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National AIDS Control Programme

HIV/AIDS/STD Surveillance

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Epidemiology Unit, NACP
Dar es Salaam
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Table Of ontents

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
ODA	Overseas Development Administration
PID	Pelvic Inflammatory Disease
RPR	Rapid Plasma Reagin
STDs	Sexually Transmitted Diseases
STIs	Sexually Transmitted Infections
TB	Tuberculosis
TPHA	*Treponema Pallidum* 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

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We all believe that: **AIDS is preventable, let us join hands to prevent it.**

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

AIDS Case reports

This report covers the period, January to December, 1997 but takes into account previous reports. In particular, the report includes the well-known first three AIDS cases in Tanzania which were reported in 1983 in the Kagera Region. Generally the reported cases are few compared to existing ones because only one out of 4-6 AIDS cases are reported in the country due to problems of AIDS diagnosis and other logistics which exist in many of the health care facilities. Thus, the current total number of estimated cumulative AIDS cases in Tanzania stands at about 520,000 while only 103,185 cumulative AIDS cases had been reported until December, 1997.

Most affected regions

As of 1997 Mbeya region had reported the highest absolute cumulative number of AIDS cases in the country. Even when the regional population size is taken into account , Mbeya region had the highest case rate. Regions following Mbeya in the rank of case rates were Dar es Salaam and Kilimanjaro in descending order.

HIV infection rates

Data on HIV infection prevalence rates have been obtained through ante-natal clinics, blood donors and surveys involving selected populations. During 1997 the data showed that HIV-1 prevalence among pregnant women ranged from 7.3% to 44.4% in rural areas and 22.0 % to 36.0 % in urban population. The prevalence of HIV infection among blood donors ranged from 2.8% for Arusha and Kigoma and 19. 8 for Dar es Salaam for males from 2.6%(Kigoma) to 40.6%(Dar es Salaam) for females. Age specific prevalence showed that the highest prevalence was found in the age group 35-39 which is 7.4 % for males and 12.1 % for females.

The overall prevalence of HIV infection among blood donors by sex for the year 1997 was 7.6% for male and 11.6% for female. Age and sex specific prevalence of HIV infection among blood donors was 6.0% among males and 9.7% among females. Basing on an estimated adult population of 16,000,000, the number of adult HIV infection in Tanzania mainland in 1997 is estimated to be 1,500,000. This indicates that during the year 1997, there were about 150,000 new infections. The trend shows that the estimated number of HIV infections was more than three times the number of estimated AIDS cases.

Sexually Transmitted disease (STDs)

Sexually transmitted disease (STDs) are among the most common causes of illness in the world and have far-reaching health, social and economic consequences. In addition to their sheer magnitude, STDs are major public health problem for two additional reasons: their sequelae and the fact that they facilitate transmission of HIV. Young adults between 15 and 19 years of age often have high rates of STD and present a particularly important problem because of their lack of easy access to STD services and condoms, and their frequent and multiple causal sex partners.

1. Introduction

This report covers the status of the HIV/AIDS epidemic in mainland Tanzania until December, 31st 1997 and provides an overview of the situation with updated figures since the eleventh report of December, 1996.

Since the first reported AIDS cases in Kagera in 1983, the HIV/AIDS epidemic has been on the increase in the country affecting mainly the sexually active populations of both sexes as well as children born of infected mothers. By 1986 all regions of the country had reported the existence of AIDS cases and by the end of 1990 a cumulative total of 25,503 AIDS cases had been reported to the NACP from the regions. The cumulative total by the end of 1997 was 103,185. This increase in the number of reported cases since 1983 is an indication of the increasing trend in AIDS cases but does not reflect the real situation in terms of the true number of existing cases in Tanzania.

2. Global AIDS situation

As of the beginning of June 1998, a total of 1,893,784 AIDS cases had been reported by countries since the beginning of the pandemic***(Table 1).*** This represents a 15 % increase from the 1,644,183 cases reported as of June 1997. It is estimated that the cumulative number of AIDS cases reported is less than 15 % of the total number estimated to have occurred to date due to under diagnosis , incomplete reporting and reporting delays. Currently, an estimated 30.6 million adults and children are living with HIV/AIDS, 5.8 million of whom were newly infected in 1997. An estimated 11.7 million AIDS deaths have occurred since the beginning of the pandemic, 2.3 million of them in 1997.

Table 1

Global distribution of reported AIDS cases up to 1997

Continent	Reported AIDS Cases
Africa	686,256 (36%)
Americas	889,465 (50%)
Asia	101,429 (2%)
Europe	207, 890 (12%)
Oceania	8,744 (1%)
TOTAL	**1,893,784**
Tanzania	***103,185***

Source: WHO - June 1998

Table 1 shows that so far the Americans have contributed 50% of all the reported AIDS cases, while Africa accounts for a little more than 1/3 of the reported cases. This is mainly because reporting of AIDS cases in Africa has generally been delayed or is incomplete.

In Tanzania, it has been estimated that only one out of 4 - 6 AIDS cases are reported to official sources. Thus, taking the 103,185 cumulative AIDS cases reported until the end of 1997 and an average estimate of one reported case out of 5 , we have an overall estimate of about 520,000 cumulative AIDS cases for Tanzania until the end of 1997.

Table 2

Regional HIV/AIDS statistics and features, December 1997

Region	Adult and Children living with HIV/AIDS	Adult prevalence rate	Cumulative No. Of orphans	Percentage women
Sub Saharan Africa	20.8 mil	7.4 %	7.8 milion	50%
North Africa, Middle East	210,000	0.13%	14,200	20 %
South and South East Asia	6.0 Million	0.6 %	220,000	25%
East Asia Pacific	440,000	0.05%	1,900	11%
Latin America	1.3 million	0.5 %	91,000	19%
Caribbean	310,000	1.9 %	48,000	33%
East Europe and Central Asia	150,000	0.07%	30	25%
West Europe	530,000	0.3%	8,700	20%
North America	869,000	0.6%	70,000	20%
Australia and New Zealand	12,000	0.1%	300	5%
TOTAL	**30.6 million**	**1.0%**	**8.2 million**	**41 %**

WHO - June 31 1998

The fact that the percentage of women infected with HIV/AIDS is 50%, indicates the bulk of transmission in Africa, especially Sub-Saharan Africa are acquired through heterosexual contact being unprotected sex between men and women which accounts for over 90% of the new HIV infections. In other continents with small percentage of women been infected, is an indication of other modes of transmission, such as homosexuality and intravenous drug use.

In the African continent, the spread of theHIV epidemic had appeared in the early 1980s in a geographical band stretching from West Africa across to the Indian Ocean on the east coast, while the countries north of the Sahara and those in the southern core of the continent seemed untouched. By 1987, the epidemic had become more concentrated in the same east-west band, and was gradually beginning to colonise the south of the continent. A decade later, HIV had been recorded all over the continent. HIV spread by 1997 was most dramatic in the Southern Africa, with 20% and more of all adults being infected in some countries, (Namibia, Zambia, Zimbabwe). The joint United Nation Programmes on HIV/AIDS (UNAIDS) and WHO, together with National AIDS control programmes and a series

of international institutions and experts, have updated the estimates of number of people living with HIV/AIDS in each country. ***Table 3*** presents the estimated number of AIDS cases and of adults and children infected with HIV as of the end of 1997, as well as the estimated prevalence rate in adults (aged 15 -49) for 1997. The estimate includes all people with HIV infection alive at the end of 1997, whether or not they have developed symptoms of AIDS.

Table 3 Distribution of Reported AIDS cases in Africa by country and report date.

Africa AIDS data as of 20 June 1998			Estimated number of people living with HIV/AIDS, end 1997.		
Country	**Number of Cases**	**Date of Report**	**Adult and children**	**Adults**	**Adult rate**
Algeria	341	31.12.97	11,000	11,000	0.07
Angola	1,926	31.08.97	110,000	100,000	2.12
Benin	2,813	06.06.98	54,000	52,000	2.06
Botswana	7,187	31.12.97	190,000	190,000	25.1
Bukina Faso	11,352	03.02.98	370,000	350,000	7.17
Burundi	9,246	31.12.97	260,000	240,000	8.3
Cameroon	9,626	31.03.97	320,000	310,000	4.89
Cape Verde	225	03.05.97			
Central African republic	7,016	30.05.97	180,000	170,000	10.77
Chad	8,339	31.03.98	87,000	83,000	2.72
Comoro	18	19.11.97		400	0.14
Congo	10,223	06.09.96	100,000	95,000	7.78
Cote d'Ivoire	37,898	05.05.97	700,000	670,000	10.06
Democratic Rep. Congo	38,426	19.01.98	950,000	900,000	4.35
Djibouti	1,672	31.12.97	33,000	32,000	10.3
Egypt	168	31.12.97			
Equatorial Guinea	231	08.11.96		2,300	1.21
Eritrea	3,464	30.06.97	2,400	49,000	3.17
Ethiopia	21,569	29.10.97	2,600,000	2,500,000	3.17
Gabon	1,660	31.12.96	23,000	22,000	9.31
Gambia	544	31.12.97	13,000	13,000	4.25
Ghana	24,692	07.05.98	210,000	200,000	2.38
Guinea	4,085	12.06.98	74,000	70,000	2.09
Guinea- Bissau	823	31.10.96	12,000	11,000	2.25
Kenya	78,765	28.05.98	1,600,000	1,600,000	11.64
Lesotho	4,075	31.12.97	85,000	82,000	8.35
Liberia	232	31.03.98	44,000	42,000	3.65
Libya	17	31.12.95	1,400	1,400	0.05
Madagascar	32	29.07.97	8,600	8,600	0.12
Malawi	49,120	30.06.97	710,000	670,000	14.92
Mali	4,516	22.05.98	89,000	84,000	1.67
Mauritania	532	31.05.97	6,100	5,900	0.52
Mauritius	43	31.05.98	500	500	0.08
Morocco	464	31.12.97	5,000	5,000	0.03
Mozambique	7,219	31.03.98	1,200,000	1,200,000	14.17
Namibia	6,784	31.03.97	150,000	150,000	19.94
Niger	3,219	04.06.98	65,000	61,000	1.45
Nigeria	20,337	31.03.98	2,300,000	2,200,000	4.12
Reunion	166	31.12.95		160	0.04
Rwanda	12,056	31.12.97	370,000	350,000	12.75
Sao Tome and Principe	27	31.10.97			
Senegal	2,393	30.12.97	75,000	72,000	1.77
Seychelles	30	02.02.98			
Sierra Leone	205	11.09.96	68,000	64,000	3.17
Somalia	13	31.12.90	11,000	11,000	0.25

