

THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF HEALTH

NATIONAL AIDS CONTROL PROGRAMME

HIV / AIDS / STD SURVEILLANCE

REPORT No. 8,

Epidemiology Unit, NACP
Dar es Salaam

CONTENTS

1. Executive Summary	Page 3
2. Introduction	Page 4
3. The Tanzanian AIDS Situation in a Global context	Page 4
4. AIDS Case reporting	Page 5
5. Sentinel Surveillance / Ante-natal clinics	Page 6
6. Sentinel Surveillance / Blood donors	Page 7
7. Survey / High Transmission Areas	Page 10
8. Survey / Family Planning Clinic Attenders	Page 11
9. HIV /AIDS and Tuberculosis	Page 12
10. Seroprevalence in the general population	Page 14
11. Projections	Page 16
12. Priority Prevention Indicators	Page 18
13. List of tables	Page 18
14. Tables, Graphs and Maps	Page 19-32

This report was prepared by:

1. Dr. R.O. Swai	Head, Epidemiology Unit, NACP
2. Dr. H.A. van Asten	Consultant, NIIH, The Netherlands
3. Mr. U.B. Teye	Computer Operator
4. Ms. F. Hussein	Computer Programmer
5. Mrs. M. Rwegoshora	Secretary

Acknowledgement.

We would like to thank all health workers, who have provided us with data on HIV, AIDS and STD's, and thus enabled us to compile this epidemiological report.

Distribution

All MO's i/c	All Departments, MOH
All DMO's	All Units, NACP
All DACC's	All Donor Agencies
All RMO's	All (Sub) Committee members, NACP
All RACC's	Other collaborating sectors and agencies

1. EXECUTIVE SUMMARY

AIDS Case reports ¹

- * First 3 cases reported in 1983
- * 34,160 cases reported up to 31.12.1991
- * 40,236 cases reported up to 31.12.1992; doubling time 19 months
- * 42,422 cases reported up to 01.10.1993
- * Only 1 out of 4 - 6 cases reported
- * Exponential increase will continue,
even when further HIV infections will stop

HIV infection rates

Blood donor data

Due to donor selection, these data increasingly underestimate HIV-infection rates

- * 5.6 % of male adults are HIV infected (1993)
- * 6.3 % of female adults are HIV infected (1993)
- * Most affected regions: (1993)

Lake Zone	- Kagera
Southern Highlands	- Mbeya, Rukwa, Iringa
Coast	- Dar es Salaam, Tanga

Ante-natal clinic data

- * Prevalence ranges from 6.7 % to 27.2 % (1993)

Orphans

- * Present estimate : 130,000 orphans

Projections

HIV Infections

- * 760,000 by the year 1990
- * 1,600,000 by the year 1995
- * 2,400,000 by the year 2000

AIDS Cases

- * 800,000 AIDS cases by the year 2000
(even if no more infections occur from 1990 : 480,000)
(worst case scenario : 850,000)

Orphans

- * On average 1 orphan per AIDS case :
- By the year 2000 :
 - at least 450,000 orphans
 - probably 750,000 orphans
 - at worst 1 million orphans

¹ Excluding Dar-es-Salaam, as Muhimbili Medical Center does not submit case reports to MoH.

2. INTRODUCTION

This report covers the status of the HIV/AIDS epidemic in Tanzania mainland by October 15th 1993, and contains updated figures since the seventh report of December 1992. Case reporting for 1992 is now almost complete.

This report supercedes all previous reports.

The surveillance areas addressed in this report are :

- Reported AIDS cases
- HIV seroprevalence among blood donors
- HIV and syphilis seroprevalence among pregnant women attending antenatal clinics. (Data are now available from 20 sites.)
- HIV seroprevalence in youth :
 - survey results for Mwanza
 - blood donor data for youth
- Survey results among Family Planning attenders in Dar-es-Salaam
- Population-based surveys in Kagera and Mwanza
- Survey results from High Transmission Area's (truck stops)
- Estimations of HIV seroprevalence in the general population.
- Projections of adult HIV infections and AIDS cases.
- Projections of paediatric HIV infections and AIDS deaths.
- Projections of orphans.

3. THE TANZANIAN AIDS SITUATION IN A GLOBAL CONTEXT.

The distribution of the HIV / AIDS epidemic by geographical area is shown in the following table:

**GLOBAL DISTRIBUTION OF ESTIMATED HIV INFECTIONS,
REPORTED AND ESTIMATED ADULT AIDS CASES**

Area	Estimated HIV ¹⁾	Reported AIDS ³⁾	Estimated AIDS ¹⁾
Africa	> 7,500,000	301,861	> 600,000
Americas	> 2,000,000	435,978	> 300,000
Asia	> 1,500,000	5,559	> 2,000
Europe	> 500,000	103,402	> 70,000
Australasia & Pacific	> 30,000	4,828	> 4,000
Total	13,000,000	851,628	> 976,000
Tanzania ²⁾	> 700,000	424226	> 120,000

¹⁾ WHO/GPA, May 1993

²⁾ NACP, December 1992

³⁾

WER ?, May 1993

Note : The number of reported AIDS cases for Tanzania cannot be compared directly to the other figures, as date and completeness of reporting may differ.

4. AIDS CASE REPORTING

Since last report (December 1992), a total of 4,006 new AIDS cases have been recorded by the Ministry of Health from the regions, bringing the total to 42,422 as per October 1st 1993. The distribution of the cases reported since last report by year of diagnosis is as follows:

Year	Number	Previously Reported	Total Report
< 1990	0	14,107	14,107
1990	3	7,974	7,977
1991	17	12,059	12,076
1992	1,800	4,2076	6,076
1993	2,186	0	2,186
Total	4,006	38,416	42,422

The cumulative number of AIDS cases by region and year, and the cumulative case rate (Number of cases per 100,000 population) is shown in table 1.

The cumulative caserate by district is depicted in map 1.

By district, the highest cumulative case rate was recorded for Bukoba urban (1202 per 100,000) and Mbeya urban (1007 per 100,000) and the lowest for Musoma rural (1.6 per 100,000) and Dodoma rural (13 per 100,000).

The doubling time between 1991 and 1992 was 51 months (4 year and 3 months).

Figure 2 shows the case rate over the years for four selected regions.

The data are believed to reflect the real trend of AIDS cases, although the absolute numbers are assumed to be a factor 3 - 4 higher, due to under-reporting, under-diagnosis and delays in reporting.

Given the large pool of HIV infections already existing in the population, as well as future infections that might occur in the years to come, a rapidly increasing number of AIDS cases will continue to be documented up to and beyond the year 2000.

4.1 Distribution of AIDS Cases by Age and Gender

Of cases reported so far, (1983 - 1993) age and gender are known for 24,606 cases.

The overall cumulative case rate is 103 per 100,000 for men and 96 for women.

The highest case rates of over 4.4 per 1,000 are seen in 30 - 34 year old men. Rates over 3 per 1,000 are seen in agegroup 25 - 44 for men and in agegroup 25 - 34 for women. (table 2)

The AIDS epidemic affects women at an earlier age than males. Case rates clear off in females at an earlier age than in males (figure 2).

The male/female ratio is 1.02. Taking in account that the general population has an excess of females, the M/F rate ratio is 1.16.

The M/F ratio of AIDS cases is expected to decrease further, as the ratio for HIV infection among blooddonors remains persistently below 1.

5 SENTINEL SURVEILLANCE / ANTENATAL CLINICS

A total of twenty sentinel sites was operational during 1993.

The first data from sentinel sites established during 1992 in Rukwa and Ruvuma confirm the findings from bloodtransfusion data, that South-Western Tanzania is now rapidly becoming a high prevalence area.

The prevalence of HIV infection among women attending the various clinics by year is shown in Table 3a and figure 4.

The HIV prevalence ranged between 6.7 % and 27.2 % during 1993.

Several sites (Mbeya urban; Rukwa and Ruvuma) continue to increase. Others (Mwanza and Mbeya rural) seem to have reached a plateau. The latter should not be interpreted as cessation of transmission: to maintain a prevalence of 15 - 30%, a considerable number of new infections must occur.

Simulations show, that at a constant rate of 5% of susceptibles becoming infected per year, the prevalence will ultimately stabilize at approx. 35%.

This is consistent with data reported by Killewo et al. from Bukoba town: in 1989 the incidence was reported as 48/1,000 (approx. 5%) in Bukoba town, while the prevalence reported for 1988 was 32%.

Syphilis serology

Together with HIV surveillance among pregnant women in selected sentinel sites, RPR testing for syphilis has been going on for all pregnant women on their first attendance to Maternal and Child Health (MCH) clinics in Dar-es-Salaam and Coast regions, and VDRL testing in various other sentinel sites. (see table 3b)

VDRL seroprevalence ranged between 2.7 % and 28.3 % during 1993.

Vertical Transmission

Assuming a 30% transmission rate from pregnant women to their offspring, the percentage of newborns expected to be infected ranges from 2 to 80 percent in the various sentinel sites.

6. SENTINEL SURVEILLANCE / BLOOD DONORS

6.1 INTRODUCTION

Reporting on serostatus of potential blood donors takes place since 1987. Initially screening took place in regional hospitals only. Since 1990 all 181 hospitals screen blood and by now 55% reports results to the NACP.

Year	Blood donors reported		Age and Sex Known		Reporting Hospitals	
	Number	%	Number	%	Number	%
1987	4,285	3 %	555	13 %	6 / 182	3
1988	13,807	10 %	3,680	27 %	14 / 182	8
1989	35,049	24 %	12,251	35 %	103 / 182	57
1990	27,514	19 %	24,035	87 %	123 / 182	68
1991	80,444	56 %	77,677	97 %	158 / 182	87
1992	62,185	43 %	60,429	97 %	140 / 182	77
1993	21,717	15 %	21,370	98 %	100 / 182	55
Total	245,001					

The number of blood transfusions taking place is estimated at 6 per 1,000 per year, i.e. approx. 144,000.

It has been reported from other countries, that sero-prevalence among blood donors might decrease, due to improved selection of blood donors, while prevalence in the general population is rising. As most blood donors in Tanzania are relatives of the recipient (see table on page 12), blood donor data are believed to be only moderately biased. This was confirmed by a study from Mwanza region (see page 11).

As all regions and most hospitals do report on the sero status of donors, these data give the most reliable estimates available for seroprevalence in the population at large.

Sero-prevalence and their trends over time differ markedly between both sexes, between various regions and between age groups.

In addition, it is assumed that the apparent high rates of seropositivity in 1988 are also due to the inclusion of samples of other categories like suspected AIDS patients as from 1990 separate blood transfusion service registers were available in all reporting centres.

6.2 Regional Differences (see table 4a-b, map 2a-b)

Overall time trends by region before 1989 are difficult to assess, as few regions reported data.

