

THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF HEALTH

Tanzania Mainland

National AIDS Control Programme



**Surveillance of HIV and Syphilis Infections
Among Antenatal Clinic Attendees**

2003/04

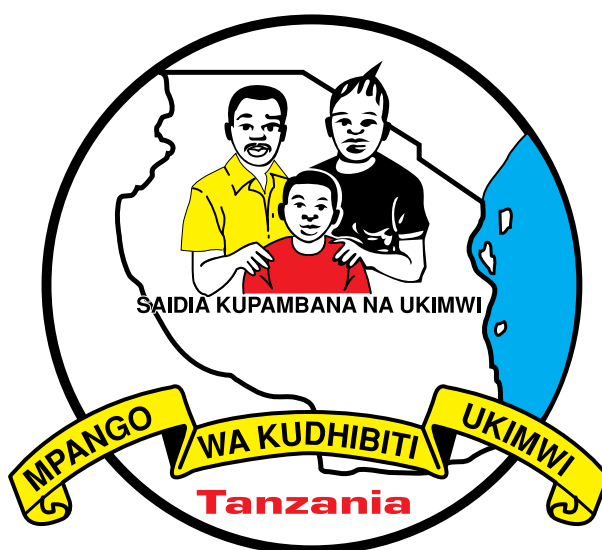
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Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal clinic
BSS	Behavioural Surveillance Survey
CDC	US Centres for Disease Control and Prevention
DBS	Dried blood spots
ELISA	Enzyme Linked Immunosorbent Assay
HIV	Human Immunodeficiency Virus
MOH	Ministry of Health
MUCHS	Muhimbili University College of Health Sciences
NACP	National AIDS Control Programme
NHRL	National HIV Reference Laboratory
NIMR	National Institute for Medical Research
QA	Quality assurance
RPR	Rapid Plasma Reagin
STD	Sexually transmitted diseases
STI	Sexually transmitted infections
UNAIDS	United Nations Programme on AIDS
UNDP	United Nations Development Programme
VDRL	Venereal Disease Research Laboratory
WHO	World Health Organisation

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Report Distribution

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EXECUTIVE SUMMARY

Introduction

This is a report of the findings from the antenatal clinic-based HIV and syphilis sero-surveillance conducted in Mainland Tanzania from October 2003 to January 2004. The goal of this surveillance programme is to contribute to the fight against HIV/AIDS and STIs through provision of relevant data from antenatal clinics in Tanzania. Consequently, the objective of this annual survey was to determine HIV and syphilis sero-prevalence as well as trends among antenatal clinic attendees and examine factors associated with infection.

The study sites were located in 10 regions namely Dar es Salaam, Dodoma, Kagera, Kilimanjaro, Kigoma, Lindi, Mbeya, Morogoro, Mtwara and Tanga. Participating regions were selected on the basis of prior participation in ANC surveillance activities, availability of HIV prevalence data and large population density, while participating ANC clinics were selected on the basis of serving large catchment populations.

A total of 17,813 women attending antenatal clinics for the first time for any pregnancy were enrolled for the surveillance from 57 out of 60 clinics that had been selected from 10 regions of Tanzania Mainland. The clinics were instructed to enrol women for three-month period from October 2003 to January 2004. For each region, six ANC were selected, two from each of three strata (urban, peri-urban and rural), making a total of 60 clinics but 3 were excluded because their staff did not participate in the training for the surveillance protocol. After training of data collectors, blood specimens were drawn from the consenting women at the clinics for syphilis RPR screening. Left over blood was applied on filter paper cards and left to dry at room temperature for 24 hours.

Results

Of the 17,813 women, 1,545 tested HIV positive resulting in an overall HIV prevalence of 8.7% (95% CI=8.3-9.1). Age-specific HIV prevalence was highest in women aged 25-34 years (11%) compared to those aged 15-24 years (7.4%) and 35-48 years (6.7%). Single women had higher prevalence than married women (9.7% vs 8.6%). Furthermore, HIV prevalence among single women with a history of previous pregnancies (13.9%) was one and half times higher than that of married women with a history of previous pregnancies (9.1%). In some regions, women who reported having at least primary education or more had higher prevalence than women with no education. Regional differences ranged between 4.8% (95% CI = 3.8% - 9.8%) in Kagera to 15.3% (95% CI = 13.9% - 16.8%) in Mbeya. Prevalence varied by location of the clinic. Women attending clinics located in urban areas had significantly higher HIV prevalence than those recruited from rural clinics. HIV prevalence did not differ with duration of residence in any of the areas surveyed.

In addition to HIV testing, 17,323 women attending antenatal clinics for the first time for any pregnancy were screened for syphilis infection, and 1,265 were found to be positive for syphilis resulting in an overall syphilis prevalence of 7.3% (95% CI=6.9-7.7). Regional prevalence ranged between 2.1% (95% CI = 1.4% - 3.0%) for Kigoma and 14.9% (95% CI = 13.3%-16.6%) for Kagera region. Age-specific syphilis prevalence was highest for women aged 35 years and older.

Conclusion

In general, the HIV infection trends have not changed significantly over the two surveys. The small changes observed are probably a result of random variation in the different regions and sites. Future surveys should include clinic sites from regions not previously studied in order to increase the representativeness of the selected sites for the country. For the group of pregnant women to continue representing the general population in the estimation of HIV prevalence trends, efforts should be made to continuously encourage women to attend antenatal clinics and enjoy the benefits of being screened for syphilis and getting treatment if found infected.

1

INTRODUCTION

Formed in 1964, the United Republic of Tanzania is a union between the then Tanganyika and the islands of Zanzibar. The country is divided into twenty-six regions, 21 being on the mainland and five on the isles. Physically, Tanzania is the largest country in East Africa, occupying an approximate area of 945,087 km², and sharing borders with eight neighbouring countries that include Kenya and Uganda to the north; Rwanda, Burundi and the Democratic Republic of Congo to the west, and Zambia, Malawi and Mozambique to the South.

According to the 2002 population census, the total population of Tanzania is 34,569,232 with 23% living in urban and 77% living in rural areas. The Tanzanian population is relatively young population with 46% being in the age group of 0-14 years. Life expectancy is 49 years for males and 51 years for females. The annual population growth rate is 2.9%.

The first AIDS cases in Tanzania were reported in the Kagera region in 1983. In the late 1980's sentinel surveillance activities in antenatal clinics (ANC) were initiated in the Kagera region. Subsequently, in the early 1990s, basing on the assumption that pregnant women attending ANC are representative of the general adult population of both males and females in the reproductive age groups, the NACP developed a protocol for ANC HIV and syphilis sero-surveillance, and expanded activities to 11 of the then 20 regions of mainland Tanzania. This protocol was implemented until 1999, when the NACP undertook a comprehensive review that resulted in improved methods for HIV and syphilis surveillance.

During 1999 - 2002, ANC HIV and syphilis surveillance was strengthened through a number of sequential core activities. The first activity comprised of analysis of the existing surveillance system to uncover strengths and weaknesses. This effort resulted in a report which was used by a multidisciplinary team in a national HIV/AIDS surveillance consensus workshop to develop the document, "Guidelines for Monitoring and Evaluation During Mid-Term Plan III, 2000-2002." These guidelines describe principles used in HIV/AIDS and syphilis surveillance, discuss methods of behavioural surveillance among youth, and introduce criteria for monitoring and evaluating prevention programmes. Using these and other resources, the NACP revised the protocol for ANC surveillance and came up with new methods of conducting sentinel surveillance that included the introduction of a 3-month data collection period to replace the previous system of continuous data collection, the introduction of a technology of using dried blood spots (DBS) filter paper cards for blood storage and the standardization of HIV test approaches and quality assurance system.

The goal of the surveillance programme is to contribute to the fight against HIV/AIDS and STIs through provision of relevant data from ANC in Tanzania. Consequently, the objective of this annual survey was to determine HIV and syphilis sero-prevalence among antenatal clinic attendees and examine factors associated with infection. Between October 2003 and January 2004, a new round of HIV and syphilis sero-surveillance was conducted at 57 ANC sites located in ten regions of Tanzania. These were Dar es Salaam, Dodoma, Kagera, Kilimanjaro, Kigoma, Lindi, Mbeya, Morogoro, Mtwara and Tanga. Similar to the previous sero-surveillance round, clinics in selected regions were stratified into three strata of urban, peri-urban and rural to allow the output to be presented according to these strata.

The information generated from this sero-surveillance activity is vital for determining the epidemiology of HIV and syphilis in Tanzania. Since the activity is planned to continue over a long time to come, information generated will be useful in determining and projecting trends as well as describing transmission patterns, identifying groups at greatest risk for HIV infection and allowing projections of HIV infections and its impacts.

Finally, this information is critical for setting priorities, designing interventions and evaluating the impact of prevention and care programmes.

2

METHODS

A sero-survey was conducted between October 27, 2003 and January 23, 2004 among pregnant women attending selected ANC clinics in Tanzania. This was the second of a series of sentinel sero-surveys involving pregnant women that was started in 2001 and meant to continue over time in an attempt to monitor HIV and syphilis infection trends in the general population.

2.1 Site selection and study population

In 1996 Tanzania Demographic and Health Surveys (DHS) clustered regions of Tanzania mainland into six geographical zones (Annex 1)¹. The six zones were Coastal, Northern Highland, Lake, Central, Southern Highland and Southern. Site selection for the 2001/2 surveillance round was based on the location of the six zones from each of which one region was selected on the basis of prior participation in national ANC sentinel surveillance studies and availability of relevant data on HIV prevalence. For the current survey-round (2003/4), ten regions were selected, six of them being those surveyed in 2001/2 while the remaining four were freshly selected on the basis of having the largest population among the remaining regions. Thus, regions with largest populations were preferentially selected.

Subsequent to the selection of the ten regions, six ANC clinic sites were selected from each region on the basis of a large catchment population, high average number of monthly bookings, road accessibility and previous participation in national sentinel surveillance studies (Annex 2). Hence, a total of sixty sites were obtained. However, three of the sites did not participate in the training exercise for the surveillance protocol and were therefore excluded from the study. The 57 sites included in the study were stratified into three distinct geographical categories for each region according to whether they were urban, peri-urban or rural with the following definition:

- Urban - ANC clinic located within the regional headquarter town
- Peri-urban - ANC clinic located in a town other than the regional headquarter town
- Rural - ANC clinic located in a rural area.

Peri-urban sites located along major roads that cross either a border town or the region were classified as border sites or roadside sites, respectively. The study population consisted of all the pregnant women presenting for the first time to the selected ANC clinics for any pregnancy during the surveillance period of three months.

2.2 Training for the surveillance protocol

In August 2003, a two-day sentinel surveillance-training workshop was held in Dar es Salaam to train those who would participate in the collection of the surveillance data. The training involved the clinic nurses and the laboratory technicians of selected sites. The training content of the workshop included the study protocol, instructions on how to fill the study instrument, relevant theory for the laboratory testing, phlebotomy techniques using the vacutainer system, and the preparation, storage and shipping of DBS before testing in the laboratory. Role-playing among the trainees reinforced the sequence of steps from client encounter, to collection of demographic data, blood specimens and their testing. Laboratory technologists from Mbeya Referral Hospital and the Muhimbili University

¹Tanzania Demographic and Health Survey 1996; August 1997.

College of Health Sciences (MUCHS), Department of Microbiology and Immunology, and surveillance staff from NACP facilitated the workshop using the Kiswahili language to encourage interaction among the participants and to minimize problems of self-expression using the English language.

2.3 Field Supervision

To ensure adequate supportive supervision and quality assurance of field activities, the NACP assembled a team of laboratory and surveillance staff to monitor ANC staff and to ensure that the surveillance protocol is adhered to, the DBS preparation and storage are properly carried out and that the relevant supplies are available at all sites. Supervisory teams visited each site according to a regular timetable and completed a monitoring checklist. The teams also reviewed the stored DBS and data collection forms to confirm that collected demographic information was duly filled and available for all the stored specimens.

2.4 Specimen collection and Transportation

After obtaining consent from the pregnant woman at the clinic, a blood sample was taken for RPR testing. The remaining blood specimen was then used to prepare DBS for HIV testing whereby consent was not needed. ANC staff applied 100ml of whole blood to each of five circles on a DBS card, which was then left to dry at room temperature. DBS were stacked in plastic envelopes (zip lock bags), and stored with desiccant packs and humidity indicator cards together with their completed data collection forms. Desiccant packs were changed when humidity indicator cards changed colour from white to pink. Samples were collected continuously for 3 months between October 27, 2003 and January 23, 2004 from all sites, and data were entered onto a carbonized duplicate data collection form labeled with the client's unique surveillance number. Study variables included age, marital status, parity, educational level, distance from residence to ANC, and duration at present residence (Appendix 3). ANC staff mailed completed data collection forms and DBS for HIV testing using weekly courier service to the National HIV Reference Laboratory (NHRL) at MUCHS. NACP continuously monitored the volume of DBS received by MUCHS from each site and contacted sites with unexpected posted numbers.

2.5 Syphilis Testing and Treatment

In all study sites RPR test was done on the site. In the majority of rural sites, ANC nurse performed the test whereas, in most of the urban and peri-urban sites it was carried out in a laboratory by a Lab Technician/Assistant. Results were recorded directly on the data collection form and on woman's clinic card or laboratory investigation request form. No TPP or TPHA was done on the positives RPR samples for confirmation of test results or quality control. Women whose RPR test results were positive were offered treatment based on the National STD Treatment Guidelines².

² Ministry of Health Tanzania, STD Training for Clinicians; User's Manual

2.6 HIV testing

The NHRL at MUCHS collaborated with the U.S. Centres for Disease Control and Prevention (CDC) on developing a DBS HIV testing protocol and algorithm. Due to a large number of DBS samples collected, six additional laboratory technologists, 4 from participating surveillance regions and 2 from zonal referral hospitals, were requested to join the technologists at the NHRL in testing the samples. At the laboratory, dried blood was eluted from the DBS card and tested using Vironostika, HIV Uni-Form II Ag/Ab ELISA test (Biomérieux, The Netherlands). Specimens with negative results underwent no further testing and were considered negative. Specimens positive on the first ELISA underwent a second ELISA test, Vironostika, HIV Uni-Form II Plus O (Biomérieux, The Netherlands). The ELISA algorithm was independently validated by CDC in Atlanta and by the NHRL at MUCHS. Specimens that reacted positive on the second test were considered positive. Specimens that reacted negative on the second test were considered negative.

2.7 Quality Assurance

Ten per cent of all samples were randomly selected by MUCHS for quality assurance (QA) testing at a laboratory different from the one which carried out the initial testing. Every 10th sample starting from number 01 at each site was selected.

2.8 Ethical Considerations

The Ministry of Health awarded ethical clearance to the National HIV Surveillance protocol during the first round of data collection in 2001-2002. Because HIV test results were not linked by name and tests were performed on residual blood from routine syphilis screening, obtaining informed consent was not warranted. All information linking the sample to the client was removed and DBS HIV testing occurred anonymously.

2.9 Data Entry and Analysis

Laboratory technologists entered HIV test results in laboratory log books and delivered them to NACP. The laboratory log books had columns for surveillance number, date of specimen collection, data collection form number, test results for first ELISA, test result for second ELISA and final HIV test result. NACP data entry clerks performed double entry of data manually into Epi-Info Programme. The two files were validated and incorrect entries were corrected.

Data were analysed by a team of researchers from NACP, MUCHS, NIMR, COSTECH and CDC, initially during a weeklong analysis meeting, followed by several rounds of consensus gathering and review. ANC HIV and syphilis prevalence rates were calculated by age, marital status, parity, educational level, and distance from residence to ANC and duration in residence. Prevalence were calculated with 95% confidence intervals (CI) to guide interpretation. Data were analysed using the statistical software packages EpiInfo 2002 (database and statistics software for public health professionals, July 2002) and Stata for windows Version 8.0.