Africa AIDS data as of 20 June 1998			Estimated number of people living with HIV/AIDS, end 1997.		
Country	**Number of Cases**	**Date of Report**	**Adult and children**	**Adults**	**Adult rate**
South Africa	12,825	30.10.96	2,900,000	2,800,000	12.91
Sudan	1,832	31.12.97	140,000	140,000	0.99
Swaziland	2,939	31.03.98	84,000	81,000	18.5
Togo	7,993	14.03.97	170,000	160,000	8.52
Tanzania	103,185	30.12.97	1,400,000	1,400,000	9.42
Tunisia	340	30.06.97	2,200	2,200	0.04
Uganda	53,306	31.12.97	930,000	870,000	6.15
Zambia	44,942	03.07.97	770,000	730,000	19.07
Zimbabwe	70,669	31.12.97	1,500,000	1,400,000	25.84
TOTAL	**686,256**		**20,984,200**	**18,848,460**	

WHO - June 31 1998.

The African epidemic has been the most under reported one up to now. It is thought to have fully two-thirds of the total world number of people living with HIV/AIDS, estimated to reach 20.8 million with 7.8 million cumulative number of orphans. Sub-Sahara Africa as a whole has reached the unprecedented level of 7.4% of all those aged 15 to 49 infected with HIV.

3. AIDS Situation in Tanzania

AIDS cases reported since last report

A total of 14,518 AIDS cases were reported to the NACP between 1st January 1997 and 31st December, 1997. Of these cases,10,592 (72.9%) were freshly reported as AIDS cases diagnosed during the year of this report. The rest of the cases 3,926 (27.1%) had occurred in previous years but had not been reported due to a variety of reasons. However, these cases were subsequently reported during the year of this report. ***Table 4*** shows the cumulative reported AIDS cases by region. The cumulative total number of AIDS cases up to the end of 1997 is 103,185.

Table 4
Cumulative AIDS cases by region and year (1991-1997)

	YEAR									
Region	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**Population**	**Rate**	**Rank**
Arusha	1,117	1,637	2,185	2,368	2,615	2,787	3,244	1,889,648	171.7	17
Coast	1,676	2,215	2,740	3,023	3,268	3,559	3,796	764,639	496.4	4
Dar es Salaam	8,834	9,295	10,406	11,050	11,302	12,983	13,899	2,095,961	663.1	2
Dodoma	536	762	1,028	1,294	1,608	1,938	2,517	1,537,221	163.7	18
Iringa	2,281	3,334	4,462	4,674	4,785	4,883	5,008	1,530,862	327.1	10
Kagera	4,742	5,813	6,646	7,064	7,223	7,426	7,671	1,724,941	444.7	5
Kigoma	930	1,556	1,920	2,070	2,257	2,280	2,426	1,086,211	223.3	14
Kilimanjaro	2,060	3,707	4,699	5,119	5,513	5,991	6,618	1,337,290	496.9	3
Lindi	842	1,211	1,691	1,966	2,173	2,480	2,712	757,524	358.0	8
Mara	639	980	1,304	1,393	1,486	1,486	1,486	1,240,168	119.8	19
Mbeya	6,924	9,890	11,439	12,214	12,371	14,685	16,835	1,961,486	858.3	1
Morogoro	2,398	3,598	4,328	4,575	4,903	5,189	5,438	1,516,424	358.6	7
Mtwara	1,361	1,968	2,090	2,201	2,267	2,444	2,569	986,929	260.3	13
Mwanza	3,041	4,207	5,349	5,731	5,974	6,365	7,006	2,394,959	292.5	11
Rukwa	261	496	715	777	801	882	1,227	1,053,670	116.5	20
Ruvuma	1,197	1,807	2,480	2,847	3,087	3,345	3,752	1,038,917	361.1	6
Shinyanga	1,278	1,874	2,624	3,062	3,361	3,824	4,217	2,358,457	178.8	16
Singida	763	1,107	1,472	1,688	1,908	2,135	2,167	1,129,287	191.9	15
Tabora	1,400	1,972	2,786	3,075	3,428	3,805	4,278	1,293,321	330.8	9
Tanga	1,914	2,636	3,207	3,475	3,793	4,062	4,278	1,562,576	273.8	12
Unspecified	1	1	1	2	44	44	44			
TANZANIA	**44,195**	**60,066**	**73,572**	**79,668**	**84,167**	**92,593**	**103,185**	**29,260,491**	**343.0**	

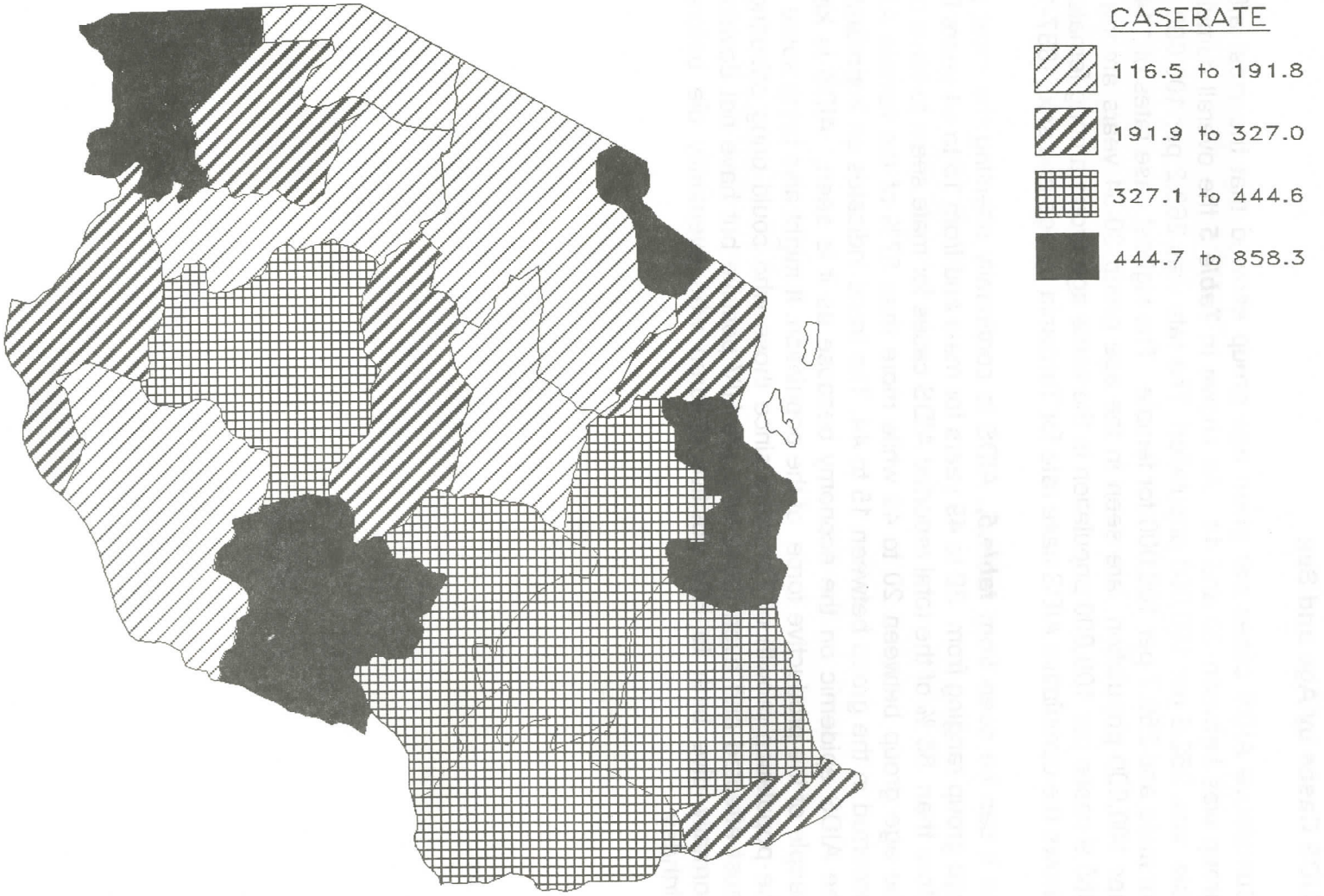
NB:

1. The total population for 1997 by regions has been projected from the 1988 population census using a constant exponential growth model with an annual growth rate calculated for each region.

Cumulative AIDS Cases as reported from each region show that Mbeya region has the highest case rate followed by Dar es Salaam, Kilimanjaro and Coast. The regional difference among case rates show that the highest case rate in the region is 858.3 cases per 100,000 population for Mbeya region and the lowest is 116.5 cases per 100,000 for Rukwa region.