As data from different regions are assumed to be equally biased, the regional differences are real. Highest prevalences (7% and over) are found in :

- Lake Zone : Kagera
- Southern Highlands : Mbeya, Rukwa, Iringa
- Coast : Dar es Salaam, Tanga

6.3 Gender Differences

Overall female seroprevalence is higher than male seroprevalence for all ages (figure 5; table 5a-b).

Since 1989 prevalence rates are declining slowly among women, and increasing in men. It seems improbable that increased donor selection would lead to opposite trends among the sexes.

Even taking in account that female donors are differing from males in average age (being younger), prevalence among female donors is considerably higher than in men : the M/F ratio is 0.89 for 1992, and increasing over time. This is at odds with findings among AIDS cases, where the M/F ratio is 1.09, but decreasing over time. This probably reflects the fact that women are at higher risk for infection now than was the case at the time when present-day cases were infected.

6.4 Age Differences

Prevalence by age for both sexes (table 5a-b, figure 5a-b) differ to some extent from the AIDS case rates by age and gender (table 2, figure 2): women peak earlier at age 20 - 24, and maintain higher prevalences over age 30.

The graph for men is rather flat compared to the AIDS case rates, which peak at age 25 - 40.

6.5 HIV Infection in Adolescents

When blood donor data are broken down by age groups, it becomes apparent that the increase is largely due to a very rapid increase in prevalence among teenagers (15-19 years) and 20-24 year olds. (table 5a-b and figure 6a-b).

Among male 15-19 year olds, prevalence was 0.0% in 1987, and reached 4.0% by 1992. Among female 15-19 year olds, prevalence rose from 0.0% in 1988 to 7.9% in 1989, 7.5% in 1990, and subsequently steadily declined to 3.6% for 1992.

Prevalence among 20-24 year old females has increased from 0.0% to 13.5% in 1989, and subsequently steadily declined to 7.1% for 1992. It should be noted that these two age groups make up 37% of the adult population.

Figure 7 shows the prevalence by single years of age. The linear regression line runs from 1.4% at age 14 to 6.4% at age 25 for males, an increase of 0.47% per year of age. For females it runs from 2.0% at age 14 to 9.7% at age 25, an increase of 0.75% per year of age. This suggests considerable rates of transmission, even before the age of 14 years.

This is in line with behavioral data which indicate that 50% of adolescents have made their sexual debut by age 15 (Source : Institute for Curriculum Development, 1992).

Additional data on adolescents are available from a population based survey in 1990/91 in Mwanza region ²

These data show a marked difference between rural, roadside and urban sites. Linear regression lines (graphs not shown) indicate an increase of 1.6% per year for Mwanza urban, 0.7% for roadside villages and 0.45% for rural villages.

² Data kindly provided by the Project Coordinator, TANERA Project, Mwanza

At age 15, prevalences are 3.73% for urban sites, 3.41% for roadside villages and 0.57% for rural villages.

HIV Prevalence in Adolescents (linear regression)

	14 yrs.	25 yrs.	Increase % p.a.
Blood donors, Male	1.4 %	6.4 %	0.47 %
Blood donors, Female	2.0 %	9.7 %	0.75 %
	15 yrs.	24 yrs.	
Mwanza, urban	3.7 %	17.8 %	1.57 %
Mwanza, roadside	3.4 %	9.5 %	0.68 %
Mwanza, rural	0.6 %	4.6 %	0.45 %

7. HIV AND SYPHILIS IN HIGH TRANSMISSION AREAS

Results of a survey conducted between July - August 1991 along the Dar-es-Salaam - Makambako highway.³

Site	Compliance	HIV prevalence	Syphilis (old)	Syphilis (active)
<u>Truck stops</u> male female	49 %	31.0 %	18.0 %	15.0 %
	81 %	55.7 %	12.2 %	29.8 %
<u>Community</u> Male Female	89 %	6.5 %	22.6 %	9.7 %
	91 %	17.8 %	5.9 %	16.1 %
<u>Trucking Company</u> Male	87 %	11.5 %	36.1 %	9.8 %

Compliance : percentage of people agreeing to be tested out of all people interviewed.

Old or treated syphilis : TPHA positive and RPR negative.

Active or untreated syphilis : TPHA positive and RPR positive.

³ Data kindly provided by AMREF

8. HIV / AIDS AND TUBERCULOSIS.

8.1 HIV prevalence among tuberculosis patients.

Prevalence of HIV among 128 newly detected tuberculosis patients in Mbeya region during the last quarter of 1990 was 52 %, while the sero-prevalence among blooddonors during the same period was 9.5 %

Category	N	HIV + %
All TB patients	128	52 %
Male TB patients	88	51 %
Female TB patients	40	53 %
Urban TB patients	70	54 %
Rural TB patients	58	45 %
15 - 24 years	22	41 %
25 - 34 years	51	73 %
35 - 44 years	31	45 %
45 + years	24	25 %
Sputum positive	49	43 %
Sputum negative	39	64 %
Extra-pulmonary	31	48 %
Relapses	9	56 %
Blood donors (Mbeya region, 1990)	148 / 1558	9.5 %

8.2 Shift in age distribution of tuberculosis patients.

When comparing the age distribution of tuberculosis patients between 1984 and 1990, a striking shift towards agegroup 20-24 years is noted. When both graphs are subtracted, the age distribution of the difference is strikingly similar to the age distribution of AIDS cases.⁴

**9. HIV AND OTHER STD's AMONG FAMILY PLANNING CLIENTS IN
DAR-ES-SALAAM**

Results of a survey conducted in Dar-es Salaam between March 1991 and January 1992.⁵

Prevalence of Laboratory Confirmed STD's

Disease		Prevalence
HIV	252 / 2009	12.5 %
Report of discharge	236 / 2009	11.7 %
Trichomoniasis	245 / 1773	13.8 %
Candidiasis	204 / 1773	11.5 %
Gonorrhoea	79 / 1773	4.5 %
Syphilis	50 / 2009	2.5 %

HIV Prevalence by Family Planning Clinic

Clinic	Pos. / Total	Prevalence
Ilala	39 / 288	13.5 %
Temeke	122 / 953	12.8 %
Mwananyamala	91 / 768	11.8 %
Total	252 / 2009	12.5 %

HIV Prevalence by age

Age	Prevalence
15 - 20 yrs	6.5 %
21 - 25 yrs	14.4 %
26 - 30 yrs	14.7 %
30 + yrs	10.8 %
Total	12.5 %

⁵ Data kindly provided by the investigators, Kapiga S., Lwihula G., Shao J. and Hunter D.

10. SEROPREVALENCE IN THE GENERAL POPULATION

10.1 POPULATION-BASED SURVEYS

Data from representative population-based surveys are available for Kagera (1987) and Mwanza (1991), and are summarized in table 6. The figures have been used to validate prevalences found among various sentinel groups (see below).

10.2 ESTIMATED SEROPREVALENCE IN THE GENERAL POPULATION

As blood donors are predominantly relatives of blood recipients, (see table below), the seroprevalence in blood donors is reasonably representative of seroprevalence in the population at large.

	Percentage	Prevalence	N
Relative	97.2 %	4.3 %	40,032
Institutional Donor	1.5 %	1.1 %	608
Paid donor	1.3 %	6.5 %	540
Total	100.0 %	4.3 %	41,180

* Institutional donors (mainly secondary school students) have a significantly lower prevalence.
(P = <0.02)

This was confirmed by Borgdorff et al., who compared a population-based survey in Mwanza region with various sentinel groups :

Age- and sex-adjusted HIV-1 prevalence in Mwanza region.

Category	Urban	Non-urban	Total
Population Survey - female - both sexes	14.9 % 11.4 %	3.1 %	4.1 %
Blood donors	12.6 %	3.4 %	4.5 %
Antenatal Clinic Attenders	10.9 %	-	-
Outpatients : - malaria - anaemia - syphilis	17.4 % 12.6 % 27.1 %	10.8 % 8.4 % -	11.6 % 8.9 % -

However, in a very high prevalence area it has been shown by Killewo et al. that blooddonor seroprevalence underestimates the population prevalence by 50%. These figures were not adjusted for gender.

Category	Crude %	Age-adj. %
Population survey	25.3 %	25.3 %
Antenatal Clinic attenders	22.8 %	17.9 %
Blood donors	11.9 %	12.1 %

As blood donors are predominantly male and most are young adults, figures derived from blooddonors have to be adjusted for the age- and sex-distribution of the general population.

When age- and sex- specific prevalences found in blood donors are extrapolated to the general population, one arrives at an estimated number of 270,000 infected adult males and 453,000 adult females (see table 9, figure 5), totalling 723,000 seropositive adults for Tanzania mainland in 1990.

Based on age specific fertility rates for Tanzanian woman, these women are estimated to have born 85,000 children in 1990, of whom approximately, 30% or 25,000 are born with HIV infection. The remaining 60,000 children are not infected, but have at least one parent who is likely to develop AIDS in the near future.

Including perinatally infected children, the total estimate of HIV seropositives is approximately 750,000.

11. PROJECTIONS

The purpose of projections is, to show how the future will look like under various scenarios.

The worst case scenario presented here, depicts future developments, if present trends in HIV infection rates continue unchanged.

Projection of Adult AIDS Cases

If the (estimated) number of seropositives is known, it is straight forward to calculate future AIDS cases, as the natural history of HIV infection is quite well known. From cohort studies in the U.S.A., it is well established that 50% of HIV infected individual will have converted to AIDS 10 years after infection.

In the absence of better data from Africa, the same rate of progression is assumed for Tanzania.

Based on the estimated number of 700,000 seropositives in 1990, AIDS cases are expected to develop as shown in figure 7.: a cumulative number of 80,000 by 1990, raising to 480,000 by the year 2,000. This is in the absence of any further HIV infection after 1990.

If HIV infections continue to occur at a rate of 1% per year up to 1995, the cumulative number of AIDS cases will be 800,000 by the year 2000.

Expressed in the number of new AIDS cases per year :
40,000 cases per year from 1990 - 2000 if no more HIV infections occur after 1990.

72,000 cases per year from 1995 - 2000 if transmission continues at 1% per year up to 1995.

Conclusion

The epidemic of AIDS cases has just started, and will become strikingly predominant during the 1990's reaching a cumulative number of 480,000 cases by the turn of the century, if HIV transmission is halted completely as from today.

If transmission continues at a rate of 1% per year up to 1995, this will result in 840,000 more infected adults, and 370,000 more AIDS cases up to the turn of the century.

