

8.1 KEY FINDINGS

- Seven percent of Tanzanian adults age 15-49 are infected with HIV; prevalence among women is higher (8 percent) than among men (6 percent).
- The HIV epidemic shows strong regional variation. Regions with the highest HIV prevalence are Mbeya (14 percent), Iringa (13 percent) and Dar es Salaam (11 percent).
- Eight percent of cohabiting couples in Tanzania are discordant, i.e., one partner is HIV positive and the other is HIV negative.
- Eighty-one percent of women and men agreed to provide blood samples for HIV testing. Response rates were 84 percent among eligible women and 77 percent among eligible men.

8.2 INTRODUCTION

HIV prevalence data provide important information to plan the national response, to evaluate programme impact, and to measure progress on the National Multi-sectoral Strategic Framework on HIV/AIDS (2003-2007). The understanding of the distribution of HIV infection within the population and analysis of the social, biological, and behavioural factors associated with HIV infection offer new insights about the HIV epidemic in Tanzania, which may lead to more precisely targeted messages and interventions.

In Tanzania, national HIV prevalence estimates have been derived using prevalence from blood donors and sentinel surveillance among pregnant women. Sentinel surveillance of HIV infection utilising antenatal (ANC) clinic attendees was established in 1990, when 24 sites were established in 11 of the 21 regions of Tanzania Mainland. In 2003-04, sentinel surveillance was conducted in 59 sites from 10 regions. The next round of antenatal sentinel surveillance, which is expected to begin in early 2005, will be implemented in 90 sites in 15 regions. Data on HIV infection among blood donors have been available from all 21 regions of Tanzania since 1990 and have been used to estimate the prevalence of HIV infection among different populations in different geographic areas.

While the rate of HIV infection in pregnant women has been shown to be a reasonable proxy for the level in the combined male and female adult population in a number of settings, there are recognised limitations in estimating HIV rates in the general adult populations from data derived exclusively from pregnant women attending selected sentinel clinics. First, the ANC data do not capture any information on HIV prevalence in non-pregnant women, nor in women who either do not attend clinics for pregnancy care or receive antenatal care at facilities not represented in the surveillance system. Pregnant women are also more at risk for HIV infection than women who may be avoiding both HIV and pregnancy through the use of condoms or women who are less sexually active and therefore less likely to become pregnant or expose themselves to HIV. In addition, there may be biases in the ANC surveillance data because HIV infection reduces fertility and because knowledge of HIV status may influence fertility choice. Moreover, ANC data do not include socio-economic characteristics that may facilitate HIV infection. Finally, ANC data are sex selective; therefore, the rates among pregnant women are not a proxy for male HIV rates.

Thus, although the information from the ANC surveillance system and blood donor prevalence has been very useful for monitoring trends of HIV in Tanzania, the inclusion of HIV testing in the 2003-04 THIS offers the opportunity to better understand the magnitude and pattern of the infection in the general reproductive-age population in Tanzania Mainland. The THIS results are in turn expected to improve the calibration of annual sentinel surveillance data, so that trends in HIV infection can be more accurately measured in the intervals between household surveys.

8.3 COVERAGE OF HIV TESTING

Tables 8.1.1, 8.1.2 and 8.1.3 present coverage rates for HIV testing for eligible women, men and both sexes combined, respectively. The response rates are presented by background characteristics. For these tables, respondents are divided into four categories, namely:

1. Those who were interviewed and consented to the HIV testing
2. Those who were interviewed and refused the testing when asked for informed consent
3. Those who were not tested for some other reason, such as mismatch between the questionnaires and the blood samples, or a technical problem in taking blood
4. Those who were not interviewed.

As shown in Table 8.1.3, 81 percent of women and men agreed to provide blood samples for HIV testing. Response rates were 84 percent among eligible women and 77 percent among eligible men.

Overall, the coverage rates for HIV testing are consistent across age groups, showing only a very slight tendency to rise with age. Rural residents were more likely to be tested than urban residents for both sexes. This is largely due to the fact that refusal rates were higher among urban women and men (18 percent for women and 22 percent for men) than for rural counterparts (10 percent for women and 11 for men). Not being interviewed at all was also an important reason for urban men not to participate in HIV testing (13 percent).

Table 8.1.1—Women

Coverage of HIV testing among eligible women age 15-49 by background characteristics, Tanzania 2003-04 (unweighted)

Background characteristic	Percent tested	Percent who refused testing	Percent with technical problem/ other result	Percent not interviewed in survey	Total	Number of women
Age						
15-19	80.9	13.2	0.1	5.8	100.0	1,556
20-24	82.8	13.3	0.1	3.8	100.0	1,431
25-29	84.0	12.1	0.2	3.7	100.0	1,319
30-34	84.3	12.0	0.2	3.5	100.0	1,034
35-39	86.0	10.5	0.3	3.3	100.0	798
40-44	85.0	10.9	0.4	3.7	100.0	568
45-49	84.8	11.6	0.2	3.3	100.0	448
Residence						
Urban	77.0	18.4	0.0	4.5	100.0	2,011
Rural	86.0	9.9	0.2	3.9	100.0	5,143
Region						
Dodoma	84.6	12.3	0.0	3.1	100.0	292
Arusha	82.3	13.7	0.6	3.4	100.0	351
Kilimanjaro	73.9	20.0	0.0	6.1	100.0	360
Tanga	88.8	5.0	0.0	6.3	100.0	303
Morogoro	86.4	7.5	0.0	6.1	100.0	294
Pwani	89.2	6.1	0.3	4.4	100.0	296
Dar es Salaam	68.7	27.2	0.0	4.1	100.0	632
Lindi	84.0	11.0	0.4	4.6	100.0	282
Mtwara	93.3	4.1	0.0	2.6	100.0	267
Ruvuma	91.4	6.6	0.3	1.7	100.0	348
Iringa	80.8	13.3	0.7	5.2	100.0	286
Mbeya	91.5	6.7	0.3	1.5	100.0	330
Singida	96.6	3.4	0.0	0.0	100.0	296
Tabora	87.4	7.6	0.0	5.1	100.0	356
Rukwa	96.7	2.3	0.0	1.0	100.0	302
Kigoma	85.5	6.0	0.3	8.2	100.0	366
Shinyanga	57.9	34.4	0.0	7.7	100.0	404
Kagera	96.5	2.3	0.3	1.0	100.0	310
Mwanza	82.3	13.0	0.8	3.9	100.0	385
Mara	70.1	25.1	0.0	4.8	100.0	378
Manyara	93.7	3.8	0.0	2.5	100.0	316
Education						
No education	83.3	11.0	0.2	5.5	100.0	1,629
Primary incomplete	85.6	11.1	0.1	3.2	100.0	1,143
Primary complete	83.8	12.3	0.2	3.7	100.0	3,828
Secondary+	78.2	18.0	0.0	3.8	100.0	550
Wealth quintile						
Lowest	86.2	9.8	0.1	3.9	100.0	1,394
Second	84.8	10.7	0.1	4.4	100.0	1,379
Middle	85.7	9.1	0.3	4.9	100.0	1,310
Fourth	84.4	12.0	0.4	3.1	100.0	1,421
Highest	77.6	18.4	0.0	4.1	100.0	1,650
Total	83.5	12.3	0.2	4.1	100.0	7,154

