HIV PREVALENCE 14

Much of the current information on national HIV prevalence in Zimbabwe derives from surveillance of HIV in special populations, such as women attending antenatal clinics, individuals enrolled in research studies and youth. However, these surveillance data results do not provide an estimate of the HIV prevalence among the general population. It was therefore decided to test a representative sample of women age 15-49 years and men 15-54 years in the 2005-06 ZDHS. The methodology used in conducting HIV testing as part of the ZDHS survey is described in detail in the first chapter of the report. This chapter addresses the results of the testing and provides information on the coverage rates of HIV testing among eligible survey respondents. The chapter then discusses levels and differentials in HIV prevalence among those who were tested.

14.1 COVERAGE RATES FOR THE HIV TESTING

Table 14.1 shows the distribution of women age 15-49 years and men 15-54 years eligible for HIV testing by the outcome of the testing. Overall, a test result was obtained for 70 percent of all ZDHS respondents who were eligible for testing. Coverage rates were higher for women than for men (76 percent and 63 percent, respectively). Among all respondents who were eligible for testing, nonresponse was nearly evenly divided between those who refused consent (15 percent) and those who were absent during the ZDHS survey visits (14 percent). Among women, refusals were a somewhat larger component of the nonresponse than absence, while the opposite pattern was observed among men.

Coverage of HIV testing was higher in rural areas (78 percent) than in urban areas (58 percent). Considering provincial patterns, coverage rates varied from 55 percent among all eligible respondents in Harare to 87 percent in Midlands. Respondents from Harare (46 percent for men and 62 percent for women) had the lowest coverage rate, while women from Midlands had the highest rate (52 percent and 91 percent).

Table 14.2 shows generally uniform coverage rates for HIV testing across all age groups among women. Age differentials in testing coverage were greater among men, with men age 15-19 (71 percent) being markedly more likely than older men to have a test result. Among older men, the highest coverage was in the 40-44 year age group (64 percent) and the lowest was in the 35-39 year age group (58 percent).

Among both women and men, coverage levels were lowest among those who had no education and those with higher than a secondary education. Both women and men in the two highest wealth quintiles had lower coverage rates than those in the three lowest wealth quintiles.

Additional tables describing the relationship between participation in the HIV testing and characteristics related to HIV risk are presented in Appendix A (see Tables A.3-A.6). Overall, the results in those tables do not show a systematic relationship between participation in the test and variables associated with higher risk of HIV infection.

Table 14.1 Coverage of HIV testing by residence and province

Percent distribution of women age 15-49 and men age 15-54 eligible for HIV testing by testing status, according to residence and province (unweighted), Zimbabwe 2005-2006

Background characteristic	DBS tested[1]	Refused to provide blood	Other[2]	Respondent not interviewed	Total	Number of respondents
			WOMEN			
Residence						
Urban	65.1	18.8	1.2	14.9	100.0	3,763
Rural	82.6	9.8	1.0	6.6	100.0	6,107
Province						
Manicaland	77.8	14.4	1.5	6.2	100.0	1,108
Mashonaland Central	72.2	20.2	0.6	6.9	100.0	807
Mashonaland East	80.7	6.8	1.9	10.5	100.0	778
Mashonaland West	74.4	13.6	0.2	11.7	100.0	880
Matabeleland North	80.5	12.7	1.7	5.1	100.0	708
Matabeleland South	76.1	13.3	0.9	9.7	100.0	698
Midlands	90.6	4.5	0.1	4.8	100.0	1,185
Masvingo	83.9	9.0	0.9	6.3	100.0	1,039
Harare	62.2	19.0	1.7	17.1	100.0	1,683
Bulawayo	68.3	16.6	1.0	14.1	100.0	984
Total	75.9	13.2	1.1	9.8	100.0	9,870
			MEN			
Residence						
Urban	49.4	21.7	0.8	28.1	100.0	3,421
Rural	72.4	14.6	1.3	11.7	100.0	5,340
Province						
Manicaland	69.2	15.1	0.8	15.0	100.0	929
Mashonaland Central	58.8	27.6	3.2	10.3	100.0	804
Mashonaland East	71.0	11.1	1.4	16.5	100.0	692
Mashonaland West	67.7	11.9	0.8	19.5	100.0	830
Matabeleland North	67.8	20.5	1.5	10.2	100.0	609
Matabeleland South	56.3	25.2	0.4	18.2	100.0	567
Midlands	82.0	6.6	0.2	11.2	100.0	1,077
Masvingo	71.1	18.9	1.2	8.6	100.0	852
Harare	46.4	19.5	0.8	33.3	100.0	1,547
Bulawayo	52.3	21.5	1.1	25.1	100.0	854
Total	63.4	17.4	1.1	18.1	100.0	8,761
			TOTAL			
Residence						
Urban	57.6	20.2	1.0	21.2	100.0	7,184
Rural	77.8	12.1	1.1	9.0	100.0	11,447
Province						
Manicaland	73.9	14.7	1.2	10.2	100.0	2,037
Mashonaland Central	65.5	23.9	1.9	8.6	100.0	1,611
Mashonaland East	76.1	8.8	1.7	13.3	100.0	1,470
Mashonaland West	71.2	12.8	0.5	15.5	100.0	1,710
Matabeleland North	74.6	16.3	1.6	7.4	100.0	1,317
Matabeleland South	67.2	18.7	0.6	13.5	100.0	1,265
Midlands	86.5	5.5	0.1	7.9	100.0	2,262
Masvingo	78.2	13.4	1.0	7.3	100.0	1,891
Harare	54.6	19.2	1.2	24.9	100.0	3,230
Bulawayo	60.9	18.9	1.0	19.2	100.0	1,838
Total	70.0	15.2	1.1	13.7	100.0	18,631

[1] Includes all dried blood spot (DBS) samples tested at the lab and for which there is a result, i.e., positive, negative, or indeterminate. Indeterminate means that the sample went through the entire algorithm, but the final result was inconclusive.

