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1993/94 SENTINEL SERO-PREVALENCE SURVEILLANCE REPORT

NATIONAL AIDS/HIV/STD CONTROL PROGRAMME
FEDERAL MINISTRY OF HEALTH
AND SOCIAL SERVICES

1995

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Finally, the survey could not have been completed but for the dedication and enthusiasm of Dr. David Olajire Durojaiye, during which course he unfortunately lost his life. May his soul rest in perfect peace.

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EXECUTIVE SUMMARY

The 1993/94 Sentinel Sero-prevalence Surveillance (SSS) was carried out in 17 States incorporating a total of 64 sentinel sites with an estimated samples size of 44,800. The sentinel groups of interest were the Commercial Sex Workers, STD patients, Tuberculosis patients and the antenatal clinics attenders. the criteria for selection of sentinel groups, sites and states followed the recommended requirements in the adapted WHO Sero-surveillance protocol.

The staff and field workers were formally trained to ensure a uniform and standardized procedure and methodology for all the sites. The methodology used was the unlinked anonymous method except for the commercial sex workers where consent was linked to provision of some other health care services. The collected data from all the sentinel states were entered into the computer using EPI-info (version 6) statistical software. Prevalence rates (at 95% confidence intervals) were determined for each of the participating states and groups. It was not possible to determine the age-sex specific prevalence for all the sites except in Enugu State as a result of the loss of the raw data in the computers where they were intially housed.

The prevalence rates in % as determined on the4 survey data according to the sentinel groups were in the order of CSW>STD>TB>LDTD>ANC. The national prevalence was 3.8% using the overall antenatal results from all the states.

The 1990/91, 1991/92 and 1993/94 antenatal results were compared; also, a comparison of the results of all the sentinel groups of 1991/92 and 1993/94 sentinel surveillance showed a significant difference using computed z score with p-value of 0.5.

There is also no doubt that the transmission of HIV in Nigeria is mostly of a heterosexual nature. The vulnerable groups are the youths and women. Efforts therefore, at intervention should concentrate mostly on preventing transmission among the youth particularly the girl child, the early recognition and management of sexually transmitted diseases as well as breaking the cycle of transmission among the commercial sex workers. The demonstrated rising HIV prevalence amongst patients with TB has obvious implications for the management of Nigerians with TB and vice versa particularly with reference to the administration of Thiacetazone, there is clearly a need to fill the research gap in this field.

Even though the unstable socio-economic and political climate of 1993/94 and the tragic loss of the sole member of the Epidemiology Component militated against the timely completion of the site operations, the data analysis and the final release of results; it is hoped that this report will be a very useful tool for several appropriate interventions and preventive measures.

1.0 INTRODUCTION

The AIDS/HIV epidemic was first described in Nigeria in 1986 when some workers identified the HIV virus in some commercial sex workers in Lagos and Enugu. Since then, there has been an alarming increase in the number of AIDS cases over the years. Though, the number of AIDS cases is universally accepted as being only the tip of the iceberg of the spectrum of the HIV Epidemic, cynics might dismiss the increase as artificial rather than real.

For any disease control programme to achieve any acceptable result, geographical, spatial and population distribution of the disease must be taken into consideration. In a young growing HIV epidemic such as ours, the organisation of periodic sentinel seroprevalence Surveillance using specific interest groups and geopgrahical distribution will in no doubt provide useful information for both the cynics as well as the AIDS stake holders and interest groups in AIDS control intervention activities. The design of this survey took into consideraiton the survey population, sample size and methodology as much as possible bearing in mind contemporary global indications and standards.

When the Medium Term Plan (MTP-I) was designed, most of the sero-prevalence data that constituted the input, came from established screening centres who were basically emphasising on provision of safe blood for patients. The vast majority of the study Population were blood donors. The MTPI strategies were consequently concentrated mainly on the control of HIV trans-mission through blood, whereas, the realities of the significance of the sexual mode of HIV transmission was highlighted in the 1990 serosurvey which has been corroborated by the results of the 1991/92 survey. The 1990 sero-survey took place in 4 states of the Federation whilst the 1991/92 sentinel surveillance covered nine (9) states. The 1993/94 sentinel surveillance involved 17 states incorporating a total of 64 sentinel sites with an estimated sample size of 44,800.