Table 8.1.2—Men

Coverage of HIV testing among eligible men age 15-49 by background characteristics, Tanzania 2003-04 (unweighted)

Background characteristic	Percent tested	Percent who refused testing	Percent with technical problem/ other result	Percent not interviewed in survey	Total	Number of men
Age						
15-19	76.8	14.5	0.4	8.3	100.0	1,481
20-24	76.5	13.9	0.6	8.9	100.0	1,097
25-29	76.4	13.7	0.1	9.9	100.0	1,024
30-34	76.6	14.6	0.2	8.6	100.0	884
35-39	77.4	13.3	0.3	9.0	100.0	752
40-44	76.1	14.6	0.0	9.3	100.0	536
45-49	82.7	11.1	1.2	5.0	100.0	422
Residence						
Urban	65.0	21.6	0.2	13.3	100.0	1,696
Rural	81.6	11.0	0.4	6.9	100.0	4,500
Region						
Dodoma	78.7	13.7	1.1	6.5	100.0	263
Arusha	70.4	15.6	0.3	13.6	100.0	294
Kilimanjaro	64.6	20.3	0.0	15.1	100.0	271
Tanga	80.6	7.6	0.0	11.8	100.0	211
Morogoro	75.7	15.3	0.0	9.0	100.0	268
Pwani	81.0	7.3	1.1	10.6	100.0	273
Dar es Salaam	51.7	33.6	0.0	14.7	100.0	563
Lindi	77.0	13.1	0.0	9.9	100.0	222
Mtwara	86.0	8.3	0.9	4.8	100.0	229
Ruvuma	82.7	13.4	0.0	3.9	100.0	284
Iringa	74.7	17.7	0.0	7.6	100.0	237
Mbeya	86.6	6.3	0.4	6.7	100.0	284
Singida	91.1	7.8	0.4	0.7	100.0	270
Tabora	82.3	8.1	0.6	9.0	100.0	322
Rukwa	89.6	3.9	0.4	6.1	100.0	279
Kigoma	88.3	5.7	0.0	6.0	100.0	281
Shinyanga	57.7	29.0	0.0	13.3	100.0	376
Kagera	93.6	2.3	0.0	4.1	100.0	266
Mwanza	77.7	11.0	2.1	9.1	100.0	373
Mara	70.2	22.6	0.3	6.9	100.0	319
Manyara	91.6	3.5	0.0	4.8	100.0	311
Education						
No education	74.9	13.9	0.6	10.7	100.0	713
Primary incomplete	81.2	12.0	0.6	6.3	100.0	1,231
Primary complete	77.5	13.5	0.2	8.8	100.0	3,618
Secondary+	69.1	20.3	0.5	10.1	100.0	632
Wealth quintile						
Lowest	82.3	8.5	0.5	8.7	100.0	1,087
Second	82.1	11.3	0.2	6.4	100.0	1,250
Middle	82.3	11.0	0.4	6.3	100.0	1,150
Fourth	77.6	13.5	0.6	8.3	100.0	1,306
Highest	63.6	23.2	0.1	13.0	100.0	1,403
Total	77.0	13.9	0.4	8.7	100.0	6,196

Table 8.1.3—Both sexes

Coverage of HIV testing among eligible women and men age 15-49 by background characteristics, Tanzania 2003-04 (unweighted)

