending antenatal clinics in the country. This is because pregnant women still constitutes the most practical group, as they are sexually active, easily defined, accessible and stable population. It also fairly represents the general population.

#### **Sampling sites**

Sentinel site here means a health facility in a state. An average of two sites in each of the states of the federation and the federal capital territory were chosen for the survey: one major city (the state capital) and one outside major city. A city was considered as an outside major city when it was not the state capital but extremely rural in infrastructure. **(Confirm 12 rural sites for monitoring)**

*Sampling sites were selected in the states based on the following criteria:*

- \* Participation in previous surveys
  - \* Availability of staff, facilities and procedure for drawing blood from antenatal clinic attendees on their first visit of the current pregnancy
  - \* Provision of services to a relatively large number of pregnant women per week.
  - \* Availability of qualified personnel and willingness of on-site staffs to cooperate,
  - \* Location of sites in different geographical areas of the country to include a major city and outside major city per state.
- In all, eighty-five sites were selected in the country to cover a population of 119 million people.

#### **Sample Inclusion criteria**

Each woman attending the antenatal clinic for the first time for the current pregnancy during the sampling period shall be enrolled for the study. All revisits during the period shall not be included in the survey.

#### **SAMPLE SIZE, SAMPLING SCHEME AND DURATION OF SAMPLING**

Based on the WHO recommendations which take into consideration an estimate of HIV prevalence in the population to be surveyed, the precision or relative error considered acceptable (0.5%) and the level of confidence (95%) desired, a sample size of 300 in all major cities and outside major cities was deemed adequate enough per selected site.



All sites shall collect a minimum amount of demographic data, e.g. age, education, occupation, duration of stay in the catchment area.

The duration of the sampling period shall be 12 weeks to give enough time for rural sites to generate enough sample size. Sentinel sites where adequate sample sizes cannot be obtained within 12 weeks shall be excluded.

An unlinked anonymous method of testing shall be used - e.g. testing HIV antibodies in aliquot of samples meant for syphilis

Samples will be collected on daily basis from the sentinel group during the specimen collection period of 12 weeks. The supervising nurse or outreach health worker screens the subject and fills in the initial demographic information of the client on data collection form on arrival. The subject is sent to the next officer responsible for blood collection. 5mls of blood will be collected from the subject into a sterile Vacutainer tube from which 200 micro-liter will be dispensed into two spots of CDC blood collection blotting paper. The sample bottle is labeled and transported from the site after screening for syphilis to the State central HIV screening laboratory for HIV test. While the blotted CDC filter paper shall be sent to the central screening laboratory for quality assurances.

Results of syphilis test are thereafter sent back to attending Doctor/Health worker for appropriate follow-up treatment and counseling.

The On-Site laboratory officer will remove initial label on samples and code after separating the sera and then store them in the freezer compartment of the refrigerator

### **The coding system of specimens is based on four variables:**

- \* State,
- \* Sentinel site,
- \* Age and
- \* Serial number.

The appropriate completed data collection form should accompany each specimen to the State central laboratory. For each sample, the following data should be collected: **State, site, institution, educational level, occupation, duration of stay and age**

The code on data collection forms and the one labeled on respective individual specimen bottles should be the same. For example:

E.g. [K][D][K][F][S][F][2][1][0][0][5]



## ASSURANCE OF CONFIDENTIALITY

The unlinked anonymous method of collecting blood samples shall be used in this survey. This means collection of aliquot of 5mls of blood from subject, labeling and transportation to the site laboratory for RPR and TPHA screening. **As a matter of fact, it is a Government policy that all public health facility must screen for syphilis and treat appropriately during antenatal visits of all pregnant women in order to control and prevent congenital syphilis.**

Following the syphilis serology, serum from the leftover sample shall be separated and put in another serum specimen bottle. The bottle is labeled with special code and sent to a distant State central HIV testing Laboratory where it is stored in the deep freezer compartment of a refrigerator for HIV testing.

To ensure maximum confidentiality, HIV testing shall not be done in the same laboratory where separation and coding will be done. That means the person who puts labels on individual specimen and the one who does the screening are different and not linked in any way.

## LABORATORY SCREENING OF SAMPLES

Samples from the sites are collected daily from sites with no adequate storage facilities or weekly where storage facilities are available before transportation to the State laboratory. Serum samples for HIV testing at the State laboratory are stored until ready for laboratory testing.

Qualified laboratory scientists shall do HIV testing in the State Central laboratory. Each sample will be initially screened with RAPID HIV testing kits ( **Cappilus** ). All samples which result "**non reactive**" will be reported as **negative**, while all samples that are reactive in the initial screening test will be further tested using **Genie II** for confirmation and differentiation of antibodies to **HIV-1 and/or HIV-2**.

Samples, which result negative in the first test, shall be reported as **negative** for HIV antibodies. Samples that are reactive in both tests will be considered **positive** for HIV antibodies. Any sample that is reactive in the first test but negative in the second test shall be considered indeterminate and recorded as such.

Dried blot spots will be collected during the supervisory visit for quality control at a central laboratory. **All blood** samples from samples that tested **positive** and **20th** negative sample at the state laboratory will be further tested using the same procedure.