Projection of Paediatric AIDS Cases and Child Mortality RatesProjections of Child Mortality Rates (CMR)
and Child Deaths by the year 2000

Scenario :	Without AIDS :		With AIDS :	
	CMR per 1,000	Child Deaths	CMR per 1,000	Child Deaths
Low	150	180,000	167	200,000
Medium	150	180,000	175	210,000
High	150	180,000	192	230,000

Projection of OrphansProjections of HIV / AIDS / Paediatric AIDS deaths / Orphans by the year 2000

Scenario	HIV infections	AIDS Cases (cum.)	Orphans (cum.)	Paediatric AIDS deaths
Low	760,000	480,000	450,000	20,000
Medium	1,600,000	800,000	750,000	30,000
High	2,400,000	850,000	830,000	50,000

Low : HIV Transmission reduced to 0% by 1990

Medium : HIV Transmission reduced to 0% by 1995

High : HIV Transmission reduced to 0% by 2000

The child deaths included in these projections are deaths due to AIDS in children born with HIV infection only.

In addition, many additional deaths will occur among non-infected children of parents with HIV/AIDS.

The chances of survival of a child are seriously reduced when it is orphaned and particularly by the death of its mother.

12. PRIORITY PREVENTION INDICATORS.

Priority Prevention Indicators were measured in 7 wards in Temeke district, Dar-es-Salaam through multistage cluster sampling of 378 individuals age 14-49 years in August 1992. The response rate was 81 %.

		Total	Male	Female
PPI-1	Knowledge of Preventive Practices.	48 %	55 %	43 %
PPI-2	Condoms available for distribution per year.	3.2		
PPI-3	People who can acquire condoms.	100 %		
PPI-4	Sexually active in past year. Casual sex in past year.	60 % 46 %	70 % 56 %	53 % 37 %
PPI-5	Condom use in most recent casual sexual act.	27 %	29 %	24 %
PPI-9	Episodes of urethritis in past year	7 %	3 %	4 %

Category	Male	Female	Total
Total sample	?	?	466
Non respondents	?	?	88
Respondents	161	217	378
Not sexually active *	48	102	150
Sexually active	113	115	228
No casual sex	50	73	123
Casual sex	63	42	105
Condom use	18	10	28
No condom use	45	32	77

* of whom 45 had never been sexually active.

Category	Male	Female	Total
Total sample	?	?	466
No urethritis	150	211	361
Urethritis	11	6	17
Treated	10	3	13
Not treated	1	3	4

List of Tables

Table 1	Cumulative number of reported AIDS cases by region 1983-1993	Page 22
Figure 1	Reported AIDS cases, 1983-1993	Page 23
Figure 2	AIDS case rates by age and gender	Page 23
Table 2	Distribution of new AIDS cases by age and gender, 1983-1993	Page 24
Figure 3	Cumulative AIDS case rates in 4 regions, 1983-1993	Page 25
Map 1	AIDS Cumulative case rates by region, 1993	Page 25
Table 3a	Prevalence of HIV in ante-natal clinic attenders 1988-1993	Page 26
Table 3b	Prevalence of VDRL in ante-natal clinic attenders 1988-1993	Page 27
Figure 4	ANC Surveillance 1988-1993	Page 28
Figure 5	HIV prevalence in blood donors by age and gender	Page 28
Table 4a	Seroprevalence in blood donors by region for males, 1987-1993	Page 29
Table 4b	Seroprevalence in blood donors by region for females, 1987-1993	Page 29
Map 2a	Seroprevalence in blood donors by region for males, 1993	Page 30
Map 2b	Seroprevalence in blood donors by region for females, 1993	Page 30
Table 5a	Prevalence of HIV for male blood donors by age, 1987-1993	Page 31
Table 5b	Prevalence of HIV for female blood donors by age, 1987-1993	Page 31
Figure 6a	HIV prevalence 1987-1993 male blood donors, selected age groups	Page 32
Figure 6b	HIV prevalence 1987-1993 female blood donors, selected age groups	Page 32
Figure 7a	Seroprevalence in adolescent male blood donors, 1987-1993	Page 33
Figure 7b	Seroprevalence in adolescent female blood donors, 1987-1993	Page 33
Figure 8a	Seroprevalence in adolescent blood donors, 1987-1993	Page 34
Figure 8b	Seroprevalence in adolescents, Mwanza survey, 1990	Page 34
Table 6	Summary of population-based surveys.	Page 35
Table 7	Summary of estimated number of infected, 1986-1993	Page 36
Figure 9	Estimated number of HIV seropositives, 1987-1993	Page 36
Figure 10a	Projected AIDS cases	Page 37

Cumulative AIDS Case rates (per 100,000 population) by Districts and Region for Tanzania Mainland

Code District Cases Population Rate

11 Kondoa	76	340,554	22.3
12 Ngorongoro	52	339,954	15.3
13 Dodoma Rural	46	353,478	13.0
14 Dodoma Urban	127	203,833	62.3
21 Monduli	29	109,292	26.5
22 Arumeru	176	321,835	54.7
23 Arusha	293	134,708	217.5
24 Kiteto	13	127,360	10.2
25 Babati	75	208,385	36.0
26 Hanang	3	113,191	2.7
27 Mbulu	148	268,129	55.2
28 Ngorongoro	2	68,775	2.9
31 Rombo	193	200,859	96.1
32 Mwanga	39	98,260	39.7
33 Same	153	170,053	90.0
34 Moshi Rural	308	342,553	89.9
35 Hai	450	200,136	224.8
36 Moshi Urban	568	96,838	586.5
41 Lushoto	284	357,255	79.5
42 Korogwe	248	217,810	113.9
43 Muheza	358	231,394	154.7
44 Tanga	187	187,455	99.8
45 Pangani	84	37,867	221.8
46 Handeni	153	251,855	60.7
51 Kilosa	72	347,233	20.7
52 Morogoro Rural	259	431,795	60.0
53 Kilombero	863	187,062	461.3
54 Uluguru	179	138,887	128.9
55 Morogoro Urban	604	117,760	512.9
61 Bagamoyo	126	173,918	71.9
62 Kibaha	255	83,018	307.2
63 Kisarawe	373	195,709	190.6
64 Ruvu	361	152,316	237.0
65 Mafia	10	33,054	30.3
71 Kinondoni	163	621,389	26.2
72 Ilala	189	333,708	56.6
73 Temeke	479	405,753	118.1
81 Kilwa	74	150,212	49.3
82 Lindi Rural	336	284,523	118.1
83 Nachingwea	101	118,017	85.6
84 Livale	11	52,211	21.1
85 Lindi Urban	171	41,587	411.2
92 Newala	164	307,998	53.2
93 Massasi	540	335,428	161.0
94 Mtwara Urban	213	76,632	278.0
101 Tunduru	107	170,235	62.9
102 Songea Rural	299	254,367	117.5
103 Mbeya	458	271,845	168.5
104 Songea Urban	204	86,880	234.8
111 Iringa Rural	364	363,605	100.1
112 Mufindi	125	229,304	54.5
113 Njombe	372	315,976	117.7
114 Ludewa	268	99,689	268.8
115 Makete	543	115,480	470.2
116 Iringa Urban	186	84,860	219.2
121 Chunya	240	164,554	145.8
122 Mbeya Rural	80	332,430	24.1
123 Kyela	585	135,645	431.3
124 Rungwe	1655	272,008	608.4
125 Hejo	166	88,436	187.7
126 Mbozi	964	330,282	291.9
127 Mbeya Urban	1539	152,844	1006.9
131 Iramba	74	290,260	25.5
132 Singida Rural	118	285,092	41.4
133 Manyoni	88	135,475	65.0
134 Singida Urban	195	80,987	240.8
141 Nzega	268	295,613	90.7
142 Igunga	309	203,097	152.1
143 Tabora Rural	173	256,641	67.4
144 Urambo	36	187,436	19.2
145 Tabora Urban	156	93,506	166.8

Code District Cases Population Rate

151 Mpanda	79	256,487	30.8
153 Nkasi	52	110,175	47.2
154 Sumbawanga Urban	91	91,972	98.9
161 Kibondo	103	176,262	58.4
162 Kasulu	170	320,518	53.0
163 Kigoma Rural	17	273,390	6.2
164 Kigoma Urban	429	84,647	506.8
171 Baralali	91	382,383	23.8
172 Maswa	145	221,194	65.6
174 Kahama	152	503,204	30.2
175 Shinyanga Urban	657	100,724	652.3
176 Meatu	73	159,439	45.8
181 Karegewe	447	292,589	152.8
182 Bukoba Rural	200	343,956	58.1
183 Muleba	444	274,447	161.8
184 Biharamulo	124	209,624	59.2
185 Ngara	129	158,668	81.3
186 Bukoba Urban	585	47,009	1201.9
191 Ukerewe	88	172,893	50.9
192 Magu	638	310,918	205.2
193 Mwanza	323	223,013	144.8
194 Ksimba	415	428,135	96.9
195 Sengerema	564	304,121	182.2
196 Geita	163	439,191	37.1
201 Tarime	250	341,146	73.3
202 Serengeti	92	113,284	81.2
203 Musoma Rural	4	247,106	1.8
204 Bunde	88	200,870	43.8
205 Musoma Urban	103	68,536	150.3

Code Region Cases Population Rate

1 Dodoma	301	1,237,819	24.3
2 Arusha	739	1,351,675	54.7
3 Kilimanjaro	1711	1,108,699	154.3
4 Tanga	1314	1,283,636	102.4
5 Morogoro	1977	1,222,737	181.7
6 Coast	1124	638,015	178.2
7 Dar es Salaam	831	1,360,850	61.1
8 Lindi	693	646,550	107.2
9 Mtwara	917	889,494	103.1
10 Ruvuma	1068	783,327	136.3
11 Iringa	1858	1,208,914	153.7
12 Mbeya	5229	1,476,199	354.2
13 Singida	475	791,814	60.0
14 Tabora	942	1,036,293	90.9
15 Hukwaa	222	634,974	31.9
16 Kigoma	719	854,817	84.1
17 Shinyanga	1118	1,772,549	63.1
18 Kagera	1909	1,326,183	143.9
19 Mwanza	2181	1,678,271	116.1
20 Mara	537	970,942	55.3

HIV Seroprevalence in 1993 among Male and Female blood donors by Districts and Region for Tanzania Mainland