Background characteristic	Percent tested	Percent who refused testing	Percent with technical problem/ other result	Percent not interviewed in survey	Total	Number of women and men
Age						
15-19	78.9	13.9	0.2	7.0	100.0	3,037
20-24	80.1	13.6	0.4	6.0	100.0	2,528
25-29	80.7	12.8	0.2	6.4	100.0	2,343
30-34	80.8	13.2	0.2	5.8	100.0	1,918
35-39	81.8	11.9	0.3	6.1	100.0	1,550
40-44	80.7	12.7	0.2	6.4	100.0	1,104
45-49	83.8	11.4	0.7	4.1	100.0	870
Residence						
Urban	71.5	19.9	0.1	8.5	100.0	3,707
Rural	84.0	10.4	0.3	5.3	100.0	9,643
Region						
Dodoma	81.8	13.0	0.5	4.7	100.0	555
Arusha	76.9	14.6	0.5	8.1	100.0	645
Kilimanjaro	69.9	20.1	0.0	10.0	100.0	631
Tanga	85.4	6.0	0.0	8.6	100.0	514
Morogoro	81.3	11.2	0.0	7.5	100.0	562
Pwani	85.2	6.7	0.7	7.4	100.0	569
Dar es Salaam	60.7	30.2	0.0	9.1	100.0	1,195
Lindi	81.0	11.9	0.2	6.9	100.0	504
Mtwara	89.9	6.0	0.4	3.6	100.0	496
Ruvuma	87.5	9.7	0.2	2.7	100.0	632
Iringa	78.0	15.3	0.4	6.3	100.0	523
Mbeya	89.3	6.5	0.3	3.9	100.0	614
Singida	94.0	5.5	0.2	0.4	100.0	566
Tabora	85.0	7.8	0.3	6.9	100.0	678
Rukwa	93.3	3.1	0.2	3.4	100.0	581
Kigoma	86.7	5.9	0.2	7.3	100.0	647
Shinyanga	57.8	31.8	0.0	10.4	100.0	780
Kagera	95.1	2.3	0.2	2.4	100.0	576
Mwanza	80.1	12.0	1.5	6.5	100.0	758
Mara	70.2	24.0	0.1	5.7	100.0	697
Manyara	92.7	3.7	0.0	3.7	100.0	627
Education						
No education	80.7	11.9	0.3	7.0	100.0	2,342
Primary incomplete	83.3	11.6	0.3	4.8	100.0	2,374
Primary complete	80.7	12.9	0.2	6.2	100.0	7,446
Secondary+	73.4	19.2	0.3	7.2	100.0	1,182
Wealth quintile						
Lowest	84.5	9.2	0.2	6.0	100.0	2,481
Second	83.5	11.0	0.2	5.4	100.0	2,629
Middle	84.1	10.0	0.4	5.5	100.0	2,460
Fourth	81.2	12.7	0.5	5.6	100.0	2,727
Highest	71.2	20.6	0.1	8.2	100.0	3,053
Total	80.5	13.0	0.3	6.2	100.0	13,350

By region, HIV testing coverage ranged from 58 percent in Shinyanga region to 95 percent in Kagera region for both sexes combined. Shinyanga and Dar es Salaam regions had the highest rates of refusal among women and men (over 30 percent). Testing coverage is somewhat lower among women and especially among men with some secondary education than it is among those with no education or primary education. Similarly, those in the highest quintile of the wealth index were the least likely to be tested and had the highest levels of refusal.

In almost every category of background characteristics, women were more likely to be tested than men. It is important to note, however, that the main reason for this is the higher percentage of eligible women who were interviewed in the survey. The rate of refusal for HIV testing is only marginally higher

among men than among women (14 versus 12 percent). As noted in Chapter 1, it is more difficult to find men at home to be interviewed.

8.4 AGE- AND SEX-SPECIFIC HIV PREVALENCE

Results from the 2003-04 THIS indicate that 7 percent of Tanzania Mainland adults are infected with HIV. Table 8.2 shows that HIV prevalence among women is higher (8 percent) than among men (6 percent).

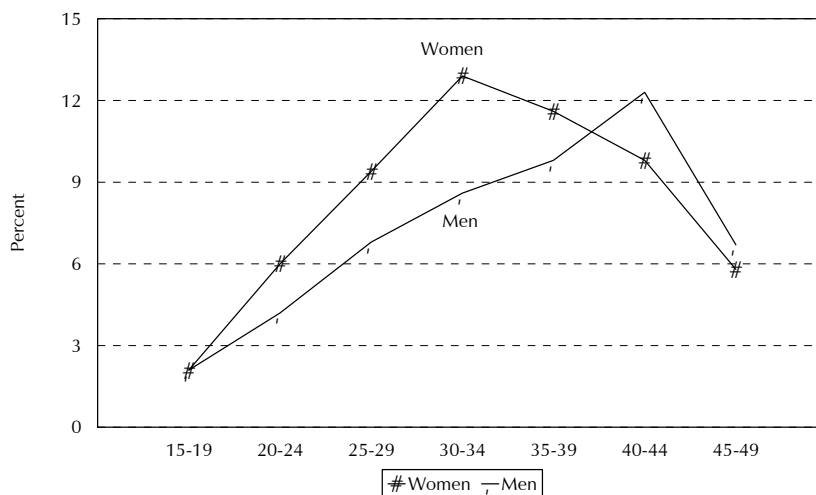
Age- and sex-specific prevalence of HIV shows that women are more highly affected at younger ages as compared with men. Except for ages 15-19, at which prevalence for both men and women was 2 percent, prevalence for women is higher than for men ages 20-39 (Figure 8.1). At ages 40-49, the pattern reverses and prevalence is higher among men than women. Prevalence for both women and men increases with age until it reaches a peak, which for women is attained at age 30-34 (13 percent) and for men at age 40-44 (12 percent).

Appendix Tables A.1 and A.2 indicate that among women and men who were interviewed, the percentage tested for HIV hardly varies at all according to marital status, circumcision status, and sexual behaviour characteristics.

Table 8.2
HIV prevalence by age, Tanzania 2003-04

Age	Women		Men		Total	
	Percentage HIV positive	Number tested	Percentage HIV positive	Number tested	Percentage HIV positive	Number tested
15-19	2.1	1,235	2.1	1,181	2.1	2,416
20-24	6.0	1,153	4.2	903	5.2	2,056
25-29	9.4	1,093	6.8	856	8.3	1,949
30-34	12.9	793	8.6	706	10.9	1,499
35-39	11.6	645	9.8	588	10.7	1,233
40-44	9.8	470	12.3	402	10.9	872
45-49	5.8	363	6.7	359	6.3	722
Total	7.7	5,753	6.3	4,994	7.0	10,747