Similar screening procedure will be done for syphilis using **RPR and TPHA** kits.

The data collection form will be used as a guide to decide which sample should be stored for QC purposes.



### **LABORATORY QUALITY ASSURANCE**

The following measures shall be adopted as internal and external controls to ensure that results are accurate, reliable and reproducible.

- \* **Engagement of highly qualified and experienced laboratory personnel at the site and state laboratory**
- \* **Organization of an elaborate training at the central and state levels for all laboratory personnel.**
- \* **All sites/states shall use the same screening and confirmation test kit for syphilis and HIV**
- \* **All test kits to be used shall be thoroughly evaluated and assessed for potency and shelf life before use.**
- \* **The test kits must be ensured to be stored in temperatures of 4-8C (refrigerator or vaccine cold room)**
- \* **All the consumables used for sample separation, storage, dispensing must be sterile and disposal.**
- \* **All samples with doubtful results in either the screening or confirmatory testing shall be retested**
- \* **Three supervisory visits planned by the National survey team to each site shall review and ensure compliance to the survey protocol by all the laboratory workers**
- \* **All positive samples by second Elisa or test for HIV and syphilis shall be retested in al central laboratory**
- \* **Every 10th negative sample for HIV in the screening test and every 20th non- reactive samples with the second test from each state shall be re-tested centrally.**



### TRAINING OF FIELD STAFFS

Cascade of training shall be organized for the following category of field workers:

<b>Designation</b>	<b>Level of Training</b>	<b>Training needs</b>
State AIDS Programme Coordinator 2-4 State Medical Officers One Laboratory Scientist National facilitators/supervisors Donors and Partners Six zonal facilitators (National survey team)	TOT Central training	Details of Survey Protocol State level supervision
Two Site Nurses Two Medical Laboratory technologist Other collaborating site staffs (Nurses and Doctors)	State Training	Detail laboratory procedure and test running of the Kits for syphilis and HIV Survey Protocol

The training at the central level shall involve four key officers from each of the 36 states plus Abuja plus six facilitators, and all donors/stakeholders. This will involve taking participants from three zones at a time running two parallel sessions for laboratory and survey protocol. The duration for the training shall be three nights per three health zone.

Participants trained centrally shall conduct the state level training. Counseling on Syphilis screening shall be incorporated to the training for the results to be beneficiary to the subjects who are positive.

The UNAIDS/WHO AFRO is expected to present updated guidelines on the conduct of ANC survey and supervise fieldwork, ensure quality assurance system during the data management and report writing and critic meeting. While the CDC shall provide technical guidance on laboratory testing at the training, site activities and quality assurance systems.

### TECHNICAL LEADERSHIP AND COORDINATION

A national survey team shall provide technical leadership and coordination with the Federal Ministry of Health as secretariat.

*The team shall be made up of the following technical representatives:*

- \* National Action Committee on AIDS (NACA)
- \* WHO-AFRO
- \* WHO Nigeria
- \* UNAIDS, Geneva
- \* UNAIDS, Nigeria
- \* CDC, Nigeria



- \* DFID
- \* UNICEF
- \* USAID
- \* University College Hospital, Ibadan
- \* College of Medicine, University of Lagos
- \* Six NASCP Zonal Officers
- \* Nigeria Institute of Medical Research (NIMR)
- \* Nigeria Institute of Pharmaceutical research Development (NIPRD) (Virology Unit).
- \* Federal Ministry of Health
- \* Family Health International
- \* UNDP
- \* UNFPA
- \* College of Medicine, University of Port Harcourt.
- \* Bell Gate/Belinda Foundation

The main objective is to conduct the survey technically, transparently and result orientedly as possible in order to increase ownership and improve utilization of the results at the end of the survey. The survey technical management team is scheduled to meet four times during the life span of the survey. The main teams of reference are to approve survey protocol, mobilize resources required for the survey, and coordinate the survey process through regular feedback meeting using problem-solving approach aimed at improving the quality of the results.

### **SUPERVISION OF THE SURVEILLANCE SYSTEM**

#### **1. State AIDS Programme Coordinator**

On-site supervision during specimen collection period is under the responsibility of the on-site survey Co-coordinator. He/She will supervise daily collection of specimen according to the given protocol and guidelines. At this stage, emphasis should be placed on compliance with the recommended method of collecting the desired number of samples (i.e. anonymous unlinked), proper coding and storage of samples, appropriate filling of data collection forms ... etc.

#### **2. Zonal Supervisors and Zonal Facilitators**

These are zonal AIDS officers located in the zonal headquarters with long years of surveillance experience. They shall be involved in providing complimentary supervision of the states within their health zones on weekly basis. Their roles are to identify existing technical problems early enough and provide on the spot solutions, quality assurance on laboratory and methodology and alert the Federal Ministry of Health outside the meeting periods of the central survey team The Zonal facilitators will work in collaboration with the zonal officers as they are senior research experts from the University located within the Health zone appointed to supervise the zonal officers and state activities within the zonal. Minimal resources such as per diem and transport shall be provided.