Code	District	Female		Male	
		N	%	N	%

11	Kondoa				
12	Mpwapwa				
13	Dodoma Rural				
14	Dodoma Urban				
21	Monduli				
22	Arumeru				
23	Arusha	128	3.13		
24	Kiteto				
25	Babati	195	3.59	767	2.35
26	Hanang				
27	Mbuki	72	5.56	555	2.70
28	Ngorongoro				
31	Rombo	29	3.45		
32	Mwanga	70	1.43		
33	Same	23	4.35	117	2.56
34	Moshi Rural	42	9.52		
35	Bei	75	4.00		
36	Moshi Urban	264	3.03		
41	Lushoto				
42	Korogwe	28	7.14	101	5.94
43	Muheza				
44	Tanga	430	4.19		
45	Pangani				
46	Hardeni				
51	Kilosa				
52	Morogoro Rural	15	6.67	33	3.03
53	Kilombero	63	6.35	376	1.86
54	Ulanga	36	11.11		
55	Morogoro Urban	5	60.00	78	7.69
61	Bagamoyo	26	7.69	95	4.21
62	Kibaha	12	8.33	241	4.98
63	Kisarawe	7	14.29	158	14.56
64	Rufiji	96	10.42	555	5.41
65	Mafia	11	18.18	126	1.59
71	Kinondoni				
72	Ila				
73	Temeke				
81	Kiwa	43	2.33		
82	Lindi Rural	15	13.33	560	3.39
83	Nachingwea	311	1.93	447	2.91
84	Liwale				
85	Lindi Urban	90	1.11		
91	Mtwara Rural				
92	Newala	50	8.00	435	5.75
93	Massai	1605	11.71		
94	Mtwara Urban	29	3.45	815	7.36
101	Tunduru	2	100.00	171	0.58
102	Songea Rural	101	7.92	1142	9.89
103	Mbinga	377	5.04	1343	6.70
104	Songea Urban	55	12.73	335	3.88
111	Iringa Rural				
112	Mufindi	9	33.33	139	13.67
113	Njombe	42	14.29	107	14.02
114	Ludewa	43	11.63	201	6.47
115	Makete				
116	Iringa Urban	37	27.03	495	16.16
121	Chunya				
122	Mbeya Rural				
123	Kyela				
124	Rungwe				
125	Nejo				
126	Mbozi				
127	Mbeya Urban				
131	Iramba	66	1.52		
132	Singida Rural	41	2.44	106	1.89
133	Manyoni	120	5.83	305	1.97
134	Singida Urban	28	7.14	232	6.47
141	Nzega	253	6.72	699	3.00
142	Igunga	104	5.77	224	8.04
143	Tabora Rural				
144	Urambo				
145	Tabora Urban	89	3.37	449	4.90

Code	District	Female		Male	
		N	%	N	%
151	Mpanda				
152	Sumbawanga Rural				
153	Nkasi				
154	Sumbawanga Urban				
161	Kibondo	9	33.33	69	8.70
162	Kasulu	52	5.77	285	5.61
163	Kigoma Rural			62	1.61
164	Kigoma Urban				
171	Bariadi	8	25.00		
172	Maswa	5	20.00	58	6.90
173	Shinyanga Rural	6	16.67	82	4.88
174	Kahama				
175	Shinyanga Urban			110	3.64
176	Meatu				
181	Karagwe	21	14.29	128	6.25
182	Bukoba Rural	13	23.08	15	13.33
183	Muleba	53	7.55	586	3.75
184	Biharamulo				
185	Ngara	163	7.98	257	8.56
186	Bukoba Urban			16	6.25
191	Ukerewe				
192	Magu	30	3.33	352	4.55
193	Mwanza				
194	Kwimba	97	3.09	349	5.44
195	Sengerema	130	10.77	493	3.85
196	Geita				
201	Tarime				
202	Serengeti				
203	Musoma Rural	25	4.00	77	7.79
204	Bunda	175	1.14	305	4.92
205	Musoma Urban	17	11.76	147	7.48

Table 1

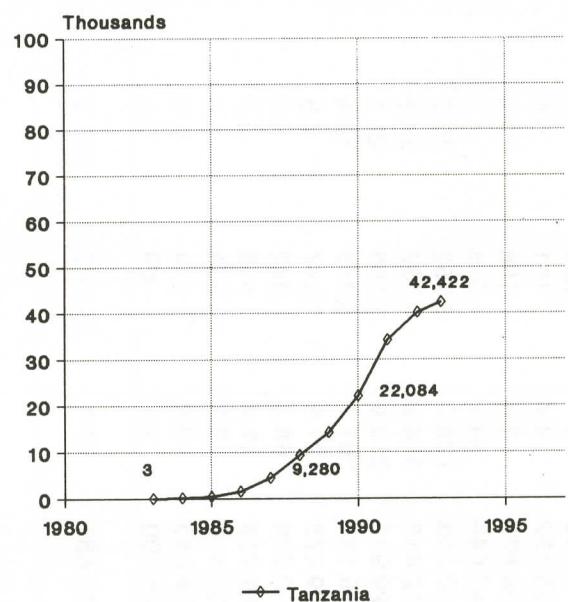
NACP / Tanzania : cumulative AIDS cases by region, 1983 – 1993 October.

Region\Yr	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	Population	Rate	Rank	
Arusha	0	0	0	10	47	217	429	579	86;	1,043	1,152	1,636,576	70.4	16	
Coast	0	0	1	4	79	224	413	705	1,147	1,361	1,457	708,756	205.6	4	
D'Salaam	0	0	51	471	1,470	3,093	5,203	7,196	8,651	8,903	9,186	1,397,472	657.3	1	
Dodoma	0	0	0	7	47	105	247	277	410	475	520	1,739,042	29.9	20	
Iringa	0	0	1	3	68	305	374	612	1,660	2,007	2,232	1,384,511	161.2	7	
Kagera	3	106	322	847	1,665	2,142	2,543	3,164	3,887	4,274	4,387	1,515,240	289.5	3	
Kigoma	0	0	0	3	50	109	243	434	631	916	961	984,121	97.7	14	
Kil'iaro	0	1	8	36	207	455	570	854	1,523	2,116	2,279	1,227,912	185.6	5	
Lindi	0	0	0	1	9	45	111	394	563	688	800	716,461	111.7	12	
Mara	0	0	0	0	3	30	99	139	237	483	623	668	1,112,257	60.1	18
Mbeya	0	0	0	0	16	208	747	1,042	2,819	4,741	6,034	6,081	1,730,235	351.5	2
Morogoro	0	0	0	0	11	88	247	339	544	1,733	2,197	2,287	1,396,276	163.8	6
Mtvara	0	0	0	1	5	23	95	173	369	824	1,046	1,051	955,381	110.0	13
Mwanza	0	0	15	54	171	448	644	1,065	2,191	2,571	2,762	2,145,421	128.7	9	
Rukwa	0	0	0	0	1	5	90	94	124	203	292	317	865,912	36.6	19
Ruvuma	0	0	0	0	20	45	76	187	391	792	1,040	1,192	925,626	128.8	8
Shinyanga	0	0	0	0	8	31	144	227	463	931	1,157	1,310	2,050,497	63.9	17
Singida	0	0	0	0	6	74	197	284	405	582	714	759	901,028	84.2	15
Tabora	0	2	5	6	59	232	510	802	1,071	1,266	1,415	1,168,030	121.1	10	
Tanga	0	0	0	13	80	210	335	650	1,256	1,513	1,606	1,427,299	112.5	11	
TANZANIA	3	109	404	1,525	4,456	9,280	14,107	22,084	34,160	40,236	42,422	25,988,053	163.2		
Doubling time (in months)	2	6	6	8	11	20	19	19	19	19	51				

*Rate per 100,000 population.

Figure 1

Reported AIDS cases 1983 - 1993

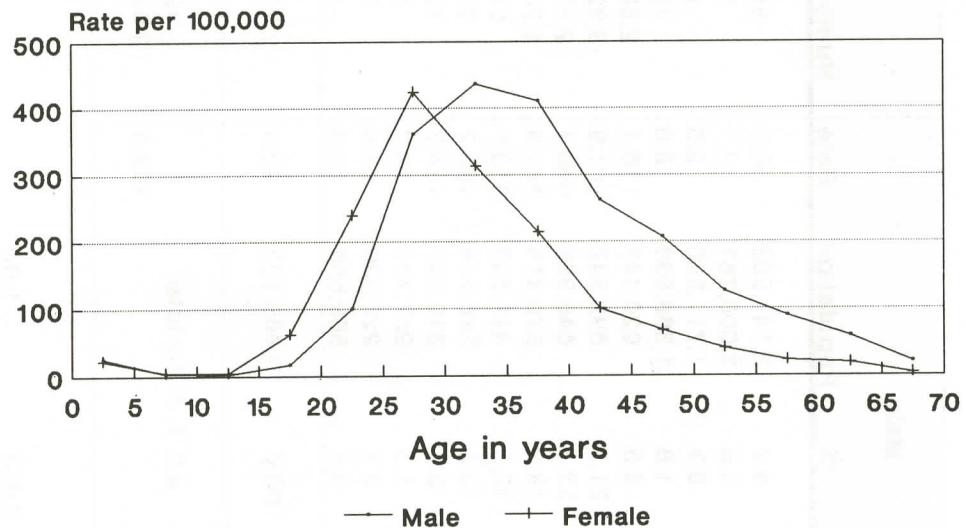


—♦— Tanzania

Epidemiology Unit / NACP, Oct 1993

Figure 2

AIDS case rates by Age and Sex 1983 - 1993 Oct.



Epidemiology Unit, October 1993.

Table 2

Distribution of AIDS cases by age and sex, 1987 - 1993 October.