2.0 METHODOLOGY

The initial activities carried out before the commencement of the 1993/94 sentinel sero-surveillance involved:

(a) A training course in HIV/AIDS Applied Epidemiology and Surveillance for all the State AIDS Programme Coordinators and functionaries of the NASCP as well as Epidemiology division of the FMOH and Social services. This course was jointly designed and organised by the FMOH and Social Services, USAID, (CCCD) Centres for Disease Control (CDC) and WHO. It was fashioned after the WHO/CDC/Emory University HIV/AIDS Applied Epidemiology Course. It's major objective was to heighten the awareness and skills of the trainees on HIV/AIDS epidemiology methodology and uses. At the end of the course, a protocol adapted from the WHO sentinel surveillance protocol was designed by the participants for the 1993/94 exercise. The designed protocol addressed the criteria for choosing the participating states, Local Government Areas and survey sites, the identification and training of survey site, personnel, sample size and sampling methods in each state was in accordance with the perceived level of risk. It also dealt with issues concerning screening algorithmic analysis and reporting of the results.

(b) Using the designed protocol, the sentinel sites and site staff were identified and trained by the SAPC, with active technical support provided by National resource persons. The training programme contained the selection and enrolment of survey population; the methodology for classifying the subject and sample collection (by using vacutainers), sample coding, preservation, transportation and final screening of samples collected from the sites. It also involved the identification of quality assurance control samples and filling of the sentinel form.
This training of site personnel started at different times in each sentinel state as it depended on the preparedness of each state.

2.1 SAMPLE COLLECTION

Each survey site was expected according to the designed protocol, to collect samples by anonymous unlinked methods in all the sentinel groups except amongst the commercial sex workers where some sort of informed consent was obtained linked to some other Health Care delivery activity.

(i) Commercial Sex Workers (100 subjects).

(ii) Sexually Transmitted Disease Clinic attenders (100 subjects).

(iii) Tuberculosis patients (100 subjects)

3.0 RESULTS

It was noticed from most of the results sent in from the sentinel states that the use of 2nd Elisa was almost as good as using 1st Elisa alone, except in some very few sentinel sites that showed little disparity. The results from one of the states which arrived much later than permissible, were muddled and disjointed giving an unrealistic projection on analysis. This would have adversely affected the final report and therefore had to be excluded from the final analysis.

Most of the sites were still not familiar with the use of MTHPA. Therefore the findings on syphilis as reported here would need further corroboration at a later date except in very few states.

Only Anambra out of the two states who had proposed it, could screen the Long Distance Truck Drivers while Cross River State could also not screen the long distance women traders.

3.1 SERO PREVALENCE OF HIV AMONG SENTINEL GROUPS IN THE STATES

Table 1. shows the results ofr all sentinel groups from the 16 sentinel states. The HIV percent positivity range by site for CSWs was **0 - 57.9%** with an overall prevalence of **22.5% (20.7 - 24.3)**. The states with the highest rates as shown on Graph 5 were Benue **46.3%** (range **39.2 - 54.0**), followed by Enugu **40.3% (31.6 - 50.0)** and Osun **39.3% (29.1 - 50.3)**. Patients with STDs were screened in 28 sites in 14 states. The highest prevalence was found in Plateau at **20.6% (16.0 - 25.8)**. The site positivity range was between **0 -33.3%** per site. Jos has the highest prevalence by site at **33.3% (24.1 - 44)**. Graph 6. the overall HIV prevalence among STD patients is **8.9% (7.9 - 10.10)**.

Among the TB patients screened in 24 sites in 14 states, the positivity range was between **0 - 25%**. The highest prevalence was in Achi in Enugu State and in Jos, Plateau State. The highest prevalence by state was in Borno State and Lagos State each at **20%** (Graph 7). The overall prevalence rate of TB patients in the country is **7.8% (6.7 - 9.0)**.

ANC patients were screened in 43 centres in 16 states. The positivity range in the sites was between **0% - 13.2%**. Barkin-Ladi in Plateau State had a prevalence of **13.2% (10.1 - 17.0%)**. Overall prevalence by state was highest in Plateau State with **8.2% (6.7 - 8.9%)**. Graph 8.