**3. National Supervisors**

Central technical supervisors have also been identified to visit the field for about three times during the period of the survey. Their main role will be to ensure that all states have conducted their training, commenced the survey simultaneously, provide quality check as guided by the protocol, follow-up existing problems for corrective actions, advocacy for ownership of the data at the state levels, provide feedback to the central Survey team; carry out payment of field workers, resolve crisis, retrieve quality control samples and data collection forms. Randomized site supervision shall be used with spot checklist to monitor the procedure in the field by the National. They are also involved in the data analysis and report writing.

The state laboratory technologists have the responsibility of ensuring the reliability of syphilis and HIV screening results.

**PERSONNEL REQUIREMENTS**

Availability of motivated staff at all levels is very crucial to the success of the HIV sentinel exercise. The SAPC should select sites based on availability of such staff at the site level.

The following table describes the type and number of staff needed at each level of implementation:

**TABLE 3: TYPE OF PERSONNEL REQUIRED PER ACTIVITY**

	<b>DESCRIPTION OF ACTIVITY</b>	<b>TYPE AND NUMBER OF STAFF NEEDED</b>
1.	Blood collection, serum separation and storage	In each site, the Medical officer should identify one reliable lab technician and one nurse to execute such an activity. The role of the nurse is to ensure that the subject selected for the exercise belongs to the right sentinel group.
2.	Transportation of specimens to the laboratory	Each SAPC should have access to appropriate means of transporting collected specimens from selected HIV sentinel sites. The NASCP will provide limited funds for such purposes.
3.	Performing screening tests	At the State laboratory, laboratory staff should be involved in conducting all the tests. If more than 2 staff are involved, the SAPC should divide that allotted sum to those involved in the activity
	Data compilation, analysis, interpretation and feedback	At State level the SAPC will do data compilation and analysis for his/her State. At Federal level, one data manager and two data entry officers will be needed.



5.	On-site supervision	The doctor on-site will supervise methods of collecting specimens, anonymous unlinked, coding and labeling
6	State level Supervision	The NASCP Epidemiology and Surveillance staff and the National/or zonal facilitators have the responsibility of supervising project implementation at the State level.

**EQUIPMENT NEEDS**

It is anticipated that all HIV sentinel sites are equipped to conduct basic laboratory tests. The FMOH in collaboration with the Center for Disease Control (CDC) will provide kits for HIV testing and the necessary consumables. Data management equipment and wide area networking facilities shall also be provided to ensure timely retrieval of data and data management.

**ETHICAL CLEARANCE**

The Survey protocol shall under ethical clearance from the Federal Ministry of Health's Ethical committee only.

**DATA COMPILATION, ANALYSIS, PRESENTATION AND FEEDBACK**

Results of screening and the minimal demographic information of subjects' shall be recorded on the presented data collection form in all sites. The State AIDS Programme Coordinators will collate individual data at the State level.

The Federal Ministry of Health shall check data forms for completeness, obvious errors and inconsistencies.

A data entry team shall be assembled to commence active data entry. A data entry protocol shall be developed to train data entry clerks. The software to be used is EPIINFO 2000 developed by the Centers for Disease Control and Prevention Atlanta. Using this software, appropriate questionnaire screen shall be created in line with questionnaire. A CHECK programme shall be created to ensure that only legal entries and data in specific ranges are entered. All entries on the computer shall be checked against that on paper, item by item.

A frequency table shall be generated for all variables in order to further examine whether there were **double** or any **unusual entries**. Finally a double entry of data shall be planned to validate entered data using the VALIDATE option in EPIINFO menu.

Discrepant records shall then be reviewed and corrected before data analysis shall commence. Data entry shall be planned for two weeks.

The analysis shall focus on determining the prevalence rates of HIV infection and syphilis by the



relevant independent variables such as age, site, state, zone, duration of stay, education and occupation. The Median and the weighted mean prevalence rates for such zone and the entire country are determined. Exact 95% confidence intervals shall be determined for all rates. The difference between zones shall be evaluated and the trend analysis shall be made.

Attempts shall be made to look at incidence of new infections.

The completed report of the 5th phase of the HIV sentinel survey should be ready within 2-4 weeks after completion of data entry and analysis.

National seminar of data producers and users shall be organized to agree on the report. This will be immediately be followed by a press conference by the Hon. Minister of Health.

The report would be widely disseminated to all departments of the Federal Ministry of Health, all Federal Ministries and Parastatals, State Ministries, Teaching Hospitals, Civilian Governors, Traditional Leaders, Mass Media networks, active NGOs in Health, Members of National Action Committee on AIDS, International Donors and Stakeholders, LGA Chairmen and PHC Coordinators at all levels.

National seminars for different audiences shall be organized to disseminate the report. In addition, technical presentations, advocacy report, other media kits covering the results of the HIV sero-surveillance system.

### **AIDS Prevention Initiative in Nigeria Proposal 2001 HIV/Syphilis Sentinel Survey in Nigeria**

The APIN program is strongly committed to the public health perspective of infectious disease prevention and control. Consistent with this doctrine is the critical need for high quality surveillance data that will guide the design and implementation of relevant intervention and prevention programs. Over the past two decades of the HIV/AIDS pandemic, temporal fluctuations in HIV rates have been substantial and geographic heterogeneity frequent. We propose a substantial support to the 2001 Syphilis/HIV Sentinel Survey in three parts - each of which includes infrastructure building, training and operational research.