Age	Number	Male			Female			Total			
		%	Population	Rate	Number	%	Population	Rate	Number	%	Population
0- 4	642	5.2	2,141,203	30.0	558	4.6	2,172,486	25.7	1,200	4.9	4,313,689
5- 9	63	0.5	2,008,761	3.1	88	0.7	2,005,152	4.4	151	0.6	4,013,913
10-14	43	0.3	1,711,868	2.5	65	0.5	1,704,878	3.8	108	0.4	3,416,746
15-19	219	1.8	1,369,838	16.0	796	6.5	1,448,644	54.9	1,015	4.1	2,818,482
20-24	1,069	8.6	920,443	116.1	2,683	22.0	1,170,303	229.3	3,752	15.2	2,090,747
25-29	2,694	21.7	892,347	301.9	3,338	27.4	1,062,445	314.2	6,032	24.5	1,954,792
30-34	2,860	23.1	648,966	440.7	2,328	19.1	729,996	318.9	5,188	21.1	1,378,962
35-39	2,016	16.3	579,415	347.9	1,269	10.4	629,183	201.7	3,285	13.4	1,208,597
40-44	1,277	10.3	411,842	310.1	570	4.7	469,978	121.3	1,847	7.5	881,819
45-49	769	6.2	396,944	193.7	273	2.2	410,278	66.5	1,042	4.2	807,222
50-54	399	3.2	319,997	124.7	137	1.1	366,759	37.4	536	2.2	686,756
55-59	188	1.5	267,704	70.2	50	0.4	253,316	19.7	238	1.0	521,020
60-64	108	0.9	226,839	47.6	36	0.3	259,363	13.9	144	0.6	486,202
65+	57	0.5	569,555	10.0	11	0.1	528,100	2.1	68	0.3	1,097,655
Total	12,404	100.0	12,465,723	99.5	12,202	100.0	13,210,881	92.4	24,606	100.0	25,676,604
unknown total	415	3.2 % of the total		421	3.3 % of the total				836	3.3 % of the total	99.1
	12,819		102.8	12,623		95.6			25,442		

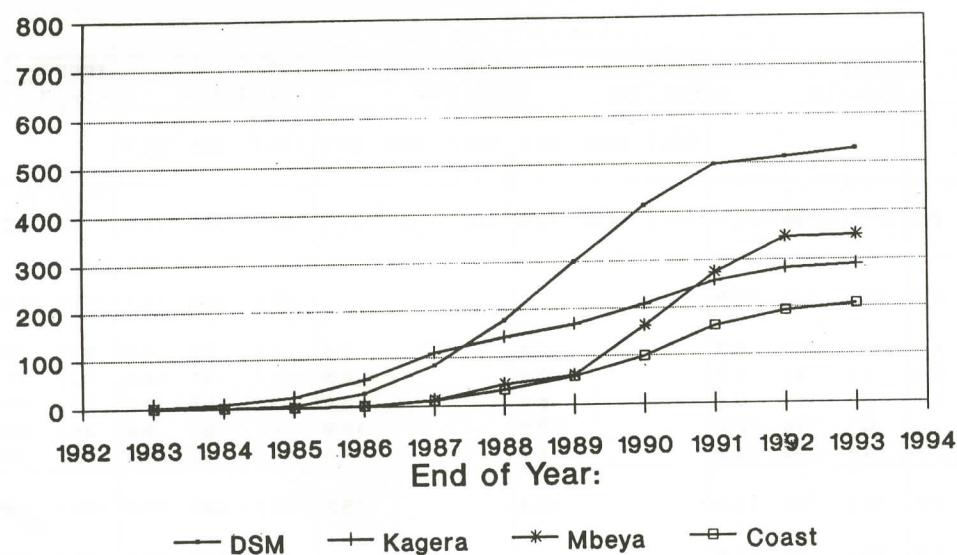
M/F ratio : 12,819 12,623 1.02
M/F rate ratio 102.8 95.6 1.08
M/F rate ratio (age-adj.) = 1.16

* Rate per 100,000 population.

Source of population data: 1988 census, medium variant projections for 1993.

Figure 3

AIDS Control Programme Cumulative AIDS case rates, 1983-1993 Oct



Epidemiology Unit / NACP, Oct 1993

Map 1

Cumulative AIDS case rate. October 1993.

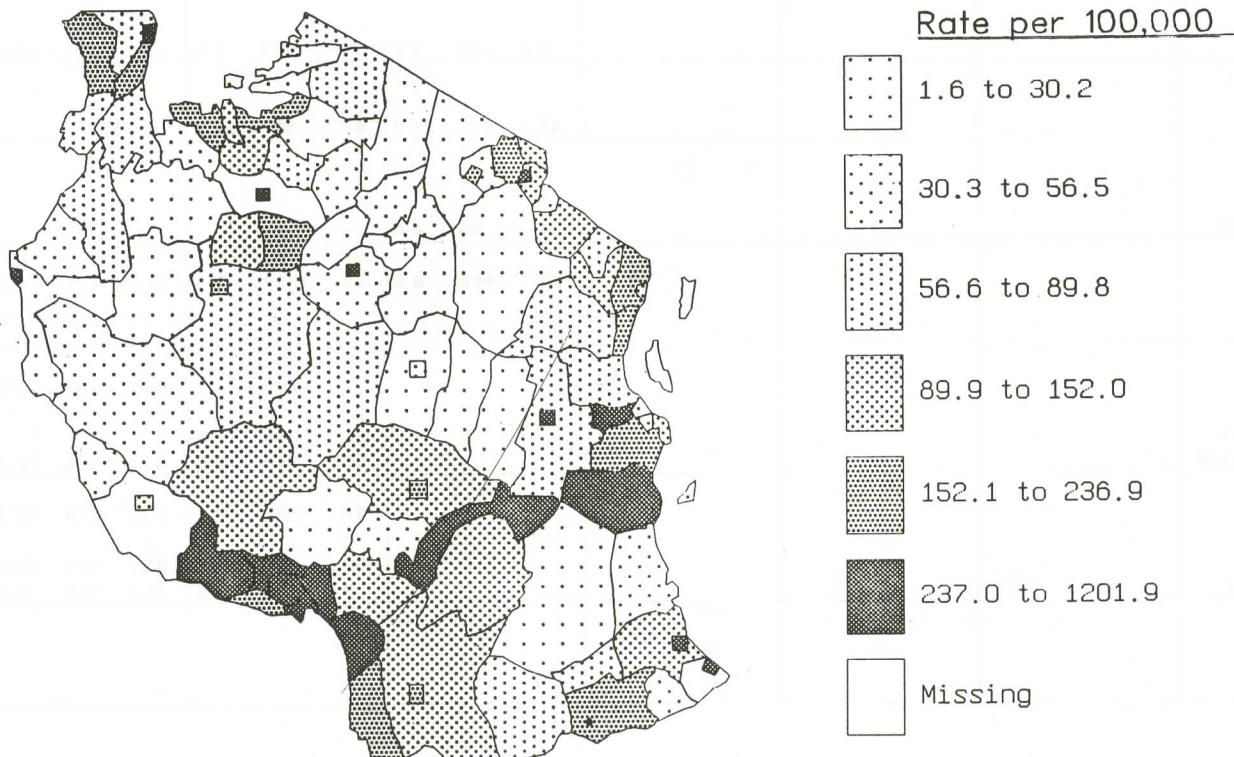


Table 3a

HIV Sentinel Surveillance in ante-natal clinic attenders, 1988–1993.

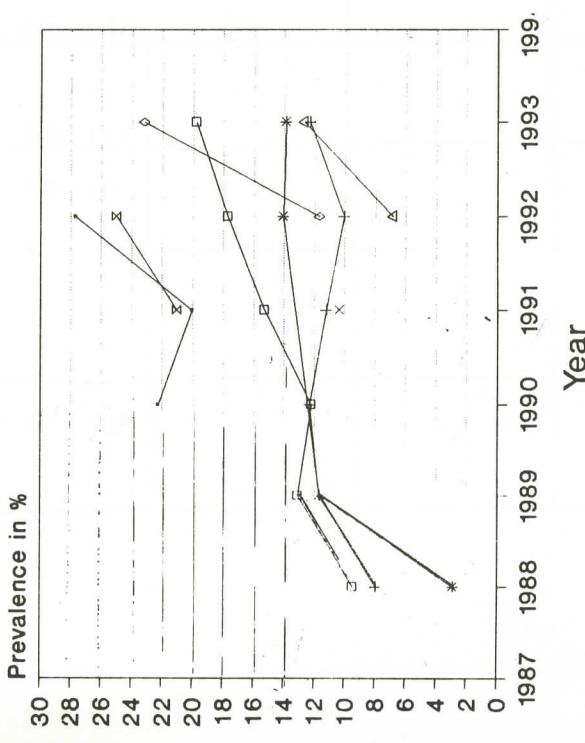
Clinic	1988		1989		1990		1991		1992		1993	
	Pos / Tot	%	Pos / Tot	%	Pos / Tot	%	Pos / Tot	%	Pos / Tot	%	Pos / Tot	%
BUKOBIA					284 / 1277 22.2		104 / 519 20.0		140 / 505 27.7			
MWANZA urban	27 / 339 8.0		151 / 1295 11.7		177 / 1438 12.3		134 / 1197 11.2		30 / 299 10.0		74 / 600 12.3	
Mbeya rural	5 / 174 2.9		37 / 318 11.6						37 / 263 14.1		158 / 1137 13.9	
Chimala	2 / 48 4.2		4 / 64 6.3			8.8		9.5	4 / 50 8.0		30 / 278 10.8	
Isoko	2 / 68 2.9		1 / 50 2.0			2.4		6.6	9 / 50 18.0		15 / 177 8.5	
Itete	1 / 58 1.7		5 / 55 9.1			6.4		3.9	3 / 57 5.3		27 / 174 15.5	
Mwambani			6 / 50 12.0			8.5		12.9	4 / 50 8.0		34 / 317 10.7	
Kyela			21 / 99 21.2			14.6		17.5	17 / 56 30.4		52 / 191 27.2	
Mbeya urban	29 / 307 9.4		51 / 391 13.0			12.2		15.3	53 / 300 17.7		175 / 886 19.8	
Kiwanjampaka	7 / 100 7.0		10 / 94 10.6					17 / 100 17.0		61 / 273 22.3		
Mwanjelwa	11 / 100 11.0		7 / 96 7.3					11 / 100 11.0		73 / 314 23.2		
Meta	11 / 107 10.3		34 / 201 16.9					25 / 100 25.0		41 / 299 13.7		
Dar es Salaam							31 / 300 10.3					
Temeke M'Nyamala A.K. Clinic												
Coast												
Bagamoyo Kisarawe Kibaha												
Kilimanjaro												
Umbwe							3 / 128 2.3	16 / 251 6.4	16 / 101 15.8			
Iringa												
Mafinga							57 / 271 21.0	167 / 667 25.0				
Mtwara												
Nanguruwe							4 / 90 4.4					
Mara												
Nyasio							27 / 300 9.0	84 / 1198 7.0	24 / 300 8.0			
Rukwa												
Namanyere Sumbawanga							70 / 600 11.7	67 / 289 23.2				
Ruvuma							34 / 300 11.3					
Songea Namtumbo							36 / 300 12.0	67 / 289 23.2				
Shinyanga							38 / 555 6.8	62 / 488 12.7				
							29 / 300 9.7	50 / 310 16.1				
							9 / 255 3.5	12 / 178 6.7				

Table 3b

VDRL Sentinel Surveillance in ante-natal clinic attenders, 1988-93.

ANC clinic	1988		1989		1990		1991		1992		1993	
	Pos / Tot	%	Pos / Tot	%	Pos / Tot	%	Pos / Tot	%	Pos / Tot	%	Pos / Tot	%
Bukoba							18 / 668 2.7		16 / 442 3.6			
Mwanza urban							191 / 2310 8.3	256 / 3321 7.7	10 / 96 10.4			
Mbeya rural								35 / 263 13.3				
Chimala								5 / 50 10.0				
Isoko							4.4	11 / 50 22.0				
Itete							7.5	5 / 57 8.8				
Mwambani								4 / 50 8.0				
Kyela							6.6	10 / 56 17.9				
Mbeya urban						9.1		8.6				
Kiwanjapaka							29 / 109 26.6	10 / 100 10.0				
Mwanjelwa							20 / 100 20.0	14 / 100 14.0				
Meta							12 / 101 11.9	5 / 100 5.0				
Dar es Salaam							13 / 311 4.2	174 / 2280 7.6				
Temeke								33 / 806 4.1				
M'Nyamala								8 / 495 1.6				
A.K. Clinic								133 / 979 13.6				
Coast									118 / 1094 10.8			
Bagamoyo									41 / 342 12.0			
Kisarawe									11 / 161 6.8			
Kibaha									66 / 591 11.2			
Kilimanjaro												
Umbwe							5 / 301 1.7	12 / 329 3.6	1 / 115 0.9			
Iringa												
Mafinga							163 / 819 19.9	132 / 607 21.7	68 / 240 28.3			
Mtwara												
Nanguruwe							11 / 264 4.2	32 / 386 8.3				
Mara												
Nyasio							6 / 501 1.2	97 / 1365 7.1				
Rukwa									101 / 600 16.8			
Namanyere									54 / 300 18.0			
Sumbawanga									47 / 300 15.7			
Ruvuma										20 / 555 3.6		
Songea							81 / 156 51.9			10 / 300 3.3		
Namtumbo										18 / 255 7.1		

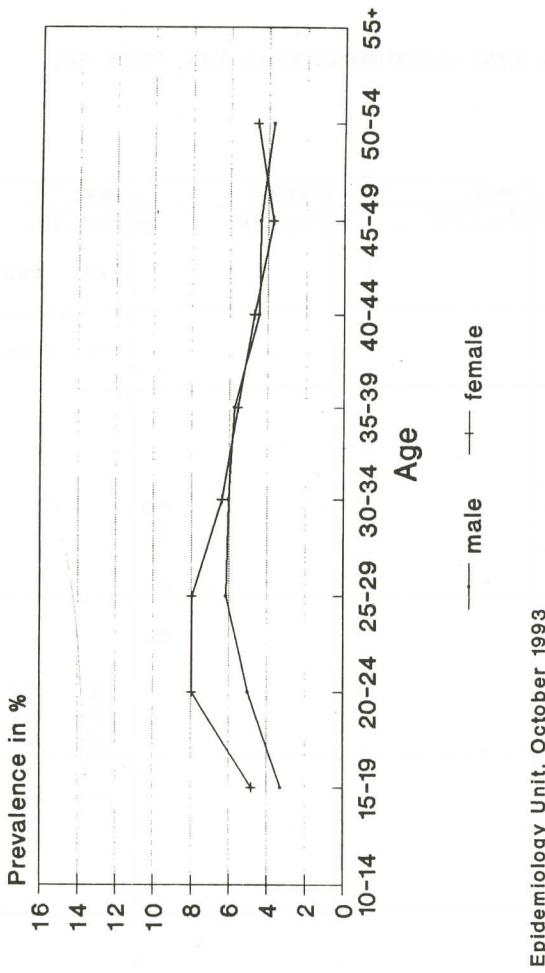
Figure 4
ANC Surveillance, 1988-1993.



Sentinel Stations :
 —— Bukoba —— Mwanza *— Mbeya-R —□— Mbeya-U
 —*— DSM —△— Rukwa —△— Ruvuma —×— Iringa

Epidemiology Unit, Oct 1993

Figure 5
NACP - TANZANIA
HIV Prevalence in blooddonors
by age and sex, 1987 - 1993 Oct.



Epidemiology Unit, October 1993

Table 4a
Seroprevalence in blooddonors by region for males, 1987 – 1993.

Region	1987	1988	1989	1990	1991	1992	1993	'87-'93	Rank
Arusha			0.00	1.93	2.31	2.58	2.47	2.35	18
Coast	0.00	5.00	4.63	4.14	4.36	4.64	6.04	4.49	14
Dodoma			1.90	6.14	3.48	2.27		3.18	15
DSM	1.49	7.50	2.51	9.39	6.86	8.78	0.00	7.15	5
Iringa			11.11	11.41	10.60	9.68	13.48	10.48	1
Kagera			10.48	10.13	10.30	10.97	5.49	10.47	2
Kigoma		7.46	1.19	1.20	2.46	1.92	5.53	1.95	20
Kili'jaro			1.27	5.20	2.69	2.36	3.35	2.70	17
Lindi			0.63	5.60	4.78	4.18	2.54	4.50	13
Mara			4.62	4.47	4.54	7.01	6.05	4.72	11
Mbeya	4.82	4.98	5.17	7.80	11.56	16.59	0.00	8.39	3
Morogoro		10.91	6.76	3.10	5.43	4.68	3.44	5.69	10
Mtware			4.92	2.00	4.16	5.38	9.56	4.57	12
Mwanza			15.33	5.48	6.17	5.16	4.44	5.90	7
Rukwa			11.59		8.08	6.68		7.69	4
Ruvuma		3.50	4.91	4.38	7.10	6.34	7.26	5.81	9
Shinyanga			12.96	4.29	6.01	6.10	4.05	5.89	8
Singida			3.13	2.25	2.19	2.04	2.88	2.21	19
Tabora			2.45	2.48	2.95	2.93	4.37	2.83	16
Tanga			6.59	6.17	6.95	9.19	4.43	7.09	6
TANZANIA	3.30	7.42	4.97	5.14	5.77	5.51	5.94	5.56	

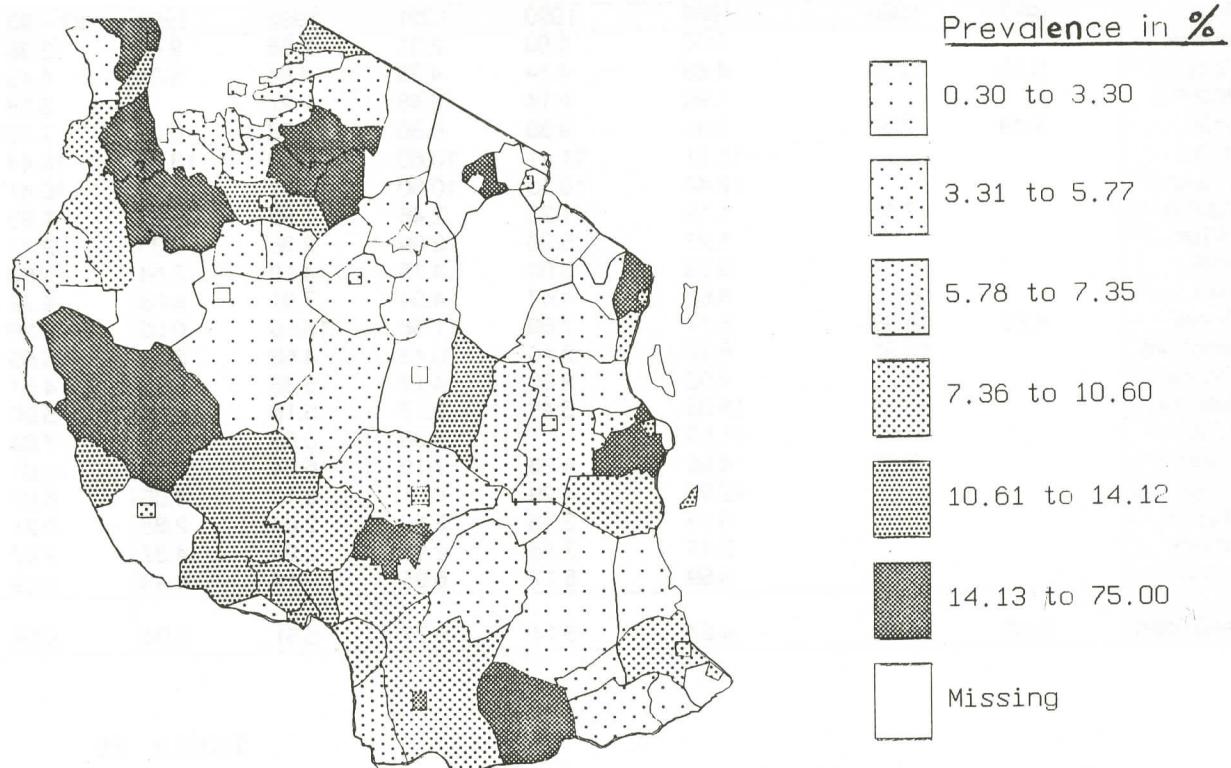
Table 4b
Seroprevalence in blooddonors by region for females, 1987 – 1993.

Region	1987	1988	1989	1990	1991	1992	1993	'87-'93	Rank
Arusha			0.00	0.88	5.50	2.15	3.97	3.55	15
Coast		0.00	6.90	6.06	6.07	5.00	10.53	5.31	9
Dodoma			0.00	5.88	14.10	7.69	0.00	4.75	20
DSM	0.00	14.29		0.00	3.26	4.83		1.93	12
Iringa			16.67	15.84	8.72	8.11	18.32	8.98	4
Kagera			9.68	12.50	12.86	10.97	9.20	11.57	1
Kigoma		29.63	9.43	1.82	4.71	4.08	7.89	4.46	13
Kili'jaro			3.85	6.67	3.23	2.22	1.82	1.97	19
Lindi			11.76	10.87	4.40	2.27	1.93	3.46	16
Mara			13.77	7.58	5.42	8.22	2.30	6.78	6
Mbeya	9.52	2.04	10.16	11.80	11.76	20.31		10.25	2
Morogoro		12.50	1.82	4.64	5.07	5.75	9.30	4.88	10
Mtware			0.00	1.59	3.52	10.46	5.68	3.88	14
Mwanza			7.50	5.31	6.21	5.70	6.84	5.89	7
Rukwa			24.00		21.43	0.00		4.84	11
Ruvuma		6.25	14.03	8.73	6.97	6.43	6.73	8.59	5
Shinyanga			33.33	16.47	18.12	10.00	12.50	10.08	3
Singida			10.53	2.17	2.19	4.55	4.31	3.33	18
Tabora			2.52	1.98	2.84	2.75	5.80	3.36	17
Tanga			23.53	2.13	7.95	6.96	5.88	5.39	8
TANZANIA	7.14	7.98	11.25	7.90	7.17	5.90	6.13	6.31	

Map 2a

HIV Seroprevalence

Male blood donors, 1988–1993.



Map 2b

HIV Seroprevalence

Female blood donors, 1988–1993.

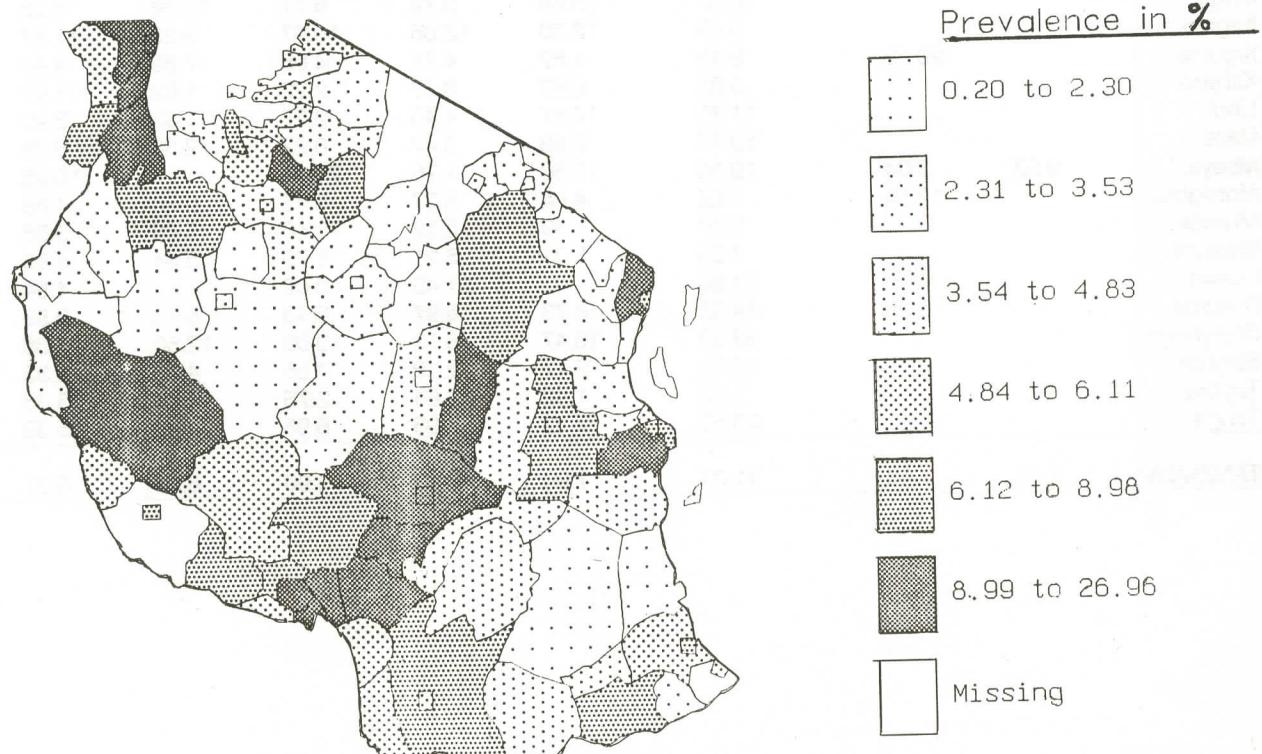


Table 5a

Prevalence of HIV for MALE blooddonors by age, 1987 – 1993.

Age	1987	1988	1989	1990	1991	1992	1993	1987–93
15–19	0.00	1.56	1.82	3.33	3.24	3.70	4.07	3.29
20–24	3.36	6.77	4.53	4.67	4.97	4.86	6.02	5.01
25–29	1.80	8.30	6.04	4.98	6.66	5.97	6.04	6.16
30–34	2.13	9.25	5.34	5.48	6.39	5.81	6.09	6.05
35–39	7.81	8.71	5.46	4.29	6.06	5.59	6.42	5.75
40–44	7.14	10.05	3.79	3.79	4.82	3.89	5.17	4.46
45–49	10.00	5.56	2.15	5.07	4.47	4.24	4.68	4.40
50–54	0.00	4.17	3.05	3.81	4.40	2.60	4.52	3.71
55+	0.00	15.38	3.60	5.00	4.00	2.35	5.10	3.80
Total	3.32	7.71	4.87	4.72	5.68	5.18	5.83	5.41

Table 5b

Prevalence of HIV for FEMALE blooddonors by age, 1987 – 1993.

Age	1987	1988	1989	1990	1991	1992	1993	1987–93
15–19	0.00	0.00	7.93	7.47	4.87	4.20	2.91	4.83
20–24	0.00	4.55	13.53	9.46	7.70	7.22	7.30	7.95
25–29	14.29	11.76	8.24	9.03	8.72	6.58	7.27	7.95
30–34	16.67	14.29	8.93	6.19	6.53	5.74	6.59	6.38
35–39	0.00	21.05	7.95	6.16	4.75	5.72	5.81	5.57
40–44	0.00	16.67	9.64	2.88	6.28	3.59	1.27	4.71
45–49	0.00	0.00	7.69	1.23	3.38	4.38	4.11	3.74
50–54	0.00	0.00	0.00	0.00	5.56	5.41	6.06	4.60
55+	0.00	0.00	0.00	10.00	6.67	4.17	0.00	5.08
Total :	7.14	7.51	9.60	7.60	6.95	6.01	6.15	6.77
Male / Female ratio:	0.46	1.03	0.51	0.62	0.82	0.86	0.95	0.80

Figure 6a

NACP - TANZANIA
HIV Prevalence, 1987-1993 Oct.
Male blooddonors, selected agegroups

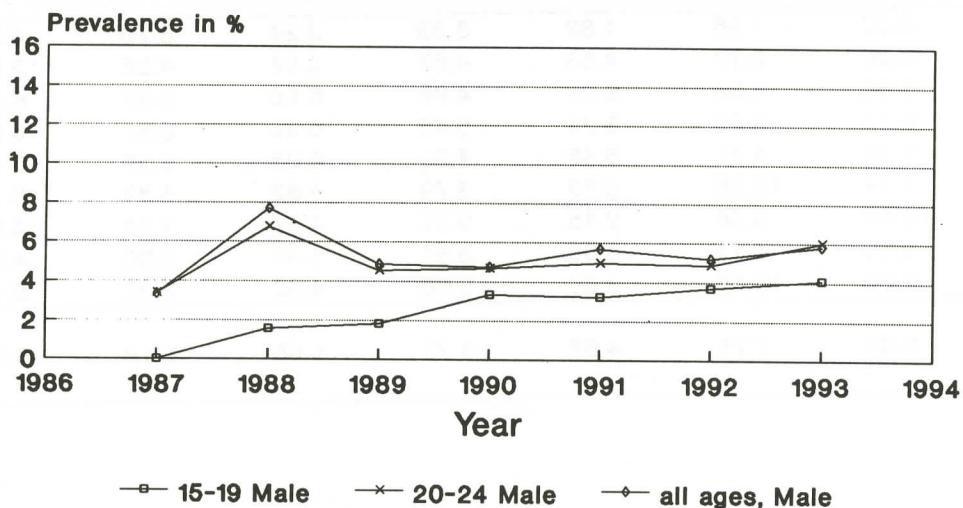


Figure 6b

NACP - TANZANIA
HIV Prevalence, 1987 - 1993 Oct.
Female blooddonors, selected agegroups

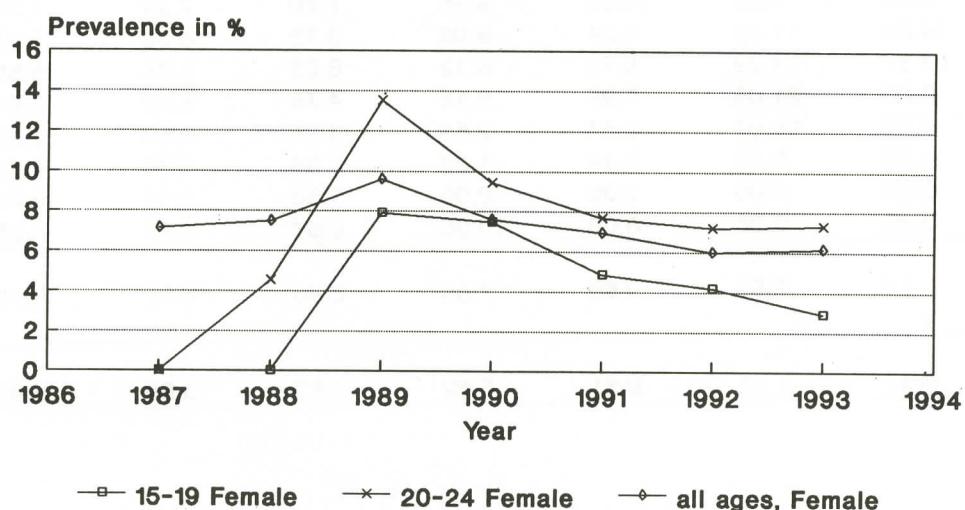
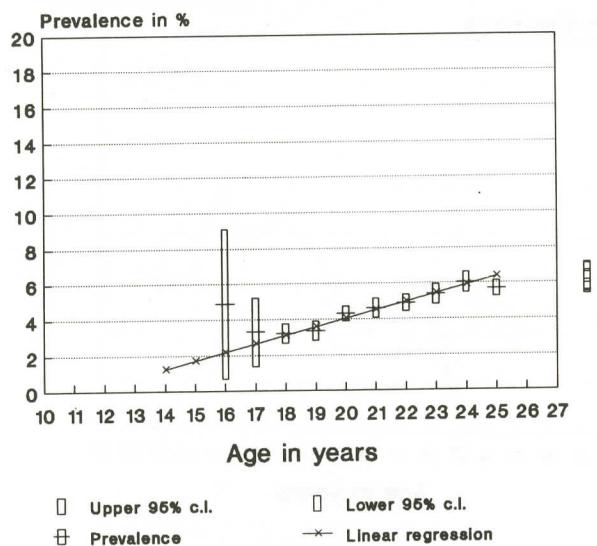


Figure 7a

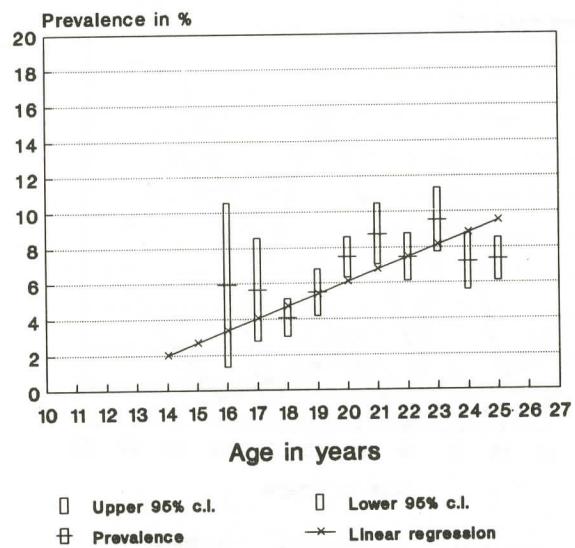
**HIV Seroprevalence
in Adolescent Blooddonors.
(Male) 1987 - 1993**



NACP, October 1993. (bts_yth)

Figure 7b

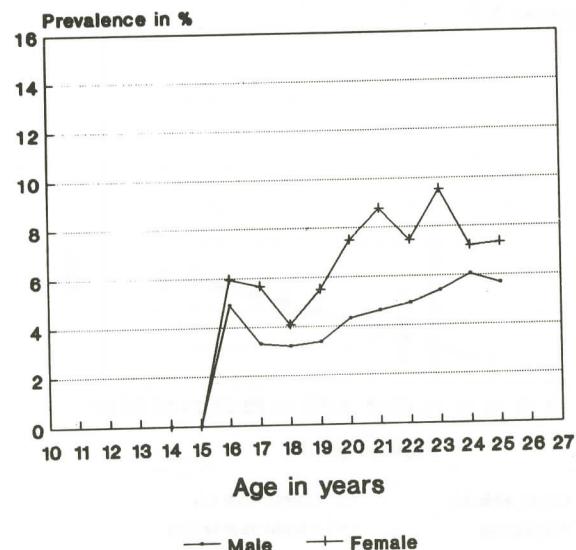
**HIV Seroprevalence
in Adolescent Blooddonors.
(Female)**



NACP, October 1993. (bts_yth)

Figure 8a

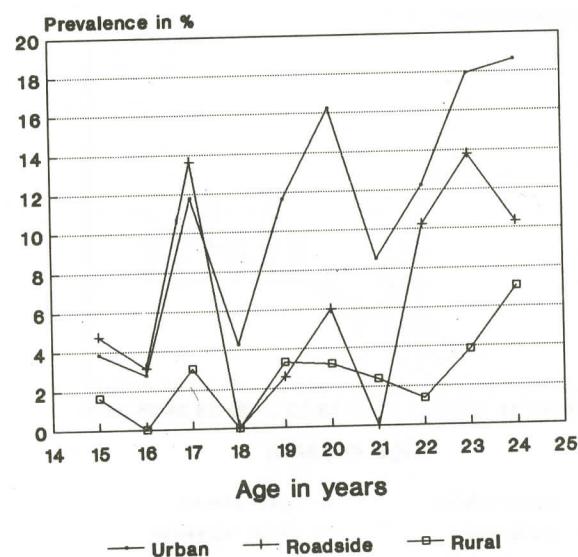
HIV Seroprevalence
in Adolescent Blooddonors.
1987 - 1993 October.



NACP, October 1993 (bt_yth_a)

Figure 8b

HIV Seroprevalence
in Adolescents, Mwanza region
1990 survey



TANERA Project, Mwanza (mw_yth_a)

Table 6

Population - based HIV surveys by Age and Sex

Area	Category	15-24	25-34	35-44	45-	All
Kagera (1)	Total	68 / 859 = 7.91	101 / 746 = 13.53	39 / 435 = 8.96	11 / 263 = 4.18	220 / 2302 = 9.55
(1987)						
	Urban	45 / 217 = 20.7	65 / 210 = 30.95	18 / 100 = 18	5 / 26 = 19.2	134 / 552 = 24.2
	Rural	23 / 642 = 3.58	36 / 536 = 6.716	21 / 335 = 6.26	6 / 237 = 2.53	86 / 1750 = 4.91
	Male					
Bukoba	Male	3 / 268 = 1.11	14 / 194 = 7.216	12 / 151 = 7.94	2 / 114 = 1.75	31 / 727 = 4.26
Urban	Female	20 / 374 = 5.34	22 / 342 = 6.432	9 / 184 = 4.89	4 / 123 = 3.25	55 / 1023 = 5.37
Bukoba R.	Male	2 / 70 = 2.85	9 / 64 = 14.06	7 / 34 = 20.5	2 / 33 = 6.06	20 / 201 = 9.95
Muleba	Female	12 / 124 = 9.67	14 / 97 = 14.43	5 / 69 = 7.24	3 / 47 = 6.38	34 / 337 = 10.0
Karagwe	Male	1 / 119 = 0.84	3 / 56 = 5.357	5 / 61 = 8.19	0 / 34 = 0	9 / 270 = 3.33
	Female	8 / 153 = 5.22	8 / 143 = 5.594	4 / 58 = 6.89	1 / 46 = 2.17	21 / 400 = 5.25
Ngara	Male	0 / 79 = 0	2 / 74 = 2.702	0 / 56 = 0	0 / 47 = 0	2 / 256 = 0.78
Biharamulo	Female	0 / 97 = 0	0 / 102 = 0	0 / 57 = 0	0 / 30 = 0	0 / 286 = 0
MWANZA (2)	Total	86 / 1498 = 5.74	114 / 1386 = 8.225	43 / 852 = 5.04	13 / 511 = 2.54	256 / 4135 = 6.19
(1990/91)						
	Urban	50 / 467 = 10.7	62 / 411 = 15.08	23 / 204 = 11.2	5 / 104 = 4.80	140 / 1130 = 12.3
	Rural	20 / 317 = 6.30	32 / 335 = 9.552	11 / 167 = 6.58	2 / 139 = 1.43	65 / 976 = 6.65
	Village	16 / 714 = 2.24	20 / 640 = 3.125	9 / 481 = 1.87	6 / 268 = 2.23	51 / 2029 = 2.51
	Male					
	Female	16 / 670 = 2.38	45 / 650 = 6.923	27 / 391 = 6.90	9 / 290 = 3.10	97 / 1981 = 4.89
		70 / 825 = 8.48	69 / 436 = 15.82	16 / 379 = 4.22	4 / 221 = 1.80	159 / 1472 = 10.8

Table 7

**Summary of estimated number of HIV infected, 1986 – 1993.
(based on age adjusted blood donor prevalence)**

	1987	1988	1989	1990	1991	1992	1993
Males	173,656	443,054	238,683	269,713	296,782	268,177	324,108
Females	236,102	468,411	517,274	452,853	412,858	319,394	303,830
Total	409,758	911,465	755,957	722,566	709,640	587,571	627,938
Infected pregnant women	62,715	99,715	109,810	85,563	75,534	66,163	66,106
Infected newborns	18,815	29,914	32,943	25,669	22,660	19,849	19,832
Uninf. newb./pos. M.	43,901	69,800	76,867	59,894	52,874	46,314	46,274

Figure 9

**Estimated number of HIV seropositives
for Tanzania mainland**

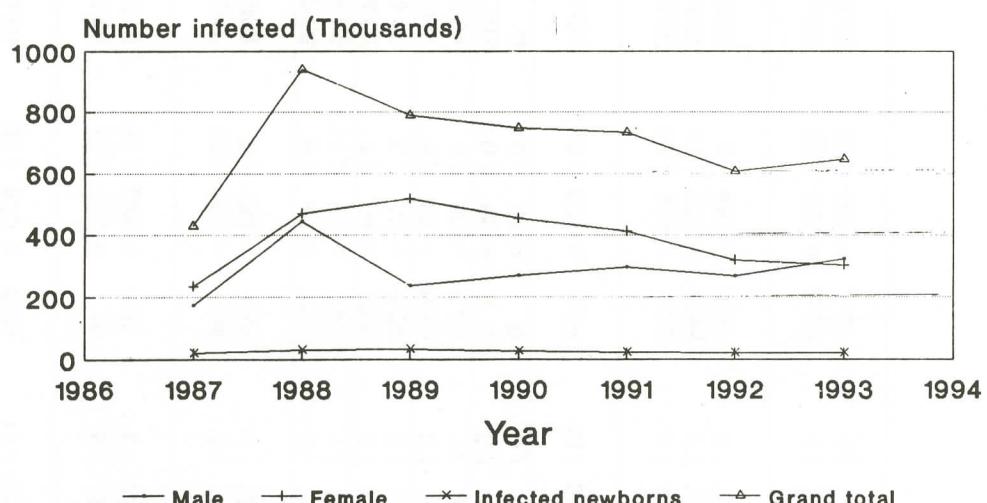
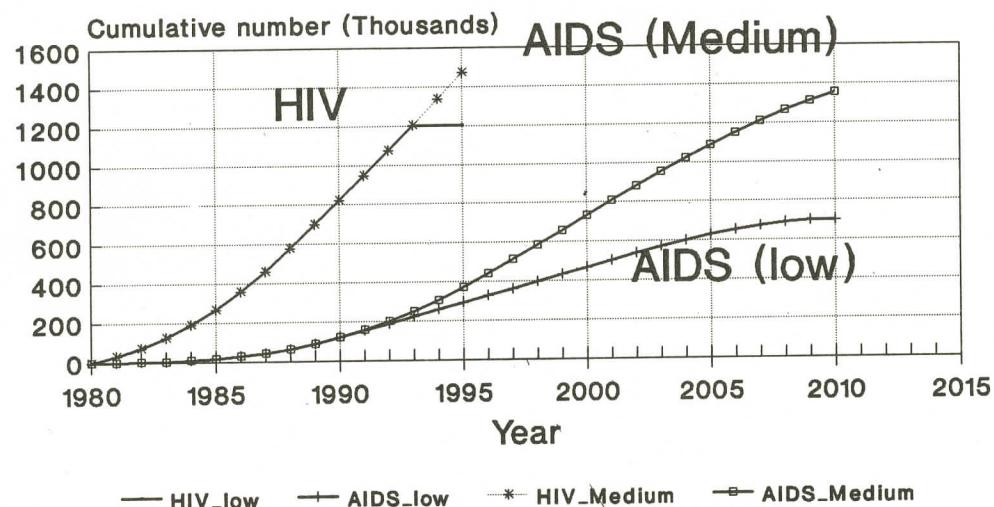


Figure 10a

Projected AIDS cases Low and Medium Scenario



Epidemiology Unit, October 1993.

the first time in 1960, and the first time in 1961.

On the 2nd of January 1962, I saw a pair of
Spoonbills at the same place.

On the 1st of February 1962, I saw a pair of
Spoonbills at the same place.

On the 1st of March 1962, I saw a pair of
Spoonbills at the same place.

On the 1st of April 1962, I saw a pair of
Spoonbills at the same place.

On the 1st of May 1962, I saw a pair of
Spoonbills at the same place.

On the 1st of June 1962, I saw a pair of
Spoonbills at the same place.

On the 1st of July 1962, I saw a pair of
Spoonbills at the same place.

On the 1st of August 1962, I saw a pair of
Spoonbills at the same place.

On the 1st of September 1962, I saw a pair of
Spoonbills at the same place.

On the 1st of October 1962, I saw a pair of
Spoonbills at the same place.

On the 1st of November 1962, I saw a pair of
Spoonbills at the same place.

On the 1st of December 1962, I saw a pair of
Spoonbills at the same place.

On the 1st of January 1963, I saw a pair of
Spoonbills at the same place.