3.2 PREVALENCE OF HIV INFECTION IN STATES, AN OVERVIEW

The pattern in the states was similar in all those 12 states that sent in data comprising all the stipulated sentinel groups. Those that sent in data for less than 3 sentinel groups were not included in the graphical presentation. The prevalence was in this decreasing order **CSW > STD > LDTD > TB > ANC**. The age-

specific prevalence rate which was only calculated for Enugu State (Graph 11) showed an age range between 15 and 50 years. Age 15 - 19 showed a female preponderance in the positivity rate, which was only caught on by males in the 20 - 29 age group. The subsequent age groups showed a significantly high female infection rate. The grpahical presenttions for each state are as shown on Graphs 9 - 29. Long distance truck drivers were screened in only one site and the test results showed a prevalence of 4% for HIV.

3.3 OVERALL HIV PREVALENCE IN NIGERIA

The HIV prevalence among antenatal Clinic attenders was as usual used to represent that of the whole community. The national seroprevalence rate was therefore put at 3.8% of the sexually active age group. The age specific analysis of Enugu State points also to the fact that females acquire the infection at a much earlier age 15 - 19 years as compared to males who start about 5 - 10 years later (Graph 11).

3.4 PREVALENCE OF SYPHILIS INFECTION IN NIGERIA

Out of the 15 states screened for syphilis along side HIV, the overal lprevalence rate was **3.8%.** Adamawa had the highest prevalence of **21% (15.4 - 27.4)** as shown on Graph 22. Among the sentinel groups, syphilis was most prevalent among CSWs. The prevalence rate among this population was noticed in Adamawa State at **29.9% (15.4 - 27.4)** as shown on Graph 22.

The prevalence rate among STD patients with syphilis from the sites ranged betwen **1.4% - 46.5%.** Plateau State had the highest rte at **22% (19.7 - 32.0).**

The prevalence of syphilis among TB patients was highest in Plateau State **19.1% (10.4 - 20.3).**

Among antenatal patients, the prevalence rate ranged between 0.5 - 24.8%. The overall ANC prevalence rate was **3.8% (12.2 - 19.5).** For the long distance truck drivers screened, syphilis infection was **2% (0.2 - 7.0).**

3.5 COMPARISON OF 1991/92 SENTINEL SURVEILLANCE WITH THE 1993/94 RESULTS

Statistical comparison of the 1991/92 and 1993/94 sentinel surveillance results showed a significant increase in all the states except in Benue and Oyo States using chique square test with P value < 0.001.

4.0 CONSTRAINTS

General constraints that affected every facet of the survey was the socio-political crisis of the year. However, specific constriants were:

1. All states did not start at the same time due to logistic and advocacy problems involved in the training of personnels at the site. This delayed the onset of surveillance in most states and ultimately prolonged the sentinel surveillance period from 8 weeks to 20 weeks.

2. Most states did not collect the desired sample size from the sentinel groups. Infact some states had only 2 sentinel sites instead of 4.

3. It is quite obvious that the site personnels were undertrained as they didn't adhere strictly to the prescriptions on the designed protocol, with respect to coding systems, labelling and meeting up the survey period, etc.

4. Loss of some personnels in the programme affected the collation, analysis and timely release of results.

5. Reagents and other consumables were not collected on time by some states. In others it was under estimated.

6. Some states did not identify with the objectives of the sentinel sero prevalence surveillance as they saw it only as a National Exercise and therefore did not provide supportive logistics.

7. The Quality assurance control results were not reliable and therefore disçarded due to a lot of inconsistencies.

8. There was inadequate funding to promote supervision and monitoring during the course of the survey.

9. There was delayed release of funds due to bureaucratic red-tapism from the ministry.

These efforts must be preferentially targetted at the hard-to-reach youths and women of child-bearing age.

Intervention programmes must focus on skill development for behavioural change as opposed to the general information giving. This is therefore inclusive of activities that will mitigate the need for frequent multiple sexual partners.

The rising seroprevalence also indicates the rising pool of People with HIV and AIDS and this must therefore be matched with activities that will cater for the needs of the affected at affordable costs to the affected and the nation.