Figure 8.1 HIV Prevalence by Age Group and Sex



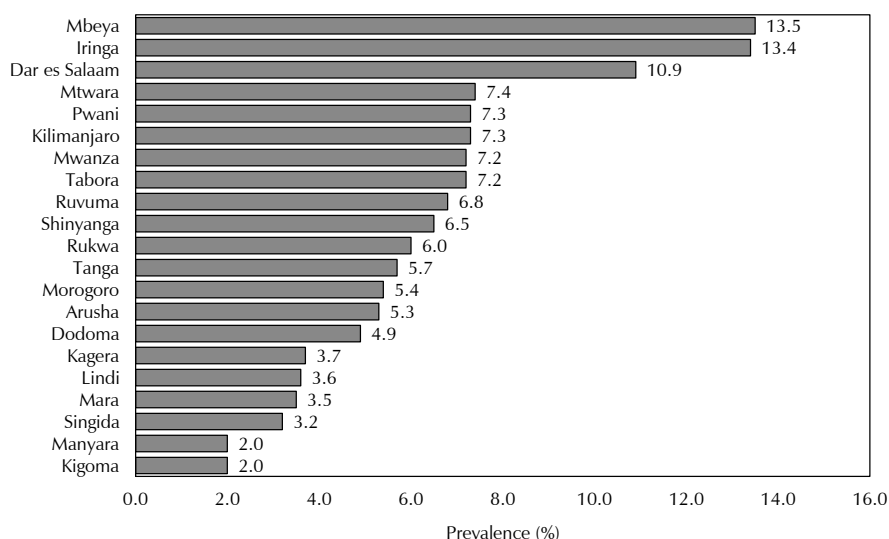
8.5 HIV PREVALENCE BY OTHER BACKGROUND CHARACTERISTICS

As Table 8.3 shows, for both sexes, urban residents have a significantly higher risk of HIV infection (11 percent) than rural residents (5 percent). Prevalence among urban women is 12 percent, compared with 6 percent for rural women; prevalence among urban men is 10 percent, compared with 5 percent for rural men.

Background characteristic	Women 15-49		Men 15-49		Total	
	Percentage HIV positive	Number tested	Percentage HIV positive	Number tested	Percentage HIV positive	Number tested
Residence						
Urban	12.0	1,771	9.6	1,505	10.9	3,276
Rural	5.8	3,982	4.8	3,490	5.3	7,471
Region						
Dodoma	4.2	296	5.7	260	4.9	556
Arusha	5.7	231	4.8	194	5.3	425
Kilimanjaro	7.3	281	7.4	209	7.3	489
Tanga	7.4	282	3.2	194	5.7	476
Morogoro	6.7	283	4.1	257	5.4	540
Pwani	10.5	149	3.9	139	7.3	288
Dar es Salaam	12.2	660	9.4	582	10.9	1,242
Lindi	3.5	141	3.6	116	3.6	257
Mtwara	7.1	179	7.7	150	7.4	329
Ruvuma	6.4	234	7.4	198	6.8	432
Iringa	13.4	278	13.3	238	13.4	516
Mbeya	15.2	372	11.5	311	13.5	683
Singida	4.2	155	2.1	140	3.2	294
Tabora	9.5	233	4.7	210	7.2	444
Rukwa	6.4	155	5.5	146	6.0	301
Kigoma	2.1	239	1.9	181	2.0	420
Shinyanga	7.6	460	5.3	423	6.5	883
Kagera	3.5	293	3.9	254	3.7	546
Mwanza	7.0	468	7.5	464	7.2	932
Mara	4.3	219	2.4	186	3.5	405
Manyara	2.0	144	1.9	144	2.0	288
Education						
No education	5.8	1,266	4.2	538	5.3	1,804
Primary incomplete	5.8	926	4.8	968	5.3	1,894
Primary complete	8.8	3,080	7.0	2,950	7.9	6,030
Secondary+	9.3	482	7.3	538	8.2	1,019
Employment						
Currently working	7.7	4,520	6.7	4,121	7.2	8,641
Not currently working	7.8	1,232	4.4	873	6.4	2,105
Wealth quintile						
Lowest	2.8	1,030	4.1	807	3.4	1,837
Second	4.6	1,016	4.3	950	4.5	1,966
Middle	6.8	1,073	4.3	962	5.6	2,035
Fourth	10.9	1,135	7.7	1,008	9.4	2,142
Highest	11.4	1,499	9.4	1,267	10.5	2,766
Religion						
Muslim	8.6	1,742	6.1	1,477	7.5	3,219
Catholic	8.4	1,847	7.6	1,673	8.0	3,520
Protestant	6.8	1,669	5.6	1,301	6.3	2,971
None	5.1	445	4.1	510	4.6	955
Total	7.7	5,753	6.3	4,994	7.0	10,747

The HIV epidemic shows strong regional variation (Figure 8.2). Overall, the regions with the highest HIV prevalence are Mbeya (14 percent), followed by Iringa (13 percent) and Dar es Salaam (11 percent). Regions with low HIV prevalence are Manyara and Kigoma (2 percent each). Overall, seven regions show HIV prevalence levels below 5 percent. In many regions, women have higher prevalence of HIV infection than men. In Pwani region, the prevalence of HIV infection among women is almost three times that of men, and prevalence among women is twice that of men for Tanga, Singida and Tabora regions.

Figure 8.2 Prevalence of HIV by Region

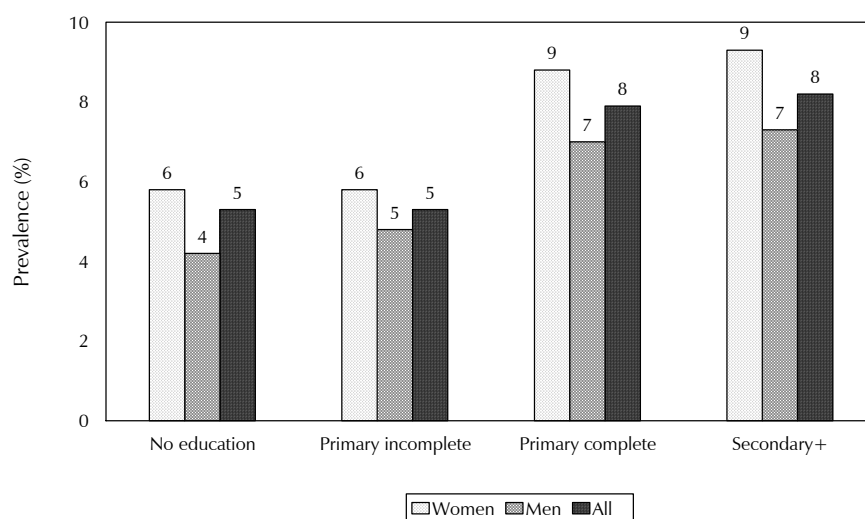


HIV prevalence increases with the level of education. Overall, those who have completed primary school and those with at least some secondary education have a higher HIV infection rate (8 percent each) than those who have either no education or only some primary school (5 percent each) (Figure 8.3). Prevalence of HIV is 9 percent for women with some secondary education and 7 percent for men with some secondary education.