[2] Includes: 1) specimens not collected due to technical problem in the field), 2) lost specimens, 3) specimens with bar code identification numbers that could not be matched to respondents, and 4) specimens not tested in the laboratory for technical reasons.

Table 14.2 Coverage of HIV testing by selected background characteristics

Percent distribution of women age 15-49 and men age 15-54 eligible for HIV testing by testing status, according to selected background characteristics (unweighted), Zimbabwe 2005-2006

Background characteristic	DBS tested[1]	Refused to provide blood	Other[2]	Respondent not interviewed	Total	Number of respondents
			WOMEN			
Age						
15-19	76.5	13.1	1.0	9.3	100.0	2,350
20-24	74.8	14.5	0.8	9.9	100.0	2,157
25-29	76.2	12.3	1.2	10.3	100.0	1,605
30-34	76.3	13.6	1.1	9.0	100.0	1,331
35-39	75.4	12.4	0.9	11.1	100.0	948
40-44	76.2	14.4	1.0	8.4	100.0	785
45-49	76.4	10.8	2.0	10.8	100.0	694
Education						
No education	74.7	11.0	1.6	12.6	100.0	435
Primary	79.2	12.3	1.0	7.5	100.0	3,212
Secondary	75.2	13.5	1.0	10.2	100.0	5,899
More than secondary	60.1	20.3	1.6	18.0	100.0	316
Wealth quintile						
Lowest	82.2	10.1	1.0	6.8	100.0	1,741
Second	83.8	9.4	1.2	5.6	100.0	1,710
Middle	82.4	9.3	0.9	7.4	100.0	1,747
Fourth	73.7	14.9	0.8	10.5	100.0	2,129
Highest	63.7	19.3	1.4	15.6	100.0	2,543
Total	75.9	13.2	1.1	9.8	100.0	9,870
			MEN			
Age						
15-19	71.4	14.8	1.0	12.7	100.0	2,266
20-24	62.8	18.1	1.1	18.0	100.0	1,751
25-29	59.5	19.4	0.6	20.5	100.0	1,300
30-34	58.7	19.0	0.9	21.5	100.0	1,118
35-39	57.8	18.7	1.3	22.2	100.0	829
40-44	63.5	17.6	1.1	17.8	100.0	550
45-49	62.5	16.7	1.5	19.3	100.0	528
50-54	59.4	16.0	2.4	22.2	100.0	419
Education						
No education	45.0	14.1	5.8	35.1	100.0	191
Primary	69.7	15.5	1.2	13.6	100.0	2,446
Secondary	62.8	17.5	0.9	18.8	100.0	5,591
More than secondary	48.1	26.6	0.8	24.5	100.0	526
Wealth quintile						
Lowest	72.7	13.7	1.3	12.2	100.0	1,415
Second	73.4	13.6	1.7	11.3	100.0	1,532
Middle	71.7	14.8	0.7	12.8	100.0	1,505
Fourth	59.6	19.9	1.0	19.5	100.0	2,229
Highest	47.8	21.9	0.8	29.5	100.0	2,080
Total	63.4	17.4	1.1	18.1	100.0	8,761

[1] Includes all dried blood spot (DBS) samples tested at the lab and for which there is a result, i.e., positive, negative, or indeterminate. Indeterminate means that the sample went through the entire algorithm, but the final result was inconclusive.

[2] Includes: 1) specimens not collected due to technical problem in the field), 2) lost specimens, 3) specimens with bar code identification numbers that could not be matched to respondents, and 4) specimens not tested in the laboratory for technical reasons.

14.2 HIV PREVALENCE

14.2.1 HIV Prevalence by Age and Sex

The adult HIV prevalence observed in the 2005-06 ZDHS is 18 percent (Table 14.3). Among women age 15-49, the HIV rate was 21 percent, compared with 15 percent among men age 15-49. Using data from antenatal clinic surveillance and mathematical modelling, the estimated adult prevalence of HIV was 20.1 percent in 2005.

Table 14.3 HIV prevalence by age

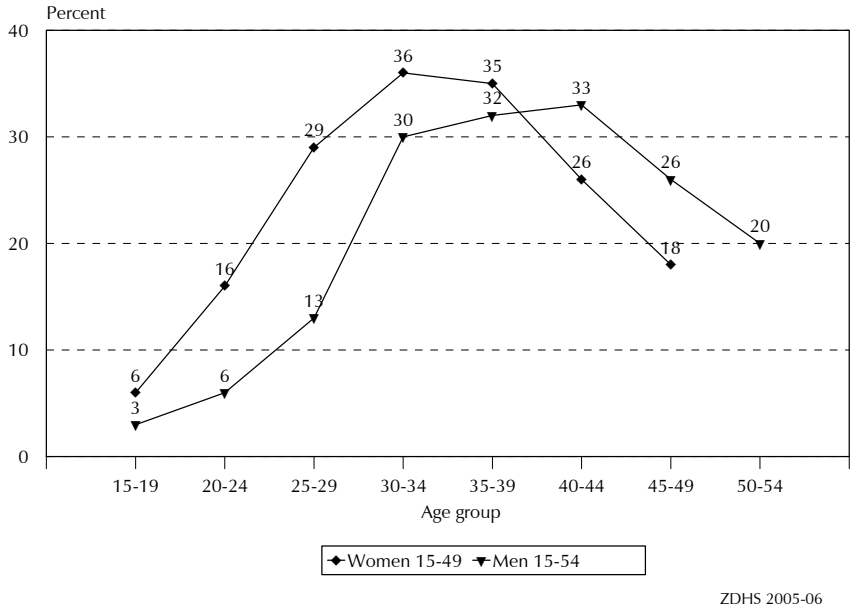
Percentage HIV positive among women age 15-49 and men age 15-54 who were tested, by age, Zimbabwe 2005-2006