There is an increasing need to research into the cost-benefit of INH PROPHYLAXIS FOR PHIV as well as the cautious administration of thiocetazone for TB pts.

So many other questions about the routine management of STD patients, TB patients and also ateratal care vis a vis the rising HIV epidemic, have been appropriately addressed in the Draft HIV/AIDS and STD Policy for Nigeria.

The involvement of all the identified sentinel groups would need to be reviewed and scaled down to only ANC annually in the face of the rising cost of things.

Table I

THIRD ROUND (1993/94) NATIONAL HIV/T. PALLIDUM SENTINEL SURVEILLANCE RESULTS.

STATE		ANC					CSW					STD					TB					LEPR				
		NO tested	Pos. for HIV	% Pos for HIV	Pos for syphilis	% Pos. for syphilis	No tested	Pos. for HIV	% Pos for HIV	Pos. for syphilis	% Pos. for syphilis	No tested	Pos. for HIV	% Pos for HIV	Pos. for syphilis	% Pos for syphilis	No tested	Pos. for HIV	% Pos for HIV	Pos. for syphilis	% Pos for syphilis	No tested	Pos. for HIV	% Pos for HIV	Pos for syphilis	% Pos for syphilis
ANWA	Kola	398	5	1.3%	62	15.6%	99	28	28.3%	29	29.3%	101	5	5.0%	19	18.8%										
	Mubi						93	12	13.0%	28	30.4%	100	8	8.0%	21	21.0%										
	Sub. 1	398	5	1.3%	62	15.6%	191	40	20.7%	57	29.9%	201	13	1.5%	40	19.9%										
BRA	Awka	200	2	1.0%	0	0.0%	99	4	4.0%	1	1.0%	100	5	5.0%	3	3.0%	100	3	3.0%	2	2.0%					
	Ekwulobia	100	4	4.0%	2	2.0%						100	3	3.0%	1	1.0%	100	1	1.0%	1	1.0%					
	Ogidi	200	5	2.5%	4	2.0%						100	4	4.0%	2	2.0%	100	3	3.0%	1	1.0%					
	Onitsha	400	8	2.0%	2	0.5%	100	7	7.0%	0	0.0%	100	7	7.0%	2	2.0%	99	4	4.0%	0	0.0%	100	4	4.0%	2	2.0%
	Sub. 2	900	19	2.4%	8	1.1%	199	11	5.5%	1	0.5%	400	19	4.8%	8	2.0%	399	11	2.8%	4	1.0%	100	4	4.0%	2	2.0%
E	Gboko	401	20	5.0%	32	8.0%	100	49	49.0%	0	0.0%	95	9	9.5%	25	26.4%	72	1	1.4%	11	15.3%					
	Ihugh	400	14	3.5%	99	24.8%						100	11	11.0%	27	27.0%										
	Otukpo	345	19	5.5%	12	3.5%																				
	Makurdi						87	38	43.7%	16	18.4%	100	30	30.0%	14	14.0%	84	5	6.0%	2	2.4%					
	Sub. 3	1146	53	4.7%	143	12.1%	187	87	46.3%	22	12.2%	295	50	16.8%	49	16.5%	156	6	3.7%	13	8.8%					
	Biu	375	18	4.8%	17	4.5%																				
	Maiduguri	400	32	8.0%	3	0.8%	74	19	25.7%	13	17.6%	92	4	4.3%	4	4.3%	70	14	20.0%	1	1.4%					
	Sub. 4	775	50	6.4%	20	2.6%	74	19	25.7%	13	17.6%	92	4	4.3%	4	4.3%	70	14	20.0%	1	1.4%					
RIVER	Calabar	401	19	4.7%	7	1.7%						100	24	24.0%	16	16.0%	100	9	9.0%	6	6.0%					
	Ikom	400	20	5.0%	38	9.5%						100	9	9.0%	5	5.0%	100	23	23.0%	7	7.0%					
	Ogoja	400	10	2.5%	26	6.5%																				
	Sub. 5	1201	49	4.1%	71	5.9%						200	41	16.5%	21	10.5%	200	32	16.0%	13	6.5%					
	Warri	399	6	1.5%	13	3.3%	96	26	27.1%	1	1.0%	103	6	5.8%	8	7.8%	101	9	8.9%	7	6.9%					
	Agbor	400	35	8.8%	2	0.5%	100	17	17.0%	3	3.0%	100	10	10.0%	0	0.0%	100	2	2.0%	4	4.0%					
	Sub. 6	799	41	5.1%	15	1.9%	196	43	22.0%	4	2.0%	203	57	7.9%	8	3.9%	201	11	5.5%	11	5.5%					