Map 1: AIDS case rate (cases per 100,000 population)

By DEC. 1997



AIDS Cases by Age and Sex

Cumulative AIDS cases per given age group showed that the most affected age group was between 20 and 44. As shown in ***Table 5*** the overall cumulative case rate was 262.5 per 100,000 population. The rate was 263.2 per 100,000 population for male and 250.7 per 100,000 for female. The highest case rates of 1143.3 cases per 100,000 population are seen in the age group 30-34 years among male and 885.9 cases per 100,000 population in the same age group among female. ***Figure 1*** shows the cumulative AIDS case rate for Tanzania by age and sex (1987-1997).

As it can be seen from ***table.5,***. AIDS is continually affecting the most productive age group ranging from 20 to 49 years for male and from 15 to 44 years for female. More than 86 % of the total reported AIDS cases for male seem to have occurred in the age group between 20 to 49 while more than 87% of the female AIDS cases occurred in the group between 15 to 44. The trend indicates an important effect of the AIDS epidemic on the economy because as it is seen, AIDS is killing many people of the productive force of the population. It might also bring some effects on the population growth of Tanzania since those who could bring offsprings are the most affected and even those who are HIV positive but have not developed AIDS normally give birth to HIV positive children who eventually die before their 5th birthday.

Table 5
Distribution of cumulative AIDS cases by age and sex, 1987 - 1997 (Age-specific population is also provided)

	Male				Female					Total			
Age	**Cases**	**%**	**Population**	**Rate**	**Cases**	**%**	Population	Rate	Unknown sex cases	Cases	%	Population	Rate
0 -4	1811	4.9	2,416,586	74.9	1584	4.2	2,452,001	64.6	15	3,410	4.5	4,868,587	70.0
5-9	267	0.7	2,267,201	11.8	312	0.8	2,263,047	13.8	15	594	0.8	4,530,248	13.1
10-14	129	0.3	1,932,061	6.7	178	0.5	1,924,204	9.3	0	307	0.4	3,856,264	8.0
15-19	554	1.5	1,546,028	35.8	2093	5.6	1,635,014	128.0	7	2,654	3.5	3,181,041	83.4
20-24	2936	7.9	1,038,886	282.6	7632	20.3	1,320,807	577.8	15	10,583	13.9	2,359,693	448.5
25-29	7412	20.0	1,007,104	736.0	9863	26.3	1,199,146	822.5	33	17,308	22.7	2,206,250	784.5
30-34	8374	22.6	732,461	1143.3	7299	19.5	823,886	885.9	51	15,724	20.6	1,556,347	1010.3
35-39	6086	16.4	653,960	930.6	4072	10.9	710,107	573.4	30	10,188	13.4	1,364,067	746.9
40-44	3979	10.7	464,812	856.0	1873	5.0	530,442	353.1	14	5,866	7.7	995,253	589.4
45-49	2356	6.4	448,002	525.9	929	2.5	463,059	200.6	18	3,303	4.3	911,061	362.5
50-54	1207	3.3	361,158	334.2	429	1.1	413,941	103.6	4	1,640	2.1	775,099	211.6
55-59	564	1.5	302,152	186.7	160	0.4	285,891	56.0	3	727	1.0	588,043	123.6
60-64	311	0.8	256,014	121.5	92	0.2	292,731	31.4	4	407	0.5	548,745	74.2
65+	189	0.5	638,524	29.6	54	0.1	600,329	9.0	2	245	0.3	1,238,853	19.8
Unknown	918	2.5	28,143		935	2.5	48,151		1474	3,327	4.4	76,294	
Total	37,093	**100**	**14,093,090**	263.2	**37,505**	**100**	**14,962,755**	**250.7**	**1685**	**76,283**	**100**	**29,055,845**	**262.5**

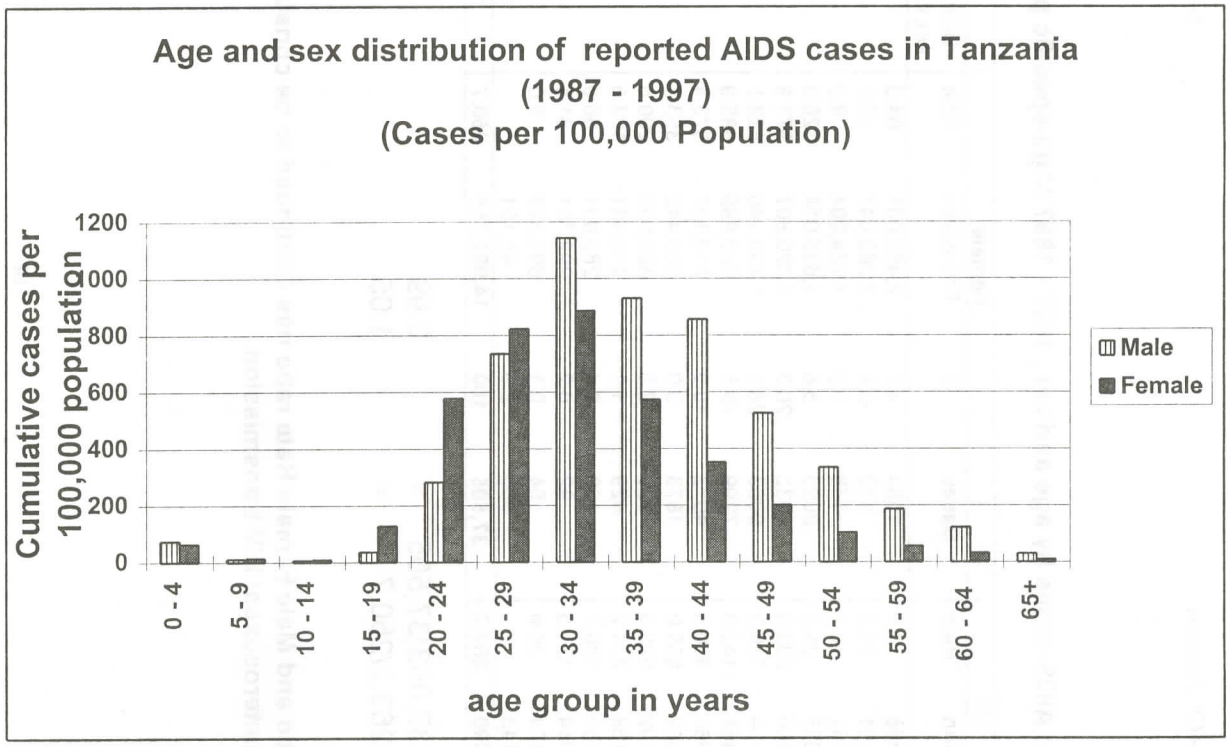
M:F case ratio 37,093/37,505 = 0.99
M:F rate ratio 263.2/250.7 = 1.05

The Male Female case ratio and Male Female Rate ratio has continued to be constant and it is approximately equal to one. This indicates dominant heterosexual HIV transmission.

It can also be seen that 4.5 % of reported AIDS cases appear among children of age less than 5 years. This is because there are many women who are HIV positive who get pregnant and give birth to HIV positive babies. It is estimated that 25 -35% of new born babies born to HIV positive mothers are HIV positive.

The age group of 5 to 14 years is significantly least affected by HIV/AIDS compared to other age groups in the population. In the overall cumulative AIDS cases reported to the Ministry of Health -NACP so far, only 1.3 % were children in this age group which comprises 39.7 % of the national population of over 29 million. It is significantly encouraging that, if preventive measures are effectively envisaged towards this group, the national impact of AIDS epidemic might be reversed in the next two decades, but if ignored, the situation might be even worse.

Figure 1.



4. HIV Sentinel surveillance using ante-natal clinics:

HIV serology in sentinel sites

During 1997, surveillance data could be collected from only 11 out of 24 sentinel sites in four regions (***Table 6).*** The prevalence of HIV-1 infection among pregnant women attending ante-natal clinics ranged from 7.3% to 44.4% in rural areas, while it ranged from 22.0% and 36.0 % in urban population. This shows that there must have been many children who were born HIV-1 positive or became infected through breast feeding from their infected mothers.

Table 6

Prevalence of HIV-1 infection (in %) using Sentinel Surveillance data from ante-natal clinics 1991-1997

	1991	1992	1993	1994	1995	1996	1997
Site of ANC Clinic	%	%	%	%	%	%	%
MBEYA RURAL		***14.1***	***13.9***	***14.1***	***16.6***	***14.4***	***20.1***
Chimala	9.5	8.0	10.8	16.0	10.5	17.0	16.0
Isoko	6.6	18.0	8.5	8.0	10.3	7.5	7.3
Itete	3.9	5.3	15.5	5.1	14.8	5.5	14.8
Mwambani	12.9	8.0	10.7	13.0	17.5	16.0	14.0
Kyela	17.5	30.4	27.2	27.5	32.5	23.1	44.4
Mbozi				15.0	13.9	17.0	24.0
MBEYA URBAN	***15.3***	***17.7***	***19.6***	***18.3***	***20.3***	***18.7***	***30.0***
Kiwanjampaka		17.0	22.3	19.5			22.0
Mwanjelwa		11.0	23.2	19.6			36.0
Meta		25.0	13.7	16.0			32.0
KILIMANJARO RURAL							
Umbwe	2.3	6.4			0.0	9.1	10.0
SONGEA		9.7	16.1				9.8

Mother to child transmission(MTCT).

Transmission of HIV infection from mother to child can occur during pregnancy at the time of birth as well as through breast milk. This mode of transmission is major cause of morbidity and mortality among young children particularly in developing countries like Tanzania with high prevalence of HIV infection.

As it can be seen from ***Table 5 and Fig 3,*** that 4.5 % of the cumulative AIDS cases were children under 5 years. Most of these children acquired the infection from their mothers during pregnancy, at the time of birth or through breast milk.

From ***Table 6*** it is found that the prevalence of HIV infection among pregnant women ranges from 7.3 % to 44.4% among rural pregnant women and from 9.8 %

to 36 % among urban pregnant women in 1997. It is estimated that about 25% to 35 % of children born to HIV positive mothers are also infected.