There is little difference in HIV prevalence by employment status, except that men who are not currently working have a lower level of HIV infection (4 percent) than working men (7 percent). The data also show a gradual increase in HIV infection with increasing wealth quintile for both women and men. Overall, the rates rise from 3 percent among those in the lowest quintile to 11 percent among the wealthiest quintile.

With regard to religion, the prevalence of HIV is low among respondents who reported having no religion as compared with Muslims and Christians. Overall, prevalence is 5 percent among those who do not belong to any religion, 8 percent for Muslims, 8 percent for Catholics and 6 percent for Protestants.

Figure 8.3 Prevalence of HIV by Education



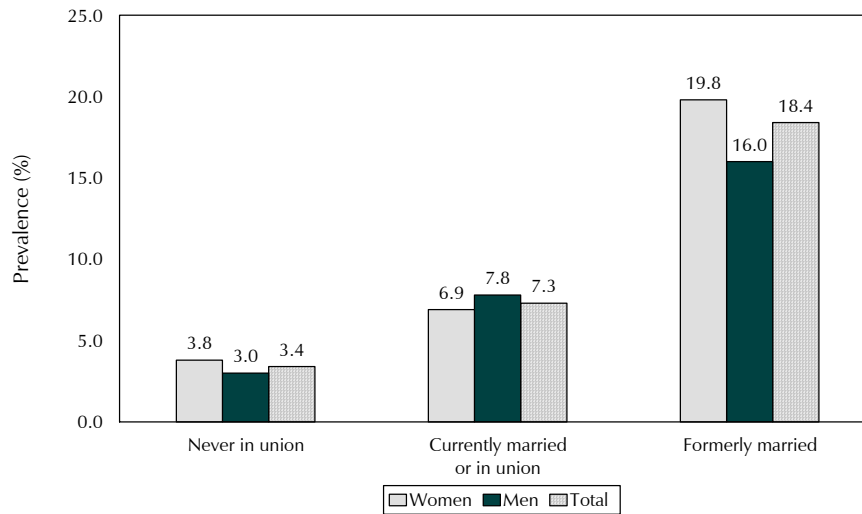
8.6 HIV PREVALENCE BY SOCIO-DEMOGRAPHIC CHARACTERISTICS

HIV prevalence is related to marital status. Table 8.4 shows that, overall, formerly married individuals have a higher HIV prevalence rate (18 percent) than other groups. Those reported to have never been in a union have a relatively low prevalence of HIV (3 percent) (Figure 8.4). Those who are currently in a marital union have intermediate HIV prevalence levels (7 percent among women and 8 percent among men).

Socio-demographic characteristic	Women 15-49		Men 15-49		Total	
	Percentage HIV positive	Number tested	Percentage HIV positive	Number tested	Percentage HIV positive	Number tested
Marital status						
Never in union	3.8	1,390	3.0	2,069	3.4	3,459
Ever had sex	6.6	657	3.5	1,242	4.6	1,899
Never had sex	1.4	734	2.4	826	1.9	1,560
Currently married/in union	6.9	3,682	7.8	2,639	7.3	6,321
Formerly married	19.8	680	15.0	287	18.4	967
Polygyny						
In polygynous union	9.9	371	9.0	263	9.5	634
Not in polygynous union	6.6	3,311	7.7	2,376	7.1	5,686
Not currently in union	9.1	2,071	4.5	2,355	6.6	4,426
Currently pregnant						
Yes	6.8	533	na	na	na	na
No/not sure	7.8	5,219	na	na	na	na
Total	7.7	5,753	6.3	4,994	7.0	10,747

na = Not applicable

Figure 8.4 Prevalence of HIV by Marital Status



Two percent of individuals who reported to have never been in a union and never to have had sex are HIV infected, suggesting either reporting errors in the sexual behaviour questions or non-sexual transmission of HIV infection, such as through blood transfusion, unsterile injections, or through other blood products.

Women in polygynous unions are more likely to be HIV positive (10 percent) than married women who are not in polygynous unions (7 percent); women who are not currently in a union are almost as likely to be HIV positive (9 percent) as polygynously married women. Men in polygynous unions have the highest rates of infection; however, those who are not currently in a union have the lowest rates.

Women who are not pregnant have a slightly higher prevalence of infection (8 percent) than those who are pregnant (7 percent). The HIV prevalence among women who are currently pregnant provides a useful benchmark for comparison with prevalence among pregnant women who are tested as part of the antenatal care sentinel surveillance system.

8.7 HIV PREVALENCE AND CIRCUMCISION

As mentioned in Chapter 3, female circumcision and male circumcision are widely viewed as having opposite risk factors for HIV transmission. Among women, circumcision increases the risk of disease transmission insofar as unsterile instruments are used. Among men, lack of circumcision is considered to be a risk factor for HIV infection, in part because of physiological differences that increase the susceptibility to HIV infection among uncircumcised men (Agot et al., 2004; Auvert et al., 2001). The THIS obtained information on circumcision status and these results can be used to examine the relationship with HIV prevalence (Table 8.5).