STATE		ANC					CSW					STD					TB					LEPTD				
		NO tested	Pos. for HIV	% Pos for HIV	Pos for syph ilis	% Pos. for syph ilis	No tested	Pos. for HIV.	% Pos. for HIV	Pos. for syph ilis	% Pos. for syphi lis	No tested	Pos. for HIV	% Pos for HIV	Pos. for syph ilis	% Pos for syph ilis	No tested	Pos. for HIV	% Pos for HIV	Pos. for syph ilis	% Pos for syph ilis	No tested	Pos for HIV	%pos for HIV	Pos for syph ilis	%Pos for syph ilis
DO	Benin	400	7	1.8%	6	1.5%																				
	Auchi																									
	Ubiaja																101	2	2.0%	5	5.0%					
	Sub. 7	400	7	1.8%	6	1.5%																				
ADUNA	Kafanchan	582	29	5.0%	25	4.3%																				
	Kaduna	560	24	4.3%	22	3.9%						147		1.4%	5	3.4%	101	2	2.0%	5	5.5%					
	Saminaka																									
	Giwa																									
	Sub. 8	1142	53	4.6%	47	4.1%																				
NO	Danbatta	160	0	0.0%	9	5.6%	100	0	0.0%	6	6.0%	147	2	1.4%	5	3.4%										
	Gwarzo	399	0	0.0%	4	1.0%	100	0	0.0%	11	11.0%															
	Kano	400	3	0.8%	4	1.0%	101	11	10.9%	12	11.9%	100		5.0%	3	3.0%	100	19	19.0%	2	2.0%					
	Rano	399	4	1.0%	25	6.3%	100	14	14.0%	14	14.0%	100		3.0%	6	6.0%										
	Sub. 9	1358	7	0.4%	42	3.5%	401	25	6.2%	43	10.7%	200	18	9.0%	9	4.5%	100	19	19.0%	2	2.0%					
RA	Ilorin	400	15	3.8%	0	0.0%	100	15	15.0%	3	3.0%	101		0.9%	0	0.0%	100	5	5.0%	0	0.0%					
	Omu-Aran	396	4	1.0%	0	0.0%																				
	Offa	400	10	2.5%	2	0.5%																				
	Sub. 10	1196	29	2.4%	2	0.2%	100	15	15.0%	3	3.0%	101	9	0.9%	0	0.0%	100	5	5.0%	0	0.0%					
OS	Badagry	354	19	5.4%	31	8.8%	91	9	9.9%	52	57.1%															
	Epe	405	17	4.2%	20	4.9%																				
	Ikeja	398	30	7.5%	25	6.3%	100	46	46.0%	23	23.0%	100		5.0%	16	16.0%										
	Ikorodu	400	27	6.8%	4	1.0%																				
	Lgos Island	337	34	10.1%	4	1.2%	101	30	29.7%	3	3.0%	100		8.0%	4	4.0%	100	20	20.0%	3	3.0%					
	Sub. 11	1894	127	6.8%	84	4.4%	292	85	28.5%	78	27.7%	200	13	6.5%	20	10.0%	100	20	20.0%	3	3.0%					

