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DEMOGRAPHIC PATTERNS OF HIV TESTING UPTAKE IN SUB-SAHARAN AFRICA

DHS COMPARATIVE REPORTS 30



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MEASURE DHS assists countries worldwide in the collection and use of data to monitor and evaluate population, health, and nutrition programs. Additional information about the MEASURE DHS project can be obtained by contacting Demographic and Health Research Division, ICF International, 11785 Beltsville Drive, Suite 300, Calverton, MD 20705 (telephone: 301-572-0200; fax: 301-572-0999; e-mail: reports@measuredhs.com; internet: www.measuredhs.com).

The main objectives of the MEASURE DHS project are:

- to provide decisionmakers in survey countries with information useful for informed policy choices;
- to expand the international population and health database;
- to advance survey methodology; and
- to develop in participating countries the skills and resources necessary to conduct high-quality demographic and health surveys.

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Demographic Patterns of HIV Testing Uptake in Sub-Saharan Africa

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Preface

One of the most significant contributions of the MEASURE DHS program is the creation of an internationally comparable body of data on the demographic and health characteristics of populations in developing countries.

The DHS *Comparative Reports* series examines these data across countries in a comparative framework. The DHS *Analytical Studies* series focuses on specific topics. The principal objectives of both series are to provide information for policy formulation at the international level and to examine individual country results in an international context. Whereas *Comparative Reports* are primarily descriptive, *Analytical Studies* have a more analytical approach.

The *Comparative Reports* series covers a variable number of countries, depending on the availability of data sets. Where possible, data from previous DHS surveys are used to evaluate trends over time. Each report provides detailed tables and graphs organized by region. Survey-related issues such as questionnaire comparability, survey procedures, data quality, and methodological approaches are addressed as needed.

The topics covered in *Comparative Reports* are selected by MEASURE DHS staff in conjunction with the U.S. Agency for International Development. Some reports are updates of previously published reports.

It is anticipated that the availability of comparable information for a large number of developing countries will enhance the understanding of important issues in the fields of international population and health by analysts and policymakers.

Sunita Kishor
Project Director

Abstract

HIV testing is an integral component of HIV prevention strategies and provides a gateway to treatment and care. Knowledge of one's HIV status is a prerequisite for seeking and obtaining medical care, including antiretroviral therapy (ART), and may act to mobilize support networks and discourage risky sexual behavior. Over the past decade, as the expansion of ARTs in the developing world has made medications and treatment more widely available, HIV testing and efforts to link HIV-positive individuals to available treatment and care have become important policy priorities. Even so, lack of knowledge of HIV status remains an important programmatic barrier to initiating ART support.

Since 1998, the MEASURE DHS Project's Demographic and Health Surveys (DHS) and AIDS Indicator Surveys (AIS) have collected nationally representative data from women and men about whether they have ever been tested for HIV and whether they received the test results. Additionally since 2001, many DHS and AIS surveys have included anonymous, informed, and voluntary HIV testing. Within the past decade the MEASURE DHS project has noted marked increases in testing uptake in surveyed sub-Saharan African countries, sometimes by more than ten-fold. In the treatment scale-up era, these demographic patterns of divergence in HIV testing uptake over time and across countries are important to recognize and understand, both to evaluate previous outreach programs and to shed light on opportunities for additional growth.

In this report, using nationally representative data on HIV testing uptake from 47 surveys in 29 sub-Saharan African countries that the DHS project conducted between 2003 and 2011, we examine four aspects of HIV testing uptake: (1) uptake by individual and household characteristics; (2) increases in uptake over time; (3) the role of HIV testing during ANC in overall uptake; and (4) uptake by HIV serostatus. We do not conduct tests of statistical significance or conduct multivariate analysis; nonetheless, the descriptive results show clear trends and divergences in testing uptake.

While uptake of HIV testing has increased in every country studied, the gains have been uneven. Regardless of any male-female testing differential in the earliest survey in a country, the most recent survey in every country indicates that women are more likely than men to have ever been tested for HIV. This disparity appears to reflect the relative success of increased testing uptake during antenatal care (ANC). Only one country, Rwanda, has achieved near-universal uptake of HIV testing among both men and women in both rural and urban areas. In the median country, a large majority of women (71 percent) and men (83 percent) have never been tested for HIV.

Universal access to HIV testing in a country is a key policy goal, but as countries scale up treatment programs, it is vital for testing to reach persons most at risk of HIV so that they may access care and support. Across countries, our analysis shows that uptake of testing is not strongly correlated with overall HIV prevalence. While seropositive individuals are more likely to have ever been tested for HIV, in 16 of 25 countries studied with respect to serostatus the majority of HIV-positive men and women have no way of knowing their HIV status because they have never been tested. Scaling up access and outreach to testing among underserved populations in particular, including men in rural areas, remains an important frontier on the road to achieving universal access to treatment and support in most countries.

1 Introduction

Worldwide, an estimated 34 million people are living with HIV. Global estimates indicate that 2.5 to 3 million people have been newly infected annually over the past five years (WHO/UNAIDS/UNICEF 2011). Sub-Saharan Africa is the world region most heavily affected by HIV/AIDS. Although sub-Saharan Africa comprises just 12 percent of the world's population, approximately two-thirds of people living with HIV reside in this region. In 2010, 70 percent of new HIV infections occurred in sub-Saharan Africa (UNAIDS 2011).

HIV-prevention efforts in sub-Saharan Africa have varied across countries and communities. Some countries have focused on behavioral interventions directed at preventing mother-to-child transmission and increasing safe-sex practices. Treatment and care for people living with HIV is also improving in many countries (UNAIDS 2011), and Millennium Development Goal 6 continues to target universal access to treatment among people with advanced infection. AIDS-related deaths and HIV incidence have decreased steadily in sub-Saharan Africa within the last decade (UNAIDS 2011).

HIV testing is an integral component of HIV prevention strategies and is a prerequisite to seeking and receiving treatment and care. Knowledge of one's HIV status may act to mobilize support networks, increase sensitivity and decrease stigma, open dialogue regarding future plans and status disclosure, and discourage risky sexual behaviors (Commonwealth Regional Health Community Secretariat 2002; Denison et al. 2008; Tedrow et al. 2011). Furthermore, HIV treatment may also act as a form of prevention: early provision of antiretroviral therapy (ART) has been shown to reduce HIV transmission (Cohen et al. 2011; Granich et al. 2009). Depending on the context, HIV testing is broadly marketed to or directed at specific high-risk populations. In sub-Saharan Africa pregnant women are perhaps the most common focus for HIV testing, probably because mother-to-child transmission is the leading cause of HIV infection among children, and antenatal care (ANC) is a common point of contact that adult women have with health services (WHO 2010).

1.1 A brief history of HIV testing in sub-Saharan Africa

The first HIV tests became available in 1985, a few years after the virus was discovered to be the cause of AIDS. Before the development of an effective treatment for HIV, many people questioned the benefit of HIV testing and emphasized the ethical concerns and potential harms that might arise from various testing strategies. Clinic settings offered HIV testing when patients presented from a "high-risk category" or with HIV/AIDS symptoms (WHO 2012). Individuals could also seek out testing via voluntary counseling and testing (VCT) (UNAIDS 2000), and client-initiated VCT became the major means by which individuals learned their HIV status (Bayer and Edington 2009; Matovu and Makumbi 2007).

The direction of the HIV epidemic and HIV testing was dramatically altered in the mid-1990s when antiretroviral treatment (ART) was found to extend and improve lives of persons living with HIV. The development of HIV treatment spurred many changes, including changes in testing strategies, increases in funding for testing, improvements in testing technology, and increased access to testing and treatment.

Soon after the development of ART, an international movement challenged the high prices for ART medications made treatment more available to sub-Saharan Africa and elsewhere in the developing world. By 2001, international organizations were examining ways to rapidly increase HIV testing on a global scale and to link HIV-positive individuals to treatment and care. Many in the HIV-prevention community argued that the standard VCT approach could remain useful but that additional testing strategies were necessary given the new treatment options. Proponents of this argument fought for

creative models that would respond to a larger community of individuals than those actively seeking testing via VCT (Bayer and Edington 2009; De Cock, Bunnell, and Mermin 2006).

Accordingly, the international public health and human rights communities debated complementary testing models to both provide services beyond VCT and normalize HIV testing (WHO 2012; Bayer and Edington 2009). Over the last decade the dialogue resulted in several documents publishing recommendations for HIV testing with evolving language that, at times, was highly politicized, including: routine testing, routine recommended testing, opt-in/opt-out testing, HIV screening, and the most recent and more accepted provider-initiated testing. During this dialogue, sub-Saharan African countries implemented various testing strategies dependent on the recommendations, funding, concentration of their epidemic, and other factors. For example, in 2004 and 2005 Botswana and Lesotho instituted routine testing backed by national programs to provide ART (Bayer and Edington 2009; Rennie and Behets 2006). In the pre-treatment era people receiving HIV testing tended to be a small group who sought it out; by contrast, in the treatment scale-up era HIV testing has become much more routine and universal (Cremin et al. 2012).

In addition to ART and rapid testing technology, HIV testing was also affected by a number of global initiatives in the last decade. These initiatives outlined goals and mobilized large amounts of funding for HIV/AIDS prevention, care, and treatment in sub-Saharan Africa and elsewhere in the developing world. The US President's Emergency Plan for AIDS Relief (PEPFAR), for example, launched in 2003, is the largest commitment in history by any nation to combat a single disease internationally. Additional initiatives are the UN General Assembly Special Session on HIV/AIDS (UNGASS) and subsequent creation in 2001 of the Global Fund to fight AIDS, Tuberculosis, and Malaria; the WHO and UNAIDS' "3 by 5" strategy announced in 2003; and international support for the UN Millennium Development Goal 6 to combat HIV/AIDS. Other initiatives have come from bilateral and national agencies. In sub-Saharan Africa these international initiatives joined with local and country-specific efforts to set vast resources in motion against the HIV epidemic.

The advances in testing technology in the last decade further shaped HIV testing and prevention efforts. The earliest versions of HIV tests, conventional blood tests such as ELISA and Western Blot developed in the 1980s, were limited in scope and impact. For example, the material and personnel costs of running conventional blood tests meant that they were difficult to implement in resource-poor settings (WHO 2004). The necessity of returning to the clinic to receive results and the fear and stigma associated with HIV infection meant that many people who tested never learned their HIV status. The advent and large-scale production of rapid tests and tests requiring less-invasive oral fluid or finger-prick blood specimens placed fewer burdens on both test providers and test takers. HIV tests could be made available in a wider variety of settings, with potentially broader reach, and with more immediate test results (Greenwald et al. 2006).

HIV testing strategies in sub-Saharan Africa and elsewhere currently include facility-based and community-based approaches. Facility-based testing may be a component of specific health care offered in clinical settings addressing sexually transmitted infections (STIs), maternal and child health, or tuberculosis treatment. Community-based approaches may offer testing at workplaces and educational facilities, at targeted events and during testing campaigns, through mobile VCT services, and in people's homes (WHO/UNAIDS/UNICEF 2011; WHO 2012). Currently, in 18 of 29 sub-Saharan countries included in this report, the majority of women know of a place where they can obtain an HIV test, as do the majority of men in 19 of 29 countries.¹

¹ Ranging from 15 percent of women in Niger to 99 percent of women in Rwanda, and from 33 percent of men in Liberia to 98 percent of men in Rwanda.

1.2 Purpose

HIV testing is an essential part of providing medical care to persons living with HIV and key to preventing HIV transmission. For people who test HIV-positive, testing is the starting point for care and management of the disease. It is also an entry point for efforts to prevent infection of their sexual partners and their children. Even for people who test HIV-negative, the testing process is an opportunity for counseling about HIV transmission that may strengthen prevention efforts and reduce stigma.

Since 1998, the MEASURE DHS Project's Demographic and Health Surveys (DHS) and AIDS Indicator Surveys (AIS) have collected nationally representative data from women and men about whether they have ever been tested for HIV and if they received the test results. Additionally, since 2001, anonymous, informed, and voluntary HIV testing has been conducted in 47 DHS and AIS surveys.

Within the past decade, the MEASURE DHS project has noted marked increases in HIV testing uptake in many surveyed sub-Saharan countries. This report examines broad trends in uptake of HIV testing, as well as correlates of testing uptake across 29 countries in sub-Saharan Africa. It uses data from 47 nationally representative surveys conducted over the past decade, profiling trends within and across countries, both of any HIV testing and of testing during antenatal care. The aim is to provide a comparative portrait of the changing face of HIV testing within sub-Saharan Africa.

2 Data and Methods

2.1 Data

The study uses data from 47 Demographic and Health Surveys (DHS) and AIDS Indicator Surveys (AIS) conducted from 2003-2011 in 29 sub-Saharan African countries where questions about receipt of HIV testing were asked. To ensure comparability, data were restricted to women and men ages 15-49. The standard DHS and AIS questionnaires ask women and men about their experiences with HIV testing. Specifically they are asked, “I don’t want to know the results, but have you ever been tested to see if you have the AIDS virus?” Those who answer “yes” are then asked, “How many months ago was your most recent test,” and “I don’t want to know the results, but did you get the results of the test?” Through these questions, MEASURE DHS tabulates the two basic indicators on HIV testing presented in this paper—ever tested and received results, and tested in the last 12 months and received results.

Note that respondents’ self-reports of HIV testing do not include the voluntary HIV serostatus testing undertaken in the DHS and AIS surveys themselves. For the purpose of this report, ‘HIV testing uptake’ is specific to respondents’ self-reports about obtaining or receiving an HIV test and the results before being interviewed in the DHS or AIS.

Although the MEASURE DHS program is based on a standard core questionnaire, some surveys use slightly different questions in order to address country-specific concerns. In addition, questions have changed over time as understanding of the HIV epidemic has advanced. Every attempt has been made to note these country-specific exceptions, which can also be found in the final report for each survey.

DHS and AIS surveys use a two-stage cluster sampling design to reach households and ultimately individuals, as described in the DHS Sampling Manual (Macro International 1996). Individual male and female weights were applied to the data in Chapters 3 to 5 to adjust for nonresponse and to restore representativeness of the sample. In Chapter 6 HIV-specific weights are used.

2.2 Definitions

Over the course of the HIV/AIDS epidemic, multiple terms have been used to describe HIV testing, including the types of tests, test delivery, and the context in which testing occurs. Country-specific questions are often introduced into DHS and AIS surveys in order to more specifically respond to a country’s needs for monitoring and evaluating HIV/AIDS-related programs. Respondents are asked about the place where the most recent HIV test was taken and about whether it was offered or required. Comparative analysis of the place of testing is difficult because of the variety of options across countries and survey years. Furthermore, DHS and AIS questions generally do not distinguish between types of testing; respondents are asked about “voluntary counseling and testing” versus consent to provider-initiated opt-out testing that has occurred as part of a standard medical visit in different ways across surveys or with regard to ANC. For purposes of comparability, we consider only the end effect: whether or not the respondent was tested and received results.

Being tested for HIV and receiving results of the most recent test within a given time is sometimes considered a proxy for knowledge of one’s current HIV serostatus. While for many respondents the most recent test results may in fact reflect their current HIV status, using recent testing as a proxy for knowledge is misleading, for several reasons. First, even for tests within the past year only, there is a small risk that the respondent was exposed to HIV and seroconverted after receiving test results, or was newly exposed to HIV after the test altogether. Second, using recent testing as a proxy for knowledge of HIV status may be misleading among individuals who test HIV-positive. For example, while those who test HIV-negative are encouraged to retest at regular intervals, those who test HIV-

positive are unlikely to keep being retested. Thus people who tested HIV-positive five years before the survey would be misclassified as not “knowing” their status, because they have not been tested recently for HIV. For these reasons we do not refer to testing as indicating knowledge of one’s HIV status. Instead, we only consider the opposite: those who report never having been tested for HIV have no knowledge of their HIV status.

In some DHS and AIS surveys, biomarker testing for HIV prevalence is included for survey participants. In these surveys respondents are asked to give a few drops of blood to be tested in a laboratory for HIV. This biomarker information is anonymously linked to information from the interview, including whether the respondent was ever tested for HIV. Serostatus testing in DHS and AIS surveys is discussed in detail in Chapter 6.

This report uses the following definitions:

- **Ever tested for HIV:** Respondent answers yes to “I don’t want to know the results, but have you ever been tested to see if you have the AIDS virus?” and, after being asked about the most recent test, responds yes to “I don’t want to know the results, but did you get the results of the test?”
- **Tested in the past 12 months:** Among ever-tested respondents, who are then asked “How many months ago was your most recent HIV test?”, those who report that their most recent test was in the past 12 months
- **Wealth quintile:** The MEASURE DHS wealth index is calculated within each survey based on household access to sanitation facilities, water, electricity, flooring and roofing materials, and asset ownership. Households are ranked by wealth based on the computed index and divided into quintiles, from lowest to highest. It is important to understand that the wealth index is a relative measure; wealthier households may still be ‘poor’ on an absolute basis. The measure is only designed to allow relative comparisons within each country at the time of the interview. See Rutstein and Johnson (2004) for detailed calculation methods.
- **Marital status:** Women and men are categorized as being “married” or “in union” in DHS and AIS surveys if they self-report that they are “married or living with a woman/man as if married.”
- **Antenatal care (ANC):** Women who have given birth in the past five years before the survey are asked, for their most recent birth, “Did you see anyone for antenatal care for this pregnancy?” If the respondent answers yes, she is considered as having received ANC, regardless of the place of the visit, the number of visits, or the skill of the provider.
- **Counseled about HIV during ANC:** Women who received ANC for their most recent birth in the past five years are asked about HIV counseling during ANC. In five older surveys² women were asked, “During any of the antenatal visits for this pregnancy, were you given any information or counseled about AIDS or the AIDS virus?” Women who responded yes are classified as having received counseling for HIV during ANC. In more recent surveys, women are specifically asked about three types of counseling;

² Ghana 2003, Kenya 2003, Lesotho 2004, Malawi 2004, and Nigeria 2003.

During any of the antenatal visits for your last birth, did anyone talk to you about:

- Babies getting the AIDS virus from their mother
- Things that you can do to prevent getting the AIDS virus
- Getting tested for the AIDS virus³

In order to maintain comparability, women who answer yes to any of these three questions are classified as having received counseling about HIV during ANC.⁴ Note that any additional questions asked in some surveys about pre- and post-test counseling are excluded, as these questions are not asked in every survey and are dependent on having been tested during ANC.

- **Tested for HIV during ANC:** Women who received ANC for their most recent birth in the past five⁵ years are asked, “I don't want to know the results, but were you tested for the AIDS virus as part of your antenatal care?” and, if yes, are then asked, “I don't want to know the results, but did you get the results of the test?” Women who answer yes to both of these questions are classified as having been tested for HIV during ANC.
- **Tested for HIV during and after ANC:** In most surveys women who report having been tested during ANC are asked: “Have you been tested for the AIDS virus since that time you were tested during your pregnancy?” If they answer yes to this question and also report having received results of their most recent test, they are classified as having been tested during and after ANC.
- **HIV serostatus:** Respondent's HIV status as determined by serotesting in the DHS or AIS. See Chapter 6 for a detailed discussion of these methods and measurements.

2.3 Surveys included

This comparative report is limited to surveys in sub-Saharan Africa, due to the unique nature of HIV prevalence and testing uptake in this region. The report in at least one chapter includes DHS or AIS surveys conducted in sub-Saharan Africa since 2003 if the surveys asked respondents whether they had been tested for HIV. In all, the report includes 47 surveys from 29 countries.

This report endeavored to include as many of the selected surveys as possible in each chapter, while limiting individual chapters to surveys that can be directly compared, given the indicators discussed. The report thus includes different combinations of surveys by chapter in order to best show trends across countries, over time, during antenatal care, and by serostatus. Table 2.1 includes a list of these surveys and the corresponding sample sizes.

³ Women in Cameroon 2004 were not asked this question.

⁴ Note that this definition is different than that used in DHS/AIS reports, where women must respond yes to all three questions in order to be classified as having been counseled for HIV. The definition is expanded in order to be consistent with earlier measures of HIV counseling during ANC.

⁵ While the questions are asked of all women who gave birth in the past five years, in order to ensure recency and consistency with final reports, we consider women who gave birth in the past two years only.

Table 2.1 Inclusion of surveys by chapter

	Chapter 3: Covariates	Chapter 4: Trends	Chapter 5: ANC	Chapter 6: Serostatus	Number of women ¹	Number of men ¹
Benin DHS 2006	•		•	•	17,794	4,615
Burkina Faso DHS 2010	•		•	•	17,087	6,500
Burundi DHS 2010	•		•	•	9,389	3,760
Cameroon DHS 2004		•	•		10,656	4,815
Cameroon DHS 2011	•	•	•	•	7,457	6,455
Chad DHS 2004	•		•		6,085	1,682
Congo (Brazzaville) DHS 2005		•	•		7,051	2,924
Congo (Brazzaville) AIS 2009	•	•	•	•	6,550	5,863
Cote d'Ivoire AIS 2005	•		•	•	5,183	4,503
D.R. Congo DHS 2007	•		•	•	9,995	4,316
Ethiopia DHS 2005		•	•		6,751	5,464
Ethiopia DHS 2011	•	•	•	•	16,515	12,834
Ghana DHS 2003		•	•	• ²	5,691	4,529
Ghana DHS 2008	•	•	•		4,916	4,058
Guinea DHS 2005	•		•	•	7,954	2,709
Kenya DHS 2003		•	• ³		8,195	3,363
Kenya DHS 2008-09	•	•	•	•	8,444	3,258
Lesotho DHS 2004-05		•	• ³		7,095	2,496
Lesotho DHS 2009	•	•	•	•	7,624	3,008
Liberia DHS 2007	•		• ³	•	7,092	6,009
Madagascar DHS 2003-04		•	• ³		7,949	2,216
Madagascar DHS 2008-09	•	•	•		8,547	7,645
Malawi DHS 2004		•	•		11,698	3,114
Malawi DHS 2010	•	•	•	•	23,020	6,818
Mali DHS 2006	•		•	•	14,583	3,704
Mozambique DHS 2003		•	• ³		12,418	2,490
Mozambique AIS 2009	•	•	•	•	5,674	4,168
Namibia DHS 2006-07	•		•		9,804	3,915
Niger DHS 2006	•		•	•	9,223	3,101
Nigeria DHS 2003		•	• ³		7,620	2,093
Nigeria DHS 2008	•	•	•		33,385	13,808
Rwanda DHS 2005		•	•		11,321	4,413
Rwanda DHS 2010	•	•	•	•	13,671	5,687
Senegal DHS 2005		•	•		14,602	3,415
Senegal DHS 2010-11	•	•	•	•	15,688	4,417
Sierra Leone DHS 2008	•		•	•	7,374	2,944
Swaziland DHS 2006-07	•		•	•	4,987	4,156
Tanzania AIS 2003-04		•	•		6,863	5,659
Tanzania DHS 2004-05		•	•		10,329	2,635
Tanzania AIS/MIS 2007-08		•	•	•	9,343	6,975
Tanzania DHS 2010	•	•	•		10,139	2,527
Uganda AIS 2004-05		•	•		9,941	8,010
Uganda DHS 2006		•	•		8,531	2,385
Uganda AIS 2011	•	•	•	•	8,674	2,173
Zambia DHS 2007	•		•	•	7,146	5,995
Zimbabwe DHS 2005-06		•	•		8,907	6,863
Zimbabwe DHS 2010-11	•	•	•	•	9,171	7,110

¹ The sample size is smaller in Chapter 5 on ANC testing, which includes women who gave birth in the past 5 years, and in Chapter 6 on HIV serostatus, which only includes adults who consented to be tested. Sample sizes are listed in those chapters.

² Most recent survey does not have HIV serotesting; earlier survey used.

³ Country excluded from tables 5.2 to 5.4 because the survey did not ask about HIV testing during ANC.

Chapter 3, on current patterns in HIV testing uptake by characteristics of respondents, includes the most recent DHS or AIS survey from each of 29 countries. Chapter 4, which examines trends in HIV testing uptake over time, includes 33 surveys from 15 countries that have had multiple surveys with questions about HIV testing since 2003. Chapter 5, which examines HIV testing during ANC, uses all 47 surveys in the first table, and subsequently 41 surveys that asked about HIV testing during ANC. Finally, Chapter 6, on HIV testing by serostatus, includes the most recent survey from the 25 countries that conducted serostatus testing. Appendix Tables A.9 to A.14, on HIV testing by serostatus and covariates, include the 13 countries from Chapter 6 with adult HIV prevalence greater than 3 percent.

2.4 Limitations

This is a descriptive report of comparative trends; the study did not conduct multivariate regressions and tests of statistical significance. Patterns found in one dimension of HIV testing uptake, such as urban residence, are undoubtedly linked to other factors, such as wealth, education, and HIV serostatus.

Given the dramatic changes in HIV testing technology, funding, and outreach over the past decade in sub-Saharan Africa, cross-national trends should be interpreted with caution as to the year when the survey was conducted. Further, among the 15 countries with more than one survey since 2001, the number of years between the first survey and the most recent survey in a country ranges from four to seven years. Thus cross-national patterns and trends suggested by the data must be interpreted with caution and attention to the timing of the surveys.

Despite the standardization of the DHS and AIS core questionnaires, there are slight differences across countries in how HIV-related questions are asked. This is particularly true regarding counseling and testing in antenatal care, addressed in Chapter 5. Footnotes indicate exceptions whenever possible; further details can be found in the survey-specific questionnaires at the end of the final report for each survey.

3 Factors Associated with HIV Testing Uptake

Chapter 3 explores the most up-to-date national estimates of HIV testing uptake from all 29 surveyed countries in sub-Saharan Africa. The chapter examines patterns of testing uptake overall as well as by place of residence, age, education, wealth, marital status, and previous sexual activity.

3.1 Recent cross-national patterns in HIV testing uptake

Table 3.1 presents the percentage of women and men who have ever been tested for HIV by country, for the most recent survey. The proportion of women ever tested for HIV ranges from 1 percent in Chad 2004 to 76 percent in Rwanda 2010, and for men ranges from 4 to 69 percent, also in Chad 2004 and Rwanda 2010, respectively. The median national uptake of HIV testing for women was 28.8 percent and for men was 17.2 percent.

Figure 3.1 shows the uptake of HIV testing by sex. In 9 of 29 countries, the majority of women have been tested for HIV at least once—Cameroon 2011, Kenya 2008-09, Lesotho 2009, Malawi 2010, Namibia 2006-07, Rwanda 2010, Tanzania 2010, Uganda 2011, and Zimbabwe 2010-11. In only two countries have the majority of men been tested for HIV at least once—Rwanda 2010 and Malawi 2010.

In 23 of 29 countries, more women than men report having ever been tested for HIV. The largest differential between women and men is 28 percentage points in Lesotho 2009. Of the six countries where the differential is reversed—that is, more men than women report having been tested—five are in West Africa; in these countries there was less than a four percentage point difference in ever testing between men and women.

Table 3.1 also shows uptake of HIV testing in the past 12 months; these data are displayed in Figure 3.2. For women, recent uptake of HIV testing ranges from less than 1 percent in Chad 2004 to 42 percent in Lesotho 2009, with a country median of 11.2 percent. For men the percent tested in the past year ranges from less than 2 percent in Niger 2006 to 38 percent in Rwanda 2010, with a country median of 8.9 percent.

In 22 of 27 countries,⁶ more women than men report having been tested for HIV in the past year. Of the five countries where more men than women report recent testing, four are in West Africa.

⁶ Due to a problem with the questionnaires for the Malawi 2010 DHS and Uganda 2011 AIS, data on time since last HIV test are not available for some women. Therefore these estimates are omitted.

Table 3.1 Uptake of HIV testing overall and in past 12 months by sex¹

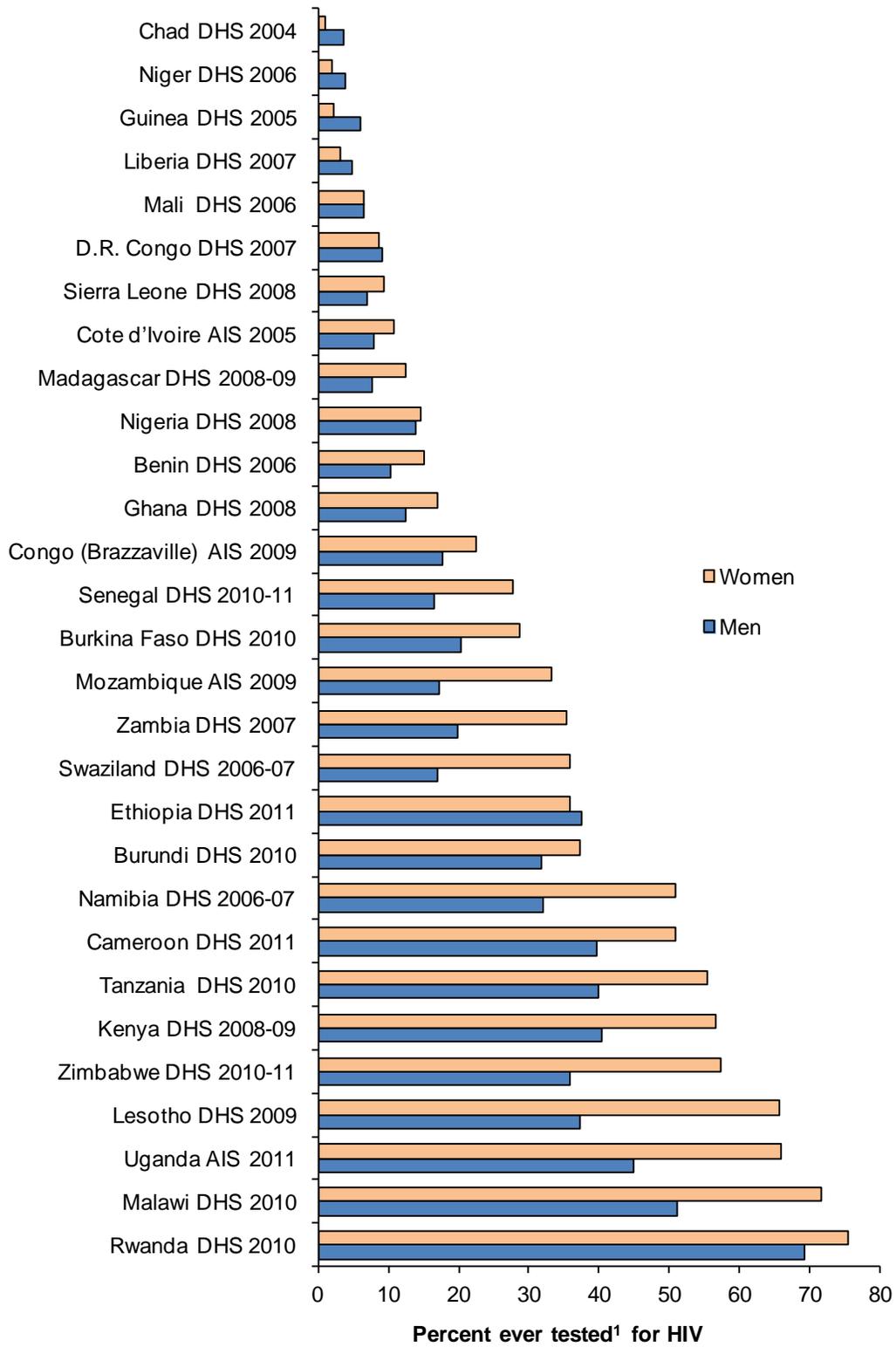
Among women and men age 15-49

	Ever tested for HIV		Tested in past 12 months		Total	
	Women	Men	Women	Men	Women	Men
	%	%	%	%	n	n
Benin DHS 2006	15.1	10.4	6.5	4.8	17,794	4,615
Burkina Faso DHS 2010	28.8	20.3	11.2	8.4	17,087	6,500
Burundi DHS 2010	37.4	31.9	18.7	11.7	9,389	3,760
Cameroon DHS 2011	50.9	39.7	22.3	20.4	7,457	6,455
Chad DHS 2004	1.1	3.7	0.5	1.7	6,085	1,682
Congo (Brazzaville) AIS 2009	22.5	17.7	8.5	7.1	6,550	5,863
Cote d'Ivoire AIS 2005	10.9	7.9	3.7	3.2	5,183	4,503
D.R. Congo DHS 2007	8.6	9.2	4.1	3.8	9,995	4,316
Ethiopia DHS 2011	35.8	37.6	20.0	20.7	16,515	12,834
Ghana DHS 2008	16.9	12.4	6.8	4.1	4,916	4,058
Guinea DHS 2005	2.1	6.0	1.1	2.9	7,954	2,709
Kenya DHS 2008-09	56.5	40.4	29.3	22.8	8,444	3,258
Lesotho DHS 2009	65.6	37.2	42.0	24.0	7,624	3,008
Liberia DHS 2007	3.2	4.9	1.6	2.3	7,092	6,009
Madagascar DHS 2008-09	12.5	7.7	4.2	3.6	8,547	7,645
Malawi DHS 2010	71.6	51.2	²	31.3	23,020	6,818
Mali DHS 2006	6.6	6.4	3.1	2.7	14,583	3,704
Mozambique AIS 2009	33.3	17.2	17.0	8.9	5,674	4,168
Namibia DHS 2006-07	50.9	32.0	28.6	17.6	9,804	3,915
Niger DHS 2006	1.9	3.9	0.9	1.6	9,223	3,101
Nigeria DHS 2008	14.6	14.0	6.6	6.5	33,385	13,808
Rwanda DHS 2010	75.5	69.3	38.6	37.7	13,671	5,687
Senegal DHS 2010-11	27.7	16.5	13.6	9.0	15,688	4,417
Sierra Leone DHS 2008	9.4	7.0	4.1	3.4	7,374	2,944
Swaziland DHS 2006-07	35.8	17.1	21.9	8.9	4,987	4,156
Tanzania DHS 2010	55.3	39.8	29.5	25.0	10,139	2,527
Uganda AIS 2011	65.8	44.9	²	23.2	11,160	8,735
Zambia DHS 2007	35.3	19.8	18.5	11.7	7,146	5,995
Zimbabwe DHS 2010-11	57.4	35.9	33.6	20.5	9,171	7,110

¹ 'Tested' means tested and received results of the last test

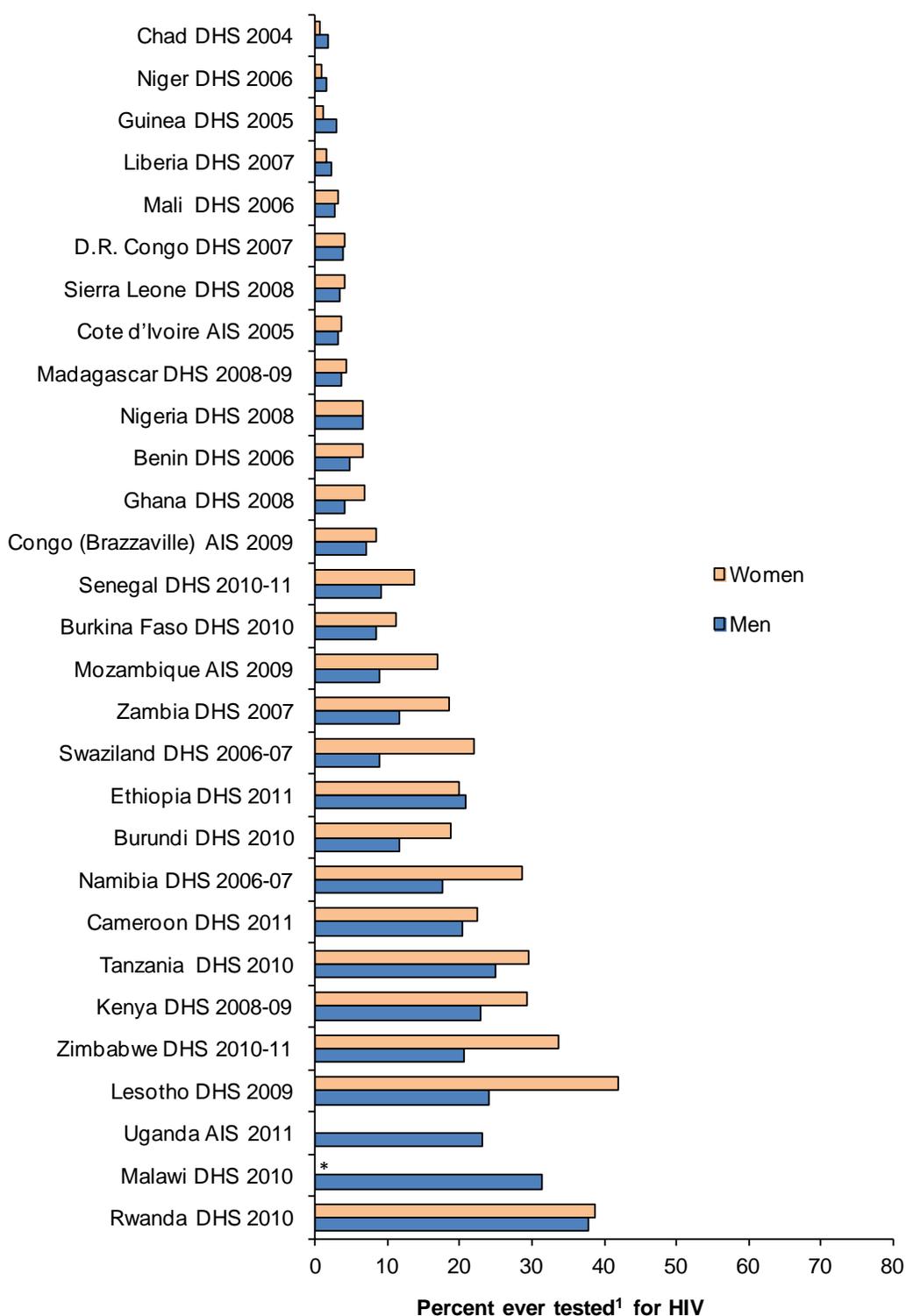
² Due to a problem with the questionnaires for the Malawi 2010 DHS and Uganda 2011 AIS, data on time since last HIV test are not available for some women. Therefore these estimates are omitted.