#### **Part 1: Archiving of Serum specimens from the 2001 Syphilis /HIV Sentinel Survey**

##### **AIMS:**

Collection from each State in the Federation, properly stored serum samples and transport to the central repository site in Ibadan, UCH, Department of Virology. Each state laboratory in the Federation will be provided with a refrigerator/ freezer, freezer boxes, serum tubes, transfer pipettes, and appropriate biosafety consumables.

Development and training of personnel in the computer entry of all specimens and results. APIN will support development of a centralized database, computer hardware and software and



database entry.

Archiving and proper storage of the complete 2001 survey samples at 70degrees. The central repository will be equipped with a 70-degree freezer with alarm system. If necessary an additional electrical generator will be provided. Freezer racks will be provided.

**Rationale:** The proposed survey includes an excellent representation of the ANC subpopulation throughout the country. Archiving of the specimens will allow very complete quality control measures for HIV serology. Archived specimens will allow for other studies to be performed for other infectious agents of interest or biomarkers. As new technologies are developed, these samples can be further examined. The changing viral parameters of HIV epidemics (5, 6) is critical to document in preparation for rationale vaccine design (2).

### **Part 2: Quality Control of HIV serology - Immunoblot confirmation for HIV-1 and HIV-2.**

#### **AIMS:**

Archived samples will allow complete confirmation of rapid test positive samples with HIV-1 and HIV-2 immunoblot.

Confirmatory immunoblotting will occur at UCH, Department of Virology with Professor Olaleye. Boston HSPH investigators will provide training on site to other laboratory investigators from Jos and Lagos to assist in the confirmatory immunoblot analysis.

A select set of rapid test positive and negatives samples will also be tested in Boston with immunoblot analysis, recombinant peptides or radioimmunoprecipitation analysis.

All immunoblot reagents, equipment and disposable supplies will be provided. Estimating approximately 3000 samples (> 10% total samples), which can be readily analyzed in 2 weeks.

**Rationale:** For the purposes of large-scale sentinel surveillance studies, it could be reasonably argued that immunoblot confirmation is not a necessity. However, HIV testing in most other settings would require such confirmation and therefore its practice represents an important training exercise for laboratory personnel. Immunoblot analysis allows for the distinction between HIV-1 and HIV-2, allowing for a nationwide assessment of the two HIV types with gold standard technology.

### **Part III: Molecular Epidemiology of HIV**

#### **AIMS and METHODS:**

At each State laboratory facility, store and freeze the serum clot tubes from all Capillus positive samples, clots from random Capillus negative samples will be supplemented to



result in a total of 50 frozen clot tubes per laboratory. These frozen clots will be transported to the Central repository in Ibadan at the time that serum samples are collected for archiving. DNA will be extracted from each clot, and PCR for beta globin (control) and HIV will be performed.

Training workshops will be held for laboratory investigators from Ibadan, Jos and Lagos, and other states as space allows. Boston HSPH and Senegal University Cheikh Anta Diop virologists will provide training in nucleic acid extraction, PCR and cloning techniques. HIV PCR results for HIV-1 and HIV-2 will be completed in Ibadan and cloning of PCR products for sequencing will also be performed.

All Nigerian investigators will travel to Boston for training in HIV sequencing techniques and analysis of sequence data to complete the analysis on the samples. Complete training in HIV diagnostic virology methods will be provided over the course of the survey.

APIN will provide all reagents, supplies, consumables and equipment to perform extractions, control and HIV PCR and cloning. Support for the travel of all trainers from Boston and Senegal will be provided --- and travel for Nigerians to come to Boston for HIV sequencing will also be supported.

**Rationale:** It is already recognized that there exists considerable heterogeneity in HIV types, subtypes and strains in West Africa (1, 3, 4). We hope to generate a complete cartography of the HIV types, subtypes and strains present in each state in Nigeria, to our knowledge, such a study has never been performed in any country worldwide. This data will also be extremely informative for understanding the dynamics of the current and potential HIV/AIDS epidemic since differences in the biological characteristics of viral variants have been described. This study will also allow the training of Nigerian laboratory personnel in molecular virologic diagnosis and the development of facilities and infrastructure in Nigeria for the continuity of such work.



**ANNEX BUDGET SUMMARY**

S/NO	Budget Line	Worksheet	Total Budget	Funding Agent	Remarks
1	Printing of Surveillance Training Documents			DFID	
2	Consumables including testing kits	1	500,000.00	CDC	
3	Reagents Requirement	2	6,260,000.00	CDC	
4	Cost of TOT Training at Ilorin	3	1,900,000.00	WHO	
5	Stationeries	4	4,916,032.00	WHO	
6	Budget for Data QC Samples	5	95,000.00	CDC	
7	Allowances for Field Workers	6	503,760.00	DFID	
8	Data Analysis/Report Writing	7	4,070,000.00	UNAIDS/ CDC/FMOH	
9	Allowances for Central HIV Screening	8	2,000,000.00		
10	Supervisory Visits	9	630,000.00	DFID	
11	Zonal Facilitators	10	2,900,000.00	DFID	
12	State level Coordination	11	2,148,000.00	DFID	
13	Central Management meetings	12	812,000.00	UNAIDS	
14	Report Dissemination Workshop		2,000,000.00	FMOH	
15	Archiving of Serum samples		2,500,000.00	UNAIDS	
16	Quality Control in HIV typing		9,300,000.00	Bill/Melinda /Gate	
17	Molecular Virology and Extractions		8,900,000.00	BMG	
	<b>Grand Cost</b>		25,000,000.00	BMG	
			75,097,920.00	BMG	

## Women Attending Antenatal Clinic



DESCRIPTION	DESIGNATION
State	<ul style="list-style-type: none"> <li>* Medical Officer in charge of Antenatal clinic</li> <li>* Nurse in charge of ANC clinic Laboratory Scientist</li> <li>* Laboratory technologist</li> <li>* State AIDS/STD control programme coordinator</li> </ul>
Zones	<ul style="list-style-type: none"> <li>* Six Zonal AIDS programme coordinator</li> <li>* Six Zonal facilitators</li> </ul>
Resource Persons Consultants <b>Central HIV Laboratory</b>	<ul style="list-style-type: none"> <li>* Six Resource persons</li> <li>* Two Consultants</li> <li>* One Virologist/Technologist/Lab. Assistants</li> </ul>

### WORKSHEET 1: CONSUMABLES

#### Worksheet 1: Consumables

S/no	Description				
1	Microvials/serum	50,000	30.00	50,000.00	1,500,000.00
2	Cold Box	50,000	2,000.00	30.00	60,000.00
3	Vacutainer and	50,000	30.00	50,000.00	1,500,000.00
4	Accessories		500.00	100.00	50,000.00
			100.00	100.00	10,000.00
5	indelible markers				50,000.00
6	Absorbent paper	100/pack	500.00	100.00	
7	Gloves		300.00	100.00	30,000.00
8	sodium Hypo chlorite		300.00	100.00	30,000.00
9	Soap Filter Paper				250,000.00
10	methylated spirit		300.00	100.00	30,000.00
11	Roll of cotton wool		500.00	100.00	50,000.00
12	Ice park Container		500.00	90.00	45,000.00
13	Notebook		300.00	100.00	30,000.00
14	biro		20.00	100.00	2,000.00
15	Pencil		15.00	100.00	1,500.00
16	Pencil eraser		10.00	100.00	1,000.00
17	Correction fluid		200.00	100.00	20,000.00
18					0.00
19					0.00
	Sub Total				3,659,500.00

**Women Attending Antenatal Clinic**



\* CDC to supply from USA.

\*\*WORKSHEET 2: REAGENTS REQUIREMENT

**Worksheet 2**

**Reagents Requirement**

**Test Kits**

S/no	Name of Reagent	No of Test	Unit Price(=N=)	Total (=N=)
1	RPR	100	3,000.00	**300,000.00
2	TPHA	100	15,000.00	**1,500,000.00
3	Pipett tips	100bags x 100pieces		**100,000.00
	1st Elisa	120	3000	**360,000
	2nd Elisa	50	8,000.00	**4,000,000
	Sub Total			**6,260,000.00

\* CDC to supply from USA.

\*\*WORKSHEET 2: REAGENTS REQUIREMENT

Description	Cost
Printing of Surveillance Documents	N500,000.00

**WORKSHEET 4 : Central Management Committee Meetings**

Description	Cost
Six Central Management Committee meeting at	N2,000,000.00

## Women Attending Antenatal Clinic



### Worksheet 3:

### Cost of TOT Training at Kwara Hotel Ilorin

S/no	Description	Cost (=N=)		
	Servicing of project vehicle	20,000.00		
	Fuelling of vehicle (Abuja - Ilorin -Abuja)	10,000.00		
	DSA for 2nights for 3 support staff at N5000/ night(5000 x 2 x3)	30,000.00		
	Facilitators at the training			
	Abuja- Ilorin -Abuja at N3/km x 156km x2 x3	5,616.00		
	Lagos -Abuja -Lagos by Air at N7,500 x 3 Person(N7500 x2 x3 )	45,000.00		
	DSA for 2 nights for 6 Facilitator			
	LAGOS Lagos- Abuja-Lagos (N6700 x 4 x3 x 2	120,000.00		
	Abuja- Ilorin-Abuja (500km x N3/km x2 x3)	160,800.00		
	OYO State (Ibadan-Ilorin-Ibadan) 498km xN3/km x 4 x 3 x 2	8,964.00		
	OGUN STATE (Abeokuta - Ilorin- Abeokuta) 236kmx2xN3/km x3	4,248.00		
	ONDO STATE Akure- Ilorin-Akure (191km x2 xN3/km x3)	3,438.00		