STATE		ANC					CSW					STD					TB					LTFU				
		NO tested	Pos. for HIV	% Pos for HIV	Pos for syphilis	% Pos. for syphilis	No tested	Pos. for HIV.	% Pos. for HIV	Pos. for syphilis	% Pos. for syphilis	No tested	Pos. for HIV	% Pos for HIV	Pos. for syphilis	% Pos for syphilis	No tested	Pos. for HIV	% Pos for HIV	Pos. for syphilis	% Pos for syphilis	No tested	Pos for HIV	TPos for HIV	Pos for Syphilis	TPos for Syphilis
UN	Ife	396	1	0.3%	0	0.0%						100		2.0%	1	1.0%	91	1	1.1%	0	0.0%					
	Ilesa	408	7	1.7%	3	0.7%	89	35	39.3%	5	5.6%															
	Oshogbo	282	6	2.1%	0	0.0%						86		2.3%	0	0.0%	76	2	2.6%	1	1.3%					
	Sub. 12	1088	14	1.4%	3	0.2%	89	35	39.3%	5	5.6%	186		2.2%	1	0.5%	167	3	1.9%	1	0.7%					
O	Ibadan	484	1	0.2	9	1.9											120	0	0.0%	5	4.2%					
	Ogbomosho																									
	Saki																									
	Sub. 1	484	1	0.2	9	1.9											120	0	0.0%	5	4.2%					
ATEAU	Akwanga	413	26	6.3%	7	1.7%						79		16.5%	5	6.3%	140	4	3.8%	11	10.6%					
	Barkin Ladi	401	53	13.2%	32	8.0%	100	12	12.0%	11	11.0%	99		4.1%	13	13.1%										
	Jos	401	20	5.0%	3	0.7%	108	41	38.0%	9	8.3%	99		31.3%	46	46.5%	112	28	25.0%	31	27.7%					
	Sub. 14.	1215	99	8.1%	42	3.5%	208	53	25.0%	20	9.7%	277	57	20.6%	64	22.0%	216	32	14.4%	42	19.1%					
KOTO	Sokoto	402	6	1.5%	4	1.0%											101	3	3.0%	0	0.0%					
	Gusau																									
	Illella	398	7	1.8%	8	2.0%																				
	Yabo																									
	Sub. 15	800	13	1.6%	12	1.5%											101	3	3.0%	0	0.0%					
NUGU	Abakalike	439	17	3.9%			105	39	37.1%	2	1.9%	76	7	9.2%	4	5.3%	76	9	11.8%	1	1.3%					
	Auchi	202	11	5.4%								22	1	4.5%	0	0.0%	4	1	25.0%							
	UNTH	138	4	2.9%			19	11	57.9%	6	31.6%	27	0	0.0%	2	7.4%	109	5	4.6%							
	Parklane	91	0	-			0	0	0	0	0	0	0	0.0%	0	0.0%	0	0	0	0	0 %					
	Sub. 16	870	32	3.7%			124	50	40%			125	6	4.8%	0		189	15	7.9%	1	0.5%					
	GRAND TOTAL	14796	567	3.8%	566	3.8%	1937	413	21.3%	246	12.7%	2502	250	10.0%	229	9.2%	2031	158	7.8%	100	4.9%	100	4	4.0%	2	

TABLE 4

HIV PREVALENCE (%) IN NIGERIA

State	ANC	CSW	STD	T.B.	LDTD	TOTAL HIV	SYPHILLIS
Adamawa	1.3%	20.7%	1.5%	-	-	7.3%	20.%
[illegible]	2.4	5.5	4.8%	2.8	4.0	2.8	1.7
Benue	4.7	46.3	6.8	3.7		11.0	1.3
[illegible]	6.4	25.7	4.3	20.0		7.2	
Cross River	4.1	-	16.5	16.0		6.7	4.9
Delta	5.1	22.0	7.9	5.5		10.9	2.7
Edo	1.8	-	-	2.0%		1.8	2.2
Enugu	3.7	40.3	4.8	7.9%		8.0	8.0
Kaduna	4.6	-	1.4	-		4.3	4.1
Kano	0.4	6.2	9.0	19		2.9	4.7
Kwara	2.4	15.0	0.9	5.0		3.9	0.3
Lagos	6.8	28.5	6.5	20.0		9.9	7.4
Oshun	1.4	39.3	2.2	1.9		3.7	0.71
Oyo	0.2	-	-	-		0.2	1.9
Plateau	8.2	25.0	20.6	14.4		12.6	8.8
Sokoto	3.8	-	-			1.8	1.3
TOTAL (Average)	3.8%	22.5%	8.9%	7.8%			