Figure 3.1 Uptake of HIV testing by sex



¹ Percentage of women and men ages 15-49 who were ever tested for HIV and received results of most recent test.

Figure 3.2 Uptake of HIV testing in the past 12 months by sex



¹ Percentage of women and men ages 15-49 who were tested for HIV in the past 12 months and received results of most recent test.

* Due to a problem with the questionnaires for the Malawi 2010 DHS and Uganda 2011 AIS, data on time since last HIV test are not available for some women. Therefore these estimates are omitted.

3.2 HIV testing uptake by place of residence

Table 3.2 shows the percentage of women and of men who have ever been tested for HIV by urban and rural residence. In each of the 29 countries surveyed, higher percentages of urban than rural residents report ever having been tested for HIV. Factors such as accessibility of voluntary counseling and testing (VCT) centers and health facilities likely play an important role in these urban-rural disparities. Some countries in Eastern and Southern Africa, particularly Lesotho, Zimbabwe, Rwanda, Malawi, and Swaziland, have achieved near parity in overall testing uptake between urban and rural residents. Lesotho and Swaziland have both the highest adult HIV prevalence among countries with DHS surveys, and some of the highest per capita expenditures on HIV in sub-Saharan Africa (Amico et al. 2012). Lesotho, Rwanda, and Swaziland are among the smallest countries in Africa, which—despite difficult terrain—makes rural areas more accessible. In Lesotho and Malawi, national testing day and national testing week campaigns, respectively, have contributed to the increased uptake of HIV tests among rural residents (WHO/UNAIDS/UNICEF 2010).

The relative disparity in uptake between urban and rural residents tends to be highest in some West and Central African countries, including Chad 2004, Niger 2006, Guinea 2005, and Mali 2006. In these countries uptake of HIV testing is among the lowest, and outreach to rural areas may have been particularly scant. These four surveys were also conducted during the pre-treatment era, before the advent of provider-initiated testing, when uptake of HIV testing tended to be limited to a self-selecting group (Cremin et al. 2012).

Table 3.2 Uptake of HIV testing by sex and place of residence

Percentage ever tested¹ among women and men age 15-49

	Women				Men			
	Residence		Total		Residence		Total	
	Urban	Rural	%	n	Urban	Rural	%	n
Benin DHS 2006	25.1	8.0	15.1	17,794	15.0	7.0	10.4	4,615
Burkina Faso DHS 2010	52.9	19.9	28.8	17,087	39.3	12.1	20.3	6,500
Burundi DHS 2010	59.7	34.8	37.4	9,389	48.5	28.8	31.9	3,760
Cameroon DHS 2011	62.3	37.8	50.9	7,457	50.1	26.6	39.7	6,455
Chad DHS 2004	4.7	0.2	1.1	6,085	10.9	0.9	3.7	1,682
Congo (Brazzaville) AIS 2009	27.6	14.3	22.5	6,550	21.3	11.4	17.7	5,863
Cote d'Ivoire AIS 2005	14.9	7.4	10.9	5,183	11.0	5.2	7.9	4,503
D.R. Congo DHS 2007	15.5	2.9	8.6	9,995	16.8	3.3	9.2	4,316
Ethiopia DHS 2011	61.2	27.8	35.8	16,515	56.3	32.1	37.6	12,834
Ghana DHS 2008	20.4	13.7	16.9	4,916	16.1	9.3	12.4	4,058
Guinea DHS 2005	5.1	0.7	2.1	7,954	10.7	2.9	6.0	2,709
Kenya DHS 2008-09	69.9	52.0	56.5	8,444	54.6	35.3	40.4	3,258
Lesotho DHS 2009	66.5	65.1	65.6	7,624	45.2	34.1	37.2	3,008
Liberia DHS 2007	5.3	1.7	3.2	7,092	8.2	2.6	4.9	6,009
Madagascar DHS 2008-09	28.3	9.1	12.5	8,547	22.2	4.9	7.7	7,645
Malawi DHS 2010	75.6	70.7	71.6	23,020	54.6	50.3	51.2	6,818
Mali DHS 2006	14.6	2.5	6.6	14,583	10.3	4.0	6.4	3,704
Mozambique AIS 2009	49.3	25.8	33.3	5,674	27.7	11.5	17.2	4,168
Namibia DHS 2006-07	59.6	42.7	50.9	9,804	42.5	21.5	32.0	3,915
Niger DHS 2006	7.5	0.5	1.9	9,223	10.1	1.7	3.9	3,101
Nigeria DHS 2008	24.7	9.0	14.6	33,385	20.9	9.9	14.0	13,808
Rwanda DHS 2010	79.4	74.9	75.5	13,671	73.1	68.5	69.3	5,687
Senegal DHS 2010-11	35.1	20.4	27.7	15,688	19.6	12.5	16.5	4,417
Sierra Leone DHS 2008	18.8	4.2	9.4	7,374	13.2	3.2	7.0	2,944
Swaziland DHS 2006-07	42.5	33.4	35.8	4,987	23.9	14.3	17.1	4,156
Tanzania DHS 2010	66.4	50.9	55.3	10,139	45.3	37.8	39.8	2,527
Uganda AIS 2011	76.3	62.9	65.8	11,160	58.6	41.5	44.9	8,735
Zambia DHS 2007	46.2	27.4	35.3	7,146	22.7	17.6	19.8	5,995
Zimbabwe DHS 2010-11	59.4	56.2	57.4	9,171	41.3	32.7	35.9	7,110

Note: See Appendix table A.1 for complete ns.

¹ 'Tested' means tested and received results of the last test.

Table 3.3 shows the percentage of women and men who have been tested in the past 12 months. Here, the disparity in recent testing uptake between urban and rural residents is generally similar to what it was among respondents who were ever tested. In Zimbabwe 2010-11 (for women only) and Rwanda 2010, the pattern is slightly reversed: the percent recently tested is slightly higher among rural than urban residents. To the extent that patterns from the past 12 months are indicative of future trends, these results suggest that testing uptake among urban and rural residents may become increasingly equal over time.

Table 3.3 Uptake of HIV testing in the past 12 months by sex and place of residence

Percentage tested¹ in the past 12 months among women and men age 15-49

	Women				Men			
	Residence		Total		Residence		Total	
	Urban	Rural	%	n	Urban	Rural	%	n
Benin DHS 2006	10.5	3.6	6.5	17,794	7.8	2.6	4.8	4,615
Burkina Faso DHS 2010	21.3	7.5	11.2	17,087	18.1	4.3	8.4	6,500
Burundi DHS 2010	30.1	17.3	18.7	9,389	19.2	10.3	11.7	3,760
Cameroon DHS 2011	28.6	15.0	22.3	7,457	26.5	12.7	20.4	6,455
Chad DHS 2004	2.4	0.0	0.5	6,085	5.2	0.4	1.7	1,682
Congo (Brazzaville) AIS 2009	9.5	6.7	8.5	6,550	8.1	5.2	7.1	5,863
Cote d'Ivoire AIS 2005	5.0	2.5	3.7	5,183	4.7	1.9	3.2	4,503
D.R. Congo DHS 2007	7.3	1.4	4.1	9,995	7.0	1.4	3.8	4,316
Ethiopia DHS 2011	36.0	15.0	20.0	16,515	30.4	17.9	20.7	12,834
Ghana DHS 2008	8.6	5.1	6.8	4,916	4.8	3.5	4.1	4,058
Guinea DHS 2005	2.7	0.4	1.1	7,954	5.2	1.4	2.9	2,709
Kenya DHS 2008-09	37.6	26.4	29.3	8,444	26.2	21.5	22.8	3,258
Lesotho DHS 2009	42.1	42.0	42.0	7,624	30.3	21.5	24.0	3,008
Liberia DHS 2007	2.7	0.9	1.6	7,092	4.0	1.1	2.3	6,009
Madagascar DHS 2008-09	11.5	2.6	4.2	8,547	10.2	2.4	3.6	7,645
Malawi DHS 2010	² 33.2	² 30.8	² 31.3	² 6,818	² 33.2	² 30.8	² 31.3	² 6,818
Mali DHS 2006	6.8	1.2	3.1	14,583	5.3	1.1	2.7	3,704
Mozambique AIS 2009	25.3	13.2	17.0	5,674	15.9	5.1	8.9	4,168
Namibia DHS 2006-07	33.1	24.3	28.6	9,804	23.1	12.0	17.6	3,915
Niger DHS 2006	3.7	0.2	0.9	9,223	4.8	0.5	1.6	3,101
Nigeria DHS 2008	10.9	4.1	6.6	33,385	9.2	4.9	6.5	13,808
Rwanda DHS 2010	38.1	38.7	38.6	13,671	37.4	37.7	37.7	5,687
Senegal DHS 2010-11	17.5	9.9	13.6	15,688	11.1	6.3	9.0	4,417
Sierra Leone DHS 2008	8.2	1.8	4.1	7,374	6.5	1.6	3.4	2,944
Swaziland DHS 2006-07	24.1	21.1	21.9	4,987	12.8	7.4	8.9	4,156
Tanzania DHS 2010	36.9	26.5	29.5	10,139	28.8	23.6	25.0	2,527
Uganda AIS 2011	²	²	²	²	30.4	21.4	23.2	8,735
Zambia DHS 2007	23.9	14.6	18.5	7,146	13.4	10.4	11.7	5,995
Zimbabwe DHS 2010-11	33.1	34.0	33.6	9,171	22.1	19.5	20.5	7,110

Note: See Appendix table A.1 for complete ns.

¹ 'Tested' means tested and received results of the last test.

² Due to a problem with the questionnaires for the Malawi 2010 DHS and Uganda 2011 AIS, data on time since last HIV test are not available for some women. Therefore these estimates are omitted.

3.3 HIV testing uptake by age

Table 3.4 displays the percentage of women ever tested for HIV by age group. The age pattern of HIV testing uptake among women tends to follow an inverse U-shape; in 28 of 29 countries, receipt of HIV testing peaks between at age 20-34, and is far lower at either end of the age distribution, particularly among teens. For example, in the Malawi 2010 DHS—which has the second highest uptake of HIV testing among women overall—more than 80 percent of women in each of the three five-year age groups between 20 and 34 report having been tested. Meanwhile, uptake among women age 15-19 is 43 percent, and among women age 45-49, 54 percent.

The only exception to this age pattern is the country with the lowest overall uptake of HIV testing, Chad 2004, where receipt of HIV testing is highest among women age 35-39. In no country is testing uptake highest among women age 15-19 or women over age 40.

In some countries with relatively high uptake of HIV testing, including Burundi 2010, Namibia 2006-07, and Swaziland 2006-07, uptake among teens is particularly low, at less than 20 percent. While many factors may affect this age pattern, one of the most important may be that the age of consent for medical treatment is 18 or 21 in these three countries (Global Commission on HIV and the Law 2012). In other countries with high testing uptake among young people age 15-19, laws are much more permissive about testing among adolescents. In Lesotho the age of consent for HIV testing is 12 years, and in Malawi, 13 years. In Rwanda young women can use sexual and reproductive health services without their parents' consent (UNFPA, IPPF, and The Global Coalition on Women and AIDS 2008b, 2008a; Global Commission on HIV and the Law 2012).

Table 3.4 Uptake of HIV testing among women by 5-year age group

Percentage ever tested¹ among women age 15-49

	Women							Total	
	5-year age groups							%	n
	15-19	20-24	25-29	30-34	35-39	40-44	45-49		
Benin DHS 2006	7.7	18.4	19.0	18.1	16.5	12.3	8.2	15.1	17,794
Burkina Faso DHS 2010	13.7	37.8	39.0	34.6	28.9	24.3	15.3	28.8	17,087
Burundi DHS 2010	16.0	50.0	50.8	48.0	46.6	32.0	22.2	37.4	9,389
Cameroon DHS 2011	28.3	59.1	63.2	62.7	57.4	47.5	44.4	50.9	7,457
Chad DHS 2004	0.6	0.9	1.4	1.3	2.0	1.0	1.3	1.1	6,085
Congo (Brazzaville) AIS 2009	10.2	25.2	29.5	29.6	25.3	19.0	16.9	22.5	6,550
Cote d'Ivoire AIS 2005	3.4	11.8	14.6	18.5	13.3	11.1	6.1	10.9	5,183
D.R. Congo DHS 2007	3.8	8.5	11.8	11.8	12.0	6.9	6.7	8.6	9,995
Ethiopia DHS 2011	32.1	44.4	39.8	36.6	34.4	29.4	23.7	35.8	16,515
Ghana DHS 2008	4.9	15.8	28.3	24.4	23.7	13.9	8.2	16.9	4,916
Guinea DHS 2005	1.8	3.2	2.6	2.7	1.2	1.5	1.5	2.1	7,954
Kenya DHS 2008-09	27.8	68.2	73.2	71.9	59.3	53.4	38.3	56.5	8,444
Lesotho DHS 2009	42.8	74.5	78.1	72.5	74.8	64.8	62.7	65.6	7,624
Liberia DHS 2007	2.7	4.4	4.2	2.7	3.4	2.3	1.7	3.2	7,092
Madagascar DHS 2008-09	8.3	15.1	15.5	15.3	11.6	12.9	8.9	12.5	8,547
Malawi DHS 2010	43.1	84.0	86.7	82.1	78.1	69.8	54.3	71.6	23,020
Mali DHS 2006	4.7	9.6	7.8	8.6	5.7	3.7	3.3	6.6	14,583
Mozambique AIS 2009	27.1	44.0	41.7	37.1	25.9	23.4	18.2	33.3	5,674
Namibia DHS 2006-07	17.5	60.2	68.5	64.6	64.1	54.7	40.0	50.9	9,804
Niger DHS 2006	1.7	2.4	1.7	2.4	1.6	1.5	1.2	1.9	9,223
Nigeria DHS 2008	4.0	14.7	21.7	22.8	17.8	12.8	7.1	14.6	33,385
Rwanda DHS 2010	43.5	76.9	90.3	92.6	89.3	80.8	72.6	75.5	13,671
Senegal DHS 2010-11	16.1	31.0	36.2	34.2	30.8	23.3	19.1	27.7	15,688
Sierra Leone DHS 2008	5.6	12.5	10.8	12.4	9.4	7.0	4.3	9.4	7,374
Swaziland DHS 2006-07	15.8	42.1	47.0	46.9	44.7	37.7	32.7	35.8	4,987
Tanzania DHS 2010	29.3	67.4	69.9	68.2	58.2	53.3	40.4	55.3	10,139
Uganda AIS 2011	40.8	77.4	80.8	73.0	70.6	64.6	54.7	65.8	11,160
Zambia DHS 2007	20.6	41.5	42.6	40.7	37.9	37.6	26.2	35.3	7,146
Zimbabwe DHS 2010-11	24.7	66.3	75.6	70.0	63.9	56.8	47.8	57.4	9,171

Note: See Appendix table A.2 for complete ns.

¹ 'Tested' means tested and received results of the last test.

Table 3.5 shows receipt of HIV testing among men by age group. The age profile of testing uptake among men tends to differ in two respects from that for women: it peaks at slightly older ages (at age 25-39 in 25 of 29 countries), and it does not decline as sharply among men over age 40 as among women. For example, in the 2010 Rwanda DHS receipt of HIV testing peaks at 90 percent among men age 30-34, but at least 80 percent of men in every other five-year age group between 25 and 49 report having ever been tested for HIV. Meanwhile, the reported uptake of testing in Rwanda is 65 percent among men age 20-24 and 37 percent among young men age 15-19. In four countries the uptake of testing among men peaks at older ages. In no country is HIV testing uptake highest among men under age 25.

Table 3.5 Uptake of HIV testing among men by 5-year age group

Percentage ever tested¹ among men age 15-49

	Men							Total	
	5-year age groups							%	n
	15-19	20-24	25-29	30-34	35-39	40-44	45-49		
Benin DHS 2006	5.4	11.0	12.6	11.0	15.0	11.0	8.8	10.4	4,615
Burkina Faso DHS 2010	7.4	23.4	28.9	28.2	25.1	18.2	15.6	20.3	6,500
Burundi DHS 2010	10.8	36.3	53.2	41.8	35.9	31.2	26.5	31.9	3,760
Cameroon DHS 2011	12.8	38.0	53.4	55.5	53.3	46.4	48.3	39.7	6,455
Chad DHS 2004	1.5	4.1	5.2	6.3	4.0	2.8	2.7	3.7	1,682
Congo (Brazzaville) AIS 2009	3.9	12.3	20.6	23.9	25.1	24.2	22.1	17.7	5,863
Cote d'Ivoire AIS 2005	2.2	5.6	11.4	10.7	15.1	5.4	7.5	7.9	4,503
D.R. Congo DHS 2007	2.9	8.2	10.1	15.4	14.1	9.8	10.2	9.2	4,316
Ethiopia DHS 2011	25.3	40.7	45.9	43.6	38.4	40.2	34.9	37.6	12,834
Ghana DHS 2008	3.1	11.1	13.8	20.3	17.5	16.6	12.4	12.4	4,058
Guinea DHS 2005	2.0	8.2	9.2	8.6	5.6	7.5	4.3	6.0	2,709
Kenya DHS 2008-09	21.9	42.7	55.7	47.5	48.8	43.3	34.7	40.4	3,258
Lesotho DHS 2009	18.5	35.3	44.7	46.4	46.8	58.8	51.3	37.2	3,008
Liberia DHS 2007	0.7	5.1	5.1	8.4	6.3	6.3	3.9	4.9	6,009
Madagascar DHS 2008-09	5.0	8.9	10.4	8.0	7.9	7.8	6.6	7.7	7,645
Malawi DHS 2010	30.6	57.6	64.9	58.3	57.0	53.9	51.4	51.2	6,818
Mali DHS 2006	2.2	7.9	7.7	10.3	7.1	7.1	4.9	6.4	3,704
Mozambique AIS 2009	9.2	23.4	21.9	22.3	14.9	15.1	14.0	17.2	4,168
Namibia DHS 2006-07	7.5	28.4	40.4	40.5	45.8	47.2	47.3	32.0	3,915
Niger DHS 2006	1.2	2.5	5.0	4.6	6.8	4.6	4.2	3.9	3,101
Nigeria DHS 2008	3.8	11.3	16.7	19.6	19.1	17.0	15.2	14.0	13,808
Rwanda DHS 2010	37.1	64.5	86.4	89.5	86.8	85.2	80.5	69.3	5,687
Senegal DHS 2010-11	10.6	15.2	17.3	23.4	20.7	20.3	17.9	16.5	4,417
Sierra Leone DHS 2008	1.4	5.6	7.7	9.5	8.9	12.6	5.4	7.0	2,944
Swaziland DHS 2006-07	3.0	13.2	25.8	28.9	30.6	31.8	27.1	17.1	4,156
Tanzania DHS 2010	17.9	42.3	50.9	46.9	51.3	47.3	46.4	39.8	2,527
Uganda AIS 2011	20.7	46.0	58.3	56.2	53.3	51.2	47.7	44.9	8,735
Zambia DHS 2007	8.7	21.3	25.4	25.0	21.6	21.1	24.2	19.8	5,995
Zimbabwe DHS 2010-11	10.3	33.9	47.5	46.4	48.5	48.1	48.5	35.9	7,110

Note: See Appendix table A.3 for complete ns.

¹ 'Tested' means tested and received results of the last test.

Ever testing is inherently cumulative: older adults have more exposure to the possibility of being tested. Even so, the proportion of women who have ever been tested for HIV tends to be far lower at older ages. Among men, there are only a few cases where testing uptake is higher among men age 40-49. HIV testing has become widely available only in the past decade, so cumulative exposure may not mean as much as it otherwise would; additionally, older adults may have less of a perceived need for HIV testing.

Table 3.6 shows the percentage of women who have been tested in the past 12 months by age group, and Table 3.7 shows the percentage of men. Among women, receipt of HIV testing in the past year tends to be skewed more toward age 20-29 than was the case among ever-tested women. Presumably, receiving ANC is an important factor in recent testing for HIV. In 22 of 23 countries where testing uptake among women in the past year is above 2 percent, uptake is lowest among young women age 15-19 and women age 45-49. Lesotho, the country with the highest uptake of testing among women in the past year, is the only outlier in this regard: women age 45-49 in Lesotho are almost equally as likely as women age 30-44 to have been tested in the past 12 months. Among men, the age pattern of testing uptake in the past 12 months is very close to the age pattern of ever-tested men: very low at age 15-19, higher at age 20-24, and highest among men over age 25. In 23 of 29 countries, testing uptake peaks among men age 25-39; in the remaining six countries it peaks between ages 40 to 49.

Table 3.6 Uptake of HIV testing in the past 12 months among women by 5-year age group

Percentage tested¹ in the past 12 months among women age 15-49

	Women							Total	
	5-year age groups								
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	%	n
Benin DHS 2006	4.5	9.9	7.8	6.6	6.1	4.0	2.8	6.5	17,794
Burkina Faso DHS 2010	7.9	16.5	14.8	12.4	9.6	6.9	3.3	11.2	17,087
Burundi DHS 2010	11.4	25.6	23.9	23.0	20.9	13.6	8.5	18.7	9,389
Cameroon DHS 2011	14.5	29.3	27.9	27.7	20.3	16.0	15.6	22.3	7,457
Chad DHS 2004	0.5	0.7	0.5	0.4	1.0	0.4	0.3	0.5	6,085
Congo (Brazzaville) AIS 2009	4.7	10.6	10.4	10.9	9.2	5.9	5.4	8.5	6,550
Cote d'Ivoire AIS 2005	2.3	3.2	5.8	4.8	2.8	6.3	0.6	3.7	5,183
D.R. Congo DHS 2007	2.3	4.5	6.0	5.6	4.2	2.5	2.5	4.1	9,995
Ethiopia DHS 2011	18.8	24.5	23.1	21.1	17.3	15.7	12.0	20.0	16,515
Ghana DHS 2008	2.6	7.6	12.5	7.3	8.7	4.3	3.1	6.8	4,916
Guinea DHS 2005	1.2	1.5	1.6	0.8	0.6	0.3	1.1	1.1	7,954
Kenya DHS 2008-09	17.8	38.6	40.2	36.0	22.7	23.3	14.9	29.3	8,444
Lesotho DHS 2009	33.1	48.9	45.2	42.2	43.6	40.5	43.7	42.0	7,624
Liberia DHS 2007	1.7	2.1	1.8	1.7	1.6	1.3	0.6	1.6	7,092
Madagascar DHS 2008-09	4	5.5	5.4	4.8	3	2.9	2.1	4.2	8,547
Malawi DHS 2010	²	²	²	²	²	²	²	²	²
Mali DHS 2006	3.2	4.2	3.6	3.7	2.3	0.7	1.6	3.1	14,583
Mozambique AIS 2009	15.1	24.2	21.1	18.7	11.9	10.6	7.2	17.0	5,674
Namibia DHS 2006-07	12.8	35.8	40.0	35.5	29.3	27.1	20.1	28.6	9,804
Niger DHS 2006	0.9	1.1	0.9	0.9	0.8	0.4	0.5	0.9	9,223
Nigeria DHS 2008	2.2	8.4	10.3	9.3	6.4	4.1	2.7	6.6	33,385
Rwanda DHS 2010	27.3	47.2	47.0	42.7	39.4	34.3	26.0	38.6	13,671
Senegal DHS 2010-11	9.6	16.3	17.3	15.2	13.9	10.9	8.5	13.6	15,688
Sierra Leone DHS 2008	3.3	5.6	4.7	5.6	3.2	2.4	1.8	4.1	7,374
Swaziland DHS 2006-07	10.0	27.9	29.7	27.4	24.1	20.7	20.3	21.9	4,987
Tanzania DHS 2010	20.5	37.9	34.5	35.1	29.6	24.2	18.6	29.5	10,139
Uganda AIS 2011	²	²	²	²	²	²	²	²	²
Zambia DHS 2007	12.8	21.9	22.5	21.6	16.3	18.8	12.7	18.5	7,146
Zimbabwe DHS 2010-11	18.4	42.2	44.1	38.0	33.8	29.3	23.0	33.6	9,171

Note: See Appendix table A.2 for complete ns.

¹ 'Tested' means tested and received results of the last test.

² Due to a problem with the questionnaires for the Malawi 2010 DHS and Uganda 2011 AIS, data on time since last HIV test are not available for some women. Therefore these estimates are omitted.

Table 3.7 Uptake of HIV testing in the past 12 months among men by 5-year age group

Percentage tested¹ in the past 12 months among men age 15-49

	Men							Total	
	5-year age groups							%	n
	15-19	20-24	25-29	30-34	35-39	40-44	45-49		
Benin DHS 2006	3.3	6.1	6.5	3.4	5.6	5.0	4.3	4.8	4,615
Burkina Faso DHS 2010	4.0	10.9	11.8	11.6	9.6	6.8	5.0	8.4	6,500
Burundi DHS 2010	6.4	16.9	16.6	13.7	9.2	10.0	7.9	11.7	3,760
Cameroon DHS 2011	6.9	21.5	31.0	27.4	22.5	21.1	22.5	20.4	6,455
Chad DHS 2004	1.1	1.9	2.7	2.1	2.4	0.6	1.3	1.7	1,682
Congo (Brazzaville) AIS 2009	2.4	5.9	7.9	8.3	8.2	10.7	10.1	7.1	5,863
Cote d'Ivoire AIS 2005	1.8	2.5	4.6	5.5	5.3	0.3	1.6	3.2	4,503
D.R. Congo DHS 2007	1.4	4.4	4.1	5.7	5.9	3.5	3.4	3.8	4,316
Ethiopia DHS 2011	16.5	24.8	23.7	22.5	17.7	22.2	17.0	20.7	12,834
Ghana DHS 2008	1.6	5.7	4.7	5.0	6.4	2.4	3.4	4.1	4,058
Guinea DHS 2005	0.9	3.6	5.6	4.6	2.5	2.3	2.7	2.9	2,709
Kenya DHS 2008-09	13.1	25.4	31.1	27.6	24.5	23.2	18.8	22.8	3,258
Lesotho DHS 2009	11.8	24.0	30.1	27.0	29.7	38.3	32.9	24.0	3,008
Liberia DHS 2007	0.4	2.9	2.6	3.2	3.1	3.8	0.7	2.3	6,009
Madagascar DHS 2008-09	2.5	4.8	4.4	3.9	3.2	3.9	2.9	3.6	7,645
Malawi DHS 2010	21.0	38.5	38.8	32.9	33.5	30.0	27.5	31.3	6,818
Mali DHS 2006	1.3	3.4	2.6	4.3	3.5	2.2	2.1	2.7	3,704
Mozambique AIS 2009	5.6	11.6	12.0	11.0	7.7	6.9	7.2	8.9	4,168
Namibia DHS 2006-07	5.7	16.3	23.7	19.8	23.9	21.9	27.1	17.6	3,915
Niger DHS 2006	1.0	1.5	2.5	1.8	1.9	1.3	1.7	1.6	3,101
Nigeria DHS 2008	2.2	5.6	7.9	9.2	9.1	6.5	6.1	6.5	13,808
Rwanda DHS 2010	23.9	41.7	47.4	43.9	40.4	38.7	35.0	37.7	5,687
Senegal DHS 2010-11	6.0	8.9	9.9	13.2	11.8	7.6	8.4	9.0	4,417
Sierra Leone DHS 2008	0.4	2.2	4.0	6.0	3.9	6.5	2.5	3.4	2,944
Swaziland DHS 2006-07	1.8	6.9	13.1	15.2	16.2	17.1	13.0	8.9	4,156
Tanzania DHS 2010	13.0	27.9	30.9	28.6	31.0	29.6	26.3	25.0	2,527
Uganda AIS 2011	11.3	25.5	31.3	29.3	28.5	21.7	20.9	23.2	8,735
Zambia DHS 2007	7.3	14.1	14.2	13.9	10.6	10.9	12.7	11.7	5,995
Zimbabwe DHS 2010-11	7.0	22.1	28.0	25.2	26.3	23.6	22.2	20.5	7,110

Note: See Appendix table A.3 for complete ns.

¹ 'Tested' means tested and received results of the last test.

3.4 HIV testing uptake by education

Table 3.8 shows the percentage of women and men who have ever been tested for HIV by education, defined as the highest level of schooling attended. Figure 3.3 for women and Figure 3.4 for men illustrates these data. In all 29 countries, women who have attended secondary school are more likely to have ever been tested for HIV than women with no education or women who have attended primary school only. For example, in Uganda 2011 testing uptake among women with no education (59 percent), is markedly lower than uptake among women who have attended secondary school (73 percent), while women a primary school education have nearly the same uptake as women overall. The only exception to this pattern is Rwanda 2010, where testing uptake is higher among women with no education than among women with a primary school education.

Relative disparities in uptake of HIV testing between women with secondary education and women with no education tend to be larger when overall testing uptake is low. In Chad 2004 and Guinea 2005, for example, less than 1 percent of women with no education have ever been tested compared with more than 8 percent of women with secondary education. In countries with higher overall testing uptake, however, greater parity in testing among educational groups is not always the case. In Cameroon 2011, for example, a country where more than half of all women have ever been tested for HIV, women who

attended secondary school are more than three times as likely to have ever been tested for HIV compared with women with no education.

Table 3.8 and Figure 3.4 show HIV testing uptake for men by education. As with women, testing uptake tends to be higher among men who attended secondary education compared with men with no education or with primary education only. There are four exceptions: Congo Brazzaville 2009, D.R. Congo 2007, Lesotho 2009, and Rwanda 2010. In the first three surveys, testing uptake among men with no education is higher than among men who had attended primary school. In Rwanda 2010, testing uptake among men with no education is higher not only than uptake among men who attended primary school but also slightly higher than among men who attended secondary school. In the other 25 countries, however, uptake of HIV testing among men increases with education. In Table 3.9, which shows the percentage of women and men tested in the past 12 months by educational attainment, the patterns are quite similar to patterns for the percentage ever tested.

Table 3.8 Uptake of HIV testing by sex and education

Percentage ever tested¹ among women and men age 15-49

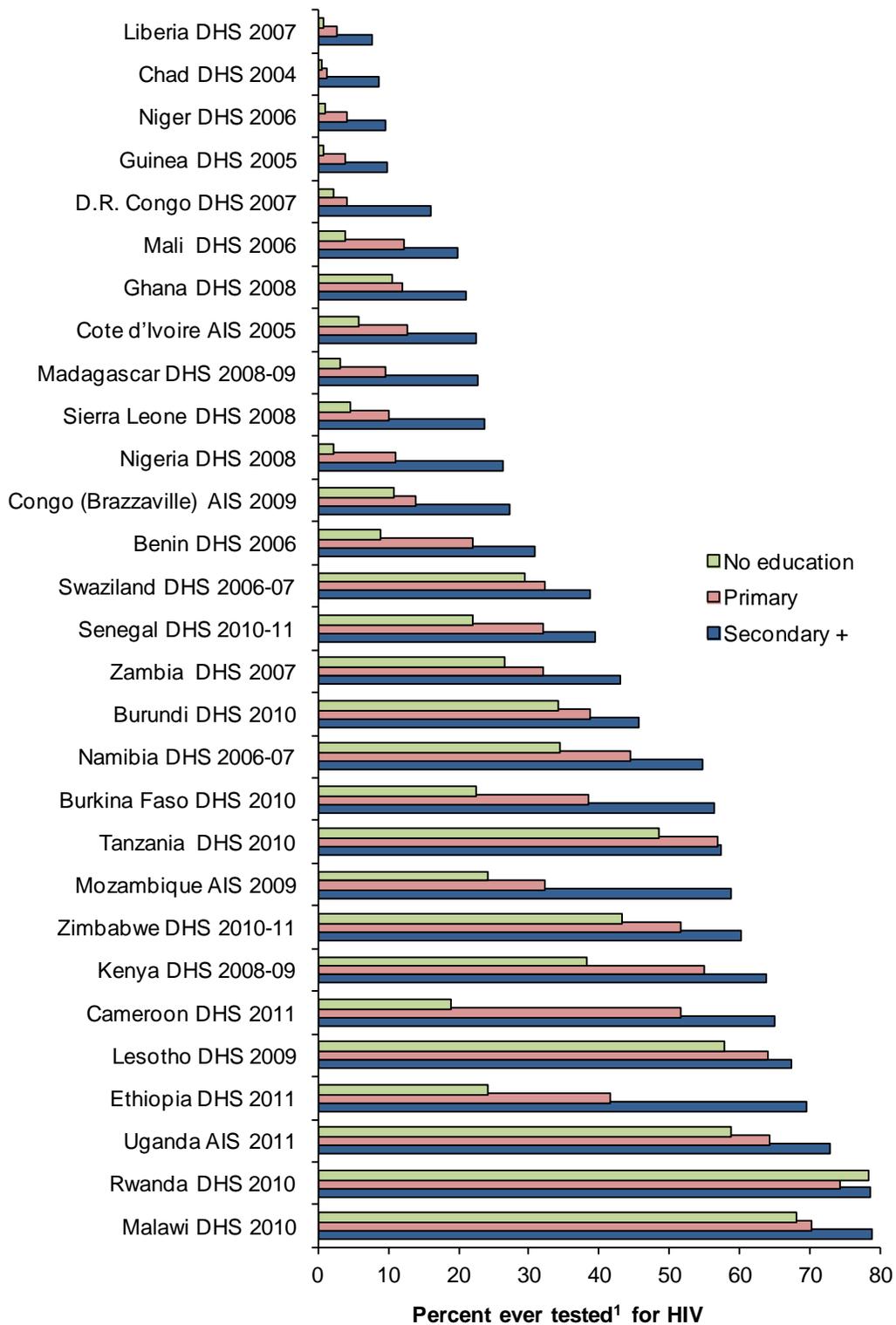
	Women					Men				
	Education ²			Total		Education ²			Total	
	No education	Primary	Secondary+	%	n	No education	Primary	Secondary+	%	n
Benin DHS 2006	8.8	22.0	30.9	15.1	17,794	3.8	8.0	18.4	10.4	4,615
Burkina Faso DHS 2010	22.4	38.4	56.4	28.8	17,087	10.0	22.0	48.4	20.3	6,500
Burundi DHS 2010	34.1	38.7	45.6	37.4	9,389	25.7	32.2	39.1	31.9	3,760
Cameroon DHS 2011	18.8	51.5	65.0	50.9	7,457	7.7	28.4	50.3	39.7	6,455
Chad DHS 2004	0.5	1.3	8.6	1.1	6,085	0.3	2.5	12.5	3.7	1,682
Congo (Brazzaville) AIS 2009	10.9	13.9	27.2	22.5	6,550	8.2	8.0	20.2	17.7	5,863
Cote d'Ivoire AIS 2005	5.9	12.7	22.4	10.9	5,183	3.0	6.1	13.1	7.9	4,503
D.R. Congo DHS 2007	2.1	4.2	16.0	8.6	9,995	4.1	1.6	13.0	9.2	4,316
Ethiopia DHS 2011	24.1	41.5	69.5	35.8	16,515	25.4	36.5	61.5	37.6	12,834
Ghana DHS 2008	10.6	12.0	21.0	16.9	4,916	5.9	6.1	15.0	12.4	4,058
Guinea DHS 2005	0.7	4.0	9.9	2.1	7,954	2.8	3.5	11.9	6.0	2,709
Kenya DHS 2008-09	38.3	55.0	63.8	56.5	8,444	19.3	31.4	52.4	40.4	3,258
Lesotho DHS 2009	57.7	63.9	67.3	65.6	7,624	35.2	31.6	44.7	37.2	3,008
Liberia DHS 2007	0.9	2.7	7.8	3.2	7,092	0.7	1.8	8.4	4.9	6,009
Madagascar DHS 2008-09	3.2	9.5	22.8	12.5	8,547	1.3	3.3	17.2	7.7	7,645
Malawi DHS 2010	68.1	70.2	78.9	71.6	23,020	34.3	45.5	65.9	51.2	6,818
Mali DHS 2006	4.0	12.2	19.8	6.6	14,583	3.1	7.4	14.1	6.4	3,704
Mozambique AIS 2009	24.2	32.3	58.8	33.3	5,674	6.7	11.7	34.8	17.2	4,168
Namibia DHS 2006-07	34.4	44.5	54.8	50.9	9,804	16.2	23.3	38.3	32.0	3,915
Niger DHS 2006	1.0	4.2	9.5	1.9	9,223	1.8	4.2	12.1	3.9	3,101
Nigeria DHS 2008	2.1	11.0	26.2	14.6	33,385	1.4	9.7	19.3	14.0	13,808
Rwanda DHS 2010	78.4	74.2	78.5	75.5	13,671	74.2	67.1	74.1	69.3	5,687
Senegal DHS 2010-11	21.9	32.0	39.4	27.7	15,688	9.0	14.4	26.3	16.5	4,417
Sierra Leone DHS 2008	4.7	10.2	23.7	9.4	7,374	1.9	3.6	14.9	7.0	2,944
Swaziland DHS 2006-07	29.4	32.2	38.7	35.8	4,987	19.1	10.4	20.9	17.1	4,156
Tanzania DHS 2010	48.4	56.9	57.3	55.3	10,139	24.4	39.1	48.4	39.8	2,527
Uganda AIS 2011	58.8	64.2	72.9	65.8	11,160	32.4	38.1	56.9	44.9	8,735
Zambia DHS 2007	26.6	32.0	42.9	35.3	7,146	13.7	14.5	25.4	19.8	5,995
Zimbabwe DHS 2010-11	43.2	51.6	60.2	57.4	9,171	13.3	24.0	39.3	35.9	7,110

See Appendix table A.3 for complete ns.