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EDO STATE(Benin- Ilorin- Benin) 362km x2 x 3 x N3/km)	6,516.00		
DELTA STATE Asaba -Ilorin - Asaba (507km x2 N3/km x 3)	9,126.00		
BENUE STATE Markudi- Ilorin- Markudi(651km x N3/km x3 x3	11,718.00		
CROSS STATE Calabar- Ilorin _Calabar (755km x N3 x2 x3)	13,590.00		
Akwa ibom state Uyo- Ilorin - Uyo (705km x2 N3 x 3)	12,690.00		
Ekiti state Ado-Ekiti- Ilorin - Ado-Ekiti(291km x 2 x N3/km x 3)	5,238.00		
OSUN STATE (Osogbo - Ilorin -Osogbo) 115km x N3/km x 3 x 2	2,070.00		
SOKOTO STATE Sokoto - Ilorin- Sokoto (732km x 3 x N3 x 2)	13,176.00		
Kebbi state Brinin-kebbi- Ilorin -Brinin-kebbi (520km x N3 x 2 x3)	9,360.00		
Zamfara state Gausu-Ilorin - Gausu (690km x N3/km x 2 x3)	12,420.00		
Katsina state Katsina- Ilorin - Katsina (893km xN3 x 2 x3)	16,074.00		

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Kaduna state Kaduna -Ilorin -Kaduna (600km N3 x 2 x3)	14,400.00		
Niger state Minna - Ilorin - Minna (437km x 2 xN3 x 3)	7,866.00		
Kwara state Local run day x2 x3	3,000.00		
Kogi state Lokoja- Ilorin - Lokoja (310km x N3x 2 x3)	5,580.00		
Kano state Kano- Ilorin- kano (850km x 2 x3 x N3 /km)	15,300.00		
Jigawa state Dutse- Ilorin- Dutse (1292km x N3 x 2 x3)	23,256.00		
Yobe state Damaturu- Ilorin - Damaturu (846km x N3 x 2 x 3)	15,288.00		
Borno State Maiduguri- Ilorin- Maiduguri (1377km x N3 x 2 x3)	24,786.00		
Gombe state Gombe- Ilorin- Gombe (960km x N3 x 2 x3)	17,280.00		
Adamawa state Yola-Ilorin- Yola (1236km x N3 x 2 x 3)	22,248.00		
Taraba state Jalingo- Ilorin- Jalingo (1264km x N3 x 2 x3)	22,752.00		
Bauchi state Bauchi - Ilorin- Bauchi (913km x N3 x 2 x3)	16,434.00		
Plateau state Jos- Ilorin -Jos (718km x N3 x 2 x3)	14,054.00		

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Rivers state PH-Ilorin- PH(732km x N3 x 2 x 3)	13,176.00		
Bayelsa state Yenegoa- Ilorin - Yenegoa (832km x N3 x 2x3)	14,976.00		
Ebonyi state Abakiliki-Ilorin - Ilorin (548km x 2 xN3 x3)	9,864.00		
Nassarawa state Lafia- Ilorin - Lafia (840km x 2 x N3 x3)	15,120.00		
Abia state Umuahia - Ilorin - Umuahia (624kmx2 x N3 x 3)	11,232.00		
Imo state Owerri - Ilorin- Owerri (604km x 2 xN3 x3)	10,872.00		
Anambra state Awka- Ilorin- Awka (528km x 2 N3 x 3)	9,504.00		
DSA for 130 Participants at N5,000 x 6 nights	3,900,000.00		
DSA for Resoure person N5,000 x 6 nights x 5	150,000.00		
Honourarium for 10 Facilitators at N200/day x 5day x 10person	50,000.00		
<b>Sub-total</b>	<b>4,916,032.00</b>		



**Worksheet 6: STATIONARIES for Training**

<b>STATIONARIES</b>				
	<b>Description</b>	<b>Units cost</b>	<b>Quantity</b>	<b>Total cost</b>
1.	Photocopy paper(reams)	1,000.00	20.00	20,000.00
2.	Typing paper	500.00	10.00	5,000.00
3.	Computer Toner	15,000.00	2	30,000.00
4.	Computer diskettes	1,000.00	10	10,000.00
5.	Conference files	300	150	30,000.00
	<b>Sub-Total</b>			<b>95,000.00</b>

**WORKSHEET 7: BUDGET FOR DATA QC SAMPLES RETRIEVAL**

At the end of the samples period, various SAPCs will deliver to the NASCP office in Abuja.

1. All completed data collection forms
2. All samples earmarked for quality control

The advantages of this process unlike in the past where NASCP staff went out to the fields to retrieve them include:

1. Shortening of data collation period
2. Ensuring the maintenance of the cold chain facility for QC samples
3. Increasing the level of responsibility and hence motivation of SAPCs in the sentinel surveillance

**Worksheet 5 TRANSPORTATION FOR QUALITY CONTROL (QC) SAMPLES**

The NASCP of the FMOH is to provide the necessary funds for SAPCs to retrieve and return data forms and all samples for QC to Abuja by road.