	Women		Men		Total	
Age	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
15-19	6.2	1,682	3.1	1,692	4.6	3,374
20-24	16.3	1,518	5.8	1,247	11.6	2,766
25-29	28.8	1,149	13.1	907	21.8	2,056
30-34	35.5	956	29.5	716	32.9	1,672
35-39	34.5	656	32.1	546	33.4	1,201
40-44	25.7	529	32.9	404	28.9	934
45-49	18.0	458	26.0	335	21.4	793
50-54	na	na	20.0	253	20.0	253
Total age 15-49	21.1	6,947	14.5	5,848	18.1	12,796
Total age 15-54	na	na	14.8	6,102	na	na

na = Not applicable

Figure 14.1 describes the age pattern of HIV prevalence for women and men. Among women, HIV prevalence peaks at 36 percent in the 30-34 year age group, which is six times the rate among women 15-19 and around twice the rate observed among women age 45-49. HIV prevalence increases from 3 percent among men in the 15-19 year age group to 33 percent in the 40-44 year age range, and then decreases to 20 percent among men age 50-54.

Figure 14.1 HIV Prevalence by Age and Sex



14.2.2 HIV Prevalence by Other Socioeconomic Characteristics

Table 14.4 shows the variation in HIV prevalence with a number of socioeconomic characteristics. HIV prevalence is similar in urban and rural areas (19 percent and 18 percent, respectively). In general, the differentials by province also are not extremely large. Matabeleland South had the highest prevalence rate (21 percent), followed closely by Manicaland (20 percent). Masvingo (15 percent) and Midlands (16 percent) had the lowest prevalence.

Among men, HIV prevalence declined as the educational level increased, from 23 percent among those with no education to 13 percent among those with more than a secondary education. Among women, HIV prevalence does not vary in a consistent fashion, with the lowest rate found among those with more than a secondary education (16 percent) and the highest among those with a primary education (22 percent).

HIV prevalence is higher among individuals who are employed (20 percent) than among those not employed (16 percent). The differential is particularly large among men, with men who are employed more than twice as likely to be HIV positive as unemployed men (17 percent and 8 percent, respectively).

Among women, HIV prevalence increases from 18 percent in the lowest wealth quintile to a peak of 27 percent in the fourth quintile before falling back to 17 percent. Among men, the variation in HIV prevalence by the wealth quintile does not exhibit a clear pattern, with the lowest rate found in the middle quintile (12 percent) and the highest observed in the fourth quintile (17 percent).

Women and men who say they do not practice any religion (21 percent) have the highest HIV prevalence, while the small number of Muslims have the lowest rate (15 percent).

Table 14.4 HIV prevalence by socioeconomic characteristics

Percentage HIV positive among interviewed women and men age 15-49 who were tested, by background characteristics, Zimbabwe 2005-2006

Background characteristic	Women		Men		Total	
	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Residence						
Urban	21.6	2,670	15.7	2,319	18.9	4,990
Rural	20.8	4,277	13.8	3,529	17.6	7,806
Province						
Manicaland	22.3	823	16.6	693	19.7	1,516
Mashonaland Central	22.9	665	13.8	617	18.5	1,282
Mashonaland East	21.3	560	14.4	488	18.0	1,048
Mashonaland West	22.5	666	15.4	604	19.1	1,270
Matabeleland North	22.8	421	14.4	349	19.0	770
Matabeleland South	24.6	345	15.6	259	20.8	604
Midlands	20.1	935	11.5	809	16.1	1,744
Masvingo	17.3	898	12.1	654	15.1	1,552
Harare	21.1	1,169	17.3	1,052	19.3	2,221
Bulawayo	19.6	466	12.8	324	16.8	789
Education						
No education	20.0	301	23.4	61	20.6	362
Primary	22.4	2,263	15.0	1,550	19.4	3,813
Secondary	20.7	4,194	14.3	3,936	17.6	8,131
More than secondary	15.8	189	12.8	302	14.0	490
Employment (past 12 months)						
Not employed	18.9	3,949	8.3	1,785	15.6	5,733
Employed	24.0	2,994	17.3	4,048	20.2	7,042
Missing	*	4	*	16	*	21
Wealth quintile						
Lowest	17.7	1,223	13.4	898	15.9	2,121
Second	21.1	1,183	15.1	997	18.4	2,180
Middle	22.7	1,240	12.2	1,041	17.9	2,281
Fourth	26.8	1,579	17.1	1,618	21.9	3,197
Highest	17.1	1,722	13.5	1,296	15.6	3,018
Religion						
Roman Catholic	20.1	725	18.1	599	19.2	1,324
Protestant	19.5	1,767	10.6	1,001	16.3	2,769
Pentecostal	20.6	1,228	10.4	762	16.7	1,991
Apostolic Sect	21.3	2,086	12.8	1,305	18.0	3,391
Other Christian	22.9	389	12.2	213	19.1	602
Muslim	(20.1)	44	(11.9)	65	15.2	109
Traditional	13.9	150	21.2	441	19.3	591
Other	*	13	*	9	*	22
None	28.5	546	18.0	1,452	20.9	1,998
Total	21.1	6,947	14.5	5,848	18.1	12,796

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates a figure is based on fewer than 25 unweighted cases and has been suppressed.

14.2.3 HIV Prevalence by Other Sociodemographic and Health Characteristics

Table 14.5 shows that marital status and HIV prevalence are related, with the highest infection rates among widows (58 percent) and widowers (67 percent). More than one-third of women and of men who were divorced or separated were HIV positive, compared with around one-fifth of those who were currently married or living with a partner. Among never-married women who reported that they were ever sexually active, 23 percent were HIV positive compared with 6 percent among sexually active, never-married men. A sizeable proportion (3 percent) of respondents who said they had never had sex were HIV positive, indicating that some women and men failed to report sexual activity or that there is some degree of nonsexual transmission of HIV, e.g., through blood transfusions or unsterile injections.

Table 14.5 HIV prevalence by demographic characteristics

Percentage HIV positive among women and men age 15-49 who were tested, by demographic characteristics, Zimbabwe 2005-2006

Demographic characteristic	Women		Men		Total	
	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Marital status						
Never married	8.4	1,846	4.3	2,976	5.9	4,822
Ever had sex	23.2	431	6.2	1,399	10.2	1,830
Never had sex	3.9	1,415	2.7	1,577	3.2	2,992
Married/living together	20.2	4,027	23.1	2,593	21.4	6,620
Divorced or separated	35.8	559	35.5	205	35.7	764
Widowed	57.7	515	66.7	75	58.8	590
Type of union						
In polygynous union	24.3	439	33.7	108	26.2	547
Not in polygynous union	19.3	3,402	22.7	2,479	20.7	5,881
Not currently in union	22.3	2,921	7.7	3,255	14.6	6,175
Don't know/missing	27.6	185	*	7	26.8	192
Times slept away from home in past 12 months						
None	20.1	2,952	14.4	2,638	17.4	5,591
1-2	21.8	2,226	11.2	1,269	18.0	3,494
3-4	21.4	843	14.6	649	18.5	1,492
5+	22.7	905	18.1	1,198	20.1	2,103
Missing	(7.0)	21	16.4	94	14.6	115
Time away in past 12 months						
Away for more than 1 month	20.2	1,564	15.5	1,118	18.3	2,682
Away for less than 1 month	23.2	2,370	14.3	2,051	19.1	4,421
Not away	20.1	2,952	14.4	2,638	17.4	5,591
Missing	12.2	61	(4.6)	41	9.1	102
Currently pregnant						
Pregnant	17.5	474	na	na	na	na
Not pregnant or not sure	21.4	6,473	na	na	na	na
ANC for last birth in the past 3 years						
ANC in a public health facility	20.5	2,123	na	na	na	na
ANC but not in a public health facility	19.2	222	na	na	na	na
No ANC/no birth in past 3 years	21.5	4,602	na	na	na	na
Total	21.1	6,947	14.5	5,848	18.1	12,796

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates a figure is based on fewer than 25 unweighted cases and has been suppressed.
na = Not applicable

Women and men in polygynous unions were more likely to be HIV positive than those not in a polygynous union.

The likelihood of HIV infection generally increased, although only modestly among women, with the number of times an individual slept away from home in the 12-month period before the survey. HIV prevalence was slightly higher among men who had spent more than one month away in the 12-month period compared with men who had been away for a shorter period or not away at all. Among women, HIV prevalence was highest among those who were away for less than one month.

Women who were pregnant at the time of the survey had a slightly lower HIV infection rate than those who were not pregnant or who were unsure of their pregnancy status (18 percent and 21 percent, respectively). HIV prevalence did not vary greatly according to whether or not a woman had received antenatal care during the three-year period prior to the survey, with the highest level found among those who had no ANC or did not give birth in the period (22 percent).

14.2.4 HIV Prevalence by Sexual Risk Behaviour

Table 14.6 presents HIV prevalence rates by sexual behaviour indicators 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 12 months preceding the survey may not adequately reflect lifetime sexual risk. Nor is it possible to know the sequence of events, e.g., whether any reported condom use occurred before or after HIV transmission.

Table 14.6 shows only a very modest and inconsistent variation in the level of HIV infection with the age at first sexual intercourse among women. However, there is a marked increase in the infection rate with increasing age at sexual debut among men who initiated sexual intercourse before age 20.

ZDHS respondents are considered to have had a higher-risk sexual encounter if they had intercourse with a nonmarital, noncohabiting partner. Table 14.6 shows that higher-risk intercourse is related to HIV prevalence levels among women but not men. Ever sexually active women who had a higher-risk sexual partner in the 12-month period before the survey were almost twice as likely to be HIV-infected as those who were sexually active but did not have sex with a higher-risk partner.

HIV prevalence tended to increase with the number of sexual partners and with the number of higher-risk partners among the small number of women who reported more than one partner in the 12-month period before the survey. The opposite pattern was true among men. For both women and men, however, there was a marked increase in the likelihood of being HIV infected with an increasing number of lifetime partners. For example, 7 percent of men who had had only one sexual partner in their lifetime were HIV positive compared with 31 percent of men with 10 or more lifetime sexual partners

Table 14.6 also shows that ever use of condoms was related to a higher risk of HIV infection among both women and men. A similar relationship was observed among women with respect to condom use with any sexual partner and with a higher-risk partner during the 12-month period before the survey. Among men, the relationship between recent condom use and HIV risk was less consistent. Men who used a condom at last sex during the 12-month period before the survey with any sexual partner regardless of the partner's risk status were less likely to be infected than men who did not use a condom (15 percent and 21 percent, respectively). Men who used a condom in the last intercourse with a higher-risk partner were, however, only slightly more likely to be HIV-infected than men who did not use a condom (13 percent and 12 percent, respectively). Among men involved in a paid sexual encounter during the period, those who used a condom had a lower HIV infection rate than those who did not use a condom (10 percent and 19 percent, respectively).

Table 14.6 HIV prevalence by sexual behaviour

Percentage HIV positive among women and men age 15-49 who ever had sex and were tested for HIV, by sexual behaviour characteristic, Zimbabwe 2005-2006

Sexual behaviour characteristic	Women		Men		Total	
	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Age at first sexual intercourse						
<16	26.9	1,078	16.4	554	23.3	1,633
16-17	25.0	1,504	18.2	826	22.6	2,330
18-19	25.9	1,474	20.4	1,120	23.5	2,593
20+	24.7	1,220	18.9	1,722	21.3	2,942
Missing	25.8	248	(30.4)	34	26.4	282
Higher-risk intercourse in past 12 months[1]						
Had higher-risk intercourse	38.7	537	12.4	1,362	19.8	1,899
Had sexual intercourse, not higher risk	20.6	4,088	23.9	2,310	21.8	6,398
No sexual intercourse in past 12 months	40.2	900	14.3	584	30.0	1,484
Number of sexual partners in past 12 months						
0	40.2	897	14.3	584	30.0	1,480
1	22.3	4,561	20.5	3,113	21.6	7,674
2	54.3	58	15.2	470	19.5	528
3+	*	6	14.8	81	14.4	87
Number of higher-risk partners in past 12 months[2]						
0	24.1	4,988	21.9	2,883	23.3	7,870
1	37.6	501	13.7	1,064	21.3	1,565
2	(60.6)	32	8.2	222	14.8	255
3+	*	4	10.7	87	10.8	91
Condom use						
Ever used a condom	32.1	1,441	20.9	2,920	24.6	4,361
Never used a condom	23.1	4,057	14.6	1,327	21.0	5,384
Missing	(47.3)	27	*	8	(38.6)	35
Condom use at last sexual intercourse in past 12 months						
Used condom	39.1	375	15.1	977	21.7	1,352
Did not use condom	21.3	4,250	21.3	2,694	21.3	6,944
No sexual intercourse in past 12 months	40.2	900	14.3	584	30.0	1,484
Condom use at last higher-risk intercourse in past 12 months						
Used condom	39.9	234	12.9	986	18.1	1,220
Did not use condom	37.9	303	11.8	387	23.2	691
No higher-risk intercourse/no sexual intercourse past 12 months	24.1	4,988	21.9	2,883	23.3	7,870
Number of lifetime partners						
1	18.1	3,612	6.6	757	16.1	4,369
2	37.1	1,201	14.8	778	28.3	1,979
3-4	42.2	567	20.3	1,160	27.5	1,727
5-9	43.9	106	22.1	931	24.3	1,037
10+	*	20	31.1	552	32.5	572
Missing	*	19	34.8	78	39.5	97
Paid for sexual intercourse in past 12 months[3]						
Paid for sexual intercourse	na	na	12.5	209	na	na
Used condom	na	na	10.2	152	na	na
Did not use condom	na	na	(18.6)	58	na	na
No paid sex/no sexual intercourse in past 12 months	na	na	19.2	4,046	na	na
Total	25.6	5,525	18.9	4,256	22.7	9,780

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates a figure is based on fewer than 25 unweighted cases and has been suppressed. The total includes 12 cases for which information is missing on the number of sexual partners in the past 12 months and 1 case where information is missing on condom use at last sex in the past 12 months.

na = Not applicable

[1] Sexual intercourse with a partner who neither was a spouse nor who lived with the respondent

[2] A partner who neither was a spouse nor who lived with the respondent, among the last three partners in the past 12 months

[3] Includes men who report having a prostitute for at least one of their last three sexual partners in the past 12 months

In summary, the results presented in Table 14.6 do not demonstrate a consistent relationship between sexual risk behaviour and HIV prevalence. More detailed analysis is clearly necessary to understand these relationships because they are often confounded by other factors, such as age, martial status, and residence, that are associated with both the behavioural measures and HIV prevalence.

14.2.5 HIV Prevalence by Other Characteristics Related to HIV Risk

Table 14.7 presents HIV prevalence by other characteristics related to HIV risk among women and men who have ever had sex. The table shows that women and men with a history of a sexually transmitted infection (STI) or STI symptoms have much higher rates of HIV infection than those with no history or symptoms.

Table 14.7 HIV prevalence by other characteristics

Percentage HIV positive among women and men age 15-49 who ever had sex and who were tested for HIV, by whether they had an STI in the past 12 months and by prior testing for HIV, Zimbabwe 2005-2006

	Women		Men		Total	
Characteristic	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Sexually transmitted infection in past 12 months						
Had STI or STI symptoms	39.7	627	32.4	342	37.2	970
No STI, no symptoms	23.7	4,866	17.7	3,902	21.1	8,768
Don't know/missing	(23.5)	31	*	12	(23.1)	43
Prior HIV testing						
Ever tested	26.1	1,674	20.0	913	23.9	2,587
Received result of last test	27.2	1,402	20.1	798	24.6	2,201
Did not receive result of last test	20.8	272	18.9	114	20.2	387
Never tested	25.4	3,805	18.7	3,335	22.3	7,140
Missing	(17.9)	45	*	8	15.3	53
Total	25.6	5,525	18.9	4,256	22.7	9,780

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates a figure is based on fewer than 25 unweighted cases and has been suppressed.

The table also shows that individuals who had been tested for HIV were only slightly more likely to be HIV positive than those who had never been tested. Among those who have been tested, the HIV infection rate was higher for those who reported getting their result from the last test than for those who said they did not receive the result.

Table 14.8 provides further information about the relationship between prior HIV testing and the actual HIV status of respondents. The results show that the majority of individuals who are HIV positive have not been tested and do not know their status. Seventy-six percent of infected respondents (73 percent of infected women and 81 percent of infected men) do not know their HIV status, either because they never had an HIV test or because they were tested but did not receive the result of the test.

Table 14.8 Prior HIV testing by HIV status

Percent distribution of women and men age 15-49 who tested HIV positive and who tested HIV negative, by HIV testing status prior to the survey, Zimbabwe 2005-2006

HIV testing prior to the survey	Women		Men		Total	
	HIV positive	HIV negative	HIV positive	HIV negative	HIV positive	HIV negative
Previously tested, received result of last test	26.3	21.0	19.3	15.2	23.7	18.2
Previously tested, did not receive result of last test	4.1	4.3	2.5	2.3	3.5	3.3
Not previously tested	69.0	74.0	78.2	81.8	72.4	77.7
Missing	0.5	0.7	0.0	0.7	0.3	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of respondents	1,467	5,480	850	4,999	2,317	10,479

14.3 HIV PREVALENCE AMONG YOUNG PEOPLE

The 15-24 year age range is an important group for monitoring reduction of HIV incidence in the population as specified in the United Nations General Assembly Special Session (UNGASS) on HIV and AIDS whose principal objective is to decrease the infection rate in men and women age 15-24 years.

Table 14.9 shows that, among young persons 15-24 years, 8 percent were HIV positive. The proportion HIV positive among young women was 11 percent while, among young men, it was 4 percent. The proportion HIV positive among young adults who have never had sex (3 percent) suggests that there may be other underlying determinants of HIV transmission that will need targeting in order to reduce the incidence of HIV in the population. It may also reflect underreporting of sexual activity among youth.

Urban youth—both female and male—are somewhat more likely to be infected than those in rural areas. Looking at the variation among young women by province, Manicaland and Matabeleland North (13 percent) had the highest rates of infection. Among young men, the infection rate was highest in Mashonaland Central (7 percent).

Looking at the variation by marital status, HIV infection was greatest among the comparatively small numbers of young women and men who were widowed, divorced, or separated. The lowest infection rates were found among youth who had not yet married. However, the rate of infection among sexually active, never-married young women was somewhat higher than the rate among their married counterparts (17 percent and 15 percent, respectively).

Table 14.9 HIV prevalence among young people by background characteristics

Percentage HIV positive among women and men age 15-24 who were tested for HIV, by background characteristics, Zimbabwe 2005-2006

Background characteristic	Women 15-24		Men 15-24		Total 15-24	
	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Age						
15-19	6.2	1,682	3.1	1,692	4.6	3,374
15-17	3.4	958	2.9	1,045	3.1	2,004
18-19	9.9	723	3.3	647	6.8	1,371
20-24	16.3	1,518	5.8	1,247	11.6	2,765
20-22	12.6	936	3.2	801	8.3	1,738
23-24	22.3	582	10.6	445	17.2	1,027
Residence						
Urban	11.2	1,303	4.4	1,136	8.0	2,439
Rural	10.9	1,898	4.1	1,803	7.6	3,700
Province						
Manicaland	12.8	353	3.4	359	8.0	712
Mashonaland Central	11.7	294	7.3	313	9.4	607
Mashonaland East	8.4	237	4.5	231	6.5	468
Mashonaland West	10.1	291	5.7	271	8.0	563
Matabeleland North	13.3	187	3.7	182	8.6	370
Matabeleland South	11.9	157	3.0	151	7.6	308
Midlands	10.9	426	3.0	410	7.1	836
Masvingo	9.6	432	3.0	352	6.6	785
Harare	11.4	593	5.0	487	8.5	1,081
Bulawayo	10.6	229	2.7	182	7.1	411
Marital status						
Never married	6.2	1,693	3.0	2,643	4.3	4,336
Ever had sex	17.2	323	3.5	1,123	6.6	1,446
Never had sex	3.6	1,370	2.6	1,519	3.1	2,890
Married/living together	14.7	1,285	12.8	253	14.4	1,538
Divorced/separated/widowed	26.1	222	(29.3)	43	26.7	266
Currently pregnant						
Pregnant	12.9	272	na	na	na	na
Not pregnant or not sure	10.8	2,928	na	na	na	na
Total	11.0	3,200	4.2	2,939	7.8	6,139

Note: Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable

Table 14.10 shows that women whose first sexual partner was 10 years older were at greater risk of HIV infection than young women who did not engage in "intergenerational" sex at the time they first had sex (23 percent and 16 percent, respectively).

As was the case in the reproductive age population as a whole, the variations in HIV prevalence with the other measures of sexual behaviour included in Table 14.10 are difficult to interpret. Among young women, those who had higher-risk sex are slightly more likely to be HIV positive than those who had non-higher-risk sex. The opposite is true for young men. Similarly, there is some evidence that having more sexual partners and more higher-risk sexual partners is related to higher infection rates among young women. However, the relationships are inconsistent among young men. Condom use also has an inconsistent relationship with HIV prevalence among young people.

Table 14.10 HIV prevalence among young people by sexual behaviour

Percentage HIV positive among women and men age 15-24 who ever had sex and were tested for HIV, by sexual behaviour, Zimbabwe 2005-2006

Sexual behaviour characteristic	Women 15-24		Men 15-24		Total 15-24	
	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Relative age of first sexual partner						
10+ years older	23.4	136	na	na	na	na
<10 years older, same age, younger/don't know	16.0	1,648	na	na	na	na
Missing	(15.4)	44	na	na	na	na
Higher-risk intercourse in past 12 months[1]						
Had higher-risk intercourse	21.9	272	4.7	836	8.9	1,108
Had sexual intercourse, not higher risk	15.0	1,329	12.5	210	14.7	1,539
No sexual intercourse in past 12 months	19.1	227	5.3	374	10.5	601
Number of sexual partners in past 12 months						
0	18.7	225	5.3	374	10.3	599
1	15.9	1,568	6.4	825	12.7	2,393
2	31.8	30	5.6	179	9.4	209
3+	*	3	*	40	(5.0)	43
Number of higher-risk partners in past 12 months[2]						
0	15.6	1,556	7.7	577	13.5	2,133
1	20.9	253	5.6	638	9.9	891
2	*	18	1.9	136	5.9	154
3+	*	1	(3.2)	69	(3.1)	70
Condom use						
Ever used a condom	20.3	495	7.5	1,005	11.7	1,500
Never used a condom	15.2	1,325	2.3	414	12.1	1,739
Condom use at first sex						
Used condom	16.2	292	6.0	625	9.3	917
Did not use condom	16.4	1,497	5.9	768	12.8	2,265
Missing	(28.7)	35	*	24	19.8	59
Condom use at last sexual intercourse in past 12 months						
Used condom	22.4	135	4.5	573	7.9	708
Did not use condom	15.6	1,466	8.3	472	13.8	1,939
No sexual intercourse in past 12 months	19.1	227	5.3	374	10.5	601
Total	16.6	1,829	6.0	1,420	11.9	3,248

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates a figure is based on fewer than 25 unweighted cases and has been suppressed. The total includes 4 cases for which information is missing on the number of sexual partners in the past 12 months, 11 cases for which information is missing on ever use of condoms, and 1 case for which information is missing on condom use at last sexual intercourse during the past 12 months.
na = Not applicable
[1] Sexual intercourse with a partner who neither was a spouse nor who lived with the respondent
[2] A partner who neither was a spouse nor who lived with the respondent, among the last three partners in the past 12 months

14.4 MALE CIRCUMCISION AND HIV PREVALENCE

Male circumcision is assumed to reduce the risk of HIV infection, in part because of physiological differences that decrease the susceptibility to HIV infection among circumcised men. Several recent studies in sub-Saharan Africa, including clinical trials conducted in South Africa, Kenya, and Uganda (Auvert et al., 2005; and NIAID, 2006), have documented that the protective effect of male circumcision is significant.

The 2005-06 ZDHS obtained information on the prevalence of male circumcision. In order to investigate the relationship between male circumcision and HIV status, men were asked about whether or not they had been circumcised during the ZDHS interview.

14.4.1 Male Circumcison among ZDHS Respondents

Table 14.11 presents information on the male circumcision rate for all men interviewed during the survey. The results in Table 14.11 indicate that relatively few men in the reproductive ages in Zimbabwe are circumcised. Nine in ten men interviewed in the ZDHS survey reported that they had not been circumcised. The greatest variations in the proportion circumcised are observed by province. The lowest proportion of ZDHS male respondents reporting that they were circumcised is found in Mashonaland Central (5 percent) and the highest proportion in Matabeleland North (19 percent).

Table 14.11 Male circumcision status

Percent distribution of all men interviewed in the ZDHS by circumcision status, Zimbabwe 2005-2006

Background characteristic	Circumcised	Not circumcised	Missing	Total	Number of men
Age					
15-24	9.1	90.7	0.2	100.0	3,358
15-19	7.9	91.8	0.3	100.0	1,899
20-24	10.6	89.3	0.1	100.0	1,459
25-29	12.5	87.3	0.2	100.0	1,082
30-39	11.1	88.6	0.3	100.0	1,545
40-49	10.8	88.7	0.4	100.0	878
Marital status					
Never married	9.0	90.7	0.2	100.0	3,404
Married or living together	11.4	88.3	0.3	100.0	3,132
Divorced/separated/widowed	12.7	87.1	0.2	100.0	327
Residence					
Urban	9.8	90.1	0.1	100.0	2,767
Rural	10.6	89.0	0.4	100.0	4,096
Province					
Manicaland	10.5	89.2	0.3	100.0	793
Mashonaland Central	5.3	94.7	0.0	100.0	681
Mashonaland East	13.1	86.6	0.3	100.0	570
Mashonaland West	11.2	88.4	0.4	100.0	691
Matabeleland North	18.8	80.5	0.7	100.0	416
Matabeleland South	11.4	86.7	1.9	100.0	306
Midlands	10.6	89.4	0.0	100.0	956
Masvingo	9.4	90.6	0.0	100.0	771
Harare	7.0	92.8	0.2	100.0	1,219
Bulawayo	13.7	86.3	0.0	100.0	460
Education					
No education	7.8	92.2	0.0	100.0	88
Primary	11.3	88.2	0.5	100.0	1,782
Secondary	10.0	89.8	0.2	100.0	4,588
More than secondary	9.5	90.5	0.0	100.0	405
Wealth quintile					
Lowest	13.6	85.9	0.5	100.0	1,042
Second	8.9	91.0	0.1	100.0	1,137
Middle	9.9	89.7	0.4	100.0	1,194
Fourth	11.0	88.7	0.3	100.0	1,892
Highest	8.5	91.4	0.1	100.0	1,599
Total 15-49	10.3	89.4	0.3	100.0	6,863
Total men 15-54	10.5	89.3	0.3	100.0	7,175

14.4.2 Male Circumcision and HIV Status

Table 14.12 examines the relationship between HIV prevalence and male circumcision among the 5,832 men age 15-49 who were tested for HIV in the survey and who responded to the question about their circumcision status. The table shows that the men who were circumcised had a slightly higher infection rate than uncircumcised men (17 percent and 14 percent, respectively). An examination of the age pattern suggests that male circumcision has a small protective effect among men under age 25, but that this effect disappears among men age 25 and over. In general, the relationship between male circumcision and HIV prevalence conforms to the national pattern, i.e., circumcised men are more likely to be HIV-infected than uncircumcised men, in the other subgroups shown in Table 14.12.

Table 14.12 HIV prevalence by male circumcision

Among men age 15-49 who were tested for HIV, the percentage HIV positive by whether circumcised, according to background characteristics, Zimbabwe 2005-2006

Background characteristic	Circumcised		Not circumcised	
	Percentage HIV positive	Number	Percentage HIV positive	Number
Age				
15-19	2.1	125	3.1	1,562
20-24	3.5	128	6.1	1,117
25-29	13.9	111	12.9	795
30-34	27.2	107	29.8	607
35-39	(40.8)	44	31.1	499
40-44	(40.8)	45	31.8	358
45-49	(29.9)	37	25.7	297
Residence				
Urban	15.9	222	15.6	2,094
Rural	17.0	375	13.4	3,141
Province				
Manicaland	20.7	69	16.2	622
Mashonaland Central	*	35	13.7	582
Mashonaland East	19.4	68	13.6	418
Mashonaland West	11.6	68	15.8	534
Matabeleland North	16.8	66	13.4	281
Matabeleland South	(17.5)	24	15.4	230
Midlands	16.6	89	10.8	720
Masvingo	(15.1)	62	11.8	592
Harare	(17.3)	71	17.1	978
Bulawayo	15.0	46	12.5	278
Education				
No education	*	6	23.0	55
Primary	19.1	176	14.3	1,365
Secondary	15.1	391	14.2	3,537
More than secondary	*	24	12.2	278
Wealth quintile				
Lowest	17.4	120	12.4	774
Second	18.6	85	14.8	911
Middle	15.3	103	11.9	933
Fourth	15.1	188	17.4	1,424
Highest	18.2	101	13.0	1,194
Religion				
Roman Catholic	23.1	61	17.5	534
Protestant	15.8	109	10.0	890
Pentecostal	5.4	51	10.8	711
Apostolic Sect	12.5	129	12.8	1,175
Other Christian	*	17	12.9	196
Muslim	*	25	15.8	40
Traditional	(27.5)	36	20.4	402
Other	*	2	*	6
None	22.1	165	17.3	1,282
Total	16.6	597	14.2	5,235

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates a figure is based on fewer than 25 unweighted cases and has been suppressed. Five cases for which information on circumcision status is missing were excluded from the table.

14.5 HIV Prevalence among Couples

More than 2,000 cohabiting couples were tested for HIV in the 2005-06 ZDHS. Results shown in Table 14.13 indicate that, among 72 percent of cohabiting couples, both partners tested negative for HIV. Both partners were HIV positive among 15 percent of cohabiting couples while 13 percent were discordant, that is, one partner was infected and the other was not. In 8 percent of couples, the male partner was infected and the woman was not, while in another 5 percent of couples, the woman was infected and the man was not.

The fact that there are almost as many cohabiting couples who are discordant for HIV than there are cohabiting couples who are both infected represents an unmet HIV prevention need for the country. This is because the majority of 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 14.13 HIV prevalence among couples

Percent distribution of couples living in the same household, both of whom were tested for HIV, by the HIV status, according to background characteristics, Zimbabwe 2005-2006

Background characteristic	Both HIV positive	Man HIV positive, woman HIV negative	Woman HIV positive, man HIV negative	Both HIV negative	Total	Number of respondents
Woman's age						
15-19	13.0	2.9	1.5	82.6	100.0	174
20-29	14.9	7.7	5.3	72.0	100.0	957
30-39	17.6	8.7	6.1	67.7	100.0	599
40-49	8.6	11.0	5.2	75.2	100.0	276
Man's age						
15-19	*	*	*	100.0	100.0	3
20-29	8.6	3.7	3.8	83.8	100.0	606
30-39	21.5	8.0	4.9	65.5	100.0	782
40-49	12.4	13.0	7.8	66.8	100.0	470
50-54	10.7	10.5	4.0	74.9	100.0	145
Age difference between partners						
Woman older	27.0	1.7	7.6	63.6	100.0	83
Same age/man older by 0-4 years	13.4	6.8	3.7	76.1	100.0	810
Man older by 5-9 years	12.3	7.7	4.7	75.3	100.0	739
Man older by 10-14 years	16.6	12.9	9.4	61.2	100.0	266
Man older by 15+ years	26.7	13.2	7.3	52.9	100.0	107
Type of union						
Monogamous	14.6	8.1	4.8	72.4	100.0	1,760
Polygynous	11.4	9.6	10.5	68.5	100.0	164
Don't know/missing	22.5	3.5	2.3	71.7	100.0	81
Residence						
Urban	15.3	10.7	5.5	68.5	100.0	654
Rural	14.4	6.8	5.0	73.8	100.0	1,351
Province						
Manicaland	14.5	13.7	4.1	67.8	100.0	218
Mashonaland Central	14.5	8.3	4.2	73.0	100.0	258
Mashonaland East	14.8	5.8	4.0	75.5	100.0	161
Mashonaland West	13.2	5.7	6.7	74.4	100.0	230
Matabeleland North	15.7	7.4	6.7	70.2	100.0	115
Matabeleland South	19.4	9.2	4.9	66.5	100.0	77
Midlands	14.5	4.7	4.1	76.8	100.0	318
Masvingo	12.6	9.1	5.7	72.6	100.0	247
Harare	16.0	10.7	4.8	68.5	100.0	298
Bulawayo	16.3	3.4	11.4	68.8	100.0	84
Woman's education						
No education	9.3	6.9	2.2	81.6	100.0	78
Primary	11.9	5.3	6.2	76.6	100.0	774
Secondary	17.7	10.3	4.8	67.2	100.0	1,104
More than secondary	0.0	4.3	1.6	94.1	100.0	49
Man's education						
No education	12.9	8.6	12.0	66.4	100.0	44
Primary	12.4	7.8	5.3	74.5	100.0	671
Secondary	16.4	7.9	5.1	70.5	100.0	1,173
More than secondary	11.3	10.6	2.7	75.4	100.0	118
Wealth quintile						
Lowest	12.4	4.7	4.2	78.8	100.0	427
Second	16.1	7.1	5.2	71.6	100.0	429
Middle	13.3	8.7	5.6	72.4	100.0	306
Fourth	19.6	10.0	4.4	65.9	100.0	507
Highest	9.6	10.0	7.3	73.1	100.0	336
Total	14.7	8.1	5.2	72.1	100.0	2,005

Note: Table based on couples for which a valid test result (positive or negative) is available for both partners. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.