¹ 'Tested' means tested and received results of the last test.

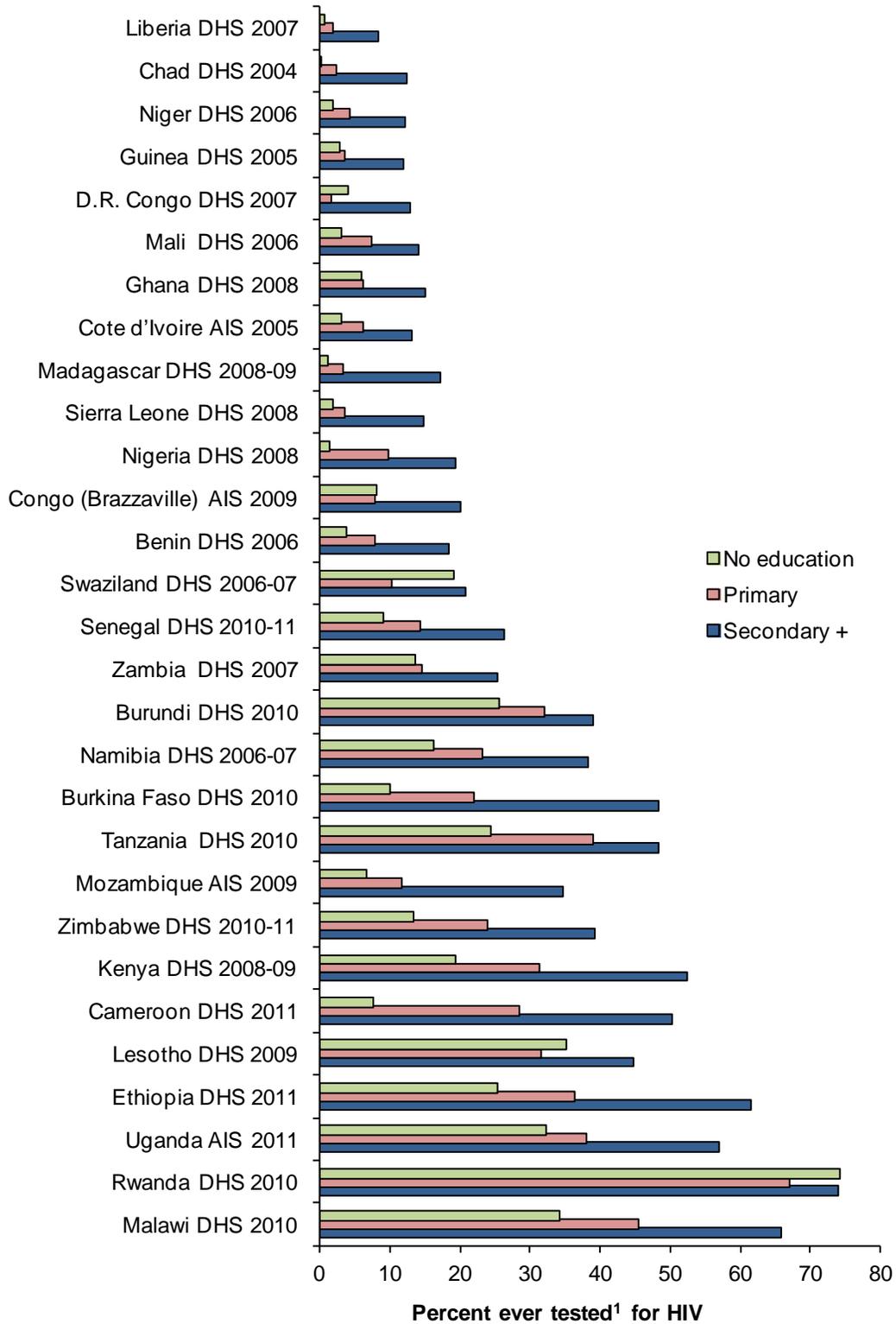
² Highest level of schooling attended.

Figure 3.3 Uptake of HIV testing among women by education



¹ Percentage of women ages 15-49 who were ever tested for HIV and received results of most recent test.

Figure 3.4 Uptake of HIV testing among men by education



¹ Percentage of men ages 15-49 who were ever tested for HIV and received results of most recent test.

Table 3.9 Uptake of HIV testing in the past 12 months by sex and education

Percentage tested¹ in the past 12 months among women and men age 15-49

	Women					Men				
	Education ²			Total		Education ²			Total	
	No education	Primary	Secondary+	%	n	No education	Primary	Secondary+	%	n
Benin DHS 2006	3.7	8.9	14.5	6.5	17,794	1.3	3.3	9.3	4.8	4,615
Burkina Faso DHS 2010	8.0	15.1	25.9	11.2	17,087	3.1	9.5	22.9	8.4	6,500
Burundi DHS 2010	16.0	20.0	24.0	18.7	9,389	7.7	11.6	17.0	11.7	3,760
Cameroon DHS 2011	4.9	21.2	31.0	22.3	7,457	2.3	13.3	26.8	20.4	6,455
Chad DHS 2004	0.2	0.6	4.0	0.5	6,085	0.1	1.1	6.0	1.7	1,682
Congo (Brazzaville) AIS 2009	3.8	5.4	10.2	8.5	6,550	2.4	3.8	7.9	7.1	5,863
Cote d'Ivoire AIS 2005	1.6	4.8	8.1	3.7	5,183	1.2	2.2	5.5	3.2	4,503
D.R. Congo DHS 2007	1.0	1.9	7.7	4.1	9,995	3.0	0.8	5.3	3.8	4,316
Ethiopia DHS 2011	12.9	23.7	39.8	20.0	16,515	13.1	19.7	36.5	20.7	12,834
Ghana DHS 2008	3.7	4.7	8.6	6.8	4,916	1.3	2.3	5.0	4.1	4,058
Guinea DHS 2005	0.3	2.6	5.0	1.1	7,954	1.5	2.1	5.3	2.9	2,709
Kenya DHS 2008-09	19.5	27.4	35.1	29.3	8,444	13.1	18.9	28.1	22.8	3,258
Lesotho DHS 2009	34.9	40.7	43.4	42.0	7,624	20.5	20.8	28.8	24.0	3,008
Liberia DHS 2007	0.3	1.7	3.9	1.6	7,092	0.4	0.9	3.9	2.3	6,009
Madagascar DHS 2008-09	1.1	2.8	8.2	4.2	8,547	0.5	1.4	8.4	3.6	7,645
Malawi DHS 2010	³	³	³	³	³	19.2	27.5	41.4	31.3	6,818
Mali DHS 2006	1.8	5.4	10.4	3.1	14,583	1.3	2.6	6.5	2.7	3,704
Mozambique AIS 2009	11.7	16.8	29.9	17.0	5,674	3.4	5.4	19.6	8.9	4,168
Namibia DHS 2006-07	18.9	23.8	31.2	28.6	9,804	10.3	11.9	21.2	17.6	3,915
Niger DHS 2006	0.5	2.1	4.0	0.9	9,223	0.7	1.8	5.6	1.6	3,101
Nigeria DHS 2008	1.0	4.3	12.0	6.6	33,385	0.6	4.3	9.1	6.5	13,808
Rwanda DHS 2010	35.6	38.0	44.3	38.6	13,671	38.1	36.5	41.2	37.7	5,687
Senegal DHS 2010-11	10.5	15.6	20.5	13.6	15,688	3.9	7.5	15.6	9.0	4,417
Sierra Leone DHS 2008	1.9	4.4	10.8	4.1	7,374	1.4	1.7	6.7	3.4	2,944
Swaziland DHS 2006-07	19.0	20.3	23.2	21.9	4,987	11.4	6.2	10.2	8.9	4,156
Tanzania DHS 2010	23.9	29.8	34.9	29.5	10,139	11.7	24.8	31.0	25.0	2,527
Uganda AIS 2011	³	³	³	³	³	14.0	19.2	30.5	23.2	8,735
Zambia DHS 2007	14.1	16.1	23.5	18.5	7,146	7.3	8.6	15.0	11.7	5,995
Zimbabwe DHS 2010-11	27.1	31.1	34.9	33.6	9,171	7.0	13.1	22.6	20.5	7,110

Note: See Appendix table A.3 for complete ns.

¹ 'Tested' means tested and received results of the last test.

² Highest level of schooling attended.

³ Due to a problem with the questionnaires for the Malawi 2010 DHS and Uganda 2011 AIS, data on time since last HIV test are not available for some women. Therefore these estimates are omitted.

Disparities in uptake by education may be caused by a number of factors, such as differences in awareness of the importance of testing, access to testing sites, and riskier sexual behaviors. People with more education may have better access to health services overall, and particularly more uptake of ANC services among women with more education. As with other covariates, inequities in testing uptake by education are largest in countries where overall uptake is low, suggesting that in countries where client-initiated VCT remains the predominant model, individuals with greater education have more access and perhaps a greater propensity to seek out VCT services. On the other hand, in countries where opportunities to be tested are more widespread or are integrated into routine healthcare, there are fewer relative disparities in testing uptake by education.

3.5 HIV testing uptake by wealth

Tables 3.10 and 3.11, respectively, show the percentage of women and men who have ever been tested for HIV and the percentage tested in the past 12 months by wealth quintile. The uptake of HIV testing tends to increase monotonically with wealth. But there are exceptions, particularly in countries with the highest and lowest overall testing uptake. For example, in Rwanda 2010 and Malawi 2010, two

of the countries with highest overall uptake of HIV testing, relatively equal proportions of men and women in each wealth quintile report ever testing and recent testing. Nonetheless, in every country surveyed, men and women in the fourth and the highest wealth quintiles are more likely to have ever been tested for HIV and tested in the past 12 months compared with those in the lowest quintile.

Unlike age and education, which are measured at the individual level, wealth is measured at the household level. For this reason we might expect more similarity in patterns among men and women. Yet in some countries, inequalities in testing uptake by wealth differ widely among women and men. In Zimbabwe 2010 and Lesotho 2009 testing uptake is generally equitable for women but not for men: men in the highest wealth quintile are at least 50 percent more likely to report being tested (both ever and in the past 12 months) than those in the lowest quintile. In contrast, among women in these two countries the disparity is much less. Women in the highest quintile are between 4 and 18 percent more likely to have been tested (ever and in past 12 months) than women in the lowest wealth quintile. This pattern could indicate that men and women access HIV testing in different ways. Chiefly, provider-initiated testing during ANC is a major source of testing that may reach women more evenly across socioeconomic groups than other testing options.

In countries where uptake of HIV testing is very low overall, proportional disparities in testing by wealth quintile tend to be larger. In Chad 2004, Niger 2006, and Guinea 2005, for example, the proportions ever tested and tested in the past 12 months are at least four times higher among men and women in the highest wealth quintile than in the lowest, a result that—as with disparities by education—may indicate self-selection or greater inequities in access to healthcare.

Table 3.10. Uptake of HIV testing by sex and wealth quintile

Percentage ever tested¹ among women and men age 15-49

	Women					Men								
	Wealth quintile					Wealth quintile								
	Lowest	Second	Middle	Fourth	Highest	%	n	Lowest	Second	Middle	Fourth	Highest	%	n
Benin DHS 2006	4.9	6.6	9.1	17.0	32.0	15.1	17,794	2.6	5.2	7.2	11.9	20.1	10.4	4,615
Burkina Faso DHS 2010	13.4	18.9	20.5	29.3	53.2	28.8	17,087	6.4	7.8	10.3	20.9	43.1	20.3	6,500
Burundi DHS 2010	30.1	32.5	34.6	37.7	52.2	37.4	9,389	27.3	26.5	26.5	28.1	45.5	31.9	3,760
Cameroon DHS 2011	15.4	41.4	51.5	65.1	68.3	50.9	7,457	10.1	27.2	37.9	47.1	58.4	39.7	6,455
Chad DHS 2004	0.2	0.0	0.1	0.6	4.9	1.1	6,085	0.0	0.6	1.2	1.3	11.3	3.7	1,682
Congo (Brazzaville) AIS 2009	11.4	17.4	23.4	26.7	35.1	22.5	6,550	8.6	14.1	17.7	20.3	27.2	17.7	5,863
Cote d'Ivoire AIS 2005	2.4	2.9	10.3	15.0	19.7	10.9	5,183	2.5	3.3	5.7	9.0	16.4	7.9	4,503
D.R. Congo DHS 2007	1.4	2.8	4.1	9.8	22.3	8.6	9,995	2.3	2.1	5.0	12.5	22.1	9.2	4,316
Ethiopia DHS 2011	18.2	23.4	28.3	37.1	61.3	35.8	16,515	22.2	28.6	32.9	38	57.7	37.6	12,834
Ghana DHS 2008	10.2	10.7	14.6	19.3	26.3	16.9	4,916	6.5	7.8	8.8	13.7	22.0	12.4	4,058
Guinea DHS 2005	0.2	0.5	0.8	2.8	5.9	2.1	7,954	2.3	1.7	3.5	6.0	11.9	6.0	2,709
Kenya DHS 2008-09	44.5	51.1	53.3	55.8	70.6	56.5	8,444	22.0	34.1	35.3	41.1	56.0	40.4	3,258
Lesotho DHS 2009	57.3	66.0	66.1	67.6	67.5	65.6	7,624	30.9	32.3	33.9	39.2	46.8	37.2	3,008
Liberia DHS 2007	0.7	1.4	2.7	4.6	5.7	3.2	7,092	1.5	1.3	3.4	7.1	9.6	4.9	6,009
Madagascar DHS 2008-09	3.4	4.3	8.4	14	27	12.5	8,547	1.3	1.9	3.8	7.1	20.6	7.7	7,645
Malawi DHS 2010	68.0	69.8	71.6	73.0	74.9	71.6	23,020	44.6	47.1	49.0	55.5	56.3	51.2	6,818
Mali DHS 2006	1.9	1.9	2.2	7.0	17.2	6.6	14,583	3.3	4.2	4.1	4.4	12.7	6.4	3,704
Mozambique AIS 2009	14.7	21.0	30.7	39.9	55.5	33.3	5,674	5.3	9.6	11.1	18.4	35.0	17.2	4,168
Namibia DHS 2006-07	38.5	42.3	47.2	57.6	62.0	50.9	9,804	13.1	16.2	28.8	38.7	50.2	32.0	3,915
Niger DHS 2006	0.3	0.1	0.5	0.8	6.9	1.9	9,223	1.5	1.7	1.2	1.9	9.7	3.9	3,101
Nigeria DHS 2008	1.5	4.4	10.3	18.2	33.8	14.6	33,385	2.5	6.3	10.2	15.3	28.4	14.0	13,808
Rwanda DHS 2010	74.8	73.8	73.3	76.5	78.9	75.5	13,671	65.2	66.6	69.5	69.5	73.1	69.3	5,687
Senegal DHS 2010-11	13.1	22.8	27.5	31.3	38.2	27.7	15,688	10.6	13.4	17.0	15.1	22.7	16.5	4,417
Sierra Leone DHS 2008	2.3	5.3	3.8	8.9	23.6	9.4	7,374	1.2	2.6	4.5	6.1	17.0	7.0	2,944
Swaziland DHS 2006-07	30.8	33.6	33.5	36.6	41.7	35.8	4,987	8.5	13.5	13.4	17.6	26.4	17.1	4,156
Tanzania DHS 2010	45.8	50.4	53.3	58.9	64.5	55.3	10,139	28.1	35.1	37.4	40.5	52.3	39.8	2,527
Uganda AIS 2011	62.8	61.2	59.7	65.5	75.5	65.8	11,160	40.6	38.1	40.4	42.6	57.8	44.9	8,735
Zambia DHS 2007	23.4	25.8	31.2	44.0	45.8	35.3	7,146	15.0	14.3	19.9	21.1	25.2	19.8	5,995
Zimbabwe DHS 2010-11	51.9	55.1	59.1	61.7	57.7	57.4	9,171	27.6	27.7	32.7	38.0	46.9	35.9	7,110

Note: See Appendix table A.4 for complete ns.

¹ "Tested" means tested and received results of the last test.

Table 3.11 Uptake of HIV testing in the past 12 months by sex and wealth quintile

Percentage tested¹ in the past 12 months among women and men age 15-49

	Women										Men										
	Wealth quintile					Total					Wealth quintile					Total					
	Lowest	Second	Middle	Fourth	Highest	%	n	Lowest	Second	Middle	Fourth	Highest	%	n	Lowest	Second	Middle	Fourth	Highest	%	n
Benin DHS 2006	2.2	3.0	4.3	7.4	13.2	6.5	17,794	1.1	1.7	3.4	4.9	10.4	4.8	4,615	1.1	1.7	3.4	4.9	10.4	4.8	4,615
Burkina Faso DHS 2010	5.5	7.1	6.9	11.4	21.4	11.2	17,087	1.7	2.7	3.5	6.9	20.6	8.4	6,500	1.7	2.7	3.5	6.9	20.6	8.4	6,500
Burundi DHS 2010	13.1	17.2	16.6	20.8	25.7	18.7	9,389	10.2	9.1	7.6	10.6	18.2	11.7	3,760	10.2	9.1	7.6	10.6	18.2	11.7	3,760
Cameroon DHS 2011	5.0	16.8	21.0	28.8	33.3	22.3	7,457	3.4	11.2	20.2	23.9	32.3	20.4	6,455	3.4	11.2	20.2	23.9	32.3	20.4	6,455
Chad DHS 2004	0.0	0.0	0.1	0.1	2.6	0.5	6,085	0.0	0.3	0.0	0.7	5.6	1.7	1,682	0.0	0.3	0.0	0.7	5.6	1.7	1,682
Congo (Brazzaville) AIS 2009	5.6	8.0	7.8	9.9	11.4	8.5	6,550	3.8	6.4	6.6	6.3	12.3	7.1	5,863	3.8	6.4	6.6	6.3	12.3	7.1	5,863
Cote d'Ivoire AIS 2005	1.2	0.9	4.3	3.5	7.2	3.7	5,183	1.0	1.1	3.0	3.7	6.3	3.2	4,503	1.0	1.1	3.0	3.7	6.3	3.2	4,503
D.R. Congo DHS 2007	0.8	1.0	2.3	5.4	9.7	4.1	9,995	1.1	0.5	2.4	4.8	9.4	3.8	4,316	1.1	0.5	2.4	4.8	9.4	3.8	4,316
Ethiopia DHS 2011	10.5	12.2	15.2	19.0	36.5	20.0	16,515	11.2	15.3	16.4	23.2	32.1	20.7	12,834	11.2	15.3	16.4	23.2	32.1	20.7	12,834
Ghana DHS 2008	3.3	4.0	5.7	8.0	11.1	6.8	4,916	1.8	3.0	4.1	4.5	6.4	4.1	4,058	1.8	3.0	4.1	4.5	6.4	4.1	4,058
Guinea DHS 2005	0.0	0.3	0.3	1.6	3.1	1.1	7,954	1.2	1.3	1.2	3.1	5.5	2.9	2,709	1.2	1.3	1.2	3.1	5.5	2.9	2,709
Kenya DHS 2008-09	23.5	27.3	27.7	26.6	37.5	29.3	8,444	12.2	20.3	21.5	22.4	30.7	22.8	3,258	12.2	20.3	21.5	22.4	30.7	22.8	3,258
Lesotho DHS 2009	37.7	42.2	40.8	43.7	43.5	42.0	7,624	21.0	20.9	20.5	24.8	31.1	24.0	3,008	21.0	20.9	20.5	24.8	31.1	24.0	3,008
Liberia DHS 2007	0.1	0.6	1.9	2.7	2.4	1.6	7,092	0.6	0.9	1.7	3.5	4.3	2.3	6,009	0.6	0.9	1.7	3.5	4.3	2.3	6,009
Madagascar DHS 2008-09	1.1	1.5	3	4.1	9.4	4.2	8,547	0.6	0.7	1.5	3.1	10.4	3.6	7,645	0.6	0.7	1.5	3.1	10.4	3.6	7,645
Malawi DHS 2010	²	²	²	²	²	²	²	28.1	27.2	31.5	33.5	34.3	31.3	6,818	28.1	27.2	31.5	33.5	34.3	31.3	6,818
Mali DHS 2006	0.8	0.8	0.9	3.0	8.4	3.1	14,583	0.8	1.1	1.6	1.7	6.3	2.7	3,704	0.8	1.1	1.6	1.7	6.3	2.7	3,704
Mozambique AIS 2009	7.9	10.4	14.9	19.9	29.4	17.0	5,674	2.5	3.2	5.4	9.7	19.9	8.9	4,168	2.5	3.2	5.4	9.7	19.9	8.9	4,168
Namibia DHS 2006-07	21.4	24.9	27.9	31.1	34.1	28.6	9,804	8.2	9.6	14.3	21.6	27.5	17.6	3,915	8.2	9.6	14.3	21.6	27.5	17.6	3,915
Niger DHS 2006	0.0	0.1	0.1	0.4	3.3	0.9	9,223	0.5	0.3	0.1	0.7	4.8	1.6	3,101	0.5	0.3	0.1	0.7	4.8	1.6	3,101
Nigeria DHS 2008	0.6	1.9	4.6	8.6	14.8	6.6	33,385	1.2	3.8	4.7	6.9	12.9	6.5	13,808	1.2	3.8	4.7	6.9	12.9	6.5	13,808
Rwanda DHS 2010	37.2	37.2	38.3	39.9	40.2	38.6	13,671	35.7	36.2	39.0	38.5	38.1	37.7	5,687	35.7	36.2	39.0	38.5	38.1	37.7	5,687
Senegal DHS 2010-11	6.3	11.4	13.3	14.4	20.1	13.6	15,688	4.9	6.9	8.3	7.6	14.4	9.0	4,417	4.9	6.9	8.3	7.6	14.4	9.0	4,417
Sierra Leone DHS 2008	0.9	2.5	1.8	4.3	9.6	4.1	7,374	0.6	2.2	2.2	2.8	7.9	3.4	2,944	0.6	2.2	2.2	2.8	7.9	3.4	2,944
Swaziland DHS 2006-07	20.1	20.9	22.1	22.4	23.3	21.9	4,987	5.0	7.4	7.2	9.7	12.8	8.9	4,156	5.0	7.4	7.2	9.7	12.8	8.9	4,156
Tanzania DHS 2010	22.9	23.0	27.7	34.7	36.3	29.5	10,139	17.1	22.4	23.8	23.7	34.1	25.0	2,527	17.1	22.4	23.8	23.7	34.1	25.0	2,527
Uganda AIS 2011	²	²	²	²	²	²	²	20.7	20.7	19.4	22.0	30.3	23.2	8,735	20.7	20.7	19.4	22.0	30.3	23.2	8,735
Zambia DHS 2007	12.2	13.4	16.2	23.8	23.6	18.5	7,146	9.0	8.6	12.4	12.0	14.6	11.7	5,995	9.0	8.6	12.4	12.0	14.6	11.7	5,995
Zimbabwe DHS 2010-11	31.4	33.5	34.8	35.6	32.5	33.6	9,171	14.9	16.4	19.6	22.1	25.7	20.5	7,110	14.9	16.4	19.6	22.1	25.7	20.5	7,110

Note: See Appendix table A.4 for complete ns.

¹ "Tested" means tested and received results of the last test.

² Due to a problem with the questionnaires for the Malawi 2010 DHS and Uganda 2011 AIS, data on time since last HIV test are not available for some women. Therefore these estimates are omitted.

3.6 HIV testing uptake by marital status

Tables 3.12 and 3.13, respectively, present the percentage of women and men who have ever been tested and the percentage tested in the past 12 months by current marital status. Patterns of testing by marital status are not as consistent as those found for other demographic characteristics. In the majority of countries surveyed, never-married women and men report lower uptake of HIV testing (ever and in past 12 months) than currently and formerly married women and men. Never-married respondents include those who report that they have never had sex, and also tend to be the youngest, so lower uptake of HIV testing is to be expected.

In more than half of the countries surveyed, higher percentages of formerly married women and men report ever having been tested than currently married or never-married women and men. Similarly, in many countries (14 of 29 for men and 12 of 29 for women) among respondents testing in the past 12 months, formerly married men and women report higher uptake than married men and women. These patterns are likely related to the fact that HIV prevalence tends to be highest among formerly married people, who on average are somewhat older than currently married or never-married people.

Table 3.12 Uptake of HIV testing by sex and marital status

Percentage ever tested¹ among women and men age 15-49

	Women					Men				
	Marital Status			Total		Marital Status			Total	
	Never married	Currently married	Formerly married	%	n	Never married	Currently married	Formerly married	%	n
Benin DHS 2006	12.2	15.7	17.7	15.1	17,794	8.6	11.4	17.3	10.4	4,615
Burkina Faso DHS 2010	19.4	30.6	38.0	28.8	17,087	17.0	22.3	22.8	20.3	6,500
Burundi DHS 2010	17.9	48.4	39.7	37.4	9,389	20.5	41.3	18.1	31.9	3,760
Cameroon DHS 2011	39.0	54.5	63.3	50.9	7,457	29.1	50.6	47.6	39.7	6,455
Chad DHS 2004	0.8	1.1	2.0	1.1	6,085	3.3	3.6	8.9	3.7	1,682
Congo (Brazzaville) AIS 2009	16.1	23.7	30.1	22.5	6,550	9.8	23.3	21.0	17.7	5,863
Cote d'Ivoire AIS 2005	6.6	12.5	16.2	10.9	5,183	6.1	9.2	13.2	7.9	4,503
D.R. Congo DHS 2007	7.0	9.0	9.9	8.6	9,995	7.1	11.2	4.9	9.2	4,316
Ethiopia DHS 2011	36.1	34.7	40.9	35.8	16,515	34.2	39.7	50.5	37.6	12,834
Ghana DHS 2008	7.8	21.9	17.8	16.9	4,916	8.1	16.7	12.4	12.4	4,058
Guinea DHS 2005	3.0	1.8	4.6	2.1	7,954	4.5	6.5	14.3	6.0	2,709
Kenya DHS 2008-09	35.8	66.9	60.4	56.5	8,444	32.7	47.9	38.2	40.4	3,258
Lesotho DHS 2009	49.4	75.1	69.7	65.6	7,624	26.9	49.9	54.4	37.2	3,008
Liberia DHS 2007	4.5	2.5	4.5	3.2	7,092	3.6	5.6	6.6	4.9	6,009
Madagascar DHS 2008-09	6.2	14.4	11.2	12.5	8,547	7.5	7.9	6.7	7.7	7,645
Malawi DHS 2010	37.3	80.5	77.9	71.6	23,020	40.1	58.4	58.5	51.2	6,818
Mali DHS 2006	4.8	6.7	9.6	6.6	14,583	3.7	7.6	11.4	6.4	3,704
Mozambique AIS 2009	27.2	33.6	36.7	33.3	5,674	15.6	17.6	21.3	17.2	4,168
Namibia DHS 2006-07	44.1	61.3	55.0	50.9	9,801	24.7	46.2	41.1	32.0	3,914
Niger DHS 2006	3.1	1.6	4.0	1.9	9,223	3.5	4.0	6.7	3.9	3,101
Nigeria DHS 2008	12.6	15.3	15.3	14.6	33,385	11.7	16.1	17.4	14.0	13,808
Rwanda DHS 2010	52.2	92.4	80.2	75.5	13,671	49.2	90.1	81.1	69.3	5,687
Senegal DHS 2010-11	19.2	31.1	32.3	27.7	15,688	14.9	18.5	34.5	16.5	4,417
Sierra Leone DHS 2008	12.9	8.7	8.1	9.4	7,374	4.3	8.7	6.4	7.0	2,944
Swaziland DHS 2006-07	27.8	43.1	47.0	35.8	4,987	10.7	29.8	25.9	17.1	4,156
Tanzania DHS 2010	34.6	62.0	63.6	55.3	10,139	27.8	48.3	48.2	39.8	2,527
Uganda AIS 2011	42.3	73.6	70.4	65.8	11,160	30.5	53.6	49.8	44.9	8,735
Zambia DHS 2007	24.1	39.0	40.5	35.3	7,146	15.5	22.9	24.1	19.8	5,995
Zimbabwe DHS 2010-11	26.4	67.0	68.1	57.4	9,171	21.3	47.9	48.4	35.9	7,110

Note: See Appendix table A.5 for complete ns.

¹ 'Tested' means tested and received results of the last test.

Table 3.13 Uptake of HIV testing in the past 12 months by sex and marital status

Percentage tested¹ in the past 12 months among women and men age 15-49

	Women					Men				
	Marital Status			Total		Marital Status			Total	
	Never married	Currently married	Formerly married	%	n	Never married	Currently married	Formerly married	%	n
Benin DHS 2006	6.6	6.5	5.5	6.5	17,794	5.0	4.6	9.0	4.8	4,615
Burkina Faso DHS 2010	9.9	11.5	10.8	11.2	17,087	8.1	8.6	9.0	8.4	6,500
Burundi DHS 2010	11.3	23.1	17.4	18.7	9,389	10.8	12.5	3.6	11.7	3,760
Cameroon DHS 2011	18.9	23.5	24.8	22.3	7,457	16.4	24.5	23.1	20.4	6,455
Chad DHS 2004	0.3	0.6	0.8	0.5	6,085	1.6	1.8	2.6	1.7	1,682
Congo (Brazzaville) AIS 2009	6.6	8.9	10.4	8.5	6,550	4.2	9.3	6.8	7.1	5,863
Cote d'Ivoire AIS 2005	3.2	3.9	3.9	3.7	5,183	3.3	2.8	5.9	3.2	4,503
D.R. Congo DHS 2007	3.6	4.0	5.4	4.1	9,995	3.8	4.1	1.8	3.8	4,316
Ethiopia DHS 2011	21.2	19.5	19.7	20	16,515	20.8	20.3	26.2	20.7	12,834
Ghana DHS 2008	3.7	8.9	4.3	6.8	4,916	3.7	4.4	5.1	4.1	4,058
Guinea DHS 2005	1.7	0.8	3.9	1.1	7,954	2.1	3.4	3.7	2.9	2,709
Kenya DHS 2008-09	21.9	33.0	30.5	29.3	8,444	20.5	25.7	15.0	22.8	3,258
Lesotho DHS 2009	33.7	46.4	46.2	42.0	7,624	17.6	32.0	33.6	24.0	3,008
Liberia DHS 2007	2.2	1.3	2.2	1.6	7,092	1.4	2.8	3.2	2.3	6,009
Madagascar DHS 2008-09	3	4.6	3.7	4.2	8,547	3.7	3.7	2.3	3.6	7,645
Malawi DHS 2010	²	²	²	²	²	26.9	33.9	39.8	31.3	6,818
Mali DHS 2006	3.0	3.1	3.1	3.1	14,583	1.6	3.2	4.5	2.7	3,704
Mozambique AIS 2009	17.1	17.0	17.3	17.0	5,674	8.4	8.9	13.5	8.9	4,168
Namibia DHS 2006-07	25.4	33.8	28.9	28.6	9,801	14.7	22.8	22.8	17.5	3,914
Niger DHS 2006	1.8	0.7	1.2	0.9	9,223	2.1	1.2	5.6	1.6	3,101
Nigeria DHS 2008	6.7	6.5	5.9	6.6	33,385	5.9	7.0	8.5	6.5	13,808
Rwanda DHS 2010	31.1	44.9	36.3	38.6	13,671	30.4	45.1	46.2	37.7	5,687
Senegal DHS 2010-11	10.3	15.0	15.3	13.6	15,688	8.7	9.1	15.3	9.0	4,417
Sierra Leone DHS 2008	6.3	3.7	2.2	4.1	7,374	1.6	4.6	2.4	3.4	2,944
Swaziland DHS 2006-07	17.0	26.7	27.4	21.9	4,987	5.4	15.9	14.5	8.9	4,156
Tanzania DHS 2010	21.6	32.5	29.8	29.5	10,139	18.5	29.8	28.6	25.0	2,527
Uganda AIS 2011	²	²	²	²	²	16.8	27.4	22.4	23.2	8,735
Zambia DHS 2007	14.0	20.3	19.1	18.5	7,146	10.6	12.5	13.2	11.7	5,995
Zimbabwe DHS 2010-11	16.8	39.9	34.4	33.6	9,171	12.8	26.6	28.9	20.5	7,110

Note: See Appendix table A.5 for complete ns.

¹ 'Tested' means tested and received results of the last test.

² Due to a problem with the questionnaires for the Malawi 2010 DHS and Uganda 2011 AIS, data on time since last HIV test are not available for some women. Therefore these estimates are omitted.

3.7 HIV testing uptake by ever had sex

Tables 3.14 and 3.15, respectively, present the percentage of women and men who have ever been tested and the percentage tested in the past 12 months by sexual activity. In general, higher percentages of sexually active respondents report ever testing and testing in the past 12 months than respondents who have never had sex. Even so, notable percentages of women and men who have never had sex also still report having been tested for HIV, even in countries where the risk of nonsexual transmission is low. In five countries—Rwanda, Malawi, Uganda, Lesotho, and Ethiopia—more than one-fifth of women who have never had sex report ever being tested for HIV. In three countries—Rwanda, Malawi, and Ethiopia—the same is true for men.

Although some respondents may have misreported their sexual activity, other factors may contribute to HIV testing among people who have never been sexually active. Many national testing day campaigns, for example, focus on the general population regardless of age or sexual activity (Goldberg, Kombe, and Osewe 2008). In Ethiopia and Rwanda, the Multi-Sectoral AIDS Program has mobilized youth groups to encourage testing among their members, including a voucher program for young people to receive expedited testing on certain days (Görgens-Albino et al. 2007). These campaigns tend to not distinguish between sexually active and inactive individuals, likely because of the stigma associated with premarital sex. Additionally, some of the youngest respondents may have been tested as children to screen for mother-to-child transmission of HIV.

