

**Tanzania
HIV/AIDS
and Malaria
Indicator Survey
2007-08**

Preliminary Report

This report summarises the findings of the 2007-08 Tanzania HIV/AIDS and Malaria Indicator Survey (THMIS), which was carried out by the National Bureau of Statistics (NBS). The Tanzania Commission for AIDS (TACAIDS) and the Zanzibar AIDS Commission (ZAC) authorised the survey. Macro International Inc. provided technical assistance through the USAID-funded MEASURE DHS project (contract no. GPO-C-00-03-00002-00), which provides support and technical assistance for the implementation of population and health surveys in countries worldwide. The opinions expressed herein are those of the authors and do not necessarily reflect the views of the U.S. Agency for International Development.

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HIV/AIDS and Malaria Indicator Survey
2007-08

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FOREWORD

This report presents preliminary findings on the prevalence of HIV/AIDS infection among Tanzania adults and of malaria infection and anaemia prevalence among young children based on the results of the 2007-08 Tanzania HIV/AIDS and Malaria Indicator Survey (THMIS). The Tanzania Commission for AIDS (TACAIDS) authorized the National Bureau of Statistics (NBS) to conduct the THMIS.

The objectives of the 2007-08 THMIS were to collect data on knowledge and behaviour regarding HIV/AIDS and malaria, measure HIV prevalence among women and men age 15-49, and measure the presence of malaria parasites and anaemia among children age 6-59 months.

Both HIV/AIDS and malaria continue to be two of the most important health problems facing Tanzania today. HIV infects approximately 6 percent of adults according to the 2007-08 THMIS. Malaria is endemic in almost all parts of Tanzania and accounts for approximately 18 percent of the national disease burden. The government of Tanzania has developed national policies to combat both diseases, including efforts to change sexual behaviour, promote wider coverage of HIV testing, disseminate mosquito bednets, and introduce newer, more effective anti-malarial drug treatments.

The tables and text contained in this report cover the most important indicators and should be used by policy makers and programme administrators to evaluate their activities and plan future directions. Advantage should be taken of the availability of this valuable information to inform the process of policy formulation, planning, monitoring and evaluation of the HIV/AIDS and malaria programmes in Tanzania. The report will also be useful to all HIV/AIDS and malaria stakeholders, be those at the policy level, programme level, or in academia and research institutions.

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I. BACKGROUND

A. Introduction

The 2007-08 Tanzania HIV/AIDS and Malaria Indicator Survey (2007-08 THMIS) was implemented by the National Bureau of Statistics (NBS) in collaboration with the Office of the Chief Government Statistician—Zanzibar. Data collection on the Mainland took place from 20 October 2007 to 12 February 2008. In Zanzibar, data collection was from 10 November 2007 to 22 February 2008. The survey was commissioned by the Tanzania Commission for AIDS (TACAIDS) and the Zanzibar AIDS Commission (ZAC). Macro International Inc. provided technical assistance through the USAID-funded MEASURE DHS project, which provides support and technical assistance for the implementation of population and health surveys in countries worldwide. Other agencies and organizations that facilitated the successful implementation of the survey through technical or financial support were the National AIDS Control Programme, the National Malaria Control Programme, the Ministry of Health and Social Welfare, the Zanzibar AIDS Control Programme, and the Muhimbili University College of Health Sciences (MUCHS).

This preliminary report presents a first look at selected findings of the 2007-08 THMIS. Where appropriate, results are compared with findings from the 2003-04 Tanzania HIV/AIDS Indicator Survey (THIS). A comprehensive analysis of the data will be presented in a final report to be published later in 2008. While considered provisional, the results presented here are not expected to differ significantly from those in the final report.

B. Survey Objectives

The primary objectives of the 2007-08 THMIS project are to provide up-to-date information on the prevalence of HIV infection among Tanzanian adults and of malaria infection and anaemia among young children. The 2007-08 THMIS is a follow-up to the 2003-04 Tanzania HIV/AIDS Indicator Survey (THIS 2003-04). The THMIS provides updated estimates of selected basic demographic and health indicators covered in previous surveys, including the 1991-92 Tanzania Demographic and Health Survey (TDHS 1991-92), the 1996 Tanzania Demographic and Health Survey (TDHS 1996), the 1999 Reproductive and Child Health Survey (RCHS 1999), and the 2004-05 Tanzania Demographic and Health Survey (TDHS 2004-05).

II. SURVEY IMPLEMENTATION

A. Sample Design

The sampling frame used for the 2007-08 THMIS is the same as that used for the 2004-05 Tanzania Demographic and Health Survey (TDHS 2004-05), which was developed by the National Bureau of Statistics (NBS) after the 2002 Population Census. The sample excluded nomadic and institutional populations such as persons in hotels, barracks, and prisons. It was designed to allow estimates of key indicators for each of Tanzania's 26 regions. On the Mainland, 25 sample points were selected in Dar es Salaam and 18 in each of the other 20 regions. Approximately 16 households were selected from each sampling point in Dar es Salaam, and 18 households per sampling point in other regions. In Zanzibar, 18 sample points were selected in each of the five regions, for a total of 90 sample points. Approximately 18 households were selected from each sample point in Unguja and 36 households in Pemba to allow for reliable estimates of HIV prevalence at each island group level. Because of the approximately equal sample sizes in each region, the sample will not be self-weighting at the national level and weighting factors will be added to the data file so that the results will be proportional at the national level.

A household listing operation was undertaken in all the selected areas prior to the fieldwork. From these lists, households to be included in the survey were selected.

B. Questionnaires

Two questionnaires were used for the 2007-08 THMIS: the Household Questionnaire and the Individual Questionnaire. These questionnaires are based on the standard AIDS Indicator Survey and Malaria Indicator Survey questionnaires, and adapted to reflect the population and health issues relevant to Tanzania. Inputs were solicited from various stakeholders representing government ministries and agencies, non-governmental organizations, and international donors. After the preparation of the definitive questionnaires in English, the questionnaires were translated into Kiswahili.

The Household Questionnaire was used to list all the usual members and visitors of selected households. Some basic information was collected on the characteristics of each person listed including his or her age, sex, education, and relationship to the head of the household. For children under age 18, survival status of the parents was determined. If a child in the household had a parent who was sick for more than three consecutive months in the 12 months preceding the survey or a parent who had died, additional questions related to support for orphans and vulnerable children were asked. Additionally, if an adult in the household was sick for more than three consecutive months in the 12 months preceding the survey or an adult in the household died, questions were asked about support for sick people or people who have died. The Household Questionnaire was also used to identify women and men who were eligible for the individual interview and HIV testing. The Household Questionnaire also collected information on characteristics of the household dwelling unit, such as the source of water, type of toilet facilities, materials used for the floor of the house, ownership of various durable goods, and ownership and use of mosquito nets.

The Household Questionnaire was also used to record haemoglobin and malaria testing results for children age 6-59 months.

The Individual Questionnaire was used to collect information from all women and men age 15-49. These respondents were asked questions on the following topics:

- Background characteristics (education, residential history, media exposure, etc.)
- Marriage and sexual activity
- Employment

- Awareness and behaviour regarding AIDS and other sexually transmitted infections (STIs)
- Other health issues including knowledge of TB and medical injections

Female respondents were asked to provide their birth history and information about illnesses of children born since January 2002.

C. Anaemia and HIV Testing

In addition to the collection of information during the survey interview, the THMIS also included anaemia and malaria testing for children under age 6 and HIV testing for adults age 15-49. The protocols for anaemia and HIV testing were based on the standard MEASURE DHS protocols, adapted to achieve the objectives of the THMIS.

Anaemia Testing

Haemoglobin testing is the primary method of anaemia diagnosis. In the THMIS, haemoglobin measurement was performed in the field by a team member. The respondent's consent was obtained for testing. The statement explained the purpose of the test, informed prospective subjects and/or their caretakers how the test would be administered, advised them that the results would be available as soon as the test was completed, and requested permission for the test to be carried out. In the case of children, consent was obtained from the parent or guardian.

For the haemoglobin measurement, capillary blood was generally taken from a finger using a sterile single-use lancet.¹ The concentration of haemoglobin in the blood was measured using the HemoCue system. The results of the anaemia test were immediately provided for all eligible children tested. Levels of anaemia were classified as severe, moderate, or mild according to criteria developed by the World Health Organisation (WHO). A brochure on anaemia was provided which included suggested steps (e.g., changes in diet) that could be taken in the event that a child was found to have some degree of anaemia. Children who were found to be severely anaemic were referred to health facilities for further evaluation and management.

Malaria Testing

The rapid diagnostic test used in the 2006-07 AMIS is the Paracheck Pf™ device (Orchid Biomedical, India) which is based on the detection of *P. falciparum*-specific histidine-rich protein 2 (HRP2 Pf). The test has relatively high sensitivity and specificity and is deemed appropriate for clinical and epidemiologic assessment of malaria, especially of placental malaria.

Parents or responsible adults were advised about the malaria test result. If the child tested positive, he or she was provided with a full course of Artemether Lumefantrine (ALu or Coartem). Children who tested negative but had a fever in the past two weeks were also provided a full course of ALu. THMIS field staff explained to the parent or responsible adult that ALu is effective and should rid the child of fever and other symptoms in a few days. Parents/guardians were advised to take the child to a health professional for treatment immediately if, after taking the ALu, the child still had high fever, fast or difficult breathing, was not able to drink or breastfeed, and became sicker or did not get better in two days.

HIV Testing

The THMIS HIV testing involved the collection of at least three blood spots from a finger prick on a special filter paper card. The HIV testing in the THMIS was anonymous, i.e., it was conducted in such fashion that the results could not be linked to individual respondents. A unique random identification number (bar code) was assigned to each eligible respondent consenting to the testing. Labels containing the bar code were

¹ In cases where a child was very thin, a heel prick was used to obtain the sample.

affixed to the filter paper card, the questionnaire, and a field tracking form at the time of the collection of the sample. No other identifiers were attached to the dried blood spots (DBS) sample.

Because of the anonymous nature of the testing approach in the THMIS, it was not possible to provide information on the results from the HIV testing conducted during the THMIS.

The procedures that THMIS field staff followed to obtain informed consent from eligible individuals to collect DBS samples for the HIV testing were similar to those used for obtaining consent for the anaemia testing. The HIV testing consent statement explained the objective of the testing and how the DBS sample would be collected, informed prospective subjects that the testing process was anonymous and, therefore, their result would not be available to them, advised them of the availability of free voluntary counselling and testing services, and requested permission for the test to be carried out. Field staff also asked for consent to store the DBS samples for unspecified future tests.

After the survey team completed a cluster, all questionnaires, DBS samples, and sample transmittal forms for the cluster were sent to the NBS for logging and checking prior to data entry. Blood samples were checked against the transmittal form and then forwarded to Muhimbili University College of Health Sciences Laboratory (MUCHS) for testing. No identifying information other than the unique barcode label affixed at the time of collection of the sample accompanied the specimen to the laboratory.

The algorithm used for the testing of the DBS samples called for each DBS specimen first to be eluted and tested with Vironostika HIV Uni-Form II Ag/Ab (Biomerieux). All HIV positive samples were then retested with Enzygnost Anti HIV 1/2 Plus (Dade Behring). The two ELISA tests were repeated for samples with discordant results. Those specimens for which the repeat test results were discordant were tested using Genetic HIV 2.2/Abbott. The final result was rendered positive if the Western Blot (WB) confirmed the result to be positive, and rendered negative if the WB confirmed it to be negative. If the results were still discordant, the sample was rendered indeterminate.

Testing of the DBS samples occurred at MUCHS concurrently with the processing of the survey questionnaires. However, no results were reported to the NBS during the period of questionnaire entry and editing and the creation of the final data file. In order to obtain the HIV tables in this report, a special file containing only the bar code identification number and information on the age, sex, and residence of each individual for whom a test result was expected was produced from the main THMIS file at the NBS offices. That anonymous file was then linked to the HIV test results at the laboratory.

After the final tabulation phase of the THMIS is completed and it is determined that no additional reconciliation of the interview results is necessary, all the sections of the THMIS questionnaires relating to the surveyed individuals' personal identification (ID), such as the name, the household number, the cluster number, and the part of the questionnaire containing the identification codes of the blood samples will be destroyed. A new data file will be created in which all of the personal identification of the persons surveyed (household number, cluster number, etc.) will be replaced by randomly generated codes. After all materials including the original identification are destroyed and the anonymised data file prepared, the results of the HIV testing from MUCHS will be merged with the entire THMIS survey data file. The unique barcode identification number assigned to the samples will serve as the means for merging the survey and testing files.

Data presented in this report came from the HIV results that are linked with the demographic and health data.

D. Pretest

Eleven women and four men participated in the pretest training in July 2007. All but three of the participants had worked in various NBS survey activities previously including the 2003-04 THIS, the 2004-05 TDHS, and the 2006 Tanzania Service Provision Assessment (TSPA) survey. Fourteen days of class instruction were provided. Trainers were staff from NBS, the Zanzibar OCGS, and the Morogoro Regional

Hospital. Pretest fieldwork lasted for four days, two days in a rural area and two days in an urban area. For the pretest, 200 Paracheck kits were obtained from the National Malaria Control Programme (NMCP), and 40 doses of (ALu) and 500 Panadol tablets were provided by the Morogoro Regional Hospital.

The length of the household interview and the individual interview was estimated to be slightly less than half an hour. The duration of the interview varies little by the addition of malaria-related questions (availability and use of mosquito nets, treatment of children with fever in the past two weeks, and malaria prevention among pregnant women).

The THMIS pilot shows that taking blood samples from a child for two purposes (haemoglobin and malaria) can be done without much problem.

E. Training of Field Staff

The field staff training was 17 days (24 September to 12 October 2007). The training was conducted following the DHS training procedures, including class presentations, mock interviews, field practice and tests. Participants included 15 team supervisors from NBS, OCGS, Ministry of Planning and Economic Empowerment (MPEE), and the Ministry of Health and Social Welfare (MOHSW). In total, 59 female nurses, 23 male nurses, and 2 office data editors were trained to carry out the survey.

Field practice in anaemia testing and HIV dried blood spot collection was carried out toward the end of the training period. During this period, field editors and team supervisors were provided with additional training in methods of field editing, data quality control procedures, and fieldwork coordination.

F. Fieldwork

Data collection was carried out by 14 field teams, each consisting of one team leader, four female interviewers, one male interviewer, and one driver. Five senior staff members from CSO coordinated and supervised the fieldwork activities. Fieldwork on the Mainland started on 20 October, 2007. The delay in obtaining ethical clearance for the fieldwork in Zanzibar delayed the beginning data collection there until 10 November. Data collection took place over a four-month period from 20 October 2007 to 22 February 2008.

G. Data Processing

All questionnaires for the THMIS were returned to the NBS central office in Dar es Salaam for data processing, which consisted of office editing, coding of open-ended questions, data entry, and editing computer-identified errors. The data were processed by a team of 9 data entry clerks, 2 data editors, 2 data entry supervisors, and one administrator to receive and check the blood samples received from the field. Data entry and editing were accomplished using the CSPro software. The process of office editing and data processing was initiated on 8 November 2007 and completed on 7 April 2008.

Dried blood spot (DBS) samples received from the field were logged in at NBS, checked, and transported to MUCHS to be tested. The processing of DBS samples for HIV testing at MUCHS was handled by 6 laboratory scientists. The DBS samples were logged into the CSPro HIV Test Tracking System (CHTTS) database, each given a laboratory number, and stored at -20°C until tested.

III. PRELIMINARY FINDINGS

A. Response Rates

Table 1 shows response rates for the 2007-08 THMIS. A total of 9,144 households were selected for the sample, of which 8,704 were occupied. Of the existing households, 8,497 were successfully interviewed, yielding a response rate of 98 percent.

In the interviewed households, 9,735 women were identified for individual interview and, of these, complete interviews were conducted with 9,343 women, yielding a response rate of 96 percent. Of the 7,935 eligible men identified, 6,975 were successfully interviewed (88 percent response rate). The lower response rate for men was likely due to their more frequent and longer absence from the household.

B. Characteristics of the Respondents

Table 2 shows the weighted and unweighted numbers and the weighted percent distributions of women and men age 15-49 interviewed in the 2007-08 THMIS by age, marital status, urban-rural residence, region, and education. Close to six in ten of respondents age 15-49 were under age 30, reflecting the young age structure of the population. One in four women is never married compared with 42 percent of men. Women are more likely to be married or living together than men (64 percent and 53 percent, respectively). About one in four respondents live in the urban areas. Ninety-seven percent of the survey population live in Tanzania Mainland while 3 percent live in Zanzibar.

With respect to educational status, one in five women and 12 percent of men reported that they had never attended school. Sixty-nine percent of women and 74 percent of men have had primary education without continuing to secondary education. Ten percent of women and 15 percent of men have attended secondary education.

Marital Status

Table 3 shows the distribution of all women and men age 15-49 by current marital status at the time of the survey. In this survey, the term "married" refers to legal or formal marriages (civil or religious), while "living together" refers to informal unions. In subsequent tables, these two categories are merged and referred to collectively as "currently married."

According to the 2007-08 THMIS, a majority of women (64 percent) are either formally married or cohabiting, 9 percent are either divorced or separated, and 3 percent are widowed. Twenty-four percent of women have never been married. The proportion of women currently married increases with age up to age 35-39 and then declines among the oldest women as the likely proportions of women widowed, divorced, or separated increase (Figure 1).