S/no	State	Distance/km	Price (n5/km)	No Of Trips	Amount (n)
1	Lagos	879	5.00	2.00	8,790.00
2	Ogun	700	5.00	2.00	7,000.00
3	Oyo	659	5.00	2.00	6,590.00
4	Osun	428	5.00	2.00	4,280.00
5	Ondo	404	5.00	2.00	4,040.00
6	Ekiti	404	5.00	2.00	4,040.00
7	Edo	450	5.00	2.00	4,500.00
8	Delta	440	5.00	2.00	4,400.00
9	Anambra	445	5.00	2.00	4,450.00
10	Enugu	595	5.00	2.00	5,950.00
11	Ebonyi	595	5.00	2.00	5,950.00
12	Benue	323	5.00	2.00	3,230.00
13	Abia	733	5.00	2.00	7,330.00
14	Imo	733	5.00	2.00	7,330.00
15	Rivers	830	5.00	2.00	8,300.00

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16	Cross River	857	5.00	2.00	8,570.00
17	Akwa Ibom	828	5.00	2.00	8,280.00
18	Bayelsa	832	5.00	2.00	8,320.00
19	Kwara	500	5.00	2.00	2,000.00
20	Niger	117	5.00	2.00	4,370.00
21	Kogi	138	5.00	2.00	3,100.00
22	Zamfara	793	5.00	2.00	6,900.00
23	Kebbi	793	5.00	2.00	5,200.00
24	Sokoto	793	5.00	2.00	7,320.00
25	Katsina	533	5.00	2.00	8,930.00
26	Jigawa	442	5.00	2.00	12,920.00
27	Yobe	908	5.00	2.00	8,460.00
28	Borno	908	5.00	2.00	13,770.00
29	Kaduna	180	5.00	2.00	6,000.00
30	Nassarawa	313	5.00	2.00	8,400.00
31	Plateau	313	5.00	2.00	7,810.00
32	Bauchi	445	5.00	2.00	9,130.00
33	Gombe	445	5.00	2.00	9,600.00
34	Taraba	855	5.00	2.00	12,640.00
35	Adamawa	855	5.00	2.00	12,360.00
36	Kano	442	5.00	2.00	8,500.00
	DSA for SAPC at				245,000.00
37	N5000/night x 3737		5,000.00		245,000.0
	<b>SUB-TOTAL</b>				<b>503,760.00</b>

### WORKSHEET 8: ALLOWANCES FOR FIELD WORKERS AT SITE LEVEL

In each state, the following incentives shall be provided.

#### WORKSHEET 8: Allowances for the field workers at site level

S/no	Description	Amount
1	State AIDS programme coordinator	20,000.00
2	State Laboratory Technologist	15,000.00
3	Two- Lab. Assistance at state level	15,000.00
4	Two- site Medical Officer	30,000.00
5	Two-site Nurses	20,000.00
6	Local run/state	10,000.00
	Total per state	110,000.00
	<b>Total/36state&amp; FCT (N110, 000.00 x 37)</b>	<b>4,070,000.00</b>

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### WORKSHEET 8: Data Analysis

S/no	Description	Amount
1	Data entry of samples size and analysis of 50,000 DATA	500,000.00
2	Hire of consultants Epidemiologists/Biostatistics for 16 weeks	200,000.00
3	Data Analysis/Report writing	300,000.00
4	Printing of report	1,000,000.00
	<b>Total</b>	<b>2,000,000.00</b>

### WORKSHEET 10. Central Screening/ Cost of Laboratory Personnel

#### ALLOWANCE FOR CENTRAL HIV SCREENING

Consultant Virologist for 16weeks	200,000.00
Lab. Scientist	50,000.00
Lab. Assistants N10,000 X 3	30,000.00
Consumables (which buffer test tube @ N10.00/test Follow-up visit of FOMH to quality assurance site	200,000.00 150,000.00
<b>SUB-TOTAL</b>	<b>630,000.00</b>

### Worksheet 11 : BUDGET FOR SUPERVISORY VISIT

For the purpose of supervisory, all the states and FCT shall be grouped into six clusters. Supervision will take place in the six clusters concurrently by consultants from research institution.

An average of N10, 000.00 for officer per day and N3, 000.00 for driver per day shall be provided. On working day shall be spent in each state.

#### See Annex check list:

##### CLUSTER 1

Lagos, Ogun, Osun, Ondo, and Ekiti state

**Duration:** Four working days + 2 travel day = 5 days (7nights)

**DSA:** Officer: N10, 000.00 x 7nights = 70,000.00

Diver: N1000.00 x 7 = 7,000.00

**FUEL:** N22/liter x 60x 7 days = 13,440.00

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### CLUSTER 6:

FCT, NASSARAWA, PLATEAU, BAUCHI, GOMBE, ADAMAWA, AND TARABA STATE

**Duration:** Six working days + 4 travel days + 2 day of weekend (12 nights)

DSA:	Officer: N10, 000.00 x 12	=	120,000.00
	Driver: N1, 000.00 x 1	=	12,000.00
	Fuel: N35 x 60liters x 12 days	=	25,200.00
	CONTINGENCY	=	10,000.00
<b>TOTAL.</b>	.....	=	<b>166, 200.00</b>

### TOTAL for supervisory visit:

Number of supervisory	=	3
Total cost / visit	=	N750,060
Grand Total	=	2,250,000.00
Courier of filter paper to Ibadan	=	N400, 000.00

<b>GROUND TOTAL:</b>	<b>N2,900,000.00</b>
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### Worksheet 12: ZONAL FACILITATORS Supervision and participation at the three Central Management Committee Meeting

S/n	Name	Zone	Per Diem N	Trasport N	Driver N	Total N
1	Dr.G.O.Okafor	A	10,000x 6x4	15,000x4 =	1000 x7days x 4	328,000.00
2		South East	=240,000.00	60,000.00	=28,000.00	
3	Dr R. Lawal	B	10,000 x7 x	20,000x4	1,000x7daysx4	388,000.00
4		South West	4= 280,000.	=80,000.00	= 28,000.00	
5	Dr. Sabitu	C	10,000x6x4	25,000x4=	1000x7daysx4	368,000.00
6		North West	=240,000.00	100,000.00	=28,000.00	
	Prof T. Harry	D	10,000x6x4	25,000x4=	1000x7daysx4	368,000.00
		North East	=240,000.00	100,000.00	=28,000.00	
	Dr M.F Gboun	E	10,000x6x4	25,000x4=	1000x7daysx4	368,000.00
		North Central	=240,000.00	100,000.00	=28,000.00	
	Dr O.O Ebong	F	10,000x 6x4	15,000x4 =	1000 x7days x 4	328,000.00
		South- South	=240,000.00	60,000.00	=28,000.00	
<b>TOTAL</b>						<b>2,148,000</b>

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### Worksheet 12: SITE SUPERVISION BY ZONAL AIDS COORDINATOR AND STATE AIDS COORDINATOR.

STATUS	COST OF SUPERVISION	NO.OF TIMES	TOTAL COST
1. Six Zonal AIDS coordinators	N2000/state x 6state =12,000.00	6	72,000.00
2. State AIDS/STD programme coordinator	20,000.00 x 37 STATES	14	740,000.00

**TOTAL**

**812,000.00**

### Worksheet 13: REPORT DISEMINATION WORKSHOPS

Workshops	Estimated Cost
Three Report Dissemination Workshops	N2, 500,000.00

### Worksheet 14: WORKPLAN FOR 2000 SENTINEL SERO-PREVALENCE

S/N	ACTIVITY	RESPONSIBLE INSTITUTION	SCHEDULED TIME	FUNDING AGENCY
1	Prepare draft protocol	NASCP	January, 2001	FMOH
2	Prepare detailed technical training Module/Protocol	NASCP/Consultant NASCP/DFID/WHO/ UNAIDS/CDC	February, 2001	FMOH
3	Conduct training of Field workers	NASCP/SMOH	June/July	WHO
5	Conduct state level training for field staff	NASCP	July	WHO
6	Procurement and consumables/ reagents	NASCP/SMOH/	June	CDC
7	Conduct field work	NASCP/DFID/	July	DFID
8	Organise 1st supervisory visits to all states	CONSULTANT	July	FMOH
9	Central Management Committee	NASCP/FMOH	July	DFID

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10	Second Sentinel Supervisory visit/ Retrieval for sample	Final retrieval date	July/August	DFID
11.	Central Management committee		August	FMOH
12	Third supervisory visit/sentinel retrieval		August	DFID
13.	Data Qty/analysis		September	UNAIDS/CDC
14.	Report writing/ printing		September	UNAIDS
15.	Press Briefing		September	FMOH

## ANNEX 1 DATA COLLECTION FORM

STATE \_\_\_\_\_ SITE: \_\_\_\_\_

INSTITUTION \_\_\_\_\_

### GENERAL INFORMATION

AGE: \_\_\_\_\_ EDUCATIONAL LEVEL \_\_\_\_\_

SEX: \_\_\_\_\_ OCCUPATION \_\_\_\_\_

Duration of stay in the catchment Area \_\_\_\_\_

S/No	Code	Serial Number	Age	Sex %	RPR	TPHA%	1st EIA%	2nd EIA%	Remarks
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									



Annex 2 PARTICIPATING STATES and LIST OF HIV SENTINEL SITES AND CODES

NO	STATE	SENTINEL SITES
1	Osun [OS]	2
2	Edo [ED]	2
3	Delta [DT]	2
4	Anambra [AN]	2
5	Eungu [EN]	2
6	Sokoto [SO]	2
7	Kawra [KW]	2
8	Adamawa [AD]	2
9	Lagos [LA]	4
10	Akwa Ibom [AK]	2
11	Cross- River [CR]	2
12	Oyo [OY]	4
13	Niger [NG]	2
14	Katsina [KT]	2
15	Borno [BO]	3
16	Kaduna [KD]	3
17	Ebonyi [EB]	2
18	Ondo [OD]	2
19	Kebbi [KB]	2
20	Zamfara [ZA]	2
21	Taraba [TR]	2
22	Bayelsa [BY]	2
23	Pleateau [PL]	2
24	Jigawa [JG]	2
25	Yobe [YB]	2
26	Kogi [KG]	2
27	Bauchi [BA]	2
28	Rivers [RV]	3
29	Kano [KN]	4
30	Ogun [OG]	2
31	FCT [FC]	2
32	Imo [IM]	2
33	Ekiti [EK]	2
34	Abia [AB]	2
35	Gombe [GM]	2
36	Nassarawa [NS]	2
37	Benue [BN]	3
	<b>Total</b>	<b>85</b>

**WONDER TECHNOLOGIES**