Table 8.5

HIV prevalence by circumcision status, Tanzania 2003-04

Background characteristic	Women 15-49				Men 15-49			
	Circumcised		Not circumcised		Circumcised		Not circumcised	
	Percent HIV positive	Number of circumcised women	Percent HIV positive	Number of uncircumcised women	Percent HIV positive	Number of circumcised men	Percent HIV positive	Number of uncircumcised men
Age								
15-19	0.5	140	2.3	1,093	2.8	751	0.9	430
20-24	4.2	189	6.4	964	5.2	633	2.0	271
25-29	3.9	177	10.5	915	7.3	624	5.7	232
30-34	8.0	162	14.2	631	7.4	498	11.3	208
35-39	6.0	155	13.4	490	9.1	427	11.8	159
40-44	3.3	102	11.6	367	11.5	280	14.1	121
45-49	3.0	94	6.7	269	7.9	250	4.2	109
Residence								
Urban	12.0	189	12.0	1,582	9.5	1,355	9.7	149
Rural	2.6	830	6.6	3,148	4.6	2,107	5.2	1,380
Education								
No education	2.0	294	7.0	969	5.0	290	3.1	247
Primary incomplete	1.7	143	6.6	782	4.9	600	4.6	368
Primary complete	6.0	546	9.4	2,533	7.1	2,092	6.5	858
Secondary+	(8.3)	36	9.3	446	7.0	480	10.5	57
Wealth quintile								
Lowest	1.3	294	3.4	732	2.5	467	6.4	340
Second	2.5	169	5.1	847	4.7	528	3.8	422
Middle	3.5	179	7.4	893	4.4	561	4.1	401
Fourth	7.0	210	11.8	925	8.0	746	6.9	260
Highest	9.0	167	11.7	1,332	9.1	1,161	13.1	106
Religion								
Muslim	5.3	287	9.3	1,454	6.3	1,430	(0.0)	47
Catholic	4.0	272	9.1	1,574	8.1	992	7.0	680
Protestant	4.0	409	7.7	1,261	5.6	892	5.7	409
None	(0.0)	46	5.7	397	4.4	129	4.1	380
Total	4.3	1,019	8.4	4,729	6.5	3,463	5.6	1,529

Note: Numbers in parentheses are based on 25-49 cases.

Unexpectedly, the results show that women who are circumcised are slightly less likely to be HIV positive than those who are not circumcised (4 versus 8 percent). This is contrary to the hypothesis that genital cutting among women can act as a means of transmission of the virus. Among men, the difference in HIV prevalence between circumcised and uncircumcised men (7 versus 6 percent) is not significant; however, it is surprising to find no apparent protective effect of male circumcision. It is important to note that more sophisticated analysis is needed to explore these relationships; for example, most of the circumcised women come from regions with low HIV prevalence, which may be due to factors other than circumcision practices.

8.8 HIV PREVALENCE BY SEXUAL RISK BEHAVIOURS

Table 8.6 examines the prevalence of HIV infection according to several sexual behaviours among respondents who have ever had sexual intercourse. In reviewing these results it is important to remember that responses about sexual risk behaviours may be subject to reporting bias. Also sexual behaviour in the past 12 months may not adequately reflect lifetime sexual risk.

There is no clear pattern of HIV prevalence with regard to age at first sexual intercourse. Prevalence of HIV among women is higher for those who delayed first sexual intercourse until age 18-19 years, while for men, it was lower in the same category (Figure 8.5).

Characteristic	Women 15-49 who ever had sex		Men 15-49 who ever had sex		Total 15-49 who ever had sex	
	Percent HIV positive	Number of women	Percent HIV positive	Number of men	Percent HIV positive	Number
Age at first sex						
≤15	8.4	1,556	8.3	936	8.3	2,493
16-17	8.0	1,481	8.0	1,018	8.0	2,499
18-19	9.8	1,224	5.9	1,076	8.0	2,300
20+	8.4	754	6.2	1,130	7.1	1,884
Sex with non-marital, non-cohabiting partner in past 12 months						
Had higher risk sex	11.3	1,045	6.5	1,756	8.3	2,801
Had sex, not higher risk	6.8	3,432	7.6	1,954	7.1	5,386
No sex in past 12 months	15.2	542	6.4	458	11.2	1,000
Number of partners in past 12 months						
0	15.2	542	6.5	457	11.2	999
1	7.6	4,191	7.2	2,668	7.5	6,859
2+	10.5	286	6.8	1,036	7.6	1,322
Number of higher risk sexual partner in past 12 months						
0	7.9	3,974	7.4	2,409	7.7	6,383
1	10.5	919	6.8	1,209	8.4	2,128
2+	17.4	127	5.7	543	7.9	670
Had sex with prostitute in past 12 months						
Yes	na	na	7.3	75	na	na
No	na	na	7.0	4,093	na	na
Condom use at last sex in past 12 months						
Used condom last sex	13.0	504	8.2	773	10.1	1,277
No condom at last sex	7.1	3,969	6.8	2,932	7.0	6,900
No sex past 12 months	15.2	542	6.4	458	11.2	1,000
Total	8.6	5,019	7.0	4,168	7.9	9,187

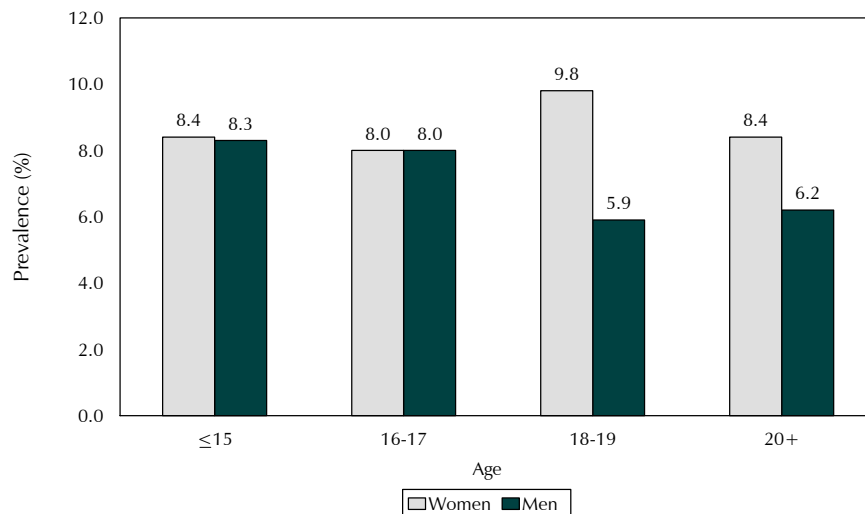
na = Not applicable

Women who said that they had higher risk sex (i.e., sex with a non-marital, non-cohabiting partner) in the 12 months preceding the survey have a higher prevalence of HIV infection (11 percent) than those who said that they had sex but not higher risk sex (7 percent). Interestingly, women who had ever had sex but who said that they had not had sex during the 12 months preceding the survey had the highest prevalence of HIV infection (15 percent). For men, there is not much difference by higher risk sex categories. Among men who reported to have had higher risk sex in the past 12 months, prevalence of HIV infection is 7 percent and for those who had sex but not higher risk sex, the prevalence of HIV infection is 8 percent, while it is 6 percent for those did not have sex in the past 12 months.