Table 1 Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence, Tanzania HMIS, 2007-08

Result	Residence		Total
	Urban	Rural	
Household interviews			
Households selected	2,039	7,105	9,144
Households occupied	1,910	6,794	8,704
Households interviewed	1,835	6,662	8,497
Household response rate ¹	96.1	98.1	97.6
Individual interviews:			
women			
Number of eligible women	2,268	7,467	9,735
Number of eligible women interviewed	2,172	7,171	9,343
Eligible woman response rate ²	95.8	96.0	96.0
Individual interviews: men			
Number of eligible men	1,785	6,150	7,935
Number of eligible men interviewed	1,499	5,476	6,975
Eligible man response rate ²	84.0	89.0	87.9

¹ Households interviewed/households occupied

² Respondents interviewed/eligible respondents

Table 2 Background characteristics of respondents

Percent distribution of women and men age 15-49 by selected background characteristics, Tanzania HMIS 2007-08

Background characteristic	Women			Men		
	Weighted percent distribution	Weighted number	Unweighted number	Weighted percent distribution	Weighted number	Unweighted number
Age						
15-19	21.2	1,984	2,138	25.3	1,768	1,881
20-24	18.7	1,746	1,678	16.5	1,148	1,149
25-29	17.2	1,603	1,512	14.4	1,004	933
30-34	14.4	1,346	1,319	14.4	1,004	931
35-39	12.6	1,175	1,154	12.1	842	834
40-44	8.3	774	804	9.0	628	669
45-49	7.6	714	738	8.3	581	578
Marital status						
Never married	23.7	2,214	2,503	42.0	2,931	3,124
Married	54.2	5,066	5,154	47.0	3,275	3,250
Living together	9.8	917	661	6.1	425	313
Divorced/separated	9.1	848	780	4.6	319	266
Widowed	3.2	298	245	0.3	24	22
Residence						
Urban	26.3	2,459	2,172	24.4	1,699	1,499
Rural	73.7	6,884	7,171	75.6	5,276	5,476
Region						
Mainland						
Arusha	4.1	383	306	3.8	262	215
Dar es Salaam	8.5	797	448	8.3	580	321
Dodoma	3.6	338	263	3.7	255	211
Iringa	4.3	403	280	4.1	286	194
Kagera	5.3	495	312	5.7	397	272
Kigoma	4.4	414	362	4.2	292	274
Kilimanjaro	4.1	379	321	3.9	271	242
Lindi	2.6	246	287	2.4	164	214
Manyara	2.8	263	326	2.9	203	287
Mara	3.9	368	393	3.5	243	277
Mbeya	6.2	581	292	7.1	496	263
Morogoro	4.7	436	247	4.9	340	199
Mtwara	3.5	324	267	3.0	209	177
Mwanza	8.9	833	373	8.7	608	302
Pwani	2.2	203	233	1.7	119	137
Rukwa	3.4	314	312	3.8	264	255
Ruvuma	4.0	372	335	4.1	287	273
Shinyanga	8.0	750	390	9.1	633	352
Singida	2.1	194	261	2.2	153	222
Tabora	5.5	518	357	5.8	404	276
Tanga	4.5	424	308	4.3	298	222
Zanzibar						
Pemba	1.0	94	1,486	0.9	63	988
Unguja	2.3	214	1,184	2.1	148	802
Education						
No education	21.2	1,983	2,068	11.9	829	814
Primary incomplete	16.2	1,517	1,562	22.0	1,534	1,607
Primary complete	52.9	4,945	4,139	51.6	3,597	3,095
Secondary+	9.6	898	1,574	14.6	1,016	1,459
Total	100.0	9,343	9,343	100.0	6,975	6,975

Note: Primary complete means completed standard 7 or 8, training after primary or pre-form 1; secondary+ education includes those who attended secondary, whether or not that level was completed.

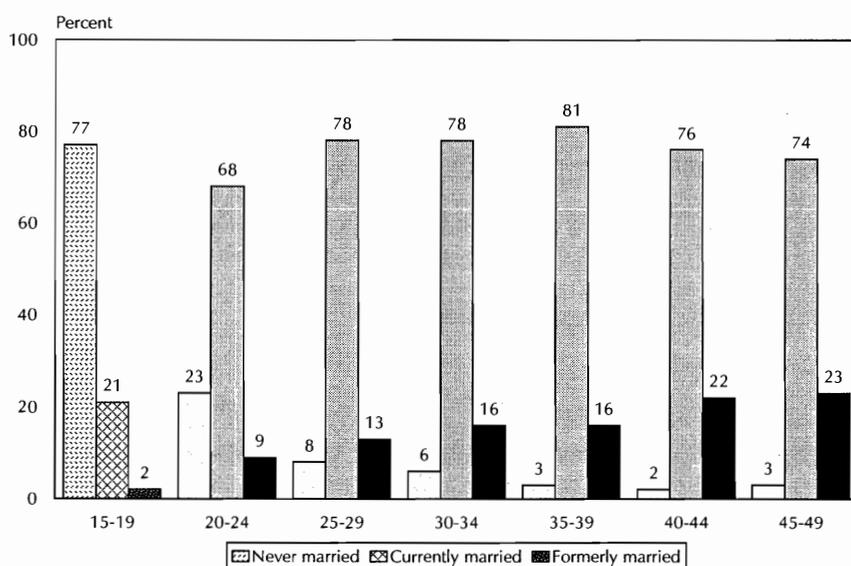
Table 3 shows that compared with women, men are more likely to remain single (42 percent of men and 24 percent of women). This difference is largely explained by the tendency of men to marry at later ages. For example, 68 percent of women age 20-24 are in union compared with 28 percent of men of the same age. While women are more likely to be in union than men (64 percent compared with 53 percent), men are less likely than women to be divorced, separated or widowed (5 percent and 12 percent, respectively).

Table 3 Current marital status

Percent distribution of women and men age 15-49 by current marital status, according to age, Tanzania HMIS 2007-08

Age	Marital status						Total	Percentage of respondents currently in union	Number of respondents
	Never married	Married	Living together	Divorced	Separated	Widowed			
WOMEN									
15-19	77.0	18.5	2.7	0.7	1.1	0.0	100.0	21.2	1,987
20-24	23.0	56.3	11.9	4.2	4.1	0.5	100.0	68.2	1,744
25-29	8.4	64.5	13.9	4.3	7.1	1.6	100.0	78.5	1,601
30-34	5.7	67.7	10.1	5.0	7.7	3.7	100.0	77.8	1,347
35-39	3.2	68.3	12.2	5.8	5.0	5.5	100.0	80.4	1,176
40-44	2.2	64.3	11.5	6.8	6.7	8.5	100.0	75.7	774
45-49	2.8	65.4	8.9	5.3	6.0	11.6	100.0	74.3	714
Total 15-49	23.7	54.2	9.8	4.1	5.0	3.2	100.0	64.0	9,343
MEN									
15-19	98.1	1.2	0.2	0.0	0.5	0.0	100.0	1.4	1,768
20-24	68.1	23.4	4.7	0.8	3.0	0.0	100.0	28.1	1,148
25-29	27.3	56.5	10.2	0.7	4.9	0.3	100.0	66.7	1,004
30-34	7.5	72.7	12.0	1.5	5.9	0.4	100.0	84.7	1,004
35-39	4.2	82.9	6.5	1.6	4.3	0.5	100.0	89.4	842
40-44	3.6	78.3	8.6	2.8	6.0	0.7	100.0	87.0	628
45-49	1.2	85.9	6.2	0.8	4.5	1.3	100.0	92.1	581
Total 15-49	42.0	47.0	6.1	1.0	3.6	0.3	100.0	53.1	6,975

Figure 1 Percent Distribution of Women Age 15-49 by Marital Status



THMIS 2007-08

C. HIV/AIDS

The HIV/AIDS epidemic is a serious threat to the country's social and economic development. The 2007-08 THMIS included a series of questions that addressed the respondent's overall knowledge of AIDS, awareness of modes of HIV transmission, coverage of prior HIV testing, and behaviours that can prevent the spread of HIV infection.

Awareness of AIDS

THMIS respondents were asked whether they had heard of an illness called AIDS. Those who reported having heard of AIDS were asked a number of questions about whether and how AIDS could be avoided. Table 4 shows that knowledge of AIDS in Tanzania is universal. Practically all women and men age 15-49 have heard about AIDS (98 percent of women and 99 percent of men). The results show that there are almost no differences in knowledge of AIDS by age, marital status, urban-rural residence, region, or education.

Awareness of Prevention Methods and Modes of Transmission

HIV/AIDS prevention programmes focus their messages and efforts on three important aspects of behaviour: using condoms; limiting the number of sexual partners/staying faithful to one partner; and delaying sexual debut in young persons (abstinence). The programmes also try to dispel misconceptions about how AIDS is transmitted which can put individuals at risk. To ascertain whether programmes in Tanzania have effectively communicated prevention messages, the 2007-08 THMIS respondents were asked questions about whether it is possible to reduce the chances of getting the AIDS virus by using a condom at every sexual encounter, limiting sex to one partner, and abstaining.

Table 5 presents levels of knowledge of the various HIV/AIDS prevention methods for women and men age 15-49. Seven in ten women and three in four men know that condoms can reduce the risk of contracting the HIV virus during sexual intercourse. Approximately eight in ten women and nine in ten men indicate that the chances of getting the AIDS virus can be reduced by limiting sex to one uninfected partner who has no other partners. Abstaining from sexual intercourse is the most frequently recognized prevention method; 85 percent of women age 15-49 and 89 percent of men age 15-49 are aware of this prevention method. Differentials in levels of awareness of the various prevention methods which are presented for women and men are not large. In general, women and men age 20-39, urban respondents, never-married respondents who are sexually active, and better educated respondents are more knowledgeable of HIV-prevention methods than other respondents.

Table 4 Knowledge of AIDS

Percentage of women and men age 15-49 who have heard of AIDS, by background characteristics, Tanzania HMIS 2007-08

Background characteristic	Women		Men	
	Has heard of AIDS	Number of women	Has heard of AIDS	Number of men
Age				
15-24	97.8	3,730	98.0	2,916
15-19	97.2	1,984	97.3	1,768
20-24	98.4	1,746	99.2	1,148
25-29	98.4	1,603	99.5	1,004
30-39	98.7	2,521	99.5	1,846
40-49	99.3	1,488	99.5	1,210
Marital status				
Never married	97.9	2,214	97.8	2,931
Ever had sex	99.0	983	99.1	1,525
Never had sex	97.0	1,231	96.5	1,406
Married/living together	98.4	5,983	99.6	3,701
Divorced/separated/ widowed	99.3	1,147	100.0	343
Residence				
Urban	99.6	2,459	99.6	1,699
Rural	97.9	6,884	98.7	5,276
Region				
Mainland				
Arusha	94.4	383	96.5	262
Dar es Salaam	100.0	797	99.7	580
Dodoma	99.2	338	98.4	255
Iringa	99.4	403	98.5	286
Kagera	98.1	495	99.2	397
Kigoma	100.0	414	100.0	292
Kilimanjaro	100.0	379	100.0	271
Lindi	100.0	246	100.0	164
Manyara	98.3	263	98.3	203
Mara	97.8	368	98.6	243
Mbeya	99.1	581	99.1	496
Morogoro	99.2	436	100.0	340
Mtwara	100.0	324	100.0	209
Mwanza	98.6	833	97.3	608
Pwani	100.0	203	100.0	119
Rukwa	91.6	314	99.1	264
Ruvuma	98.5	372	99.0	287
Shinyanga	94.2	750	97.6	633
Singida	99.6	194	99.8	153
Tabora	99.7	518	99.4	404
Tanga	99.7	424	99.0	298
Zanzibar	99.0	309	99.3	212
Pemba	99.6	94	99.8	63
Unguja	98.8	214	99.1	148
Education				
No education	95.7	1,983	96.9	829
Primary incomplete	98.0	1,517	97.8	1,534
Primary complete	99.3	4,945	99.5	3,597
Secondary +	99.9	898	100.0	1,016
Total 15-49	98.4	9,343	98.9	6,975

Table 5 Knowledge of HIV prevention methods

Percentage of women and men age 15-49 who, in response to prompted questions, say that people can reduce the risk of getting the AIDS virus by using condoms every time they have sexual intercourse, by having one sex partner who is not infected and has no other partners, and by abstaining from sexual intercourse, by background characteristics, and percentage of women and men age 50 and over who know the various HIV prevention methods, Swaziland 2006-07

Background characteristic	Women					Men				
	Using condoms ¹	Limiting sexual intercourse to one uninfected partner ²	Using condoms and limiting sexual intercourse to one uninfected partner ^{1,2}	Abstaining from sexual intercourse	Number of women	Using condoms ¹	Limiting sexual intercourse to one uninfected partner ²	Using condoms and limiting sexual intercourse to one uninfected partner ^{1,2}	Abstaining from sexual intercourse	Number of men
Age										
15-24	67.6	79.5	60.0	82.3	3,730	72.6	81.2	64.2	85.3	2,916
15-19	62.8	76.2	54.8	79.2	1,984	67.6	77.9	59.2	82.6	1,768
20-24	73.1	83.2	66.0	85.8	1,746	80.2	86.4	71.7	89.5	1,148
25-29	72.5	84.3	65.7	86.5	1,603	77.5	89.4	71.7	91.1	1,004
30-39	70.3	84.2	63.3	88.3	2,521	81.8	91.4	76.8	92.4	1,846
40-49	63.8	80.6	57.1	85.8	1,488	75.9	90.0	71.0	92.5	1,210
Marital status										
Never married	65.4	80.8	59.2	82.7	2,214	71.3	81.5	63.5	85.0	2,931
Ever had sex	78.7	85.9	71.9	85.7	983	82.4	87.0	74.6	88.8	1,525
Never had sex	54.8	76.7	49.2	80.3	1,231	59.2	75.6	51.5	80.8	1,406
Married/living together	68.7	82.2	61.6	85.7	5,983	79.9	90.5	74.3	92.4	3,701
Divorced/separated/widowed	74.2	81.4	64.7	87.1	1,147	80.3	88.0	74.1	92.6	343
Residence										
Urban	74.5	89.3	70.5	88.8	2,459	73.5	91.5	70.1	90.0	1,699
Rural	66.5	79.1	58.2	83.9	6,884	77.2	85.0	69.7	89.0	5,276
Region										
Mainland										
Arusha	58.5	85.3	56.6	84.6	383	77.3	91.1	76.4	90.5	262
Dar es Salaam	76.6	91.1	73.1	87.0	797	69.1	92.5	66.2	88.8	580
Dodoma	70.3	84.7	65.3	85.3	338	78.4	90.2	75.1	85.8	255
Iringa	53.4	69.8	42.0	70.2	403	68.8	79.6	60.6	81.7	286
Kagera	67.9	79.7	60.0	83.4	495	72.8	75.9	60.6	88.1	397
Kigoma	88.9	97.4	88.0	96.7	414	81.9	96.4	80.7	95.5	292
Kilimanjaro	73.9	94.8	70.7	93.2	379	70.6	91.3	66.3	93.1	271
Lindi	85.4	93.4	80.8	98.8	246	90.0	94.2	86.5	97.2	164
Manyara	53.8	89.8	53.1	89.7	263	79.0	96.5	78.5	94.5	203
Mara	72.1	80.4	63.6	86.9	368	78.2	84.9	70.8	90.0	243
Mbeya	50.7	68.6	43.6	84.3	581	74.0	85.9	67.8	95.8	496
Morogoro	77.6	83.7	69.5	87.9	436	82.5	91.8	77.2	89.4	340
Mtwara	85.8	89.6	78.6	96.2	324	84.7	91.6	80.6	95.1	209
Mwanza	64.0	79.4	55.6	83.2	833	79.9	75.7	65.6	86.2	608
Pwani	84.5	95.2	82.7	92.9	203	81.4	95.2	80.9	86.5	119
Rukwa	44.9	62.9	32.4	67.4	314	72.7	88.6	68.8	90.9	264
Ruvuma	70.3	71.0	55.4	75.9	372	78.8	80.7	68.6	85.0	287
Shinyanga	67.6	62.9	49.2	76.9	750	76.1	78.9	64.6	83.4	633
Singida	57.4	79.4	52.5	84.1	194	75.7	86.3	70.2	85.5	153
Tabora	82.1	96.6	80.6	94.3	518	84.9	92.1	80.0	90.6	404
Tanga	74.1	85.2	66.6	86.2	424	78.5	92.5	73.7	93.8	298
Zanzibar	46.1	78.8	40.9	81.7	309	49.4	82.1	42.5	84.4	212
Pemba	36.9	72.1	33.0	80.9	94	48.7	71.9	36.5	83.0	63
Unguja	50.2	81.8	44.4	82.0	214	49.7	86.4	45.0	84.9	148
Education										
No education	54.7	71.2	46.0	76.8	1,983	66.4	76.7	56.9	83.5	829
Primary incomplete	62.6	75.8	53.4	80.6	1,517	72.4	78.3	62.6	85.3	1,534
Primary complete	74.4	85.6	67.6	88.6	4,945	80.6	90.3	75.1	91.2	3,597
Secondary +	77.5	94.2	74.9	92.7	898	75.0	94.0	72.4	93.0	1,016
Total 15-49	90.6	92.9	86.8	94.3	4,987	87.2	91.0	83.2	93.2	4,156

¹ Using condoms every time they have sexual intercourse

² Partner who has no other partners

Stigma and Discrimination Associated with HIV/AIDS

Knowledge and beliefs about AIDS influence how HIV-infected persons and those affected by HIV/AIDS are treated. The extent of stigma and discrimination associated with HIV/AIDS can be ascertained from four questions included in the THMIS: whether respondents are willing to care for a family member with HIV at home; whether respondents would buy fresh vegetables from a vendor who has the AIDS virus; whether respondents believe that a female teacher who had the AIDS virus but not sick should be allowed to continue teaching; and whether respondents would want to keep the HIV positive status of a family member a secret. The results are shown in Tables 6.1 and 6.2.

Background characteristic	Percentage of women who:					Number of women who have heard of AIDS
	Are willing to care for a family member with the AIDS virus in the respondent's home	Would buy fresh vegetables from shop-keeper who has the AIDS virus	Say that a female teacher with the AIDS virus and is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with the AIDS virus	Percentage expressing acceptance attitudes on all four indicators	
Age						
15-24	89.9	54.0	74.8	49.5	25.7	3,648
15-19	87.1	51.6	71.6	47.7	23.5	1,929
20-24	93.0	56.6	78.4	51.5	28.2	1,719
25-29	96.0	60.6	80.1	48.6	27.2	1,577
30-39	93.2	58.5	74.9	49.8	27.6	2,488
40-49	95.0	54.8	70.4	49.4	24.6	1,478
Marital status						
Never married	89.8	57.9	78.1	51.0	30.1	2,167
Ever had sex	93.6	62.8	82.3	51.1	33.7	972
Never had sex	86.7	54.0	74.7	50.9	27.2	1,194
Married/living together	93.6	55.5	73.6	49.3	24.9	5,885
Divorced/separated/ widowed	93.5	58.9	76.5	47.2	26.0	1,139
Residence						
Urban	97.4	73.3	89.8	51.8	36.5	2,450
Rural	90.9	50.4	69.6	48.6	22.6	6,741
Region						
Mainland	92.7	56.2	74.7	49.1	26.0	8,885
Arusha	89.8	67.5	72.2	69.6	41.8	362
Dar es Salaam	98.7	76.9	95.1	43.6	32.4	797
Dodoma	95.2	59.0	85.1	31.5	17.1	335
Iringa	93.3	49.3	75.8	49.2	20.3	400
Kagera	96.0	55.5	74.5	46.5	25.4	485
Kigoma	92.1	53.5	68.6	50.8	25.3	414
Kilimanjaro	97.3	66.3	85.7	52.4	36.0	379
Lindi	99.4	61.0	85.5	41.4	34.0	246
Manyara	87.9	68.2	66.3	63.0	37.6	259
Mara	92.7	60.2	73.4	59.1	30.1	360
Mbeya	89.6	54.4	69.7	58.8	27.2	576
Morogoro	94.6	61.0	76.0	44.1	25.6	432
Mtwara	99.4	53.5	80.4	30.4	17.1	324
Mwanza	90.0	56.3	71.1	48.5	27.6	821
Pwani	95.8	58.7	81.4	50.1	29.5	203
Rukwa	88.7	50.8	69.3	59.6	27.0	287
Ruvuma	94.6	61.6	79.2	52.1	28.3	367
Shinyanga	87.4	37.0	57.9	48.0	17.5	706
Singida	93.4	55.0	75.1	36.1	15.0	193
Tabora	87.1	36.9	53.9	56.4	17.0	516
Tanga	91.4	47.2	82.8	38.6	18.6	423
Zanzibar	90.5	63.3	85.1	57.7	34.4	306
Pemba	87.9	48.6	78.5	55.8	24.3	94
Unguja	91.6	69.8	88.1	58.6	38.8	212
Education						
No education	86.6	37.0	54.9	44.2	14.4	1,897
Primary incomplete	88.2	44.1	67.2	48.1	18.2	1,486
Primary complete	95.5	63.1	81.7	50.2	29.7	4,909
Secondary +	97.2	82.0	93.9	58.5	46.1	898
Total 15-49	92.7	56.5	75.0	49.4	26.3	9,191

Table 6.2 Accepting attitudes toward those living with HIV/AIDS: Men

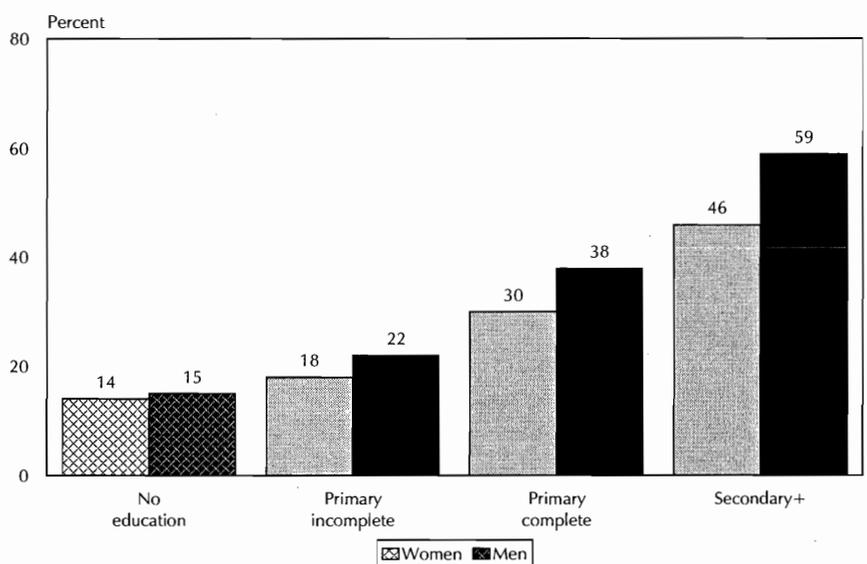
Among men age 15-49 who have heard of HIV/AIDS, percentage expressing specific accepting attitudes toward people with HIV/AIDS, by background characteristics, Tanzania HMIS 2007-08

Background characteristic	Percentage of men who:					Number of men who have heard of AIDS
	Are willing to care for a family member with the AIDS virus in the respondent's home	Would buy fresh vegetables from shopkeeper who has the AIDS virus	Say that a female teacher with the AIDS virus and is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with the AIDS virus	Percentage expressing acceptance attitudes on all four indicators	
Age						
15-24	90.8	60.9	73.4	55.9	30.9	2,858
15-19	87.9	56.8	73.4	52.6	26.9	1,720
20-24	95.2	67.1	73.5	60.7	36.9	1,139
25-29	94.1	67.2	76.6	63.9	41.0	998
30-39	96.5	69.4	76.1	60.2	37.1	1,837
40-49	95.3	65.7	77.8	59.5	35.1	1,204
Marital status						
Never married	90.4	62.3	75.1	56.9	33.0	2,868
Ever had sex	92.4	65.5	76.8	58.6	35.4	1,512
Never had sex	88.1	58.6	73.3	55.1	30.4	1,356
Married/living together	95.8	67.3	75.6	60.7	36.6	3,686
Divorced/separated/widowed	96.7	61.4	74.7	54.3	29.5	343
Residence						
Urban	97.4	80.9	89.1	65.6	49.6	1,692
Rural	92.3	59.7	70.9	56.6	29.9	5,205
Region						
Mainland	93.5	64.6	75.0	58.7	34.5	6,687
Arusha	90.5	76.2	77.2	68.9	47.7	253
Dar es Salaam	99.8	88.8	93.7	65.6	56.1	578
Dodoma	92.9	64.8	78.8	47.7	27.1	251
Iringa	92.0	65.0	79.7	63.0	34.7	282
Kagera	94.2	61.3	78.3	48.4	30.5	394
Kigoma	95.1	67.0	75.7	64.3	42.8	292
Kilimanjaro	91.8	62.9	76.0	56.6	31.6	271
Lindi	98.9	69.4	88.5	46.4	33.8	164
Manyara	95.4	59.9	68.1	63.4	38.6	200
Mara	95.0	76.8	75.3	68.6	40.9	240
Mbeya	93.4	69.5	75.3	72.5	44.9	491
Morogoro	93.4	60.5	78.4	56.7	31.2	340
Mtwara	98.7	69.9	78.3	49.7	31.6	209
Mwanza	94.8	60.5	69.4	50.7	28.4	592
Pwani	94.9	65.9	83.8	58.1	35.0	119
Rukwa	93.6	70.3	71.1	67.0	39.1	262
Ruvuma	95.6	62.1	85.5	63.3	37.4	284
Shinyanga	87.0	48.2	57.3	56.9	22.5	618
Singida	92.6	56.0	78.7	41.0	22.5	152
Tabora	90.7	48.0	56.1	62.2	21.1	401
Tanga	88.7	59.8	75.0	46.0	21.9	295
Zanzibar	94.6	75.4	86.9	62.5	43.7	210
Pemba	92.9	66.9	86.4	54.2	31.8	63
Unguja	95.2	79.1	87.2	66.0	48.8	147
Education						
No education	87.8	41.7	53.3	48.2	14.8	803
Primary incomplete	87.8	50.0	67.0	50.9	21.6	1,500
Primary complete	96.2	70.0	79.0	61.2	37.9	3,579
Secondary +	97.3	87.5	92.3	70.6	59.1	1,016
Total 15-49	93.6	64.9	75.4	58.8	34.8	6,898

Almost all women and men age 15-49 (93 and 94 percent, respectively) are willing to care for a family member with HIV in their own household, and 57 percent of women and two-thirds of men would buy fresh vegetables from a vendor with AIDS. Three in four women and men also believe that an HIV-positive female teacher should be allowed to continue teaching. However, less than half of women and 59 percent of men do not believe that the HIV-positive status of a family member should be kept a secret. The four measures can be combined to provide a single measure of the percentage of women and men who show

accepting attitudes towards persons who have AIDS. It is discouraging to note that 26 percent of women and 35 percent of men express accepting attitudes on all four measures. Urban respondents are more likely to express accepting attitudes towards people with AIDS than rural residents. For all indicators, acceptance attitudes have a positive relationship with the person's education. For example, 14 percent of women with no education express accepting attitudes on all four measures compared with 46 percent of women with secondary education. The corresponding percentages for men are 15 and 59 percent, respectively.

Figure 2 Accepting Attitudes Towards HIV/AIDS



THMIS 2007-08

Recent Sexual Activity

In the absence of contraception, the chance of becoming pregnant is related to the frequency of sexual intercourse. Thus, information on sexual activity can be used to refine measures of exposure to pregnancy. Women and men were asked how long ago their last sexual activity occurred. The responses to this question allow for an assessment of recent sexual activity (in the four weeks preceding the survey).

Tables 7.1 and 7.2 show the distribution of women and men according to timing of last sexual activity, by background characteristics. Thirteen percent of women age 15-49 and 20 percent of men age 15-49 have never had sexual intercourse. More than half of women and men had a recent (within the past four weeks) sexual encounter, and 10 percent of women and 8 percent of men report to have had their last sexual encounter more than one year before the survey.

As expected, recent sexual activity is less common among the youngest age group (15-19); 54 percent of women and 64 percent of men in this age group have never had sexual intercourse. Recent sexual activity is more common among the currently married, with 78 percent of women and 86 percent of men having had sex in the four weeks before the survey. Male-female differences are largest for those who are formerly married: the proportion of these men who report a recent sexual encounter is almost twice that of women (51 percent and 28 percent, respectively). Small differences are found between urban and rural respondents and across regions.

Table 7.1 Recent sexual activity: Women

Percent distribution of women age 15-49 by timing of last sexual intercourse, according to background characteristics, Tanzania HMIS 2007-08

Background characteristic	Timing of last sexual intercourse				Never had sexual intercourse	Total	Number of women
	Within the past 4 weeks	Within 1 year ¹	One or more years	Missing			
Age							
15-19	23.7	17.2	4.9	0.1	54.1	100.0	1,984
20-24	59.2	25.1	8.4	0.3	7.1	100.0	1,746
25-29	68.2	23.1	6.9	0.3	1.4	100.0	1,603
30-34	68.8	20.2	10.0	0.3	0.7	100.0	1,346
35-39	67.8	22.7	9.3	0.1	0.1	100.0	1,175
40-44	67.6	16.7	15.4	0.2	0.0	100.0	774
45-49	59.7	16.4	23.2	0.6	0.1	100.0	714
Marital status							
Never married	12.8	20.5	11.0	0.1	55.6	100.0	2,214
Married or living together	78.0	17.9	3.8	0.3	0.0	100.0	5,983
Divorced/separated/ widowed	27.8	35.7	36.2	0.3	0.0	100.0	1,147
Marital duration²							
0-4 years	77.5	19.1	2.9	0.5	0.0	100.0	1,363
5-9 years	78.2	18.6	2.9	0.3	0.0	100.0	1,116
10-14 years	74.7	20.3	4.8	0.2	0.0	100.0	814
15-19 years	79.3	17.1	3.6	0.1	0.0	100.0	661
20-24 years	78.5	16.5	5.0	0.0	0.0	100.0	484
25+ years	74.0	17.2	8.5	0.4	0.0	100.0	402
Married more than once	81.4	15.4	3.0	0.2	0.0	100.0	1,143
Residence							
Urban	52.1	22.3	10.1	0.5	15.0	100.0	2,459
Rural	57.9	20.1	9.2	0.2	12.5	100.0	6,884
Region							
Mainland	56.7	21.0	9.6	0.3	12.5	100.0	9,034
Arusha	51.6	19.1	13.3	0.7	15.3	100.0	383
Dar es Salaam	50.8	22.7	12.6	0.4	13.5	100.0	797
Dodoma	53.8	22.1	10.8	0.0	13.3	100.0	338
Iringa	45.2	21.4	21.2	0.0	12.1	100.0	403
Kagera	59.5	16.2	10.0	0.0	14.3	100.0	495
Kigoma	57.5	14.6	6.2	0.0	21.8	100.0	414
Kilimanjaro	44.9	21.7	11.5	0.0	21.9	100.0	379
Lindi	59.4	21.7	7.4	0.7	10.8	100.0	246
Manyara	51.5	20.2	11.0	0.0	17.2	100.0	263
Mara	55.8	23.9	8.7	1.2	10.4	100.0	368
Mbeya	61.8	14.1	10.4	0.0	13.7	100.0	581
Morogoro	59.8	23.6	9.3	0.3	7.0	100.0	436
Mtwara	60.0	24.7	7.2	0.0	8.1	100.0	324
Mwanza	60.2	20.2	6.7	0.0	12.9	100.0	833
Pwani	51.9	25.6	10.2	0.0	12.3	100.0	203
Rukwa	59.7	18.9	9.8	0.0	11.6	100.0	314
Ruvuma	57.7	21.1	13.7	0.3	7.2	100.0	372
Shinyanga	67.2	19.3	4.9	0.3	8.3	100.0	750
Singida	53.5	27.7	4.3	0.0	14.5	100.0	194
Tabora	61.2	23.3	5.5	0.8	9.3	100.0	518
Tanga	51.4	28.4	9.1	0.6	10.4	100.0	424
Zanzibar	47.9	12.7	6.2	0.0	33.1	100.0	309
Pemba	50.0	11.8	5.4	0.1	32.7	100.0	94
Unguja	47.0	13.2	6.5	0.0	33.3	100.0	214
Education							
No education	63.5	20.4	12.2	0.3	3.7	100.0	1,980
Primary incomplete	51.3	17.5	6.8	0.3	24.0	100.0	1,518
Primary complete	58.7	21.9	9.1	0.3	10.1	100.0	4,940
Secondary +	36.6	20.2	10.2	0.1	32.9	100.0	906
Total	56.4	20.7	9.5	0.2	13.2	100.0	9,343

¹ Excludes women who had sexual intercourse within the past 4 weeks² Excludes women who are not currently married

Table 7.2 Recent sexual activity: Men

Percent distribution of men age 15-49 by timing of last sexual intercourse, according to background characteristics, Tanzania HMIS 2007-08

Background characteristic	Timing of last sexual intercourse				Never had sexual intercourse	Total	Number of men
	Within the past 4 weeks	Within 1 year ¹	One or more years	Missing			
Age							
15-19	11.6	13.4	10.5	0.0	64.4	100.0	1,768
20-24	44.6	24.6	13.0	0.0	17.8	100.0	1,148
25-29	69.2	19.8	6.2	0.2	4.5	100.0	1,004
30-34	78.0	16.4	4.6	0.2	0.8	100.0	1,004
35-39	79.5	14.7	4.3	0.7	0.8	100.0	842
40-44	79.8	13.6	5.0	1.3	0.3	100.0	628
45-49	83.2	12.2	3.9	0.4	0.3	100.0	581
Marital status							
Never married	17.4	20.1	14.6	0.0	48.0	100.0	2,931
Married or living together	85.5	12.5	1.4	0.5	0.0	100.0	3,701
Divorced/separated/widowed	51.1	32.4	15.8	0.6	0.0	100.0	343
Marital duration²							
0-4 years	85.5	13.5	0.6	0.4	0.0	100.0	831
5-9 years	83.2	14.1	2.1	0.6	0.0	100.0	738
10-14 years	82.6	15.8	1.0	0.6	0.0	100.0	516
15-19 years	89.9	8.9	0.9	0.3	0.0	100.0	406
20-24 years	83.2	13.7	1.7	1.4	0.0	100.0	277
25+ years	92.6	3.0	4.4	0.0	0.0	100.0	115
Married more than once	87.2	10.8	1.6	0.4	0.0	100.0	818
Residence							
Urban	47.1	19.7	11.1	0.4	21.7	100.0	1,699
Rural	57.8	15.7	6.6	0.3	19.6	100.0	5,276
Region							
Mainland	55.6	16.9	7.7	0.3	19.5	100.0	6,763
Arusha	50.1	19.4	8.1	0.4	21.9	100.0	262
Dar es Salaam	47.0	19.4	12.8	0.8	20.0	100.0	580
Dodoma	55.1	19.8	8.6	1.5	15.1	100.0	255
Iringa	46.1	20.8	10.4	0.4	22.2	100.0	286
Kagera	49.4	10.3	11.1	0.4	28.9	100.0	397
Kigoma	57.6	9.9	3.3	0.0	29.2	100.0	292
Kilimanjaro	38.7	22.7	13.6	0.0	25.0	100.0	271
Lindi	69.0	20.0	3.8	0.0	7.2	100.0	164
Manyara	54.5	19.6	3.7	0.0	22.3	100.0	203
Mara	51.0	17.6	4.8	0.3	26.3	100.0	243
Mbeya	51.2	14.6	10.8	0.0	23.4	100.0	496
Morogoro	62.9	15.3	8.4	0.0	13.5	100.0	340
Mtwara	63.9	21.9	8.0	0.0	6.2	100.0	209
Mwanza	57.8	13.3	7.9	0.6	20.4	100.0	608
Pwani	47.5	28.0	4.1	0.0	20.3	100.0	119
Rukwa	59.6	15.3	7.8	0.8	16.5	100.0	264
Ruvuma	62.1	20.2	5.8	0.0	11.9	100.0	287
Shinyanga	66.6	12.2	3.8	0.0	17.4	100.0	633
Singida	45.3	21.0	11.0	0.5	22.3	100.0	153
Tabora	67.1	15.9	2.8	0.0	14.1	100.0	404
Tanga	53.6	21.9	6.7	0.5	17.2	100.0	298
Zanzibar	42.5	10.7	4.9	0.5	41.5	100.0	212
Pemba	41.5	7.0	2.5	0.3	48.7	100.0	63
Unguja	42.9	12.3	6.0	0.5	38.4	100.0	148
Education							
No education	66.1	17.1	5.2	0.0	11.6	100.0	829
Primary incomplete	43.8	15.1	6.6	0.1	34.3	100.0	1,534
Primary complete	62.7	16.9	7.4	0.4	12.6	100.0	3,597
Secondary +	37.0	17.9	12.0	0.4	32.7	100.0	1,016
Total 15-49	55.2	16.7	7.7	0.3	20.2	100.0	6,975

¹ Excludes men who had sexual intercourse within the past 4 weeks² Excludes men who are not currently married

Higher-risk Sexual Behaviour

Information on sexual behaviour is important in designing and monitoring intervention programmes to control the spread of HIV. The 2007-08 THMIS included questions on respondents' sexual partners during their lifetime and over the 12 months preceding the survey. For male respondents, an additional question was asked on whether they paid for sex during the 12 months preceding the interview. Information on the use of condoms at the last sexual intercourse with each type of partner was collected for women and men. Because of the sensitivity of these questions, it is recognized that some respondents may have been reluctant to provide information on their recent sexual behaviour.

Tables 8.1 and 8.2 show the proportion of women and men age 15-49 who had sexual intercourse with more than one partner in the past 12 months, and the proportion who had higher-risk sexual intercourse (sexual intercourse with a non-marital, non-cohabiting partner) by background characteristics.

Three percent of women and 25 percent of men age 15-49 who had sex in the 12 months preceding the survey had sex with two or more partners. Sexual intercourse with a non-marital, non-cohabiting partner is not uncommon. One in five women (21 percent) and 41 percent of men age 15-49 who had sex in the past 12 months reported having had sex with a non-marital, non-cohabiting partner. While condom use is common with higher-risk partners, it is far from universal. Forty-three percent of women and 53 percent of men who had sex with a non-marital, non-cohabiting partner in the 12 months preceding the survey used a condom the last time they had sex with such a partner.

By definition, all sexual activity among women and men who have never married is higher-risk sex. Among married women and men age 15-49 who had sex in the past 12 months, 3 percent of women and 19 percent of men engaged in higher-risk sex. Never-married women are somewhat more likely than married women to use condoms during higher-risk sex (48 and 39 percent, respectively). However, never-married men are less likely than married men to use a condom during higher-risk sex (51 percent and 58 percent, respectively). Divorced, separated, and widowed men are the least likely group of men to use a condom during higher-risk sex (50 percent).

There is a general increase in both higher-risk sex and condom use during higher-risk sex with increasing level of education. It is worth noting, however, that engagement in higher-risk sex is highest among women with secondary education (34 percent) and men with incomplete primary education (52 percent).

The mean number of lifetime sexual partners is 2.4 for women and 6.8 for men. While in general there are small variations across subgroups of women, the mean number of lifetime sexual partners among older men and formerly married is much higher than that of other men. On average, men in Mainland Tanzania have twice as many sexual partners in their lifetime as men in Zanzibar (6.8 compared with 3.1).

Table 8.1 Multiple sexual partners and higher-risk sexual intercourse in the past 12 months: Women

Among women age 15-49 who had sexual intercourse in the past 12 months, the percentage who had intercourse with more than one partner and the percentage who had higher-risk sexual intercourse in the past 12 months; and among those having higher-risk intercourse in the past 12 months, the percentage reporting that a condom was used at last higher-risk intercourse; and the mean number of sexual partners during her lifetime for women who ever had sexual intercourse, by background characteristics, Tanzania HMIS 2007-08

Background characteristic	Among women who had sexual intercourse in the past 12 months;			Among women who had higher risk inter-course in the past 12_months:		Among women who ever had sexual intercourse	
	Percentage who had 2+ partners in the past 12 months	Percentage who had higher-risk in the past 12 months ¹	Number	Percentage who reported using a condom at last higher-risk intercourse ¹	Number	Mean number of sexual partners in lifetime	Number
Age							
15-24	4.1	31.5	2,282	46.3	719	2.0	2,529
15-19	4.8	49.1	810	48.2	398	1.8	907
20-24	3.7	21.9	1,472	43.9	322	2.1	1,622
25-29	2.8	15.6	1,465	42.0	229	2.4	1,568
30-39	3.4	15.8	2,262	41.6	357	2.6	2,499
40-49	2.9	14.8	1,196	32.3	177	2.8	1,478
Marital status							
Never married	4.3	98.8	737	48.1	728	2.3	978
Married or living together	2.6	3.2	5,739	38.8	185	2.3	5,958
Divorced/separated/widowed	8.6	78.1	728	37.3	569	3.4	1,138
Residence							
Urban	3.1	28.9	1,831	51.7	529	2.6	2,078
Rural	3.5	17.7	5,374	37.8	952	2.4	5,996
Region							
Mainland	3.5	20.8	7,017	43.1	1,462	2.5	7,868
Arusha	0.3	14.7	271	(34.7)	40	1.8	320
Dar es Salaam	3.4	30.6	586	64.2	179	2.5	689
Dodoma	6.2	19.1	256	(38.4)	49	2.5	293
Iringa	1.1	16.3	268	(44.9)	44	2.0	352
Kagera	3.3	15.7	375	(37.7)	59	2.0	422
Kigoma	0.7	12.6	298	(28.5)	37	1.7	324
Kilimanjaro	1.4	20.7	253	(57.6)	52	1.9	296
Lindi	6.2	27.5	200	45.5	55	3.7	218
Manyara	0.8	10.6	189	(7.7)	20	2.3	214
Mara	5.5	29.6	293	43.5	87	3.1	324
Mbeya	0.7	8.7	441	*	38	1.5	501
Morogoro	2.7	20.2	364	(54.2)	73	2.6	404
Mtwara	7.5	24.6	274	28.1	68	4.0	296
Mwanza	3.9	23.8	670	40.0	159	3.2	720
Pwani	5.6	31.2	158	36.7	49	3.0	178
Rukwa	0.2	9.3	247	*	23	1.5	276
Ruvuma	4.3	24.8	293	42.8	73	3.0	344
Shinyanga	3.1	19.6	648	36.8	127	2.5	686
Singida	4.6	19.2	157	(16.0)	30	2.2	166
Tabora	6.9	25.6	437	43.3	112	2.8	466
Tanga	5.1	25.7	339	50.2	87	2.0	380
Zanzibar	0.5	10.3	187	20.3	19	1.7	206
Pemba	0.0	1.6	58	*	1	1.5	63
Unguja	0.8	14.2	129	20.3	18	1.8	143
Education							
No education	2.6	13.8	1,663	30.3	229	2.3	1,898
Primary incomplete	4.0	24.4	1,046	31.4	256	2.8	1,147
Primary complete	3.7	20.6	3,984	46.0	822	2.4	4,426
Secondary +	2.5	34.1	511	60.8	174	2.1	603
Total 15-49	3.4	20.6	7,205	42.8	1,482	2.4	8,074

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

¹ Sexual intercourse with a non-marital, non-cohabiting partner

Table 8.2 Multiple sexual partners and higher-risk sexual intercourse in the past 12 months: Men

Among men age 15-49 who had sexual intercourse in the past 12 months, the percentage who had intercourse with more than one partner and the percentage who had higher-risk sexual intercourse in the past 12 months; and among those having more than one partner in the past 12 months, the percentage reporting that a condom was used at last intercourse; and among those having higher-risk intercourse in the past 12 months, the percentage reporting that a condom was used at last higher-risk intercourse; and the mean number of sexual partners during his lifetime for men who ever had sexual intercourse, by background characteristics, Tanzania HMIS 2007-08

Background characteristic	Among men who had sexual intercourse in the past 12 months:			Among men who had 2+ partners in the past 12 months:		Among men who had higher risk intercourse in the past 12 months:		Among men who ever had sexual intercourse	
	Percentage who had 2+ partners in the past 12 months	Percentage who had higher-risk intercourse in the past 12 months ¹	Number	Percentage who reported using a condom at last sexual intercourse	Number	Percentage who reported using a condom at last higher-risk intercourse ¹	Number	Mean number of sexual partners in lifetime	Number
Age									
15-24	22.0	79.8	1,237	36.9	272	49.0	987	3.6	1,564
15-19	14.2	95.3	443	42.0	63	41.3	422	2.5	625
20-24	26.4	71.1	794	35.3	209	54.7	565	4.3	939
25-29	24.1	41.2	894	34.4	215	60.2	368	6.0	951
30-39	26.8	25.9	1,741	15.8	466	57.2	451	8.1	1,778
40-49	25.6	20.1	1,142	10.5	292	53.1	230	9.7	1,148
Marital status									
Never married	18.5	99.4	1,097	54.0	203	51.2	1,091	3.8	1,517
Married or living together	25.8	18.9	3,629	13.5	937	57.9	687	7.6	3,590
Divorced/separated/ widowed	37.0	89.9	287	40.1	106	49.5	258	11.2	333
Residence									
Urban	20.3	46.8	1,135	35.2	231	69.9	531	6.3	1,299
Rural	26.2	38.8	3,879	19.5	1,015	47.4	1,505	6.9	4,142
Region									
Mainland	25.0	41.0	4,901	22.7	1,224	53.5	2,011	6.8	5,318
Arusha	8.1	31.1	182	*	15	(43.6)	57	5.6	199
Dar es Salaam	18.7	49.5	385	(40.0)	72	79.8	191	6.6	456
Dodoma	28.6	50.8	191	(25.4)	55	50.5	97	7.2	211
Iringa	27.0	41.1	192	(37.9)	52	58.5	79	5.5	221
Kagera	17.6	22.1	237	(5.7)	42	(53.9)	52	4.0	273
Kigoma	12.7	22.5	197	*	25	(52.2)	44	3.9	201
Kilimanjaro	16.2	40.9	167	*	27	67.6	68	5.1	199
Lindi	30.8	49.0	146	29.7	45	58.0	72	8.4	150
Manyara	9.8	32.9	150	*	15	27.8	50	5.6	153
Mara	32.1	46.0	167	12.1	54	37.1	77	9.7	177
Mbeya	27.8	29.4	326	(17.3)	91	74.5	96	5.5	380
Morogoro	19.8	33.5	266	(20.7)	53	64.1	89	7.4	293
Mtwara	32.2	48.9	179	(22.1)	58	52.9	88	8.3	192
Mwanza	36.1	49.7	433	26.5	156	48.4	215	8.5	460
Pwani	20.5	47.2	90	*	18	(61.9)	42	6.2	93
Rukwa	23.7	33.2	198	(13.1)	47	48.2	66	5.8	219
Ruvuma	22.9	51.0	236	(25.2)	54	61.8	120	6.9	246
Shinyanga	31.8	41.9	499	7.9	159	28.4	209	8.9	520
Singida	21.2	37.5	101	(26.4)	21	46.6	38	5.6	117
Tabora	27.9	46.3	335	21.7	94	41.4	155	8.6	328
Tanga	32.7	47.3	225	36.9	74	66.4	106	5.5	227
Zanzibar	19.9	22.5	113	4.2	22	32.9	25	3.1	123
Pemba	15.8	7.3	31	2.4	5	(24.0)	2	2.4	32
Unguja	21.4	28.2	82	4.7	18	33.8	23	3.3	91
Education									
No education	24.6	35.7	689	15.5	170	39.3	246	7.6	719
Primary incomplete	29.2	51.7	904	26.0	264	44.0	468	5.7	982
Primary complete	24.3	36.8	2,862	20.9	695	55.2	1,054	7.0	3,068
Secondary +	21.0	48.1	558	33.3	117	74.6	268	6.0	672
Total 15-49	24.9	40.6	5,014	22.4	1,246	53.3	2,036	6.8	5,441

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

¹ Sexual intercourse with a non-marital, non-cohabiting partner

Paid Sex

Sex with commercial sex workers is considered to be higher-risk sexual behaviour. Male respondents in the 2007-08 THMIS were asked whether they had paid money in exchange for sex in the past 12 months or if any of their last three partners in the past 12 months was a commercial sex worker. They were also asked about condom use at these sexual encounters. Table 9 shows that 8 percent of men age 15-49 reported having had sex with a prostitute in the 12 months preceding the survey. Paid sex occurs most frequently among men age 20-24 (13 percent) and men who are divorced, separated, or widowed (23 percent). Having sex with commercial sex workers is far less common in Zanzibar than in the Tanzania Mainland, with just 1 percent of men in Zanzibar having paid for sex in the past year compared with 9 percent in Mainland.

About six in ten men who paid for sex reported using a condom the last time they had sex with a prostitute. Because the number of men who reported having sex with prostitutes is so small, it is not possible to interpret with confidence the differentials in condom use by region. However, men in urban areas and those with higher education are more likely than other men to have used condoms in these encounters (78 and 79 percent, respectively).

Table 9 Payment for sexual intercourse and condom use at last paid sexual intercourse:
Men

Percentage of men age 15-49 reporting payment for sexual intercourse in the past 12 months, and among them, the percentage reporting that a condom was used the last time they paid for sexual intercourse, by background characteristics, Tanzania HMIS 2007-08

Background characteristic	Payment for sexual intercourse in the past 12 months		Condom use at last paid sexual intercourse	
	Percentage who paid for sexual intercourse	Number of men	Percentage reporting condom	Number of men who paid for sexual intercourse in the past 12 months
Age				
15-24	8.1	2,916	57.2	236
15-19	4.6	1,768	55.6	82
20-24	13.4	1,148	58.0	154
25-29	10.8	1,004	60.6	108
30-39	8.9	1,846	62.6	165
40-49	5.5	1,210	61.8	67
Marital status				
Never married	8.4	2,931	58.4	246
Married or living together	6.8	3,701	61.7	253
Divorced/separated/widowed	22.5	343	58.7	77
Residence				
Urban	6.5	1,699	77.9	110
Rural	8.8	5,276	55.7	465
Region				
Mainland	8.5	6,763	59.9	574
Zanzibar	0.7	212	*	2
Education				
No education	10.4	829	53.2	86
Primary incomplete	9.0	1,534	60.2	138
Primary complete	8.8	3,597	59.4	316
Secondary +	3.5	1,016	(79.3)	36
Total 15-49	8.3	6,975	59.9	576

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

Prior HIV Testing

Voluntary counselling and testing (VCT) is vital in the fight against HIV/AIDS. Knowledge of HIV status helps HIV-negative individuals make specific decisions to reduce risk and increase safer sex practices so they can remain disease free. For those who are HIV positive, knowledge of their status allows them to take action to protect their sexual partners, to access treatment, and to plan for the future.

The 2007-08 THMIS asked all respondents who had heard of AIDS whether they had ever been tested for the virus, when they were last tested, whether the test was voluntary or mandatory, whether they received the test results, and where they went for the test. If they have not been tested, they were asked whether they would like to be tested, and whether they know where to go for the test. Respondents who have never been tested were asked if they know a place where they can go to get tested. Tables 10.1 and 10.2 present the results of these questions.

Respondents were asked if they know where to get an HIV test. The results indicate a generally high level of knowledge of where an HIV test can be obtained. Eight in ten women (81 percent) and 86 percent of men age 15-49 know where to go for an HIV test.

Among respondents age 15-49, 37 percent of women and 27 percent of men had been tested for HIV at some time in their life (ever tested) and received the results. Nineteen percent of women and men age 15-49 were tested for HIV and received the results in the past 12 months. This means that almost half of the population that has ever been tested for HIV were tested during the 12 months preceding the survey.

In the four years between the 2003-04 THIS and the 2007-08 THMIS, the proportion of women and men age 15-49 who had been tested for HIV doubled, from 15 to 41 percent for women and from 15 to 29 percent for men. The proportion of women and men who were tested and received the results in the 12 months preceding the survey increased almost four-fold, from 5 to 19 percent for women and from 7 to 19 percent for men.

Table 10.1 Coverage of prior HIV testing: Women

Percentage of women age 15-49 who know where to get an HIV test, percent distribution of women age 15-49 by testing status and by whether they received the results of the last test, the percentage of women ever tested, and the percentage of women age 15-49 who received their test results the last time they were tested for HIV in the past 12 months, according to background characteristics, Tanzania HMIS 2007-08

Background characteristic	Percentage who know where to get an HIV test	Percent distribution of women by testing status and by whether they received the results of the last test			Total	Percentage ever tested	Percentage who received results from last HIV test taken in the past 12 months	Number of women
		Ever tested and received results	Ever tested, but did not receive results	Never tested ¹				
Age								
15-24	76.1	33.3	3.8	62.9	100.0	37.1	18.4	3,730
15-19	68.0	21.8	2.5	75.7	100.0	24.3	14.7	1,984
20-24	85.3	46.4	5.3	48.3	100.0	51.7	22.6	1,746
25-29	86.5	50.1	3.0	46.8	100.0	53.2	24.9	1,603
30-39	83.8	40.4	4.4	55.2	100.0	44.8	18.9	2,521
40-49	81.0	27.4	3.0	69.6	100.0	30.4	15.0	1,488
Marital status								
Never married	73.4	23.7	2.6	73.7	100.0	26.3	15.6	2,214
Ever had sex	85.5	40.8	3.7	55.5	100.0	44.5	24.4	983
Never had sex	63.7	10.0	1.7	88.3	100.0	11.7	8.5	1,231
Married/living together	82.5	41.3	4.0	54.7	100.0	45.3	20.1	5,983
Divorced/separated/widowed	85.8	41.8	4.2	54.0	100.0	46.0	20.9	1,147
Residence								
Urban	90.4	51.5	2.9	45.6	100.0	54.4	24.4	2,459
Rural	77.3	32.1	4.0	64.0	100.0	36.0	17.2	6,884
Region								
Mainland	80.7	37.5	3.8	58.7	100.0	41.3	19.3	9,034
Arusha	76.4	34.0	0.4	65.6	100.0	34.4	14.6	383
Dar es Salaam	93.2	59.7	1.5	38.8	100.0	61.2	26.5	797
Dodoma	87.1	28.5	4.2	67.3	100.0	32.7	17.2	338
Iringa	85.9	49.1	2.7	48.2	100.0	51.8	27.2	403
Kagera	85.2	33.0	8.6	58.4	100.0	41.6	17.9	495
Kigoma	93.5	53.5	1.3	45.2	100.0	54.8	28.7	414
Kilimanjaro	92.9	51.4	2.8	45.8	100.0	54.2	23.5	379
Lindi	85.2	35.2	3.9	60.9	100.0	39.1	21.8	246
Manyara	71.3	29.6	1.0	69.4	100.0	30.6	16.6	263
Mara	77.5	33.2	3.6	63.2	100.0	36.8	20.6	368
Mbeya	69.9	33.1	7.6	59.3	100.0	40.7	19.2	581
Morogoro	79.9	37.2	5.6	57.3	100.0	42.7	15.6	436
Mtwara	83.1	29.0	2.1	68.9	100.0	31.1	15.1	324
Mwanza	71.0	30.5	6.7	62.9	100.0	37.1	14.0	833
Pwani	80.6	44.4	4.3	51.3	100.0	48.7	14.6	203
Rukwa	53.2	21.4	3.6	75.0	100.0	25.0	11.4	314
Ruvuma	88.0	40.3	2.9	56.8	100.0	43.2	25.0	372
Shinyanga	68.5	19.2	3.3	77.5	100.0	22.5	12.4	750
Singida	86.7	42.9	2.8	54.4	100.0	45.6	21.9	194
Tabora	89.7	41.8	2.7	55.6	100.0	44.4	20.2	518
Tanga	83.6	40.7	2.8	56.6	100.0	43.4	23.5	424
Zanzibar	82.0	26.3	1.6	72.1	100.0	27.9	12.2	309
Pemba	82.7	23.9	2.0	74.1	100.0	25.9	12.1	94
Unguja	81.7	27.3	1.4	71.2	100.0	28.8	12.2	214
Education								
No education	66.7	25.3	3.0	71.7	100.0	28.3	12.4	1,983
Primary incomplete	69.1	25.7	4.2	70.2	100.0	29.8	12.0	1,517
Primary complete	87.7	43.2	4.1	52.7	100.0	47.3	22.2	4,945
Secondary +	93.3	49.3	2.3	48.4	100.0	51.6	29.1	898
Total 15-49	80.8	37.2	3.7	59.1	100.0	40.9	19.1	9,343

¹ Includes 'don't know/missing'

Table 10.2 Coverage of prior HIV testing: Men

Percentage of men age 15-49 who know where to get an HIV test, percent distribution of men age 15-49 by testing status and by whether they received the results of the last test, the percentage of men ever tested, and the percentage of men age 15-49 who received their test results the last time they were tested for HIV in the past 12 months, according to background characteristics, Tanzania HMIS 2007-08

Background characteristic	Percentage who know where to get an HIV test	Percent distribution of men by testing status and by whether they received the results of the last test			Total	Percentage ever tested	Percentage who received results from last HIV test taken in the past 12 months	Number of men
		Ever tested and received results	Ever tested, but did not receive results	Never tested ¹				
Age								
15-24	79.8	19.1	1.9	78.9	100.0	21.1	15.2	2,916
15-19	74.0	12.8	1.8	85.4	100.0	14.6	11.2	1,768
20-24	88.8	28.9	2.1	69.0	100.0	31.0	21.3	1,148
25-29	90.8	34.1	2.5	63.4	100.0	36.6	22.8	1,004
30-39	91.9	32.3	3.4	64.4	100.0	35.6	22.6	1,846
40-49	87.6	28.9	3.7	67.4	100.0	32.6	18.8	1,210
Marital status								
Never married	79.6	19.5	1.9	78.6	100.0	21.4	15.2	2,931
Ever had sex	87.6	26.4	2.2	71.4	100.0	28.6	19.7	1,525
Never had sex	70.9	12.1	1.5	86.3	100.0	13.7	10.4	1,406
Married/living together	90.5	31.6	3.3	65.1	100.0	34.9	21.4	3,701
Divorced/separated/widowed	90.7	30.5	2.9	66.6	100.0	33.4	22.3	343
Residence								
Urban	92.8	34.8	2.6	62.5	100.0	37.5	22.2	1,699
Rural	83.7	23.8	2.7	73.5	100.0	26.5	17.8	5,276
Region								
Mainland	86.0	26.5	2.7	70.8	100.0	29.2	19.1	6,763
Arusha	84.0	33.6	0.4	66.0	100.0	34.0	26.2	262
Dar es Salaam	96.1	38.6	2.8	58.6	100.0	41.4	23.2	580
Dodoma	87.6	22.0	1.7	76.3	100.0	23.7	15.6	255
Iringa	83.1	28.6	5.5	65.9	100.0	34.1	24.0	286
Kagera	88.3	16.8	4.0	79.1	100.0	20.9	14.6	397
Kigoma	92.0	30.8	1.1	68.1	100.0	31.9	26.2	292
Kilimanjaro	92.4	30.4	4.2	65.4	100.0	34.6	23.0	271
Lindi	92.1	34.8	3.7	61.5	100.0	38.5	29.3	164
Manyara	76.1	21.7	0.3	78.0	100.0	22.0	18.6	203
Mara	84.1	28.5	3.3	68.2	100.0	31.8	22.4	243
Mbeya	84.5	26.3	3.1	70.6	100.0	29.4	20.2	496
Morogoro	81.7	21.5	3.4	75.1	100.0	24.9	14.2	340
Mtwara	92.4	14.7	2.7	82.6	100.0	17.4	10.9	209
Mwanza	80.6	21.0	2.1	76.9	100.0	23.1	14.2	608
Pwani	83.6	25.8	3.2	71.0	100.0	29.0	14.6	119
Rukwa	81.7	22.8	2.3	74.9	100.0	25.1	18.6	264
Ruvuma	90.2	30.3	3.9	65.8	100.0	34.2	23.6	287
Shinyanga	78.4	21.6	3.3	75.1	100.0	24.9	12.1	633
Singida	86.2	31.5	1.4	67.1	100.0	32.9	22.7	153
Tabora	88.1	29.2	1.1	69.7	100.0	30.3	20.6	404
Tanga	88.4	30.4	3.1	66.5	100.0	33.5	19.3	298
Zanzibar	83.2	25.2	1.5	73.3	100.0	26.7	10.9	212
Pemba	85.4	23.8	0.7	75.5	100.0	24.5	11.3	63
Unguja	82.2	25.8	1.8	72.4	100.0	27.6	10.8	148
Education								
No education	73.9	16.3	2.3	81.5	100.0	18.5	11.5	829
Primary incomplete	76.1	17.3	2.2	80.6	100.0	19.4	12.1	1,534
Primary complete	90.4	28.5	3.2	68.3	100.0	31.7	20.8	3,597
Secondary +	94.9	41.5	2.0	56.4	100.0	43.6	28.4	1,016
Total 15-49	86.0	26.5	2.7	70.8	100.0	29.2	18.9	6,975

¹ Includes 'don't know/missing'

Prevalence of Medical Injections

Non-sterile injections can pose a risk of infection with HIV and other diseases. To measure the potential risk of transmission of HIV associated with medical injections, respondents in the 2007-08 THMIS were asked if they had received an injection in the past 12 months and, if so, the number of injections. The results indicate that more women (35 percent) than men (21 percent) reported to have received a medical injection in the past 12 months. The average number of injections received per person in the previous 12 months (including people who received no injections at all) is 1.2 injections per woman age 15-49 and 0.8 injections per man age 15-49. No large differentials are observed by background characteristics of respondents.

Table 11 Prevalence of medical injections

Percentage of women and men age 15-49 who received at least one medical injection in the past 12 months, the average number of medical injections per person in the past 12 months, and among those who received a medical injection, the percentage of last medical injections for which the syringe and needle were taken from a new, unopened package, by background characteristics, Tanzania HMIS 2007-08

Background characteristic	Women					Men				
	Percentage who received a medical injection in the past 12 months	Average number of medical injections per person in the past 12 months	Number of women	For last injection, syringe and needle taken from a new, unopened package	Number of women receiving medical injections in the past 12 months	Percentage who received a medical injection in the past 12 months	Average number of medical injections per person in the past 12 months	Number of men	For last injection, syringe and needle taken from a new, unopened package	Number of men receiving medical injections in the past 12 months
Age										
15-24	38.6	1.2	3,730	98.3	1,440	20.6	0.7	2,916	95.7	600
15-19	33.1	1.0	1,984	98.0	656	19.9	0.7	1,768	96.4	351
20-24	44.9	1.4	1,746	98.5	784	21.7	0.7	1,148	94.6	249
25-29	40.3	1.3	1,603	97.6	646	23.6	0.8	1,004	93.4	237
30-39	34.1	1.3	2,521	99.0	859	21.8	0.9	1,846	95.8	402
40-49	21.8	1.0	1,488	95.0	325	21.1	0.9	1,210	97.9	255
Residence										
Urban	38.6	1.4	2,459	99.6	949	25.9	1.0	1,699	95.4	441
Rural	33.7	1.2	6,884	97.4	2,322	20.0	0.7	5,276	95.9	1,054
Region										
Mainland	35.3	1.2	9,034	98.0	3,185	21.5	0.8	6,763	95.7	1,451
Arusha	32.9	0.8	383	99.0	126	19.6	0.6	262	94.0	51
Dar es Salaam	43.4	1.5	797	99.5	346	30.2	1.1	580	98.2	175
Dodoma	28.8	0.9	338	99.0	97	15.9	0.6	255	(97.6)	41
Iringa	29.4	1.0	403	98.9	118	23.4	0.8	286	(93.9)	67
Kagera	47.0	1.3	495	97.4	232	27.5	1.3	397	94.8	109
Kigoma	26.7	0.8	414	98.7	111	17.5	0.6	292	(98.2)	51
Kilimanjaro	45.3	1.3	379	98.8	172	37.3	0.9	271	96.3	101
Lindi	34.3	1.2	246	99.2	84	24.0	1.1	164	96.8	39
Manyara	28.7	0.9	263	92.8	76	10.6	0.3	203	(92.1)	21
Mara	37.5	1.8	368	99.4	138	19.1	0.9	243	97.0	47
Mbeya	26.2	1.0	581	98.6	152	21.9	0.7	496	95.8	108
Morogoro	37.2	1.2	436	96.3	162	17.8	0.6	340	(91.6)	60
Mtwara	35.5	1.1	324	96.8	115	19.6	0.7	209	(91.9)	41
Mwanza	40.8	1.5	833	99.0	340	15.1	0.5	608	(92.8)	92
Pwani	37.9	1.1	203	92.3	77	25.7	1.2	119	(97.2)	30
Rukwa	22.7	1.2	314	100.0	71	24.9	1.2	264	100.0	66
Ruvuma	41.7	1.6	372	96.2	155	20.3	1.1	287	97.2	58
Shinyanga	35.9	1.1	750	96.5	269	18.5	0.8	633	94.4	117
Singida	21.6	0.9	194	98.2	42	8.3	0.3	153	*	13
Tabora	26.9	1.2	518	97.6	139	16.9	0.7	404	97.3	68
Tanga	38.2	1.7	424	99.0	162	31.5	1.0	298	(93.9)	94
Zanzibar	27.5	1.0	309	98.8	85	20.6	0.7	212	96.5	44
Pemba	29.1	0.9	94	98.9	27	21.9	0.9	63	99.0	14
Unguja	26.8	1.0	214	98.8	57	20.0	0.7	148	95.4	30
Education										
No education	23.7	0.8	1,983	96.9	470	14.6	0.5	829	96.1	121
Primary incomplete	33.9	1.1	1,517	97.3	515	21.2	0.9	1,534	94.9	326
Primary complete	39.0	1.4	4,945	98.2	1,931	22.0	0.8	3,597	95.7	792
Secondary +	39.4	1.3	898	99.7	354	25.2	0.9	1,016	96.7	256
Total 15-49	35.0	1.2	9,343	98.0	3,270	21.4	0.8	6,975	95.7	1,494

Note: Medical injections are those given by a doctor, nurse, pharmacist, dentist or other health worker. Figures in parentheses are based on 25-49 unweighted cases.

Those who had received injections were further asked if the syringe and needle that was used were taken from a new, previously unopened package. Table 11 shows that a majority (98 percent of women and 96 percent of men) who received injections in the previous 12 months were administered injections with a syringe and needle taken from a new, unopened package. This is observed across all respondents.

Youth and HIV/AIDS

This section addresses HIV and AIDS-related knowledge and sexual behaviour among youth age 15-24. Knowledge of how HIV is transmitted is crucial in enabling young people to avoid contracting the virus. Young people are often at greater risk because they may have shorter relationships and with more partners, or engage in other risky behaviours. Respondents age 15-24 were asked the same set of questions on facts and beliefs about HIV transmission as other respondents. Information on the age group's overall level of knowledge of major methods of avoiding HIV and rejection of major misconceptions were discussed previously in Tables 5, 6.1 and 6.2.

Comprehensive Knowledge about AIDS

Table 12 presents a composite indicator—comprehensive knowledge—among youth by background characteristics. Comprehensive knowledge is defined as knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chances of getting HIV, knowing that a healthy-looking person can have HIV and rejecting the two most common local misconceptions about HIV transmission or prevention: that HIV can be transmitted by supernatural means and by sharing food with a person who has HIV or AIDS. The results show that the level of comprehensive knowledge of HIV and AIDS among young women and men in Tanzania is low (39 percent for women and 42 percent for men), and it increases with age and level of education. Comprehensive knowledge about AIDS is higher among young people in urban than those in rural areas. Comprehensive knowledge is twice as high among youth on Mainland Tanzania than in Zanzibar (40-42 percent compared with 26-27 percent).

Age at First Sex

Since HIV transmission in Tanzania occurs predominantly through heterosexual intercourse between an infected and a non-infected person, age at first intercourse marks the point at which most individuals first risk exposure to the virus. Table 13 shows the proportion of young women and men who had sex before age 15 and before age 18. Eleven percent of young women and 10 percent of young men had sex by age 15, while 58 percent of young women and 43 percent of young men had sex by age 18. These figures indicate that young women start having sexual intercourse at a younger age than men. For both women and men, these proportions are higher among ever-married respondents than those who have never-married. The proportion of young people who had sexual intercourse before age 15 and 18 is higher among rural residents than urban residents, and decreases dramatically as education increases. For instance, 22 percent of young women with no education had sexual intercourse before age 15 compared with only 4 percent of girls who continued their education to secondary school.

Young people on Mainland Tanzania start having sexual intercourse at a younger age than their counterparts in Zanzibar. While 60 percent of young women in Mainland have had sex at age 18, the corresponding proportion in Zanzibar is only 22 percent.

Table 12 Comprehensive knowledge about AIDS and of a source of condoms among youth

Percentage of young women and young men age 15-24 with comprehensive knowledge about AIDS and percentage with knowledge of a source of condoms, by background characteristics, Tanzania HMIS 2007-08

Background characteristic	Women			Men		
	Percentage with comprehensive knowledge of AIDS ¹	Percentage who know a condom source ²	Number of women	Percentage with comprehensive knowledge of AIDS ¹	Percentage who know a condom source ²	Number of men
Age						
15-19	35.1	50.1	1,984	38.8	68.9	1,768
15-17	34.1	43.6	1,315	35.6	64.2	1,152
18-19	37.1	63.1	669	44.6	77.7	616
20-24	43.9	69.4	1,746	45.7	89.1	1,148
20-22	43.9	67.5	1,076	45.9	89.0	778
23-24	44.0	72.3	671	45.2	89.4	370
Marital status						
Never married	40.8	52.7	1,928	41.9	74.8	2,516
Ever had sex	50.9	77.9	730	49.6	91.9	1,173
Never had sex	34.7	37.4	1,198	35.2	59.7	1,343
Ever married	37.5	66.0	1,802	38.5	90.2	399
Residence						
Urban	51.7	72.8	1,019	50.8	87.9	704
Rural	34.5	54.0	2,711	38.5	73.4	2,212
Region						
Mainland	39.7	60.7	3,592	42.0	78.3	2,818
Arusha	44.2	65.4	144	54.9	78.2	88
Dar es Salaam	58.5	77.7	318	52.9	91.0	219
Dodoma	39.0	71.4	130	47.0	84.2	107
Iringa	28.0	58.5	125	28.3	65.0	112
Kagera	38.1	43.1	191	40.9	63.0	179
Kigoma	62.1	65.6	192	56.2	78.0	135
Kilimanjaro	53.8	76.3	157	38.0	82.8	132
Lindi	64.0	66.7	93	66.1	89.8	47
Manyara	36.4	58.3	96	45.1	62.6	81
Mara	38.3	63.7	159	40.8	79.3	111
Mbeya	29.0	42.2	219	38.8	78.8	223
Morogoro	37.7	72.0	152	39.2	94.6	112
Mtwara	51.8	52.6	115	59.6	80.9	75
Mwanza	29.2	46.2	352	35.2	75.9	275
Pwani	53.6	69.3	78	51.6	78.8	47
Rukwa	16.0	28.2	129	41.0	80.6	111
Ruvuma	28.3	76.6	148	36.1	86.1	124
Shinyanga	24.0	50.2	329	33.7	71.2	282
Singida	23.0	52.9	67	43.1	71.4	68
Tabora	42.5	76.8	236	40.7	79.3	173
Tanga	47.9	72.1	162	37.1	82.2	117
Zanzibar	25.9	17.5	138	27.4	36.2	98
Pemba	21.0	7.6	41	26.7	17.6	32
Unguja	28.0	21.7	96	27.8	45.1	66
Education						
No education	20.7	48.2	652	21.3	70.0	274
Primary incomplete	27.6	43.1	789	32.2	68.8	930
Primary complete	45.4	67.3	1,783	45.2	81.7	1,152
Secondary +	59.3	69.6	506	59.2	83.7	560
Total	39.2	59.1	3,730	41.5	76.9	2,916

¹ Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention: that HIV can be transmitted by supernatural means and by sharing food with a person who has HIV or AIDS.

² Friends, family members, and home are not considered sources for condoms

Table 13 Age at first sexual intercourse among youth

Percentage of young women and of young men age 15-24 who had sexual intercourse before age 15 and percentage of young women and of young men age 18-24 who had sexual intercourse before age 18, by background characteristics, Tanzania HMIS 2007-08

Background characteristic	Women				Men			
	Percentage who had sexual intercourse before age 15	Number of women 15-24	Percentage who had sexual intercourse before age 18	Number of women 18-24	Percentage who had sexual intercourse before age 15	Number of men 15-24	Percentage who had sexual intercourse before age 18	Number of men 18-24
Age								
15-19	10.7	1,984	na	na	10.8	1,768	na	na
15-17	11.1	1,315	na	na	12.4	1,152	na	na
18-19	10.0	669	57.5	669	7.8	616	45.5	616
20-24	11.5	1,746	58.8	1,746	8.1	1,148	41.8	1,148
20-22	13.4	1,076	60.3	1,076	7.8	778	39.8	778
23-24	8.3	671	56.4	671	8.6	370	45.9	370
Marital status								
Never married	6.6	1,928	36.6	766	9.2	2,516	38.0	1,366
Ever married	15.8	1,802	68.6	1,649	12.8	399	60.6	397
Knows condom source¹								
Yes	11.7	2,206	63.1	1,633	11.1	2,241	46.7	1,501
No	10.2	1,524	48.8	782	5.2	674	22.1	262
Residence								
Urban	8.0	1,019	51.7	678	7.1	704	40.1	457
Rural	12.2	2,711	61.1	1,737	10.5	2,212	44.1	1,307
Region								
Mainland	11.4	3,592	59.8	2,330	10.0	2,818	44.2	1,700
Arusha	10.3	144	54.0	97	11.4	88	(34.3)	51
Dar es Salaam	5.7	318	48.6	221	3.7	219	39.8	151
Dodoma	11.4	130	77.0	74	19.2	107	67.4	64
Iringa	9.6	125	51.5	77	9.2	112	(33.7)	68
Kagera	7.9	191	53.3	118	9.7	179	29.0	91
Kigoma	6.6	192	40.8	127	7.9	135	34.1	75
Kilimanjaro	4.2	157	36.0	84	3.2	132	40.7	76
Lindi	12.0	93	60.8	62	21.3	47	(62.6)	31
Manyara	5.5	96	38.4	61	2.4	81	38.6	51
Mara	12.7	159	68.6	101	8.9	111	35.2	52
Mbeya	11.1	219	56.2	151	10.9	223	32.7	143
Morogoro	17.2	152	73.0	105	13.5	112	(52.6)	54
Mtwara	15.2	115	69.1	77	18.6	75	68.6	49
Mwanza	12.0	352	67.1	209	11.8	275	40.2	175
Pwani	6.4	78	62.3	48	4.3	47	47.3	29
Rukwa	17.0	129	66.2	88	23.1	111	57.4	66
Ruvuma	13.9	148	71.7	108	16.4	124	44.6	71
Shinyanga	13.3	329	64.3	215	7.1	282	(53.4)	174
Singida	2.2	67	48.2	42	8.5	68	35.7	45
Tabora	24.9	236	82.9	155	8.7	173	57.8	112
Tanga	10.0	162	48.6	111	3.0	117	43.5	70
Zanzibar	3.4	138	22.2	85	1.7	98	12.6	64
Pemba	4.1	41	26.7	24	1.1	32	9.3	18
Unguja	3.1	96	20.3	60	2.1	66	13.9	46
Education								
No education	21.5	652	69.5	525	11.8	274	48.9	223
Primary incomplete	15.4	789	73.9	350	12.1	930	50.2	360
Primary complete	7.3	1,783	57.8	1,219	9.4	1,152	44.8	783
Secondary +	4.0	506	25.9	321	5.3	560	29.8	398
Total	11.1	3,730	58.4	2,415	9.7	2,916	43.1	1,763

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

na = Not available

¹ Friends, family members, and home are not considered sources for condoms

Premarital Sex

Premarital sex and the length of the interval between sexual initiation and marriage (or living together) are among the factors that predispose people to HIV infection. Table 14 focuses on never-married young people and shows the percentage who have never had sex, the percentage who had sex in the 12 months preceding the survey, and among those, the percentage who used a condom the last time they had sex. The data show that 62 percent of young women and 53 percent of young men reported that they had never had sex. Young women in rural areas are much less likely than urban women to have ever had sex, but rural men are as likely as urban men to have been engaged in sexual intercourse.

Among those who reported having sex in the 12 months preceding the survey, half of young men and young women report using a condom during last sexual intercourse (49 percent). The percentage using condoms is significantly higher among youth who know a condom source and among urban youth. Condom use at last sexual intercourse increases with increasing level of education.

Table 14 Premarital sexual intercourse and condom use during premarital sexual intercourse among youth

Among never-married women and men age 15-24, the percentage who have never had sexual intercourse, the percentage who had sexual intercourse in the past 12 months, and, among those who had premarital sexual intercourse in the past 12 months, the percentage who used a condom at the last sexual intercourse, by background characteristics, Tanzania HMIS 2007-08

Background characteristic	Women					Men				
	Percentage who have never had sexual intercourse	Percentage who had sexual intercourse in the past 12 months	Number of never married women	Percentage who used condom at last sexual intercourse	Number of women	Percentage who have never had sexual intercourse	Percentage who had sexual intercourse in the past 12 months	Number of never married men	Percentage who used condom at last sexual intercourse	Number of men
Age										
15-19	70.3	23.8	1,527	49.4	364	65.6	23.6	1,735	40.3	410
15-17	76.1	18.6	1,162	49.9	216	74.2	17.0	1,150	31.6	196
18-19	52.0	40.4	365	48.6	147	48.8	36.6	585	48.3	214
20-24	30.9	51.9	401	47.4	208	26.1	55.1	781	56.6	430
20-22	33.5	49.5	299	49.9	148	28.7	53.5	605	56.3	323
23-24	23.1	59.0	103	41.3	60	17.0	60.5	176	57.6	107
Knows condom source¹										
Yes	44.1	45.0	1,017	54.5	457	42.7	41.6	1,881	51.6	782
No	82.3	12.6	911	25.1	115	85.1	9.1	635	9.2	58
Residence										
Urban	55.4	35.8	634	54.8	227	52.6	30.9	650	69.6	201
Rural	65.4	26.6	1,294	44.6	345	53.6	34.3	1,866	42.1	640
Education										
No education	48.7	38.2	140	32.7	54	43.0	46.9	191	36.6	90
Primary incomplete	73.9	20.7	492	37.9	102	61.9	28.9	828	40.8	240
Primary complete	55.5	35.9	873	49.5	313	45.5	39.1	957	49.5	374
Secondary +	66.6	24.5	423	64.7	104	58.0	25.3	540	68.0	137
Total	62.1	29.7	1,928	48.6	572	53.4	33.4	2,516	48.7	840

¹ Friends, family members, and home are not considered sources for condoms

Higher-Risk Sexual Intercourse and Condom Use among Young People

Tables 15.1 and 15.2 present information on young women and men age 15-24 who had sexual intercourse in the past 12 months. They show the proportion who engaged in higher-risk sex (i.e., sexual intercourse with a non-marital, non-cohabiting partner) in the past 12 months. By definition, sexual intercourse among never-married young people is considered higher-risk sex. Among sexually active young people age 15-24, 32 percent of women and 80 percent of men reported engaging in higher-risk sexual intercourse in the 12 months preceding the survey. Forty-six percent of these women and 49 percent of these men used a condom at last higher-risk sexual intercourse.

The age pattern in higher-risk sexual behaviour for women and men age 15-24 is a reflection of their age pattern of entry into marriage. The proportion of persons who engage in higher-risk sexual intercourse declines with age, reflecting the increased proportion who are married or living with a sexual partner. The likelihood of engaging in higher-risk sexual intercourse increases sharply with level of education, especially among women. Among young men, the likelihood of engaging in higher-risk sex is high for most background characteristics. Among both young women and young men, use of condoms at last higher-risk sexual intercourse in general increases with level of education, with a slight dip among women and men who have completed primary school (Figure 3). In fact, women and men with secondary education are twice more likely than those with no education to use condoms.

Table 15.1 Higher-risk sexual intercourse among youth and condom use at last higher-risk intercourse in the past 12 months: Women

Among young women age 15-24 who had sexual intercourse in the past 12 months, the percentage who had higher-risk sexual intercourse in the past 12 months, and among those having higher-risk intercourse in the past 12 months, the percentage reporting that a condom was used at last higher-risk intercourse, by background characteristics, Tanzania THIS 2007-08

Background characteristic	Respondents 15-24 who had sexual intercourse in the past 12 months:		Respondents 15-24 who had higher risk intercourse in the past 12 months:	
	Percentage who had higher-risk intercourse in the past 12 months ¹	Number of women	Percentage who reported using a condom at last higher-risk intercourse ¹	Number of women
Age				
15-19	49.1	810	48.2	398
15-17	62.9	368	48.7	232
18-19	37.5	442	47.5	166
20-24	21.9	1,472	43.9	322
20-22	22.0	881	47.1	194
23-24	21.6	591	39.0	128
Marital status				
Never married	98.7	572	49.0	564
Ever married	9.0	1,710	36.1	155
Knows condom source²				
Yes	36.4	1,583	52.3	576
No	20.5	699	22.1	143
Residence				
Urban	44.8	599	55.2	268
Rural	26.8	1,683	40.9	451
Education				
No education	18.3	539	35.1	98
Primary incomplete	34.2	385	34.4	132
Primary complete	32.5	1,172	48.0	381
Secondary +	58.4	186	64.7	108
Total 15-24	31.5	2,282	46.3	719

¹ Sexual intercourse with a non-marital, non-cohabiting partner
² Friends, family members, and home are not considered sources for condoms

Table 15.2. Higher-risk sexual intercourse among youth and condom use at last higher-risk intercourse in the past 12 months: Men

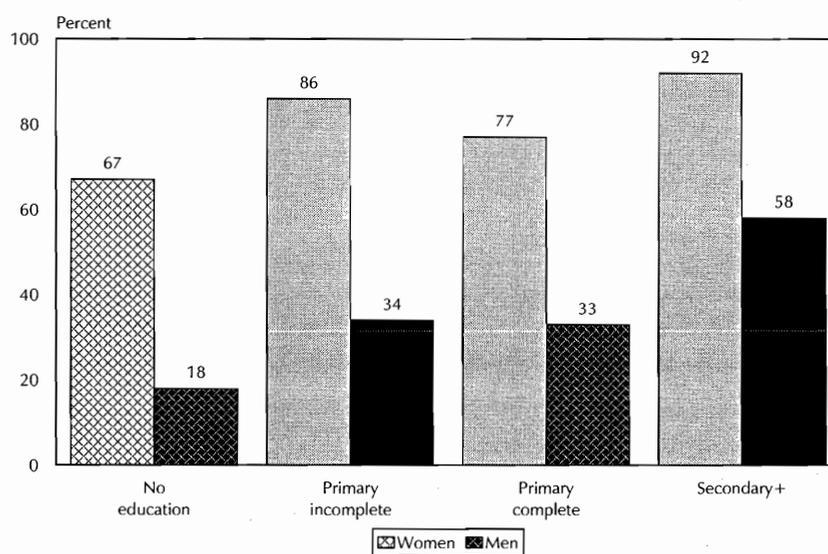
Among young men age 15-24 who had sexual intercourse in the past 12 months, the percentage who had higher-risk sexual intercourse in the past 12 months, and among those having higher-risk intercourse in the past 12 months, the percentage reporting that a condom was used at last higher-risk intercourse, by background characteristics, Tanzania HMIS 2007-08

Background characteristic	Men 15-24 who had sexual intercourse in the past 12 months:		Men 15-24 who had higher risk intercourse in the past 12 months:	
	Percentage who had higher-risk intercourse in the past 12 months ¹	Number of men	Percentage who reported using a condom at last higher-risk intercourse ¹	Number of men
Age				
15-19	95.3	443	41.3	422
15-17	99.4	198	31.4	197
18-19	92.0	245	49.9	225
20-24	71.1	794	54.7	565
20-22	78.7	496	54.0	390
23-24	58.5	298	56.3	175
Marital status				
Never married	99.8	840	48.8	838
Ever married	37.5	397	50.1	149
Knows condom source²				
Yes	80.3	1,139	52.0	915
No	73.6	98	10.6	72
Residence				
Urban	87.9	254	68.5	224
Rural	77.7	983	43.2	764
Education				
No education	66.8	172	30.3	115
Primary incomplete	86.0	340	43.5	292
Primary complete	76.8	569	51.4	437
Secondary +	91.5	156	67.6	143
Total 15-24	79.8	1,237	49.0	987

¹ Sexual intercourse with a non-marital, non-cohabiting partner

² Friends, family members, and home are not considered sources for condoms

Figure 3 Percentage of Women and Men Age 15-24 Who Had Higher-Risk Intercourse in the Past 12 Months by Education



THMIS 2007-08

HIV Prevalence

Coverage of HIV Testing

All women and men age 15-49 living in the households selected for the 2007-08 THMIS were eligible for the HIV testing component. Table 16 shows the coverage rates for HIV testing among eligible respondents by reason for not being tested by residence and region. Respondents are divided into four categories, namely:

1. Those who were interviewed and consented to the HIV testing (90 percent for women and 80 percent for men)
2. Those who were interviewed and refused the testing when asked for informed consent (6 percent for women and 8 percent for men)
3. Those who were absent at the time of testing (less than 1 percent for both women and men).
4. 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 percent for women and 12 percent for men).

Overall, 9,735 women and 7,935 men age 15-49 (a total of 17,670 respondents) were eligible for HIV testing. HIV tests were conducted for 90 percent of the eligible women and 80 percent of the eligible men.

For both women and men, rural residents were more likely to be tested than their urban counterparts. For women, coverage rates are higher in Zanzibar than on the Mainland. For women, coverage of HIV testing by region ranges between 75 percent in Arusha to 95 percent in Kagera. For men, the rates are lower, ranging between 58 percent in Dar es Salaam and 91 percent in Kagera. The low coverage rates are in large part due to high rates of refusal. The refusal rate in Arusha, for example, is 20 percent among women and 18 percent among men.

Acceptance for HIV testing in the 2007-08 THMIS is higher than that recorded in the 2003-04 THMIS (84 percent for women and 77 percent for men). These figures are comparable to coverage rates for Tanzania Mainland in the 2007-08 THMIS, 88 percent for women and 79 percent for men.

Table 16 Coverage of HIV testing

Percent distribution of population age 15-49 eligible for HIV testing by testing status, according to residence and region unweighted), Tanzania HMIS 2007-08

Age	Testing status				Total	Number
	DBS tested ¹	Refused to provide blood	Absent at the time of blood collection	Other/missing ²		
WOMEN						
Residence						
Urban	84.9	10.7	0.2	4.2	100.0	2,268
Rural	90.9	5.0	0.2	4.0	100.0	7,467
Region						
Mainland	87.6	7.7	0.2	4.5	100.0	6,991
Arusha	75.4	19.9	0.0	4.7	100.0	321
Dar es Salaam	77.1	16.6	0.4	5.9	100.0	476
Dodoma	91.1	5.9	0.4	2.6	100.0	270
Iringa	94.0	5.0	0.4	0.7	100.0	282
Kagera	95.4	1.2	0.0	3.4	100.0	323
Kigoma	87.9	3.0	0.3	8.8	100.0	397
Kilimanjaro	91.6	4.8	0.0	3.6	100.0	333
Lindi	92.1	1.6	0.3	5.9	100.0	305
Manyara	89.4	8.8	0.6	1.2	100.0	330
Mara	93.5	4.5	0.0	2.0	100.0	401
Mbeya	92.6	5.4	0.0	2.0	100.0	298
Morogoro	83.5	13.3	0.0	3.1	100.0	255
Mtwara	82.0	11.6	0.4	6.0	100.0	284
Mwanza	84.8	8.0	0.2	7.0	100.0	401
Pwani	83.6	11.5	0.4	4.5	100.0	244
Rukwa	83.5	11.3	0.3	4.9	100.0	328
Ruvuma	90.7	3.4	0.0	5.9	100.0	356
Shinyanga	90.0	7.8	0.0	2.3	100.0	399
Singida	91.5	4.0	0.4	4.0	100.0	272
Tabora	87.4	4.4	0.3	8.0	100.0	388
Tanga	84.8	8.5	0.6	6.1	100.0	328
Zanzibar	94.4	2.8	0.1	2.7	100.0	2,744
Pemba	94.3	3.0	0.1	2.6	100.0	1,525
Unguja	94.5	2.5	0.1	2.9	100.0	1,219
Total	89.5	6.3	0.2	4.0	100.0	9,735
MEN						
Residence						
Urban	70.6	13.2	0.1	16.0	100.0	1,785
Rural	82.5	6.5	0.1	11.0	100.0	6,150
Region						
Mainland	79.2	9.0	0.1	11.7	100.0	5,870
Arusha	66.8	18.2	0.0	15.0	100.0	253
Dar es Salaam	58.4	22.2	0.3	19.1	100.0	397
Dodoma	78.7	13.0	0.0	8.3	100.0	230
Iringa	79.6	6.2	0.0	14.2	100.0	226
Kagera	91.1	2.1	0.0	6.8	100.0	292
Kigoma	85.8	2.3	0.6	11.3	100.0	309
Kilimanjaro	86.6	3.3	0.0	10.0	100.0	269
Lindi	86.9	3.8	0.0	9.3	100.0	236
Manyara	81.4	14.0	0.0	4.7	100.0	301
Mara	81.4	5.3	0.3	12.9	100.0	318
Mbeya	86.6	6.0	0.0	7.4	100.0	284
Morogoro	79.4	11.9	0.0	8.7	100.0	218
Mtwara	72.3	15.3	0.0	12.4	100.0	202
Mwanza	82.7	5.6	0.0	11.7	100.0	342
Pwani	71.1	15.1	0.0	13.8	100.0	159
Rukwa	71.5	11.0	0.0	17.5	100.0	309
Ruvuma	78.5	8.7	0.3	12.5	100.0	312
Shinyanga	87.2	6.7	0.3	5.9	100.0	374
Singida	85.2	6.2	0.0	8.6	100.0	243
Tabora	75.4	5.6	0.0	19.1	100.0	341
Tanga	76.9	10.2	0.0	12.9	100.0	255
Zanzibar	81.6	5.0	0.1	13.3	100.0	2,065
Pemba	81.8	3.6	0.1	14.5	100.0	1,155
Unguja	81.3	6.7	0.1	11.9	100.0	910
Total	79.8	8.0	0.1	12.1	100.0	7,935

Continued...

Table 16—Continued

Age	Testing status				Total	Number
	DBS tested ¹	Refused to provide blood	Absent at the time of blood collection	Other/missing ²		
TOTAL						
Residence						
Urban	78.6	11.8	0.2	9.4	100.0	4,053
Rural	87.1	5.6	0.1	7.1	100.0	13,617
Region						
Mainland	83.7	8.3	0.2	7.8	100.0	12,861
Arusha	71.6	19.2	0.0	9.2	100.0	574
Dar es Salaam	68.6	19.1	0.3	11.9	100.0	873
Dodoma	85.4	9.2	0.2	5.2	100.0	500
Iringa	87.6	5.5	0.2	6.7	100.0	508
Kagera	93.3	1.6	0.0	5.0	100.0	615
Kigoma	87.0	2.7	0.4	9.9	100.0	706
Kilimanjaro	89.4	4.2	0.0	6.5	100.0	602
Lindi	89.8	2.6	0.2	7.4	100.0	541
Manyara	85.6	11.3	0.3	2.9	100.0	631
Mara	88.2	4.9	0.1	6.8	100.0	719
Mbeya	89.7	5.7	0.0	4.6	100.0	582
Morogoro	81.6	12.7	0.0	5.7	100.0	473
Mtwara	78.0	13.2	0.2	8.6	100.0	486
Mwanza	83.8	6.9	0.1	9.2	100.0	743
Pwani	78.7	12.9	0.2	8.2	100.0	403
Rukwa	77.7	11.1	0.2	11.0	100.0	637
Ruvuma	85.0	5.8	0.1	9.0	100.0	668
Shinyanga	88.6	7.2	0.1	4.0	100.0	773
Singida	88.5	5.0	0.2	6.2	100.0	515
Tabora	81.8	4.9	0.1	13.2	100.0	729
Tanga	81.3	9.3	0.3	9.1	100.0	583
Zanzibar	88.9	3.7	0.1	7.3	100.0	4,809
Pemba	88.9	3.3	0.1	7.7	100.0	2,680
Unguja	88.9	4.3	0.1	6.7	100.0	2,129
Total	85.1	7.1	0.2	7.7	100.0	17,670

¹ Includes all dried blood samples (DBS) tested at the laboratory 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) other results of blood collection (e.g., technical problem in the field), 2) lost specimens, 3) non-corresponding bar codes, 4) other lab results such as blood not tested for technical reason, not enough blood to complete the algorithm, etc. and 5) persons for whom a final result of the testing is missing

HIV Prevalence by Age and Sex

The 2007-08 THMIS found that 6 percent of the population age 15-49 in Tanzania is HIV/AIDS positive (Table 17). HIV prevalence is higher among women than men (7 and 5 percent, respectively). These rates are slightly lower than those recorded in the 2003-04 Tanzania HIV/AIDS Indicator Survey (THIS), 7 percent overall, 8 percent for women and 6 percent for men.

Looking at the age pattern, Table 17 and Figure 4 show that HIV prevalence among women rises sharply with age from 1 percent among women age 15 -19 to peak at 10 percent among women age 30-34 before falling to a level of 7 percent among those age 45-49. Among men age 15-49, the HIV rate rises more gradually with age to a peak at age 35-39 (10 percent), before declining to 6 percent among men age 45-49.

HIV prevalence in the urban areas is almost double that in the rural areas. Among women, HIV prevalence is 11 percent compared with 5 percent in rural areas. For men, the corresponding prevalence is 6 and 4 percent, respectively.

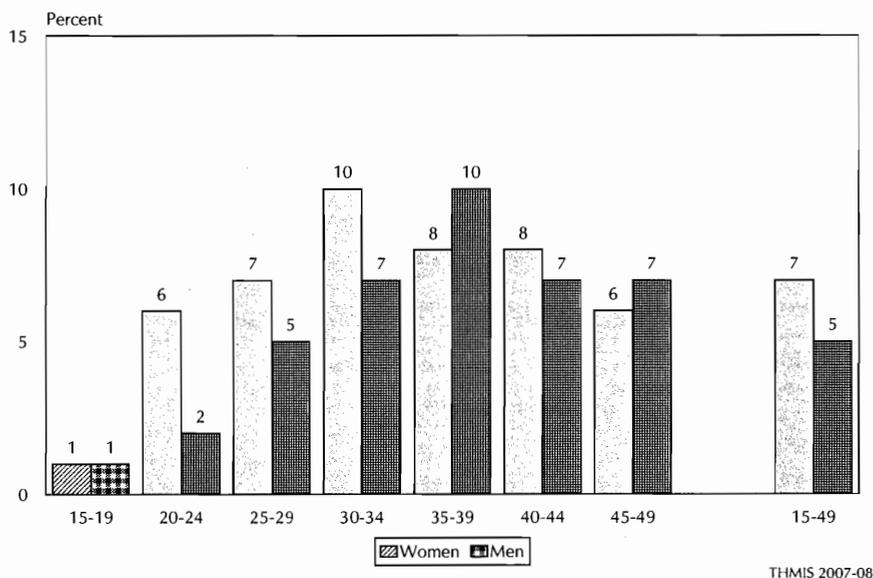
Table 17 HIV prevalence by socioeconomic characteristics

Percentage HIV positive among interviewed women and men age 15-49 who were tested, by background characteristics, Tanzania THIS 2007-08

Background characteristic	Women 15-49		Men 15-49		Total	
	Percentage HIV positive	Number tested	Percentage HIV positive	Number tested	Percentage HIV positive	Number tested
Age						
15-19	1.3	1,756	0.7	1,815	1.0	3,571
20-24	6.3	1,531	1.7	1,125	4.3	2,656
25-29	7.9	1,422	5.0	970	6.7	2,392
30-34	10.4	1,164	7.4	954	9.1	2,119
35-39	9.5	1,007	10.6	806	10.0	1,813
40-44	7.6	668	6.7	615	7.2	1,283
45-49	6.8	630	6.1	580	6.4	1,210
Residence						
Urban	10.6	2,065	6.4	1,605	8.7	3,670
Rural	5.3	6,114	4.0	5,260	4.7	11,374
Region						
Mainland	6.8	7,909	4.7	6,657	5.8	14,566
Arusha	0.8	249	2.2	185	1.4	434
Dar es Salaam	10.2	835	7.3	693	8.9	1,528
Dodoma	4.0	309	2.4	271	3.3	580
Iringa	16.8	323	12.1	254	14.7	577
Kagera	3.8	534	2.9	475	3.4	1,009
Kigoma	1.5	365	0.1	297	0.9	662
Kilimanjaro	2.2	281	1.5	226	1.9	507
Lindi	4.9	201	2.6	155	3.9	356
Manyara	2.6	261	0.7	232	1.7	493
Mara	6.7	341	3.5	278	5.3	619
Mbeya	7.6	448	8.3	432	7.9	880
Morogoro	6.1	308	2.1	277	4.2	586
Mtwara	3.4	267	2.4	200	3.0	467
Mwanza	6.0	636	3.7	511	5.0	1,148
Pwani	6.6	152	3.2	101	5.3	253
Rukwa	4.7	260	4.3	249	4.5	509
Ruvuma	6.3	322	4.4	288	5.4	610
Shinyanga	8.4	691	6.8	656	7.6	1,347
Singida	2.8	167	2.3	151	2.6	319
Tabora	6.8	460	5.3	417	6.1	877
Tanga	5.3	334	2.1	281	3.8	614
Zanzibar	0.7	270	0.5	208	0.6	478
Pemba	0.3	82	0.2	62	0.3	145
Unguja	0.9	187	0.6	146	0.8	334
Education						
No education	5.9	1,744	5.8	820	5.9	2,565
Primary incomplete	5.0	1,283	4.0	1,521	4.5	2,804
Primary complete	6.8	4,157	4.5	3,437	5.8	7,594
Secondary +	5.5	559	3.5	852	4.3	1,411
Total 15-49	6.6	8,179	4.6	6,865	5.7	15,044

¹ HIV positive refers only to those infected with HIV-1.

Figure 4 HIV Prevalence by Age



D. Orphans and Vulnerable Children

Living Arrangements

The Household Questionnaire collected information on living arrangements and parental survival status of children under age 18 in the households included in the THMIS sample. These data are presented by background characteristics in Table 18 for de jure children under age 15 and under age 18, i.e., for children under age 15 or 18 who were usual residents in the households selected for the THMIS sample.

The results in Table 18 indicate that, in Tanzania, two in three children under age 18 are living in a household with both of their parents while about 17 percent are not living with either biological parent. Most children who are living with a single parent live with their mother (19 percent) rather than their father (5 percent). Eleven percent of children under age 18 have lost one of their parents. One percent of children under age 18 are double orphans, that is, both their parents are dead. Children are twice as likely to have lost their father as their mother (8 and 4 percent, respectively).

As expected, the proportion of children who are not living with their biological parent increases with age. There are small differences by the sex of the child. However, children in urban areas are less likely than those living in rural areas to live with their biological parents.

Orphanhood represents a serious social, emotional, and economic burden for children and caretakers. Children whose parents are ill for an extended period or who live in households where other adults suffer from chronic illness also can experience significant hardships, as serious illness may limit the resources available to feed, clothe, and educate them. Table 19 presents the prevalence of orphans and of children who are vulnerable because of the chronic illness of a parent or the chronic illness or recent death of a chronically ill adult in their household. The table presents these results for de jure children under age 18 by background characteristics and for the total population of de jure children under age 15.

Table 18. Children's living arrangements and orphanhood

Percent distribution of de jure children under age 18 by living arrangements and survival status of parents, and the percentage of children not living with a biological parent, according to background characteristics, Tanzania HMIS 2007-08

Background characteristic	Living with both parents	Living with mother but not father		Living with father but not mother		Not living with either parent					Total	Percentage not living with a biological parent	Number of children	
		Father alive	Father dead	Mother alive	Mother dead	Both alive	Only father alive	Only mother alive	Both dead	Information missing on father or mother				
Age														
0-4	72.3	17.0	1.9	1.5	0.2	5.8	0.5	0.4	0.1	0.3	100.0	7.1	7,488	
<2	77.2	19.0	1.3	0.5	0.0	1.3	0.4	0.0	0.0	0.2	100.0	1.9	3,037	
2-4	68.9	15.7	2.4	2.2	0.3	8.8	0.6	0.7	0.1	0.4	100.0	10.6	4,451	
5-9	59.8	13.1	4.9	4.6	0.7	12.6	1.3	1.5	0.9	0.7	100.0	17.0	6,553	
10-14	51.2	11.4	7.4	6.1	1.6	13.2	2.4	3.5	2.3	0.7	100.0	22.3	5,762	
15-17	45.3	10.0	8.0	4.0	2.0	17.6	2.8	5.7	3.0	1.7	100.0	30.7	2,654	
Sex														
Male	60.8	13.4	5.1	4.2	1.0	10.0	1.4	2.1	1.3	0.8	100.0	15.5	11,314	
Female	59.3	13.8	4.7	3.6	0.8	12.1	1.6	2.3	1.1	0.6	100.0	17.8	11,142	
Residence														
Urban	53.7	15.5	4.5	4.0	0.6	13.3	1.7	3.1	2.4	1.2	100.0	21.8	4,264	
Rural	61.5	13.2	5.0	3.9	1.0	10.5	1.5	1.9	0.9	0.6	100.0	15.4	18,192	
Region														
Mainland	59.8	13.7	5.0	3.9	0.9	11.0	1.5	2.2	1.3	0.7	100.0	16.7	21,814	
Arusha	64.1	16.6	6.0	1.8	1.0	7.9	0.7	0.4	1.2	0.4	100.0	10.5	857	
Dar es Salaam	57.0	16.4	5.1	5.3	0.6	8.5	1.1	3.4	1.8	0.8	100.0	15.7	1,069	
Dodoma	60.1	14.7	2.5	1.9	0.7	14.9	3.0	1.2	0.6	0.5	100.0	20.2	906	
Iringa	51.0	13.6	12.1	1.2	1.1	10.6	3.9	2.8	3.7	0.1	100.0	21.1	1,029	
Kagera	64.3	10.9	5.3	3.4	1.2	8.9	1.5	1.7	1.7	1.1	100.0	14.9	1,433	
Kigoma	71.6	11.2	6.5	1.1	0.6	5.8	1.1	1.2	0.3	0.5	100.0	8.9	1,005	
Kilimanjaro	51.8	16.5	5.7	3.3	1.7	14.6	1.4	3.0	1.4	0.6	100.0	20.9	896	
Lindi	51.2	23.4	3.0	5.9	0.3	12.7	1.0	1.4	0.4	0.8	100.0	16.3	508	
Manyara	65.9	14.4	5.2	2.7	0.4	8.7	1.4	0.6	0.6	0.1	100.0	11.4	708	
Mara	54.7	14.5	7.0	4.5	0.5	9.1	1.2	4.8	1.4	2.5	100.0	18.9	975	
Mbeya	66.5	7.9	5.8	2.4	0.3	11.7	1.5	2.6	1.1	0.2	100.0	17.1	1,426	
Morogoro	62.8	10.8	3.6	4.8	1.6	9.7	3.2	2.0	0.9	0.6	100.0	16.4	1,014	
Mtwara	42.5	24.7	3.2	7.3	0.9	16.2	2.3	2.2	0.3	0.5	100.0	21.4	662	
Mwanza	58.4	16.1	2.1	4.1	1.5	13.1	1.0	2.0	1.2	0.6	100.0	17.8	2,156	
Pwani	51.9	19.8	2.6	3.0	0.5	15.1	1.0	3.4	1.9	0.7	100.0	22.1	456	
Rukwa	66.6	11.1	7.3	1.6	1.5	7.3	1.1	0.7	2.4	0.3	100.0	11.8	929	
Ruvuma	55.9	15.2	4.8	5.5	1.3	12.0	2.0	1.9	0.6	0.9	100.0	17.3	835	
Shinyanga	60.4	11.3	5.0	6.6	0.4	11.6	1.2	2.0	0.7	0.8	100.0	16.3	2,126	
Singida	72.3	8.7	3.3	1.6	2.0	8.0	0.7	1.9	0.5	1.0	100.0	12.2	549	
Tabora	60.3	9.6	2.9	7.6	0.5	13.3	0.7	2.5	1.6	1.0	100.0	19.1	1,395	
Tanga	56.1	16.8	5.6	2.1	0.6	11.4	1.8	3.6	1.7	0.4	100.0	18.9	879	
Zanzibar	66.7	10.4	3.3	3.0	0.3	12.6	0.9	1.8	0.3	0.5	100.0	16.3	642	
Pemba	72.8	9.8	2.2	2.5	0.6	9.7	0.8	1.2	0.5	0.0	100.0	12.1	120	
Unguja	63.4	11.1	3.5	3.6	0.2	13.8	0.9	2.3	0.2	0.9	100.0	18.1	389	
Total <15	62.0	14.1	4.5	3.9	0.8	10.2	1.3	1.7	1.0	0.5	100.0	14.8	19,803	
Total <18	60.0	13.6	4.9	3.9	0.9	11.1	1.5	2.2	1.2	0.7	100.0	16.6	22,457	

Note: Table is based on de jure household residents, i.e., usual members.

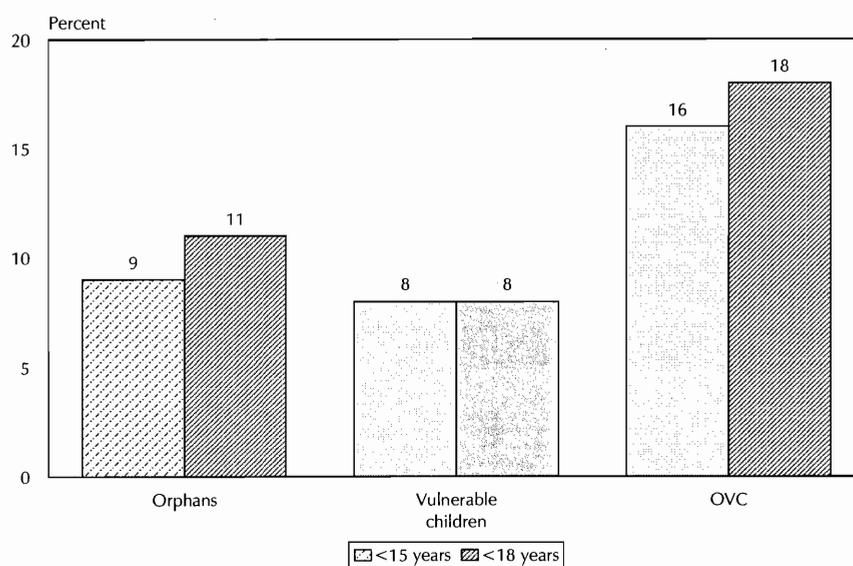
Overall, 11 percent of children under age 18 are orphans, and 8 percent are considered to be vulnerable children (Figure 5). Looking more closely at the factors contributing to a child's vulnerability, 3 percent of children under age 18 had a parent who was very sick, 7 percent lived in a household in which at least one adult (a parent or other household member) had been very sick, and 2 percent lived in a household where at least one adult had been very sick and died during the 12 months preceding the survey.

Table 19 also shows that, taken together, 18 percent of children under age 18 in Tanzania are orphaned or vulnerable. The percentage of children who were orphaned or vulnerable increases rapidly with age, from 10 percent of children under five years to 29 percent of children in the age group 15-17 years. The table shows that girls are as likely as boys to be orphaned and vulnerable. Further, rural children are less likely to be orphaned and/or vulnerable than urban children (17 and 21 percent, respectively). The percentage of children who are orphaned or vulnerable is higher on Mainland than Zanzibar (18 percent compared with 10 percent). Across regions, Iringa has the highest proportion of orphans and vulnerable children (29 percent), while Lindi has the lowest (8 percent). In other regions, this percentage ranges between 13 and 24 percent.