It is estimated that between one third to half of all HIV infections in children in developing country like Tanzania are acquired through breast milk. However there are several reasons for this. Firstly, about 90% of all HIV infected women in these countries have no idea that they are infected. They therefore can not make informed choices about how to feed their children. Secondly, women may chose to breast feed even if they know about their HIV infection and know that they might pass it on to their children through breast milk. (Breast feeding protects the infant against range of other infections and it is convenient and considerably cheaper than any other means of feeding.)

Syphilis Screening in sentinel sites.

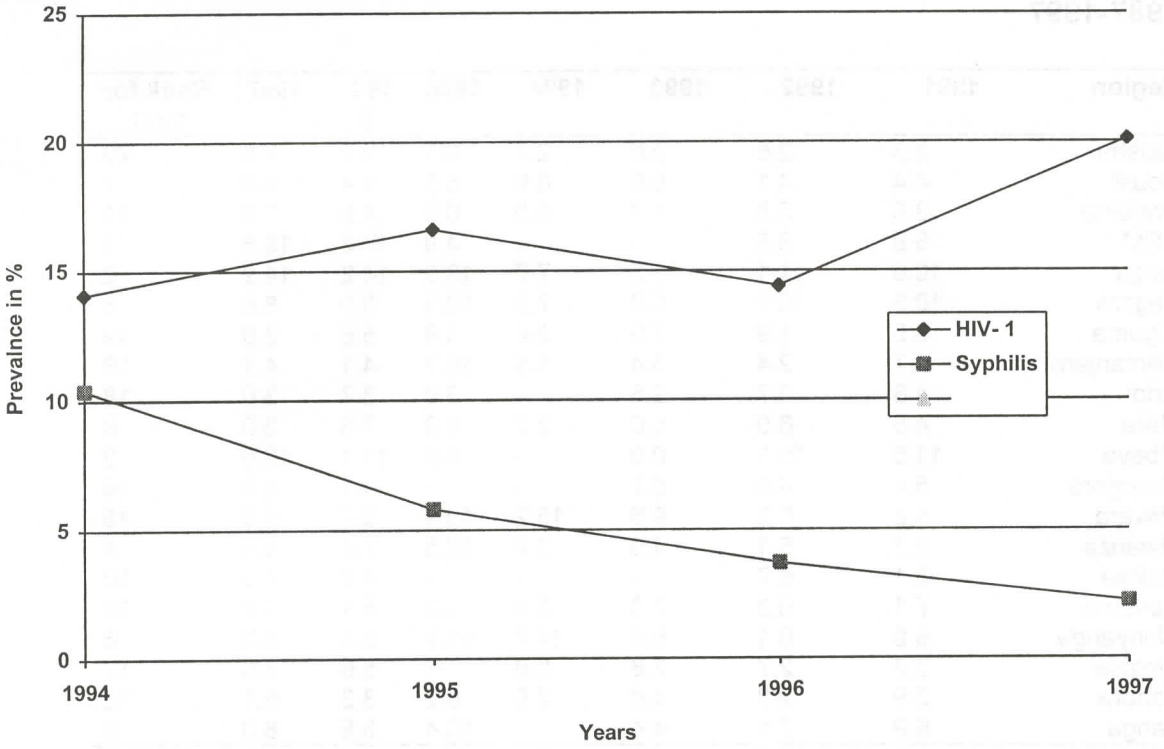
Antenatal women apart from HIV are also screened for syphilis. In Mbeya region where screening and treatment of pregnant women have been going on since 1989 there has been a clear downward trend for syphilis(Sea **Table 7 and fig. 2)** while the HIV prevalence is still remaining high.

Table 7

Prevalence of Syphilis infection (in %) using Sentinel Surveillance data from ante-natal clinics, 1990-1997

	1990	1991	1992	1993	1994	1995	1996	1997
Site of ANC Clinic	%	%	%	%	%	%	%	%
MBEYA RURAL			***13.3***		***10.4***	***5.8***	***3.7***	***2.2***
Chimala	4.4		10.0		14.0	8.5	2.5	6.3
Isoko	7.5	7.3	22.0		5.5	0.7	2.7	0.0
Itete			8.0		10.1	7.4	0.0	2.0
Mwambani	6.6		8.0		17.5	11.0	10.5	3.5
Kyela		4.8	17.9		7.5	1.0	4.1	0.0
Mbozi					8.0	6.2	2.5	1.5
MBEYA URBAN	*9.1*	*8.6*	*9.7*		*12.4*	*7.3*	*6.8*	*0.8*
Kiwanjampaka		26.6	10.0		13.5			0.5
Mwanjelwa		20.0	14.0		10.6			0.0
Meta		11.9	5.0		13.0			2.0
KILIMANJARO(RURAL)								
Umbwe		1.7	3.6	0.9		1.1	0.7	4.8
RUVUMA								
Songea		51.9	3.6				12.0	4.0
Madaba			3.1			4.0	2.1	2.5
Namtumbo			7.1			1.7	4.9	5.4
MTWARA								
Ndanda								15

Fig 2. Trend of prevalence of HIV-1 (in %) and infection and Syphilis infection(in %) Using Sentinel Surveillance in Mbeya region.



5. HIV Sentinel surveillance using blood donors

Regional Differences in HIV infection using blood donor data

Tables 8 and 9 show the prevalence of HIV-1 infection among blood donors by region and by sex between 1991 and 1997. These tables show that the prevalence ranges from 2.8% to 19.8% and 2.6% to 40.6% for males and females respectively.

Table 8

Prevalence of HIV-1 infection (in %) among blood donors by region for males, 1987-1997

Region	1991	1992	1993	1994	1995	1996	1997	Rank for 1997
Arusha	2.3	2.6	2.6	2.7	6.1	3.0	2.8	20
Coast	4.4	4.1	5.9	6.6	5.5	9.4	8.2	7
Dodoma	3.5	2.8	1.7	0.0	0.0	4.9	7.9	11
DSM	6.9	8.5	-	-	4.9	17.2	19.8	1
Iringa	10.6	11.1	13.2	7.7	13.0	14.2	14.2	2
Kagera	10.3	10.9	5.8	7.9	10.8	8.0	8.6	5
Kigoma	2.5	1.9	7.0	3.4	4.9	5.6	2.8	19
Kilimanjaro	2.7	2.4	3.4	1.5	10.7	4.1	4.1	16
Lindi	4.8	3.7	2.5	-	3.0	3.7	3.0	18
Mara	4.5	6.9	5.0	3.7	5.8	7.6	8.0	8
Mbeya	11.6	15.1	0.0	-	9.0	11.1	12.6	3
Morogoro	5.4	4.6	5.7	-	-	4.1	5.5	14
Mtwara	4.2	5.2	9.5	15.2	10.1	9.7	4.5	15
Mwanza	6.2	5.1	4.0	2.9	12.5	7.6	9.5	4
Rukwa	8.1	6.7	-	-	-	8.0	7.9	10
Ruvuma	7.1	6.2	7.3	2.0	3.3	8.1	7.7	12
Shinyanga	6.0	6.1	6.4	14.7	11.7	8.5	8.5	6
Singida	2.2	2.7	2.8	0.0	-	5.6	3.6	17
Tabora	2.9	2.8	4.4	2.5	6.2	3.2	6.1	13
Tanga	6.9	7.1	4.4	-	10.4	5.5	8.0	9
TANZANIA	5.8	5.3	5.9	6.9	7.8	6.8	7.6	

Arusha and Kigoma regions show the lowest prevalence of HIV infection among blood donors for males. The highest prevalence among males is found in DSM which is 19.8% and the lowest is found in Arusha and Kigoma being 2.8% for both regions, ***Table 8.***

Table 9
Prevalence of HIV-1 infection (in %) among blood donors by region for females, 1991 - 1997

Region	1991	1992	1993	1994	1995	1996	1997	Rank 1997
Arusha	5.5	2.2	3.9	-	15.6	4.4	6.0	15
Coast	6.1	5.0	10.2	11.8	9.2	-	8.0	13
Dodoma	3.3	4.8	-	-	0.0	-	9.2	10
DSM	14.1	7.7	-	-	6.7	-	40.6	1
Iringa	8.7	8.1	17.6	20.0	7.8	12.4	16.4	2
Kagera	12.9	11.0	8.6	8.3	14.3	7.4	11.3	9
Kigoma	4.7	4.1	5.8	5.1	0.0	6.1	2.6	18
Kilimanjaro	3.2	2.2	1.8	2.9	0.0	5.9	8.1	12
Lindi	4.4	.3	1.9	-	1.6	3.6	4.9	17
Mara	5.4	8.2	2.9	10.0	9.4	10.1	13.1	6
Mbeya	11.8	20.3	-	-	11.4	13.8	14.4	4
Morogoro	5.1	5.7	10.8	-	-	6.0	9.1	11
Mtwara	3.5	10.5	5.7	0.0	5.6	10.5	-	NR
Mwanza	6.2	5.7	8.0	5.0	0.0	8.5	11.8	8
Rukwa	21.4	0.0	-	-	-	8.8	-	NR
Ruvuma	7.0	6.4	6.7	2.1	6.1	10.5	12.7	7
Shinyanga	18.1	10.0	21.6	33.3	0.0	14.9	14.9	3
Singida	2.2	4.5	4.6	0.0	-	5.8	5.2	16
Tabora	2.8	2.7	5.8	0.0	12.9	3.2	7.7	14
Tanga	7.9	7.0	5.9	-	20.8	7.0	13.6	5
Tanzania	7.2	5.9	6.2	4.8	9.4	8.2	11.6	

Note: NR = not ranked since no blood donors were reported during the year.