The number of higher risk partners in the past 12 months shows some association with HIV prevalence among women but does not show any defined pattern for men. Sexually experienced women who report having no higher risk sex partners in the past 12 months have a prevalence of HIV infection of 8 percent, while prevalence is 11 and 17 percent for those who had one partner or two or more higher risk sex partners in the last 12 months, respectively. For men, prevalence of HIV infection seems to decrease as the number of higher risk sexual partners increases in the past 12 months. Sex with prostitutes is considered to be higher risk sex. Results from Table 8.6 show no difference in HIV infection levels between men who had sex with prostitutes in the 12 months preceding the survey and those who did not.

Condoms—when used consistently and correctly—are a very effective way of preventing HIV infection, sexually transmitted infections, and unwanted pregnancy. Results from the THIS show that HIV prevalence tends to be higher among those who used a condom at last sex, especially among women. It is difficult to sort out the direction of the relationship between condom use and HIV infection; condoms can be used in order to protect HIV-negative users from becoming infected but they can also be used by HIV-positive individuals to protect their partners. Low prevalence of HIV infection among those reported to have not used a condom at last sex may be associated with the type of relationship; a majority of those who did not use a condom at last sex could be having sex with a husband or wife.

Figure 8.5 Prevalence of HIV by Age at First Sex



8.9 HIV PREVALENCE BY OTHER CHARACTERISTICS RELATED TO HIV RISK

Table 8.7 presents HIV prevalence by other characteristics related to HIV risk behaviours among men and women who have ever had sex. As expected, women and men with a recent history of a sexually transmitted infection (STI) or STI symptoms in the 12 months preceding the survey have higher rates of HIV infection than those with none (12 versus 8 percent). For women, the gap is even larger; those with a history of STIs or STI symptoms have a high rate of HIV infection (15 percent) compared with those with no history of STIs or STI symptoms (8 percent).

Use of alcohol at the time of last sex is associated with a higher prevalence of HIV, especially when the alcohol use is by the female partner. Prevalence of HIV is higher among respondents who report that one or both partners used alcohol at last sex. Prevalence of HIV among women who said that they alone used alcohol at last sex is almost twice that for women who said that neither they nor their partners used alcohol at last sex. Similarly, HIV prevalence among men who said that only their partners used alcohol is almost three times that of men who said that neither used alcohol (20 versus 7 percent).

Table 8.7
HIV prevalence by other characteristics related to risk, Tanzania 2003-04

Characteristic	Women 15-49 who ever had sex		Men 15-49 who ever had sex		Total 15-49 who ever had sex	
	Percent HIV positive	Number of women	Percent HIV positive	Number of men	Percent HIV positive	Number
Had STI in past 12 months						
Had STI or STI symptoms	15.1	283	9.4	295	12.2	578
No STI, no symptoms	8.2	4,713	6.9	3,857	7.6	8,570
Use of alcohol at last sex						
Respondent only	13.7	48	6.9	259	8.0	307
Partner only	10.2	502	19.9	58	11.2	561
Respondent and partner	11.0	176	13.8	121	12.1	296
Neither	7.3	3,750	6.6	3,272	7.0	7,022
No sex past 12 months	15.2	542	6.5	457	11.2	999
Prior HIV testing status						
Ever tested	12.3	837	9.2	753	10.8	1,590
Never tested	7.9	4,182	6.6	3,415	7.3	7,597
Total	8.6	5,019	7.0	4,168	7.9	9,187

STI = Sexually transmitted infection

Both women and men who have been tested for HIV in the past are more likely to be HIV infected than those who have never been tested. Among those who have ever had sex, the prevalence of HIV infection among men and women who have ever had an HIV test is 11 percent, compared with 7 percent among those who have never been tested for HIV. Among women who have ever had sex, the level of HIV infection is 12 percent among those who have ever been tested for HIV, compared with 8 percent among those who have never been tested. Among men, 9 percent of those previously tested are HIV positive, compared with 7 percent of those who have never been tested.

Table 8.8 provides further information about the relationship between prior HIV testing and the actual HIV status of respondents. The results show that many individuals who are HIV positive have not been tested and do not know their status. Overall, 77 percent of infected respondents (76 percent of infected women and 78 percent of infected men) do not know their HIV status, either because they never got tested or because they were tested and did not receive their HIV test results.

Table 8.8
HIV prevalence by prior HIV testing status, Tanzania 2003-04

Prior HIV testing status	Women 15-49		Men 15-49		Total	
	HIV positive	HIV negative	HIV positive	HIV negative	HIV positive	HIV negative
Ever tested and knows results of last test	21.5	12.4	20.2	13.3	21.0	12.8
Ever tested, does not know results	2.1	2.2	2.0	2.1	2.1	2.1
Never tested	76.4	85.5	77.9	84.7	77.0	85.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	442	5,306	313	4,681	755	9,988

8.10 PREVALENCE OF HIV AMONG YOUTH

Generally, cases of HIV infection among youths aged 15-24 represent more recent infections and serve as an important indicator for detecting trends in both prevalence and incidence. Table 8.9 shows HIV prevalence levels among youth according to several indicators of sexual behaviour. Overall, prevalence of HIV for the 15-24 age group is 4 percent. Prevalence among women aged 15-24 years is 4 percent, while among men, it is 3 percent. Urban youths—both female and male—are more likely to be infected than those in rural areas (6 versus 3 percent).