Background characteristic	Percentage of children who:					Vulnerable children	
	Orphan children Percentage of children with one or both parents dead	Have a very sick parent for at least 3 months in the past 12 months ¹	Live in a household where at least one adult has been very sick for at least 3 months in the past 12 months ²	Live in a household where at least one adult died in the past 12 months and had been very sick for at least 3 months before he/she died ²	Percentage of children who have a very sick parent OR live in a household where an adult has been very sick OR died in the past 12 months (vulnerable children)	OVC children	
						Percentage of children who are orphans and/or vulnerable	Number of children
Age							
0-4	3.2	2.0	6.2	1.2	7.4	9.8	7,488
<2	1.7	1.7	5.7	1.1	6.7	8.0	3,037
2-4	4.1	2.2	6.5	1.2	7.8	11.1	4,451
5-9	9.3	2.8	6.9	1.6	8.5	16.6	6,553
10-14	17.5	2.7	6.9	1.8	9.0	23.9	5,762
15-17	21.7	3.5	7.9	1.2	9.6	28.5	2,654
Sex							
Male	11.0	2.3	6.7	1.2	8.0	17.7	11,314
Female	10.6	2.8	6.9	1.7	8.8	17.6	11,142
Residence							
Urban	12.5	2.4	8.0	2.9	11.0	21.1	4,264
Rural	10.4	2.6	6.5	1.1	7.8	16.8	18,192
Region							
Mainland	10.9	2.6	6.9	1.5	8.5	17.8	21,814
Arusha	9.3	3.2	4.7	1.2	6.5	14.9	857
Dar es Salaam	12.2	2.8	7.6	1.6	9.4	20.6	1,069
Dodoma	8.0	2.0	8.2	0.0	8.7	15.9	906
Iringa	23.6	4.1	6.6	2.0	8.8	28.8	1,029
Kagera	11.6	2.0	5.3	1.2	6.7	16.4	1,433
Kigoma	9.7	0.2	3.0	0.4	3.4	13.1	1,005
Kilimanjaro	13.2	1.5	4.1	1.8	6.6	18.3	896
Lindi	6.1	1.5	2.8	0.0	2.8	8.3	508
Manyara	8.3	1.6	4.9	0.6	5.6	12.8	708
Mara	14.7	2.7	10.4	0.1	11.1	22.2	975
Mbeya	11.4	5.7	10.8	2.5	13.5	21.2	1,426
Morogoro	11.3	3.8	7.4	0.6	8.1	18.6	1,014
Mtwara	8.9	2.1	7.6	1.0	8.8	16.8	662
Mwanza	8.1	2.6	7.6	1.5	9.3	15.9	2,156
Pwani	9.5	3.5	6.9	0.0	7.2	16.3	456
Rukwa	13.1	5.8	12.8	1.3	13.8	24.1	929
Ruvuma	11.0	4.7	9.5	3.0	12.5	21.2	835
Shinyanga	9.4	0.8	4.2	2.2	6.4	15.1	2,126
Singida	8.7	2.6	7.9	0.3	8.2	15.7	549
Tabora	8.2	1.3	5.5	3.7	8.6	14.9	1,395
Tanga	13.4	2.3	6.3	1.8	8.8	21.3	879
Zanzibar	6.7	0.8	3.8	0.3	4.3	10.4	642
Pemba	5.3	1.3	4.4	0.3	4.9	10.0	120
Unguja	7.2	0.6	4.3	0.2	4.6	11.0	389
Total <15	9.4	2.4	6.6	1.5	8.2	16.2	19,803
Total <18	10.8	2.6	6.8	1.4	8.4	17.6	22,457

Note: Table is based only on children who usually live in the household. Very sick means person was too sick to work or do normal activities.
¹ Whether or not lives in same household as child
² Person age 18-59 years

Figure 5 Orphans and Vulnerable Children



THMIS 2007-08

E. Malaria Prevention and Treatment

This section presents data that are useful for assessing the implementation of malaria control strategies, the availability and use of mosquito nets by women and children and the prophylactic use of anti-malarial drugs. Data presented show the percentage of households possessing mosquito nets by category (any nets and insecticide treated nets (ITNs)) and the percentages of women and children who slept under a net the night before the survey. Data are also presented showing, for women who gave birth in the two years preceding the survey, the percentage who took anti-malarial drugs during pregnancy, and the percentage who obtained the drug as part of antenatal care from a health facility (referred to as Intermittent Preventive Treatment). Additionally, among children under age five, information is provided on the percentage of children who experienced an episode of fever in the two weeks preceding the survey, whether they were treated with anti-malarial drugs, and the timeliness with which they received drug treatment (the same or next day following onset of fever).

Ownership and Use of Mosquito Nets

Significant advances have been made in the prevention of malaria through the use of insecticide-treated bednets (ITN). Pyrethroids, the chemicals currently used in many countries including Tanzania to treat bednets, mimic the insecticidal compounds of natural pyrethrum. Synthetic pyrethroids have low mammalian toxicity; are repellents, highly toxic to mosquitoes, and odorless; and have low volatility with long persistence. Use of treated bednets has been shown to significantly reduce malaria transmission.

Table 20 shows the percentages of households owning various types of mosquito nets (treated or untreated) and the average number of nets per household by background characteristics. Overall, 56 percent of households owned some type of mosquito net. The majority of households with nets had at least one insecticide-treated net (ITN), which is a permanent net that does not require any treatment, a pre-treated net obtained within the past six months or a net that has been soaked with insecticide within the past six months (39 percent). Urban households are much more likely than rural households to use a mosquito net (treated or untreated).

Ownership of any type of mosquito nets has increased from 46 percent in the 2004-05 Tanzania Demographic and Health Survey (TDHS) to 56 percent. Whereas, in 2007-08, 39 percent of households with nets own at least one ITN (69 percent of all households), only 23 percent of households were found to have at least one ITN in the 2004-05 TDHS (49 percent of all households).

Table 20 also provides information on the percentages of children under five years of age and of all women and pregnant women who slept under a mosquito net (treated or untreated) on the night before the survey. Overall, 36 percent of children slept under a mosquito net and 26 percent slept under an ITN. Use of mosquito net for pregnant women is the same as that for children; 36 percent slept under a mosquito net and 27 percent slept under an ITN. Urban children are twice more likely than their rural counterparts to use a mosquito net (66 and 30 percent, respectively). In urban areas, pregnant women are more than twice more likely than in rural areas to use a mosquito net (48 and 21 percent, respectively).

The percentage of children under age 5 who slept under an ITN the night before the survey in 2007-08 is higher than in 2004-05 (26 and 16 percent, respectively).

Intermittent Preventative Treatment (IPT)

Malaria during pregnancy is common among women living in countries that are malaria endemic. It is a contributory factor to low birth weight, infant mortality, maternal anaemia, spontaneous abortion, and still birth. The NMCP and the ZMCP recommends Intermittent Preventative Treatment (IPT) with S/P Fansidar for pregnant women during antenatal visits as a prophylactic measure during pregnancy. Table 20 also presents information on the percentage of women who took any anti-malarial drugs for prevention, during pregnancy for the last live birth in the past two years preceding the survey. Overall, 59 percent of women with a live birth in the two years prior to the survey report that they took anti-malarial drugs for prevention and most of these women took IPT (57 percent). Urban women are more likely than their rural counterparts to take IPT (69 percent compared with 55 percent).

The proportion of women whose last birth were born in the two years before the survey and who received IPT during antenatal care visits has increased from 52 percent in the 2004-05 TDHS to 57 percent in the THMIS.

Treatment of Childhood Fever

Fever among children in malaria prevalent areas is mostly indicative of malaria. It is very important that children with symptoms of fever in such areas be treated promptly and symptomatically for malaria. In the 2007-08 THMIS, for each child under five years of age, mothers were asked if the child had experienced an episode of fever in the two weeks preceding the survey. Information was also collected on the percentage of episodes in which mothers sought treatment for their children, and the type of treatment given to children in each episode.

The last panel in Table 20 shows the percentage of children under age five with fever in the two weeks preceding the survey, and among children with fever, the percentage who took anti-malarial drugs. Overall, 18 percent of the children had had a fever in the two weeks preceding the survey. Fever was more prevalent among children in the urban than among children in rural areas. More than half of the children reported to have fever were given an anti-malarial drug to treat the fever (57 percent). Overall, for six in ten children, the fever was treated on the same day or the next day it was detected.

Table 20 Malaria indicators

Possession and use of mosquito nets, preventive malaria treatment during pregnancy, and treatment of children with fever using anti-malarial drugs, by urban-rural residence, Tanzania HMIS 2007-08

Malaria indicators	Urban		Rural		Total	
	Percentage	Number	Percentage	Number	Percentage	Number
Mosquito nets						
Percentage of households with at least one mosquito net (treated or untreated)	78.6	2,106	48.9	6,391	56.3	8,497
Percentage of households with at least one insecticide-treated net (ITN) ¹	59.2	2,106	32.6	6,391	39.2	8,497
Percentage of children under age five who slept under a mosquito net (treated or untreated) the night before the survey	65.6	1,327	30.0	6,187	36.3	7,514
Percentage of children under age five who slept under an insecticide-treated net (ITN) the night before the interview ¹	49.2	1,327	20.6	6,187	25.7	7,514
Percentage of pregnant women age 15-49 who slept under a mosquito net (treated or untreated) the night before the interview	62.9	170	29.3	676	36.0	846
Percentage of pregnant women age 15-49 who slept under an insecticide-treated net (ITN) the night before the interview ¹	47.8	170	21.4	676	26.7	846
Preventive malaria treatment during pregnancy						
Percentage of last births in the two years preceding the survey for which the mother took anti-malarial drugs for prevention during the pregnancy	69.4	525	57.0	2,520	59.1	3,044
Percentage of last births in the two years preceding the survey for which the mother got intermittent preventive treatment (IPT) during an antenatal visit ²	69.0	525	55.0	2,520	57.4	3,044
Treatment of fever						
Percentage of children under age five with fever in the two weeks preceding the survey	20.7	1,253	18.4	5,896	18.8	7,149
Among children under age five with fever in the two weeks preceding the survey, percentage who took anti-malarial drugs	69.0	259	53.8	1,084	56.7	1,343
Among children under age five with fever in the two weeks preceding the survey, percentage who took anti-malarial drugs the same day/next day after developing fever	49.6	259	30.7	1,084	34.3	1,343
¹ An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment or (2) a pretreated net obtained within the past 12 months or (3) a net that has been soaked with insecticide within the past 12 months						
² Intermittent preventive treatment is preventive treatment with at least two doses of SP/Fansidar during antenatal visits.						

Coverage of Malaria Testing

All children age 6-59 months living in the households selected for the 2007-08 THMIS were eligible for malaria and haemoglobin testing. Table 21 shows the coverage rates for malaria and haemoglobin testing among children by age, residence and region. Malaria tests were conducted for 94 percent of the 6,812 eligible children. Children were not tested because either the parent/guardian did not grant permission for the child to be tested or the child refused to be tested, or the child was not at home when the technician arrived for testing and were not found on call backs. Young children age (6-11 months) are the least likely to be tested. Response rate to malaria testing is better among rural children, and ranges between 87 and 98 percent across regions.

Table 21 Coverage of malaria testing by residence and region

Percent distribution of children age 6-59 months eligible for malaria testing by testing status, by background characteristics (unweighted), Tanzania HMIS 2007-08

Background characteristic	Number of children eligible for testing	Percent tested
Age in months		
6-11	812	89.5
12-23	1,583	94.6
24-35	1,468	94.6
36-47	1,432	94.6
48-59	1,517	93.5
Residence		
Urban	1,167	90.7
Rural	5,644	94.4
Region		
Mainland	5,068	93.5
Arusha	209	88.0
Dar es Salaam	183	86.9
Dodoma	202	95.0
Iringa	197	95.4
Kagera	283	97.5
Kigoma	302	94.0
Kilimanjaro	185	96.8
Lindi	166	94.0
Manyara	272	95.2
Mara	369	92.1
Mbeya	221	96.8
Morogoro	162	87.7
Mtwara	178	89.3
Mwanza	321	94.4
Pwani	158	93.7
Rukwa	302	97.0
Ruvuma	226	96.0
Shinyanga	376	93.1
Singida	220	97.7
Tabora	337	89.3
Tanga	199	90.5
Zanzibar	1,744	94.5
Pemba	584	96.9
Unguja	619	92.2
Total	6,812	93.8

Malaria and Anaemia Prevalence

As part of the THMIS, all children above six months of age but less than five years for whom consent for the testing was obtained were tested for malaria and anaemia. The rapid diagnostic test used for detecting malaria in the 2007-08 THMIS is the Paracheck Pf™ device. For the haemoglobin measurement, capillary blood was generally taken from a finger. The concentration of haemoglobin in the blood was measured using the HemoCue system.

The overall prevalence of malaria in young children in Tanzania is 18 percent. The prevalence increases with age; 9 percent among children 6-11 months and 22 percent among children 48-59 months. Rural children are almost three times more likely than urban children to have malaria parasites (20 percent compared with 7 percent). The prevalence of malaria in children varies widely across regions, with Kagera having the highest rate (42 percent) and Arusha the lowest (less than 1 percent). In other regions, malaria prevalence is 30 percent or higher in Lindi, Mara, Mtwara, Mwanza, and Shinyanga.

Table 22 Prevalence of malaria and anaemia

Percentage malaria positive and anaemia less than 8 g/dl among children 6-59 months who were tested, by background characteristics, Tanzania THMIS 2007-08

Background characteristic	Percent positive for malaria	Percent with anaemia < 8 g/dl ¹	Number of children tested
Age in months			
6-11	9.1	11.1	760
12-23	14.4	12.4	1,454
24-35	19.6	8.2	1,409
36-47	19.5	5.2	1,310
48-59	21.9	3.0	1,443
Residence			
Urban	8.1	8.5	1,129
Rural	19.7	7.5	5,246
Region			
Mainland	18.1	7.8	6,211
Arusha	0.4	6.8	242
Dar es Salaam	1.2	8.3	276
Dodoma	12.5	2.0	254
Iringa	2.6	3.1	275
Kagera	41.1	9.3	423
Kigoma	19.6	8.7	307
Kilimanjaro	1.0	3.6	203
Lindi	35.5	6.4	131
Manyara	1.0	1.5	194
Mara	30.3	13.3	297
Mbeya	3.0	1.1	421
Morogoro	15.7	14.4	246
Mtwara	33.6	7.4	196
Mwanza	31.4	9.5	618
Pwani	20.8	9.1	123
Rukwa	11.0	3.8	291
Ruvuma	23.9	17.5	231
Shinyanga	29.5	10.6	690
Singida	6.0	7.4	157
Tabora	9.7	6.7	401
Tanga	13.9	8.0	236
Zanzibar	0.8	4.7	165
Pemba	1.1	4.9	33
Unguja	0.8	4.4	97
Total	17.7	7.7	6,376

¹ A haemoglobin level of <8 g/dl is defined as severe anaemia for the Roll Back Malaria Project.

Figure 6 Prevalence of Malaria and Anaemia among Children Under Age Five

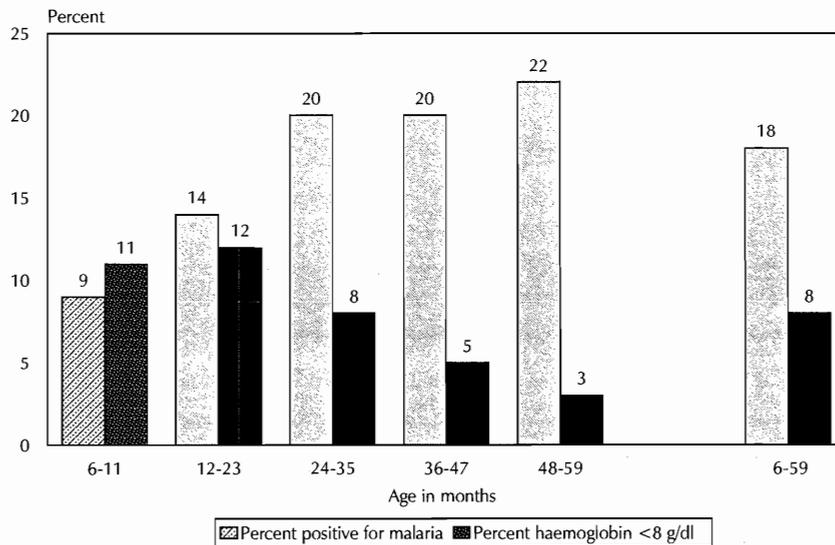


Table 22 also presents the percentage of children age 6-59 months who are severely anaemic (haemoglobin concentration is less than 8.0 grams per decilitre). Overall, 8 percent of children were found to be seriously anaemic. In contrast to malaria, the prevalence of serious anaemia tends to decline with the age of the child. Children age 48-59 months are much less likely to have anaemia below 8 g/dl than children age 6-23 months. The prevalence of this serious form of anaemia is highest in Ruvuma (18 percent) and lowest in Mbeya (1 percent). Severe anaemia is 10 percent or higher in Mara, Morogoro, Mwanza, and Ruvuma.

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Guinea 2006	August	2006	French
Lesotho 2004	September	2006	English
Egypt 2006	September	2006	English
Rwanda 2006	November	2006	French
Ethiopia 2006	November	2006	English
Moldova 2006	November	2006	English/Romanian
Vietnam (AIS) 2006	February	2006	English/Vietnamese
Armenia 2005	March	2006	English
Congo (Brazzaville) 2005	March	2006	French
Côte d'Ivoire (AIS) 2005	June	2006	French
Cambodia 2005	July	2006	English
Haiti 2005-06	July	2006	French
Zimbabwe 2005-06	August	2006	English
Niger 2006	August	2006	French
Niger (Intervention zones) 2006	October	2006	French
Nepal 2006	October	2006	English
Uganda 2006	November	2006	English
Tanzania (SPA) 2006	January	2007	English
Benin 2006	March	2007	French
Azerbaijan 2006	April	2007	English
Mali 2006	April	2007	French
Pakistan 2006-07	June	2007	English
Swaziland 2006-07	June	2007	English
Liberia 2007	July	2007	English
Democratic Rep. Congo 2007	December	2007	French
Bangladesh 2007	December	2007	English
Rwanda (SPA) 2007	December	2007	English/French
Jordan 2007	January	2008	English/Arabic
Uganda (SPA) 2007	March	2008	English
Ukraine 2007	June	2008	English/Ukrainian
Indonesia 2007	July	2008	English
Indonesia (young adult) 2007	July	2008	English
Rwanda (interim) 2007-08	July	2008	English/French
Zambia 2007	July	2008	English
Tanzania (HIV/AIDS and Malaria) 2007-08	July	2008	English

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