3

RESULTS

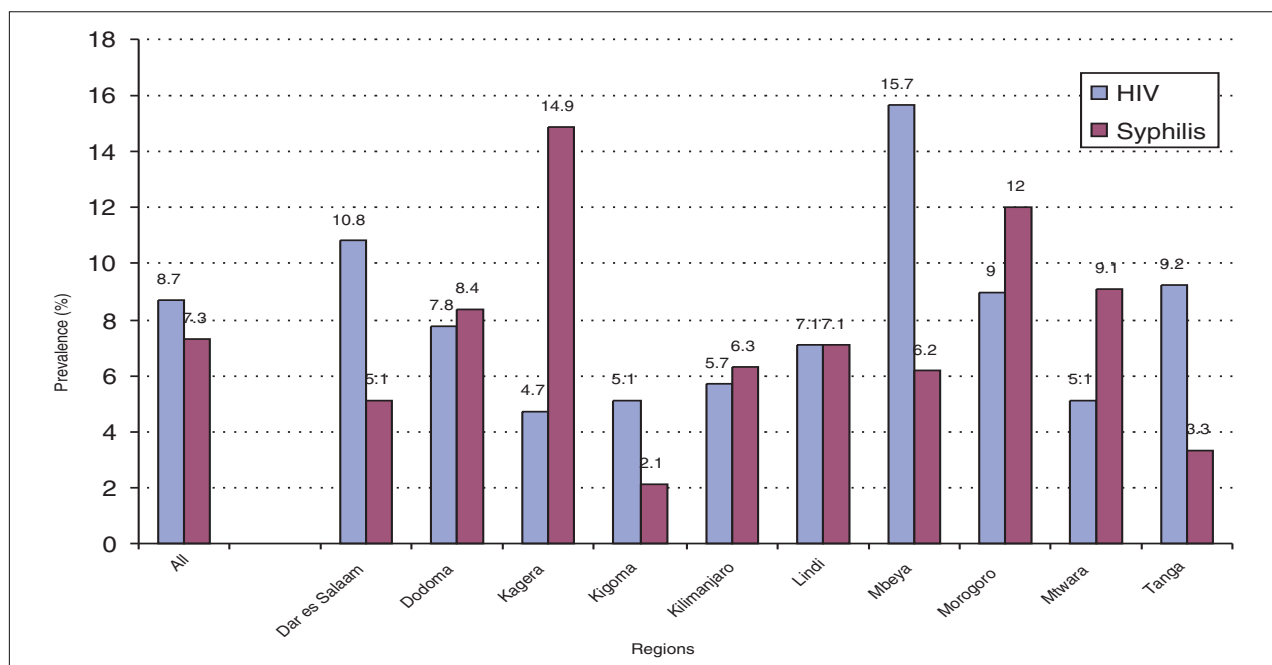
3.1 HIV prevalence

A total of 17,813 antenatal clinic attendees were enrolled in the ANC serosurveillance study from 57 clinics located in 10 regions of Tanzania between October 27th 2003 and January 23rd 2004. The number of enrolled women regionally ranged from 1135 in Lindi to 3018 in Dar es Salaam. A total of 1,545 women tested HIV positive resulting in an overall HIV prevalence in this population of 8.7% (95% CI = 8.3, 9.1). HIV infection prevalence ranged from a low of 4.7% (95% CI = 3.8, 9.8%) in Kagera region to a high of 15.7% (95% CI = 13.9-16.8) in Mbeya region (figure 1). HIV prevalence is also presented at the clinic level (Table 1). Socio-demographic variables associated with ANC attendees are reported at the level of the clinic and are shown in tables 5 to 14.

Of the 57 ANC sites surveyed in this study, 13 (22.8%) were found to have a prevalence of HIV infection of 10% or more. These high prevalence sites consisted of one clinic in Dodoma (urban), three urban clinics in Dar es Salaam, two clinics in Lindi (urban), one in Morogoro (urban), one in Tanga (urban) and five in Mbeya (2 urban, 1 rural, 1 border and 1 road side) (Table 1).

The HIV prevalence differed according to residence ranging between 3.7% for rural clinics, and 15.3 for border clinic ($p < 0.001$) (Figure 6).

Fig 1: Prevalence of HIV and syphilis among ANC attendees by region, Tanzania 2003 - 2004



RESULTS

Table 1: Prevalence of HIV and syphilis infection by ANC sites, Tanzania 2003/04

Region/Site	Syphilis			HIV		
	Total	Positive	% prevalence	Total	Positive	% prevalence
Dar es salaam	2959	151	5.1	3018	325	10.8
Buguruni	879	11	1.3	884	107	12.1
Kasorobo	446	46	10.3	450	43	9.6
Kigamboni	386	4	1.0	389	36	9.3
Oysterbay	466	37	7.9	478	50	10.5
Kimara	361	10	2.8	384	35	9.1
Kiwalani	421	43	10.2	433	54	12.5
Dodoma	1597	134	8.4	1621	126	7.8
Bahi	176	6	3.4	181	8	4.4
Handali	228	64	28.1	228	1	0.4
Kibaigwa	203	5	2.5	203	18	8.9
Makole	331	4	1.2	339	31	9.1
Mpwapwa	308	29	9.4	319	19	5.9
Wajenzi	351	26	7.4	351	49	13.9
Kagera	1814	270	14.9	1826	87	4.7
Bukoba	409	21	5.1	410	39	9.5
Katoro	244	64	26.2	245	6	2.4
Kimeya	235	51	21.7	241	2	0.8
Nkwenda	451	86	19.1	452	7	1.5
Nyamiaga	180	27	15.0	182	4	2.2
Rwamishenye	295	21	7.1	296	29	9.8
Kilimanjaro	1405	89	6.3	1429	81	5.7
Hedaru	219	84	38.4	221	5	2.3
Majengo	323	1	0.3	323	22	6.8
Masama	266	0	0	268	17	6.3
Umbwe	103	0	0	103	3	2.9
Huruma	187	2	1.1	323	26	8.1
Pasua	307	2	0.7	191	8	4.2
Mbeya	2386	149	6.2	2442	384	15.7
Chimala	249	18	7.2	249	38	15.3
Ilembo	178	13	7.3	188	15	8.0
Kiwanjampaka	724	29	4.0	726	137	18.9
Kyela	315	22	7.0	323	51	15.8
Igamba	195	29	14.9	228	24	10.5
Ruanda	725	38	5.2	728	116	15.9
Mtwara	1262	115	9.1	1279	66	5.1
Ligula	388	29	7.5	389	37	9.5
Mangaka	264	21	8.0	267	13	4.9
Nanyama	173	9	5.2	176	6	3.4
Tandahimba	146	8	5.5	147	1	0.7
Likombe	165	29	17.6	165	7	4.2
Mkunya	126	19	15.1	135	2	1.5
Kigoma	1246	26	2.1	1349	69	5.1
Kibondo	204	0	0.0	217	7	3.2
Kiganamo	293	5	1.7	326	11	3.4
Kigoma	296	6	2.0	301	21	7.0

RESULTS

Region/Site	Syphilis			HIV		
	Total	Positive	% prevalence	Total	Positive	% prevalence
Nyakitonto	113	2	1.8	163	6	3.7
Ujiji	340	13	2.8	342	24	7.0
Lindi	1112	79	7.1	1135	80	7.1
Chumo	132	4	3.0	141	4	2.8
Liwale	296	7	2.4	307	8	2.7
Nachingwea	227	32	14.1	227	22	9.7
Nyangao	231	20	8.7	233	12	5.2
Sokoine	117	7	6.0	119	16	13.5
Town clinic	109	9	8.3	113	18	15.9
Morogoro	1556	187	12.0	1630	147	9.0
Hembeti	81	9	11.1	99	2	2.1
Mkuyuni	154	5	3.3	173	3	1.7
Morogoro	550	54	9.8	559	64	11.5
Uhuru	771	119	15.4	799	78	9.8
Tanga	1986	65	3.3	2084	191	9.2
Handeni	380	8	2.1	403	32	7.9
Kwamkono	158	16	10.1	168	8	4.7
Lushoto	237	1	0.4	246	13	5.3
Magoma	171	7	4.1	175	2	1.1
Makorola	518	8	1.5	545	36	6.6
Ngamiani	522	25	4.8	547	100	18.3

In all regions, HIV prevalence was highest among women aged 25 – 34 years. Rates were similar among the youngest and oldest age groups (Figure 2). HIV prevalence among single women (9.7%) was not statistically different from that of married women (8.6%) ($p < 0.07$), (Figure 3).

Fig 2: Prevalence of HIV and syphilis by age group among ANC attendees, Tanzania 2003/04

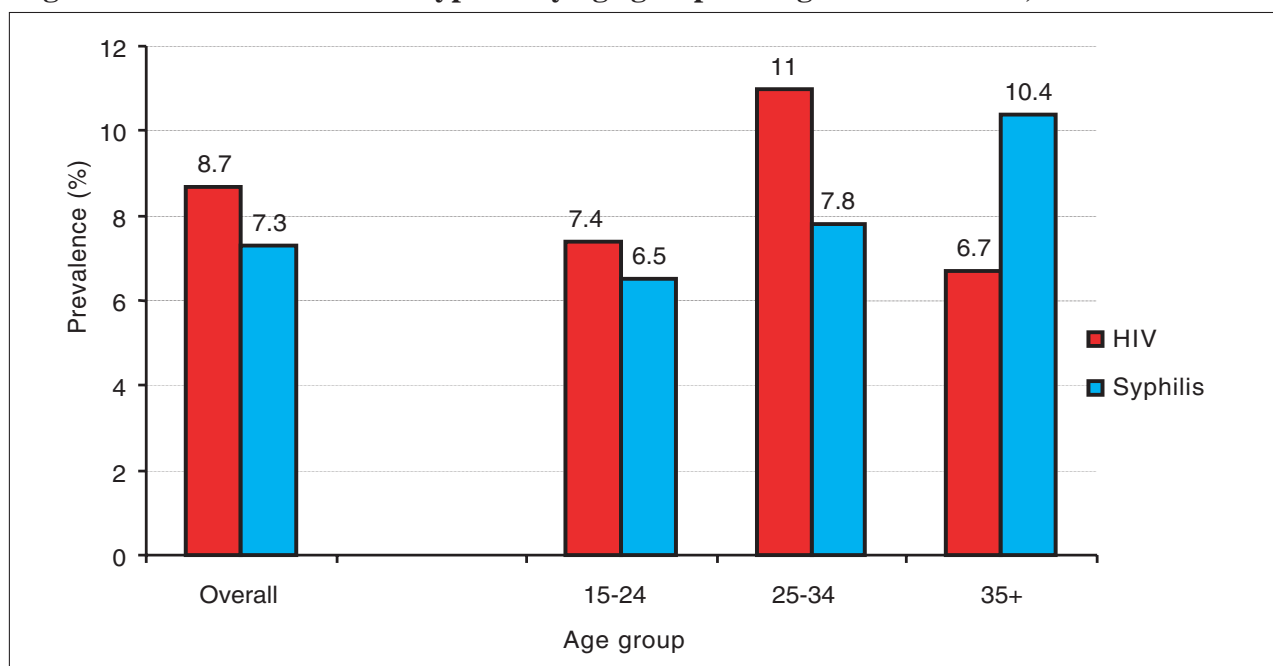
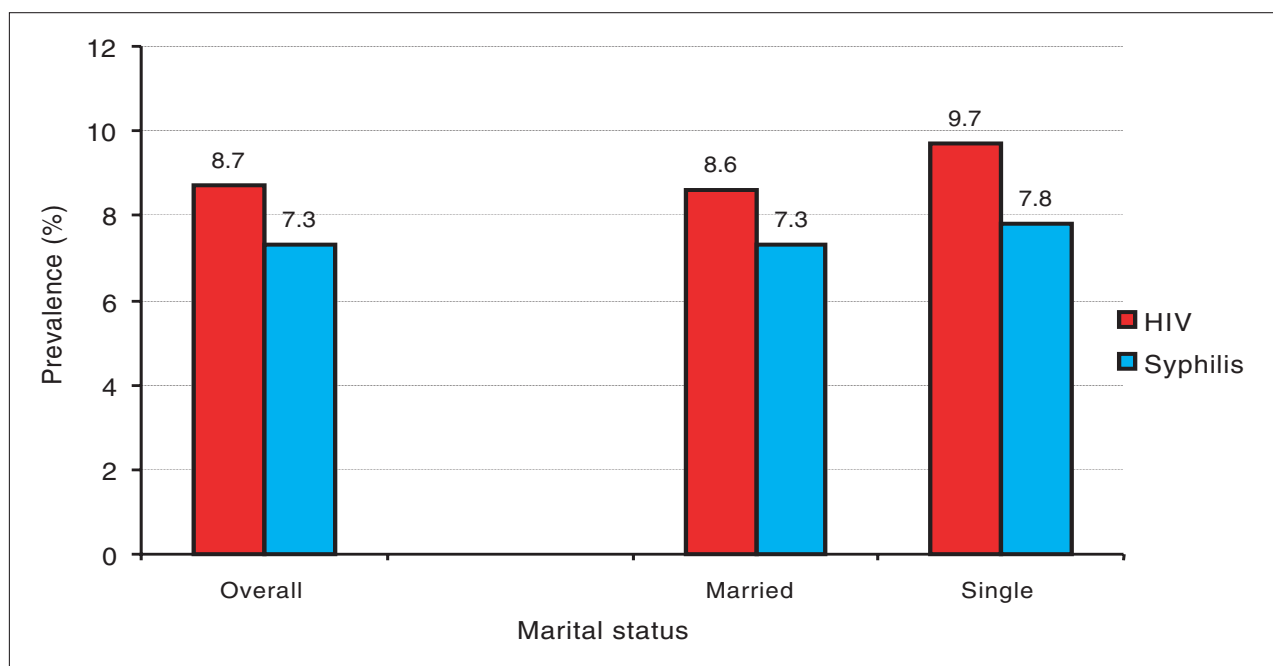


Fig 3: Prevalence of HIV and syphilis among ANC attendees by marital status, Tanzania, 2003/04

HIV prevalence increased with level of education from 5.2% among women with no education to 9.3% among those with some primary education or more ($p < 0.001$) (Figure 4).

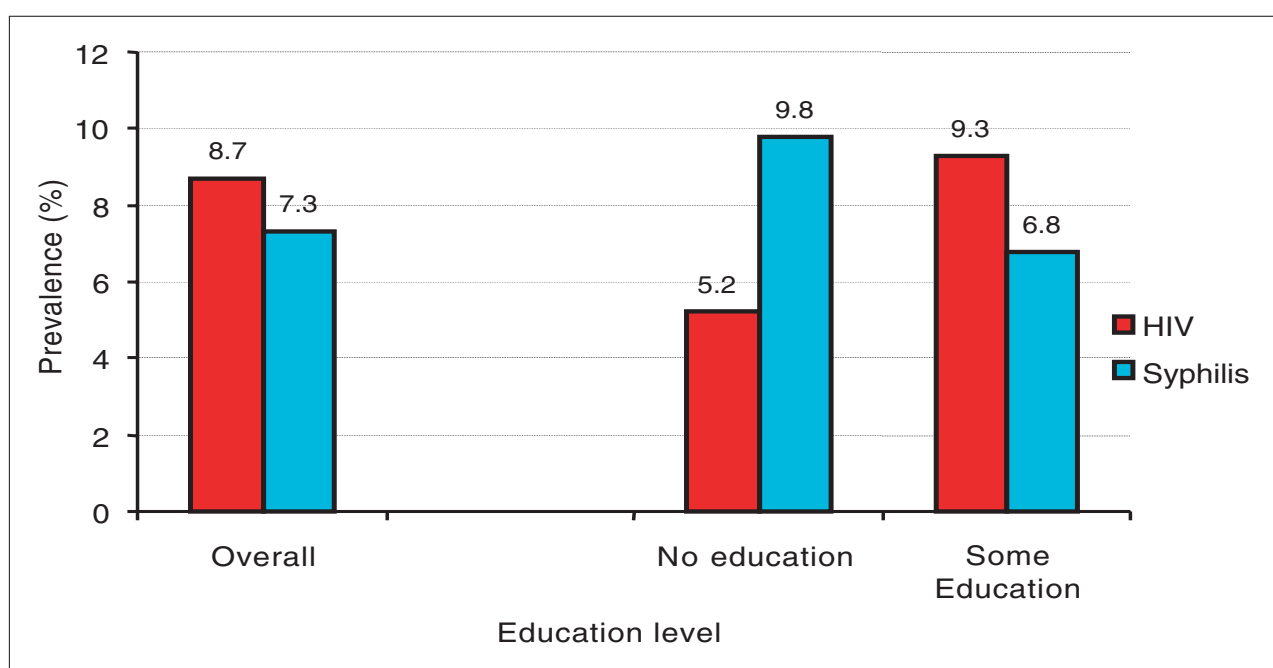
Fig 4: Prevalence of HIV and Syphilis among ANC Attendees by education status, Tanzania, 2003/04

Fig 5: Prevalence of HIV and syphilis among ANC attendees by number of previous pregnancies, Tanzania, 2003/04

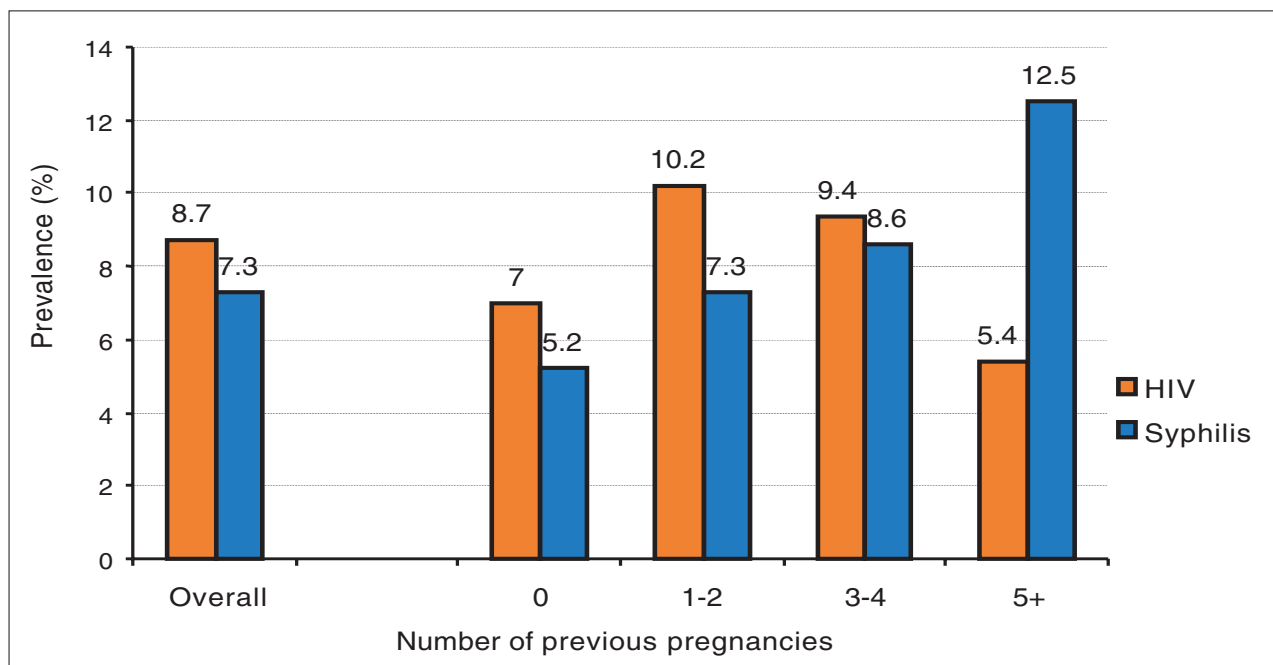
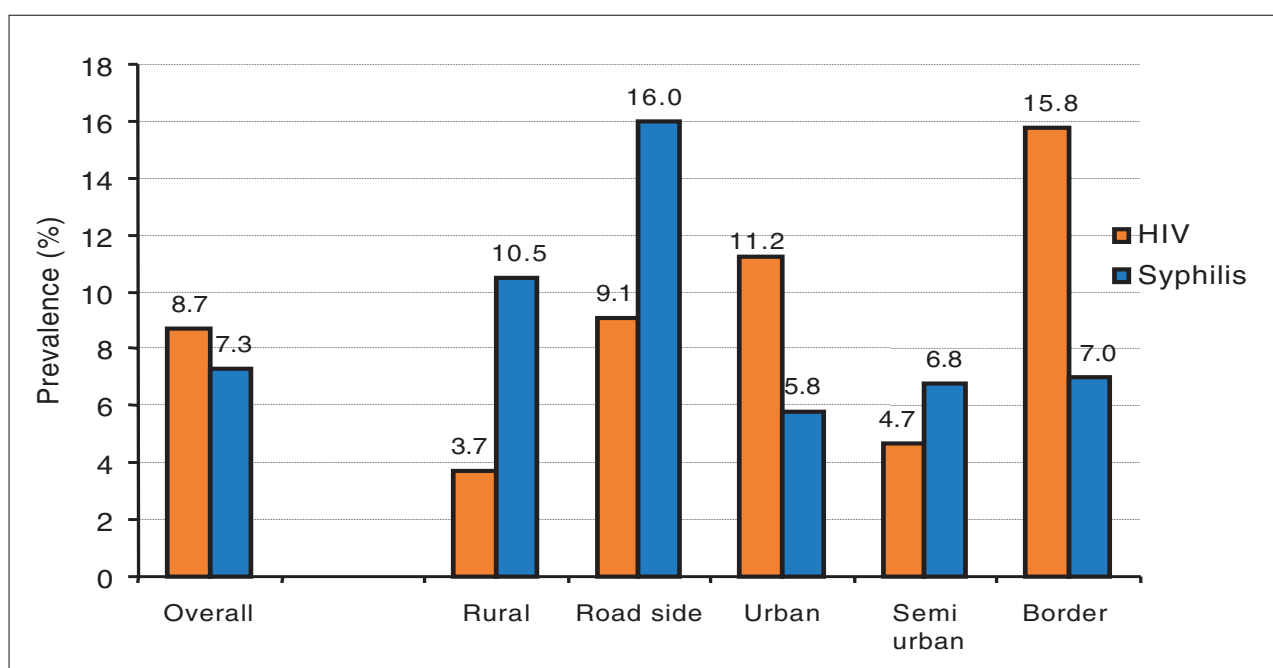


Fig 6: Prevalence of HIV and syphilis among ANC attendees by ANC location, Tanzania, 2003/04



3.2 Syphilis prevalence

A total of 17,323 ANC attendees were tested for syphilis during the study period. A total of 1,265 women tested positive, resulting in an overall syphilis prevalence of 7.3% (95% CI = 6.9-7.7). Syphilis infection prevalence ranged from a low of 2.1% (95% CI = 1.4,3.0) in Kigoma region to a high of 14.9% (95% CI = 13.3,16.6) in Kagera region where interestingly, the HIV prevalence was found to be the lowest.

The prevalence of syphilis was highest among attendees from roadside clinics 16.0% (95% CI = 13.3-18.9) than those from rural clinics 10.5% (95% CI = 9.5-11.5) and lowest among urban clinic attendees 5.8% (95% CI = 5.4-6.3). Selected socio-demographic variables associated with syphilis infection are reported by clinic, and are shown in Table 15. Women living in rural areas had higher prevalence than those in urban areas ($p < 0.0001$) (Figure 6).

Marital status did not appear to influence the prevalence of syphilis (Figure 3). The age specific prevalence of syphilis were 6.5% for age group 15-24, 7.8% for age group 25-34 and 10.4% for age group 35-49. The observed differences in age-specific prevalence were statistically significant ($p < 0.001$), suggesting that there was a higher likelihood of having syphilis for women aged >34 years compared to those less than 34 years of age (Figure 2). As in previous years, in contrast to women with HIV, women with no education were more likely to be infected with syphilis than were women with some education ($p < 0.0001$).

3.3 HIV/Syphilis co-infection

Overall, 130/17813 (0.7%) of clinic attendees were co-infected with syphilis and HIV.

3.4 Discussion

HIV prevalence in this surveillance round was 8.7%, with a range of 4.8% to 15.3% within 10 regions of Tanzania. Previous HIV prevalence in Tanzania ranged from 4% to 32% using a variety of different methodologies. Important findings from these data include a higher HIV prevalence in women living in border areas, reporting formal education, and among single women with previous pregnancies. The overall prevalence of syphilis was 7.3%, with a range of 2.1% in Kigoma to 14.9% in Kagera. Notable observations from the syphilis data include higher syphilis prevalence in women from roadside clinics and with no formal education. However, unlike HIV, there was no association with marital status.

The ANC serosurveillance programme described here provides a model for systematic and reproducible data collection within Tanzania and countries striving to increase reliability of field data. As observed during the previous HIV surveillance in 2001/2002 as well as in this surveillance round, the introduction of DBS technology for blood storage and the standardized approach to surveillance methods, improved the reliability and quality of data collection from the field. ANC serosurveillance in Tanzania will continue to provide yearly HIV prevalence data for use in planning interventions, monitoring HIV infection trends and assessing effectiveness of prevention programmes.

4

COMPARISON BETWEEN DATA COLLECTED IN THE YEAR 2001/02 AND YEAR 2003/04

4.1 Introduction

The aim of the surveillance program is to generate trends of HIV infection and syphilis so as to assess the extent to which the various interventions are influencing the course of the epidemic. The surveillance programme was intensified in 1999 after realizing that the surveillance system that began in 1990 was no longer providing the required data due to lack of resources. Hence, the first NACP-led antenatal-care surveillance for pregnant women was launched in January 2002 and the second was conducted in October 2003. Data from the two survey rounds have availed two data points, which serve as initial points for describing the HIV infection trends in future. Details of the methodology adopted in the two surveys are given in Chapter 2 of this report.

4.2 Comparisons between regions, clinic sites and time periods.

Following the sero-survey among pregnant women that was conducted between January and April 2002, a second round survey was conducted between October 2003 and January 2004. The first survey round involved 24 clinic sites in six regions while the second involved 57 sites in ten regions. The second survey round incorporated all the 24 sites that were surveyed in the first round, making it possible to relate data of the 24 clinics collected during the two time periods. Regional variation of HIV infection with time indicates that, except for Dar es Salaam region and few ANC sites, there is no statistically significant difference between the HIV prevalence for 2001/ 2002 and that for 2003/2004. The sites where the HIV prevalence difference is statistically significant are Buguruni in Dar es Salaam and Kimeya and Nkwenda in Kagera, Table 3.

Table 2. Comparison of the characteristics of study population for the 2001/02 and 2003/04 ANC Surveys, Tanzania, 2003/04

Demographic characteristics	2001/ 2002		2003/2004	
	Number	Percent	Number	Percent
Age group				
15-24	3,924	53.9	4,377	55.6
25-34	2759	37.9	2,877	36.5
35+	516	7.1	550	7.0
Previous pregnancies				
None	1,877	26.8	2453	31.1
1 to 2	3,031	43.3	3227	40.9
3 to 4	1,379	19.7	1381	17.5
5 or more	714	10.2	692	8.8
Level of Education				
No formal	1150	15.9	1365	17.3
Primary	5575	76.9	5850	74.2
Secondary+	528	7.2	654	8.3
Marital Status				
Single	969	13.3	783	9.9
Married	6,253	86.0	7054	89.5

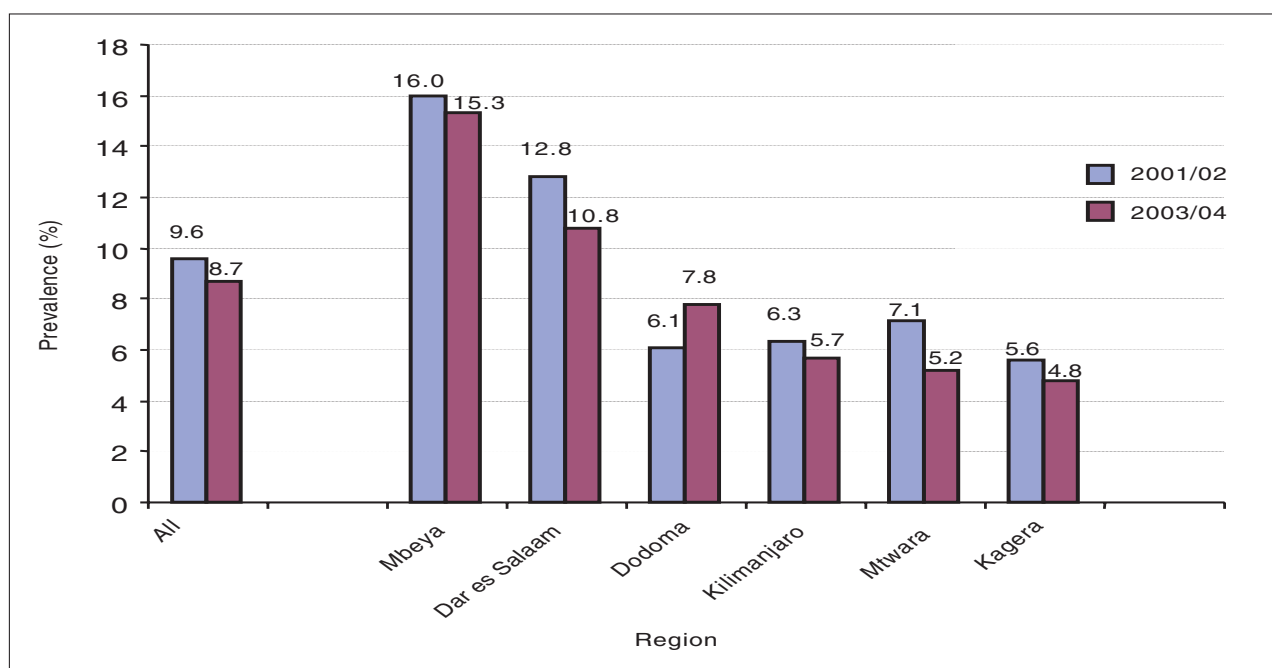
NB. Totals may not be constant in various demographic characteristics.

Table 3: Comparisons of HIV prevalence among ANC attendees by region between 2001/02 and 2003/04, Tanzania, 2003/04.

REGION	2001/02			2003/04			p-value
	Total	Positive	Prevalence	Total	Positive	prevalence	
Dodoma	888	54	6.1	1621	126	7.8	0.12
Dar es salaam	1697	217	12.8	3018	326	10.8	0.04
Kagera	1494	84	5.6	1826	88	4.8	0.28
Kilimanjaro	965	61	6.3	1429	81	5.7	0.51
Mbeya	1369	219	16.0	2442	374	15.3	0.58
Mtwara	862	61	7.1	1279	67	5.2	0.08
Dar es salaam							
Buguruni	571	94	16.4	884	107	12.1	0.019
Kasorobo	280	28	10.0	450	43	9.6	0.84
Kigamboni	334	40	12.0	389	36	9.3	0.24
Oysterbay	512	56	11.0	478	50	10.5	0.81
Dodoma							
Bahi	173	2	1.2	181	8	4.4	0.06
Handali	204	1	0.5	228	1	0.4	0.94
Kibaigwa	181	20	11.0	203	18	8.9	0.48
Makole	330	32	9.8	339	31	9.1	0.81
Kagera							
Bukoba	516	44	8.5	410	39	9.5	0.61
Katoro	333	10	3.0	245	6	2.4	0.69
Kimeya	181	11	6.1	241	2	0.8	0.002
Nkwenda	464	18	3.9	452	7	1.5	0.03
Kilimanjaro							
Hedaru	294	16	5.5	221	5	2.3	0.07
Majengo	424	32	7.6	323	22	6.8	0.7
Masama	133	3	2.3	268	17	6.3	0.08
Umbwe	114	10	8.8	103	3	2.9	0.07
Mbeya							
Chimala	217	37	17.1	249	38	15.3	0.6
Ilembo	211	15	7.1	188	15	8.0	0.74
Kiwanjampaka	568	102	17.9	726	137	18.9	0.91
Kyela	373	64	17.2	323	51	15.8	0.63
Mtwara							
Ligula	305	38	12.5	389	37	9.5	0.22
Mangaka	279	12	4.3	267	13	4.9	0.75
Nanyama	125	5	4.0	176	6	3.4	0.79
Tandahimba	153	6	4.0	147	1	0.7	0.06

Overall, the HIV prevalence was lower during 2003/2004 compared to 2001/2002. Except for Dodoma region, the HIV prevalence in the five regions for 2003/4 was consistently lower than that of 2002, Figure 7.

Fig 7: Comparison of region specific HIV prevalence among ANC attendees between 2001/02 and 2003/04



In the majority of the sites (18/24) the HIV prevalence was lower during 2003/2004 than 2002, but with the exception of six sites. However, the difference was not statistically significant, figure 8 and table 3.

Fig 8: Comparison of site specific HIV prevalence among ANC attendees, between 2001/02 and 2003/04

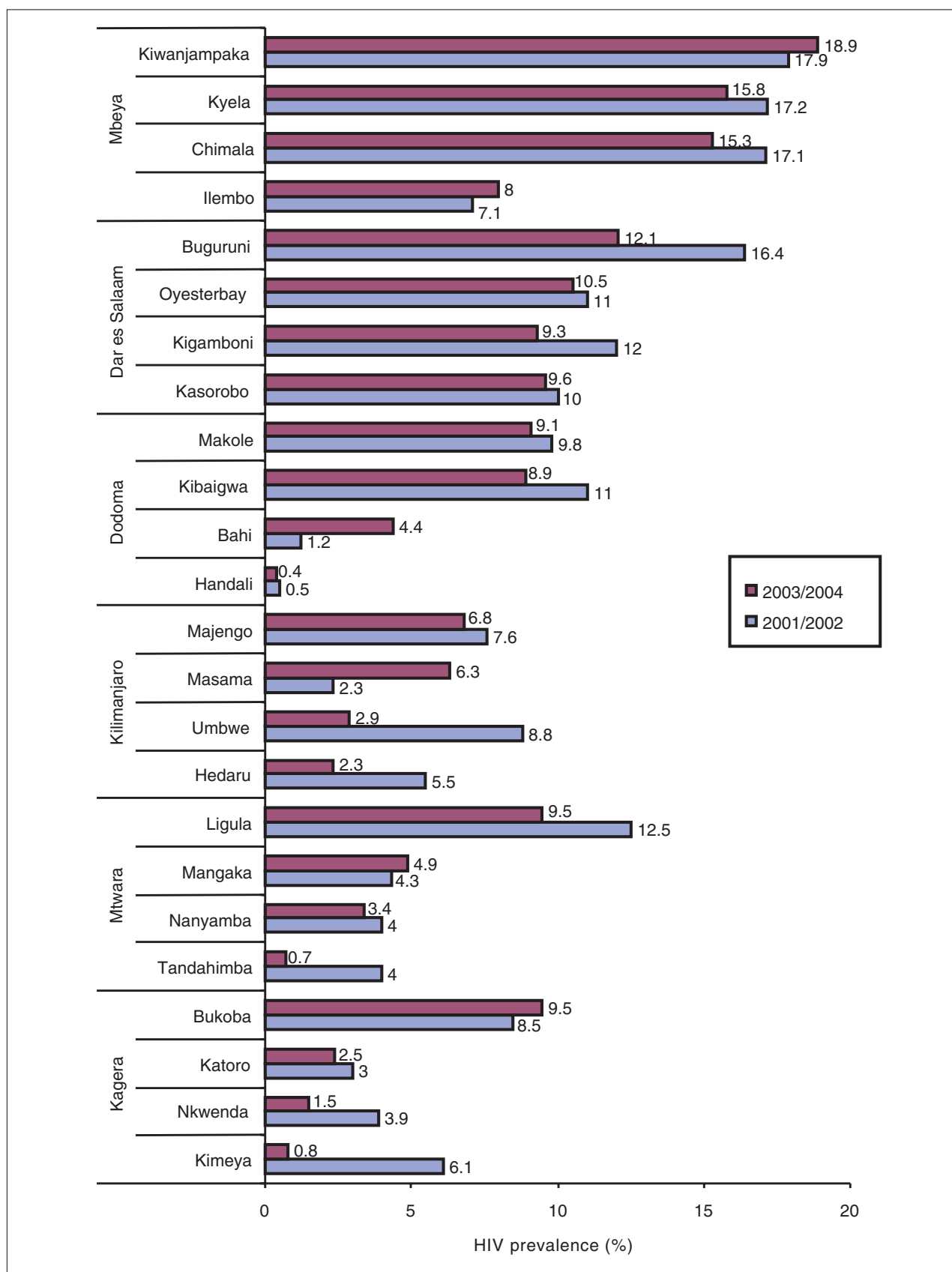


Fig 9: Comparisons of age group specific HIV prevalence among ANC attendees between 2001/02 and 2003/04

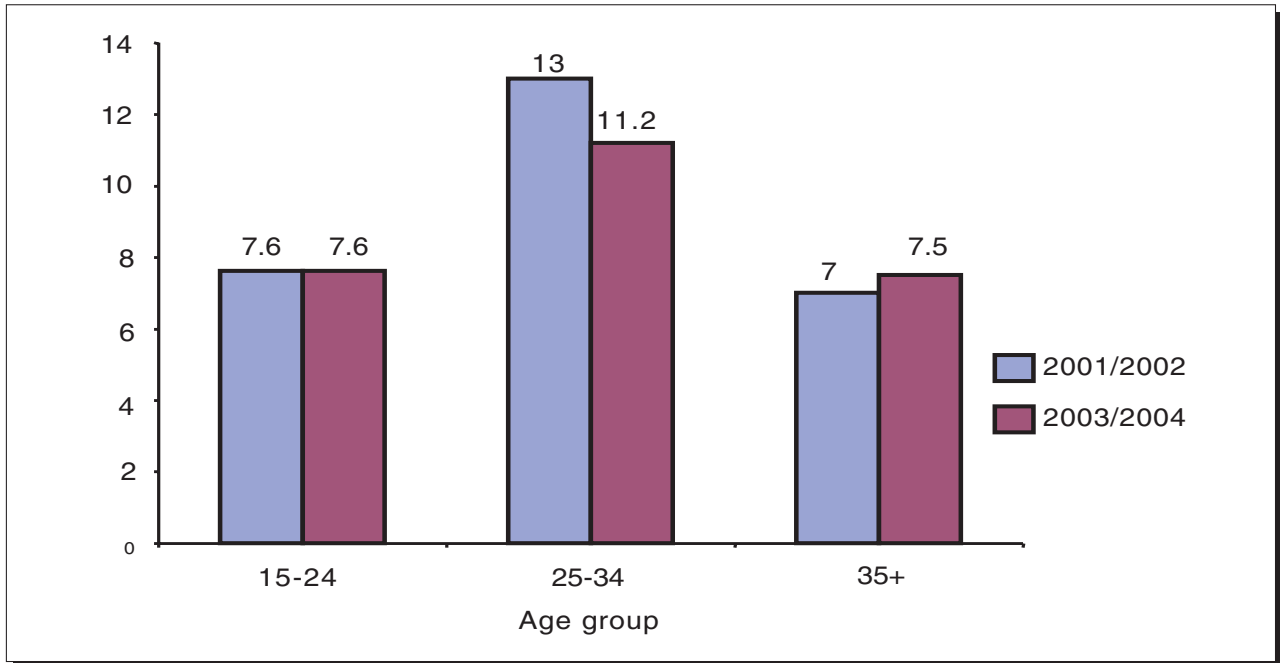


Fig 10: Comparison of HIV prevalence among ANC attendees according to number of previous pregnancies between 2001/02 and 2003/04

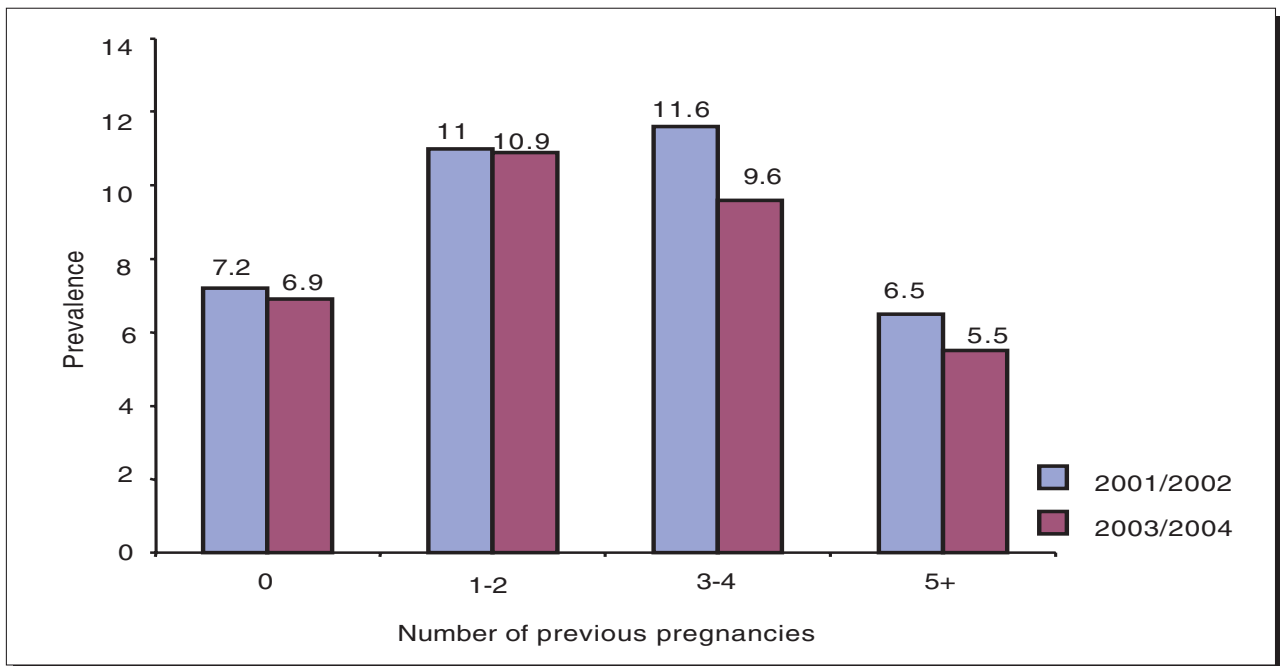
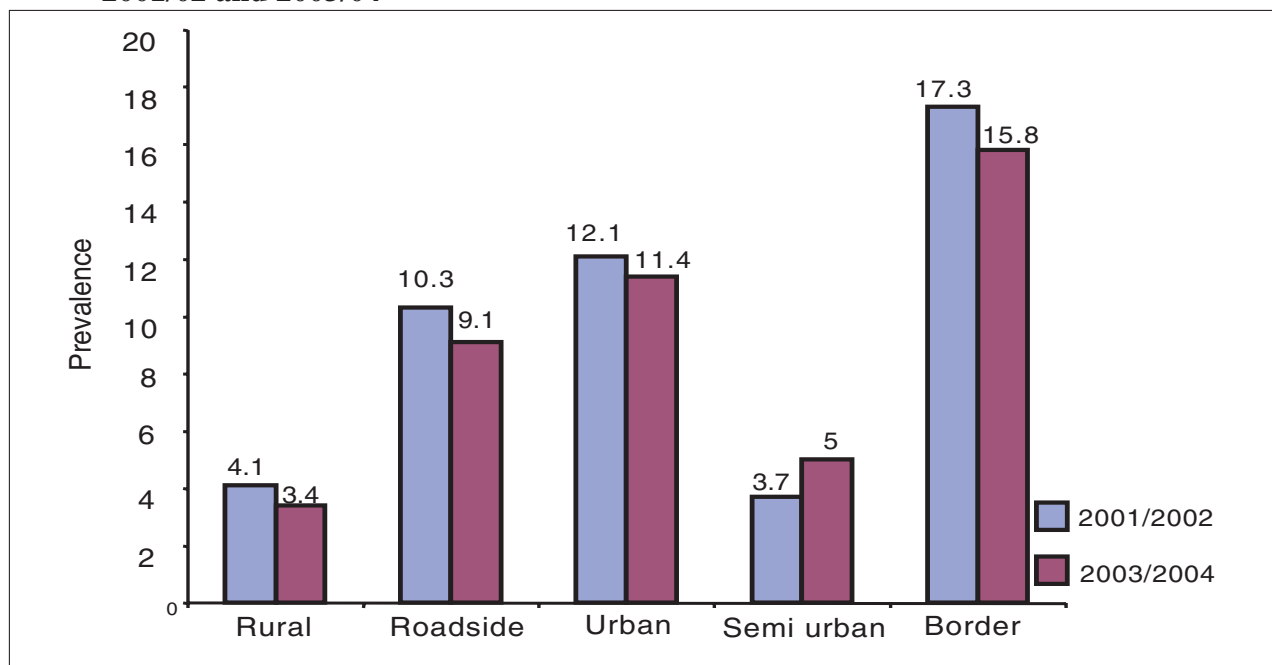
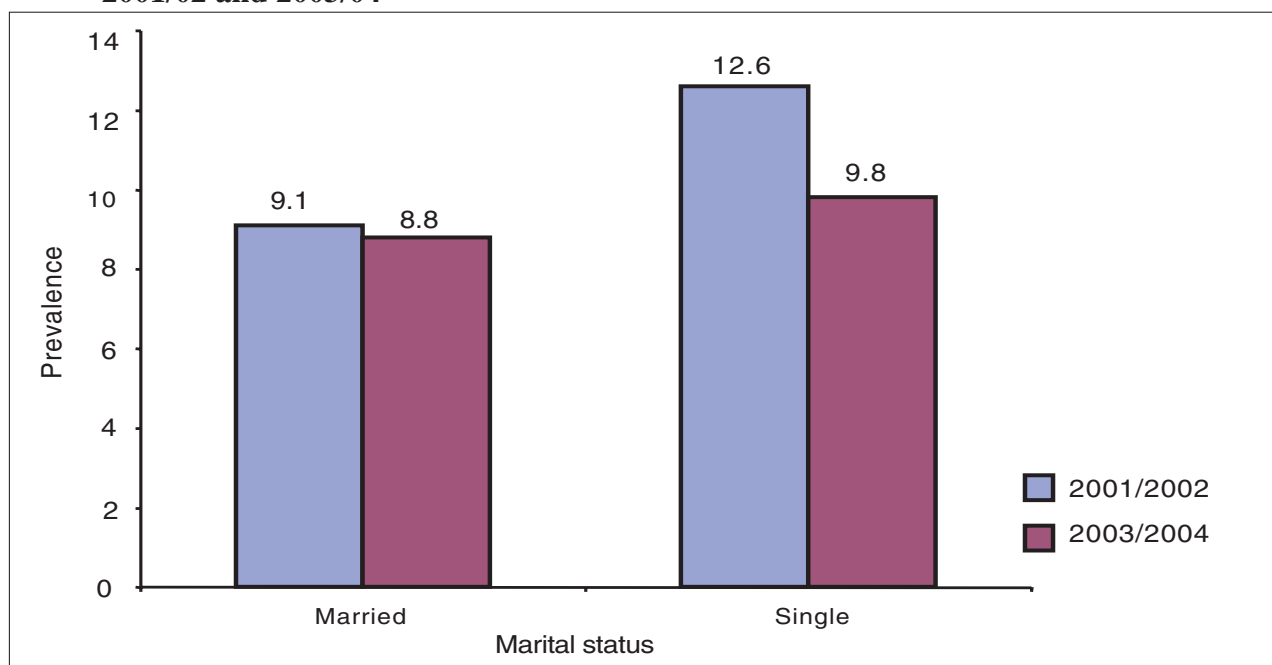


Fig 11: Comparison of HIV prevalence among ANC attendees by place of residence between 2001/02 and 2003/04**Fig 12: Comparison of HIV Prevalence among ANC attendees by marital status between 2001/02 and 2003/04**

4.3 Discussion

The two survey rounds showed only a modest decline in HIV sero-prevalence ranging from 5.6% in Kagera region to 16.0% in Mbeya region in the 2002 survey with similar values for the 2003/04 survey; 4.8% in Kagera to 15.3% in Mbeya. As shown in Table 3 and Figure 8 above, HIV seroprevalence tended to decline between the 2001/02 and 2003/4 surveys. This decline was however, only statistically significant for Buguruni in Dar es Salaam and Kimeya and Nkwenda in Kagera.

5

ESTIMATING AND PROJECTING HIV PREVALENCE IN TANZANIA

5.1 Background

Recently, the WHO, UNAIDS and its partners released an update of the Estimations and Projections Package (EPP 2005) for HIV/AIDS. This update provides improved software for making estimations and projections of HIV by organizing ANC prevalence data and preparing short-term projections for HIV. The EPP 2005 software fits an epidemic curve on the ANC HIV surveillance data, which have been collected over time and generates estimates of HIV prevalence, number living with HIV and new HIV infections. The software allows for calibration of the inputted ANC surveillance data to match the overall prevalence as measured in large-scale population surveys.

5.2 Methods

The HIV prevalence data set from ANC clinics covering the period from 1985 to 2002 was agreed upon in a consensus workshop held in 2004 to be used for future estimations and projections. The data set was updated by incorporating the HIV prevalence data from ANC clinics for 2003/2004. A new work set for the current estimates was then created in the EPP 2005. In this work set a generalized epidemic state was selected and the national epidemic was defined as urban and rural sub-epidemics. The 2005 UN population estimates for adults aged 15 years and above was applied. This population was divided into urban and rural in the proportions of 77.4% for rural and 22.6% for urban areas. These rural and urban proportions were produced by the 2002 national population census.

The ANC surveillance sites were categorized into urban and rural areas on the basis of the standard national definitions of urban and rural areas. This process produced 40 urban and 35 rural clinic sites. Prevalence data points were available from 1986 to 2003 and were entered into the EPP 2005 urban and rural pages.

Each sub-epidemic was run independently by fitting the model to all data and on level fits. The t_0 , f_0 , r and ϕ were all not fixed to allow the engine to search for the best curve fit. The ANC HIV prevalence was calibrated using an average of 5.3% for rural and 10.9% for urban HIV prevalence. These averages were obtained from the 2003 Tanzania HIV Indicator Survey (THIS). Since rural clinics include peri-urban sites, it is evident that they are not truly rural. Hence, the HIV prevalence for rural areas was reduced by 20% to adjust for the inflating effect of peri-urban sites where HIV prevalence tends to be higher.

5.3 Results

Figure 13 depicts three HIV prevalence curves, the urban, national and rural prevalence curves representing estimates and projections for the period from 1980 to 2010. The urban HIV epidemic curve shows an increasing trend that reached its peak in 1992 and subsequently leveled to a plateau. The rural curve shows a steeply increasing HIV prevalence trend until 1995 when it reached its peak that was subsequently followed by a gradually declining trend. The national HIV prevalence curve depicts a trend between the two urban and rural scenarios.

The prevalence estimates shown on Table 4 complement the prevalence trends observed on Figure 13. The table also provides estimations of the number of people living with HIV and the number of new HIV infections each year.

Figure 13: Estimated trends in HIV prevalence for the period 1980-2010, Tanzania, 2003/04

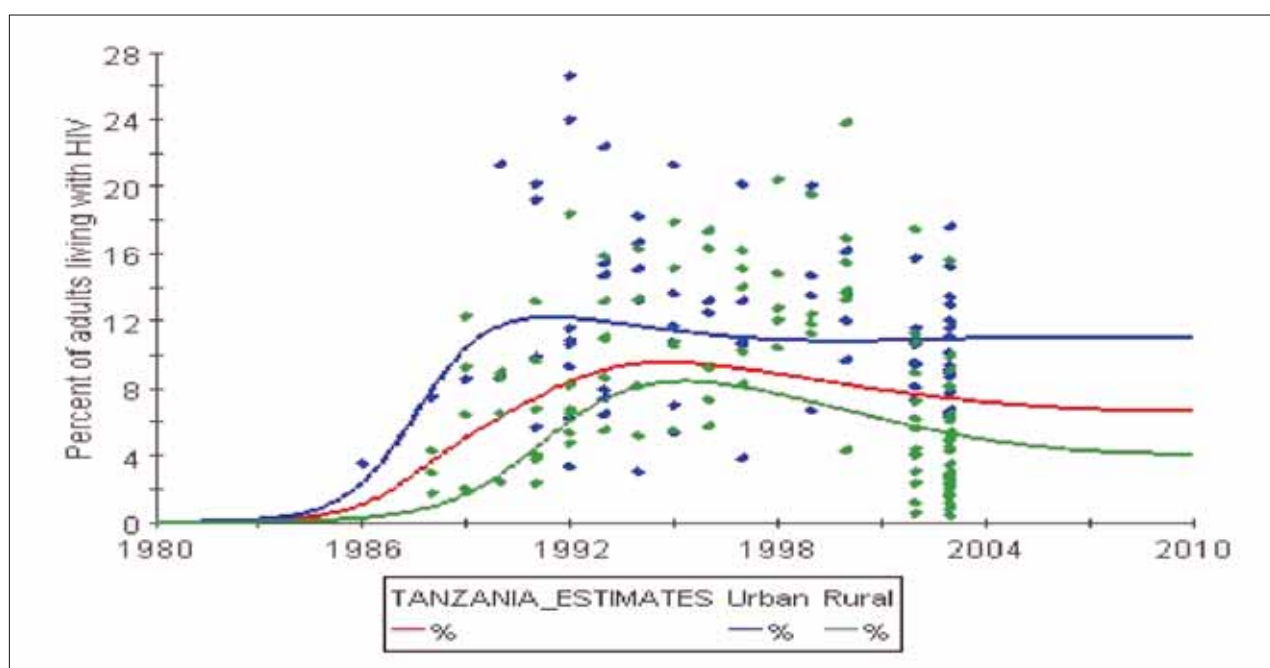


Table 4a: Estimated HIV infection for the period 1980 - 1990, Tanzania, 2003/04

NATIONAL ESTIMATES											
Pop in base year: 23,834,140											
BASE YEAR	2005										
Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
% HIV+	0	0.01	0.02	0.06	0.13	0.31	0.69	1.39	2.41	3.54	4.66
Number HIV+	725	725	3,154	7,612	18,386	43,884	100,395	208,507	370,880	561,041	761,282
New HIV infections	0	727	2,447	4,526	10,970	26,002	57,744	110,969	168,466	201,794	220,143
Population	12,247,679	12,598,504	12,961,497	13,337,502	13,726,594	14,128,250	14,542,646	14,970,534	15,411,221	15,863,212	16,324,387
Urban (Population in base year 5,386,516)											
% HIV+	0	0.02	0.06	0.16	0.40	0.98	2.25	4.57	7.67	10.39	11.97
Number HIV+	725	725	1,932	5,059	13,085	32,939	77,971	163,164	281,392	391,929	463,829
New HIV infections	727	727	1,221	3,173	8,160	20,210	45,940	87,365	122,909	119,344	86,353
Population	2,919,448	3,003,074	3,089,596	3,179,210	3,271,915	3,367,539	3,465,998	3,567,162	3,670,211	3,773,752	3,876,167
Rural (Population in base year 18,447,624)											
% HIV+	0	0	0.01	0.03	0.05	0.10	0.20	0.40	0.76	1.40	2.39
Number HIV+			1,222	2,553	5,301	10,945	22,425	45,342	89,488	169,112	297,453
New HIV infections			1,226	1,353	2,810	5,792	11,804	23,604	45,557	82,449	133,790
Population	9,328,231	9,595,430	9,871,900	10,158,292	10,454,679	10,760,711	11,076,648	11,403,373	11,741,010	12,089,460	12,448,220

Table 4b: Estimated HIV infection for the period 1991 - 2000, Tanzania, 2003/04

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
% HIV+	5.79	6.81	7.57	7.98	8.10	8.02	7.83	7.59	7.33	7.08
Number HIV+	971,551	1,175,655	1,342,199	1,453,472	1,513,739	1,537,204	1,537,697	1,525,884	1,509,595	1,494,600
New HIV infections	241,434	249,588	229,011	192,492	160,806	142,632	136,445	138,196	144,506	153,172
Population	16,792,314	17,264,471	17,738,540	18,212,944	18,687,334	19,161,907	19,636,268	20,113,814	20,598,519	21,095,935
Urban (Pop in base year 5,386,516)										
% HIV+	12.57	12.61	12.38	12.05	11.70	11.38	11.12	10.93	10.82	10.78
Number HIV+	499,679	513,510	515,929	513,132	508,778	505,200	503,843	505,605	510,923	519,809
New HIV infections	57,061	42,387	38,339	39,966	44,289	49,684	55,151	60,203	64,591	68,211
Population	3,976,161	4,073,075	4,166,949	4,258,447	4,348,724	4,439,041	4,530,316	4,624,056	4,721,485	4,823,711
Rural (Pop in base year 18,447,624)										
% HIV+	3.68	5.02	6.09	6.74	7.01	7.01	6.84	6.59	6.29	5.99
Number HIV+	471,872	662,145	826,269	940,340	1,004,961	1,032,005	1,033,854	1,020,279	998,672	974,791
New HIV infections	184,373	207,202	190,671	152,526	116,517	92,948	81,294	77,993	79,915	84,961
Population	12,816,154	13,191,395	13,571,590	13,954,497	14,338,609	14,722,866	15,105,951	15,489,758	15,877,035	16,272,223

Table 4c: Estimated HIV infection for the period 2001 - 2010, Tanzania, 2003/04

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
% HIV+	6.87	6.70	6.57	6.49	6.44	6.43	6.44	6.47	6.51	6.55
Number HIV+	1,484,954	1,483,244	1,490,870	1,508,278	1,535,223	1,570,879	1,613,886	1,662,514	1,714,917	1,769,379
New HIV infections	162,706	172,174	181,125	189,430	197,195	204,522	211,381	217,704	223,486	228,803
Population	21,607,900	22,136,761	22,683,706	23,249,373	23,834,140	24,437,684	25,059,187	25,698,128	26,354,491	27,028,401
Urban (Population in base year 5,386,516)										
% HIV+	10.79	10.83	10.90	10.97	11.02	11.06	11.08	11.09	11.09	11.08
Number HIV+	531,820	546,148	561,805	577,865	593,707	609,053	623,855	638,183	652,185	666,053
New HIV infections	70,968	72,844	73,942	74,507	74,925	75,528	76,462	77,734	79,297	81,089
Population	4,930,453	5,041,004	5,154,177	5,269,271	5,386,516	5,506,401	5,629,136	5,754,679	5,882,912	6,013,753
Rural (Population in base year 18,447,624)										
% HIV+	5.72	5.48	5.30	5.17	5.10	5.08	5.10	5.14	5.19	5.25
Number HIV+	953,134	937,096	929,065	930,413	941,516	961,825	990,032	1,024,331	1,062,732	1,103,326
New HIV infections	91,738	99,330	107,182	114,922	122,270	128,994	134,919	139,970	144,189	147,714
Population	16,677,446	17,095,758	17,529,528	17,980,101	18,447,624	18,931,283	19,430,052	19,943,449	20,471,579	21,014,649

6

HIV AND SYPHILIS DATA BY REGIONS AND SITES

Table 5a. HIV prevalence among ANC attendees, Dar es Salaam, Tanzania, 2001/02 and 2003/04

Characteristics	Buguruni (Urban)		Kasorobo (Urban)		Kigamboni (Urban)		Oysterbay (Urban)		Kimara (Urban)		Kivalani (Urban)		Total	
	2001-2002	2003-2004	2001-2002	2003-2004	2001-2002	2003-2004	2001-2002	2003-2004	2003-2004	2003-2004	2001-2002	2003-2004	2001-2002	2003-2004
	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)
Age group (yrs)														
15-24	333	12.0	164	6.7	179	6.1	279	7.9	223	7.6	256	10.9	955	8.8
25-34	209	23.0	97	15.5	125	19.2	202	15.8	134	13.4	143	16.1	633	18.8
35-48	26	19.2	18	11.1	25	20.0	20	10.0	15	0.0	13	7.7	89	5.7
Not stated	3	0.0	1	0.0	5	9.1	11	9.1	12	0.0	21	9.5	20	5.3
Median age (yrs)	23		23		24		24		23		23		23	
Marital status														
Single	108	13.0	63	12.7	96	15.6	140	12.9	68	4.4	70	17.1	407	13.5
Married	458	17.2	217	9.2	224	11.2	366	10.1	314	10.2	363	11.6	1265	12.7
Other							4	25.0					4	25.0
Not stated	5	0.0	3	0.0	14	0.0	2	50.0	2	0.0			21	4.8
Previous pregnancies														
0	231	10.0	3	0.0	117	6.8	189	7.9	152	7.9			540	8.5
1-2	251	18.7	179	7.3	138	12.3	232	12.1	163	9.2	299	10.4	800	13.1
3-4	75	26.7	75	16.0	55	20.0	71	12.7	38	10.5	107	18.7	276	18.8
> 5	14	21.4	23	13.0	24	16.7	20	25.0	6	0.0	17	5.9	81	18.5
Not stated														
Total number tested for HIV	571		280		334		512		384		433		1697	
Total number HIV positive	93		28		40		56		35		54		218	
Overall HIV prevalence (%) per site	16.4	12.1	10.0	9.6	12.0	9.3	11.0	10.5	9.1	12.5	12.8	10.8		

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table 5b. HIV prevalence among ANC attendees, Dar es Salaam, Tanzania, 2001/02 and 2003/04

Characteristics	Buguruni (Urban)		Kasorobo (Urban)		Kigamboni (Urban)		Oysterbay (Urban)		Kimara (Urban)		Kivalani (Urban)		Total												
	2001-2002		2003-2004		2001-2002		2003-2004		2001-2002		2003-2004		2001-2002		2003-2004										
	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)									
Education level																									
No formal	58	19.0	79	13.9	27	7.4	77	5.2	47	10.6	54	5.6	19	5.3	15	6.7	37	10.8	33	6.1	151	12.6	295	8.5	
Primary	472	16.1	726	12.0	239	10.5	354	10.2	245	11.0	281	9.6	435	11.5	397	9.8	290	8.3	353	13.6	1391	12.8	2401	10.9	
> secondary	40	15.0	78	11.5	14	7.1	18	16.7	40	20.0	54	11.1	58	10.3	66	15.2	56	12.5	46	8.7	152	13.8	318	12.3	
Not stated			1	0.0			1	0.0									1	0.0	1	0.0			4	0.0	
Distance from residence to clinic																									
0-5 km	451	16.4	859	12.2	276.0	9.4	446	9.6	303	11.9	373	8.8	506	10.9	220	9.5	380	9.5	413	12.8	1536	12.4	2691	10.8	
More than 5 km	115	16.5	18	11.1	3.0	66.7			31	12.9	14	21.4	3	33.3	250	11.6	1	0.0	11	9.1	152	17.1	294	11.9	
Not stated	5	0.0	7	0.0	1.0	0.0	4	0.0			2	0.0		3	33.3	8	0.0	3	0.0	9	0.0	9	11.1	33	0.0
Duration living in residence																									
< 6 months	55	12.7	109	12.8	0	0	5	0.0	48	12.5	40	12.5	6	0.0	49	8.2	78	11.5	50	14.0	109	11.90	331	11.8	
> 6 months	514	16.5	773	12.0	280	10.0	445	9.7	284	12.0	345	8.7	504	11.1	425	10.6	305	8.5	381	12.1	1582	12.80	2674	10.6	
Not stated	12	0.0	2	0.0	0	0			2	0.0	4	25.0	2	50.0	4	25.0	1	0.0	2	50.0	6	33.3	13	23.1	
Total number tested for HIV	571		884		280		450		334		389		512		478		384		433		1697		3018		
Total number HIV positive	93		107		28		43		40		36		56		50		35		54		218		325		
Overall HIV prevalence (%) per site		16.4		12.1		10.0		9.6		12.0		9.3		11.0		10.5		9.1		12.5		12.8		10.8	

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table 6a. HIV prevalence among ANC attendees, Dodoma, Tanzania, 2001/02 and 2003/04

Characteristics	Bahi (Rural)		Handari (Rural)		Kibaigwa (Road side)		Makole (Urban)		Mpwapwa (semi Urban)		Wajenzi (Urban)		Total			
	2001-2002	2003-2004	2001-2002	2003-2004	2001-2002	2003-2004	2001-2002	2003-2004	2003-2004	2003-2004	2001-2002	2001-2002	2001-2002	2003-2004		
	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)		
Agegroup (yrs)																
15-24	68	1.5	98	4.1	107	5.6	120	8.3	170	5.3	207	10.1	453	5.3	883	6.7
25-34	77	1.3	58	3.4	66	19.7	70	10.0	117	7.7	120	22.5	336	8.0	581	10.5
35-48	22	0.0	25	8.0	7	14.3	13	7.7	30	0.0	23	4.3	87	4.6	151	3.3
Not stated	6	0.0			1	0.0			2	50.0	1	0.0	12	0.0	6	16.7
Median age (yrs)	27		23		22		23		24		23		24		24	
Marital status																
Single	12	8.3	16	0.0	18	5.6	40	12.5	48	8.3	80	2.0	107	7.5	258	11.6
Married	159	0.6	165	4.8	161	11.8	163	8.0	270	5.6	271	12.2	774	6.1	1358	7.1
Other									1	0.0			1	0.0	2	0.0
Not stated	2	0.0			2	0.0							6	0.0	3	0.0
Previous pregnancies																
0	44	0.0	53	0.0	47	4.3	53	11.3	88	5.7	121	14.0	250	3.6	478	7.1
1-2	56	1.8	66	6.1	78	9.0	86	8.1	131	7.6	111	12.6	344	7.8	637	8.3
3-4	39	0.0	30	6.7	34	14.7	39	10.3	62	4.8	80	18.8	171	6.4	303	10.6
> 5	34	2.9	31	6.5	22	27.3	21	4.8	33	3.0	30	10.0	123	6.2	181	3.9
Not stated			1	0.0			4	0.0	5	0.0	9	0.0			22	0.0
Total number tested for HIV	173		181		181		203		319		351		888		1621	
Total number HIV positive	2		8		19		18		19		49		54		126	
Overall HIV prevalence (%) per site	1.2		4.4		0.5		11.0		9.1		13.9		6.1		7.8	

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table 6b. HIV prevalence among ANC attendees, Dodoma, Tanzania, 2001/02 and 2003/04

Characteristics	Bahi (Rural)				Handari (Rural)				Kibaigwa (Road side)				Makole (Urban)				Mpwapwa (Semi urban)		Wajenzi (Urban)		Total				
	2001-2002		2003-2004		2001-2002		2003-2004		2001-2002		2003-2004		2001-2002		2003-2004		2001-2002		2003-2004		2001-2002		2003-2004		
	No.	HIV Prevalence (%)	No.	Prevalence (%)	No.	HIV Prevalence (%)	No.	Prevalence (%)	No.	HIV Prevalence (%)	No.	Prevalence (%)	No.	HIV Prevalence (%)	No.	Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	
Education level																									
No formal	65	0.0	86	2.3	103	1.0	111	0.9	59	5.1	66	10.6	30	10.0	23	8.7	89	1.1	41	9.8	257	2.7	416	4.1	
Primary	105	1.9	95	6.3	99	0.0	114	0.0	116	12.9	133	8.3	249	9.6	263	9.5	210	8.6	278	13.3	569	7.2	1093	8.9	
> secondary	2	0.0					1	0.0	5	40.0	4	0.0	50	10.0	53	7.5	20	0.0	32	25.0	57	12.3	110	10.9	
Not stated	1				2		2	0.0	1				1								5		2	0.0	
Distance from residence to clinic																									
0-5 km	135	1.5	177	3.4	201	0.5	228	0.4	141	12.1	138	8.7	107	9.3	316	9.5	226	8.4	340	14.4	584	5.1	1425	8.2	
More than 5 km	36	0.0	4	50.0	1	0.0			39	5.1	64	9.4	220	10.0	22	4.5	93	0.0	11	0.0	296	8.1	194	4.6	
Not stated	2	0.0			2	0.0			1	0.0	1	0.0	3	0.0	1	0.0					8	12.5	2	0.0	
Duration living in residence																									
< 6 months			7	0.0	23	0.0	2	0.0	0		2	0.0	45	8.9	93	8.6	25	16.0	51	11.8	68	5.9	180	10.0	
> 6 months	161	1.2	173	4.6	177	0.6	224	0.4	177	11.3	201	9.0	278	10.1	245	9.4	294	5.1	300	14.3	793	6.4	1437	7.5	
Not stated	12	0.0	1	0.0	4	0.0	2	0.0	4	0.0			7	0.0	1	0.0					27	0.0	4	0.0	
Total number tested for HIV	173		181		204		228		181		203		330		339		319		351		888		1621		
Total number HIV positive	2		8		1		1		19		18		32		31		19		49		54		126		
Overall HIV prevalence (%) per site		1.2		4.4		0.5		0.4		11.0		8.9		9.8		9.1		5.9		13.9		6.1		7.8	

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table 7a: HIV prevalence among ANC attendees, Kagera, Tanzania 2001/02 and 2003/04

Characteristics	Bukoba (urban)		Katoro (Semi-urban)		Kimeya (Rural)		Nkwenda (Rural)		Nyamiyaga (Semi-urban)		Rwamishenye (Urban)		Total	
	2001-2002	2003-2004	2001-2002	2003-2004	2001-2002	2003-2004	2001-2002	2003-2004	2003-2004	2003-2004	2003-2004	2003-2004	2001-2002	2003-2004
	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)
Age group (yrs)														
15-24	310	6.5	247	6.9	74	2.7	117	0.0	258	3.5	233	1.3	89	2.2
25-34	193	11.4	153	13.7	84	9.5	95	0.0	165	4.2	178	2.2	71	1.4
35-48	10	20.0	9	11.1	16	0	26	3.8	40	5	36	0.0	15	0.0
Not stated	3	0	1	0.0	7	14.3	3	33.3	1	0	5	0.0	7	14.3
Median age (yrs)	23		23		25		25		24		24		24	
Marital status														
Single	39	15.4	16	0.0	5	20.0	6	0.0	10	20.0	8	0.0	10	10.0
Married	470	8.1	393	9.9	176	5.7	233	0.9	453	3.5	443	1.6	168	1.8
Other	1								1				1	0.0
Not stated	6		1	0.0	5	0	2	0.0			1	0.0	3	0.0
Previous pregnancies														
0	195	6.2	150	6.0	27	0.0	51	2.0	104	4.8	106	1.9	39	5.1
1-2	228	10.5	181	12.2	54	3.7	77	0.0	162	2.5	141	2.8	64	3.1
3-4	78	10.3	61	13.1	47	12.8	61	0.0	106	2.8	103	1.0	39	0.0
> 5	15	0.0	18	0.0	53	5.7	50	2.0	92	6.5	99	0.0	35	0.0
Not stated	195	6.2			23	4.3	1	0.0	23	4.3	1	0.0	23	4.3
Total number tested for HIV	516		410		181		241		464		452		182	
Total number HIV positive	43		39		11		2		18		7		4	
Overall HIV prevalence (%) per site	8.5	9.5		2.5	6.1	0.8		3.9		2.2	9.8			5.6

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table 7b: HIV prevalence among ANC attendees, Kagera Tanzania, 2001/02 and 2003/04

Characteristics	Bukoba urban		Katoro (Semi-urban)		Kimeya (Rural)		Nkwenda (Rural)		Nyamiyaga (Semi-urban)		Kwamishenye (Urban)		Total												
	2001-2002		2003-2004		2001-2002		2003-2004		2001-2002		2003-2004		2001-2002		2003-2004										
	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)									
Education level																									
No formal	19	0.0	12	16.7	58	5.2	85	3.5	70	5.7	104	1.0	173	2.9	152	1.3	57	3.5	19	21.1	320	3.8	429	3.3	
Primary	428	9.3	333	9.6	270	2.6	156	1.9	109	6.4	135	0.7	282	4.3	293	1.4	118	1.7	240	8.3	1,089	6.1	1275	4.9	
> secondary	64	6.3	65	7.7	4	0.0	4	0.0	1	0	2	0.0	7	14.3	5	0.0	7	0.0	37	13.5	76	6.6	120	8.3	
Not stated	5	0.0			1	0.0			1	0			2	0	2	50.0					9	0	2	50.0	
Distance from residence to clinic																									
0-5 km	482	7.7	366	9.3	207	2.4	116	1.7	177	6.2	202	0.5	182	4.4	130	2.3	98	3.1	295	9.8	1,048	5.8	1207	6.0	
More than 5 km	26	23.1	44	11.4	119	4.2	126	3.2	2	0	38	2.6	280	3.6	321	1.2	82	1.2			427	4.9	611	2.5	
Not stated	8	12.5			7	0	3	0.0	2	0	1	0.0	2	0	1	0.0	2	0.0	1	0.0	19	5.3	8	0.0	
Duration living in residence																									
< 6 months			105	7.6			19	0.0	1	0	5	0.0	1	0	28	3.6	14	21.4	61	6.6	2	0	232	6.9	
> 6 months	513	8.6	303	10.2	330	3.0	225	2.7	177	6.2	232	0.9	462	3.9	421	1.4	167	0.6	235	10.6	1,482	5.6	1583	4.5	
Not stated	3	0	2	0.0	3	0	1	0.0	3	0	4	0.0	1	0	3	0.0	1	0.0			10	0	11	0.0	
Total number tested for HIV	516		410		333		245		181		241		464		452		182		296		1494		1826		
Total number HIV positive	43		39		10		6		11		2		18		7		4		29		83		87		
Overall HIV prevalence (%) per site		8.5	9.5			3.0		2.5		6.1		0.8		3.9		1.6		2.2		9.8		5.6		4.7	

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table 8a: HIV prevalence among ANC attendees, Mtwara Tanzania, 2001/02 and 2003/04

Characteristics	Ligula (Urban)		Mangaka (Semi-urban)		Nanyamba (Rural)		Tandahimba (Semi-urban)		Likimbe (Urban)		Mkunya (Rural)		Total	
	2001-2002	2003-2004	2001-2002	2003-2004	2001-2002	2003-2004	2001-2002	2003-2004	2003-2004	2003-2004	2001-2002	2003-2004	2001-2002	2003-2004
	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)
Age group (yrs)														
15-24	158	7.0	208	6.3	66	1.5	80	3.7	99	3.0	74	0.0	424	5.2
25-34	117	19.7	146	13.7	46	8.7	71	4.2	53	5.7	42	4.8	332	10.5
35-48	28	10.7	30	10.0	12	0.0	22	0.0	13	7.7	17	0.0	99	3.0
Not stated	2	100	5	20.0	3	0.0	1	0.0	1	0	5	20.0	7	20
Median age (yrs)	24		24		24		25		22		24		25	
Marital status														
Single	58	13.8	63	6.3	25	8.0	12	8.3	30	6.7	22	4.5	126	11.9
Married	247	12.1	325	9.8	144	4.2	164	3.0	134	3.7	113	0.9	733	6.3
Other														
Not stated			1	100.0	1	0.0			1	0.0			3	0.0
Previous pregnancies														
0	112	6.3	126	3.2	9	11.1	35	0.0	53	1.9	39	0.0	240	5.8
1-2	124	13.7	171	11.7	67	3.0	74	8.1	71	4.2	57	3.5	348	7.8
3-4	54	22.2	63	11.1	32	3.1	38	0.0	33	3.0	22	0.0	170	10.0
> 5	15	13.3	14	21.4	17	5.9	24	0.0	6	33.3	14	0.0	104	2.9
Not stated			15	20.0			5	0.0	2	0.0	3	0.0		
Total number tested for HIV	305		389		125		176		165		135		862	
Total number HIV positive	38		37		5		6		7		2		61	
Overall HIV prevalence (%) per site		12.5		9.5		4.3		4.8		4.2		1.5		7.1
						4.0		3.4		0.7		4.0		5.1

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table 8b: HIV prevalence among ANC attendees, Mtwara, Tanzania 2001/02 – 2003/04

Characteristics	Ligula (Urban)				Mangaka (Semi-urban)				Nanyamba (Rural)				Tandahimba (Semi-urban)				Likombe (Urban)		Mkunya (Rural)		Total				
	2001-2002		2003-2004		2001-2002		2003-2004		2001-2002		2003-2004		2001-2002		2003-2004		2001-2002		2003-2004		2001-2002		2003-2004		
	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	
Education level																									
No formal	57	8.8	82	9.8	91	4.4	97	0.0	47	2.1	101	4.0	68	4.4	42	0.0	33	0.0	56	1.8	263	4.9	411	3.2	
Primary	216	13.4	271	9.6	181	3.9	165	7.9	73	5.5	69	2.9	75	4.0	99	1.0	126	5.6	76	1.3	545	7.9	806	6.2	
> secondary	32	12.5	36	8.3	7	14.3	5	0.0	5	0.0	6	0.0	8	0.0	6	0.0	5	0.0	3	0.0	52	9.6	61	4.9	
Not stated													2	0.0			1	0.0			2	0.0	1	0.0	
Distance from residence to clinic																									
0-5 km	290	12.8	353	9.9	124	7.3	162	4.9	97	5.2	164	3.0	128	4.7	96	1.0	157	4.5	110	1.8	639	8.9	1042	5.6	
More than 5 km	14	7.1	35	5.7	154	1.9	105	4.8	27	0.0	12	8.3	23	0.0	51	0.0	4	0.0	24	0.0	218	1.8	231	3.5	
Not stated	1	0.0	1	0.0	1	0.0			1	0.0			2	0.0			4	0.0	1	0.0	5	0.0	6	0.0	
Duration living in residence																									
< 6 months	56	8.9	65	6.2					11	9.1	17	5.9	3	0.0	13	0.0	25	0.0	16	0.0	70	8.6	136	3.7	
> 6 months	248	13.3	320	10.3	277	4.3	267	4.9	112	3.6	157	3.2	149	4.0	130	0.8	138	5.1	118	1.7	786	7.0	1130	5.4	
Not stated	1	0.0	4	0.0	2	0.0			2	0.0	2	0.0	1	0.0	4	0.0	2	0.0	1	0.0	6	0.0	13	0.0	
Total number tested for HIV	305		389		279		267		125		176		153		147		165		135		862		1279		
Total number HIV positive	38		37		12		13		5		6		6		1		7		2		61		66		
Overall HIV prevalence (%) per site	12.5		9.5		4.3		4.8		4.0		3.4		4.0		0.7		4.2		1.5		7.1		5.1		

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table: 9 a. HIV prevalence among ANC attendees, Kilimanjaro, Tanzania, 2001/02 and 2003/04.

Characteristics	Hedaru (Road side)		Majengo (Urban)		Masama (Rural)		Umbwe (Rural)		Pasua (Urban)		Huruma (Semi Urban)		Total											
	2001-2002	2003-2004	2001-2002	2003-2004	2001-2002	2003-2004	2001-2002	2003-2004	2003-2004	2003-2004	2003-2004	2001-2002	2001-2002	2003-2004										
	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)								
Agegroup (yrs)																								
15-24	126	4.8	125	2.4	235	6.4	202	7.9	75	1.3	119	9.2	45	6.7	48	0	196	8.7	69	4.4	481	5.2	759	6.6
25-34	131	6.9	79	2.5	164	9.8	109	4.6	50	4.0	122	4.9	56	12.5	45	6.7	111	6.3	94	5.3	401	8.5	560	5.0
35-48	37	2.7	15	0	19	5.3	12	8.3	80	0	24	0	12	0	10	0	11	18.2	25	0	76	2.6	97	3.1
Not stated		-			6	0				-	3	0	1	0			5	0	3	0	7		13	0
Median age (yrs)	25		24		24		23		24		25		27		25		23		27		24		24	
Marital status																								
Single	20	10	11	0	60	10	33	6.1	10	10	19	10.5	12	8.3	4	25.0	56	5.4	34	8.8	102	9.8	157	7.0
Married	274	5.1	210	2.4	364	7.1	287	7.0	123	1.6	247	6.1	102	8.8	97	2.1	263	8.8	157	3.2	863	5.9	1261	5.6
Other														1	0		1	0					4	0
Not stated							1	0			2	0		1	0		3	0					7	0
Previous pregnancies																								
0	77	6.5	13	0	149	4.7	138	5.1	48	0.0	66	9.1	26	3.8	20	5	144	7.0	49	6.1	300	4.3	400	6.3
1-2	95	3.2	109	3.7	203	8.9	133	10.5	58	3.4	134	6.7	43	14	40	0	132	9.9	64	3.1	399	7.3	612	6.9
3-4	78	7.7	63	1.6	57	10.5	36	2.8	26	3.8	52	3.9	31	9.7	23	8.7	46	6.5	40	7.5	192	8.3	260	4.6
> 5	44	4.5	33	0	15	6.7	8	0	1	0.0	9	0	14	0.0	18	0	13	7.7	30	0	74	4.1	111	0.9
Not stated			3	0			8	0			7	0			2	0	18	5.6	8	0			46	2.2
Total number tested for HIV	294		221		424		323		133		268		114		103		191		323		965		1429	
Total number HIV positive	16		5		32		22		3		17		10		3		8		26		61		81	
Overall HIV prevalence (%) per site		5.5		2.3	7.6		6.8			2.3		6.3		8.8		2.9		4.2		8.1		6.3		5.7

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table: 9b. HIV prevalence among ANC attendees, Kilimanjaro, Tanzania, 2001/02 and 2003/04.

Characteristics	Hedaru (Road side)		Majengo (Urban)		Masama (Rural)		Umbwe (Rural)		Pasua (Urban)		Huruma (Semi Urban)		Total												
	2003-2004		2003-2004		2003-2004		2003-2004		2003-2004		2003-2004		2003-2004												
	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)											
Education level																									
No formal	16	0.0	27	0	5	20	13	15.4	0	0	19	5.3	3	0.0	4	0	0	0	9	11.1	24	4.2	72	5.6	
Primary	275	5.8	188	2.7	359	7.5	264	6.4	119	2.5	227	6.2	107	8.4	93	3.3	174	3.5	273	8.1	860	6.4	1218	5.5	
> secondary	2	0.0	5	0	60	6.7	46	3.0	14	0.0	20	5.0	4	25.0	6	0	16	12.5	40	7.5	80	6.3	133	6.8	
Not stated	1	0.0	1	0	0	0	0	0	0	0	2	1.0	0	0	1	0	1	0	0	0	1	0	6	16.7	
Distance from residence to clinic																									
0-5 km	203	4.9	113	1.8	361	6.9	295	6.4	131	2.3	264	6.4	108	8.3	96	3.1	136	3.7	298	8.1	803	5.9	1202	5.8	
More than 5 km	90	6.7	104	2.9	63	11.1	28	10.7	1	0	3	0	6	16.7	7	0	55	5.5	17	11.8	160	8.7	214	5.1	
Not stated	1	0.0	4	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	13	0	
Duration living in residence																									
< 6 months	1	100	1	0	97	7.2	55	10.9	6	16.7	3	33.3	3	0.0	2	0	12	0	12	8.3	107	8.4	85	9.4	
> 6 months	293	5.1	218	2.3	325	7.4	268	6	127	1.6	264	6.1	111	9.0	101	3.0	176	4.6	296	8.5	856	6.0	1323	5.5	
Not stated			2	0	2	50	0	0	0	0	1	0	0	0	0	0	3	0	15	0	2	0	21	0	
Total number tested for HIV	294		221		424		323		133		268		114		103		191		323		965		1429		
Total number HIV positive	16		5		32		22		3		17		10		3		8		26		61		81		
Overall HIV prevalence (%) per site		5.5		2.3	7.6		6.8			2.3		6.3		8.8		2.9		4.2		8.1		6.3		5.7	

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table: 10a. HIV prevalence among ANC attendees, Mbeya, Tanzania, 2001/02 and 2003/04.

Characteristics	Chimala (Road side)		Ilembo (Rural)		Kiwanjampaka(Urban)		Kyeia Border		Igamba (Rural)		Ruanda (Urban)		Total		Total											
	2003-2004		2003-2004		2003-2004		2003-2004		2003-2004		2003-2004		2001-2002		2003-2004											
	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)										
Agegroup (yrs)																										
15-24	122	15.6	116	8.6	103	5.9	110	8.3	335	13.1	422	16.1	239	16.0	222	14.0	139	9.4	450	14.2	799	13.4	1459	13.6		
25-34	74	23	109	21.1	93	7.5	64	9.4	199	24.6	273	23.1	113	22.1	86	21.0	77	13.0	238	17.7	479	20.5	847	19.6		
35-48	16	6.3	23	21.7	12	8.3	10	0	25	24.0	26	15.4	17	5.9	13	15.4	9	11.1	21	4.8	70	12.9	102	14.7		
Not stated	5	0	1	0	3	0	4	0	9	25.0	5	40.0	4	0	2	0	3	0	19	5.3	21	11.1	34	11.8		
Median age (yrs)	23		25		25		23		23		23		22		22		24		23		23		23		23	
Marital status																										
Single	18	0	22	22.7	10	20	11	18.2	71	15.5	38	13.2	53	18.9	47	19.2	8	12.5	23	21.7	23	15.1	152	15.1	149	18.1
Married	197	18.3	227	15.0	197	6.6	177	7.9	496	18.1	684	19.4	308	16.6	273	15.4	219	10.5	700	15.9	1198	15.9	2280	15.7		
Other	0	0	0	0	0	0	0	0	1	0	1	0	8	37.5	1	0	0	0	0	0	0	0	9	33.3	2	0
Not stated	2	50	0	0	4	0	0	0			3	0	4	0	2	0	1	0	5	0	10	10	11	0		
Previous pregnancies																										
0	66	13.6	54	1.9	64	4.4	56	7.1	216	12.5	258	13.2	132	12.9	125	13.6	52	3.9	294	12.9	478	11.7	839	11.4		
1-2	87	20.7	108	20.4	69	11.6	61	11.5	233	20.6	311	23.8	180	21.7	152	13.8	105	10.5	315	19.1	569	19.9	152	18.5		
3-4	45	20	55	21.8	50	8.0	49	8.2	100	24.0	125	21.6	55	12.7	34	32.4	43	14.0	94	14.9	250	17.6	400	18.8		
> 5	19	5.3	28	14.3	28	0.0	20	5.0	19	10.5	23	13.1	6	16.7	6	33.3	16	12.5	13	7.7	72	5.6	106	12.3		
Not stated			4	0			2	0.0			9	0			6	0			12	25.0	12	25.0	45	13.3		
Total number tested for HIV	217		249		211		188		568		726		373		323		228		728		1369		2442			
Total number HIV positive	37		39		15		16		102		138		64		51		24		116		218		384			
Overall HIV prevalence (%) per site		17.1		15.7		7.1		8.5		17.9		19.0		17.2		15.8		10.5		15.9		16.0		15.7		

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table: 10 b. HIV prevalence among ANC attendees, Mbeya, Tanzania, 2001/02 and 2003/04.

Characteristics	Chimala (Road side)		Ilembo (Rural)		Kiwanjampaka(Urban)		Kyeia Border		Igamba (Rural)		Ruanda (Urban)		Total	
	2003-2004		2001-2002		2003-2004		2001-2002		2003-2004		2003-2004		2001-2002	
	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)
Education level														
No formal	30	30	61	13.1										
Primary	173	15.6	178	16.9	40	7.5	29	6.9	58	13.3	20	10.0	23	13.0
> secondary	13	0	10	10.0	164	7.3	156	9.0	449	18	577	18.5	591	16.9
Not stated	1	100			6	0	3	0	61	19.7	129	22.5	112	11.6
Distance from residence to clinic					1	0							2	50.0
0-5 km	113	16.8	120	15	125	6.4	126	10.3	404	17.8	719	19.2	711	15.9
More than 5 km	102	16.7	129	16.3	78	9.0	60	5.0	150	18.0	1	0	11	18.2
Not stated	2	50	249	15.7	8	0	2	0	14	14.3	6	0	6	1
Duration living in residence														
< 6 months	10	20	15	13.3	5	0	11	18.2	64	15.6	23	13.0	16	14.5
> 6 months	207	16.9	232	15.5	200	7.0	171	6.4	503	18.1	701	19.0	653	16.1
Not stated			2	50	6	16.7	6	50	1	0	2	100	6	16.7
Total number tested for HIV	217		249		211		188		568		726		728	
Total number HIV positive	37		39		15		16		102		138		116	
Overall HIV prevalence (%) per site		17.1		15.7		7.1		8.5		17.9		19.0		15.9
														16.0
														15.7

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table 11 a: HIV prevalence among ANC attendees, Tanga, Tanzania, 2003/04

Characteristics	Handeni (Semi-urban) 2003-2004		Kwamkono (Rural) 2003-2004		Lushoto (Semi-urban) 2003-2004		Magoma (Rural) 2003-2004		Makolola (Urban) 2003-2004		Ngamiani (Urban) 2003-2004		Total 2003-2004	
	No	Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)
Agegroup (yrs)														
15-24	202	5.4	82	6.1	94	3.2	68	0.0	286	4.9	296	16.9	1028	8.1
25-34	147	9.5	65	4.6	127	6.3	75	1.3	201	9.0	213	21.6	828	10.9
35-48	43	14.0	19	0.0	23	8.7	20	5.0	34	8.8	31	9.7	170	8.8
Not stated	11	9.1	2	0.0	2	0.0	12	0.0	24	4.2	7	14.3	58	5.2
Median age (yrs)	24		25		26		25		24		24		##	
Marital status														
Single	23	4.3	19	10.5	22	9.1	12	0.0	63	6.3	83	22.9	222	12.6
Married	379	8.2	149	4.0	223	4.9	162	1.2	480	6.7	461	17.6	1854	8.8
Other	1	0.0			1	0.0	1	0.0					3	0.0
Not stated									2	0.0	3	0.0	5	0.0
Previous pregnancies														
0	103	8.7	34	11.8	51	2.0	35	0.0	141	2.8	170	16.5	534	8.6
1-2	143	8.4	51	2.0	124	3.2	69	0.0	267	7.5	281	20.3	935	10.1
3-4	90	5.6	46	2.2	54	11.1	47	4.3	98	10.2	70	17.1	405	8.9
> 5	54	9.3	30	6.7	11	9.1	23	0.0	19	5.3	18	11.1	155	7.1
Not stated	13	7.7	7	0.0	6	16.7	1	0.0	20	5.0	8	12.5	55	7.3
Total number tested for HIV	403		168		246		175		545		547		2084	
Total number HIV positive	32		8		13		2		36		100		191	
Overall HIV prevalence (%) per site		7.9		4.7		5.3		1.1		6.6		18.3		9.2

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table 11 b: HIV prevalence among ANC attendees, Tanga, Tanzania 2003/04

Characteristics	Handeni (Semi-urban) 2003-2004		Kwamkono (Rural) 2003-2004		Lushoto (Semi-urban) 2003-2004		Magoma (Rural) 2003-2004		Makolola (Urban) 2003-2004		Ngamiani (Urban) 2003-2004		Total 2003-2004	
	No	Prevalence (%)	No.	Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)
Education level														
No formal	83	6.0	48	2.1	14	7.1	55	1.8	72	9.7	17	29.4	289	6.9
Primary	308	7.8	118	5.9	216	4.6	116	0.9	437	6.2	475	18.1	1670	9.3
> secondary	12	25.0	2	0.0	16	12.5	3	0.0	34	5.9	51	17.6	118	13.6
Not stated							1	0.0	2	0.0	4	0.0	7	0.0
Distance from residence to clinic														
0-5 km	258	9.7	137	4.4	205	5.9	96	2.1	494	6.7	422	19.4	1612	9.9
More than 5 km	140	5.0	30	6.7	40	2.5	79	0.0	45	6.7	119	15.1	453	6.8
Not stated	5	0.0	1	0.0	1	0.0			6	0.0	6	0.0	19	0.0
Duration living in residence														
< 6 months	37	8.1	7	0.0	18	11.1			48	6.3	86	19.8	196	12.8
> 6 months	365	7.9	161	5.0	223	4.9	168	1.2	471	6.6	452	17.9	1840	8.8
Not stated	1	0.0			5	0.0	7	0.0	26	7.7	9	22.2	48	9.3
Total number tested for HIV	403		168		246		175		545		547		2084	
Total number HIV positive	32		8		13		2		36		100		191	
Overall HIV prevalence (%) per site		7.9		4.7		5.3		1.1		6.6		18.3		9.2

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table 12 : HIV prevalence among, ANC attendees Kigoma Tanzania, 2003/04.

Characteristics	Kibondo (Semi urban)		Kiganamo (Semi urban)		Kigoma (Urban)		Nyakitonto (Rural)		Ujiji (Urban)		Total	
	2003-2004		2003-2004		2003-2004		2003-2004		2003-2004		2003-2004	
	No	Prevalence	No.	Pr HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)
Age group (yrs)												
15-24	116	0.9	150	4.0	173	6.9	59	5.1	201	6.0	699	4.9
25-34	77	3.3	136	2.2	106	6.6	61	3.3	114	9.7	494	5.3
35-48	22	9.1	35	5.7	21	9.5	43	2.3	21	4.8	142	5.6
Not stated	2	50	5	0	1	0	0	0	6	0	14	7.1
Median age (yrs)	24		25		23		26		23		24	
Marital status												
Single	7	0	46	2.2	30	6.7	11	9.1	34	14.7	128	7.1
Married	210	3.3	276	3.3	271	7.0	149	3.4	307	6.7	1213	4.9
Other	0	0	2	0	0	0	3	0	0	0	5	20
Not stated	0	0	2	1	0	0	0	0	1	0	3	0
Previous pregnancies												
0	46	1.8	85	4.7	93	8.6	25	8.0	106	7.6	365	6.3
1-2	84	1.2	128	3.1	105	7.6	41	4.9	112	8.9	470	5.3
3-4	37	8.1	54	1.9	65	3.1	40	2.5	59	5.1	255	3.9
> 5	38	5.3	44	4.6	36	8.3	54	1.9	52	5.8	224	4.9
Not stated	2	0	15	0	2	0	3	0	13	0	35	0
Education level												
No formal	45	4.4	30	0	67	10.5	48	0	75	6.7	266	5.3
Primary	161	3.1	272	4.0	204	5.4	114	5.3	253	7.1	1004	5.1
> secondary	10	0	22	0	3	0	1	0	13	7.7	76	5.3
Not stated	0	0	2	0	0	0	0	0	1	0	3	0
Distance from residence to clinic												
0-5 km	208	3.4	308	3.3	279	6.1	120	3.3	337	7.1	1252	5.0
More than 5 km	9	0	11	9.1	20	15.0	38	5.3	0	0	78	7.7
Not stated	0	0	7	0	2	50	5	0	5	0	19	5.3
Duration living in residence												
< 6 months	17	0	9	11.1	25	8.0	5	0	32	6.3	88	5.7
> 6 months	198	3.5	311	3.2	275	6.9	156	3.9	307	7.2	1248	5.1
Not stated	1	0	6	0	1	0	2	0	3	0	13	0
Total number tested for HIV	217		326		301		163		342		1349	
Total number HIV positive	7		11		21		6		24		69	
Overall HIV prevalence (%) per site		3.2		3.4		7.0		3.7		7.0		5.1

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table 13 : HIV prevalence among, ANC attendees Lindi Tanzania, 2003/04.

Characteristics	Chumo		Liwale (Rural)		Nachingwea (Semi-urban)		Nyang'ao		Sokoine (Urban)		Town clinic (Urban)		Total	
	No	Pr HIV Prevalence (%)	No	Prevalence	No.	Pr HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)
Age group (yrs)														
15-24	71	1.4	163	1.2	127	6.3	115	5.2	69	7.3	62	11.3	607	4.8
25-34	49	4.1	99	5.1	82	14.6	86	4.7	39	25.7	38	21.1	393	10.4
35-48	21	4.8	40	2.5	17	11.8	32	6.3	9	11.1	10	20.0	129	7.0
Not stated	0	0	0	0	1	0	0	0	2	0	3	33.3	6	16.7
Median age (yrs)	24		23.5		23				23		23		24	
Marital status														
Single	37	2.7	67	0	39	7.7	44	6.8	11	9.9	37	8.1	235	4.7
Married	103	2.9	235	3.4	188	10.1	189	4.8	108	13.9	76	19.7	899	7.7
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not stated	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Previous pregnancies														
0	20	0	87	1.2	79	6.3	69	4.4	40	5.0	35	5.7	330	3.9
1-2	38	2.6	105	1.9	94	8.5	84	6.0	54	16.7	57	15.8	432	7.8
3-4	32	3.1	53	7.6	37	21.6	49	6.1	13	15.4	10	40.0	194	11.3
>5	47	4.3	56	1.8	15	6.7	24	0	6	16.7	8	25.0	156	4.5
Not stated	4	0	1	0	2	0	7	14.3	6	33.3	3	33.3	23	17.4
Education level														
No formal	87	3.5	56	1.8	40	12.5	66	4.5	27	11.1	19	21.1	295	6.4
Primary	54	1.9	233	2.6	176	8.5	155	5.8	70	15.7	17	16.5	767	7.2
> secondary	0	0	13	7.7	11	18.2	12	0	22	9.1	15	6.7	73	8.2
Not stated	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distance from residence to clinic														
0-5 km	59	3.4	179	3.4	178	11.8	130	4.6	113	13.2	111	16.2	770	8.8
More than 5 km	79	2.5	122	1.6	48	2.1	103	5.8	4	25.0	1	0	357	3.4
Not stated	3	0	1	0	1	0	0	0	2	0	1	0	8	0
Duration living in residence														
< 6 months	6	0	15	0	32	6.3	9	0	12	0	22	4.6	96	3.1
> 6 months	134	3.0	287	2.8	195	10.3	223	5.4	94	13.8	91	18.7	124	7.2
Not stated	1	0	0	0	0	0	1	0	13	23.1	0	0	15	20
Total number tested for HIV	141		302		227		233		119		113		1135	
Total number HIV positive	4		8		22		12		16		18		80	
Overall HIV prevalence (%) per site		2.8		2.7		9.7		5.2		13.5		15.9		7.1

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table 14. HIV prevalence among ANC attendees, Morogoro Tanzania, 2003/04.

Characteristics	Hembeti (Rural)		Makuyuni (Rural)		Morogoro MCH (Urban)		Uhuru (Urban)		Total	
	2003-2004		2003-2004		2003-2004		2003-2004		2003-2004	
	No	Prevalence	No.	Pr HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)	No.	HIV Prevalence (%)
Age group (yrs)										
15-24	54	1.9	83	0	264	9.9	480	7.7	881	7.3
25-34	30	3.3	71	1	235	14	273	12.8	609	11.5
35-48	14	0	19	2	38	10.5	44	13.6	115	10.4
Not stated	1	0	0	0	22	4.6	2	0	25	4.0
Median age (yrs)	24		25		25		23		24	
Marital status										
Single	13	0.0	17	0	62	14.5	127	11.8	219	11.0
Married	85	2.4	155	1.9	496	10.9	670	9.4	1406	8.7
Other	0	0	1	0	1	100	0	0	1	0
Not stated	1	0	0	0	0	0	2	0	4	25.0
Previous pregnancies										
0	22	0	37	0	176	9.1	287	5.9	522	6.3
1-2	40	5.0	65	0	262	11.5	365	12.6	732	10.7
3-4	15	0	47	0	92	14.1	102	9.8	256	9.0
> 5	20	0	23	13	11	18.2	30	10.0	84	9.5
Not stated	2	0	1	0	18	16.7	15	13.3	36	13.9
Education level										
No formal	38	0	87	2.3	33	18.2	99	9.1	257	6.6
Primary	58	3.5	86	1.2	451	10.4	648	9.7	1243	9.1
> secondary	3	0	0	0	74	13.5	51	11.8	127	12.6
Not stated	1	0	0	0	1	100	1	0	3	33.3
Distance from residence to clinic										
0-5 km	83	2.4	137	2.2	532	11.1	796	9.8	1548	9.2
More than 5 km	13	0	35	0	26	19.2	2	0	76	6.6
Not stated	3	0	1	0	1	0	1	0	6	0
Duration living in residence										
< 6 months	1	0	6	0	0	0	0	0	7	0
> 6 months	96	2.1	167	1.8	543	11.1	796	9.8	1602	8.9
Not stated	2	0	173	1.7	16	25	3	0	21	9.1
Total number tested for HIV	99		173		559		799		1630	
Total number HIV positive	2		3		64		78		147	
Overall HIV prevalence (%) per site		2.1		1.7		11.5		9.8		9.0

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table 15: Region and site specific prevalence of syphilis by age, level of education and HIV serostatus, Tanzania, 2003/04

	Age						HIV Serostatus				Level of Education						Total	
	15 – 24		25 – 34		35 - 48		Negative		Positive		No formal education		Primary		Secondary and above		Number	Syphilis Prevalence (%)
	Number	Syphilis Prevalence (%)	Number	Syphilis Prevalence (%)	Number	Syphilis Prevalence (%)	Number	Syphilis Prevalence (%)	Number	Syphilis Prevalence (%)	Number	Syphilis Prevalence (%)	Number	Syphilis Prevalence (%)	Number	Syphilis Prevalence (%)		
Dar es Salaam																		
Buguruni	511	0.8	317	1.9	36	2.8	772	1.2	107	1.9	79	0	724	1.4	75	1.3	879	1.3
Kasorobo	268	10.4	136	10.3	40	10.0	403	10.7	43	7.0	77	15.6	350	9.1	18	11.1	446	10.3
Kigamboni	230	0.4	128	1.6	26	3.8	350	0.6	36	5.6	53	0	279	1.1	54	1.2	386	1.0
Kimara	207	2.4	128	3.9	15	0.0	328	2.7	33	3.0	35	17.1	271	1.2	54	0	361	2.8
Kiwalani	247	8.9	141	9.2	13	0.0	368	9.2	53	17.0	31	16.1	344	10.5	45	2.2	421	10.2
Oysterbay	270	8.9	169	7.7	15	0.0	416	8.7	50	2.0	15	0	386	8.0	65	9.2	466	7.9
Total	1733	4.8	1019	5.2	145	4.1	2637	5.0	322	5.6	290	7.9	2354	4.9	311	3.5	2959	5.1
Dodoma																		
Bahi	94	3.2	37	3.5	25	4.0	168	3.0	8	12.5	82	1.2	94	5.3	0	0	176	3.4
Handali	112	28.6	80	21.2	36	41.7	227	27.8	1	100	111	24.3	114	31.6	1	100	228	28.1
Kibaigwa	120	1.7	70	2.9	13	7.7	185	2.7	18	0.0	66	3.0	133	2.3	4	0	203	2.5
Makole	172	1.2	133	1.5	23	0.0	300	0.3	31	9.7	22	0.0	256	1.6	53	0	331	1.2
Mpwapwa	167	7.8	112	10.7	27	14.8	289	9.0	19	15.8	84	9.5	204	9.8	20	5.0	308	9.4
Wajenzi	207	7.2	120	7.5	23	8.7	302	7.0	49	10.2	41	7.3	278	7.6	32	6.3	351	7.4
Total	872	7.7	572	7.7	147	15.6	1471	8.2	126	10.3	406	10.1	179	8.2	110	3.6	1597	8.4
Kagera																		
Bukoba	247	4.0	152	6.6	9	0.0	370	4.3	39	12.8	12	0	333	6.0	64	1.6	409	5.1
Katoro	115	24.3	94	23.4	33	42.4	238	26.5	6	16.8	85	34.1	155	63.5	4	0	244	26.2
Kimeya	113	16.8	93	23.7	26	38.5	233	21.5	2	50.0	102	19.6	131	23.7	2	0	235	21.7
Nkwenda	233	16.7	178	18.0	36	38.9	444	19.4	7	0	152	23.7	293	17.1	5	0	451	19.1
Nyamiyaga	88	12.5	71	18.3	15	13.3	176	14.8	4	25.0	57	19.3	116	13.8	7	0	180	15.0
Rwamishenye	195	6.7	91	7.7	7	14.3	266	6.8	29	10.3	19	0	239	7.9	37	5.4	295	7.1
Total	991	12.1	679	15.6	126	32.5	1727	15.0	87	12.6	427	22.5	1267	13.5	119	2.5	1814	14.9
Kigoma																		
Kibondo	108	0.0	73	0.0	21	0.0	197	0	7	0	43	0	151	0	10	0	204	0
Kiganamo	134	2.2	122	0.8	33	3.0	282	1.4	11	9.1	29	0	243	2.1	20	0	293	1.7
Kigoma	172	1.2	102	2.0	21	9.5	276	1.2	20	0	67	3.0	200	2.0	29	0	296	2.1
Nyakitonto	38	2.6	45	2.2	30	0.0	109	1.8	2	0	21	0	91	2.2	1	0	113	1.8
Ujiji	201	3.0	113	4.4	20	10.0	316	4.1	24	0	74	1.4	252	4.7	13	0	340	3.8
Total	653	1.8	455	2.0	125	4.0	1180	2.1	66	1.5	234	1.4	937	4.7	73	0	1246	2.1
Kilimanjaro																		
Hedaru	124	37.1	79	36.7	14	64.3	214	38.3	5	40.0	26	61.5	187	34.8	5	40.0	219	38.4
Huruma	67	0.0	92	1.1	25	4.0	179	1.1	8	0	0	0	171	1.2	15	0	187	1.1
Majengo	202	0.5	109	0.0	12	0.0	301	0.3	22	0	13	0	264	0.4	46	0	323	0.3
Masama	119	0.0	121	0.0	23	0.0	249	0	17	0	19	0	225	0	20	0	266	0
Pasua	186	0.5	105	1.0	11	0.0	281	0.7	26	0	8	0	260	0.8	39	0	307	0.6
Umbwe	48	0.0	45	0.0	10	0.0	100	0	3	0	4	0	92	0	6	0	103	0
Total	746	6.4	551	5.6	95	10.5	1324	6.6	81	2.5	70	22.7	1199	5.8	131	1.5	1405	6.3
Lindi																		
Chumo	65	1.5	46	6.5	21	0.0	128	3.1	4	0	84	3.6	48	2.1	0	0	132	3.0
Liwale	161	1.2	96	4.2	39	2.6	288	2.1	8	12.5	56	3.5	227	2.2	13	0.0	296	2.4
Nachingwea	127	10.2	82	20.7	17	11.8	205	13.7	22	18.2	40	5.0	176	17.1	11	0	227	14.1
Nyangao																		
Sokoine	69	7.2	38	5.3	8	0.0	101	7	16	0	27	11.1	68	4.4	22	4.6	117	6.0
Town Clinic	60	3.3	36	16.7	10	10.0	92	6	17	17.7	19	21.1	75	6.7	15	0.0	109	8.3
Total	595	4.9	384	10.9	127	6.3	1033	6.7	79	12.7	292	5.8	747	8.0	73	2.7	1112	7.1

TABLES: HIV PREVELANCE BY SITE AND DEMOGRAPHIC CHARACTERISTIC

Table 15: Region and site specific prevalence of syphilis by age, level of education and HIV serostatus, Tanzania, 2003/04 (Continued)

	Age						HIV Serostatus				Level of Education						Total		
	15 – 24		25 – 34		35 - 48		Negative		Positive		No formal education		Primary		Secondary and above		Number	Syphilis Prevalence (%)	
	Number	Syphilis Prevalence (%)	Number	Syphilis Prevalence (%)	Number	Syphilis Prevalence (%)	Number	Syphilis Prevalence (%)	Number	Syphilis Prevalence (%)	Number	Syphilis Prevalence (%)	Number	Syphilis Prevalence (%)	Number	Syphilis Prevalence (%)			Number
Mbeya																			
Chimala	116	4.3	109	10.1	23	8.7	211	6.2	38	13.2	61	13.1	178	5.6	10	0	249	7.2	
Igamba	118	11.9	67	19.4	9	22.2	175	14.7	20	15.0	9	33.3	182	13.7	4	25.0	195	14.9	
Ilembo	105	6.7	60	5.0	10	20.0	164	5.5	14	28.6	28	10.7	147	6.8	3	0	178	7.3	
Kiwanjampaka	421	4.5	272	3.3	26	3.8	587	3.2	137	7.3	20	10.0	575	4.4	129	1.6	724	4.0	
Kyela	218	7.3	84	6.0	12	8.3	265	6.8	50	8.0	6	0	277	7.6	32	3.1	315	7.0	
Ruanda	449	4.5	238	6.3	21	14.3	617	4.5	108	9.3	23	8.7	590	5.1	112	5.4	725	5.2	
Total	1429	5.7	8030	6.7	101	10.9	2019	5.6	367	9.8	147	12.2	1949	6.2	290	3.5	2386	6.2	
Morogoro																			
Hembeti	45	11.1	23	8.7	12	16.7	81	11.1	0	0	31	6.5	47	14.9	2	0	81	11.1	
Mukuyuni	77	3.9	60	1.7	17	5.9	151	3.3	3	0	77	1.3	77	5.2	0	0	154	3.3	
Morogoro	258	11.2	232	8.6	38	2.6	486	9.5	64	12.5	33	24.2	442	9.5	74	5.4	550	9.8	
Uhuru	461	14.8	267	15.7	41	22.0	694	15.1	77	18.2	95	13.7	628	15.8	47	14.9	771	15.4	
Total	841	12.5	582	11.2	108	12.0	1412	11.7	144	15.3	236	10.2	1194	12.7	123	8.9	1556	12.0	
Mtwara																			
Ligula	207	2.4	146	13.7	30	13.3	351	6.6	37	16.2	82	9.8	270	7.4	36	2.8	388	7.5	
Likombe	99	11.1	53	32.1	13	7.7	158	18.4	7	0	33	15.2	126	18.3	5	20	165	17.6	
Mangaka	135	6.7	99	8.1	29	13.8	251	8.4	13	0	97	2.1	162	11.7	5	0	264	7.9	
Mkunya	70	14.3	38	13.4	16	12.5	124	15.3	2	0	53	13.2	70	17.1	3	0	126	15.1	
Nanyamba	80	6.3	69	5.8	21	0.0	167	5.4	6	0	100	3.0	67	9.0	6	0	173	5.2	
Tandahimba	75	4.0	50	10.0	16	0.0	145	5.5	1	0	42	7.1	98	4.1	6	16.7	146	5.5	
Total	666	6.5	455	13.4	125	8.8	1196	10.9	66	9.1	407	6.9	793	10.6	61	4.9	1262	9.1	
Tanga																			
Handeni	189	2.1	141	2.8	41	0.0	350	2.0	30	3.3	79	2.5	289	2.1	12	0	380	2.1	
Kwamkono	79	11.4	59	8.5	18	11.1	153	9.8	5	20.0	46	6.5	111	11.7	1	0	158	10.1	
Lushoto	93	0.0	119	0.8	23	0.0	224	0.5	13	0	12	0	209	0.5	16	0	237	0.4	
Magoma	66	4.5	74	4.1	20	0.0	169	4.1	2	0	53	1.9	114	5.3	3	0	171	4.1	
Makolola	275	1.5	191	2.1	32	0.0	482	1.0	36	8.3	68	1.5	418	1.7	32	0	518	1.5	
Ngamiani	284	4.6	203	5.4	31	3.2	424	4.5	98	6.1	17	5.9	455	4.4	49	8.2	522	4.8	
Total	986	3.3	787	3.6	165	1.8	1802	3.0	184	6.0	275	2.9	1596	3.3	113	3.5	1986	3.3	
All																			
Total enrolees	9510		6314		1264		15801		1522		2784		13115		1404		17323		
Total RPR +	622		495		131		1135		130		274		939		50		1265		
Syphilis Prevalence %		6.5		7.8		10.4		7.2		8.5		9.8		7.2		3.6		7.3	

NB. Totals may not be the same across categories of demographic characteristics

ANNEXES

Annex 1: Geographic zones, regions in the zones and surveillance regions, Tanzania, 2003/04.

Geographic Zone	Regions	Surveillance Regions
Coastal zone	Tanga, Morogoro, Coast, and Dar es Salaam.	Dar es Salaam, Tanga, Morogoro
Northern Highland zone	Arusha, Kilimanjaro	Kilimanjaro
Lake Zone	Tabora, Kigoma, Shinyanga, Kagera, Mwanza & Mara	Kagera, Kigoma
Central Zone	Dodoma and Singida	Dodoma
Southern Highland Zone	Iringa, Mbeya and Rukwa	Mbeya
Southern Zone	Lindi, Mtwara and Ruvuma	Mtwara, Lindi

Annex 2: ANTENATAL CLINIC HIV/STI SENTINEL SURVEILLANCE SITES IN TANZANIA MAINLAND

Name of ANC	Type	District location
Kilimanjaro region		
Majengo Health Centre	Urban	Moshi Municipality
Pasua Health Centre	Urban	Moshi Municipality
Umbwe Health Centre	Rural	Moshi Rural District
Masama (Modio) Health Centre	Rural	Hai District
Hedaru dispensary	Semi-Urban (Roadside)	Same District
Huruma Hospital MCH Clinic	Semi-urban	Rombo District
Dodoma region		
Makole Urban Health Centre	Urban	Dodoma Municipality
Wajenzi MCH Clinic	Urban	Dodoma Municipality
Bahi Government Dispensary	Rural	Dodoma Rural District
Handali Rural Health Centre	Rural	Dodoma Rural District
Kibaigwa Dispensary	Roadside	Kongwa District
Mpwapwa Hospital MCH Clinic	Semi-urban	Mpwapwa District
Kagera region		
Bukoba Regional Hospital	Urban	Bukoba Township
Rwamisheni Health Centre.	Urban	Bukoba Township
Katoro Health Centre	Semi-urban	Bukoba Rural District
Nyamiaga Dispensary	Semi-urban	Ngara District
Kimeya Health Centre	Rural	Muleba District
Nkwenda Health Centre	Rural	Karagwe
Mtwara region		
Ligula Hospital	Urban	Mtwara Township
Likombe Dispensary	Urban	Mtwara Township
Nanyamba Health Centre	Rural	Mtwara rural District
Mkunya Dispensary	Rural	Newala
Tandahimba Health Centre	Semi-urban	Tandahimba District
Mangaka Dispensary	Semi-urban	Masasi District
Mbeya region		
Kiwanjampaka Health Centre	Urban	Mbeya Municipality
Ruanda Health Centre	Urban	Mbeya Municipality
Chimala Mission Hospital	Roadside	Mbarali District
Ilembo Rural Health Centre	Rural	Mbeya Rural District
Igamba Dispensary	Rural	Mbozi District
Kyela District Hospital	Border	Kyela District

Name of ANC	Type	District location
Dar es Salaam region		
Kigamboni Health Centre	Urban	Temeke District
Kasorobo MCH Clinic	Urban	Temeke District
Buguruni Dispensary	Urban	Ilala District
Kiwalani Dispensary	Urban	Ilala District
Oyesterbay MCH Clinic	Urban	Kinondoni district
Kimara Dispensary	Urban	Kinondoni
Morogoro region		
Morogoro regional hospital MCH Clinic	Urban	Morogoro Municipality
Uhuru Health Centre	Urban	Morogoro Municipality
Makuyuni Dispensary	Rural	Morogoro rural district
Hembeti Dispensary*	Rural	Mvomero district
Kigoma region		
Ujiji Dispensary	Urban	Kigoma Town Council
Kigoma Dispensary	Urban	Kigoma Town Council
Kiganamo Health Centre	Semi-urban	Kasulu District
Kibondo MCH Clinic	Semi-urban	Kibondo District
Nyakitonto Health Centre	Rural	Kasulu District
Keza Mission Dispensary	Rural	Kibondo District
Lindi region		
Town Clinic	Urban	Lindi Urban
Sokoine MCH	Urban	Lindi Urban
Liwale Rural Health Centre	Rural	Liwale
Nyangao MCH	Semi-urban	Lindi Rural
Nachingwea Hospital	Semi-urban	Nachingwea
Chumo MCH	Rural	Kilwa
Mtama Dispensary	Rural	Lindi rural
Tanga region		
Bombo Hospital	Urban	Tanga Urban
Makorora Health Centre	Urban	Tanga Urban
Lushoto Hospital	Semi-urban	Lushoto
Handeni MCH	Semi-urban	Handeni
Kwamkono MCH	Rural	Handeni
Magoma MCH	Rural	Korogwe

Annex 3: Data collection form for ANC sero-surveillance, Tanzania.

Clinic card number
(Remove this part after assigning surveillance number)



MINISTRY OF HEALTH TANZANIAANC SURVEILLANCE DATA COLLECTION FORM

1. Surveillance number
2. Date of specimen collection (dd/mm/yy)
3. Clinic Name District:
4. Age of the woman (years)
5. Marital status (circle)
 1. Single
 2. Married
 3. Other, specify
6. Number of previous pregnancies:
7. Education status of the woman (circle)
 1. No formal education
 2. Adult education
 3. Primary
 4. Secondary
 5. Post secondary (e.g. collage, university)
8. Estimate distance in Kilometres from the woman's residence to the Clinic (circle)
 1. 0 to 5Km
 2. More than 5 km
9. How long have you lived in that area of your residence? (years)

LABORATORY TEST RESULTS

- L1. RPR (circle)
 1. Positive
 2. Negative
- L2. First Serology (circle)
 1. Positive
 2. Negative
- L3. Second Serology (circle)
 1. Positive
 2. Negative
- L4. Final serology result (circle)
 1. Positive
 2. Negative