Young women who are widowed, divorced or separated ('formerly married') are much more likely to be HIV positive (18 percent) than currently married women (4 percent) or those who have never been married (2 percent). Differences among men are less pronounced, and there are too few formerly married men to make any firm conclusions. About 2 percent of youths who reported never having sex are HIV positive. This may be associated with other means of HIV transmission, such as transfer of blood products or unsafe injections.

Differences in HIV prevalence for other characteristics are minimal.

Table 8.9

HIV prevalence among youth age 15-24, Tanzania 2003-04

Characteristic	Women 15-24		Men 15-24		Total 15-24	
	Percent HIV positive	Number of women	Percent HIV positive	Number of men	Percent HIV positive	Number
Age						
15-17	0.9	741	1.6	684	1.2	1,425
18-19	3.8	494	2.8	497	3.3	991
20-22	5.5	721	4.2	535	4.9	1,256
23-24	6.9	432	4.3	368	5.7	799
Residence						
Urban	5.5	818	5.6	668	5.5	1,486
Rural	3.2	1,570	1.8	1,416	2.5	2,986
Marital status						
Never in union	2.2	1,222	2.6	1,754	2.4	2,976
Ever had sex	3.5	511	2.9	970	3.1	1,481
Never had sex	1.2	711	2.3	784	1.8	1,495
Currently married/in union	4.1	1,022	5.1	283	4.4	1,305
Formerly married	18.2	144	(4.9)	47	14.9	191
Had sex with non-marital, non-cohabiting partner in past 12 months¹						
Had higher risk sex	6.5	557	3.1	840	4.4	1,396
Had sex, not higher risk	4.2	962	5.2	183	4.4	1,145
No sex in past 12 months	6.1	158	3.4	277	4.4	436
Number of partners in past 12 months¹						
0	6.1	158	3.4	277	4.4	436
1	4.8	1,399	3.4	677	4.4	2,076
2+	8.0	120	3.5	342	4.7	461
Number of higher risk sexual partners in past 12 months¹						
0	4.5	1,120	4.1	460	4.4	1,580
1	5.8	499	2.8	567	4.2	1,066
2+	13.2	58	3.6	269	5.3	327
Condom use at last sex in past 12 months¹						
Used condom last sex	8.1	284	4.0	377	5.8	661
No condom at last sex	4.4	1,234	3.1	642	3.9	1,876
No sex in past 12 months	6.1	158	3.4	277	4.4	436
Condom use at first sex¹						
Used at first sex	4.0	243	5.1	257	4.6	501
Did not use at first sex	5.1	1,230	2.9	747	4.3	1,977
No sex in past 12 months	6.1	158	3.4	277	4.4	436
Total	4.0	2,388	3.0	2,084	3.5	4,472

Note: Totals may not add up because of omission of some cases with missing data. Numbers in parentheses are based on 25-49 cases.

¹ Refers to those who ever had sex

8.11 HIV PREVALENCE AMONG COHABITING COUPLES

As part of the 2003-04 THIS, over 2,000 cohabiting couples were tested for HIV. Results show that for 90 percent of cohabiting couples, both partners are HIV negative, while for 3 percent, both partners are HIV positive (Table 8.10). Data also show that 8 percent of cohabiting couples are discordant, that is one partner is infected and the other is not. In 4 percent of discordant cohabiting couples, the male partner is infected and the woman is not; in another 4 percent of couples, the female partner is infected and the man is not. Discordance is more common among older couples and among urban couples than among rural couples.

The fact that there are three times as many cohabiting couples who are discordant for HIV as there are cohabiting couples who are both infected represents an unmet HIV prevention need for the country. This is because the vast majority of these cohabiting couples do not mutually know their HIV status and therefore are not empowered to take action to prevent further spread of the disease.

Table 8.10

HIV prevalence among cohabiting couples, Tanzania 2003-04

Background characteristic	Both partners HIV positive	Man positive, woman negative	Woman positive, man negative	Both HIV negative	Total	Number of couples
Woman's age						
15-19	0.0	4.1	2.9	93.0	100.0	172
20-29	1.7	4.5	3.1	90.7	100.0	1,054
30-39	4.3	3.8	4.4	87.5	100.0	647
40-49	4.2	6.1	3.0	86.2	100.0	179
Man's age						
15-19	*	*	*	*	100.0	13
20-29	1.0	3.8	1.9	93.3	100.0	624
30-39	3.5	4.5	4.0	88.0	100.0	860
40-54	3.1	5.0	4.2	87.6	100.0	555
Type of union						
Monogamous	2.5	4.3	3.2	89.9	100.0	1,933
Polygynous	3.9	4.9	7.6	83.7	100.0	118
Residence						
Urban	4.4	6.2	6.0	83.4	100.0	417
Rural	2.1	3.9	2.8	91.1	100.0	1,634
Woman's education						
No education	3.0	4.5	2.0	90.3	100.0	475
Primary incomplete	1.0	3.3	3.2	92.5	100.0	306
Primary complete	2.7	4.7	4.2	88.4	100.0	1,191
Secondary+	5.1	3.0	2.5	89.4	100.0	80
Man's education						
No education	2.4	3.3	2.0	92.2	100.0	245
Primary incomplete	2.8	4.5	3.4	89.3	100.0	301
Primary complete	1.9	4.7	3.5	89.8	100.0	1,354
Secondary+	8.3	2.8	5.6	83.3	100.0	152
Wealth quintile						
Lowest	0.7	2.9	1.6	94.8	100.0	426
Second	1.2	3.7	2.8	92.4	100.0	472
Middle	2.3	2.9	4.6	90.2	100.0	419
Fourth	4.2	5.9	3.8	85.8	100.0	373
Highest	5.3	7.2	4.9	82.6	100.0	363
Total	2.6	4.4	3.5	89.5	100.0	2,052

Note: Data refer only to those couples in which both partners were tested. An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed.