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Abbreviations and acronyms

AIDS	Acquired Immune Deficiency Syndrome
AMREF	African Medical and Research Foundation
CBR	Crude Birth Rate
CDR	Crude Death Rate
GDS	Genital Discharge Syndrome
GTZ	German Development Agency
GUD	Genital Ulcer Disease
HIV	Human Immunodeficiency Virus
IDC	Infectious Disease Centre
LSHTM	London School of Hygiene and Tropical Medicine
M:F	Male to female ratio
MOH	Ministry of Health
MCT	Mother To Child Transmission
MUCHS	Muhimbili University College of Health Sciences
NACP	National AIDS Control Programme (referred to as the Programme)
NIMR	National Institute for Medical Research
PID	Pelvic Inflammatory Disease
RPR	Rapid Plasma Reagins
STDs	Sexually Transmitted Diseases
STIs	Sexually Transmitted Infections
TB	Tuberculosis
TPHA	<i>Treponema Pallidum</i> Haemogglutination Assay
UK	United Kingdom
UNAIDS	Joint United Nations Programme on AIDS
VDS	Vaginal Discharge syndrome
VDRL	Venereal Disease Research Laboratory
WHO	World Health Organization

Acknowledgement

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Lastly, many thanks to the staff of Epidemiology Unit of the National AIDS Control Programme who prepared the report and other staff who took part in one way or the other in various stages during the production of this report.

Distribution of the report

This report is produced and distributed for use by those who helped to provide the information therein so that they can see for themselves the outcome of their efforts. In addition, the report is intended for use by all service providers, social scientists, health professionals, students of health sciences and other sectors as well as individuals and agencies collaborating in AIDS work. The following are already on the Programme's mailing list for regular distribution.

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Executive summary

This report provides an overview of the epidemiologic situation of HIV/AIDS in the world, and a detailed account of HIV/AIDS/STDs in mainland Tanzania for the period January to December 1998, as well as from the start of the epidemic in the country.

Until December 1998, 33.4million people were living with HIV/AIDS worldwide. Of these, 5.8million were infected in 1998 alone. Of the 5.8 million infections in 1998, 5.2million were adults 15 - 49, 2.1million were women and 590,000 were children below 15 years. 4.0 million of infection (70%) occurred in Sub-Saharan Africa.

In the same year, 2.5million people died of HIV/AIDS worldwide, bringing cumulative AIDS deaths to 13.9million. Ten percent (250,000) of 1998 deaths and 11.5million (83%) of cumulative AIDS deaths occurred in Sub Saharan Africa, the region where only 10% of world's population live.

In Tanzania a total of 8,675 AIDS cases were reported to the NACP from the 20 regions in 1998, bringing the cumulative AIDS cases to 109,863. The NACP, however, estimates a total of 43,375 AIDS cases to have occurred in 1998 alone and a cumulative total of 549,315 cases basing on the estimate that only 1 out of 5 cases are reported.

Male and females are equally affected but the peak number of AIDS cases in women was at the age 19 - 22 compared with 45 years and above in men, meaning that women are affected in early age than men.

Reports from a population based adult morbidity and mortality study show that HIV/AIDS is the commonest cause of adult males and females deaths in Hai district and Dar es Salaam City. It is also the commonest and second commonest cause of deaths among adult females and males respectively in Morogoro rural district.

Only 10 out of 24 antenatal clinic sentinel surveillance sites located in 2 (Kilimanjaro and Mbeya) out of 11 regions were active in 1998. The overall HIV seroprevalence among pregnant women in Mbeya region (range) was 15.4% (12.3% in Mbeya rural and 24% in Kyela). These were a little lower than in 1997. In Moshi rural (Umbwe) the prevalence was 20%, a proportion which is two times higher than that of 1997.

During this reporting year, 116,796 (94%) of blood donors were patient's relatives and 22,299 (18%) were women. The overall HIV sero-prevalence among blood donors was 9%. Prevalence in men was 8.5% compared with 11.8% in women. Prevalence trend among female and male blood donors is that of continuous heightening. In general, seroprevalence in both men and women of all ages has been heightening over time. From 1995 to 1998, seroprevalence in female blood donors has remained higher than in men. Extrapolating these rates to the adult population aged 15 years and above 1,633,599 persons were infected with AIDS virus as of Dec. 1998.

Only 11 out of 24 antenatal sentinel surveillance sites reported on syphilis screening. Of those reported, syphilis seroprevalence (RPR test) ranged from 0 in Umbwe, Moshi district to 15% in Mwambani, Mbeya. In general, syphilis prevalence was higher in 1998 compared with 1997.

Except in Mbeya region where Genital Ulcer Disease (GUD) is most common, Genital Discharge Syndrome (GDS) was the most common STD syndrome. The number of episodes diagnosed from youths was 1.8 times more than that of 1997. Availability of youth friendly STD services in the regions might an explanation to this increase.

1.0 Global HIV/AIDS Situation

According to reports by the UNAIDS, in 1998 alone, 5.8 million people were infected with HIV worldwide. 5.2 million were adults, 590,000 were children below the age of 15 years and 2.1 million were women as shown in table 1. Cummulatively, 33.4 million people live with HIV/AIDS worldwide as of December 1998. In the same year, 2.5 million people died of AIDS worldwide, bringing the total number of AIDS deaths since the beginning of the epidemic to 13.9 million. Out of these, 4.7 and 3.2 million are women and children below the age of 15 years respectively.

Seventy percent of the people who became infected with AIDS virus in 1998 and 10% of AIDS deaths occurred in sub-Saharan Africa. Since the start of the epidemic, 83% of all AIDS deaths have so far been in sub-Saharan region where only 10% of the world's population live.

In some sub-Sahara African countries like Botswana, Namibia, Swaziland, and Zimbabwe, current estimates show that between 20% and 26% of people aged 15-49 are living with HIV or AIDS. In general, West Africa is less affected by HIV than Southern or East Africa.

For a detailed account of the 1998 global HIV/AIDS situation, the reader is referred to AIDS epidemic update; December 1998 by UNAIDS and WHO

Table 1: Regional HIV/AIDS statistics features, December 1998

Region	Epidemic started	Adult & Children living with HIV/AIDS	Adult and children newly infected	Adult prevalence rate(*)	Percentage of HIV positive adults who are women	Main modes of Transmission for adults#
Sub-Saharan Africa	Late '70s Early '80s	22.5 million	4.0 million	8.0 %	50%	Hetero
North Africa & Middle East	Late '80s	210,000	19,000	0.13%	20%	IDU, Hetero
South & South-East Asia	Late '80s	6.7 million	1.2 million	0.69%	25%	Hetero
East Asia Pacific	Late '80s	560,000	200,000	0.068	15%	IDU, Hetero MSM
Latin America	Late '70s Early '80s	1.4 million	160,000	0.57%	20%	MSM, IDU Hetero
Caribbean	Late '70s Early '80s	330,000	45,000	1.96%	35%	Hetero, MSM
Eastern Europe & Central Asia	Late '70s Early '80s	270,000	80,000	0.14%	20%	IDU, MSM
Western Europe	Late '70s Early '80s	500,000	30,000	0.25%	20%	MSM, IDU
North America	Late '70s Early '80s	890,000	44,000	0.56%	20%	MSM, IDU Hetero
Australia & New Zealand	Late '70s Early '80s	12,000	600	0.1%	5%	MSM, IDU
Total		33.4 million	5.8 million	1.1%	43%	

Source: UNAIDS updates 1998.

* The proportion of adults (15 to 49 year age) living with HIV/AIDS in 1998 using 1997 population numbers

MSM (sexual transmission among men who have sex with men), IDU (transmission through injecting drug use), Heterosexual transmission.

2.0 AIDS Situation in Tanzania

AIDS case reporting

Method of Case recording and reporting

Clinical AIDS Surveillance forms are issued to the office of the Regional Medical Officer (RMO) in each region for distribution to all hospitals in the region. Information to be filled are socio-demographic profiles, criterion for AIDS diagnosis in adults and children, doctors' opinion on possible source of infection, and whether or not HIV test was done. All hospitals return duly-filled forms to the office of the RMO monthly. Office of RMOs return filled forms to the epidemiology unit of the NACP quarterly where they are processed for analysis and reporting.

Distribution of AIDS cases

Between 1st January and 31st December 1998, a total of 8,675 AIDS cases were reported to the NACP from the 20 regions of mainland Tanzania. Of these, 8221 (95%) were AIDS cases diagnosed during the year of this report. The remaining 454 (5%) were diagnosed before the year of this report but were not reported to the NACP in time due to variety of reasons. Adding to the number of AIDS cases diagnosed and reported to the NACP since 1983, it brings the cumulative total to 109,863.

Age and sex differences of AIDS cases reported during the period January through December 1998 is presented in Table 2 and Figure 1. Age was not recorded in almost half of the cases (4242, 49%), testifying incomplete recording at health facility level. Fifty percent of 4,433 cases whose age was recorded are below the age of 32 years, and 88.6% of them are 15 to 49 years. Overall, male and female are equally affected but women are affected in early age than men, Figure 1. The peak number of AIDS cases for women is in the 27 - 32 year age group while that of men is 33 - 38 years. Note on the figure that, between the age 15 to 22, women are four times more affected than men are. Note also that 24 cases were of the age group 65 and above.

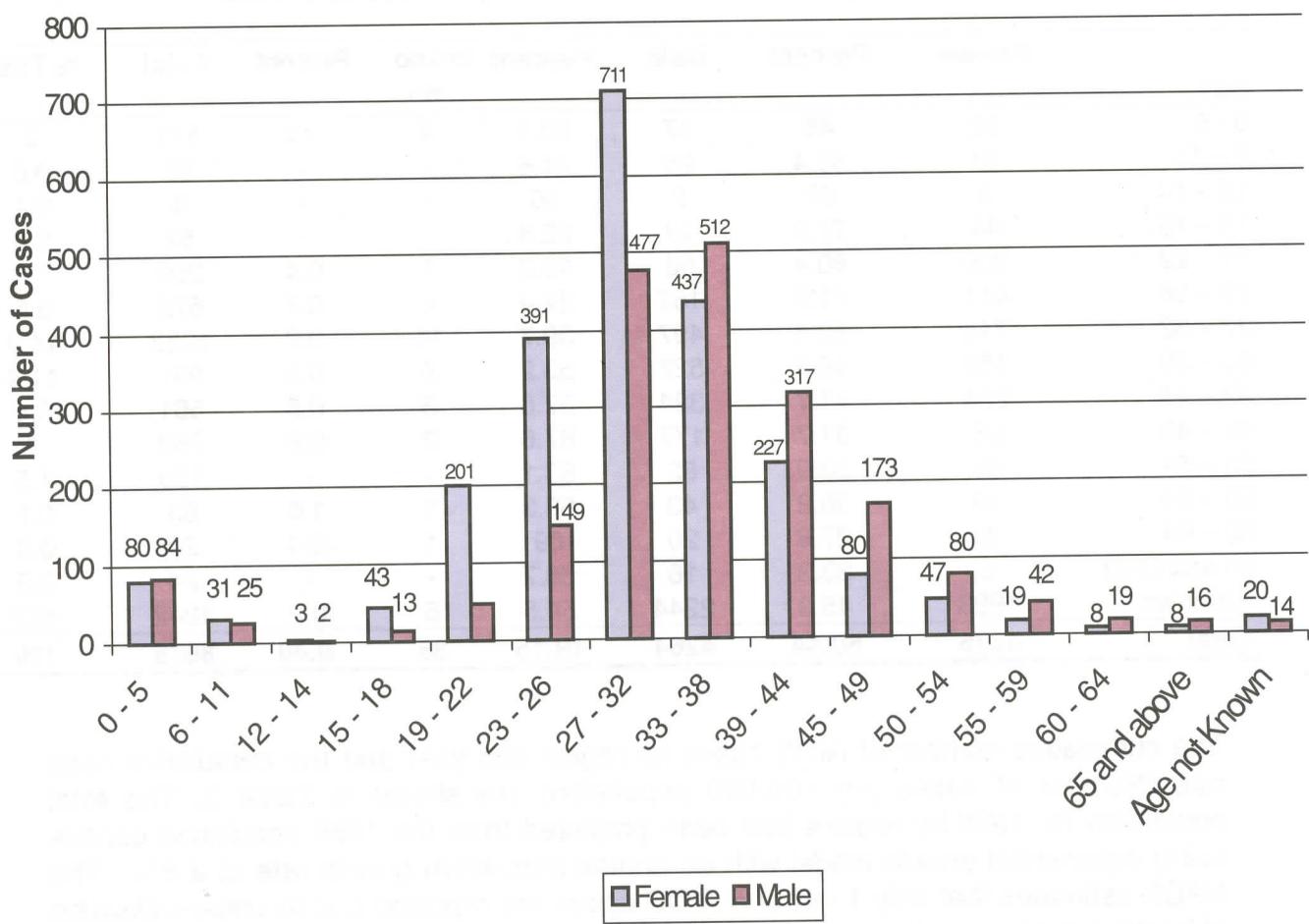
Many factors could be responsible for age-sex differences in HIV infection. Among them are early sexual maturity among females and the tendency for older men to seek sexual relations with young girls in attempts to avoid infection. It is also possible that economic considerations are attracting young girls into sexual relations with older and well to do men.

Table 2: Age and Sex of Reported AIDS Cases; January to December 1998.

Age	Female	Percent	Male	Percent	Unkn wn	Percent	Total	% Total
0 - 5	82	48	87	50.9	2	1.2	171	2
6 - 11	31	55.4	25	44.6	-	-	56	0.6
12 - 14	3	60	2	40	-	-	5	0.1
15 - 18	44	77.2	13	22.8	-	-	57	0.6
19 - 22	209	80.4	50	19.2	1	0.4	260	3
23 - 26	411	71.9	157	27.4	4	0.7	572	6.6
27 - 32	744	59.4	497	39.7	11	0.9	1252	14.4
33 - 38	459	46.3	527	53.2	5	0.5	991	11.4
39 - 44	234	41.7	324	57.8	3	0.5	561	6.4
45 - 49	83	31.7	177	67.6	2	0.8	262	3
50 - 54	48	36.9	82	63.1	-	-	130	1.5
55 - 59	19	30.2	43	68.3	1	1.6	63	0.7
60 - 64	8	27.6	20	69	1	3.4	29	0.3
65 and Over	8	33.3	16	66.7	-	-	24	0.3
Unknown	1993	45.3	2244	54.5	5	0.2	4242	48.9
Total	4376	50.44	4264	49.15	35	0.40	8675	100

The cumulative number of AIDS cases by region and year and the cumulative case rate (Number of cases per 100,000 population) are shown in Table 3. The total population for 1998 by regions has been projected from the 1988 population census using exponential growth model with an annual population growth rate of 2.8%. The NACP estimates that only 1 out of 5 AIDS cases are reported due to under-utilisation of health services, under-diagnosis, under-reporting and delays in reporting. However, the data is believed to reflect the trend of AIDS cases in the country. In face of under-reporting differences among regions, care is needed in the interpretation of region specific cumulative case rates. Indeed, regions with high case rates are those with fairly complete and regular recording and reporting. Mbeya can be cited here as an example of a region, which reports AIDS cases to the NACP fairly regularly and consistently. It appears on table 3 to have the highest case rate compared to other regions. Although it is one of the hard hit regions in the country, perhaps it wouldn't have ranked highest if reporting were regular and consistent in all regions. Thus, it is wise that case rates be used to judge disease burden (map 1) as well as worthiness of AIDS reporting system in the regions.

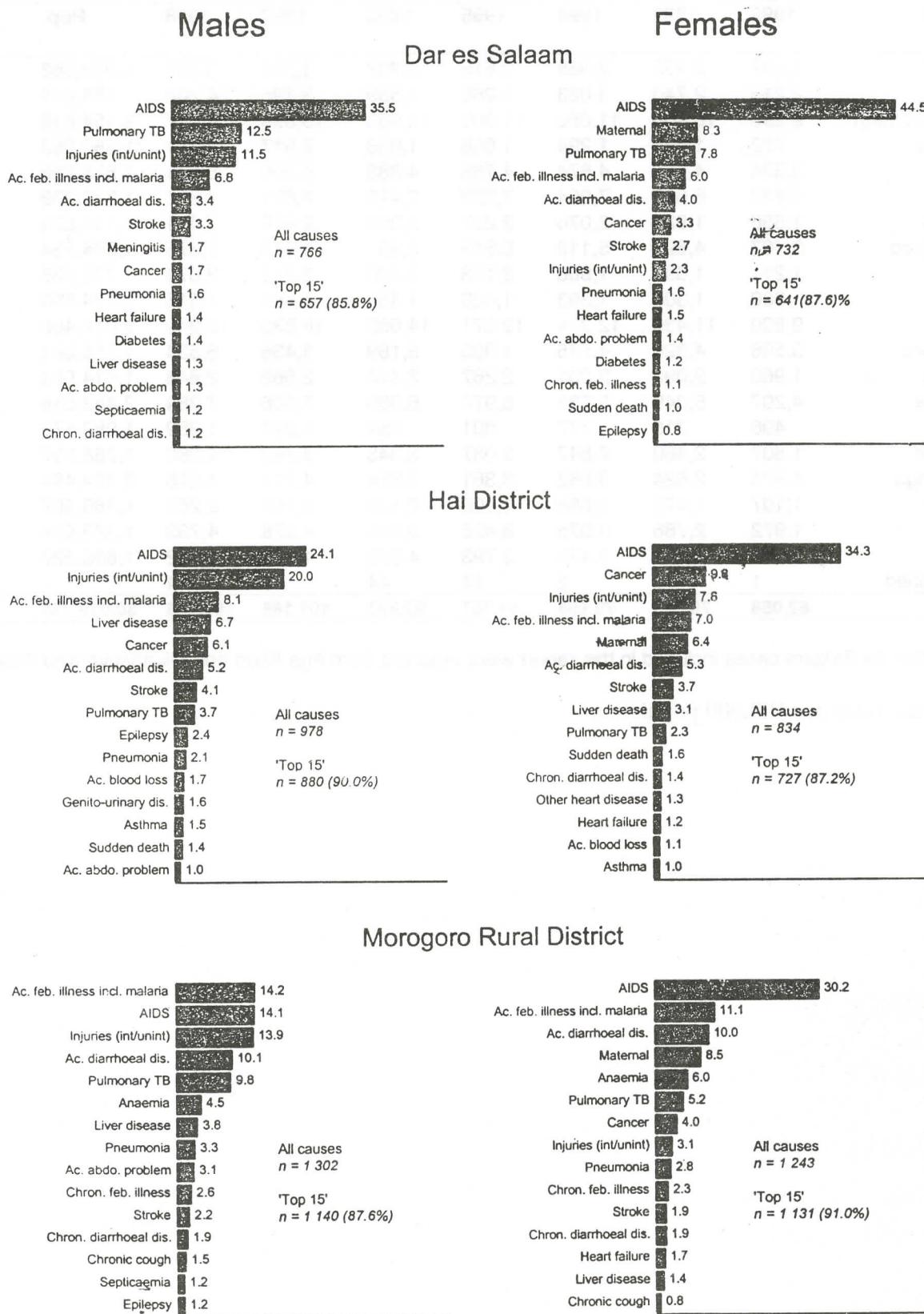
**Figure 1: Age and Sex differences of Reported AIDS Cases
January - December 1998**



HIV/AIDS Mortality

Results from a population based Adult Morbidity and Mortality Project (AMMP) August 1997 are that, HIV/AIDS is the commonest cause of deaths in adult males and females aged 15 – 59 years in Dar Es Salaam city and Hai district. It was also the commonest cause of deaths in adult female, and second to acute febrile illness including Malaria in men in Morogoro rural district. AMMP is implemented in three areas namely Dar es Salaam city, Hai and Morogoro rural districts(Figure 2)

Fig 2. Top 15 causes of death in males and female aged 15-59 years in Dar es Salaam, Hai District and Morogoro Rural District.



Source: Adult Morbidity and Mortality Project (AMMP), Tanzania.

Table 3: Cumulative AIDS cases by region and year (1992-1998)

Region	1992	1993	1994	1995	1996	1997	1998	Pop.	Case* Rate
Arusha	1,637	2,185	2,368	2,615	2,787	3,244	3,567	1,942,558	184
Coast	2,215	2,740	3,023	3,268	3,559	3,796	4,266	786,049	543
Dar es Salaam	9,295	10,406	11,050	11,302	12,983	13,899	14,517	2,154,648	674
Dodoma	762	1,028	1,294	1,608	1,938	2,517	2,641	1,580,263	167
Iringa	3,334	4,462	4,674	4,785	4,883	5,008	5,031	1,573,726	320
Kagera	5,813	6,646	7,064	7,223	7,426	7,671	7,881	1,773,239	444
Kigoma	1,556	1,920	2,070	2,257	2,280	2,426	2,481	1,116,625	222
Kilimanjaro	3,707	4,699	5,119	5,513	5,991	6,618	7,375	1,374,734	536
Lindi	1,211	1,691	1,966	2,173	2,480	2,712	3,074	778,735	395
Mara	980	1,304	1,393	1,486	1,486	1,486	1,515	1,274,893	119
Mbeya	9,890	11,439	12,214	12,371	14,685	16,835	19,949	2,016,408	989
Morogoro	3,598	4,328	4,575	4,903	5,189	5,438	5,534	1,558,884	355
Mtwara	1,968	2,090	2,201	2,267	2,444	2,569	2,843	1,014,563	280
Mwanza	4,207	5,349	5,731	5,974	6,365	7,006	7,384	2,462,018	300
Rukwa	496	715	777	801	882	1,227	1,359	1,083,173	125
Ruvuma	1,807	2,480	2,847	3,087	3,345	3,752	4,260	1,068,007	399
Shinyanga	1,874	2,624	3,062	3,361	3,824	4,217	4,515	2,424,494	186
Singida	1,107	1,472	1,688	1,908	2,135	2,167	2,262	1,160,907	195
Tabora	1,972	2,786	3,075	3,428	3,805	4,278	4,733	1,329,534	356
Tanga	2,636	3,207	3,475	3,793	4,062	4,278	4,632	1,606,328	288
Unspecified	1	1	2	44	44	44	44		
All	62,058	75,565	79,668	84,167	92,593	101,188	109,863	30,079,785	365

Note: Dar Es Salaam cases included in this report were reported from Aga Khan and Mwananyamala hospitals only.

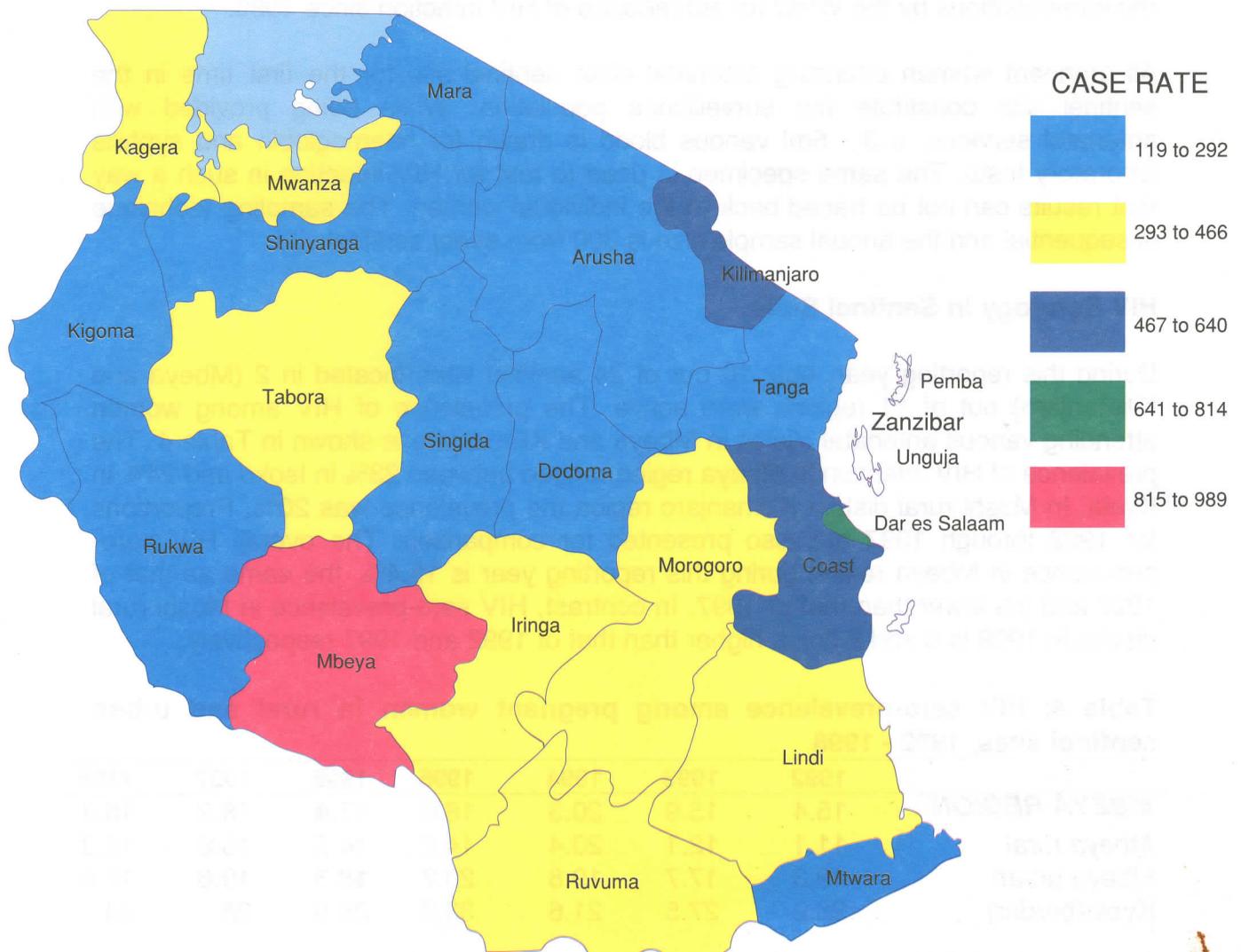
* Case rates per 100,000 population

DATA:

AIDS/STD SURVEILLANCE REPORT NUMBER 13

Page 12; Table 3:

Column totals for columns 2 (1992), 3 (1993) and 9 (Pop.) are 60,066, 73,572 and 30,079,786 respectively.

Map 1: AIDS cases reporting differences among regions by Dec. 98

3.0 HIV SENTINEL SURVEILLANCE USING ANTE Natal CLINICS

Methods

Sentinel surveillance was established in Tanzania since 1990, when 24 sites were established in 11 out of 20 regions of the mainland Tanzania. To allow for the national and international comparability, the NACP maintains uniformity in the procedures for sampling and sample size and HIV testing technique. It keeps adopting recommendations by the WHO for surveillance of HIV infection since 1990.

All pregnant women attending antenatal clinic sentinel site for the first time in the sentinel site constitute the surveillance population. While being provided with antenatal services, a 3 - 5ml venous blood is drawn for haemoglobin and syphilis laboratory tests. The same specimen is used to test for HIV infection in such a way that results can not be traced back to the individual women. The sampling technique is sequential and the annual sample size is 300 from every sentinel site.