Table 3.14 Uptake of HIV testing by sex and sexual activity

Percentage ever tested¹ among women and men age 15-49

	Women				Men			
	Never had sex	Ever had sex	Total ²		Never had sex	Ever had sex	Total ²	
			%	n			%	n
Benin DHS 2006	4.6	16.2	15.1	17,794	4.1	11.6	10.4	4,615
Burkina Faso DHS 2010	8.7	31.7	28.8	17,087	8.3	23.7	20.3	6,500
Burundi DHS 2010	13.6	47.3	37.4	9,389	15.3	40.0	31.9	3,760
Cameroon DHS 2011	16.6	56.3	50.9	7,457	10.5	46.8	39.7	6,455
Chad DHS 2004	0.4	1.3	1.1	6,085	0.5	4.6	3.7	1,682
Congo (Brazzaville) AIS 2009	3.4	23.8	22.5	6,550	3.3	19.0	17.7	5,863
Cote d'Ivoire AIS 2005	1.2	11.9	10.9	5,183	0.5	9.0	7.9	4,503
D.R. Congo DHS 2007	2.4	9.4	8.6	9,995	3.8	10.1	9.2	4,316
Ethiopia DHS 2011	33.1	36.7	35.8	16,515	28.8	42.5	37.6	12,834
Ghana DHS 2008	3.8	19.4	16.9	4,916	3.4	15.2	12.4	4,058
Guinea DHS 2005	1.4	2.2	2.1	7,954	1.1	6.9	6.0	2,709
Kenya DHS 2008-09	18.6	64.2	56.5	8,444	17.3	44.9	40.4	3,258
Lesotho DHS 2009	29.3	71.9	65.6	7,624	15.8	40.6	37.2	3,008
Liberia DHS 2007	0.0	3.4	3.2	7,092	0.7	5.4	4.9	6,009
Madagascar DHS 2008-09	3.9	13.6	12.5	8,547	3.0	8.5	7.7	7,645
Malawi DHS 2010	26.7	78.7	71.6	23,020	26.6	55.4	51.2	6,818
Mali DHS 2006	3.4	7.0	6.6	14,583	1.5	8.0	6.4	3,704
Mozambique AIS 2009	4.3	34.7	33.3	5,674	4.4	18.4	17.2	4,168
Namibia DHS 2006-07	10.6	58.8	50.9	9,804	5.8	36.2	32	3,915
Niger DHS 2006	2.7	1.8	1.9	9,223	1.5	4.8	3.9	3,101
Nigeria DHS 2008	6.0	16.0	14.6	33,385	4.3	17.1	14.0	13,808
Rwanda DHS 2010	44.4	88.9	75.5	13,671	40.1	82.1	69.3	5,687
Senegal DHS 2010-11	15.8	31.8	27.7	15,688	10.7	20.1	16.5	4,417
Sierra Leone DHS 2008	3.0	9.9	9.4	7,374	1.3	7.9	7.0	2,944
Swaziland DHS 2006-07	5.8	42.3	35.8	4,987	3.8	23.0	17.1	4,156
Tanzania DHS 2010	16.5	61.6	55.3	10,139	16.1	45.4	39.8	2,527
Uganda AIS 2011	23.4	72.0	65.8	11,160	19.8	50.4	44.9	8,735
Zambia DHS 2007	10.3	39.2	35.3	7,146	7.3	22.2	19.8	5,995
Zimbabwe DHS 2010-11	15.5	66.7	57.4	9,171	13.8	43.3	35.9	7,110

¹ 'Tested' means tested and received results of the last test.

² Total includes a small number of missing cases. See Appendix table A.6 for complete ns.

Table 3.15 Uptake of HIV testing in the past 12 months by sex and sexual activity

Percentage tested¹ in the past 12 months among women and men age 15-49

	Women				Men			
	Never had sex	Ever had sex	Total ²		Never had sex	Ever had sex	Total ²	
			%	n			%	n
Benin DHS 2006	2.5	6.9	6.5	17,794	2.4	5.2	4.8	4,615
Burkina Faso DHS 2010	4.5	12.1	11.2	17,087	4.3	9.6	8.4	6,500
Burundi DHS 2010	9.3	22.5	18.7	9,389	7.7	13.6	11.7	3,760
Cameroon DHS 2011	7	24.7	22.3	7,457	4.8	24.2	20.4	6,455
Chad DHS 2004	0.2	0.6	0.5	6,085	0.3	2.1	1.7	1,682
Congo (Brazzaville) AIS 2009	1.7	8.9	8.5	6,550	2.0	7.5	7.1	5,863
Cote d'Ivoire AIS 2005	0.4	4.1	3.7	5,183	0.2	3.6	3.2	4,503
D.R. Congo DHS 2007	1.3	4.4	4.1	9,995	1.5	4.2	3.8	4,316
Ethiopia DHS 2011	19.0	20.3	20.0	16,515	17.6	22.4	20.7	12,834
Ghana DHS 2008	1.9	7.7	6.8	4,916	1.9	4.8	4.1	4,058
Guinea DHS 2005	0.6	1.1	1.1	7,954	0.9	3.2	2.9	2,709
Kenya DHS 2008-09	12.0	32.8	29.3	8,444	9.8	25.3	22.8	3,258
Lesotho DHS 2009	21.3	45.6	42.0	7,624	11.3	26.0	24.0	3,008
Liberia DHS 2007	0.0	1.7	1.6	7,092	0.2	2.6	2.3	6,009
Madagascar DHS 2008-09	1.9	4.5	4.2	8,547	1.4	4.0	3.6	7,645
Malawi DHS 2010	₃	₃	₃	₃	18.4	33.5	31.3	6,818
Mali DHS 2006	2.5	3.1	3.1	14,583	0.4	3.4	2.7	3,704
Mozambique AIS 2009	3.4	17.6	17.0	5,674	3.1	9.5	8.9	4,168
Namibia DHS 2006-07	7.0	32.9	28.6	9,804	4.3	19.6	17.6	3,915
Niger DHS 2006	1.6	0.8	0.9	9,223	0.9	1.9	1.6	3,101
Nigeria DHS 2008	3.3	7.1	6.6	33,385	2.3	7.9	6.5	13,808
Rwanda DHS 2010	26.6	43.8	38.6	13,671	25.0	43.3	37.7	5,687
Senegal DHS 2010-11	8.4	15.5	13.6	15,688	6.3	10.6	9.0	4,417
Sierra Leone DHS 2008	1.9	4.3	4.1	7,374	0.2	3.9	3.4	2,944
Swaziland DHS 2006-07	2.9	26.0	21.9	4,987	2.0	12.0	8.9	4,156
Tanzania DHS 2010	10.4	32.5	29.5	10,139	12.3	28.0	25.0	2,527
Uganda AIS 2011	₃	₃	₃	₃	10.5	25.9	23.2	8,735
Zambia DHS 2007	6.8	20.3	18.5	7,146	6.0	12.8	11.7	5,995
Zimbabwe DHS 2010-11	9.3	39.0	33.6	9,171	8.3	24.6	20.5	7,110

¹ 'Tested' means tested and received results of the last test

² Total includes a small number of missing cases. See Appendix table A.6 for complete ns.

³ Due to a problem with the questionnaires for the Malawi 2010 DHS and Uganda 2011 AIS, data on time since last HIV test are not available for some women. Therefore these estimates are omitted.

4 Time Trends in HIV Testing Uptake

4.1 Cross-national trends

Over the past decade 15 countries in sub-Saharan Africa—Cameroon, Congo-Brazzaville, Ethiopia, Ghana, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Nigeria, Rwanda, Senegal, Tanzania, Uganda, and Zimbabwe—have had more than one DHS or AIS survey that asked adults whether they had ever been tested for HIV, when the most recent test took place, and if they had received the results of their most recent test. Table 4.1 shows the proportion of women and men who have ever received an HIV test and the proportion who have received an HIV test in the past 12 months.

Table 4.1 Trends in the uptake of HIV testing among women and men

Percentage ever tested and tested in the past 12 months among women and men age 15-49¹

	Ever tested and received results				Tested and received results in past 12 months			
	Women		Men		Women		Men	
	%	n	%	n	%	n	%	n
Cameroon DHS 2004	20.7	10,656	13.9	4,815	4.8	10,656	6.7	4,815
Cameroon DHS 2011 ²	50.9	7,457	39.7	6,455	22.3	7,457	20.4	6,455
Congo (Brazzaville) DHS 2005	9.5	7,051	10.6	2,924	3.2	7,051	3.1	2,924
Congo (Brazzaville) AIS 2009	22.5	6,550	17.7	5,863	8.5	6,550	7.1	5,863
Ethiopia DHS 2005	3.3	6,751	4.9	5,464	1.6	6,751	2.3	5,464
Ethiopia DHS 2011	35.8	16,515	37.6	12,834	20.0	16,515	20.7	12,834
Ghana DHS 2003	7.4	5,691	7.5	4,529	2.3	5,691	3.2	4,529
Ghana DHS 2008	16.9	4,916	12.4	4,058	6.8	4,916	4.1	4,058
Kenya DHS 2003	13.1	8,195	14.3	3,363	6.7	8,195	7.6	3,363
Kenya DHS 2008-09	56.5	8,444	40.4	3,258	29.3	8,444	22.8	3,258
Lesotho DHS 2004-05	12.0	7,095	9.1	2,496	6.3	7,095	4.8	2,496
Lesotho DHS 2009	65.6	7,624	37.2	3,008	42.0	7,624	24.0	3,008
Madagascar DHS 2003-04	0.9	7,949	0.9	2,216	0.4	7,949	0.5	2,216
Madagascar DHS 2008-09	12.5	8,547	7.7	7,645	4.2	8,547	3.6	7,645
Malawi DHS 2004	12.9	11,698	15.1	3,114	6.5	11,698	7.7	3,114
Malawi DHS 2010	71.6	23,020	51.2	6,818	2	2	31.3	6,818
Mozambique DHS 2003	3.7	12,418	3.6	2,490	2.4	12,418	2.7	2,490
Mozambique AIS 2009	33.3	5,674	17.2	4,168	17.0	5,674	8.9	4,168
Nigeria DHS 2003	6.4	7,620	13.6	2,093	3.0	7,620	5.9	2,093
Nigeria DHS 2008	14.6	33,385	14.0	13,808	6.6	33,385	6.5	13,808
Rwanda DHS 2005	21.4	11,321	20.1	4,413	11.6	11,321	11.0	4,413
Rwanda DHS 2010	75.5	13,671	69.3	5,687	38.6	13,671	37.7	5,687
Senegal DHS 2005	2.8	14,602	4.2	3,415	1.0	14,602	1.5	3,415
Senegal DHS 2010-11	27.7	15,688	16.5	4,417	13.6	15,688	9.0	4,417
Tanzania AIS 2003-04	12.9	6,863	13.5	5,659	4.9	6,863	7.3	5,659
Tanzania DHS 2004-05	12.1	10,329	12.3	2,635	6.2	10,329	6.5	2,635
Tanzania AIS/MIS 2007-08	36.7	9,343	26.5	6,975	23.9	9,343	18.9	6,975
Tanzania DHS 2010	55.3	10,139	39.8	2,527	29.5	10,139	25.0	2,527
Uganda AIS 2004-05	12.7	9,941	10.8	8,010	4.0	9,941	3.8	8,010
Uganda DHS 2006	24.8	8,531	20.7	2,385	12.0	8,531	10.4	2,385
Uganda AIS 2011	65.8	11,160	44.9	8,735	2	2	23.2	8,735
Zimbabwe DHS 2005-06	21.7	8,907	16.4	6,863	6.6	8,907	6.7	6,863
Zimbabwe DHS 2010-11	57.4	9,171	35.9	7,110	33.6	9,171	20.5	7,110

¹ 'Tested' means tested and received results of the last test.

² Due to a problem with the questionnaires for the Malawi 2010 DHS and Uganda 2011 AIS, data on time since last HIV test are not available for some women. Therefore these estimates are omitted.

Table 4.1 shows that in all 15 countries HIV testing among women and men has increased over the past decade. While these increases are not strictly comparable—countries have had anywhere from a

four-year to a seven-year gap between the earliest and latest surveys since 2003—the differentials in the uptake of HIV testing across countries range dramatically. Among women, the increase in the proportion ever tested between the earliest and latest surveys ranges from 8 percentage points in Nigeria to 59 percentage points in Uganda and Malawi; among men, the range of increase is from 0.4 percentage points in Nigeria to 49 percentage points in Rwanda.

Regardless of any male-female testing differential in the earliest survey, the most recent survey in 14 of the 15 countries (all except Ethiopia) indicates that women are more likely than men to have ever been tested for HIV. In five countries—Lesotho, Madagascar, Mozambique, Senegal, and Zimbabwe—the most recent survey indicates that women are at least 50 percent more likely than men to have ever been tested.

The proportion of adults who have ever been tested for HIV has an inherent momentum over time; persons who have ever received an HIV test before the first survey remain tested at the time of the next survey. Trends in uptake of HIV testing over the course of the past 12 months, however, can fluctuate more widely from year to year. Nonetheless, within each country the percent recently tested for HIV increased between the earliest and latest surveys among both women and men, as did the percent ever tested.

DHS and AIS surveys do not usually gather data on the number of times adults have been tested for HIV. An exception is the Uganda 2011 AIS, which did ask about the number of times tested. In this survey the majority of respondents who were ever tested (55 percent of women and 70 percent of men) said that they were tested only once or twice.⁷

In countries where DHS and AIS surveys did not ask adults about the number of times they were tested for HIV, it can be useful to compare the proportion of adults who have been tested for HIV in the past year with the proportion ever tested. If the proportion is high, it could indicate repeat testing or a recent surge in uptake. Looking at the most recent survey in all 15 countries studied, the proportion of women who have ever been tested for HIV who also were tested in the past 12 months ranges from 34 percent in Madagascar 2008-09 to 64 percent in Lesotho 2009; among men it ranges from 33 percent in Ghana 2008 to 65 percent in Lesotho 2009.⁸ Where recent uptake of HIV testing is high relative to overall uptake may be a barometer of programmatic expansion efforts or reflect a growing desire for and better access to re-testing.

The trends in ever testing among women reported in Table 4.1 are graphed in Figure 4.1. Here the dramatic increase in testing uptake is apparent, particularly among women. For women, the rate of increase in the uptake of HIV testing is lowest in Ghana, Nigeria, and Madagascar, and highest in Lesotho, Malawi, and Rwanda. However, these trends should be interpreted with caution, as the year in which the most recent survey was conducted appears to have a strong relationship to current patterns of testing: the three countries with highest reported uptake of HIV testing among women (Rwanda, Malawi, and Uganda) had surveys in 2010 or after; the three countries with lowest testing uptake (Ghana, Nigeria, Madagascar) are the only three to have had their most recent survey conducted before 2009.

Figure 4.2 shows trends in ever testing among men. Here there has been a steady increase in HIV testing uptake but it is slower than among women. As mentioned above, comparisons across countries are limited by the fact that the date of the last survey seems to influence the overall proportion ever tested, at both higher and lower bounds. Even so, Rwanda is a particularly notable outlier, with 69 percent of men reporting having ever been tested for HIV, compared to 54 percent in the next highest country (Malawi).

⁷ Among respondents who did not declare that they were HIV-positive (data not shown).

⁸ Calculations based on Table 4.1.

Figure 4.1 Trends in the uptake of HIV testing among women in sub-Saharan Africa

Percentage of women ages 15-49 who were ever tested for HIV and received results of most recent test

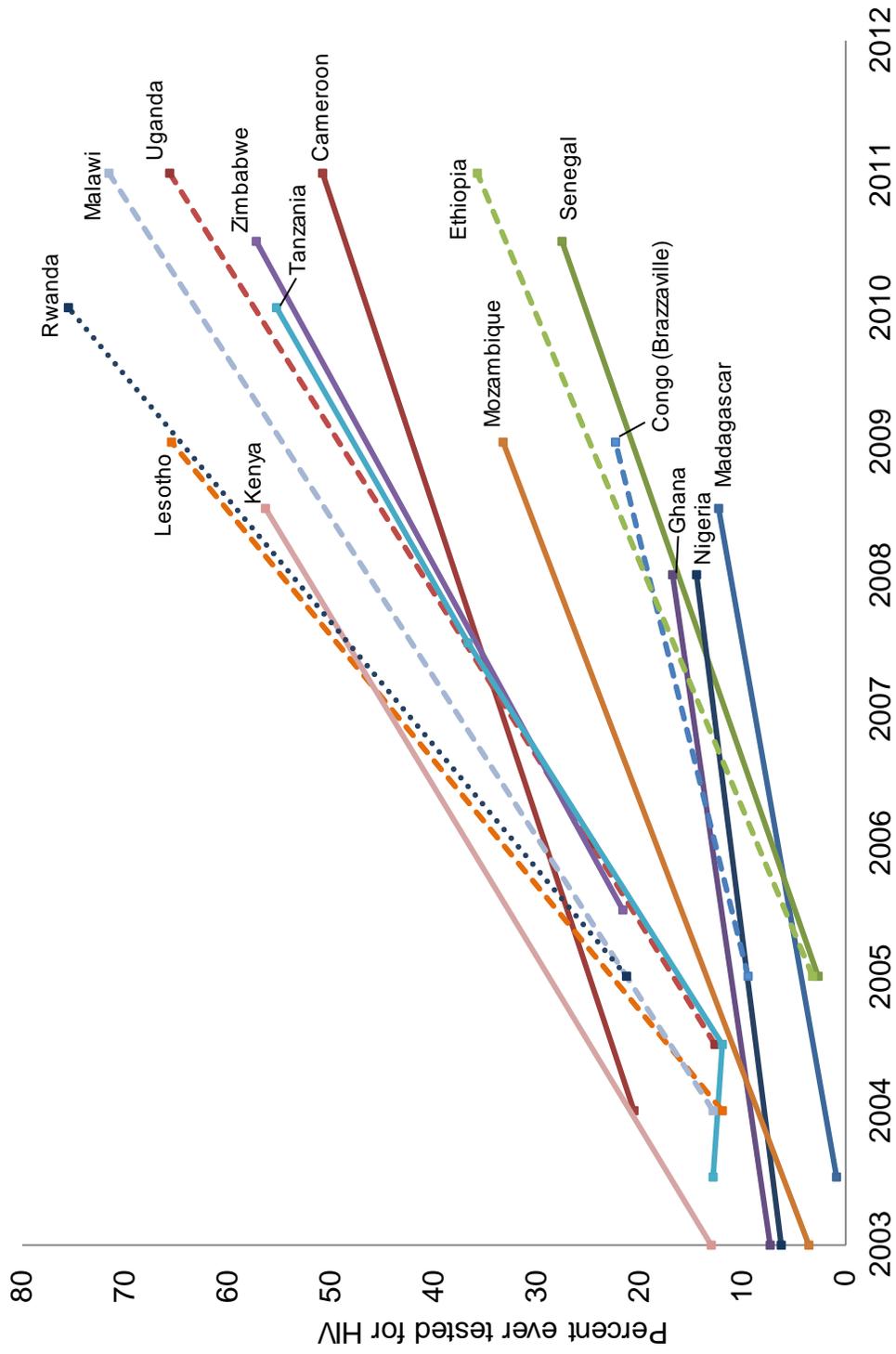
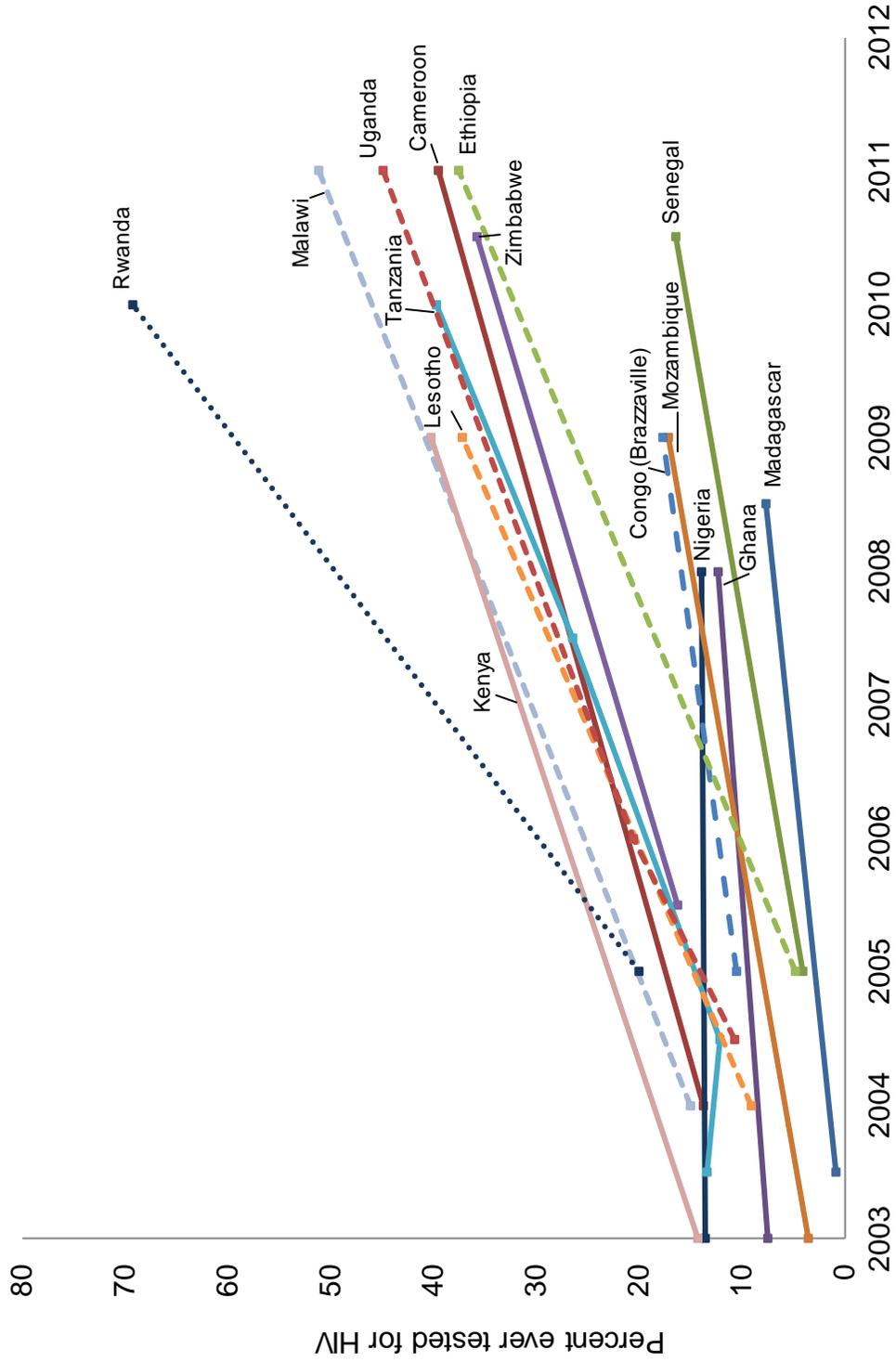


Figure 4.2 Trends in the uptake of HIV testing among men in sub-Saharan Africa

Percentage of men ages 15-49 who were ever tested for HIV and received results of most recent test



4.2 Trends within country by residence

In many African countries HIV testing is less common among men and among rural residents. Reaching these groups has proven to be a particular public health challenge. Comparing increases in HIV testing uptake by sex and by place of residence reveals the extent to which gains in testing uptake have been concentrated or widespread.

Table 4.2 shows the percentage of women and men who have ever been tested for HIV by place of residence across all 15 countries. Among every subgroup (urban women, rural women, urban men, rural men) in all 33 surveys, there are gains in the percentage ever tested between the most recent and earlier surveys, except among rural men in Nigeria, where the proportion ever tested for HIV declined by two percentage points between surveys. Other gains range from five percentage points among urban men in Nigeria to 60 percentage points among rural women in Malawi and Uganda, comparing the earliest surveys with the most recent. In all 33 surveys urban women and men are more likely to have ever been tested for HIV than their rural counterparts.

Table 4.2 Trends in the uptake of HIV testing by sex and place of residence

Percentage ever tested¹ among women and men age 15-49

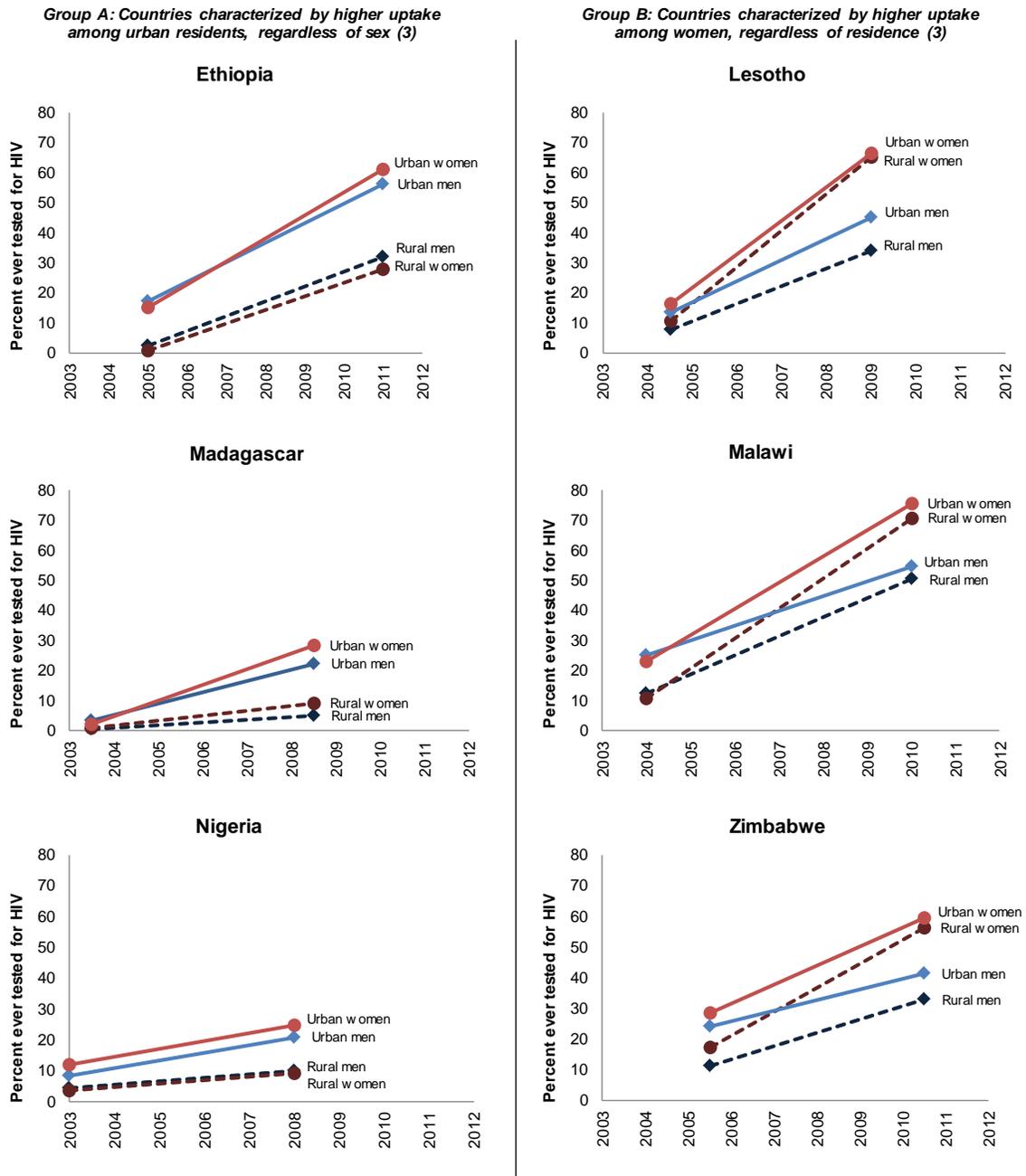
	Women				Men			
	Residence		Total		Residence		Total	
	Urban	Rural	%	n	Urban	Rural	%	n
Cameroon DHS 2004	29.0	10.6	20.7	10,656	18.3	7.7	13.9	4,815
Cameroon DHS 2011	62.3	37.8	50.9	7,457	50.1	26.6	39.7	6,455
Congo (Brazzaville) DHS 2005	13.7	4.1	9.5	7,051	13.8	5.8	10.6	2,924
Congo (Brazzaville) AIS 2009	27.6	14.3	22.5	6,550	21.3	11.4	17.7	5,863
Ethiopia DHS 2005	15.1	0.9	3.3	6,751	17.4	2.6	4.9	5,464
Ethiopia DHS 2011	61.2	27.8	35.8	16,515	56.3	32.1	37.6	12,834
Ghana DHS 2003	9.3	5.5	7.4	5,691	10.9	4.7	7.5	4,529
Ghana DHS 2008	20.4	13.7	16.9	4,916	16.1	9.3	12.4	4,058
Kenya DHS 2003	22.4	10.0	13.1	8,195	22.0	11.7	14.3	3,363
Kenya DHS 2008-09	69.9	52.0	56.5	8,444	54.6	35.3	40.4	3,258
Lesotho DHS 2004-05	16.6	10.6	12.0	7,095	13.5	7.8	9.1	2,496
Lesotho DHS 2009	66.5	65.1	65.6	7,624	45.2	34.1	37.2	3,008
Madagascar DHS 2003-04	2.1	0.6	0.9	7,949	3.2	0.3	0.9	2,216
Madagascar DHS 2008-09	28.3	9.1	12.5	8,547	22.2	4.9	7.7	7,645
Malawi DHS 2004	22.9	10.7	12.9	11,698	25.1	12.4	15.1	3,114
Malawi DHS 2010	75.6	70.7	71.6	23,020	54.6	50.3	51.2	6,818
Mozambique DHS 2003	8.4	0.9	3.7	12,418	7.3	0.7	3.6	2,490
Mozambique AIS 2009	49.3	25.8	33.3	5,674	27.7	11.5	17.2	4,168
Nigeria DHS 2003	11.8	3.6	6.4	7,620	16.3	11.9	13.6	2,093
Nigeria DHS 2008	24.7	9.0	14.6	33,385	20.9	9.9	14.0	13,808
Rwanda DHS 2005	43.5	16.9	21.4	11,321	34.8	16.9	20.1	4,413
Rwanda DHS 2010	79.4	74.9	75.5	13,671	73.1	68.5	69.3	5,687
Senegal DHS 2005	4.4	1.2	2.8	14,602	5.1	2.9	4.2	3,415
Senegal DHS 2010-11	35.1	20.4	27.7	15,688	19.6	12.5	16.5	4,417
Tanzania AIS 2003-04	24.8	7.6	12.9	6,863	20.3	10.5	13.5	5,659
Tanzania DHS 2004-05	24.7	7.1	12.1	10,329	19.1	9.7	12.3	2,635
Tanzania AIS/MIS 2007-08	51.3	31.6	36.7	9,343	34.8	23.8	26.5	6,975
Tanzania DHS 2010	66.4	50.9	55.3	10,139	45.3	37.8	39.8	2,527
Uganda AIS 2004-05	31.0	9.4	12.7	9,941	24.3	8.4	10.8	8,010
Uganda DHS 2006	40.7	21.6	24.8	8,531	34.0	18.0	20.7	2,385
Uganda AIS 2011	76.3	62.9	65.8	11,160	58.6	41.5	44.9	8,735
Zimbabwe DHS 2005-06	28.5	17.4	21.7	8,907	23.9	11.3	16.4	6,863
Zimbabwe DHS 2010-11	59.4	56.2	57.4	9,171	41.3	32.7	35.9	7,110

¹ 'Tested' means tested and received results of the last test.

In the most recent survey from each country, urban women are the most likely group to have ever been tested for HIV, and—with the exception of Ethiopia and Nigeria—rural men are the least likely

group to have been tested. The size of the disparity between these two groups, and to what extent it reflects divergence by sex, residence, or both, is the subject of Figure 4.3. The figure shows trends in HIV testing uptake within each country by sex and residence for all 15 countries. Countries have been grouped into four broad categories: (A) countries characterized by higher uptake among urban residents, regardless of sex; (B) countries characterized by higher uptake among women, regardless of residence; (C) countries characterized by divergence in testing uptake between urban women and all other groups; (D) countries characterized by narrow differentials in testing uptake by sex and residence.

Figure 4.3 Trends in the uptake of HIV testing by country, residence, and sex



¹ Percent who have been tested and received the results of the most recent test.

Figure 4.3—continued Trends in the uptake of HIV testing by country, residence, and sex

Group C: Countries characterized by divergence in testing uptake between urban women and all other groups (6)

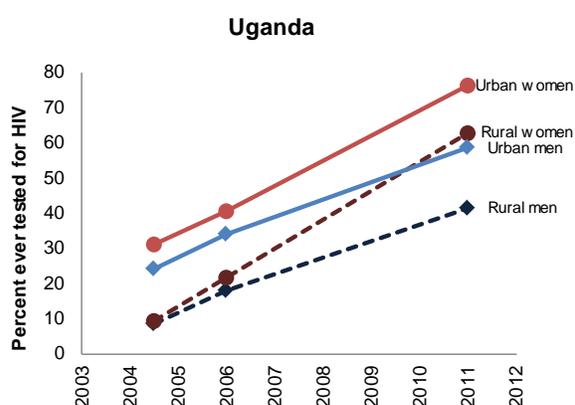
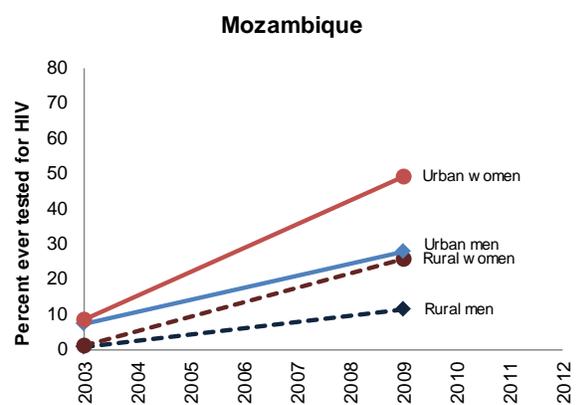
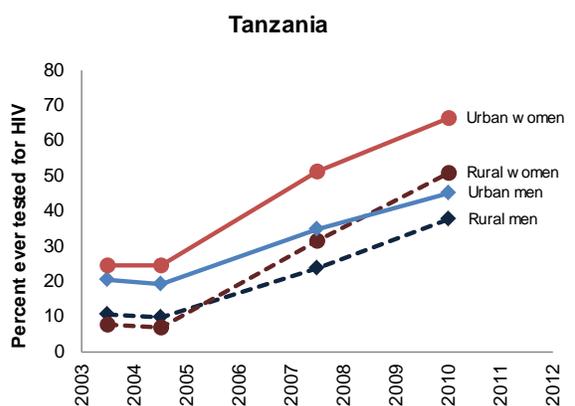
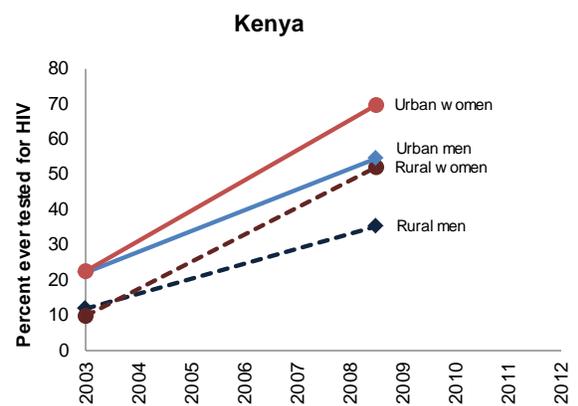
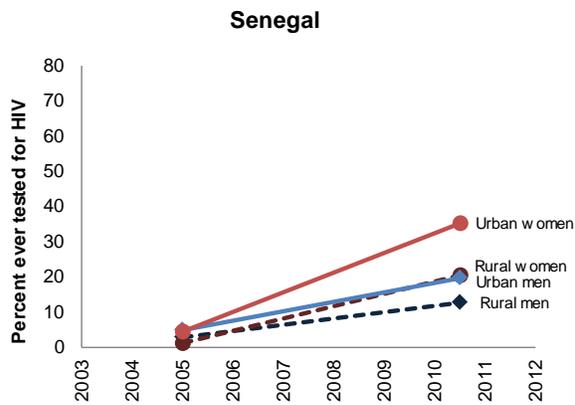
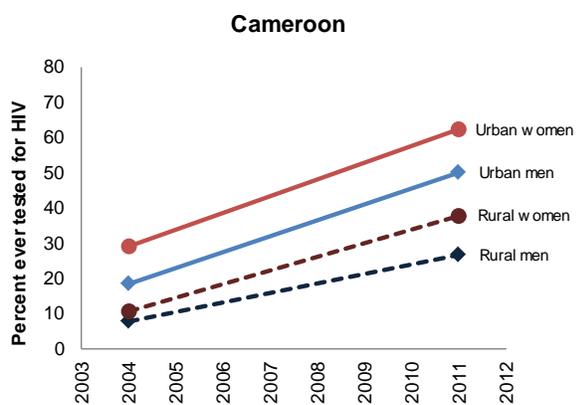


Figure 4.3—continued Trends in the uptake of HIV testing by country, residence, and sex

Group D: Countries characterized by narrow differentials in testing uptake by sex and residence (3)

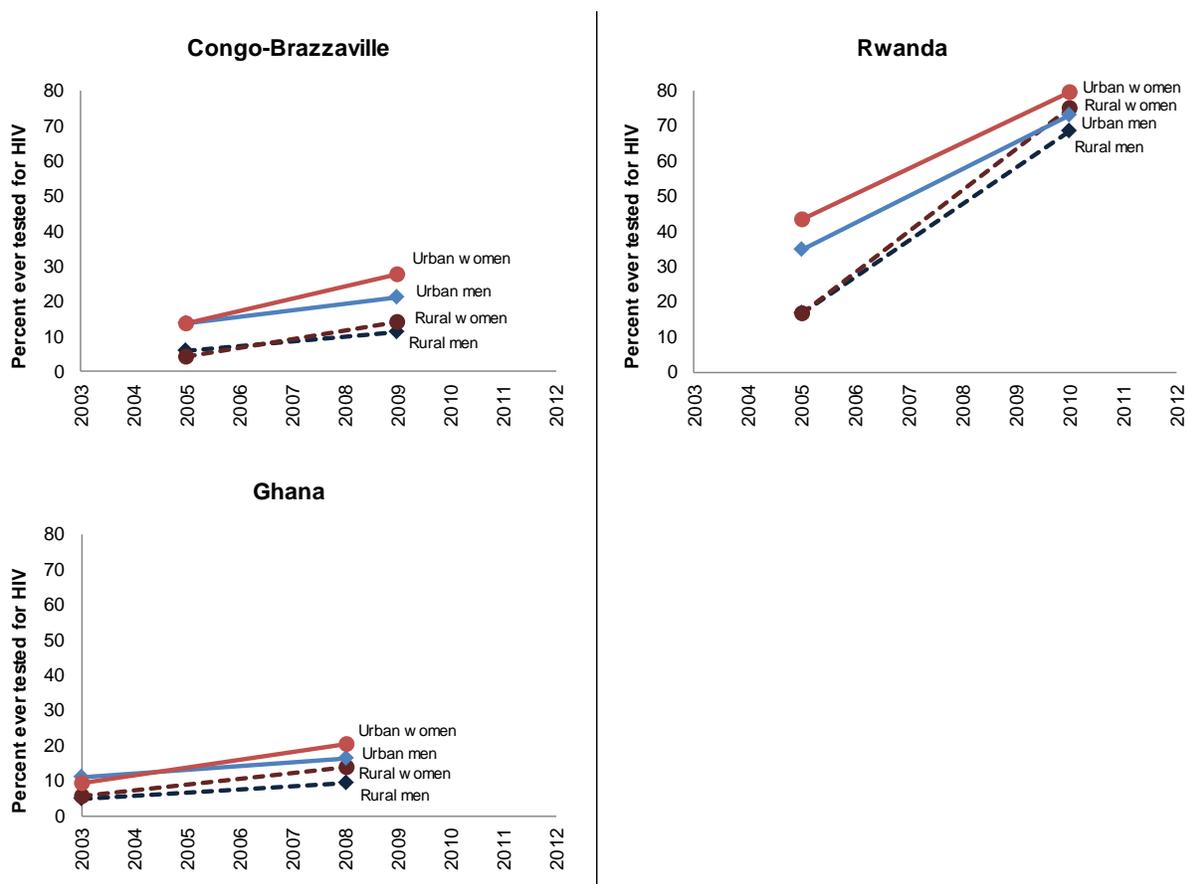


Table 4.3 shows the proportion of women and men tested in the past 12 months by place of residence. Here the trends are broadly similar to the proportion ever tested. Urban men and urban women are more likely to have been tested in the past 12 months than their rural counterparts; the only exceptions are slightly higher uptake among rural adults in Rwanda 2010 and among rural versus urban women in Zimbabwe 2010-11. The highest urban-rural differential in recent HIV testing among women is in Ethiopia (21 percentage points), and among men is in Cameroon (14 percentage points).