Prevalence rate of HIV infection among female blood donors shows high prevalence for Dar es salaam which is 40.6%. However this should be interpreted with great care since it is calculated from small sample of donors. The prevalence of HIV infection for males in the same region can be used to determine the high prevalence of HIV infection among female blood donors. Regions which have the lowest prevalence among female blood donors are Kigoma 2.6% followed by Lindi 4.9%.

Age and sex differences in HIV infection (Blood donors)
Tables 10 and ***11*** show that the overall female HIV prevalence among blood donors is higher than that of males in almost all age groups.

Table 10
Age-specific prevalence of HIV-1 infection (in %) among Male blood donors (1990-1997)

Age	1990	1991	1992	1993	1994	1995	1996	1997
15-19	3.3	3.2	3.7	3.9	2.4	5.3	4.4	4.5
20-24	4.7	5.0	4.9	5.8	2.4	5.8	5.9	4.9
25-29	5.0	6.7	6.0	6.1	5.8	7.2	7.4	7.2
30-34	5.5	6.4	5.8	6.2	5.4	7.7	7.9	7.3
35-39	4.3	6.1	5.6	6.5	9.8	7.8	7.7	7.4
40-44	3.8	4.8	3.9	5.1	0.0	5.9	6.3	6.6
45-49	5.0	4.5	4.2	4.9	7.4	5.8	5.7	5.8
50-54	3.8	4.4	2.6	4.3	0.0	3.5	5.6	4.8
55+	5.0	4.0	2.3	5.2	12.5	2.5	4.4	5.9
Total	5.0	5.8	5.3	5.9	4.8	6.7	6.9	6.0

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

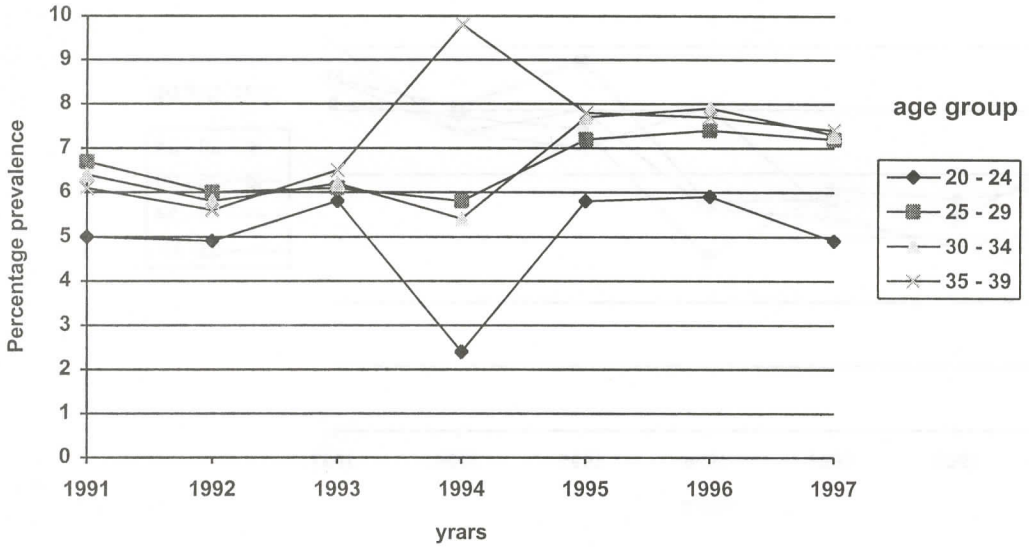
females than in males of the same age group. The prevalence across the age group for male ranges from 4.5 % for the age group 15 - 19 to 7.4% for the age group 35 - 39. For female' the lowest prevalence is found in the age group 15-19 which is 6.7% and the highest is 12.1 % for age group 35 - 39.

Table 11.
Age-specific prevalence of HIV-1 infection (in %) among Female blood donors (1990-1997)

Age	1990	1991	1992	1993	1994	1995	1996	1997
15-19	7.5	4.9	4.2	2.9	5.6	5.3	6.3	6.7
20-24	9.5	7.7	7.2	7.5	5.4	9.4	9.8	10.2
25-29	9.0	8.7	6.6	7.2	7.1	11.6	10.1	11.0
30-34	6.2	6.5	5.7	6.6	6.9	10.0	9.3	11.0
35-39	6.2	4.8	5.7	6.7	10.1	8.8	9.3	12.1
40-44	2.9	6.3	3.6	1.7	5.4	7.6	6.0	9.6
45-49	1.2	3.4	4.4	3.7	7.5	4.8	5.5	8.2
510-54	0.0	5.6	5.4	5.9	6.2	*6.3	5.6	11.2
55+	10.0	6.7	4.2	5.3	3.3	*16.7	7.1	7.6
Total	7.9	7.2	5.9	6.3	6.9	9.2	8.7	9.7

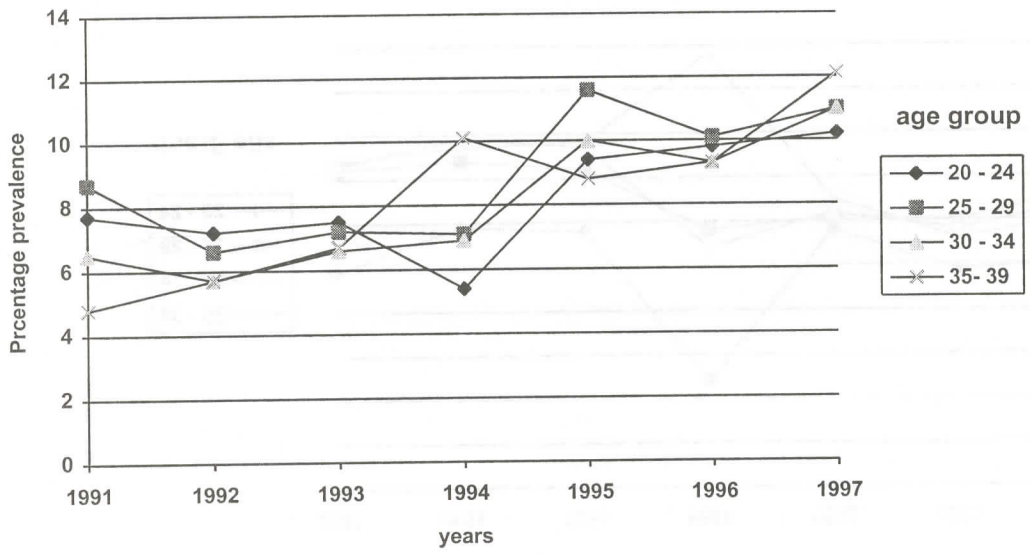
By comparing ***table 10*** and ***table 11,*** females appear to be infected at an earlier age than the males. In the age group 15 -19 the prevalence of HIV infection among females is 6.7 % while in the same age group for males the prevalence is 4.5%.

Fig 3.
Age-specific prevalence of HIV-1 infection (in %) among Male blood donors (1990-1997)



It can be seen from ***Fig 3,*** that the prevalence of HIV infection among male blood donors is stabilising between 7.0 % and 8.0% for the age groups between 25 and 39 years during 1995 to 1997. However for the female blood donors the prevalence of HIV infection in this age group shows no stabilisation for the past three years , rather it is on the increase, ***Fig 4.***

Fig 4.
Age-specific prevalence of HIV-1 infection (in %) among Female blood donors (1990-1997)



Relationship of Blood donors to Patients seeking Blood.

Table 12 Shows that many of those who donate blood(91.6%) are relatives of the patients who require blood. The prevalence of HIV infection for the year 1997 was highest among institutional donors(12.0%) followed by paid donor(9.3%) and the lowest prevalence was found among relatives(7.9%).

Table 12
Distribution of blood donors by category of donor and relationship to recipient 1997

Category	No of blood donors	% of Total	No. HIV +Ve	% HIV positive
Relatives	60,186	91.6	4772	7.9
Institutional donors	569	0.9	68	12.0
Paid donors	621	0.9	58	9.3
Unknown relation	4333	6.6	438	10.1
Total	**65,709**	**100.0**	**4906**	**7.5**

6. Decline in Prevalence of HIV-1 Infection in Young Women in the Kagera Region

In North-western Tanzania, a population based survey of HIV infection in Kagera region in 1987 demonstrated high prevalence of 24.2% in adults of Bukoba town whereas it was lower(10.0%) in the surrounding rural district of Bukoba. In 1993 and 1996 population based cross sectional studies were carried out in urban and rural Bukoba districts respectively, to monitor the time trend in the prevalence of HIV-1 Infection in the region. In the study it was discovered that the overall age adjusted HIV-1 sero prevalence in urban Bukoba decreased from 24.2% in 1987 to 18.3% in 1993. The age-adjusted gender-specific prevalence declined significantly in women, from 29.1% to 18.7%. Except for men 35 years of age, whose prevalence appeared to have an upward trend between the two studies, all other age groups in both genders had a downward trend; this finding was most significant in women between 15 and 24 years of age (from 27.6% to 11.2%); For the rural population the overall prevalence decreased from 10.0% in 1987 to 6.8% in 1996 except for rural women between 15 and 24 years of age whose prevalence decreased from 9.7% to 3.1%, other age groups in the rural populations showed no change ni prevalence. Ongoing interventions in this area leading to behavioural change may have contributed to this observation. An incidence study is underway to confirm this observation and to investigate the factors that are responsible for the decline in the HIV-1 prevalence.

7. Curable STDs

Sexually transmitted disease (STDs) are among the most common causes of illness in the world and have far-reaching health, social and economic consequences. In addition to their sheer magnitude, STDs are major public health problem for two additional reasons: their sequelae and the fact that they facilitate transmission of HIV.

Young adults between 15 and 19 years of age often have high rates of STD and present a particularly important problem because of their lack of easy access to STD services and condoms, and their frequent and multiple causal sex partners.

Control and prevention of sexually transmitted diseases (STDs) has been recognised as a major strategy in the prevention of HIV infection and ultimately AIDS. Monitoring different components of STDs control can also provide information on HIV prevention and behaviour change within a country. One of the cornerstones of STDs control is adequate management of patients with symptomatic STDs. This includes diagnosis, treatment, and individual health education and counselling on disease prevention and partner notification.

Through comprehensive STDs surveillance done in Mbeya region, a total of 19,912 STDs episodes were recorded among females attending STDs clinics and 13, 806 were observed among males, recorded in 151 STDs Clinics. STDs monitoring in

Tanzania needs a comprehensive surveillance to be able to monitor it. ***Table 13*** and ***14*** show that, while 33,718 STDs episodes were reported to the Mbeya Regional AIDS Control Programme, only 30,189 were reported from the rest of the country.

STDs episodes appear to be more rampant among women than in men. In Mbeya region ***Table 14,*** 59.1 % of all reported STDs incidences were in women as compared to 40.9 % in men.

Table 13 also shows STD cases reported from other regions. Most STDs cases are found in the age group between 20 and 44, which is about 83.1% of all reported STDs.

Table 13 Distribution of STD Episodes by Age group & Sex from all regions excluding Mbeya.

Age Group	GUD		GDS		PID	OTHERS		TOTAL	
	Male	*Female*	*Male*	*Female*	*Female*	*Male*	*Female*	*Male*	*Female*
Under 15	32	0	69	10	12	118	49	219	71
15 - 19	331	428	539	745	943	370	559	1240	2675
20 - 24	997	960	1502	2190	2774	746	1052	3246	6976
25 - 34	1227	741	2057	2050	2596	820	610	4104	5997
35 - 44	156	234	860	1412	1788	209	119	1225	3553
Above 45	25	66	361	146	185	67	33	453	430
Total	**2768**	**2429**	**5388**	**6553**	**8299**	**2330**	**2422**	**10487**	**19702**

N.B Others: neonatal conjunctivitis, genital warts, pubic lice, buboes, scrotal swellings etc.

This table shows the absence of genital ulcer disease(**GUD**) in the age group of under 15 years for females while the overall STD episodes in that group was only 24.5%. For the age group 15 - 24, females were over twice as much infected(68%) compared to the males(32.%) of the total recorded STD cases.

In overall sexually transmitted infections (STIs), females have higher prevalence than males and this could be due to the presence of PID for females, a condition which does not exist in males **Fig 5.**

Fig 5. Distribution of STDs episodes by age and sex.

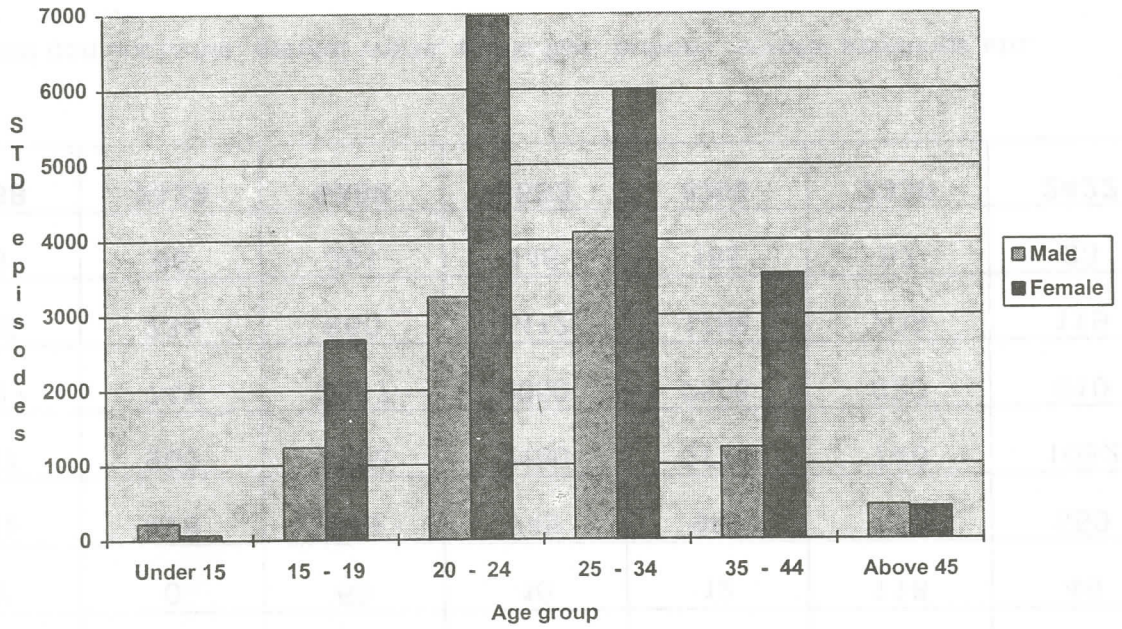


Table 14 Distribution of STDs Mbeya Region.

District	GUD		GDS		PID	BUBO		OTHER STIs		TOTAL	
	Female	Male	Female	Male	Female	Female	Male	Female	Male	Female	Male
Chunya	836	873	1055	643	692	38	71	1	1	2693	1589
Mbeya Urban	1814	1934	1489	988	1315	177	225	16	0	5036	3163
Kyela	768	868	836	671	505	38	78	48	106	2273	1771
Mbarali	703	809	999	699	411	35	138	3	0	2289	1649
Mbeya rural	627	658	546	435	426	28	102	18	5	1747	1218
Ileje	134	152	127	89	32	2	11	0	0	306	252
Mbozi	784	772	1453	1423	860	71	126	42	15	3336	2378
Rungwe	737	852	717	783	556	78	150	0	1	2238	1786
Total	**6403**	**6918**	**7222**	**5731**	**4241**	**467**	**901**	**128**	**128**	**19918**	**13806**

Table 15: Prevalence of HIV infection among STD clinic attendees in Mbeya Region.

Location	Number of STD patients	Active Syphilis	% HIV +ve
Itete	48	6%	27 %
Isoko	40	5%	22%
Mwambani	49	0 %	36%
Chimala	49	4 %	18%
Mbozi	46	0%	43%
Kiwanjampaka	49	0%	38 %
Ruanda municipal	49	6 %	36 %
Mbeya Referral Hospital	129	0.7 %	17 %
Kyela	196	1 %	25%

STDs among HTA

Table 15 shows the prevalence of HIV infection among selected STD patients attending clinics in Mbeya region. The table shows HIV infection which varied from 17% in Mbeya urban to 43 % in Mbozi, while active syphilis varied from 0.0% to 6.0% in Itete and Ruanda municipal. It can be observed that there is high HIV prevalence among STDs patients. The reason for this trend may be explained by the mode of transmission of STDs and HIV. HIV and STDs are transmitted through sexual intercourse, hence the presence of STDs indicates a risk behaviour of the person and consequently greater chance of acquiring HIV. Another explanation to this is that, presence of STD facilitates HIV transmission and therefore an STD patient has a greater chance of acquiring HIV than a person without STDs.

Table 16: Clients seen along High Transmission Areas(HTAs) for the period of November 1997 to January 1998.

HTA	GUD		UDS	VDS	PID	POST	PSS	BUBO		RPR +Ve		TOTAL	
	male	Female	male	female	female	HITS(m)	male	male	Female	male	female	Male	female
Dodoma	3	7	8	33	12	0	0	0	0	0	2	11	54
Singida	10	7	27	27	21	0	0	0	0	3	5	40	60
Iguguno	2	1	15	8	3	1	2	0	0	0	0	20	12
Shelui	7	4	35	36	24	0	1	0	0	0	0	43	64
Sekenke	5	2	27	23	24	0	2	2	0	0	0	36	49
Nzega	50	22	59	237	41	0	0	7	8	6	7	122	315
Isaka	14	1	21	27	11	4	2	3	0	0	0	44	39
Kagongwa	6	8	49	25	16	1	2	1	1	0	0	59	50
Masumbwe	2	1	14	8	14	2	0	0	0	0	0	18	23
Igulwa	8	4	7	15	27	0	0	4	0	0	0	19	46
Bwenda	-	1	6	7	6	0	1	0	0	0	0	7	14
Katente	5	2	7	8	6	1	1	2	0	0	0	16	16
Kabuhima	3		22	7	11	1	0	4	0	0	0	30	18
Total	**115**	**60**	**297**	**461**	**216**	**11**	**11**	**23**	**9**	**9**	**14**	**466**	**760**

Table 16 shows that genital discharge syndrome(urethral discharge syndrome(**UDS**)and vaginal discharge syndrome(**VDS**)) is more prevalent than the genital ulcer among clients seen along High Transmission Areas(HTAs), in November 1997 to January 1998. Among the 13 enumerated areas along HTAs, Nzega was more affected(over 41.1%) in overall number of cases in both sexes. Nzega township is highly affected among HTAs and this could have been attributed to it being a junction for a busy road joining commercial cities of Dar es Salaam and Mwanza via Dodoma, Tabora and Shinyanga, thus to Burundi, Rwanda and Congo. It is centrally situated and it is a main stop over for both buses and long distant trucks. It is surrounded by gemstone mines, cotton plantations and livestock markets, giving opportunity for seasonal labourers. Accessibility to health facilities is poor. It is occupied by highly mobile population and it is one of the fastest growing townships in the country.

8. HIV/AIDS 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 (Tanzania inclusive). 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 already in contact with tuberculous bacilli and HIV are 25 -30 times more likely to develop TB disease than those who are infected only with tuberculous bacilli. This is because HIV reduces the immune system working effectively and the TB germs are able to multiply rapidly. In Tanzania, where many people are infected by TB and HIV, HIV-associated diseases is now becoming very common.

Table 17:
Prevalence of HIV infection among TB patients by region 1995 -1997

Region	No. Of TB patients	Number HIV +Ve	Number HIV -Ve	% HIV +ve
Arusha	803	197	606	24.5
Dar. Ilala	1287	674	613	52.4
Dar. Kinondoni	796	423	373	53.1
Dar. Temeke	485	254	231	52.4
Dodoma	409	158	251	38.6
Kagera	461	175	286	38.0
Kilimanjaro	540	245	295	45.4
Lindi	387	122	265	31.5
Mara	407	119	288	29.2
Mbeya	611	431	180	70.5
Morogoro	473	156	317	33.0
Mtwara	495	134	361	27.1
Mwanza	785	268	517	34.1
Pwani	316	163	153	51.6
Shinyanga	549	171	378	31.1
Singida	345	111	234	32.2
Tabora	253	121	132	47.8
Tanga	986	427	559	43.3
Zanzibar	116	25	91	21.6
TOTAL	10504	4374	6130	41.6

The prevalence of HIV among tuberculosis patients in Tanzania mainland varies from 24.5% (Arusha) to 70.5% (Mbeya) with an average of about 42 %. Regions most affected include Dar es Salaam with its 3 districts (Kinondoni 53.1% Ilala and Temeke 52.4 % each). Regions following Dar es salaam in the rank of prevalence were Coast(51.6%), Tabora (47.8%) and Kilimanajro (45.4%) in descending order. Prevalence of HIV positivity among tuberculosis patients in Zanzibar was 21.6 %.

The pattern of tuberculosis cases correlate with the prevalence of HIV infection in the regions affected.

9. Voluntary HIV testing for HIV prevention

Voluntary HIV testing in Tanzania was initiated in 1995 as a pilot project. In the same year, 16 counsellors from four pilot regions- Dar es Salaam, Morogoro, Coast and Dodoma were extensively trained to be able to conduct counselling and HIV antibody testing. Today, counselling and voluntary HIV testing have been established in 59 centres in 19 regions in the country. Individuals who want to be tested are provided with pre-test counselling and informed clearly what it means to be tested so that they are prepared to receive their results. Those tested are informed of their HIV status after counselling. In addition, the HIV positive individuals are educated on how to live positively with the virus. That entails accepting the situation and coping with it without blaming any one or being guilt or ashamed and depressed. All positive samples and the 10^{th} negative are sent to AMREF for quality control.

It is estimated that nine out of ten people living with HIV do not know they have the virus and therefore cannot seek care or plan ahead for themselves and their families. Demographic Health Survey in Tanzania shows that two thirds of people questioned would like to know their HIV status. Apart from its other benefits, voluntary testing and counselling can reduce the risk of transmission.

There is clearly a great demand and need for HIV testing and more access to voluntary HIV testing and good quality counselling. NACP is working to make voluntary HIV testing and counselling widely available and work to ensure that the right facilities are available and to ensure that the right policies and attitudes are developed to support the communities living with HIV. If voluntary testing really can help reduce HIV transmission, it will become another vital tool in Africa's battle against the epidemic.

Table 18 below shows some distribution of people who were counselled and tested for HIV in Tanzania by region.

Table 18. Reported Clients Counselled and Tested during April - Dec 1997.

CENTRE	COUSELLED	TESTED	HIV +VE	HIV -VE	% HIV +VE
Dar es salaam.	880	642	517	125	80.5
Morogoro	43	36	28	8	77.8
Coast	100	57	42	15	73.7
Dodoma	151	51	38	13	74.5
Mara	48	17	15	2	88.2
Mwanza	508	134	88	46	65.7
Kagera	20	16	10	6	62.5
Shinyanga	281	196	136	60	69.4
Singida	244	78	56	22	71.8
Tabora	168	142	66	76	46.5
Kigoma	130	40	23	17	57.5
Ruvuma	75	23	17	6	73.9
Rukwa	104	40	35	5	87.5
Iringa	186	122	93	29	76.2
Mtwara	38	23	7	16	30.4
Lindi	75	56	15	41	26.8
Kilimanjaro	114	82	52	30	63.4
Arusha	162	72	34	38	47.2
Tanga	138	71	51	20	71.8
Total	3465	1898	1323	575	69.7

Table 18 shows that during the period of April to December 1997, 3465 clients were counselled and 1898 went through voluntary HIV testing. Of the 1898 clients tested, 69.7 % (1323) were HIV positive. Most of the people who sought voluntary HIV testing might have been involved in risk behaviour or had some feeling that they were infected due to their past life style. That is why the overall prevalence of HIV infection among the voluntary HIV tested was very high. Due to the nature of the data itself one cannot use this it to determine prevalence of HIV in the population because they are biased.

From ***table 18***, only 54.7% of those who went through counselling were tested. The remaining 45.3 % did not wish to volunteer for HIV testing. The probable reason for being unwilling might have been the cost involved in testing or the stigma attached to it.

10. Estimated HIV infections by region by the end of year 1996.

Table 19 shows the estimated HIV infection in the population in 1996 based on the adjusted blood donor HIV prevalence 1996.

Table 19
Estimated number of HIV infections by region, 1996.

(based on age adjusted blood donor prevalence) – This table of 1996 is made available in report No. 12 of 1997 because it was not compiled and tabulated in time for 1996 report.

Region	male (%HIV+)	Female (%HIV+)	Pop Male (15-49)	Pop female (15-49)	HIV+ male	HIV+ female	Region HIV+	Region Pop (15-49)	Region HIV+ (%)
Arusha	3	4.4	400,383	456,884	12,011	20,103	32,114	857,267	3.7
Coast	9.4	8	163,038	186,046	15,326	14,884	30,209	349,084	8.7
Dodoma	4.9	5	243,996	278,428	11,956	13,921	25,877	1,138,287	2.3
DSM	17.2	6.4	531,632	606,655	91,441	38,826	130,267	522,424	24.9
Iringa	14.2	12.4	350,256	399,684	49,736	49,561	99,297	749,940	13.2
Kagera	8	7.4	357,001	407,380	28,560	30,146	58,706	764,381	7.7
Kigoma	5.6	6.1	234,958	268,115	13,158	16,355	29,513	503,073	5.9
Kilimanjaro	4.1	5.9	294,486	336,043	12,074	19,827	31,900	630,529	5.1
Lindi	3.7	3.6	177,539	202,593	6,569	7,293	13,862	380,132	3.6
Mara	7.6	10.1	270,894	309,122	20,588	31,221	51,809	580,016	8.9
Mbeya	11.1	13.8	465,191	530,838	51,636	73,256	124,892	996,029	12.5
Morogoro	4.1	6	334,219	381,383	13,703	22,883	36,586	715,602	5.1
Mtwara	9.7	10.5	244,677	279,205	23,734	29,317	53,050	523,882	10.1
Mwanza	7.6	8.5	525,785	599,983	39,960	50,999	90,958	1,125,768	8.1
Rukwa	8	8.8	221,196	252,411	17,696	22,212	39,908	473,607	8.4
Ruvuma	8.1	10.5	250,206	285,515	20,267	29,979	50,246	535,721	9.4
Shinyanga	8.5	14.9	522,053	595,724	44,375	88,763	133,137	1,117,777	11.9
Singida	5.6	5.8	240,446	274,377	13,465	15,914	29,379	514,823	5.7
Tabora	3.2	3.2	282,496	322,361	9,040	10,316	19,355	604,857	3.2
Tanga	5.5	7	354,575	404,612	19,502	28,323	47,824	759,187	6.3
Total			**6,465,027**	**7,377,360**	514,794	614,097	1,128,891	**13,842,387**	8.2

11. RECENT PUBLICATIONS

The following are references to recent publications on HIV infection and AIDS in Tanzania. Literature search has shown that during 1996 there were 46 articles about the problem of AIDS/HIV and STDs in Tanzania. Most of these articles were published in international journals and copies of most of them have been submitted to the MOH for information and action. Authors who have not submitted reprints or copies of their articles are asked to do so as soon as possible in order to enable the Ministry to disseminate the information and to take appropriate action towards the control of the epidemic. Copies of these publications may then be made available to others on request from the NACP. Information leading to acquisition of certain rare or bulky publications may also be available.

1. Gilson L, Mkanje R, Grosskurth H, Mosha F, Picard J, Gavyole A et al. Cost - effectiveness of improved treatment services for sexually transmitted diseases in preventing HIV-1 infection in Mwanza Region, Tanzania: *Lancet 1997;* 350: 1805 - 1809.

2. Jacobs B, Mayaud P, Changalucha J, Todd J, Gina ka-Gina. Sexual transmission of Hepatitis B in Mwanza, Tanzania: *Sexual Transmitted Diseases 1997;* 24: 121 - 126.

3. Karlsson K, Massawe A, Urassa E, Kawo G, Msemo G, Kazimoto T et al. Late postnatal transmission of human immunodeficiency virus type 1 infection from mothers to infants in Dar Es Salaam, Tanzania: *Paediatric infections Disease Journal 1997;* 16: 963 - 967.

4. Klepp K. I, Ndeki S. S, Leshabari M. T, Hannan P. J, Lyimo B. A. AIDS education in Tanzania: promoting risk reduction among primary school children: *Am J. Public Health 1997;* 87: 1931 - 1936.

5. Klouman E, Masenga EJ, Klepp KI, Sam NE, Nkya W, Nkya C. HIV and reproductive tract infections in a total village population in rural Kilimanjaro, Tanzania: Women at increased risk: *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology 1997;* 14: 165 - 168.

6. Klouman E, Masenga EJ, Sam NE. Serological markers for treponemal infection in children in rural Kilimanjaro, Tanzania: evidence of Syphilis or non-venereal treponemoteses? *Genitourim Med 1997;* 73: 522 - 527.

7. Kwesigabo G, Kilewo J, Carina G, et al Decline in the decline in the prevalence of HIV infection among young women in the Kagera region, Tanzania

8. Lyamuya E, Bredberg-Raden U, Albert J, Gransvist O, Msangi V, Kagoma C. Comparison of in-house and commercial sample preparation and PCR amplification systems for detection of human immunodeficiency virus type 1 DNA in blood samples from Tanzanian adults: *Journal of Clinical Microbiology 1997.* 1: 278 - 280

9. Manguti K, Grosskurth H, Newell J, Senkoro K, Mosha, Todd J et al. Patterns of sexual behaviour in a rural population in north-western Tanzania: *Soc. Sciences medicine 1997;* 44: 1553 - 1561.

10. Mayaud P, Mosha F, Todd J, Balira R, Mgara J, West B et at. Improved treatment services significantly reduce the prevalence of sexually transmitted diseases in rural Tanzania: results of a randomised controlled trial: *AIDS 1997;* 11: 1873 - 1880.

11. Mcligeyo S. O. Long distance truck driving: its role in the dynamics of HIV/AIDS epidemic: *East African Medical Journal 1997;* 74: 341 - 342.

12. Mgalla Z, Pool R. Sexual relationships, condom use and risk perception among female bar workers in north-west Tanzania: *AIDS Care 1997;* 9: 407 - 416.

13. Mgalla Z, Schapink D, Boerma T, Mlemya B, Maswe M, Veldhuijzen K. Sexual exploitation of school girls in Africa: findings from operational research in Tanzania: *TANESA Working Paper 1997;* 17: 1-19

14. Mnyika K. S, Klepp K. I, Kvale G, Ole - Kingori N. Determinants of high risk sexual behaviour and condom use among adults in the Arusha region, Tanzania: *International Journal of STD and AIDS 1997;* 8: 76 - 183.

15. Nnko S, Boerma JF, Washija R, Urassa M. The popularisation of male circumcision in Africa: Changing practices among the Sukuma of Tanzania: *TANESA Working paper 1997;* 18: 1 - 9.

16. Nyamuryekunge K, Laukamm - Josten U, Vuylsteke B, Mbuya C, Hamelmann C, Outwater A et al. STD services for women at truck stop in Tanzania: Evaluation of acceptable approaches: *East African Medical Journal 1997;* 74: 343 - 347.

17. Quingley M, Munguti K, Grosskurth H, Todd J, Mosha F. Sexual behaviour patterns and other risk factors for HIV infection in rural Tanzania: a case control study. Quingley M, Munguti K, Grosskurth H, Todd J, Mosha F. Sexual behaviour patterns and other risk factors for HIV infection in rural Tanzania: a case control study: *AIDS 1997*; 11:237 - 248.

18. Tanzania: female guardians offer assistance in primary school: *AIDS/STD Health Promotion Exchange 1997;* 1: 5 - 6.

19. Todd J, Balira R, Grosskurth H, Mayaud P, Mosha F, Gina Ka - Gina et al. HIV - associated adult mortality in a rural Tanzanian population: *AIDS 1997;* 11: 801 - 807.

20. Urassa M, Todd J, Boerma JT, Hayes R, Isingo R. Male circumcision and susceptibility to HIV infection among men in Tanzania: *AIDS 1997;* 11: 73 - 80.

21. Van-den-Broek J, Chum HJ, Swai R, O'Brien RJ. Association between leprosy and HIV infection in Tanzania. International journal, *Other Mycobacterial Disease 1997;* 65: 203-210

INDICATORS

STD Prevalence, men:
Prevention indicator 9: Proportion of men aged 15-49 years who reported episodes of urethritis in the last 12 months.

Year	Area	Age	Rate	N=
1996	All	15-49	2.2	

Comments: 2.2% is for any STDs. For Syphilis it is 0.6% and for Gonorrhoea it is 1.4%
Sources: Tanzania Demographic Health Surveys TDHS

STD Prevalence, Women:
Prevention Indicator 8: Proportion of pregnant women aged 15-24 years attending antenatal clinics whose blood has been screed with positive serology for syphilis.

Year	Area	Age	Rate	N=
1996	All	15-24	5.3	1615

Comments: The data are from one region where surveillance data for pregnant women has been collected from time to time. The data can be a representative of an actual situation within the country since they are collected both rural and urban areas.

Source: National AIDS Control Programme HIV/AIDS/STD Surveillance report no. 11.

STD Case Management (counselled)
Prevention Indicator 7: Proportion of people presenting with STD or for STD care in health facilities who received basic advice on condoms and on partner notification.

Year	Area	Age	Rate	N=
1994	All	All	82.2	

Comments: PP17-Advise on Condoms: 86.3%; PP17 - Participation notification: 95.2%. Final PP17 score 120/146=82.2%.

Source: PPI 6&7 Survey. National AIDS Control Programme/WHO 1994.

STD Case Management (treatments)
Prevention Indicator 6: Proportion of people presenting with STD in health facilities assessed and treated in an appropriate way (according to national standards).

Year	Area	Age	Rate	N=
1994	All	All	5.5	

Comments: PPI- Correct History: 91.8%: Correct Examination: 51.4%; Correct Treatment 6.2%.

Source: PPI 6&7 Survey. National AIDS Control Programme/WHO 1994.

Condom availability (central level)

Latex condoms are the only technology available that can prevent sexual transmission of HIV/STD. Person needing protection in situations that carry risk should have consistent access to high quality condoms. National AIDS Programmes implement activities to increase both availability of an access to condoms. The two condoms availability indicators below are intended to highlight areas of strength and weakness at the beginning and at the end of the distribution system so that programmatic resources can be directed appropriately to problem areas.

Condom availability (central level)

Prevention indicator 2: Availability of condoms per capita in the country over the last 12 months (central level)

Year	Area	N	Rate
1996	All		3

Comments:

Source: Tanzania AIDS Project, Family Planning Unit and National AIDS Control Programme, 1996.

Condom availability (peripheral level)

Prevention Indicator 3: Proportion of people who can acquire a condom (peripheral level).

Year	Area	N	rate
1996	All	3	

Comments: The policy is that in every 50 m there should be a condom available.

Source: Tanzania AIDS Project, Family Planning Unit and National AIDS Control Programme, 1996.

Knowledge and behaviour

Information on knowledge and behaviour related to HIV/AIDS is essential in identifying populations at risk for HIV infection. It is also critical and assessing changes over time as a result of prevention efforts. Guidelines and recommendations have been published in the publication. "Evaluation of a National AIDS Programme: A methods package. 1. Prevention of HIV infection. WHO/GPA/TCO/SEF/94.1 Geneva, 1994".

Knowledge of HIV-related preventive practices

Prevention Indicator 1: Proportion of people citing at least two acceptable ways of protection from HIV infection.

Year	Area	Age group	Male	Female	All
1996	All	15-19	78.6	65.1	68.1
1996	All	20-24	76.6	81	80.1
1996	All	25-49	75.9	78.4	77.9
1996	All	15-49	76.1	76.4	76.3

Comments: Data are for those who can cite at least ONE way of avoiding AIDS.

Source: Tanzania Demographic Health Surveys TDHS.

Reported non-regular sexual partnerships

Prevention Indicator 4: Proportion of sexually active people having at least one sex partner other than a regular partner in the last 12 months.

Year	Area	Age group	Male	Female	All
1990	All	15-19	80.5	639.1	
1990	All	20-24	67.9	20	
1990	All	25-39	31.5	15.1	
1990	All	40-49	23	10.3	
1990	All	15-49	45.4	19.3	
1996	All	15-19	25.7	11.6	
1996	All	20-24	49.4	18.3	
1996	All	25-49	24.6	12.1	
1996	All	15-49	29.1	12.9	

Comments: Over-representation of women.

Source: KABP/Behavioural Studies - GPA, 1993. Demographic Health Survey, 1996.

Reported condom use in risk sex (gen. pop)

Prevention Indicator 5: Proportion of people reporting the use of condom during the most recent intercourse of risk.

Year	Area	Age group	Male	Female	All
1996	All	15-19	25.4	18.7	15.9
1996	All	20-24	40.3	21.9	29.1
1996	All	25-49	33.8	14.4	22.1
1996	All	15-49	34.8	17.2	23.7

Source: Tanzania Demographic Health Surveys TDHS, 1996.

Ever use of condom

Percentage of people who ever used a condom.

Year	Area	Age group	Male	Female
1992	All	15-19		1.8
1992	All	20-24		6.2
1992	All	25-29		3.7
1992	All	30-34		4.8
1992	All	35-39		3.7
1992	All	40-44		2.6
1992	All	45-49		0.8
1992	All	Total		3.6
1996	All	15-19	10	3.5
1996	All	20-24	26.8	10.7
1996	All	25-29	26.6	8.9
1996	All	30-34	25.7	8.3
1996	All	35-39	20.5	6.7
1996	All	40-44	14.3	5
1996	All	45-49	8.1	1.9
1996	All	Total	18.1	7

Comments: All women

Source: Demographic Health Surveys

Median age at first sexual intercourse
Median age of people at which they first had sexual intercourse.

Year	Area	Age group	Male	Female
1996	All	20-24	17.8	17.4
1996	All	25-49	18	16.7
1996	All	25-49	18.1	16.6

All

Comments: All women

Source: Demographic Health Surveys

Adolescent pregnancy
Percentage of teenagers 15-19 who are mothers or pregnant with their first child.

Year	Area	Age group	Rate	N
1996	All	15	1.3	288
1996	All	15-17	10.3	1039
1996	All	16	11.2	408
1996	All	17	39.2	343

Comments:

Source: Tanzania Demographic Health Surveys TDHS, 19967