HIV Serology in Sentinel Sites

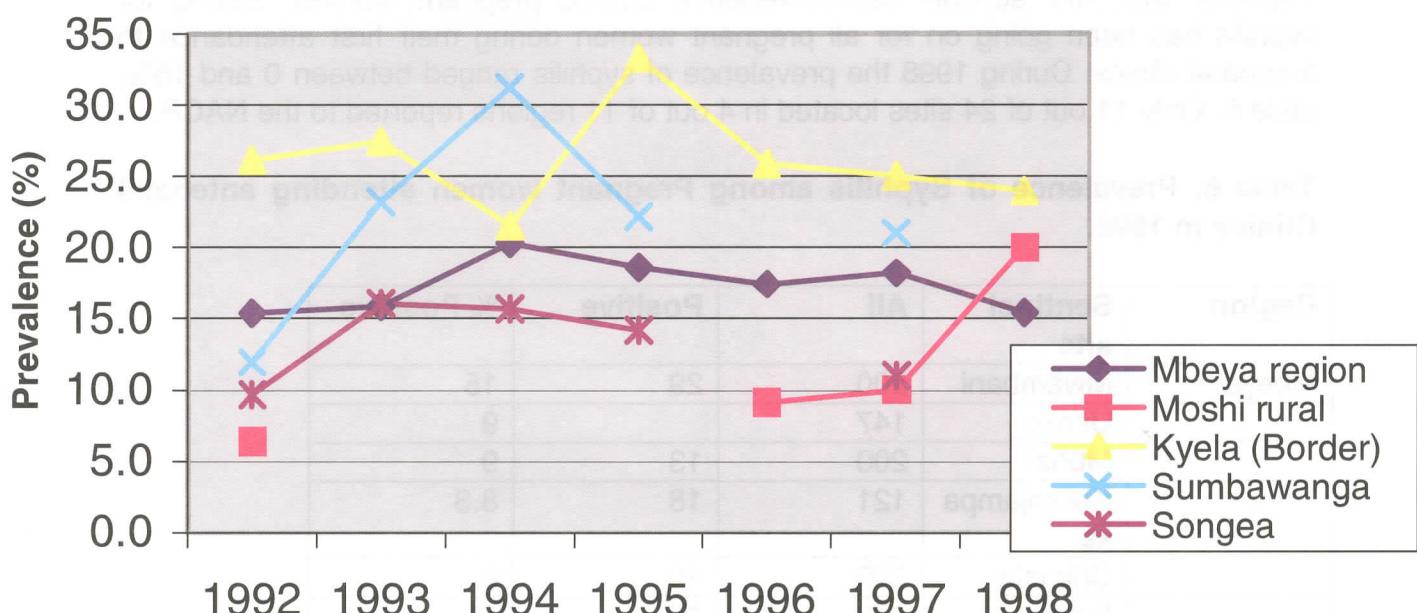
During this reporting year, only 10 out of 24 sentinel sites located in 2 (Mbeya and Kilimanjaro) out of 11 regions were active. The prevalence of HIV among women attending various antenatal clinics in Mbeya and Kilimanjaro is shown in Table 4. The prevalence of HIV infection in Mbeya region ranged between 23% in Isoko and 24% in Kyela. In Moshi rural district Kilimanjaro region the prevalence was 20%. Proportions for 1992 through 1997 are also presented for comparison. The overall HIV sero-prevalence in Mbeya region during this reporting year is 15.4%, the same as that of 1992 and 3% lower than that of 1997. In contrast, HIV sero-prevalence in Moshi rural district in 1998 is 3 and 2 times higher than that of 1992 and 1997 respectively.

Table 4: HIV sero-prevalence among pregnant women in rural and urban sentinel sites, 1992 - 1998

	1992	1993	1994	1995	1996	1997	1998
MBEYA REGION	15.4	15.9	20.3	18.6	17.4	18.2	15.4
Mbeya rural	11.1	12.1	20.4	14.2	14.5	15.6	12.3
Mbeya urban	19.3	17.7	19.8	20.7	18.5	19.6	17.3
Kyela(border)	26.2	27.5	21.6	33.3	25.9	25	24
RUKWA			26.5	17.4			
Namanyere(Rural)	11.3	8.33	19	11.2		11.2	
Sumbawanga(Urban)	12	23.3	31.3	22.2		21.0	
RUvUMA							
Songea(Urban)	9.7	16.1	15.7	14.2		11	
Namtumbo(Rural)	3.5	6.7	3.2	5.6		4	
KILIMANJARO							
Moshi rural	6.4				9.1	10	20

Seven-year HIV seroprevalence trend for Mbeya, Rukwa, Ruvuma and Kilimanjaro is presented in figure 3. The trendline for Moshi District is different from all in that it has doubled between 1997 and 1998.

Figure 3: Seven-year Prevalence trend of HIV infection in Selected areas of Tanzania.



The observed prevalence of HIV infection in blood donors in Mbeya and Kilimanjaro is that of increase over time.

Table 5: Prevalence of HIV in pregnant women age 24 and below in Moshi Rural District in 1998.

Age	All tested	HIV positive	%HIV Positive
17-24	132	27	20.5
25-48	169	33	19.5
Total	301	60	19.9

In Umbwe sentinel site (Moshi rural district), HIV prevalence rate among pregnant women aged 17 – 24 in 1998 is 20.5%. This rate is statistically not different from 19.5% in women aged 25 and above ($p=0.841$), table 5.

HIV sero-prevalence from Population Based studies

Population based studies are essential for validation of sentinel surveillance data. Results from a randomized trial of effects of Vitamin supplementation on pregnancy outcome, which was carried out in Dar es Salaam between 1995 and 1997, established HIV sero-prevalence rate of 13.5% in 1995, 12.4% in 1996 and 14.8% in 1997. Another study, which was carried out in Moshi rural district between March and June 1995, enrolling youth (15 – 24) came up with an overall prevalence rate of 7.5%. Prevalence in female was 9.7% and that of male was 5%.

Syphilis serology in sentinel sites

Together with HIV sentinel serosurveillance among pregnant women, testing for syphilis has been going on for all pregnant women during their first attendance to antenatal clinics. During 1998 the prevalence of syphilis ranged between 0 and 15%, table 6. Only 11 out of 24 sites located in 4 out of 11 regions reported to the NACP.

Table 6: Prevalence of Syphilis among Pregnant women attending antenatal Clinics in 1998.

Region	Sentinel site	All	Positive	% Positive
Mbeya	Mwambani	200	29	15
	Usoko	147		9
	Mbozi	200	13	9
	Kiwanjampa ka	121	18	8.3
	Chimala	200	10	8
	Itete	174	16	5
	Mbeya Urban	623	8	5
	Kyela	200	30	5
Iringa	Mafinga	413	10	14.3
Ruvuma	Songea	374	15	4
Kilimanjaro	Umbwe	306	0	0

Table 7 shows the time trend in the prevalence of syphilis among pregnant women in some sentinel sites. Note the prevalence in Umbwe (Moshi Rural) and compare with that of HIV sero-prevalence in the same area. Trendlines are also presented in figure 4.

Table 7: Seven-year Prevalence of Syphilis, 1992 - 1998

Location	1992	1993	1994	1995	1996	1997	1998
Meya Rural	9.1	11.0	5.2	3.4	2.5	4.0	9.1
Mbeya Urban	12.9	12.4	9.8	1.5	1.2	7.0	4.8
Kyela(border)	16.2	7.5	3.0	1.5	2.6	1.5	5.0
Umbwe	3.6	0.9		1.1	0.7	4.8	0
Mafinga	21.7	28.3		1.2	-	-	14.3
Songea	3.3				12	4	4

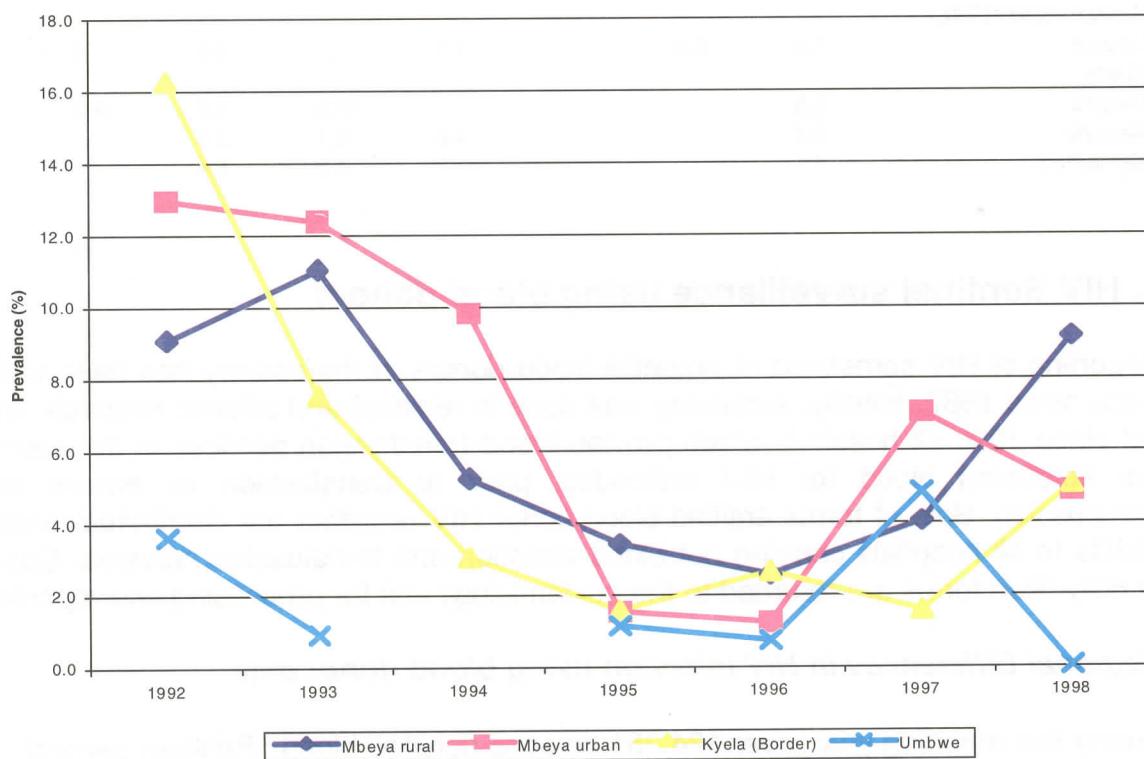
Figure 4: Seven-year prevalence trend of Syphilis in selected antenatal sentinel sites.

Table 8 Prevalence (%) of Syphilis infection using Sentinel Surveillance data from ante-natal clinics, 1990-1998

ANC Sentinel Site	1992	1993	1994	1995	1996	1997	1998
	%						
MBEYA RURAL	13.3		10.4	5.8	3.7	2.2	
Chimala	10.0		14.0	8.5	2.5	6.3	8
Isoko	22.0		5.5	0.7	2.7	0.0	9
Itete	8.0		10.1	7.4	0.0	2.0	5
Mwambani	8.0		17.5	11.0	10.5	3.5	15
Kyela	17.9		7.5	1.0	4.1	0.0	5
Mbozi			8.0	6.2	2.5	1.5	9
MBEYA URBAN	9.7		12.4	7.3	6.8	0.8	
Kiwanjampaka	10.0		13.5			0.5	8.3
Mwanjelwa	14.0		10.6			0.0	
Meta	5.0		13.0			2.0	
KILIMANJARO(RURAL)							
Umbwe	3.6	0.9		1.1	0.7	4.8	0
RUVUMA							
Songea	3.6				12.0	4.0	4.0
Madaba	3.1			4.0	2.1	2.5	
Namtumbo	7.1			1.7	4.9	5.4	

4. HIV Sentinel surveillance using blood donors

Reporting of HIV serostatus of potential blood donors in the country has been taking place since 1987. Initially, screening was done in regional and referral hospitals only, but since 1990 all hospitals which provide blood transfusion services in the country are screening blood for HIV antibodies prior to transfusion to ensure safe transfusion. Sets of forms entitled blood donor HIV registers are distributed through RMOs to all hospitals carrying out blood donation and transfusion services. Copies of duly-filled forms are returned to the epidemiology unit for processing and reporting.

Regional Differences in HIV infection using blood donor data

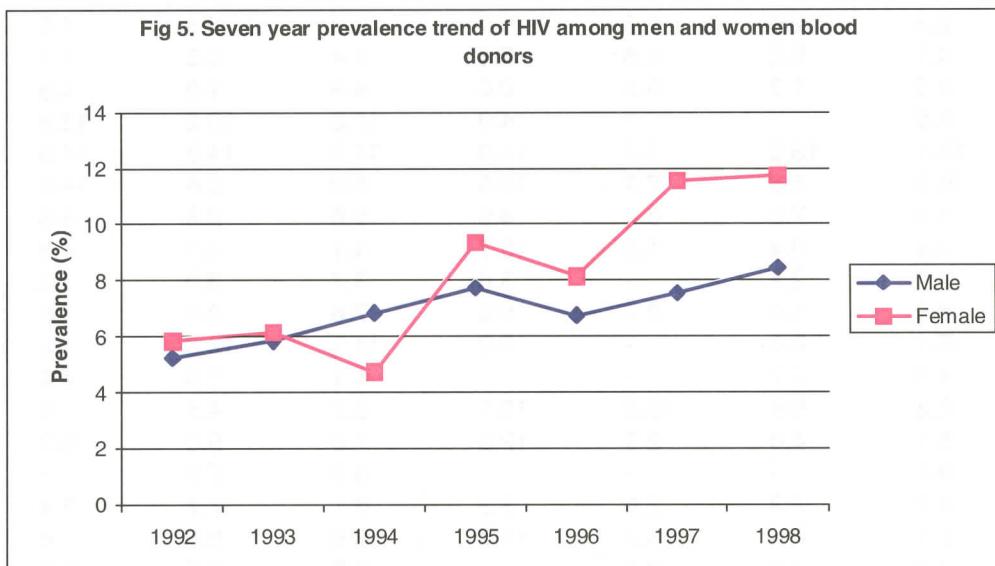
During this reporting year, over 124,251 persons donated blood. Eighteen percent (22,299) of them were women. Ninety-four (94) percent were patients' relatives, 2.7 % were institutional donors and relationship of the remaining 3.3% donors was not specified. The overall prevalence of HIV infection among blood donors was 9%. HIV prevalence rate in male blood donors was 8.5% and in female blood donors the rate was 11.8 %. The prevalence of 11.8% in women is significantly higher than 8.5% in men. Extrapolating these rates to the adult population aged 15 years and above, 1,633,599 persons were infected with the AIDS virus as of Dec. 1998.

Table 9: Prevalence (%) of HIV infection among male blood donors by region, 1992-1998.

Region	1992	1993	1994	1995	1996	1997	1998
Arusha	2.6	2.6	2.7	6.1	3.0	2.8	4.2
Coast	4.1	5.9	6.6	5.5	9.4	8.2	7.7
Dodoma	2.8	1.7	0.0	0.0	4.9	7.9	4.9
DSM	8.5	-	-	4.9	17.2	19.8	12.5
Iringa	11.1	13.2	7.7	13.0	14.2	14.2	14.8
Kagera	10.9	5.8	7.9	10.8	8.0	8.6	14.8
Kigoma	1.9	7.0	3.4	4.9	5.6	2.8	3.8
Kilimanjaro	2.4	3.4	1.5	10.7	4.1	4.1	4.8
Lindi	3.7	2.5	-	3.0	3.7	3.0	3.3
Mara	6.9	5.0	3.7	5.8	7.6	8.0	7.6
Mbeya	15.1	0.0	-	9.0	11.1	12.6	13
Morogoro	4.6	5.7	-	-	4.1	5.5	7.4
Mtwa	5.2	9.5	15.2	10.1	9.7	4.5	8
Mwanza	5.1	4.0	2.9	12.5	7.6	9.5	6.9
Rukwa	6.7	-	-	-	8.0	7.9	-
Ruvuma	6.2	7.3	2.0	3.3	8.1	7.7	7.4
Shinyanga	6.1	6.4	14.7	11.7	8.5	8.5	8
Singida	2.7	2.8	0.0	-	5.6	3.6	6.2
Tabora	2.8	4.4	2.5	6.2	3.2	6.1	5.9
Tanga	7.1	4.4	-	10.4	5.5	8.0	7.3
All	5.3	5.9	6.9	7.8	6.8	7.6	8.5

Table 10: Prevalence (%) of HIV infection among female blood donors by region, 1992 – 1998

Region	1992	1993	1994	1995	1996	1997	1998
Arusha	2.2	3.9	-	15.6	4.4	6.0	7.6
Coast	5.0	10.2	11.8	9.2	-	8.0	13.1
Dodoma	4.8	-	-	0.0	-	9.2	6.2
DSM	7.7		-	6.7	-	40.6	32.1
Iringa	8.1	17.6	20.0	7.8	12.4	16.4	15.1
Kagera	11.0	8.6	8.3	14.3	7.4	11.3	14.3
Kigoma	4.1	5.8	5.1	0.0	6.1	2.6	2.6
Kilimanjaro	2.2	1.8	2.9	0.0	5.9	8.1	8.1
Lindi	.3	1.9	-	1.6	3.6	4.9	5.2
Mara	8.2	2.9	10.0	9.4	10.1	13.1	7.7
Mbeya	20.3	-	-	11.4	13.8	14.4	15.1
Morogoro	5.7	10.8	-	-	6.0	9.1	8.8
Mtwa	10.5	5.7	0.0	5.6	10.5	-	23
Mwanza	5.7	8.0	5.0	0.0	8.5	11.8	9.5
Rukwa	0.0	-	-	-	8.8	-	-
Ruvuma	6.4	6.7	2.1	6.1	10.5	12.7	12.2
Shinyanga	10.0	21.6	33.3	0.0	14.9	14.9	14.6
Singida	4.5	4.6	0.0	-	5.8	5.2	7
Tabora	2.7	5.8	0.0	12.9	3.2	7.7	9.5
Tanga	7.0	5.9	-	20.8	7.0	13.6	11.9
All	5.9	6.2	4.8	9.4	8.2	11.6	11.8

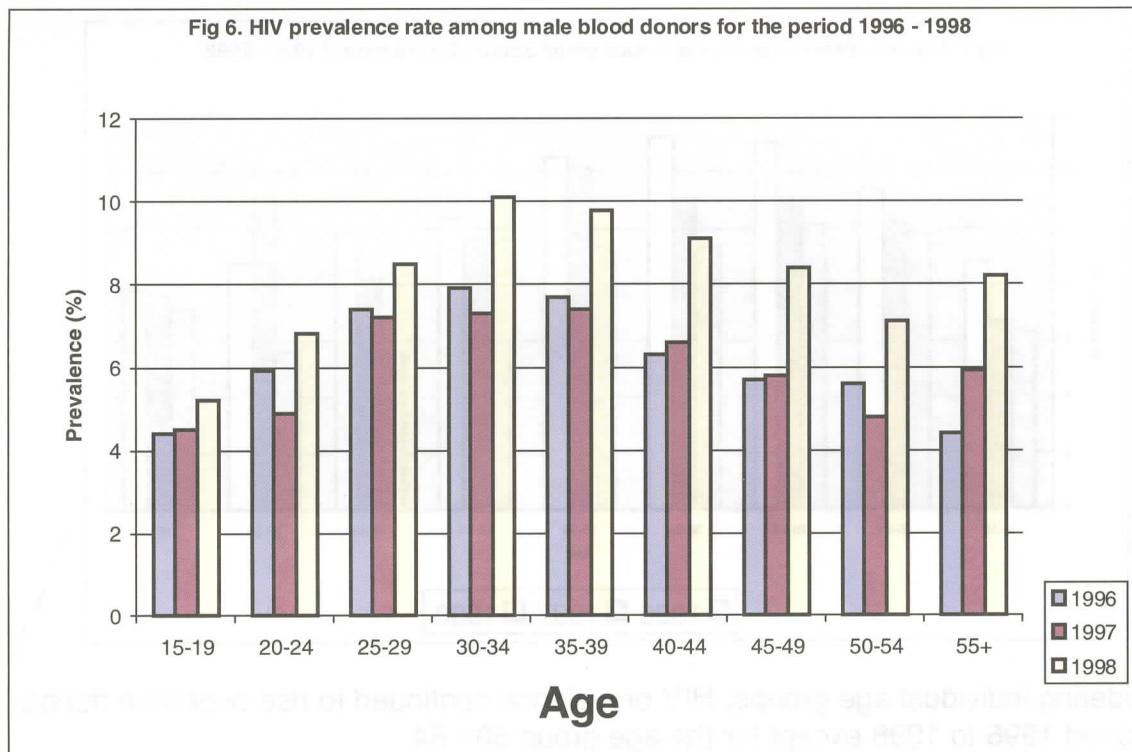


In general prevalence of HIV infection in both men and women has been continuously at increase for the past seven years.

Tables 9 and 10 show the prevalence of HIV infection among blood donors by region and gender for the period between 1992 and 1998.

Table 11: Age-specific prevalence (%) of HIV infection among Male blood donors (1991-1998)

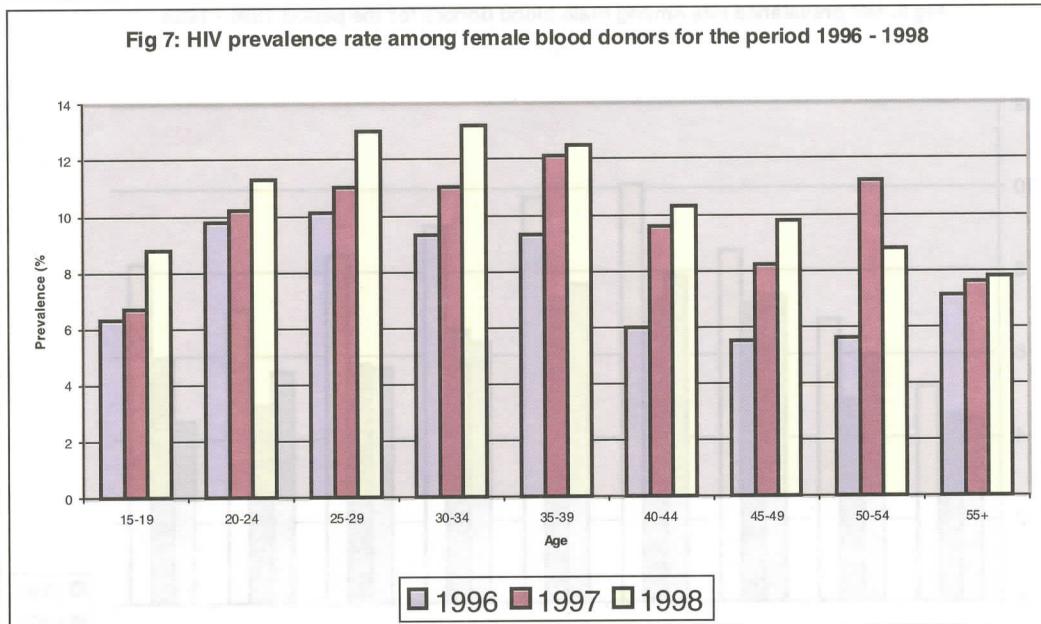
Age	1991	1992	1993	1994	1995	1996	1997	1998
15-19	3.2	3.7	3.9	2.4	5.3	4.4	4.5	5.2
20-24	5.0	4.9	5.8	2.4	5.8	5.9	4.9	6.8
25-29	6.7	6.0	6.1	5.8	7.2	7.4	7.2	8.5
30-34	6.4	5.8	6.2	5.4	7.7	7.9	7.3	10.1
35-39	6.1	5.6	6.5	9.8	7.8	7.7	7.4	9.8
40-44	4.8	3.9	5.1	0.0	5.9	6.3	6.6	9.1
45-49	4.5	4.2	4.9	7.4	5.8	5.7	5.8	8.4
50-54	4.4	2.6	4.3	0.0	3.5	5.6	4.8	7.1
55+	4.0	2.3	5.2	12.5	2.5	4.4	5.9	8.2
All	5.8	5.3	5.9	4.8	6.7	6.9	6.0	8.5



Prevalence of HIV infection among blood donors shows some specific difference with regard to age and sex. Higher prevalence of HIV infection is seen among females than in males of the same age group. The prevalence across the age group for male ranges between 5.2 % for the age group 15 - 19 and 10.1% for the age group 30 - 34. For female the range is 7.8% and 13.2% for the age groups 55 and above and 30 – 34 years respectively.

Table 12: Age-specific prevalence (%) of HIV infection among Female blood donors (1991-1998)

Age	1991	1992	1993	1994	1995	1996	1997	1998
15-19	4.9	4.2	2.9	5.6	5.3	6.3	6.7	8.8
20-24	7.7	7.2	7.5	5.4	9.4	9.8	10.2	11.3
25-29	8.7	6.6	7.2	7.1	11.6	10.1	11.0	13
30-34	6.5	5.7	6.6	6.9	10.0	9.3	11.0	13.2
35-39	4.8	5.7	6.7	10.1	8.8	9.3	12.1	12.5
40-44	6.3	3.6	1.7	5.4	7.6	6.0	9.6	10.3
45-49	3.4	4.4	3.7	7.5	4.8	5.5	8.2	9.8
50-54	5.6	5.4	5.9	6.2	*6.3	5.6	11.2	8.8
55+	6.7	4.2	5.3	3.3	*16.7	7.1	7.6	7.8
Total	7.2	5.9	6.3	6.9	9.2	8.7	9.7	11.8



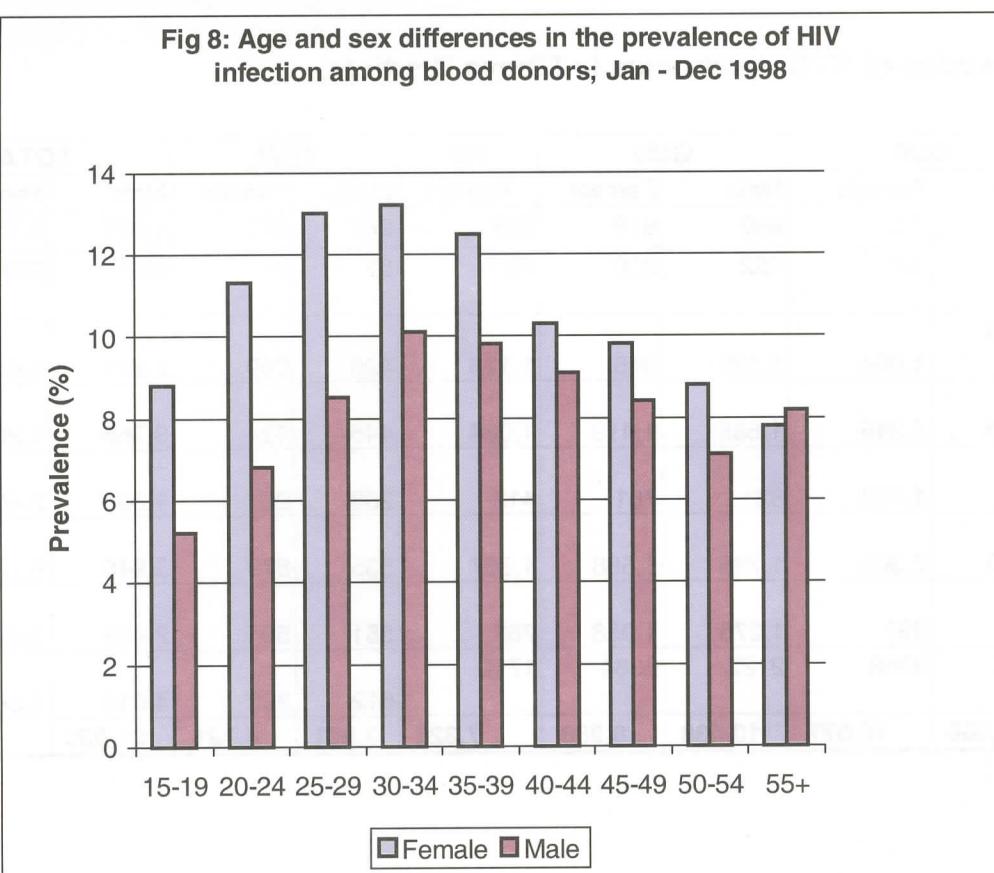
Considering individual age groups, HIV prevalence continued to rise over time during the period 1996 to 1998 except for the age group 50 - 54.

The following table shows the HIV prevalence rates among female blood donors by age group for each year. The data shows a general increase in prevalence over time, particularly in the younger age groups. The overall prevalence rates are relatively low compared to some other countries, but there is a clear upward trend in most age groups.

Table showing HIV prevalence rates among female blood donors by age group for each year

Age Group	1996 (%)	1997 (%)	1998 (%)
15-19	6.2	6.7	8.8
20-24	9.8	10.5	11.5
25-29	10.2	11.0	13.0
30-34	9.3	11.0	13.3
35-39	9.5	12.2	12.5
40-44	6.1	9.7	10.5
45-49	5.6	8.4	10.0
50-54	5.7	11.5	9.0
55+	7.2	7.8	8.0

Fig 8: Age and sex differences in the prevalence of HIV infection among blood donors; Jan - Dec 1998



Except in the age group 55 and above, prevalence of HIV infection in blood donors is higher in women than men in all age groups.

5.0 Curable STDS

Total reported episodes of GDS in regions other than Mbeya were 2.5 times more than those reported in 1997, (13,473 versus 5,197). Compared to other syndromes, GDS was most common in both men and women. Women were 1.4 times diagnosed with GDS compared to men. However, PID was 20% less common compared to 1997. Furthermore, number of episodes diagnosed from youth (15 - 24) were 1.8 times more than that diagnosed in the previous year, (10,910 versus 6,097) Tables 15 and 16 and figures 10 and 11. Availability of youth friendly STD services could be among the explanation to this observation.

In contrast, GUD was the commonest diagnosed syndrome in Mbeya region. It was also the commonest STD in men. GDS was commonest STD in women in this region, and PID was diagnosed 1.7 times more frequently than in 1997 (7,326 versus 4241).

Table 13: Episodes of STD syndromes in Mbeya Districts.

DISTRICT	GDS		GUD		PID	VDRL		TOTAL	
	Male	Female	Male	Female	Female	Male	Female	Male	Female
CHUNYA	621	732	966	816	665	287	544	1,874	2,757
ILEJE	253	335	352	336	223	57	67	662	961
KYELA	1,020	1,064	1,428	946	1,123	426	509	2,874	3,642
RUNGWE	1,235	1,346	1,688	1,419	1,064	445	434	3,368	4,263
MBARALI	771	1,032	821	761	412	288	261	1,880	2,466
MBOZI	1,620	2,303	1,785	1,588	1,367	535	879	3,940	6,137
MBEYA R	781	897	1,276	1,058	762	351	504	2,408	3,221
MBEYA U	1285	2368	2122	2064	1710	612	923	4,019	7,065
TOTAL	7,586	10,077	10,438	8,988	7,326	3,001	4,121	21,025	30,512

Fig 9: Distribution of Episodes of STD syndromes diagnosed in Mbeya in 1998

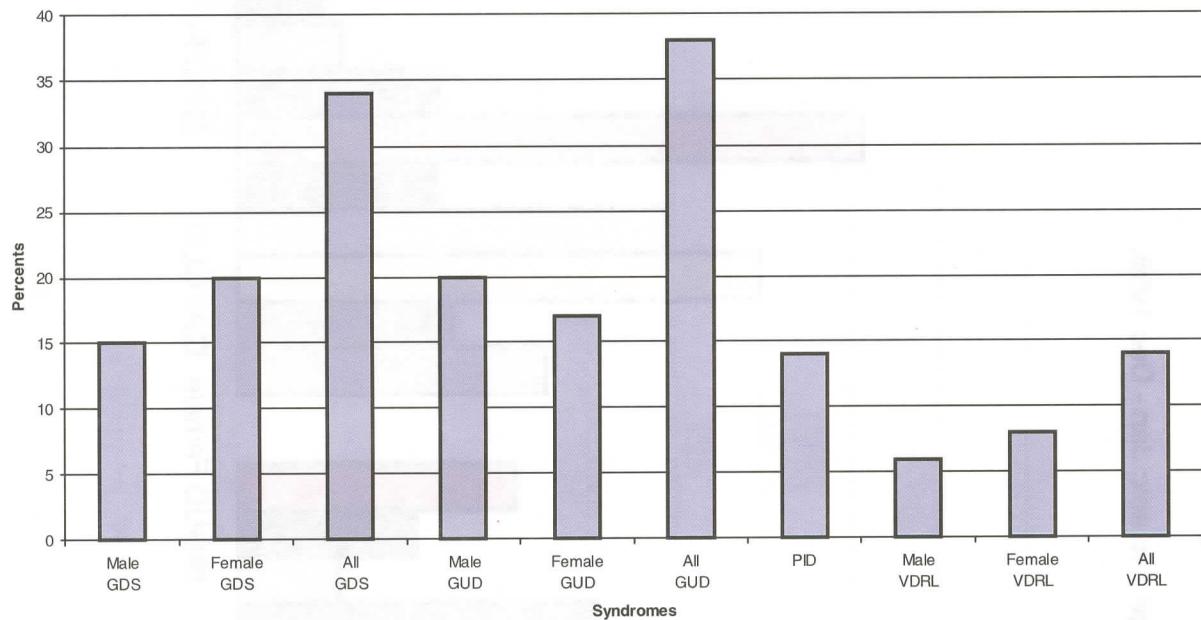


Table 14: Distribution of STD episodes by age for Mbeya region Jan. – Dec. 1998

DISTRICT	Syndromes and Gender								TOTAL	
	GDS		GUD		PID		OTHER			
	Male	Female	Male	Female	Female	Male	Female	Male	Female	
UNDER 20	720	1,869	978	1,792	909	662	1,123	2,360		5,693
20 – 29	3,345	5,762	4,562	4,947	4,114	1,145	2,028	9,052		16,851
ABOVE	3,521	2,446	4,898	2,249	2,303	1,194	970	9,613		7,968
TOTAL	7,586	10,077	10,438	8,988	7,326	3,001	4,121	21,025		30,512

Fig 10: STD episodes diagnosed in Mbeya by age and sex; Jan - Dec 1998.

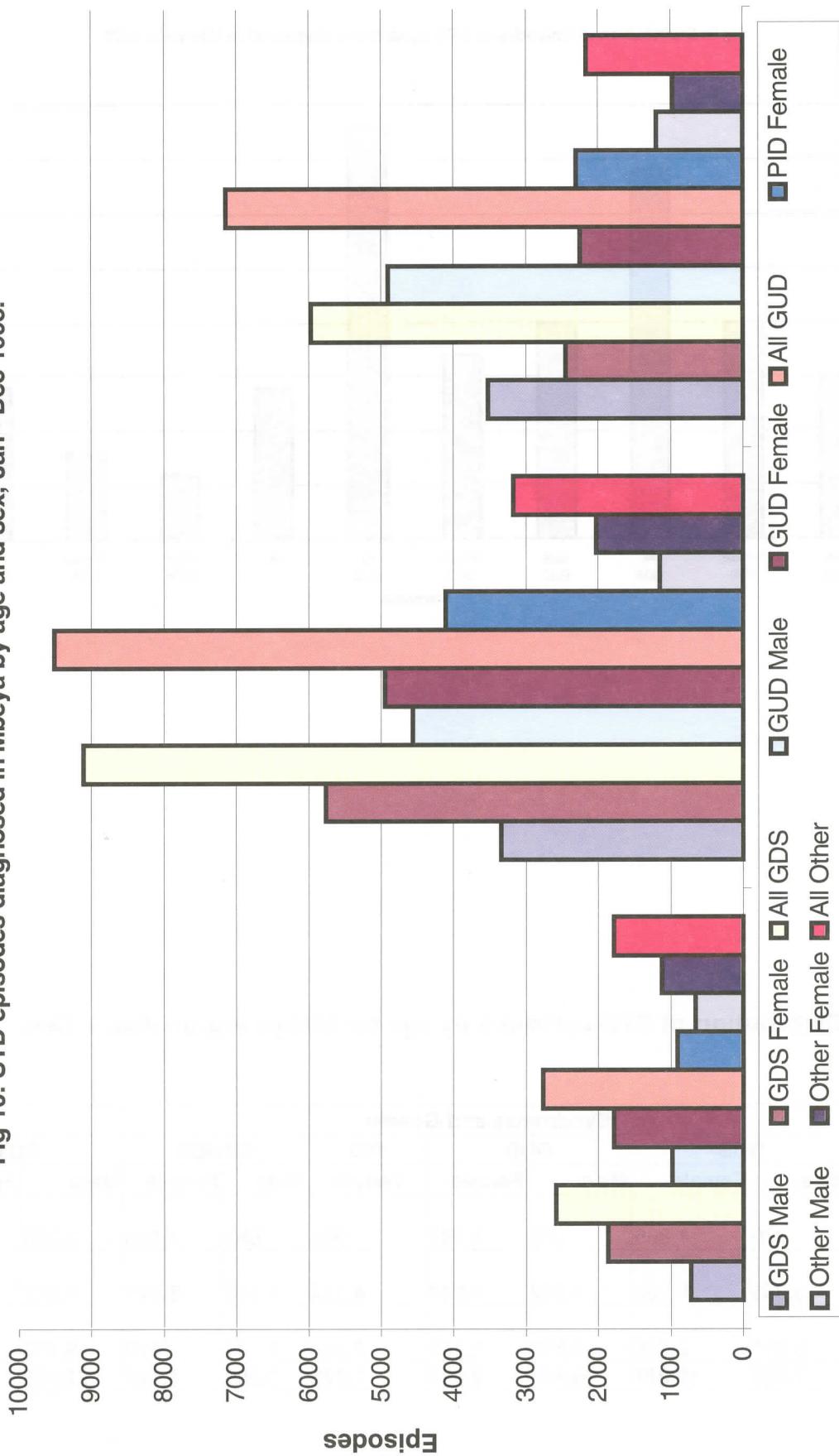


Table 15: STD episodes by eleven selected regions; Jan. – Dec 998.

Region	GDS		GUD		PID	OTHER		TOTAL	
	MALE	FEMALE	MALE	FEMALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Arusha	1752	1944	242	242	1113	482	466	2476	3765
DSM	1375	1585	1131	1685	926	809	770	3315	4966
Iringa	64	183	81	90	98	71	161	216	532
Kagera	134	92	37	37	116	28	63	199	308
Kigoma	233	410	95	75	116	38	110	366	711
Mara	35	56	16	14	23	30	17	81	110
Kilimanjaro	382	1358	102	135	107 8	117	199	601	2770
Mwanza	197	327	109	64	148	133	6	439	545
Ruvuma	164	240	90	128	94	10	25	264	487
Shinyanga	684	993	405	348	703	243	101	1332	2145
Tabora	606	659	222	152	346	811	947	1639	2104
TOTAL	5,626	7,847	2,530	2,970	4,761	2,772	2,865	10,928	18,443

Table 16: Distribution OF STD episodes by age and sex for region other than Mbeya.

Age group	GDS		GUD		PID	OTHER		TOTAL	
	MALE	FEMALE	MALE	FEMALE	FEMALE	MALE	FEMALE	MALE	FEMALE
UNDER 15	197	256	54	211	46	193	165	444	678
15 - 19	641	966	267	467	402	396	382	1304	2217
20 - 24	1347	1998	587	655	1315	712	775	2646	4743
25 - 34	1845	2648	867	885	1861	821	776	3533	6170
35 - 44	1120	1260	496	492	865	452	382	2068	2999
45 ABOVE	476	719	259	260	272	198	385	933	1636
TOTAL	5,626	7,847	2,530	2,970	4,761	2,772	2,865	10,928	18,443

6.0 HIV and Tuberculosis

Each year there are estimated 8 million new cases of tuberculosis (TB) and 3 million deaths due to TB worldwide, most of which occur in resource poor-countries. About 9% of global TB cases are attributed to human immunodeficiency virus(HIV) infection, projected to increase to about 14% by the year 2000. Many countries in Sub-Saharan Africa have annual increase in TB cases by 10% and rates of HIV infection in new patients may exceed 50%.

People who are infected with both AIDS virus and tubercle bacilli are 25 -30 times more likely to develop TB disease than those who are infected with tubercle bacilli alone. This is because HIV reduces the effectiveness of body immune system allowing the TB germ to multiply rapidly. In Tanzania, where almost all adults are infected by tubercle bacilli, HIV-TB associated disease is now becoming very common.

Proportion of HIV infection in all forms of TB cases is presented in Table 17. In this table, the prevalence of HIV among smear positive TB patients in mainland Tanzania varies from 24.3% in Arusha to 75.7% in Rukwa, with an average of 40%. The prevalence of over 80% and 75% was recorded in smear negative pulmonary and extrapulmonary cases in Rukwa region.

Table 17: Tuberculosis and HIV infection in Tanzania, October 1994 – March 1998.

Region	AFB			Relapse			AFB-			Extra-Pulmonary		
	Total	HIV+	% +Ve	Total	HIV+	%+ve	Total	HIV+	%+ve	Total	HIV+	%+ve
Arusha	317	77	24.3	43	12	27.9	286	74	25.9	161	35	21.7
Dar-Illala	752	342	45.5	49	29	59.2	330	201	60.9	164	108	65.9
Dar-Kinondoni	398	189	47.5	29	17	58.6	236	133	56.4	136	84	61.8
Dar Temeke	430	194	45.1	29	16	55.2	162	85	52.5	37	27	73.0
Dodoma	229	86	37.6	17	4	23.5	96	44	45.8	68	24	35.3
Iringa	332	222	66.9	19	11	57.9	174	114	65.5	157	110	70.1
Kagera	250	91	36.4	15	4	26.7	143	62	43.4	53	18	34.0
Kilimanjaro	330	135	40.9	26	16	61.5	113	58	51.3	72	36	50.0
Lindi	291	86	29.6	25	9	36.0	31	10	32.3	41	17	41.5
Mara	276	77	27.9	14	3	21.4	47	23	48.9	79	19	24.1
Mbeya	356	230	64.6	7	5	71.4	62	48	77.4	188	148	78.7
Morogoro	250	63	25.2	21	10	47.6	134	57	42.5	80	29	36.3
Mtwara	397	103	25.9	25	6	24.0	42	13	31.0	39	13	33.3
Mwanza	503	148	29.4	45	18	40.0	145	66	45.5	95	37	38.9
Pwani	217	100	46.1	11	7	63.6	47	27	57.4	43	30	69.8
Rukwa	152	115	75.7	5	4	80.0	30	25	83.3	61	46	75.4
Ruvuma	108	44	40.7	12	3	25.0	74	33	44.6	63	25	39.7
Shinyanga	409	111	27.1	14	5	35.7	55	24	43.6	77	34	44.2
Singida	202	56	27.7	24	5	20.8	67	29	43.3	54	22	40.7
Tabora	145	65	44.8	13	6	46.2	47	31	66.0	48	19	39.6
Tanga	446	190	42.6	39	15	38.5	356	155	43.5	147	67	45.6
Zanzibar	82	16	19.5	4	1	25.0	14	3	21.4	16	5	31.3
Grand total	6872	2740	39.9	486	206	42.4	2691	1315	48.9	1879	953	50.7

Tuberculosis is known to be an important opportunistic infections in HIV/AIDS. A study conducted in Mwanza on TB suspects found that 51.5% of TB suspects were HIV sero-positive. All forms of proven TB cases combined had HIV prevalence rate of 67.5%

REPORT ON VOLUNTARY COUNSELLING AND HIV TESTING SERVICES

7.0 Voluntary Counselling and HIV testing

Until December 1998, a total of 162 District counsellors had been trained by NACP. Ninety one of them were trained in December 1998. The work of 71 trained district counsellors between January and December 1998 is presented in Table 18. Out of 5843 counselled clients, 62% were new. Seventy-one percent of the new clients accepted HIV testing and 65.6% of the tested were found to be HIV positive.

Table 18: Voluntary Counselling and HIV Testing Services
January – Dec. 1998

Region/District	1997		1998					
	New clients	Clients tested	Counselled	New clients	Clients tested	HIV Positive	% HIV Positive	No. of referred cases
ARUSHA	162	72	326	187	98	64	65.3	10
COAST	100	57	325	162	84	63	75.0	0
DODOMA	151	51	327	120	51	39	76.5	8
DSM	880	642	1366	643	685	514	75.0	104
IRINGA	186	122	479	335	198	138	69.7	9
KILIMANJARO	114	82	150	149	98	53	54.1	0
KIGOMA	130	40	42	35	27	7	25.9	3
KAGERA	20	16	64	38	32	7	21.9	0
LINDI	75	56	160	112	58	33	56.9	0
MOROGORO	43	36	166	108	34	30	88.0	3
MTWARA	38	23	219	141	71	61	85.9	9
MARA	48	17	175	149	28	27	96.4	0
MWANZA	508	134	503	499	463	289	62.4	77
RUKWA	104	40	197	113	46	31	67.4	29
RUVUMA	75	23	170	153	34	24	70.6	0
SINGIDA	244	78	446	164	127	80	63.0	37
SHINYANGA	281	196	218	218	114	58	50.9	0
TANGA	138	71	234	233	157	110	70.1	1
TABORA	168	142	276	61	174	59	33.9	0
Total	3465	1898	5843	3620	2570	1687	65.6	290

RECENT PUBLICATIONS FOR 1998 SURVEILLANCE REPORT

1. Dadian Margaret J. AIDSCAP initiative innovation in NGO capacity building: Tanzania AIDS Project. *AIDSLink* 1998; 49: 8-10.
2. Good Charles M. Mobilizing traditional healers to prevent STDs and combat the spread of HIV/AIDS in Tanzania. *AIDSLink* 1998 ;
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4. Kwesigabo G, Killewo J, Godoy C, Urassa W, Mbena E, Mhalu F et al. Decline in the prevalence of HIV-1 infection in young women in the Kagera Region of Tanzania. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology* 1998; 17: 262-268
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