Table 4.3 Trends in the uptake of HIV testing in the past 12 months by sex and place of residence

Percentage tested¹ in the past 12 months among women and men age 15-49

	Women				Men				
	Residence		Total		Residence		Total		
	Urban	Rural	%	n	Urban	Rural	%	n	
Cameroon DHS 2004	7.1	2.0	4.8	10,656	8.6	4.0	6.7	4,815	
Cameroon DHS 2011	28.6	15.0	22.3	7,457	26.5	12.7	20.4	6,455	
Congo (Brazzaville) DHS 2005	4.5	1.6	3.2	7,051	4.2	1.4	3.1	2,924	
Congo (Brazzaville) AIS 2009	9.5	6.7	8.5	6,550	8.1	5.2	7.1	5,863	
Ethiopia DHS 2005	7.1	0.4	1.6	6,751	7.8	1.2	2.3	5,464	
Ethiopia DHS 2011	36.0	15.0	20.0	16,515	30.4	17.9	20.7	12,834	
Ghana DHS 2003	3.1	1.5	2.3	5,691	4.7	1.9	3.2	4,529	
Ghana DHS 2008	8.6	5.1	6.8	4,916	4.8	3.5	4.1	4,058	
Kenya DHS 2003	11.3	5.1	6.7	8,195	12.5	5.9	7.6	3,363	
Kenya DHS 2008-09	37.6	26.4	29.3	8,444	26.2	21.5	22.8	3,258	
Lesotho DHS 2004-05	8.6	5.6	6.3	7,095	6.7	4.3	4.8	2,496	
Lesotho DHS 2009	42.1	42.0	42.0	7,624	30.3	21.5	24.0	3,008	
Madagascar DHS 2003-04	0.9	0.2	0.4	7,949	1.4	0.2	0.5	2,216	
Madagascar DHS 2008-09	11.5	2.6	4.2	8,547	10.2	2.4	3.6	7,645	
Malawi DHS 2004	10.7	5.6	6.5	11,698	13.6	6.1	7.7	3,114	
Malawi DHS 2010	²	²	²	²	33.2	30.8	31.3	6,818	
Mozambique DHS 2003	5.8	0.4	2.4	12,418	5.4	0.6	2.7	2,490	
Mozambique AIS 2009	25.3	13.2	17.0	5,674	15.9	5.1	8.9	4,168	
Nigeria DHS 2003	5.3	1.8	3.0	7,620	7.5	4.9	5.9	2,093	
Nigeria DHS 2008	10.9	4.1	6.6	33,385	9.2	4.9	6.5	13,808	
Rwanda DHS 2005	23.2	9.2	11.6	11,321	19.9	9.0	11.0	4,413	
Rwanda DHS 2010	38.1	38.7	38.6	13,671	37.4	37.7	37.7	5,687	
Senegal DHS 2005	1.7	0.4	1.0	14,602	2.0	0.8	1.5	3,415	
Senegal DHS 2010-11	17.5	9.9	13.6	15,688	11.1	6.3	9.0	4,417	
Tanzania AIS 2003-04	9.8	2.7	4.9	6,863	11.2	5.7	7.3	5,659	
Tanzania DHS 2004-05	12.2	3.9	6.2	10,329	9.3	5.5	6.5	2,635	
Tanzania AIS/MIS 2007-08	30.8	21.5	23.9	9,343	22.2	17.8	18.9	6,975	
Tanzania DHS 2010	36.9	26.5	29.5	10,139	28.8	23.6	25.0	2,527	
Uganda AIS 2004-05	8.9	3.2	4.0	9,941	8.5	3.0	3.8	8,010	
Uganda DHS 2006	17.7	10.8	12.0	8,531	17.0	9.0	10.4	2,385	
Uganda AIS 2011	²	²	²	²	30.4	21.4	23.2	8,735	
Zimbabwe DHS 2005-06	9.9	4.5	6.6	8,907	10.3	4.2	6.7	6,863	
Zimbabwe DHS 2010-11	33.1	34.0	33.6	9,171	22.1	19.5	20.5	7,110	

¹ 'Tested' means tested and received results of the last test.

² Due to a problem with the questionnaires for the Malawi 2010 DHS and Uganda 2011 AIS, data on time since last HIV test are not available for some women. Therefore these estimates are omitted.

5 Trends in HIV Testing Uptake Associated with Antenatal Care

This chapter examines women's reported uptake of HIV testing before, during, after, and outside of antenatal care (ANC) in sub-Saharan Africa since 2003. In many countries, antenatal care (ANC) has been an important site of HIV testing, both for efforts to counsel and inform sexually-active women about HIV, and to help prevent mother-to-child transmission of the virus. Especially in high-fertility countries where the use of medical services is low, ANC can provide sexually active women with a link to health services; thus increases in HIV testing during ANC can contribute enormously to women's receipt of HIV testing overall.

5.1 Receipt of HIV testing by time since most recent birth

Table 5.1 shows receipt of any HIV testing among women age 15-49 by timing of last birth, among 47 surveys in sub-Saharan Africa since 2003. In nearly every country women who have ever given birth, particularly women who have given birth in the past two years, are more likely to have ever been tested for HIV. In 19 surveys women who have given birth in the past two years are more than twice as likely to have ever been tested for HIV as women who have never given birth.

Table 5.1 Uptake of HIV testing among women by date of last birth

Percentage ever tested¹ among women age 15-49

Country and year	Women who have never given birth	Women who gave birth more than 2 years ago	Women who have given birth in past 2 years ²	All women 15-49	Number of women
Benin DHS 2006	12.2	13.3	19.2	15.1	17,794
Burkina Faso DHS 2010	19.6	27.7	36.2	28.8	17,087
Burundi DHS 2010	20.2	36.5	57.5	37.4	9,389
Cameroon DHS 2004	12.2	23.7	25.1	20.7	10,656
Cameroon DHS 20011	34.6	56.0	61.3	50.9	7,457
Chad DHS 2004	1.5	1.4	1.9	1.1	6,085
Congo (Brazzaville) DHS 2005	5.5	11.5	10.4	9.5	7,051
Congo (Brazzaville) AIS 2009	14.3	24.3	26.7	22.5	6,550
Cote d'Ivoire AIS 2005	6.8	11.0	15.0	10.9	5,183
D.R. Congo DHS 2007	6.4	9.9	8.9	8.6	9,995
Ethiopia DHS 2005	7.0	2.3	1.9	3.3	6,751
Ethiopia DHS 2011	37.4	35.5	34.2	35.8	16,515
Ghana DHS 2003	4.8	8.4	8.7	7.4	5,691
Ghana DHS 2008	8.7	16.1	30.6	16.9	4,916
Guinea DHS 2005	3.0	1.7	2.0	2.1	7,954
Kenya DHS 2003	9.2	14.1	15.5	13.1	8,195
Kenya DHS 2008-09	31.0	58.5	80.3	56.5	8,444
Lesotho DHS 2004-05	6.1	13.8	16.8	12.0	7,095
Lesotho DHS 2009	45.0	71.0	85.7	65.6	7,624
Liberia DHS 2007	3.2	3.2	3.2	3.2	7,092
Madagascar DHS 2003-04	1.2	1.3	0.3	0.9	7,949
Madagascar DHS 2008-09	9.0	12.3	16.1	12.5	8,547
Malawi DHS 2004	9.2	13.5	15.3	12.9	11,698
Malawi DHS 2010	37.8	73.5	91.1	71.6	23,020
Mali DHS 2006	4.7	6.2	8.1	6.6	14,583
Mozambique DHS 2003	5.4	3.2	3.3	3.7	12,418
Mozambique AIS 2009	19.3	28.2	47.0	33.3	5,674
Namibia DHS 2006-07	25.7	57.2	80.0	50.9	9,804
Niger DHS 2006	1.9	1.4	2.4	1.9	9,223
Nigeria DHS 2003	7.2	6.6	5.4	6.4	7,620
Nigeria DHS 2008	12.4	13.4	18.3	14.6	33,385
Rwanda DHS 2005	12.3	21.4	32.6	21.4	11,321
Rwanda DHS 2010	50.5	86.2	97.6	75.5	13,671
Senegal DHS 2005	2.3	4.9	7.1	2.8	14,602
Senegal DHS 2010-11	17.1	29.0	39.1	27.7	15,688
Sierra Leone DHS 2008	6.0	9.0	12.4	9.4	7,374
Swaziland DHS 2006-07	15.6	37.8	59.9	35.8	4,987

Continued...

Table 5.1—Continued

Percentage ever tested¹ among women age 15-49

Country and year	Women who have never given birth	Women who gave birth more than 2 years ago	Women who have given birth in past 2 years ²	All women 15-49	Number of women
Tanzania AIS 2003-04	10.0	12.8	15.2	12.9	6,863
Tanzania DHS 2004-05	9.0	11.9	14.5	12.1	10,329
Tanzania AIS/MIS 2007-08	21.1	37.2	48.5	36.7	9,343
Tanzania DHS 2010	29.8	56.1	75.9	55.3	10,139
Uganda AIS 2004-05	8.6	14.0	13.7	12.7	9,941
Uganda DHS 2006	15.3	26.9	29.6	24.8	8,531
Uganda AIS 2011	39.4	69.5	79.5	65.8	11,160
Zambia DHS 2007	17.7	38.2	44.4	35.3	7,146
Zimbabwe DHS 2005	12.9	22.3	31.5	21.7	8,907
Zimbabwe DHS 2010	25.2	63.5	79.1	57.4	9,171

¹ 'Tested' means tested and received results of the last test.² Women who gave birth in the past 2 years are also counted as 'ever tested' if they report having been tested and received results during or after ANC, whether or not it was the most recent test.

In six surveys the uptake of HIV testing is slightly higher among all women than among women who have recently given birth (Ethiopia 2005 and 2011, Guinea 2005, Madagascar 2003-04, Mozambique 2003, and Nigeria 2003), but in each case the difference is less than two percentage points. These countries have relatively low uptake of ANC overall, and uptake of HIV testing is highest among unmarried, sexually active women (data not shown), suggesting that unmarried sexually active women may be more aware of HIV risk or that they may have been a target audience for testing campaigns.

5.2 Uptake of HIV testing during ANC

DHS and AIS surveys ask women who have recently given birth about their receipt of antenatal care. In 41 of 47 surveys⁹ in Table 5.1, women who recently gave birth were asked whether they were counseled and tested for HIV. Table 5.2 shows the proportion of women who gave birth in the past two years who were tested for HIV during one or more ANC visits. Women who were not tested during ANC are grouped into two categories: those who did not receive ANC at all, and those who received ANC but were not tested.

Table 5.2 shows that in 35 of the 41 surveys since 2003 in which women were asked about HIV testing during ANC, fewer than 20 percent of women who gave birth in the past two years had no ANC—in other words, more than 80 percent of women reported at least one ANC visit. In the other six surveys—Chad, Mali, Niger, Nigeria, and two from Ethiopia—between 30 and 80 percent of women who gave birth in the past two years did not receive any ANC for their most recent birth.

Looking at the proportion of women who received ANC during their most recent birth, in only 9 of 41 countries—Cameroon, Kenya, Malawi, Namibia, Rwanda, Swaziland, Tanzania, Uganda, and Zimbabwe—did more than half of women who gave birth in the past two years receive ANC and also HIV testing during ANC. These nine countries rank high for overall receipt of ANC but are not the highest. In particular, Cameroon (2011) and Zimbabwe (2010) stand out as countries where a relatively larger proportion of pregnant women did not receive any ANC (17 and 13 percent, respectively), but where the majority of those who did receive ANC were also tested for HIV (55 and 73 percent, respectively).

⁹ HIV testing during ANC was not asked about in Kenya 2003, Lesotho 2004-05, Liberia 2007, Madagascar 2003-04, Mozambique 2003, and Nigeria 2003.

Table 5.2 Uptake of HIV testing during ANC

Among women age 15-49 who gave birth in the two years preceding the survey¹

	Did not receive ANC ²	Received ANC and:		Total	Number of women
		Tested ³ during ANC	Not tested during ANC		
Benin DHS 2006	11.8	16.1	72.1	100.0	6,380
Burkina Faso DHS 2010	3.9	33.2	62.9	100.0	5,988
Burundi DHS 2010	0.9	44.3	54.9	100.0	3,111
Cameroon DHS 2004	16.9	22.9	60.1	100.0	3,173
Cameroon DHS 2011	17.1	55.6	27.4	100.0	2,183
Chad DHS 2004	54.3	1.5	44.2	100.0	2,251
Congo (Brazzaville) DHS 2005	13.0	7.9	79.2	100.0	2,017
Congo (Brazzaville) AIS 2009	8.8	22.3	68.8	100.0	2,075
Cote d'Ivoire AIS 2005	8.5	11.0	80.5	100.0	1,452
D.R. Congo DHS 2007	13.0	7.4	79.6	100.0	3,435
Ethiopia DHS 2005	70.0	1.0	29.0	100.0	2,119
Ethiopia DHS 2011	56.5	20.0	23.5	100.0	4,453
Ghana DHS 2003	7.1	6.5	86.4	100.0	1,421
Ghana DHS 2008	3.8	28.9	67.2	100.0	1,178
Guinea DHS 2005	16.8	1.5	81.7	100.0	2,614
Kenya DHS 2008-09	7.4	74.0	18.5	100.0	2,264
Lesotho DHS 2009	8.1	43.0	48.9	100.0	1,606
Madagascar DHS 2008-09	11.5	14.0	74.5	100.0	2,375
Malawi DHS 2004	5.0	10.5	84.6	100.0	4,604
Malawi DHS 2010	1.8	86.6	11.6	100.0	7,724
Mali DHS 2006	27.3	7.2	65.4	100.0	5,663
Mozambique AIS 2009	18.6	43.5	37.9	100.0	2,024
Namibia DHS 2006-07	4.7	73.9	21.4	100.0	2,054
Niger DHS 2006	52.1	2.0	45.9	100.0	3,918
Nigeria DHS 2008	36.7	16.5	46.9	100.0	11,027
Rwanda DHS 2005	5.2	23.9	70.9	100.0	3,436
Rwanda DHS 2010	1.8	94.3	3.9	100.0	3,208
Senegal DHS 2005	7.3	6.4	86.3	100.0	4,391
Senegal DHS 2010-11	4.6	35.8	59.5	100.0	4,516
Sierra Leone DHS 2008	7.6	10.9	81.5	100.0	2,478
Swaziland DHS 2006-07	2.8	55.0	42.2	100.0	1,147
Tanzania AIS 2003-04	10.3	12.2	77.5	100.0	2,261
Tanzania DHS 2004-05	3.2	12.8	84.0	100.0	3,500
Tanzania AIS/MIS 2007-08	1.4	43.3	55.3	100.0	3,046
Tanzania DHS 2010	2.3	70.6	27.1	100.0	3,266
Uganda AIS 2004-05	11.8	8.8	79.4	100.0	3,717
Uganda DHS 2006	4.6	22.0	73.4	100.0	3,247
Uganda AIS 2011	3.1	72.2	24.7	100.0	3,970
Zambia DHS 2007	2.7	40.3	57.0	100.0	2,631
Zimbabwe DHS 2005	5.7	27.4	66.9	100.0	2,144
Zimbabwe DHS 2010	12.5	72.7	14.8	100.0	2,448

¹ The following surveys are excluded from this table (and subsequent tables) because HIV testing during ANC was not asked about: Kenya 2003, Lesotho 2004-05, Liberia 2007, Madagascar 2003-04, Mozambique 2003, and Nigeria 2003.

² Did not have any antenatal visits, or answered DK/NA.

³ 'Tested' indicates tested during ANC and received results. Testing at time of delivery only is excluded.

5.3 HIV counseling during ANC

Pregnant women who are HIV-positive are at risk of transmitting the virus to their infants during pregnancy, delivery, or while breastfeeding. There has been an increased effort during ANC visits not only to test pregnant women for HIV but also to counsel them about the risks of mother-to-child transmission [MTCT], the importance of knowing one's HIV status, and methods to prevent HIV transmission.

DHS and AIS questions about HIV counseling during ANC have changed over time. In five older surveys—Ghana 2003, Kenya 2003, Lesotho 2004, Malawi 2004, and Nigeria 2003—women who had received ANC for their most recent birth were asked whether they were “given information about AIDS” during any of their ANC visits. In all other surveys considered here, women were asked “During any of

the antenatal visits for your last birth, did anyone talk to you about: (1) Babies getting the AIDS virus from their mother? (2) Things that you can do to prevent getting the AIDS virus? and (3) Getting tested for the AIDS virus?”¹⁰

To ensure consistency over time and across countries, we consider a woman to have been counseled for HIV during an ANC visit if she was “given information about AIDS” or if she discussed any of the three specific HIV-related topics. Post-test counseling is not included, as by definition it is not comparable for women who received an HIV test and those who did not, and also is not asked about in every survey. Table 5.3 shows receipt of HIV counseling and testing among women who received any ANC for their most recent birth in the past two years.

Among women who were tested for HIV during ANC, in every country the vast majority of respondents report that they were also counseled about HIV. In six surveys (Burundi 2010, Cameroon 2011, Ethiopia 2011, Namibia 2006-07, Senegal 2010-2011, and Swaziland 2006-07), more than 3 percent of women who received ANC report being tested for HIV but do not recall being counseled about HIV.

Table 5.3 also shows wide variation in receipt of HIV counseling among women who were not tested for HIV during ANC. In 15 surveys more than half of women who received ANC for a recent birth were neither tested nor counseled about HIV. All 15 of these surveys were conducted between 2003 and 2008; more recent surveys have found a larger proportion of women counseled about HIV during ANC even if they were not tested.

¹⁰ In 2009, women who received ANC in Lesotho were also asked whether they received counseling about “special medications that can be taken by pregnant women to reduce the risk of transmission of HIV to her baby.” For purposes of comparability, this question was not used in assessing ‘counseling’ during ANC; if it had been included, an additional 21 respondents would have been classified as receiving counseling.

Table 5.3 HIV counseling and testing during ANC

Among women age 15-49 who gave birth in the two years preceding the survey and had at least one ANC visit, receipt of HIV counseling and testing during ANC

	Tested ¹ for HIV during ANC and:		Not tested for HIV during ANC and:		Total	Number of women
	Counseled ² about HIV	Not counseled about HIV	Counseled about HIV	Not counseled about HIV		
Benin DHS 2006	16.7	1.5	27.2	54.6	100.0	5,626
Burkina Faso DHS 2010	33.0	1.5	34.3	31.2	100.0	5,753
Burundi DHS 2010	41.4	3.3	33.3	22.1	100.0	3,084
Cameroon DHS 2004	26.9	0.7	39.5	32.9	100.0	2,636
Cameroon DHS 2011	62.1	4.9	14.2	18.8	100.0	1,810
Chad DHS 2004	3.1	0.3	37.7	59.0	100.0	1,029
Congo (Brazzaville) DHS 2005	8.4	0.7	38.8	52.1	100.0	1,755
Congo (Brazzaville) AIS 2009	23.0	1.5	33.0	42.4	100.0	1,891
Cote d'Ivoire AIS 2005	11.2	0.8	16.4	71.6	100.0	1,328
D.R. Congo DHS 2007	7.9	0.5	36.5	55.1	100.0	2,987
Ethiopia DHS 2005	3.0	0.5	32.8	63.8	100.0	635
Ethiopia DHS 2011	38.9	7.0	15.5	38.5	100.0	1,936
Ghana DHS 2003	5.5	1.5	41.0	52.0	100.0	1,320
Ghana DHS 2008	29.0	1.1	45.9	24.0	100.0	1,133
Guinea DHS 2005	1.4	0.5	23.3	74.9	100.0	2,176
Kenya DHS 2008-09	77.2	2.8	10.0	10.1	100.0	2,095
Lesotho DHS 2009	46.2	0.6	4.6	48.6	100.0	1,475
Madagascar DHS 2008-09	14.4	1.5	28.5	55.7	100.0	2,102
Malawi DHS 2004	9.8	1.2	45.4	43.6	100.0	4,376
Malawi DHS 2010	87.4	0.8	9.7	2.1	100.0	7,589
Mali DHS 2006	8.4	1.5	21.4	68.7	100.0	4,116
Mozambique AIS 2009	52.0	1.4	34.7	11.9	100.0	1,647
Namibia DHS 2006-07	74.3	3.2	14.8	7.7	100.0	1,958
Niger DHS 2006	3.2	0.9	24.1	71.8	100.0	1,875
Nigeria DHS 2008	24.1	1.9	29.1	44.9	100.0	6,984
Rwanda DHS 2005	24.4	0.8	49.1	25.6	100.0	3,259
Rwanda DHS 2010	94.9	1.2	3.0	1.0	100.0	3,149
Senegal DHS 2005	5.6	1.4	12.5	80.6	100.0	4,071
Senegal DHS 2010-11	33.3	4.3	20.5	42.0	100.0	4,306
Sierra Leone DHS 2008	11.0	0.8	31.4	56.8	100.0	2,290
Swaziland DHS 2006-07	53.5	3.1	35.1	8.3	100.0	1,116
Tanzania AIS 2003-04	11.7	1.9	30.4	56.0	100.0	2,028
Tanzania DHS 2004-05	12.0	1.2	36.5	50.3	100.0	3,389
Tanzania AIS/MIS 2007-08	42.4	1.5	28.1	28.0	100.0	3,002
Tanzania DHS 2010	70.5	1.7	15.2	12.5	100.0	3,192
Uganda AIS 2004-05	9.4	0.6	49.4	40.5	100.0	3,279
Uganda DHS 2006	22.0	1.1	40.5	36.4	100.0	3,099
Uganda AIS 2011	72.8	1.7	16.9	8.5	100.0	3,846
Zambia DHS 2007	41.2	0.2	42.6	16.0	100.0	2,560
Zimbabwe DHS 2005	27.8	1.3	44.8	26.1	100.0	2,022
Zimbabwe DHS 2010	80.9	2.2	11.1	5.8	100.0	2,142

¹ 'Tested' means tested and received results of the last test.

² Counseling means that a respondent said that she was 'given information about AIDS' during ANC, or--in more recent surveys--that someone talked to her about any the following topics: (1) babies getting HIV from their mother; (2) preventing the virus; or (3) getting tested for the virus.

5.4 HIV testing before, after, and during ANC

DHS and AIS surveys do not ask all adults about the number of times they have been tested for HIV, nor the timing of the test for any except the most recent. For this reason, asking detailed questions about HIV testing among women who have recently given birth, not only during ANC but also at the time of delivery and after delivery, offers a unique opportunity to examine the timing of HIV testing, whether before, during, or after a recent pregnancy.

Table 5.4 shows receipt of HIV testing during, after, and outside of ANC among women who have given birth in the past two years. In most countries women who were tested during ANC also were not tested afterward. However, recent surveys in Lesotho, Malawi, Namibia, Rwanda, Uganda, and

Zimbabwe indicate that more than one in five women who have recently given birth received HIV testing at the time of delivery or after delivery. The sizeable proportion of women who were tested during and after ANC in these countries may reflect particular initiatives to test women at the time of delivery and during follow-ups.

Table 5.4 HIV testing during, after, and outside of ANC

Among women age 15-49 who gave birth in the two years preceding the survey

	Tested ¹ during ANC and:		Not tested during ANC ² and:			Total	Number of women
	Tested after ANC ³	Not tested after ANC	Never tested	Tested in past 2 years	Tested more than 2 years ago ⁴		
Benin DHS 2006	1.1	15.0	80.8	1.6	1.5	100.0	6,380
Burkina Faso DHS 2010	8.8	24.4	63.8	1.2	1.8	100.0	5,988
Burundi DHS 2010	6.8	37.4	42.5	3.6	9.6	100.0	3,111
Cameroon DHS 2004	2.2	20.7	74.9	1.2	0.9	100.0	3,173
Cameroon DHS 2011	8.8	46.7	38.7	0.7	5.1	100.0	2,183
Chad DHS 2004	0.3	1.2	98.1	0.2	0.1	100.0	2,251
Congo (Brazzaville) DHS 2005	1.1	6.7	89.6	1.2	1.3	100.0	2,017
Congo (Brazzaville) AIS 2009	2.0	20.4	73.3	1.7	2.6	100.0	2,075
Cote d'Ivoire AIS 2005	0.1	10.9	85.0	1.7	2.3	100.0	1,452
D.R. Congo DHS 2007	1.0	6.3	91.1	0.8	0.7	100.0	3,435
Ethiopia DHS 2005	0.0	1.0	98.1	0.6	0.3	100.0	2,119
Ethiopia DHS 2011	6.9	13.1	65.8	9.0	5.2	100.0	4,453
Ghana DHS 2003 ⁵		6.5	91.3	1.0	1.2	100.0	1,421
Ghana DHS 2008	5.0	23.9	69.4	0.9	0.8	100.0	1,178
Guinea DHS 2005	0.2	1.4	98.0	0.4	0.1	100.0	2,614
Kenya DHS 2008-09	19.8	54.2	19.7	4.3	1.9	100.0	2,264
Lesotho DHS 2009	21.7	21.3	14.3	40.6	2.2	100.0	1,606
Madagascar DHS 2008-09	1.8	12.3	83.9	1.9	0.2	100.0	2,375
Malawi DHS 2004 ⁵		10.5	84.7	3.5	1.4	100.0	4,604
Malawi DHS 2010	30.9	55.8	8.9	0.0	4.4	100.0	7,724
Mali DHS 2006	0.6	6.6	91.9	0.4	0.4	100.0	5,663
Mozambique AIS 2009	6.8	36.7	53.0	2.8	0.8	100.0	2,024
Namibia DHS 2006-07	30.9	43.0	20.0	4.7	1.4	100.0	2,054
Niger DHS 2006	0.4	1.6	97.6	0.3	0.1	100.0	3,918
Nigeria DHS 2008	2.5	14.0	81.7	1.2	0.6	100.0	11,027
Rwanda DHS 2005	1.8	22.1	67.4	3.6	5.1	100.0	3,436
Rwanda DHS 2010	26.2	68.1	2.4	1.9	1.4	100.0	3,208
Senegal DHS 2005	0.2	6.2	92.9	0.3	0.4	100.0	4,391
Senegal DHS 2010-11	11.0	24.8	60.9	1.9	1.3	100.0	4,516
Sierra Leone DHS 2008	2.1	8.8	87.6	1.2	0.3	100.0	2,478
Swaziland DHS 2006-07	15.7	39.3	40.1	3.8	1.1	100.0	1,147
Tanzania AIS 2003-04	1.9	10.3	84.8	2.1	0.9	100.0	2,261
Tanzania DHS 2004-05 ⁵		12.8	85.5	0.9	0.8	100.0	3,500
Tanzania AIS/MIS 2007-08	9.4	33.9	51.5	4.8	0.4	100.0	3,046
Tanzania DHS 2010	11.9	58.7	24.1	3.6	1.7	100.0	3,266
Uganda AIS 2004-05	1.0	7.8	86.3	1.9	3.0	100.0	3,717
Uganda DHS 2006	3.8	18.2	70.4	4.2	3.4	100.0	3,247
Uganda AIS 2011 ⁶		72.2	20.5	4.9	2.4	100.0	3,970
Zambia DHS 2007	8.8	31.6	55.6	2.9	1.2	100.0	2,631
Zimbabwe DHS 2005	3.5	23.9	68.5	2.4	1.7	100.0	2,144
Zimbabwe DHS 2010	24.4	48.4	20.9	5.1	1.3	100.0	2,448

¹ 'Tested' means tested and received results of the last test.

² Includes those who did not receive ANC.

³ At time of delivery (if asked) or after delivery.

⁴ Default for ever tested but more than 2 years ago.

⁵ In Ghana 2003, Malawi 2004, and Tanzania 2004-05, women were asked about HIV testing during but not after ANC.

⁶ Uganda 2011 is the only survey where women who received testing during ANC were asked about their test results. Women who reported testing positive during ANC were not asked if they had been tested after ANC; therefore these categories have been grouped.

With the exception of Lesotho, in every survey the majority of women who were not tested for HIV during ANC (including those who did not receive ANC) had never been tested for HIV. That is, women who are not being tested for HIV during ANC also are not being reached through outside initiatives or other campaigns to promote voluntary counseling and testing. This pattern appears to hold regardless of whether overall uptake of ANC (and of HIV testing during ANC) is high or low in a country, suggesting the primacy of ANC as a site for HIV testing.

5.5 Time trends in the uptake of HIV testing during ANC

Over the past decade, nine countries in sub-Saharan Africa have had more than one DHS or AIS survey that asked about HIV testing during ANC. In every case, the more recent survey has found a higher uptake of HIV testing during ANC. Is this trend due to increased access to ANC among pregnant women, or to increased uptake of testing among women who receive ANC? Figure 5.1 shows the proportion who received ANC and the proportion who received HIV testing during ANC in each country among women who have given birth in the past two years, shown in ascending order by most recent proportion tested during ANC.

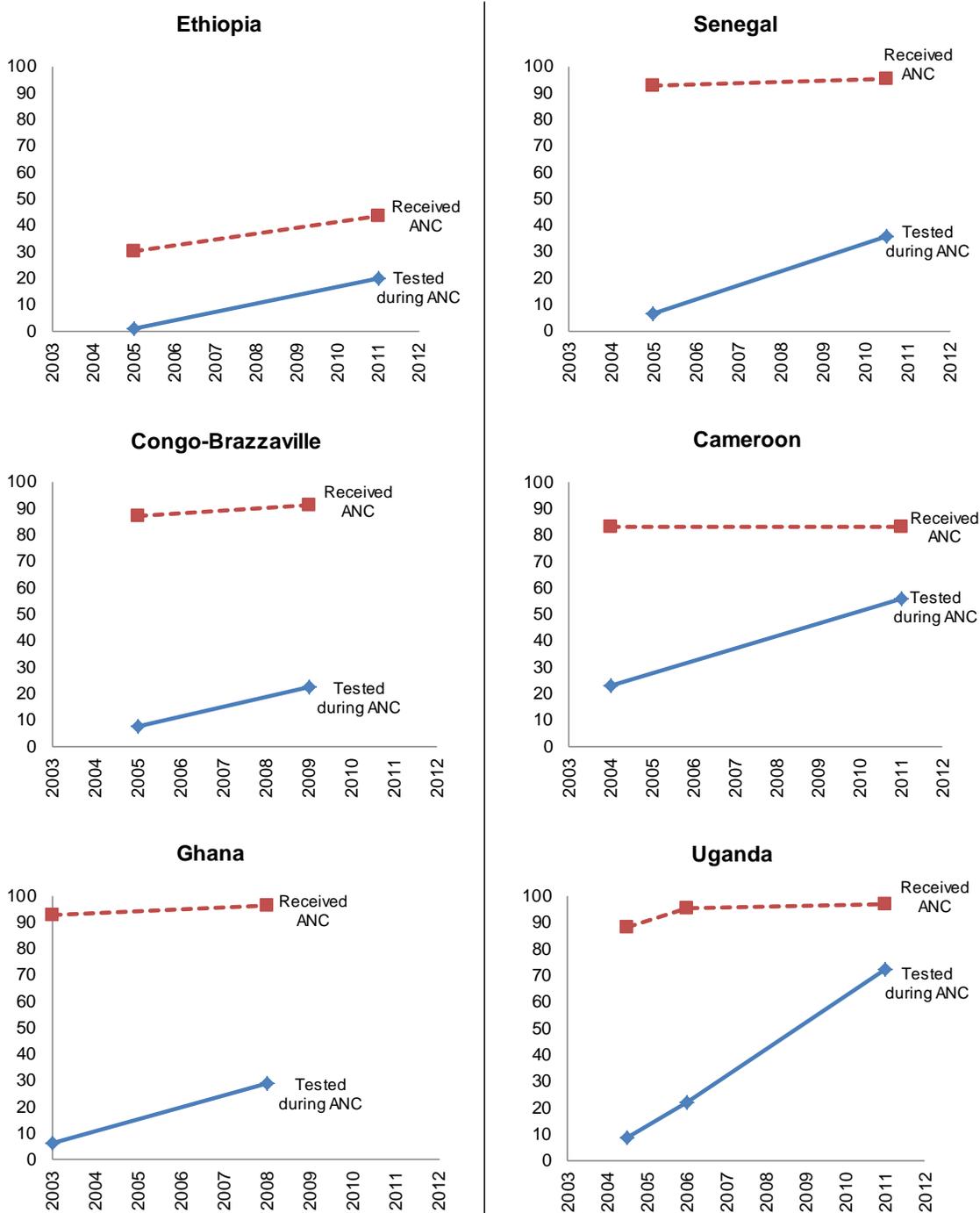
In all nine countries HIV testing during ANC has increased over time. Even in Zimbabwe, where receipt of ANC declined, more women who have given birth in the past two years were tested for HIV during ANC than ever before. In all nine countries the rate of increase in the uptake of HIV testing during ANC is higher than the rate of increase in receipt of ANC overall. The rate is highest in Rwanda, Malawi, Tanzania, Zimbabwe, and Uganda, suggesting that early adoption of provider-initiated opt-out testing in these countries, and the positive perceptions of these programs (Baggaley et al. 2012), may have been an important factor in increasing the uptake of testing during ANC.

Overall, HIV testing during ANC in sub-Saharan Africa appears to be a major source of women's knowledge about their HIV status. In the median country, women who have never given birth are half as likely to have ever been tested for HIV as women who gave birth in the past two years. And among women who have given birth in the past two years but were not tested during ANC, the majority—at least two-thirds in 39 of 41 countries—had never been tested. Additionally, even if not tested for HIV during an ANC visit, more and more women are being counseled about HIV during ANC.

Figure 5.1 Trends in receipt of ANC, and receipt of HIV testing during ANC, by country

Among women ages 15-49 who have given birth in the 2 years preceding the survey

Countries in ascending order by current proportion tested for HIV during ANC

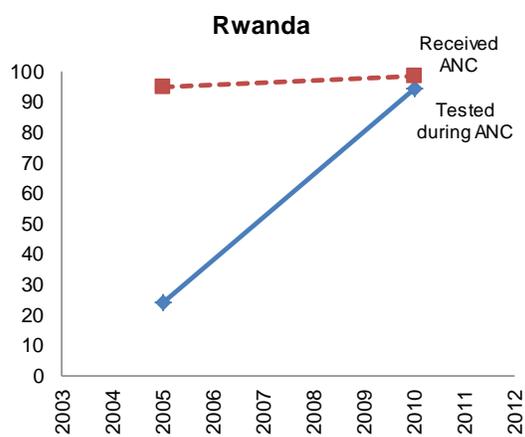
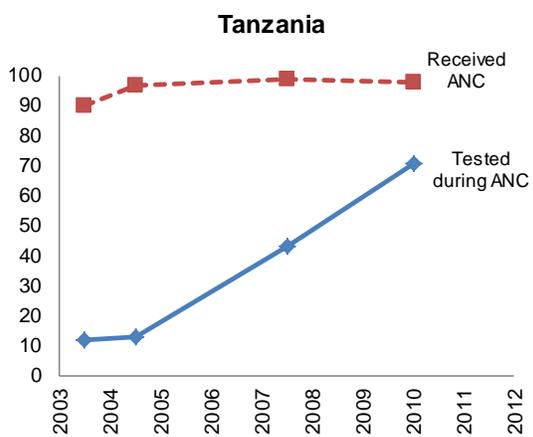
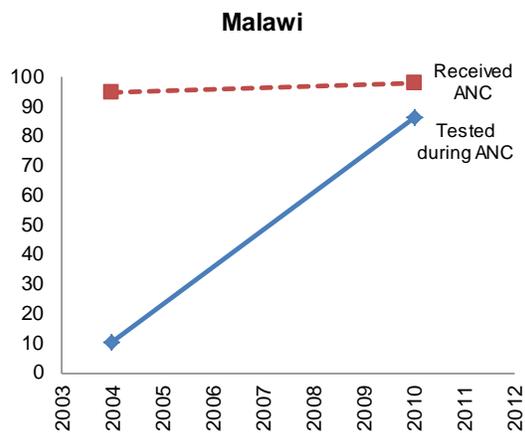
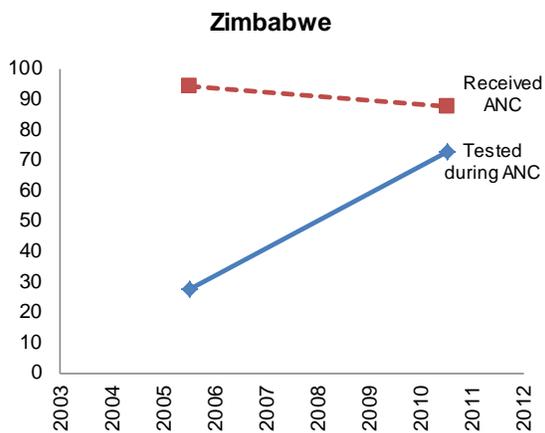


¹ Received ANC means had 1 or more ANC visits for most recent birth in the past two years. Tested during ANC means tested and received results.

Figure 5.1—continued Trends in receipt of ANC, and receipt of HIV testing during ANC, by country

Among women ages 15-49 who have given birth in the 2 years preceding the survey

Countries in ascending order by current proportion tested for HIV during ANC



6 HIV Testing by Serostatus

6.1 HIV serotesting in DHS and AIS surveys

Before 2001, HIV prevalence was estimated largely from sentinel surveillance systems that monitored HIV rates in pregnant women attending antenatal care. At the time, this was the best available proxy measure for national prevalence. In 2001, MEASURE DHS included testing for HIV in the Mali Demographic and Health Survey, providing one of the first-ever HIV prevalence estimates from a nationally representative, population-based sample. Unlike sentinel surveillance, population-level HIV testing includes men, nonpregnant women, and people without access to health facilities. Thus it provides more representative estimates of HIV prevalence nationwide.

The HIV serostatus data collected by DHS can be linked with all of the information collected during the interview. This allows for a comprehensive examination of the sociodemographic and behavioral factors associated with HIV infection, such as age, education, residence, wealth, marital status, and sexual behaviors, including previous HIV testing and receipt of results.

Between January 2001 and October 2012, MEASURE DHS included population-based HIV testing as part of 48 surveys in 34 countries, including 37 completed surveys in sub-Saharan Africa. HIV testing is usually conducted for women and men age 15-49, although some country surveys have tested children, and others have tested older adults.

The HIV testing protocol for the DHS and AIS surveys provides for informed, anonymous, and voluntary testing of women and men selected for an interview. The testing protocol undergoes an ethical review by the host-country as well as an ethical review at ICF International. In countries with involvement of the U.S. Centers for Disease Control (CDC), the testing protocol is also reviewed by the CDC. The testing protocol is simple; in most cases, the interviewer collects blood drops from a finger prick on filter paper. Procedures to ensure DBS testing quality and reliability are strictly followed in every country.¹¹ After testing, each filter paper is assigned a unique bar code that can be linked to the questionnaire to allow for analysis of HIV status by respondents' background characteristics but does not allow the results of the HIV test to be identified to the name or location of a specific individual.

Coverage rates for DHS-initiated HIV testing in the surveys included in this comparative report range from 77 percent of women in Zambia 2007 and 69 percent of men in Zimbabwe 2010-11 to 99 percent of women in Rwanda 2010 and 98 percent of men in Rwanda 2010 and Congo Brazzaville 2009. A detailed list of coverage rates can be found in Appendix Table A.8.

As discussed earlier (Section 2.2), respondents who report that they have ever been tested in the past and received the results of the test do not necessarily know their current HIV status. Even someone who tested negative in the last 12 months before the survey may have become infected after the test and therefore would not know their current status. Alternatively, someone who tested positive for HIV five years before the survey would have no need to be retested, and therefore would not be captured in the data on recent testing. Thus this chapter analyzes only ever testing for HIV. Figures on uptake of HIV testing

¹¹ The blood spots are then dried, and the dried blood spots (DBS) are transported to a laboratory for testing. In the laboratory, the sample undergoes an initial ELISA test, and then all positive samples and 5 to 10 percent of negative samples are retested with a second ELISA. For those tests with discordant results on the two ELISA tests, another test, usually a Western blot, is used to determine the result. As external quality control, all positive samples and a random sample of about 3 to 5 percent of the negative samples are sent for testing to another lab that is not associated with the survey. The results from the independent lab are checked against the results of the main laboratory. However, for the few cases where the HIV testing protocol has not led to conclusive results, a small number of indeterminate cases have been excluded from the categories HIV-positive and HIV-negative, but are included in the total.

in this chapter are calculated among adults who consented to DHS-initiated HIV testing only and therefore differ slightly from percentages reported earlier.

6.2 Cross-national patterns in HIV prevalence and testing uptake

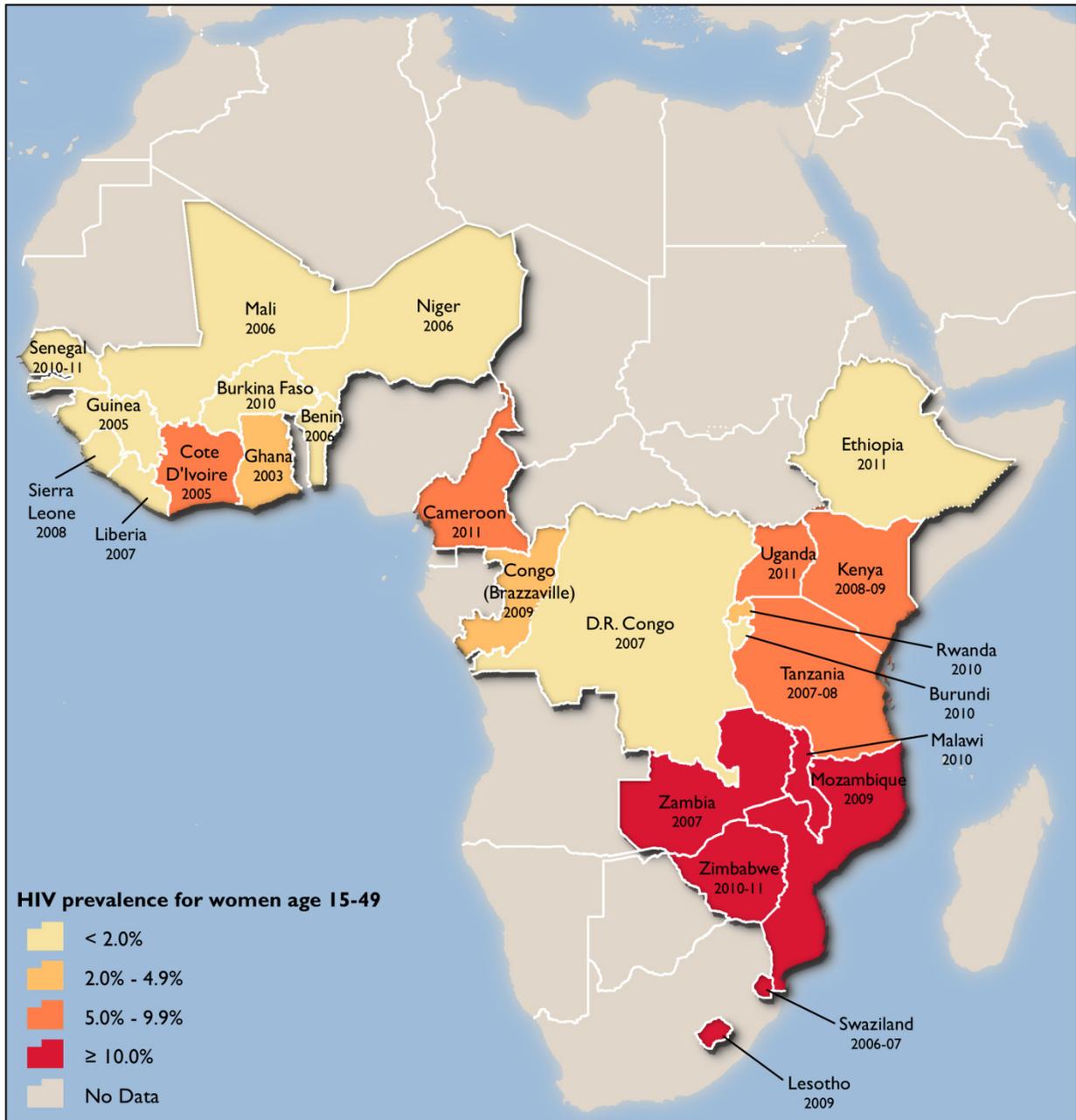
Table 6.1 shows the proportion of women and men ever tested for HIV and the corresponding national HIV prevalence. The data on HIV uptake and prevalence among women are shown, respectively, in Maps 6.1 and 6.2, and corresponding prevalence data for men are shown in maps 6.3 and 6.4. As discussed in Chapter 4, the proportion of adults who have ever been tested for HIV varies substantially across countries. Maps 6.2 and 6.4 also illustrate that HIV prevalence varies substantially throughout sub-Saharan Africa. In general, HIV prevalence is lowest in Western Africa and highest in Southern Africa, with Central and Eastern African countries in the mid-range. For example, less than 1 percent of women and men in Senegal and Niger are HIV-positive, while more than 25 percent of women and more than 18 percent of men in Lesotho and Swaziland tested positive for HIV in their respective country surveys. In all countries except Niger, HIV prevalence is higher among women than it is among men, ranging from 30 percent higher to more than twice as high.

Table 6.1. HIV prevalence and testing uptake				
Prevalence of HIV and percentage ever tested ¹ among women and men age 15-49				
	Women (%)		Men (%)	
	Ever tested	HIV prevalence	Ever tested	HIV prevalence
Benin DHS 2006 ²	14.8	1.5	10.4	0.8
Burkina Faso DHS 2010	27.8	1.2	20.2	0.8
Burundi DHS 2010	37.3	1.7	31.8	1.0
Cameroon DHS 2011	51.1	5.6	39.6	2.9
Congo (Brazzaville) AIS 2009	22.8	4.1	17.6	2.1
Cote d'Ivoire AIS 2005	10.1	6.4	7.9	2.9
D.R. Congo DHS 2007	8.5	1.6	8.6	0.9
Ethiopia DHS 2011	36.0	1.9	38.1	1.0
Ghana DHS 2003	7.4	2.7	7.2	1.5
Guinea DHS 2005	1.7	1.9	5.6	0.9
Kenya DHS 2008-09	57.8	8.0	40.7	4.3
Lesotho DHS 2009	64.8	26.7	37.8	18.0
Liberia DHS 2007	3.1	1.9	4.6	1.2
Malawi DHS 2010	71.9	12.9	51.8	8.1
Mali DHS 2006	6.3	1.5	6.5	1.0
Mozambique AIS 2009	32.9	13.1	16.9	9.2
Niger DHS 2006	1.8	0.7	3.9	0.8
Rwanda DHS 2010	75.0	3.7	69.3	2.2
Senegal DHS 2010-11	27.3	0.8	16.9	0.5
Sierra Leone DHS 2008	9.2	1.7	6.6	1.2
Swaziland DHS 2006-07	35.7	31.1	16.3	19.7
Tanzania AIS/MIS 2007-08	36.7	6.6	26.4	4.6
Uganda AIS 2011	65.8	8.3	44.9	6.1
Zambia DHS 2007	35.8	16.1	20.0	12.3
Zimbabwe DHS 2010-11	58.6	17.7	36.3	12.3

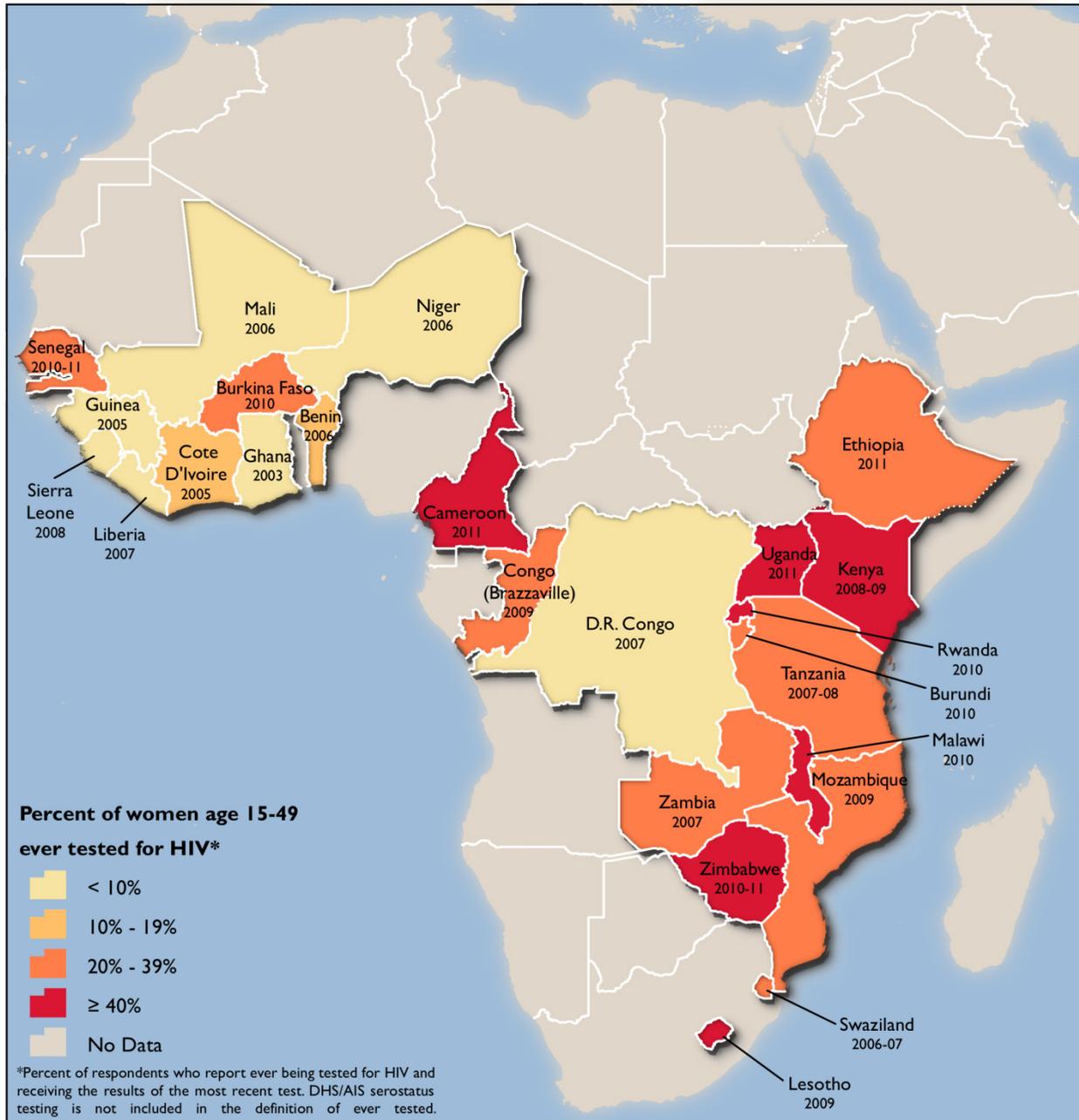
¹ Among those who consented to DHS serotesting only. 'Tested' means the respondent reported ever obtaining an HIV test and receiving the results of the most recent test.

² Benin HIV data are restricted; numbers are from the country's final report.

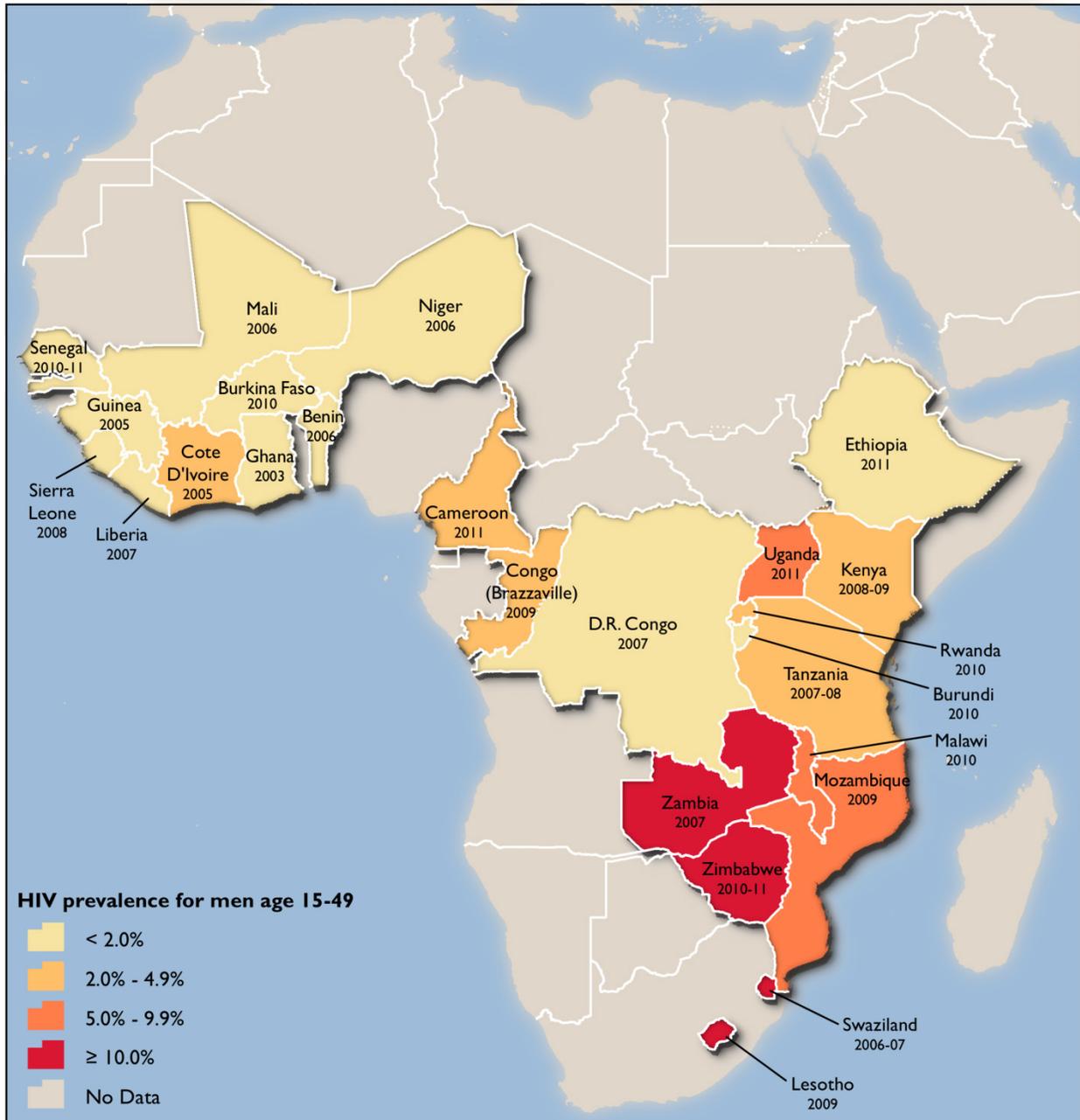
Map 6.1 HIV prevalence among women, sub-Saharan Africa



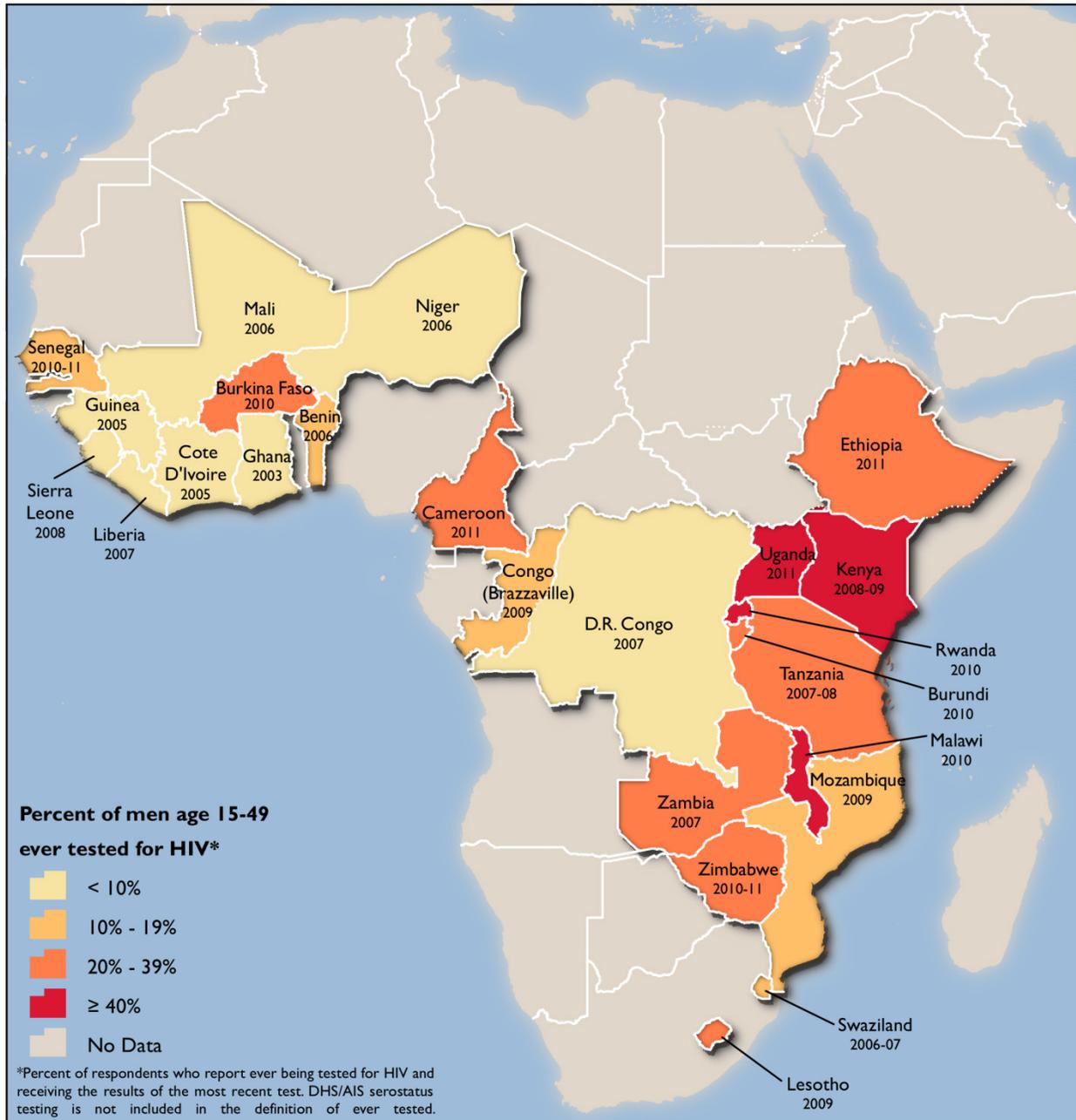
Map 6.2 Percentage of women who have ever been tested for HIV, sub-Saharan Africa



Map 6.3 HIV prevalence among men, sub-Saharan Africa



Map 6.4 Percentage of men who have ever been tested for HIV, sub-Saharan Africa



Figures 6.1 and 6.2 show the percentage of women and men, respectively, ever tested for HIV (the y-axis) by year of survey (the x-axis) and HIV prevalence (bubble size). For women, some countries with high HIV prevalence, such as Swaziland, Zambia, and Mozambique, have relatively low levels of HIV testing (about one-third of women have ever been tested for HIV). In contrast, lower countries with lower HIV prevalence, such as Kenya and Rwanda, have fairly high levels of ever testing (58 percent among women in Kenya and 75 percent in Rwanda). Lesotho and Zimbabwe have both high HIV prevalence and high percentages of women reporting that they have ever been tested. Many of the countries with very low HIV prevalence, such as Senegal, Benin, Mali, Niger, Liberia, and D.R. Congo, have very low levels of ever testing among women.

Figure 6.2 indicates that levels of ever testing among men are lower than among women, as is HIV prevalence. But the same inconsistent relationship between ever testing and HIV prevalence is found among men as among women. Again, Rwanda stands out as an exception—with relatively low HIV prevalence among men (2 percent) but the highest level of testing (69 percent). Malawi, a relatively high-prevalence country (8 percent among men) is the only other country in which at least half of men have ever been tested for HIV. Other high-prevalence countries, such as Zimbabwe and Lesotho, have relatively low levels of HIV testing uptake. Countries with very low HIV prevalence, such as Senegal, D.R. Congo, Mali, Niger, and Benin, all have correspondingly low levels of ever testing for HIV among men.

Figure 6.1 Percentage of women who have ever been tested for HIV by year and women’s HIV prevalence

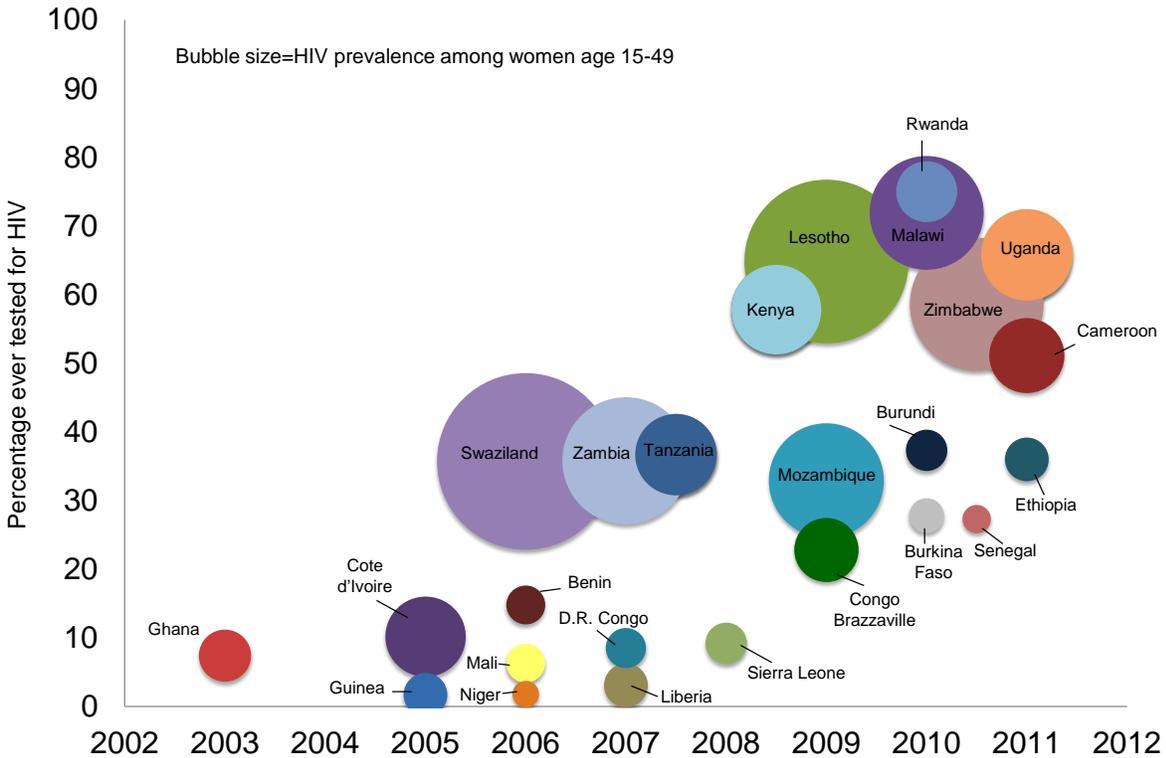
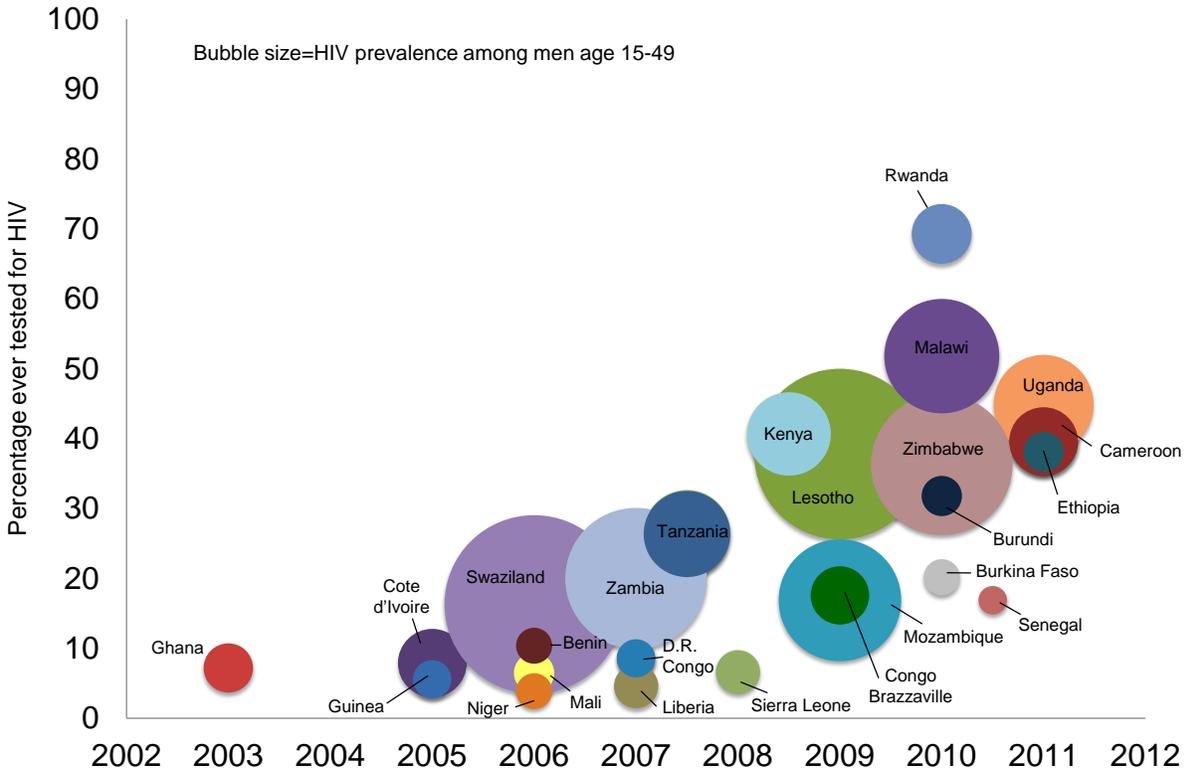


Figure 6.2 Percentage of men who have ever been tested for HIV by year and women’s HIV prevalence



Countries with higher HIV prevalence are likely also to have higher levels of HIV testing, both due to individual motivation and assessment of risk and to a more active policy and funding environment that makes testing accessible and acceptable. Figures 6.1 and 6.2, for women and men respective, both indicate a pattern of increase in HIV testing uptake in recent years, with some exceptions. For example, women in Swaziland, Zambia, and Tanzania—three higher-prevalence countries—have a much higher uptake of HIV testing compared with other countries surveyed in 2006-2007. Among men, recent surveys in Senegal and Burkina Faso still find relatively low levels of testing uptake compared with other surveys conducted at the same time.

Overall among the countries surveyed, however, the year of the survey is a stronger predictor of HIV testing uptake than of HIV prevalence, for both women and men. The correlation between testing uptake and year of survey is more than 70 percent among both women and men, while the correlation between HIV prevalence and uptake of HIV testing is 50 percent for women and 26 percent for men.¹²

¹² Calculations based on Table 6.1, using the midpoint between two years if the survey overlapped (for example, 2008.5 for a 2008-09 survey).

6.3 Uptake of HIV testing by respondent's serostatus

At the national level HIV testing uptake may not be strongly related to overall HIV prevalence, but among individuals the uptake of HIV testing is consistently higher among HIV-positive persons in each country examined. Table 6.1 and Figures 6.3 and 6.4 describe ever testing by respondent's serostatus. In all 25 surveys HIV-positive individuals report having been tested for HIV more often than HIV-negative individuals. In some countries, such as Cote d'Ivoire, Ethiopia, Guinea, Liberia, Mali, Niger, Sierra Leone, and Swaziland, the proportion of HIV-positive men or women who report ever being tested for HIV is double that of their HIV-negative counterparts. In Ethiopia, for example, HIV ever testing is twice as high among HIV-positive women and men (about 70 percent) as among women who tested HIV-negative in the 2011 Ethiopia DHS (about 35 percent).

Table 6.2. Uptake of HIV testing by sex and serostatus

Percentage ever tested¹ among women and men age 15-49

	Women (%)			Men (%)			Women (n)			Men (n)		
	HIV+	HIV-	Total ²	HIV+	HIV-	Total ²	HIV +	HIV -	Total ²	HIV +	HIV -	Total ²
Benin DHS 2006 ³	24.9	14.6	14.8	20.3	10.3	10.4	76	4,949	5,025	33	3,916	3,949
Burkina Faso DHS 2010	41.6	27.6	27.8	39.9	20.0	20.2	97	8,196	8,298	51	6,263	6,317
Burundi DHS 2010	64.9	36.9	37.3	(49.1)	31.6	31.8	78	4,454	4,533	36	3,518	3,554
Cameroon DHS 2011	69.4	50.0	51.1	63.9	38.9	39.6	402	6,817	7,221	181	6,100	6,282
Congo (Brazzaville) AIS 2009	35.2	22.2	22.8	21.1	17.5	17.6	266	6,172	6,438	117	5,555	5,671
Cote d'Ivoire AIS 2005	13.6	9.9	10.1	23.6	7.4	7.9	283	4,131	4,414	115	3,908	4,023
D.R. Congo DHS 2007	8.7	8.4	8.5	(14.5)	8.5	8.6	73	4,419	4,492	38	3,974	4,012
Ethiopia DHS 2011	72.5	35.3	36	70.3	37.8	38.1	273	14,412	14,695	127	12,442	12,582
Ghana DHS 2003	12.4	7.3	7.4	8.2	7.2	7.2	138	4,951	5,097	59	3,986	4,047
Guinea DHS 2005	5.4	1.7	1.7	(5.2)	5.6	5.6	71	3,667	3,742	24	2,548	2,577
Kenya DHS 2008-09	73.5	56.5	57.8	58.6	39.9	40.7	291	3,350	3,641	130	2,936	3,066
Lesotho DHS 2009	70.8	62.6	64.8	51.8	34.7	37.8	1,010	2,768	3,778	514	2,342	2,856
Liberia DHS 2007	8.0	3.0	3.1	11.5	4.6	4.6	114	6,267	6,381	63	5,288	5,351
Malawi DHS 2010	81.0	70.6	71.9	63.1	50.9	51.8	913	6,177	7,091	529	5,967	6,497
Mali DHS 2006	11.7	6.2	6.3	(10.9)	6.4	6.5	70	4,458	4,528	37	3,577	3,614
Mozambique AIS 2009	43.2	31.3	32.9	30.1	15.6	16.9	687	4,543	5,229	352	3,479	3,832
Niger DHS 2006	(3.4)	1.8	1.8	(16.9)	3.8	3.9	31	4,374	4,406	22	2,834	2,856
Rwanda DHS 2010	91.3	74.4	75.0	87.1	68.9	69.3	257	6,660	6,917	127	5,563	5,690
Senegal DHS 2010-11	29.7	27.3	27.3	*	16.9	16.9	44	5,282	5,326	19	4,085	4,104
Sierra Leone DHS 2008	20.2	9.0	9.2	(19.1)	6.4	6.6	60	3,389	3,448	33	2,692	2,726
Swaziland DHS 2006-07	44.0	31.9	35.7	28.8	13.2	16.3	1,378	3,046	4,424	741	3,022	3,763
Tanzania AIS/MIS 2007-08	43.2	36.2	36.7	30.8	26.2	26.4	541	7,638	8,179	313	6,552	6,865
Uganda AIS 2011	76.5	64.8	65.8	57.3	44.0	44.8	907	9,976	10,883	529	8,144	8,673
Zambia DHS 2007	45.4	33.9	35.8	28.3	18.9	20.0	885	4,614	5,502	606	4,336	4,942
Zimbabwe DHS 2010-11	71.0	55.9	58.6	51.4	34.2	36.3	1,295	6,018	7,313	769	5,481	6,250

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

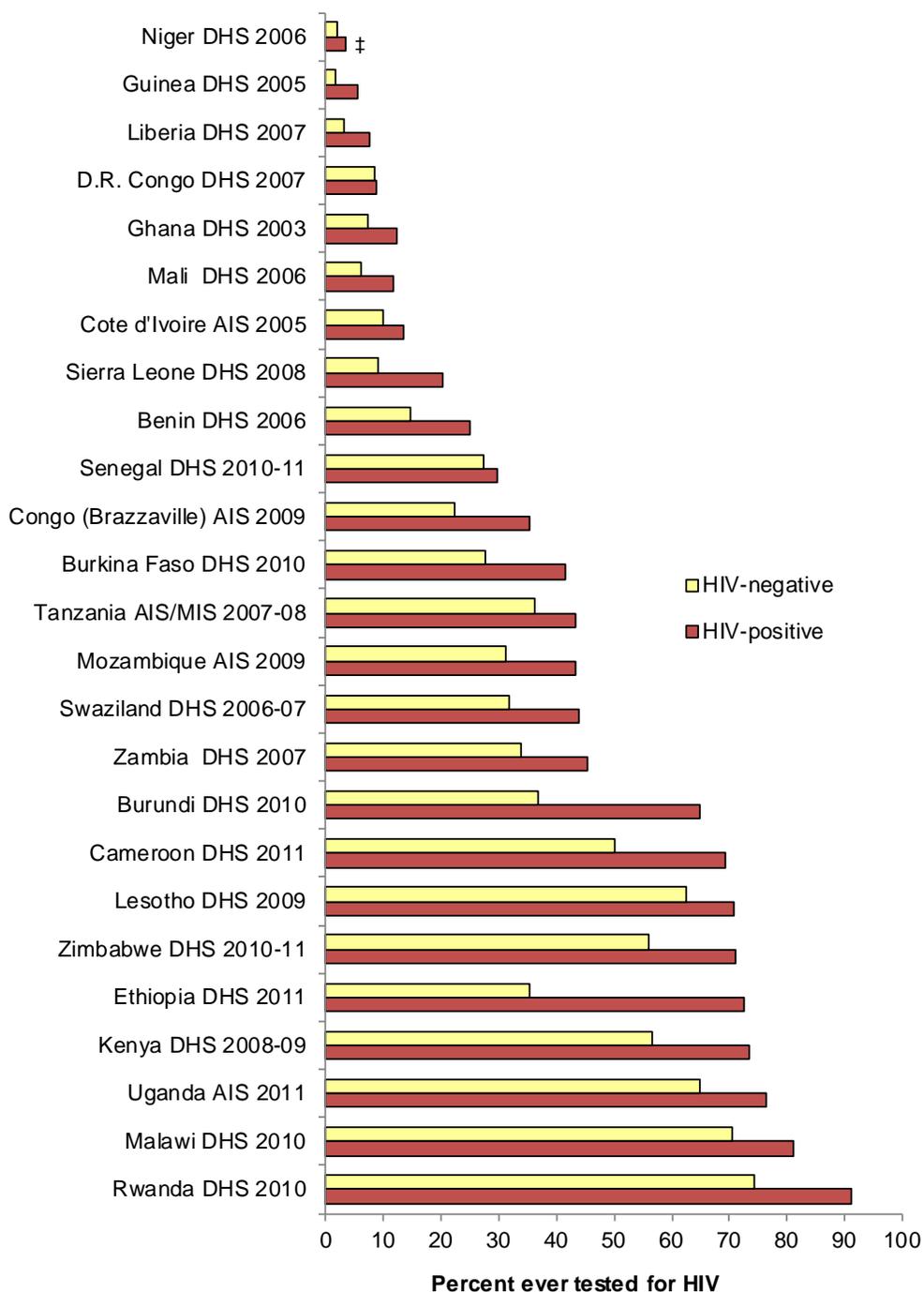
¹ Among those who consented to DHS serotesting only. 'Tested' means the respondent reported ever obtaining an HIV test and receiving the results of the most recent test. DHS serostatus testing is not included in the definition of tested.

² Total includes a small number of cases with indeterminate results

³ Benin HIV data are restricted; numbers are from the country's final report (unable to check unweighted cases as a result).

Figure 6.3 Uptake of HIV testing among women by serostatus

Percentage of women ages 15-49 who have ever been tested¹ for HIV by serostatus

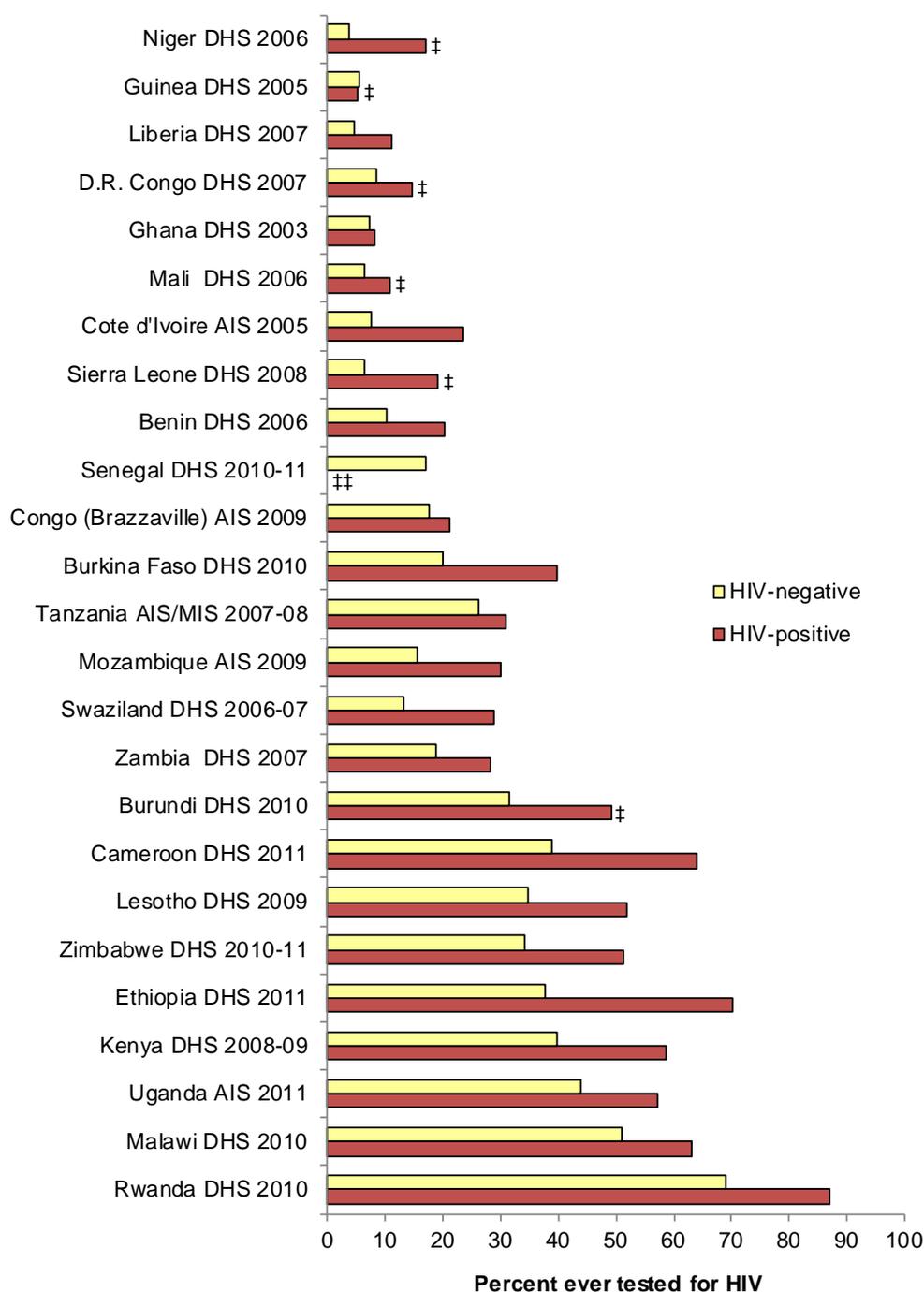


¹ 'Tested' means the respondent reported ever obtaining an HIV test and receiving the results of the most recent test. DHS serostatus testing is not included in the definition of tested. See Table 6.1 for additional notes.

‡ Based on 25-49 unweighted cases

Figure 6.4 Uptake of HIV testing among men by serostatus

Percentage of men ages 15-49 who have ever been tested¹ for HIV by serostatus



¹ 'Tested' means the respondent reported ever obtaining an HIV test and receiving the results of the most recent test. DHS serostatus testing is not included in the definition of tested. See Table 6.1 for additional notes.

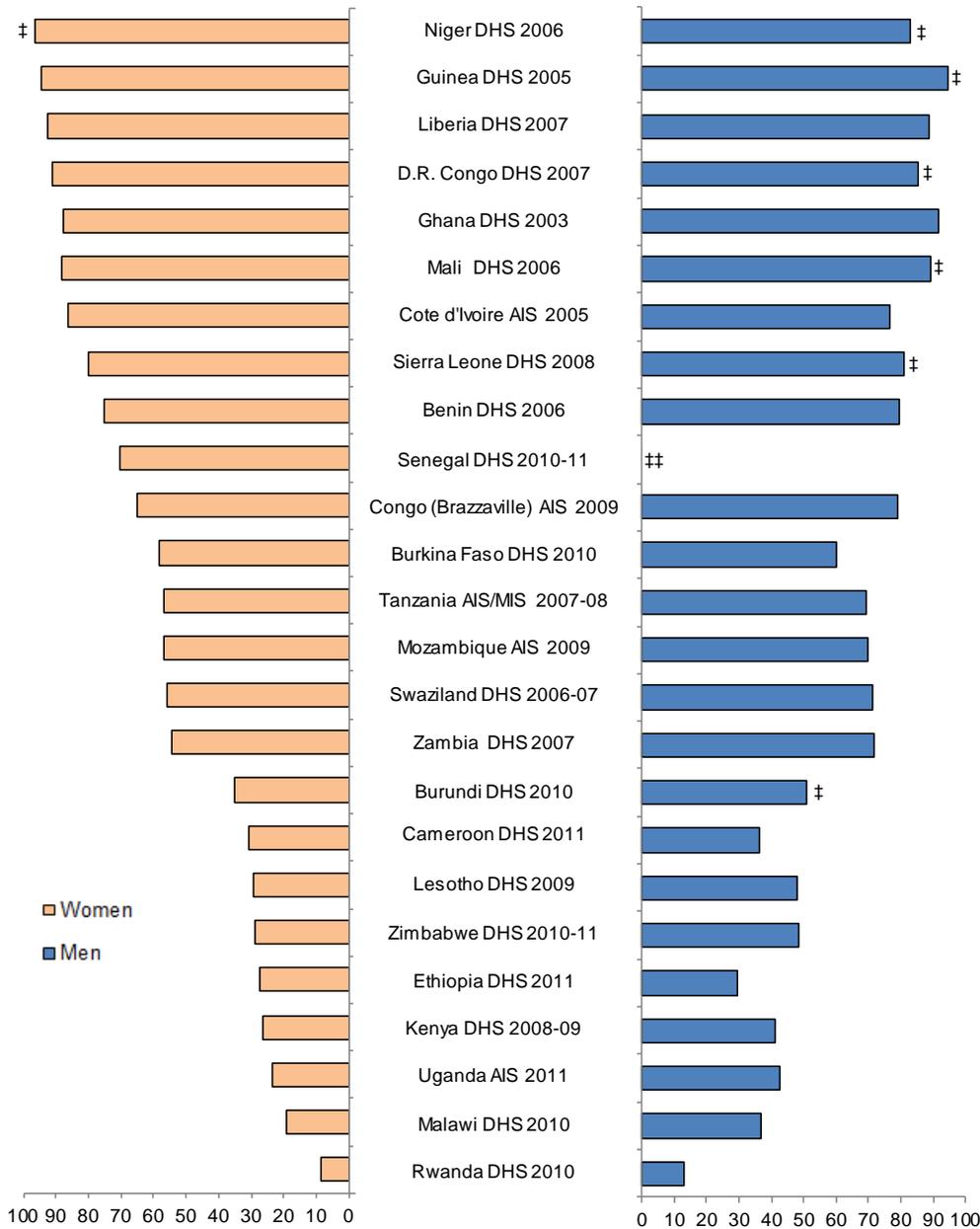
‡ Based on 25-49 unweighted cases

†† Based on fewer than 25 unweighted cases; result suppressed.

While receipt of an HIV test and the results does not mean that respondents actually know their current HIV status, the higher uptake of testing among HIV-positive women and men may indicate something about individual awareness of risk, or better targeting of testing by policymakers and NGOs. For example, programs for most-at-risk populations may be successfully reaching these groups for HIV testing, while individuals who engage in higher-risk behaviors such as multiple sexual partnerships or paid sex are correctly identifying themselves as at higher risk of HIV infection.

Figure 6.5 Percentage of HIV-positive adults who cannot know their HIV status

Percentage of seropositive adults ages 15-49 who have never been tested¹ for HIV



¹ 'Tested' means the respondent reported ever obtaining an HIV test and receiving the results of the most recent test. DHS serostatus testing is not included in the definition of tested. See Table 6.1 for additional notes.

‡ Based on 25-49 unweighted cases

‡‡ Based on fewer than 25 unweighted cases; result suppressed.

While it is impossible to state with any certainty that HIV testing in the past indicates current knowledge of one's own HIV status, the opposite is true: those women and men who have never been tested cannot possibly know their HIV status. In 16 of the 25 countries studied with respect to serostatus, the majority of HIV-positive men and women have never been tested for HIV and thus are unaware of their HIV status (Figure 6.5).

Tables on women and men's testing history by serostatus and background characteristics, including place of residence, age, education, household wealth, and marital status are found in Appendix Tables A.10 to A.14. These tables are limited to countries with adult HIV prevalence of more than 3 percent, although in some cases the sample size was still too small to analyze by wealth quintile or age, for example. These appendix tables may be meaningful to policymakers on a country-by-country basis, but there appear to be no major patterns that could be generalized to sub-Saharan Africa.

7 Conclusions

Regular testing for all adults at risk of HIV is vital to both care and prevention. Lack of knowledge of HIV status remains a critical barrier to treatment and support. Sub-Saharan Africa, the world region most affected by HIV, has experienced dramatic increases in the uptake of HIV testing over the past decade. Among all 15 countries with more than one DHS or AIS survey, the percent ever tested among women increased dramatically over the survey period, ranging from more than double in Nigeria to more than a ten-fold increase in Madagascar. Among men, the uptake of HIV testing doubled in 12 of 15 countries, with Madagascar experiencing the sharpest increase. Mozambique, Ghana, and Congo-Brazzaville experienced the smallest relative increases in uptake of HIV testing among men (3 percent, 65 percent, and 67 percent, respectively).

In the treatment scale-up era, funding for HIV testing programs has grown dramatically (Amico, Aran, and Avila 2010), and most countries have implemented outreach campaigns. Hence the timing of the DHS or AIS survey is clearly an important factor in the level of HIV testing uptake. As more programs focus on HIV testing, more women and men are likely to be tested. Even a few years can make a difference in survey results.

Disparities in uptake between women and men persist. In the most recent surveys from 22 of 28 countries, men are less likely than women to have ever been tested for HIV. Disparities in recent testing (within the past 12 months) are lower than overall disparities between women and men in testing, which may signal that this pattern is changing.

Among women, increased uptake of HIV testing during antenatal care appears to be an important component of the overall increase in testing. In the median country, women who have given birth in the past two years are 26 percent more likely to have ever been tested for HIV, and the dramatic increase in women's uptake of HIV testing in at least three countries—Malawi, Tanzania, and Uganda—appears to have been largely driven by increases in testing during ANC.

Urban and rural disparities in HIV testing remain high in most countries. In Madagascar and Nigeria, urban women and men are more than twice as likely to have ever been tested for HIV compared with rural women and men; the same is true among women in Ethiopia and among men in Mozambique. Continuing disparities in testing between urban and rural areas suggest an important frontier for expansion of voluntary counseling and testing programs in many countries.

While universal access to HIV testing is a policy priority, in the treatment scale-up era it is particularly important that testing reach HIV-positive persons so that they may obtain care and support. Although HIV testing rates have increased dramatically over the past 10 years in sub-Saharan Africa, the relationship between national HIV prevalence and HIV testing uptake is relatively weak. Even so, the data show that in every African country where DHS-initiated serostatus testing was conducted, reported testing uptake among HIV-positive adults is higher than among HIV-negative adults. This difference probably reflects a combination of greater awareness of risk among HIV-positive persons and focused targeting on HIV-positive persons by testing programs. Increased efforts to test spouses and partners of people found to be HIV-positive may also contribute to the increased uptake of testing among HIV-positive persons, as these partners are themselves more likely than the average adult to be HIV-positive.

Underlying differences in medical infrastructure, level of funding for HIV programs, and accessibility of rural populations contribute to differences in coverage and disparities in the uptake of HIV testing. The experience of countries such as Rwanda, Malawi, and Uganda, which have been particularly successful at scaling up testing across the population, may be useful models for other countries in sub-Saharan Africa.

Overall, gains in the uptake of HIV testing in sub-Saharan Africa have been impressive. Even so, in the median country the majority of women (71 percent) and men (83 percent) have never been tested for HIV. Regular testing for all adults at risk of HIV is an important means of both care and prevention, but those who are unaware that they are living with HIV are of particular concern. HIV-positive adults are more likely to have been tested for HIV than their HIV-negative counterparts in nearly every country surveyed; even so, in the majority of countries surveyed HIV-positive adults have no way of knowing their serostatus, because they have never been tested for HIV.

Continued expansion of voluntary counseling and testing (VCT) services and integrated opportunities to be tested during regular medical care—and, more broadly, an increase in access to healthcare overall—remain policy priorities in sub-Saharan Africa. Treatment as well as prevention is contingent on the identification of seropositive individuals. Scaling up testing, particularly among men, rural residents, and other hard-to-reach populations, remains a critical part of HIV prevention and treatment efforts.

Appendix Tables

Table A.1 Denominators for tables 3.2-3.3: Number of women and men by place of residence

	Women			Men		
	Residence			Residence		
	Urban	Rural	Total	Urban	Rural	Total
Benin DHS 2006	7,360	10,434	17,794	1,992	2,623	4,615
Burkina Faso DHS 2010	4,624	12,463	17,087	1,947	4,553	6,500
Burundi DHS 2010	1,002	8,387	9,389	578	3,181	3,760
Cameroon DHS 2011	3,992	3,465	7,457	3,607	2,847	6,455
Chad DHS 2004	1,289	4,796	6,085	469	1,213	1,682
Congo (Brazzaville) AIS 2009	4,036	2,514	6,550	3,726	2,137	5,863
Cote d'Ivoire AIS 2005	2,454	2,729	5,183	2,115	2,388	4,503
D.R. Congo DHS 2007	4,540	5,455	9,995	1,890	2,426	4,316
Ethiopia DHS 2011	3,947	12,568	16,515	2,882	9,952	12,834
Ghana DHS 2008	2,383	2,533	4,916	1,866	2,191	4,058
Guinea DHS 2005	2,472	5,482	7,954	1,096	1,612	2,709
Kenya DHS 2008-09	2,148	6,296	8,444	866	2,392	3,258
Lesotho DHS 2009	2,573	5,051	7,624	845	2,162	3,008
Liberia DHS 2007	2,998	4,094	7,092	2,426	3,583	6,009
Madagascar DHS 2008-09	1,483	7,064	8,547	1,226	6,419	7,645
Malawi DHS 2010	4,302	18,718	23,020	1,440	5,379	6,818
Mali DHS 2006	4,918	9,665	14,583	1,384	2,321	3,704
Mozambique AIS 2009	1,810	3,864	5,674	1,483	2,685	4,168
Namibia DHS 2006-07	4,772	5,032	9,804	1,962	1,953	3,915
Niger DHS 2006	1,817	7,406	9,223	816	2,285	3,101
Nigeria DHS 2008	11,934	21,451	33,385	5,215	8,593	13,808
Rwanda DHS 2010	2,057	11,614	13,671	939	4,748	5,687
Senegal DHS 2010-11	7,738	7,950	15,688	2,467	1,951	4,417
Sierra Leone DHS 2008	2,655	4,719	7,374	1,123	1,822	2,944
Swaziland DHS 2006-07	1,330	3,657	4,987	1,181	2,975	4,156
Tanzania DHS 2010	2,892	7,247	10,139	693	1,834	2,527
Uganda AIS 2011	2,365	8,795	11,160	1,739	6,995	8,735
Zambia DHS 2007	3,009	4,137	7,146	2,601	3,395	5,995
Zimbabwe DHS 2010-11	3,548	5,623	9,171	2,621	4,488	7,110

Notes: See tables 3.2 and 3.3.

Table A.2 Denominators for tables 3.4 and 3.6: Number of women by 5-year age group

	Women							Total
	age 5-year groups							
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Benin DHS 2006	3,067	3,181	3,641	2,788	2,117	1,595	1,404	17,794
Burkina Faso DHS 2010	3,312	3,311	2,959	2,586	1,991	1,644	1,284	17,087
Burundi DHS 2010	2,359	1,832	1,608	1,064	1,067	745	714	9,389
Cameroon DHS 2011	1,715	1,509	1,276	940	830	630	556	7,457
Chad DHS 2004	1,360	1,072	1,140	783	657	525	547	6,085
Congo (Brazzaville) AIS 2009	1,305	1,286	1,229	931	749	561	489	6,550
Cote d'Ivoire AIS 2005	1,232	1,128	913	683	505	404	318	5,183
D.R. Congo DHS 2007	2,030	2,274	1,655	1,344	1,044	909	739	9,995
Ethiopia DHS 2011	4,009	2,931	3,147	2,054	1,916	1,261	1,196	16,515
Ghana DHS 2008	1,025	878	832	644	638	470	429	4,916
Guinea DHS 2005	1,648	1,152	1,259	1,119	1,170	821	785	7,954
Kenya DHS 2008	1,761	1,715	1,454	1,209	877	768	661	8,444
Lesotho DHS 2008-09	1,785	1,552	1,244	983	763	656	641	7,624
Liberia DHS 2007	1,312	1,363	1,166	956	956	665	674	7,092
Madagascar DHS 2008	1,965	1,405	1,368	1,199	990	894	725	8,547
Malawi DHS 2010	5,005	4,555	4,400	3,250	2,522	1,730	1,558	23,020
Mali DHS 2006	3,104	2,678	2,625	1,971	1,688	1,354	1,163	14,583
Mozambique AIS 2009	948	1,136	970	904	741	470	503	5,674
Namibia DHS 2006	2,246	1,855	1,623	1,417	1,045	928	689	9,804
Niger DHS 2006	1,718	1,651	1,792	1,354	1,167	883	658	9,223
Nigeria DHS 2008	6,493	6,133	6,309	4,634	3,912	3,032	2,872	33,385
Rwanda DHS 2010	2,945	2,683	2,494	1,822	1,447	1,168	1,112	13,671
Senegal DHS 2010	3,429	3,220	2,746	2,148	1,817	1,379	949	15,688
Sierra Leone DHS 2008	1,198	1,186	1,643	1,043	1,131	652	520	7,374
Swaziland DHS 2006	1,274	1,046	729	616	503	438	383	4,987
Tanzania DHS 2010	2,172	1,909	1,668	1,422	1,290	938	740	10,139
Uganda AIS 2011	2,458	2,163	1,942	1,478	1,355	948	816	11,160
Zambia DHS 2007	1,574	1,370	1,363	1,056	747	561	475	7,146
Zimbabwe DHS 2010	1,945	1,841	1,686	1,296	1,051	732	620	9,171

Notes: See tables 3.4 and 3.6.

Table A.3 Denominators for tables 3.5 and 3.7: Number of men by 5-year age group

	Men							Total
	age 5-year groups							
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Benin DHS 2006	1,010	695	752	677	651	460	370	4,615
Burkina Faso DHS 2010	1,437	1,035	952	940	795	713	628	6,500
Burundi DHS 2010	932	732	584	442	388	349	331	3,760
Cameroon DHS 2011	1,591	1,227	1,074	828	697	577	460	6,455
Chad DHS 2004	406	267	293	212	181	172	151	1,682
Congo (Brazzaville) AIS 2009	1,137	938	966	1,001	796	622	402	5,863
Cote d'Ivoire AIS 2005	898	938	806	624	523	385	330	4,503
D.R. Congo DHS 2007	988	869	651	568	483	400	357	4,316
Ethiopia DHS 2011	3,013	2,319	2,297	1,483	1,648	1,121	952	12,834
Ghana DHS 2008	911	704	624	533	528	394	364	4,058
Guinea DHS 2005	664	482	311	307	362	301	281	2,709
Kenya DHS 2008	776	630	483	461	344	306	257	3,258
Lesotho DHS 2008-09	835	634	463	396	290	196	193	3,008
Liberia DHS 2007	1,156	1,039	917	766	830	687	613	6,009
Madagascar DHS 2008	1,711	1,322	1,178	1,068	914	763	689	7,645
Malawi DHS 2010	1,748	1,239	1,099	948	798	529	458	6,818
Mali DHS 2006	876	633	476	497	452	390	380	3,704
Mozambique AIS 2009	901	683	663	629	543	372	377	4,168
Namibia DHS 2006	910	750	702	586	400	331	235	3,915
Niger DHS 2006	620	490	472	425	382	369	343	3,101
Nigeria DHS 2008	2,532	2,378	2,459	2,058	1,794	1,413	1,174	13,808
Rwanda DHS 2010	1,449	1,159	1,038	710	490	430	412	5,687
Senegal DHS 2010	1,170	897	701	545	438	383	284	4,417
Sierra Leone DHS 2008	526	403	446	373	525	336	335	2,944
Swaziland DHS 2006	1,323	886	624	431	367	269	256	4,156
Tanzania DHS 2010	645	414	343	352	300	270	204	2,527
Uganda AIS 2011	2,072	1,406	1,354	1,160	1,129	890	722	8,735
Zambia DHS 2007	1,416	1,066	977	954	717	475	390	5,995
Zimbabwe DHS 2010	1,735	1,372	1,236	970	828	589	379	7,110

Notes: See tables 3.5 and 3.7.

Table A.4 Denominators for tables 3.8 and 3.9: Number of women and men by education

	Women				Men			
	Education				Education			
	No education	Primary	Secondary+	Total	No education	Primary	Secondary+	Total
Benin DHS 2006	11,334	3,550	2,910	17,794	1,523	1,407	1,684	4,615
Burkina Faso DHS 2010	12,642	2,329	2,116	17,087	3,852	1,328	1,319	6,500
Burundi DHS 2010	4,211	4,042	1,136	9,389	1,066	1,891	803	3,760
Cameroon DHS 2011	1,559	2,457	3,441	7,457	533	2,073	3,849	6,455
Chad DHS 2004	4,549	1,144	392	6,085	757	556	368	1,682
Congo (Brazzaville) AIS 2009	390	1,826	4,333	6,550	114	1,086	4,663	5,863
Cote d'Ivoire AIS 2005	2,794	1,373	1,016	5,183	1,532	1,129	1,841	4,503
D.R. Congo DHS 2007	2,081	3,851	4,063	9,995	234	1,262	2,821	4,316
Ethiopia DHS 2011	8,394	6,276	1,845	16,515	3,785	6,813	2,236	12,834
Ghana DHS 2008	1,046	988	2,883	4,916	551	619	2,888	4,058
Guinea DHS 2005	6,162	909	883	7,954	1,304	482	923	2,709
Kenya DHS 2008-09	752	4,798	2,894	8,444	112	1,687	1,459	3,258
Lesotho DHS 2009	93	3,551	3,979	7,624	336	1,467	1,205	3,008
Liberia DHS 2007	3,012	2,334	1,746	7,092	1,059	2,000	2,950	6,009
Madagascar DHS 2008-09	1,637	4,210	2,700	8,547	1,186	3,856	2,602	7,645
Malawi DHS 2010	3,505	14,916	4,599	23,020	422	4,270	2,126	6,818
Mali DHS 2006	11,410	1,668	1,505	14,583	2,146	759	799	3,704
Mozambique AIS 2009	1,673	3,263	737	5,674	439	2,634	1,094	4,168
Namibia DHS 2006-07	651	2,435	6,718	9,804	360	1,108	2,447	3,915
Niger DHS 2006	7,700	963	560	9,223	2,047	574	480	3,101
Nigeria DHS 2008	11,942	6,566	14,878	33,385	2,597	2,761	8,449	13,808
Rwanda DHS 2010	2,119	9,337	2,216	13,671	583	3,916	1,189	5,687
Senegal DHS 2010-11	9,079	3,414	3,195	15,688	1,632	1,261	1,525	4,417
Sierra Leone DHS 2008	4,860	960	1,554	7,374	1,426	414	1,104	2,944
Swaziland DHS 2006-07	402	1,628	2,957	4,987	316	1,450	2,389	4,156
Tanzania DHS 2010	1,940	6,553	1,646	10,139	239	1,710	578	2,527
Uganda AIS 2011	1,566	6,606	2,988	11,160	485	4,957	3,292	8,735
Zambia DHS 2007	744	3,891	2,511	7,146	267	2,775	2,953	5,995
Zimbabwe DHS 2010-11	212	2,568	6,390	9,171	56	1,508	5,546	7,110

Notes: See tables 3.8 and 3.9.

Table A.5 Denominators for tables 3.10 and 3.11: Number of women and men by wealth quintile

	Women						Men					
	Wealth quintile						Wealth quintile					
	Lowest	Second	Middle	Fourth	Highest	Total	Lowest	Second	Middle	Fourth	Highest	Total
Benin DHS 2006	3,125	3,227	3,397	3,805	4,240	17,794	714	834	885	1,018	1,164	4,615
Burkina Faso DHS 2010	2,996	3,189	3,252	3,395	4,255	17,087	1,057	1,231	1,183	1,241	1,788	6,500
Burundi DHS 2010	1,898	1,910	1,854	1,811	1,916	9,389	600	700	717	772	970	3,760
Cameroon DHS 2011	1,227	1,325	1,447	1,642	1,816	7,457	987	1,032	1,175	1,465	1,795	6,455
Chad DHS 2004	1,216	1,310	1,100	1,246	1,213	6,085	258	325	308	332	460	1,682
Congo (Brazzaville) AIS 2009	1,403	1,345	1,269	1,251	1,282	6,550	1,123	1,140	1,198	1,236	1,166	5,863
Cote d'Ivoire AIS 2005	885	948	962	1,100	1,287	5,183	755	846	904	943	1,055	4,503
D.R. Congo DHS 2007	1,798	1,967	2,043	1,888	2,300	9,995	769	786	999	806	956	4,316
Ethiopia DHS 2011	2,986	3,041	3,031	3,215	4,242	16,515	2,141	2,362	2,454	2,683	3,194	12,834
Ghana DHS 2008	783	900	979	1,119	1,135	4,916	708	738	699	974	939	4,058
Guinea DHS 2005	1,640	1,508	1,535	1,594	1,677	7,954	446	456	464	518	824	2,709
Kenya DHS 2008-09	1,393	1,483	1,613	1,736	2,220	8,444	457	577	574	725	926	3,258
Lesotho DHS 2009	1,073	1,190	1,325	1,900	2,136	7,624	443	575	666	640	684	3,008
Liberia DHS 2007	1,251	1,332	1,359	1,580	1,569	7,092	1,062	1,181	1,170	1,160	1,437	6,009
Madagascar DHS 2008-09	1,521	1,599	1,576	1,743	2,109	8,547	1,277	1,436	1,456	1,669	1,807	7,645
Malawi DHS 2010	4,268	4,332	4,517	4,515	5,388	23,020	997	1,309	1,367	1,376	1,770	6,818
Mali DHS 2006	2,675	2,803	2,774	2,864	3,467	14,583	663	674	584	785	998	3,704
Mozambique AIS 2009	1,066	1,070	1,095	1,176	1,266	5,674	683	799	843	806	1,038	4,168
Namibia DHS 2006-07	1,621	1,668	1,885	2,292	2,338	9,804	560	607	875	963	911	3,915
Niger DHS 2006	1,755	1,780	1,756	1,906	2,026	9,223	412	553	645	618	873	3,101
Nigeria DHS 2008	6,194	6,234	6,341	6,938	7,678	33,385	2,275	2,332	2,570	3,163	3,468	13,808
Rwanda DHS 2010	2,622	2,661	2,736	2,677	2,976	13,671	854	986	1,139	1,235	1,474	5,687
Senegal DHS 2010-11	2,585	2,805	3,114	3,494	3,689	15,688	665	688	908	1,019	1,137	4,417
Sierra Leone DHS 2008	1,382	1,368	1,428	1,472	1,723	7,374	558	520	530	597	739	2,944
Swaziland DHS 2006-07	785	862	968	1,111	1,262	4,987	601	665	856	953	1,081	4,156
Tanzania DHS 2010	1,681	1,947	1,997	2,112	2,403	10,139	401	447	490	572	618	2,527
Uganda AIS 2011	1,894	2,024	2,056	2,292	2,894	11,160	1,504	1,632	1,667	1,706	2,226	8,735
Zambia DHS 2007	1,240	1,283	1,280	1,567	1,776	7,146	1,114	869	1,097	1,381	1,534	5,995
Zimbabwe DHS 2010-11	1,546	1,594	1,681	2,073	2,278	9,171	1,074	1,216	1,371	1,664	1,786	7,110

Notes: See tables 3.10 and 3.11.

Table A.6 Denominators for tables 3.12 and 3.13: Number of women and men by marital status

	Women				Men			
	Marital Status				Marital Status			
	Never married	Currently married	Formerly married	Total	Never married	Currently married	Formerly married	Total
Benin DHS 2006	3,556	13,403	835	17,794	1,791	2,727	97	4,615
Burkina Faso DHS 2010	2,991	13,563	531	17,087	2,497	3,867	136	6,500
Burundi DHS 2010	3,121	5,421	847	9,389	1,652	2,057	51	3,760
Cameroon DHS 2011	2,109	4,692	655	7,457	3,227	2,958	270	6,455
Chad DHS 2004	873	4,663	549	6,085	649	977	55	1,682
Congo (Brazzaville) AIS 2009	1,788	3,892	870	6,550	2,360	3,008	495	5,863
Cote d'Ivoire AIS 2005	1,674	3,057	452	5,183	2,236	2,000	267	4,503
D.R. Congo DHS 2007	2,432	6,622	941	9,995	1,816	2,279	221	4,316
Ethiopia DHS 2011	4,469	10,287	1,758	16,515	5,600	6,872	363	12,834
Ghana DHS 2008	1,593	2,876	446	4,916	1,936	1,950	172	4,058
Guinea DHS 2005	1,311	6,292	351	7,954	1,161	1,419	129	2,709
Kenya DHS 2008-09	2,634	4,928	881	8,444	1,524	1,592	142	3,258
Lesotho DHS 2009	2,618	4,049	957	7,624	1,691	1,169	148	3,008
Liberia DHS 2007	1,853	4,540	699	7,092	2,274	3,413	319	6,009
Madagascar DHS 2008-09	1,566	5,899	1,081	8,547	2,315	4,906	423	7,645
Mali DHS 2006	1,726	12,365	491	14,583	1,312	2,236	156	3,704
Mozambique AIS 2009	682	4,157	834	5,674	1,255	2,710	203	4,168
Namibia DHS 2006-07	5,673	3,451	678	9,801	2,545	1,205	163	3,914
Niger DHS 2006	916	7,941	366	9,223	1,109	1,923	69	3,101
Nigeria DHS 2008	8,397	23,578	1,409	33,385	6,548	7,018	238	13,808
Rwanda DHS 2010	5,285	6,897	1,489	13,671	2,873	2,699	115	5,687
Senegal DHS 2010-11	4,585	10,347	757	15,688	2,738	1,609	71	4,417
Sierra Leone DHS 2008	1,399	5,525	450	7,374	1,085	1,767	92	2,944
Swaziland DHS 2006-07	2,487	2,062	438	4,987	2,734	1,219	203	4,156
Tanzania DHS 2010	2,540	6,412	1,188	10,139	1,046	1,317	164	2,527
Uganda AIS 2011	2,641	7,097	1,422	11,160	3,227	4,994	514	8,735
Zambia DHS 2007	1,856	4,402	888	7,146	2,553	3,168	274	5,995
Zimbabwe DHS 2010-11	2,197	5,703	1,271	9,171	3,221	3,584	304	7,110

Notes: See tables 3.12 and 3.13.

Table A.7 Denominators for tables 3.14 and 3.15: Number of women and men by sexual activity

	Women			Men		
	Never had sex	Ever had sex	Total*	Never had sex	Ever had sex	Total*
Benin DHS 2006	1,786	15,993	17,794	744	3,863	4,615
Burkina Faso DHS 2010	2,122	14,952	17,087	1,460	5,038	6,500
Burundi DHS 2010	2,742	6,643	9,389	1,230	2,526	3,760
Cameroon DHS 2011	1,018	6,434	7,457	1,243	5,193	6,455
Chad DHS 2004	801	5,283	6,085	358	1,323	1,682
Congo (Brazzaville) AIS 2009	405	6,113	6,550	478	5,358	5,863
Cote d'Ivoire AIS 2005	476	4,696	5,183	552	3,944	4,503
D.R. Congo DHS 2007	1,195	8,791	9,995	601	3,706	4,316
Ethiopia DHS 2011	4,169	12,328	16,515	4,598	8,225	12,834
Ghana DHS 2008	774	4,140	4,916	953	3,101	4,058
Guinea DHS 2005	741	7,194	7,954	394	2,309	2,709
Kenya DHS 2008-09	1,410	7,028	8,444	529	2,729	3,258
Lesotho DHS 2009	1,123	6,501	7,624	409	2,598	3,008
Liberia DHS 2007	365	6,686	7,092	671	5,323	6,009
Madagascar DHS 2008-09	1,005	7,537	8,547	1,147	6,493	7,645
Malawi DHS 2010	3,123	19,875	23,020	999	5,810	6,818
Mali DHS 2006	1,549	13,006	14,583	954	2,740	3,704
Mozambique AIS 2009	254	5,399	5,674	353	3,813	4,168
Namibia DHS 2006-07	1,590	8,147	9,804	533	3,355	3,915
Niger DHS 2006	881	8,314	9,223	818	2,267	3,101
Nigeria DHS 2008	4,686	28,572	33,385	3,370	10,393	13,808
Rwanda DHS 2010	4,097	9,568	13,671	1,734	3,950	5,687
Senegal DHS 2010-11	4,087	11,601	15,688	1,679	2,739	4,417
Sierra Leone DHS 2008	475	6,857	7,374	383	2,548	2,944
Swaziland DHS 2006-07	880	4,102	4,987	1,276	2,876	4,156
Tanzania DHS 2010	1,403	8,736	10,139	483	2,044	2,527
Uganda AIS 2011	1,440	9,720	11,160	1,563	7,171	8,735
Zambia DHS 2007	952	6,188	7,146	969	5,021	5,995
Zimbabwe DHS 2010-11	1,661	7,510	9,171	1,794	5,316	7,110

*Total includes missings

Notes: See tables 3.14 and 3.15.

Table A.8 DHS/AIS serotesting¹ response rate

	Women eligible for serotesting	% Women Tested	Men eligible for serotesting	% Men Tested	Men upper age limit
Benin DHS 2006	6,359	82.6	5,826	75.0	64
Burkina Faso DHS 2010	8,670	96.3	7,506	93.7	59
Burundi DHS 2010	4,911	91.8	4,592	88.8	59
Cameroon DHS 2011	7,739	93.7	7,526	92.3	59
Congo (Brazzaville) AIS 2009	6,550	96.9	5,863	98.2	49
Cote d'Ivoire AIS 2005	5,772	79.1	5,148	76.3	49
D.R. Congo DHS 2007	5,127	90.3	4,985	86.3	59
Ethiopia DHS 2011	17,385	89.3	15,908	81.8	59
Ghana DHS 2003	5,949	89.3	5,345	80.0	59
Guinea DHS 2005	4,189	92.5	3,360	88.2	59
Kenya DHS 2008-09	4,418	86.3	39,140	79.2	54
Lesotho DHS 2009	4,112	93.6	3,493	88.0	59
Liberia DHS 2007	7,448	87.0	6,476	80.4	49
Malawi DHS 2010	8,174	90.5	7,783	83.7	54
Mali DHS 2006	5,157	92.0	4,643	83.7	59
Mozambique AIS 2009	5,647	92.3	4,159	91.7	49
Niger DHS 2006	4,889	90.7	3,839	84.2	59
Rwanda DHS 2010	7,032	98.9	6,414	98.2	59
Senegal DHS 2010-11	6,678	83.7	5,669	76.3	59
Sierra Leone DHS 2008	3,954	87.7	3,541	85.0	59
Swaziland DHS 2006-07	5,301	87.2	4,675	77.6	49
Tanzania AIS/MIS 2007-08	9,735	89.5	7,935	79.8	49
Uganda AIS 2011	11,353	96.8	9,983	94.2	59
Zambia DHS 2007	7,408	77.1	7,146	72.2	59
Zimbabwe DHS 2010-11	9,831	79.9	8,723	69.3	54

Note: includes women age 15-49 and men age 15 to upper limit.

¹ The respondent was eligible for serotesting, present on the day of interview, consented to HIV serostatus testing, and a test was performed during their DHS/AIS interview.

Table A.9 Women and men who have ever been tested for HIV by serostatus and place of residence

	Women (%)			Men (%)			Women (n)			Men (n)		
	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹
Cameroon DHS 2011												
Urban	77.6	61.6	62.6	75.5	49	49.8	248	3,628	3,877	106	3415	3521
Rural	56.3	36.9	37.8	47.5	26	26.6	155	3,189	3,344	75	2684	2760
Congo (Brazzaville) AIS 2009												
Urban	43.1	27.0	27.7	21.1	27.9	21.3	186	3,846	4,032	70	3,535	3,605
Rural	17.0	14.3	14.4	11.2	11.0	11.2	80	2,326	2,406	47	2,019	2,066
Cote d'Ivoire AIS 2005												
Urban	19.8	13.5	13.9	(37.7)	10.5	11.4	156	1,961	2,118	61	1828	1892
Rural	6.0	6.8	6.7	7.5	4.6	4.7	126	2,162	2,295	53	2073	2130
Kenya DHS 2008-09												
Urban	80.8	75.0	75.6	(58.9)	54.8	54.9	90	772	862	29	769	798
Rural	70.2	50.9	52.3	58.5	34.6	35.6	201	2,579	2,779	101	2,167	2,268
Lesotho DHS 2009												
Urban	74.0	61.9	65.6	57.0	43.8	46.6	383	852	1,235	173	634	806
Rural	68.9	62.9	64.4	49.2	31.3	34.3	627	1,916	2,543	341	1,709	2,050
Malawi DHS 2010												
Urban	83.9	73.7	76.0	68.0	54.3	55.9	316	1,073	1,389	167	1,217	1,383
Rural	79.4	69.9	70.9	60.9	50.0	50.7	597	5,104	5,702	362	4,750	5,114
Mozambique AIS 2009												
Urban	55.9	47.5	49.0	36.2	25.7	27.0	307	1,356	1,663	176	1,193	1,369
Rural	33.0	24.4	25.3	24.0	10.3	11.3	380	3,186	3,566	177	2,286	2,463
Rwanda DHS 2010												
Urban	93.0	76.8	78.2	87.7	72.2	73.1	91	959	1,049	50	888	938
Rural	90.4	74.0	74.4	86.7	68.2	68.5	166	5,702	5,867	76	4,676	4,752
Swaziland DHS 2006-07												
Urban	45.9	40.3	42.4	29.2	21.4	23.4	431	740	1,171	274	797	1,070
Rural	43.2	29.2	33.2	28.6	10.2	13.4	947	2,306	3,252	468	2,225	2,693
Tanzania AIS/MIS 2007-08												
Urban	48.2	51.8	51.4	36.2	35.3	35.3	218	1,847	2,065	103	1,503	1,605
Rural	39.9	31.2	31.7	28.1	23.5	23.7	323	5,791	6,114	211	5,049	5,260
Uganda AIS 2011												
Urban	80.2	75.6	76.1	65.7	57.7	58.2	245	2054	2299	104	1605	1710
Rural	75.2	62.0	63.1	55.2	40.7	41.6	662	7922	8584	424	6539	6963
Zambia DHS 2007												
Urban	49.3	46.3	47.1	30.4	22.2	23.5	535	1,780	2,317	342	1,805	2,148
Rural	39.3	26.2	27.7	25.7	16.5	17.4	349	2,834	3,185	264	2,531	2,795
Zimbabwe DHS 2010-11												
Urban	75.7	56.4	60.2	57.5	40.0	42.3	451	1,846	2,297	244	1,622	1,866
Rural	68.4	55.7	57.9	48.5	31.7	33.7	844	4,171	5,015	525	3,859	4,384

Note: among countries with >3% adult HIV prevalence. Figures in parentheses are based on 25-49 unweighted cases.

¹ Total includes those with indeterminate results.

Table A.10 Women and men who have ever been tested for HIV by serostatus and 5-year age group

	Women (%)			Men (%)			Women (n)			Men (n)		
	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹
Cameroon DHS 2011												
15-19	(57.4)	27.7	28.3	*	12.6	12.6	34	1614	1647	6	1545	1551
20-24	68.8	58.9	59.3	*	38.1	37.8	50	1420	1470	8	1195	1203
25-29	64.0	63.5	63.5	(85.2)	52.6	53.6	95	1155	1250	32	1014	1045
30-34	82.9	61.3	62.9	(65.4)	55.0	55.6	66	838	903	43	763	807
35-39	72.2	55.4	57.1	(64.2)	52.6	53.2	81	727	808	40	645	685
40-44	70.5	46.3	48.1	(76.9)	44.6	46.1	43	567	612	26	521	547
45-49	(63.7)	43.0	44.3	(52.9)	47.2	47.6	34	497	531	28	417	445
Congo (Brazzaville) AIS 2009												
15-19	*	10.4	10.2	*	0.0	3.8	24	1,251	1,275	1,087	9	1,096
20-24	(33.4)	25.0	25.2	*	34.8	12.6	37	1,231	1,268	899	6	905
25-29	(49.2)	28.8	29.8	*	28.8	20.5	64	1,169	1,233	924	16	940
30-34	(55.5)	28.1	29.6	*	30.9	23.7	50	851	901	953	18	971
35-39	(18.8)	26.5	26.3	*	12.7	24.7	34	698	733	757	16	773
40-44	(38.4)	18.1	19.2	(24.6)	23.4	24.5	30	518	549	563	34	597
45-49	*	17.1	17.1	*	14.0	21.3	27	452	480	371	18	389
Cote d'Ivoire AIS 2005												
15-19	*	3.4	3.4	*	2.8	2.8	4	1058	1065	2	804	807
20-24	(15.4)	11.3	11.5	*	4.7	4.6	44	933	979	3	893	899
25-29	18.7	15.4	15.6	*	10.9	11.3	59	723	785	23	726	749
30-34	8.7	12.7	12.1	*	8.9	11.5	84	476	560	29	490	519
35-39	(23.0)	12.6	13.4	*	15.7	15.3	35	384	420	22	417	440
40-44	(1.1)	12.2	11.2	*	7.2	7.6	29	307	336	22	291	313
45-49	(18.0)	4.5	5.9	*	5.6	5.5	28	241	269	14	282	296
Kenya DHS 2008-09												
15-19	(58.2)	27.1	27.9	*	22.1	22.3	21	729	750	6	763	769
20-24	82.3	68.7	69.6	*	42.0	42.0	47	682	729	9	577	585
25-29	89.0	75.0	76.5	*	55.5	56.3	67	576	643	29	421	450
30-34	74.1	73.1	73.2	(61.8)	48.1	49.0	56	450	506	30	413	444
35-39	(61.1)	61.5	61.5	(51.4)	51.8	51.8	32	332	364	30	257	287
40-44	(70.4)	50.0	52.9	*	43.4	44.1	49	295	344	17	276	292
45-49	(41.8)	39.2	39.3	*	32.4	34.0	20	286	306	10	230	240
Lesotho DHS 2009												
15-19	(48.4)	39.9	40.3	*	18.9	18.9	37	845	882	23	790	813
20-24	74.7	75.8	75.5	(44.6)	35.6	36.2	191	601	792	35	563	598
25-29	75.2	80.6	78.7	42.7	46.1	45.5	206	376	582	82	362	444
30-34	65.6	74.7	71.0	59.4	37.9	46.5	197	287	485	150	223	372
35-39	76.9	74.6	75.6	43.0	52.2	48.9	170	232	401	96	175	271
40-44	64.2	61.2	62.3	69.5	56.9	61.8	118	208	326	70	108	178
45-49	70.4	56.1	60.3	55.7	48.0	50.5	92	219	311	58	122	180
Malawi DHS 2010												
15-19	56.2	41.4	42.0	*	31.1	31.1	64	1,481	1,545	22	1,681	1,703
20-24	79.0	84.7	84.3	(57.0)	58.9	58.9	89	1,311	1,401	33	1,143	1,176
25-29	87.2	86.4	86.5	58.7	66.2	65.6	190	1,217	1,407	72	967	1,040
30-34	82.3	81.5	81.7	60.0	58.7	58.9	194	741	937	95	791	885
35-39	86.9	78.1	80.2	69.9	54.8	57.5	192	614	806	137	619	756
40-44	77.4	73.8	74.5	68.5	51.4	55.0	109	424	533	105	402	507
45-49	75.1	48.2	52.5	64.4	51.4	53.3	74	388	462	64	365	429
Mozambique AIS 2009												
15-19	46.7	25.4	27.0	(21.7)	8.8	9.2	63	816	879	23	820	843
20-24	37.9	44.3	43.4	(36.2)	23.1	23.8	152	900	1,052	32	600	632
25-29	43.9	40.2	40.8	22.4	21.6	21.7	150	743	894	71	539	610
30-34	58.6	31.8	35.9	33.3	20.1	21.9	127	702	829	77	494	571
35-39	38.6	24.0	25.9	34.8	10.3	13.8	90	584	674	71	427	497
40-44	27.9	22.7	23.4	(27.9)	11.5	13.5	56	374	430	42	296	339
45-49	38.3	16.3	18.5	(31)	12.4	14.4	48	424	472	37	303	340
Rwanda DHS 2010												
15-19	*	42.5	42.9	*	37.0	37.1	12	1,520	1,532	4	1,446	1,450
20-24	(93.2)	75.5	75.9	*	64.4	64.4	33	1,339	1,372	5	1,153	1,158
25-29	(90.2)	90.2	90.2	*	86.5	86.4	50	1,220	1,270	18	1,019	1,037
30-34	(93.5)	91.8	91.8	(92.7)	89.3	89.5	37	843	881	25	685	710
35-39	94.6	89.6	90.0	*	86.5	86.8	57	658	715	19	474	493
40-44	(87.7)	82.4	82.7	(94.5)	84.5	85.3	37	575	612	32	397	430
45-49	(86.7)	71.2	72.1	(78.3)	80.6	80.5	31	503	534	23	390	413
Swaziland DHS 2006-07												
15-19	22.7	14.8	15.6	*	2.8	2.7	116	1,036	1,152	24	1,247	1,271
20-24	45.2	41.3	42.8	19.3	11.0	12.1	354	568	922	96	684	780
25-29	48.4	47.0	47.7	26.7	24.6	25.2	319	329	648	153	399	553
30-34	46.8	45.2	45.9	27.8	29.3	28.7	243	294	536	166	214	380
35-39	47.4	43.9	45.2	36.9	26.8	31.3	167	275	441	144	177	321
40-44	42.4	34.1	36.4	35.3	27.4	30.6	106	276	382	94	137	230
45-49	38.4	30.0	31.8	34.1	26.0	28.3	73	269	342	64	165	229

Continued...

Table A.10—Continued

	Women (%)			Men (%)			Women (n)			Men (n)		
	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹
Tanzania AIS/MIS 2007-08												
15-19	*	21.6	21.5	*	12.8	12.7	23	1,733	1,756	13	1,803	1,815
20-24	47.5	45.6	45.7	*	28.0	28.0	96	1,434	1,530	19	1,106	1,125
25-29	52.9	49.3	49.6	(30.9)	34.4	34.2	112	1,311	1,423	49	921	970
30-34	43.2	41.1	41.3	(20.4)	34.9	33.8	121	1,043	1,164	71	884	955
35-39	41.7	38.0	38.4	34.0	32.8	32.9	95	912	1,007	85	721	806
40-44	(48.2)	30.9	32.2	(37.3)	27.3	28.0	51	617	668	41	573	615
45-49	(23.3)	21.2	21.4	*	28.8	29.9	43	587	630	35	545	580
Uganda AIS 2011												
15-19	55.1	40.3	40.7	(38.3)	20.2	20.5	71	2323	2393	35	2020	2055
20-24	76.8	77.5	77.4	(54.7)	45.4	45.7	149	1962	2111	39	1356	1396
25-29	81.8	80.7	80.8	54.7	58.1	58.0	185	1711	1897	54	1295	1350
30-34	77.4	72.5	73.1	59.1	56.1	56.4	158	1276	1434	104	1040	1144
35-39	80.1	69.3	70.6	59.0	53.0	53.7	161	1165	1326	124	999	1123
40-44	77.2	63.6	65.1	51.3	51.5	51.5	99	823	921	99	784	883
45-49	73.2	52.4	54.6	72.5	44.9	47.7	84	717	801	74	649	723
Zambia DHS 2007												
15-19	34.9	21.5	22.3	(9.1)	9.3	9.3	69	1,133	1,202	42	1,120	1,162
20-24	53.5	40.0	41.6	(31.7)	21.1	21.7	120	901	1,023	45	821	865
25-29	46.5	42.6	43.4	32.9	24.5	25.5	211	847	1,058	91	705	796
30-34	44.2	39.4	40.6	28.8	23.6	24.5	213	606	819	135	653	788
35-39	43.4	36.5	38.2	31.1	20.0	22.5	146	440	586	136	472	608
40-44	47.3	34.8	37.3	26.2	18.7	20.5	81	362	445	99	311	410
45-49	43.1	23.6	25.9	28.5	23.3	24.3	45	324	369	58	255	313
Zimbabwe DHS 2010-11												
15-19	47.0	25.2	26.2	15.6	10.4	10.5	66	1,487	1,553	53	1,516	1,569
20-24	72.6	67.3	67.9	(42.0)	34.1	34.4	155	1,309	1,463	46	1,158	1,204
25-29	76.6	76.3	76.4	43.9	47.8	47.4	272	1,082	1,354	112	970	1,082
30-34	73.8	69.4	70.7	44.8	48.9	48.2	293	717	1,010	146	697	844
35-39	70.4	62.7	65.0	59.0	43.3	47.2	246	598	843	179	533	712
40-44	68.3	54.4	57.9	59.7	48.0	51.0	151	438	589	132	374	506
45-49	66.7	44.6	49.6	68.0	45.3	52.1	113	388	501	100	233	333

Note: among countries with >3% adult HIV prevalence. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

¹ Total includes those with indeterminate results.

Table A.11 Women and men who have ever been tested for HIV by serostatus and education

	Women (%)			Men (%)			Women (n)			Men (n)		
	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹
Cameroon DHS 2011												
no education	(36.0)	18.5	19.0	*	7.3	7.8	42	1456	1498	9	500	508
primary	63.7	50.8	51.7	56.4	27.3	28.2	159	2231	2392	62	1953	2015
secondary +	81.0	64.1	65.1	70.3	49.4	50.0	201	3130	3331	111	3648	3759
Congo (Brazzaville) AIS 2009												
no education	*	11.5	11.3	*	0.0	8.7	13	356	369	105	1	106
primary	(30.4)	13.0	13.7	(7.7)	23.0	8.0	62	1,727	1,790	1,040	18	1,058
secondary +	38.9	27.0	27.5	20.0	21.0	20.1	190	4,089	4,279	4,410	98	4,507
Cote d'Ivoire AIS 2005												
no education	4.0	6.1	6.0	(4.6)	3.6	3.6	123	2228	2351	38	1254	1294
primary	15.7	12.6	12.8	*	5.8	6.0	102	1133	1239	17	1032	1050
secondary +	(30.5)	17.3	18.2	(38.1)	11.4	12.3	58	763	823	60	1615	1680
Kenya DHS 2008												
no education	*	42.0	42.2	*	14.1	18.5	19	300	319	5	93	98
primary	73.5	54.4	56.1	52.2	30.4	31.4	186	1,888	2,073	78	1,523	1,602
secondary +	(79.7)	63.5	64.6	(65.1)	52.6	53.0	86	1,163	1,249	47	1,320	1,366
Lesotho DHS 2009												
no education	72.9	56.7	60.0	40.8	32.4	34.7	9	35	44	89	234	322
primary	68.1	61.1	63.2	47.8	28.5	31.9	539	1,249	1,788	242	1,155	1,397
secondary +	73.9	64.0	66.4	62.3	42.8	45.9	462	1,484	1,946	183	954	1,137
Malawi DHS 2010												
no education	(76.6)	67.9	69.1	(58.7)	31.6	34.4	154	942	1,096	43	352	397
primary	78.7	69.4	70.5	59.9	44.9	46.0	530	4,038	4,569	311	3,741	4,052
secondary +	89.2	76.6	78.6	69.9	66.4	66.7	229	1,197	1,426	174	1,875	2,049
Mozambique AIS 2009												
no education	(34.2)	22.8	23.9	(3.4)	5.6	5.5	150	1,380	1,530	28	360	388
primary	40.6	30.1	31.6	25.5	10.1	11.5	436	2,589	3,025	223	2,212	2,435
secondary +	67.3	57.4	58.9	47.3	33.0	34.4	101	574	675	102	907	1,009
Rwanda DHS 2010												
no education	*	76.9	77.4	*	74.0	74.3	44	1,011	1,055	17	566	583
primary	90.9	73.0	73.6	91.0	66.5	67.1	160	4,582	4,742	82	3,840	3,922
secondary +	*	77.8	78.6	(76.9)	74.0	74.1	52	1,067	1,119	27	1,158	1,185
Swaziland DHS 2006-07												
no education	37.4	23.6	29.0	28.4	13.0	17.8	142	220	362	88	196	284
primary	40.0	27.9	32.0	23.6	7.0	10.0	500	979	1,480	242	1,096	1,338
secondary +	48.0	35.0	38.7	32.0	17.1	20.0	735	1,847	2,582	411	1,730	2,141
Tanzania AIS/MIS 2007-08												
no education	(22.6)	25.0	24.8	(20.4)	16.0	16.2	104	1,623	1,728	44	757	801
primary	47.1	38.0	38.6	29.9	24.5	24.7	399	5,282	5,681	235	4,816	5,051
secondary +	*	48.6	49.1	*	42.4	42.6	38	733	771	34	979	1,014
Uganda AIS 2011												
no education	68.3	58.1	59.0	(28.0)	33.1	32.7	144	1377	1521	40	436	476
primary	75.9	63.1	64.2	54.1	37.0	38.2	577	5880	6457	329	4603	4933
secondary +	85.0	72.1	72.9	71.5	55.9	56.7	186	2719	2905	159	3105	3265
Zambia DHS 2007												
no education	*	25.2	25.3	*	13.7	14.0	60	489	549	16	194	210
primary	43.1	30.0	32.2	24.9	12.6	13.9	463	2,471	2,937	246	2,001	2,247
secondary +	51.4	42.4	44.0	31.3	25.2	26.0	362	1,654	2,016	343	2,142	2,485
Zimbabwe DHS 2010-11												
no education	*	45.0	47.0	*	14.6	14.5	26	142	168	8	42	50
primary	59.2	52.0	53.5	36.7	22.7	24.6	434	1,722	2,156	190	1,212	1,402
secondary +	77.5	57.9	61.2	56.8	37.7	39.9	835	4,153	4,989	570	4,227	4,798

Note: among countries with >3% adult HIV prevalence. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

¹Total includes those with indeterminate results.

Table A.12 Women and men who have ever been tested for HIV by serostatus and wealth quintile

	Women (%)			Men (%)			Women (n)			Men (n)		
	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹
Cameroon DHS 2011												
poorest	(22.4)	15.3	15.5	*	10.1	10.3	30	1150	1180	12	939	951
poorer	59.5	40.3	41.3	(47.7)	26.3	27.1	63	1223	1285	35	972	1007
middle	63.1	51	51.7	(58.6)	37.2	37.8	83	1322	1404	30	1119	1150
richer	79.3	64.8	65.8	(71.8)	46.6	47.4	112	1501	1612	44	1390	1434
richest	82.2	67.4	68.5	(77.3)	57	57.7	115	1623	1739	61	1679	1740
Congo (Brazzaville) AIS 2009												
poorest	17.8	11.1	11.3	(8.4)	8.8	8.4	38	1,314	1,351	1,062	28	1,089
poorer	33.4	16.7	17.5	(13.9)	20.7	14.1	65	1,228	1,293	1,084	24	1,108
middle	(23.0)	22.7	22.7	(17.7)	13.8	17.6	43	1,238	1,281	1,133	27	1,161
richer	(37.2)	27.2	27.6	*	43.6	20.2	52	1,196	1,248	1,177	23	1,200
richest	(52.5)	34.6	35.6	*	22.8	27.2	69	1,196	1,265	1,099	14	1,113
Cote d'Ivoire AIS 2005												
poorest	(10.5)	2.1	2.4	*	2.1	2.0	28	731	760	12	664	676
poorer	0.0	2.6	2.5	(1.7)	3.2	3.1	32	784	819	26	745	772
middle	13.1	11.2	11.3	*	5.5	7.0	54	772	826	35	770	808
richer	6.1	16.1	15.2	*	10.1	9.9	73	838	914	17	792	809
richest	25.0	15.4	16.2	*	13.9	14.8	96	998	1095	25	931	958
Kenya DHS 2008-09												
poorest	(72.1)	45.1	46.7	*	20.1	20.7	40	618	658	10	410	420
poorer	72.1	46.2	48.5	(34.5)	35.4	35.3	55	565	619	25	525	549
middle	(74.3)	52.4	53.9	*	34.8	36.2	41	585	626	24	511	535
richer	67.5	55.7	56.5	(67.6)	40.1	41.6	61	755	815	40	670	710
richest	78.4	75.5	75.8	(64.1)	55.6	55.9	94	828	922	33	820	852
Lesotho DHS 2009												
poorest	59.1	57.2	57.6	43.9	29.1	31.5	113	442	554	70	359	429
poorer	70.0	62.6	64.5	45.6	30.5	33.1	163	463	626	97	454	551
middle	72.0	65.9	67.5	52.7	28.8	33.0	185	494	679	111	519	631
richer	75.6	64.2	67.8	54.8	37.5	40.7	299	644	943	108	490	598
richest	70.1	62.3	64.3	57.3	45.5	47.8	251	725	975	128	520	648
Malawi DHS 2010												
poorest	77.5	69.4	70.1	57.6	44.9	45.6	107	1,095	1,202	52	878	932
poorer	77.6	68.0	68.9	60.4	46.8	47.7	129	1,262	1,392	82	1,173	1,255
middle	74.9	70.9	71.3	56.3	48.7	49.3	148	1,244	1,393	104	1,195	1,298
richer	79.3	72.8	73.7	66.5	55.5	56.4	188	1,181	1,369	107	1,201	1,308
richest	86.8	71.6	74.6	67.7	55.5	56.8	341	1,394	1,735	184	1,520	1,704
Mozambique AIS 2009												
poorest	(10.5)	14.8	14.5	(10.4)	4.9	5.2	66	924	989	32	614	646
poorer	30.3	19.7	20.6	(27.5)	7.8	9.0	86	910	997	43	690	734
middle	32.0	30.1	30.3	16.3	10.7	11.1	102	920	1,021	56	710	766
richer	45.6	37.8	39.2	21.7	17.9	18.4	195	869	1,065	92	641	733
richest	59.7	54.5	55.6	47.7	32.4	34.5	238	919	1,157	129	825	954
Rwanda DHS 2010												
poorest	(90.1)	73.3	73.9	*	65.0	65.2	41	1,211	1,252	17	839	855
poorer	(92.7)	71.8	72.5	*	66.1	66.6	43	1,349	1,392	18	968	986
middle	(89.8)	73.2	73.6	*	69.3	69.5	35	1,338	1,374	17	1,123	1,140
richer	(93.5)	76.5	76.9	(91.2)	69.0	69.5	34	1,350	1,384	27	1,209	1,236
richest	91.0	76.8	77.7	88.0	72.5	73.0	103	1,413	1,515	48	1,424	1,472
Swaziland DHS 2006-07												
poorest	36.3	28.9	31.2	18.3	4.6	7.3	225	486	711	111	450	561
poorer	45.0	28.7	33.9	32.1	8.5	13.2	248	526	774	121	486	607
middle	43.7	29.4	33.9	28.3	9.5	12.7	275	599	873	133	652	785
richer	47.3	29.5	35.2	30.3	13.1	16.7	315	676	991	181	671	851
richest	45.8	40.1	41.8	31.8	24.4	25.9	316	759	1,075	196	763	959
Tanzania AIS/MIS 2007-08												
poorest	39.6	25.7	26.4	(11.8)	16.1	15.9	76	1,426	1,501	47	1,121	1,168
poorer	32.3	26.4	26.8	(15.8)	21.7	21.5	97	1,358	1,455	50	1,385	1,435
middle	32.8	34.2	34.1	(14.4)	22.7	22.4	81	1,501	1,582	54	1,261	1,315
richer	44.5	39.9	40.2	(59.2)	30.3	31.6	98	1,543	1,641	62	1,301	1,363
richest	54.0	50.4	50.7	38.5	37.3	37.4	189	1,811	2,000	100	1,482	1,582
Uganda AIS 2011												
poorest	75.3	62.1	63.0	56.7	39.9	40.8	126	1716	1842	85	1410	1496
poorer	67.9	60.7	61.2	54.2	37.4	38.3	148	1831	1979	82	1544	1627
middle	73.2	58.5	59.6	52.4	39.6	40.4	148	1867	2014	108	1563	1672
richer	80.7	64.2	65.7	49.1	41.9	42.4	207	2034	2241	122	1565	1687
richest	80.4	74.8	75.4	71.5	56.8	57.7	278	2529	2807	130	2062	2193
Zambia DHS 2007												
poorest	39.2	22.4	23.9	27.0	12.6	13.6	83	856	939	62	854	916
poorer	33.5	24.3	25.3	18.9	14.4	14.8	95	891	987	68	646	714
middle	39.5	30.3	31.5	31.8	19.0	20.4	129	843	973	95	791	886
richer	46.3	43.9	44.5	27.0	20.5	21.7	273	919	1,193	204	925	1,129
richest	52.4	45.2	46.8	32.2	24.7	25.7	305	1,105	1,410	176	1,121	1,297

Continued...

Table A.12—Continued

	Women (%)			Men (%)			Women (n)			Men (n)		
	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹
Zimbabwe DHS 2010-11												
poorest	63.7	52.4	54.3	46.9	25.4	28.6	236	1,139	1,375	153	887	1,040
poorer	70.2	54.2	56.8	38.0	27.2	28.5	231	1,180	1,411	147	1,053	1,200
middle	70.9	57.9	60.5	46.5	32.1	33.8	290	1,167	1,457	155	1,141	1,296
richer	72.2	60.9	63.1	57.8	37.0	39.4	300	1,226	1,527	160	1,223	1,383
richest	77.4	54.1	57.7	66.8	46.0	48.4	239	1,305	1,544	154	1,177	1,331

Note: among countries with >3% adult HIV prevalence. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

¹ Total includes those with indeterminant results.

Table A.13 Women and men who have ever been tested for HIV by serostatus and marital status

	Women (%)			Men (%)			Women (n)			Men (n)		
	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹	HIV +	HIV -	All ¹
Cameroon DHS 2011												
never married	62.3	38.5	39.2	(57.7)	28.5	28.8	58	1984	2042	33	3116	3149
currently married	67.2	54.0	54.7	66.5	49.9	50.7	239	4297	4535	133	2732	2866
formerly married	78.4	60.5	63.5	*	47.2	47.6	106	537	644	15	252	268
Congo (Brazzaville) AIS 2009												
never married	19.2	15.9	16.1	(9.7)	17.3	9.8	74	1686	1759	26	2248	2274
currently married	37.4	23.7	24.2	23.2	20.8	23.1	125	3684	3810	77	2831	2908
formerly married	48.6	28.4	30	*	29.8	21.1	67	802	869	14	475	489
Cote d'Ivoire AIS 2005												
never married	19.8	5.1	5.7	*	5.7	6.0	67	1399	1472	26	2034	2065
currently married	9.3	12.3	12.1	17.6	8.9	9.2	156	2389	2546	62	1650	1713
formerly married	17.9	13.5	14.1	*	12.1	14.8	59	336	395	27	218	245
Kenya DHS 2008-09												
never married	(65.7)	36.6	37.7	*	32.3	32.7	42	1,091	1,133	22	1447	1469
currently married	76.8	66.9	67.6	60.4	48.2	48.9	143	1,990	2,134	87	1376	1463
formerly married	72.2	59.2	62.9	*	35.3	38.1	106	269	375	22	113	135
Lesotho DHS 2009												
never married	67.3	44.5	48.1	34.3	27.0	27.5	205	1,097	1,302	119	1509	1628
currently married	72.8	76.7	75.7	56.7	48.6	51.1	534	1,486	2,020	336	758	1094
formerly married	69.6	56.4	64.2	59.1	50.1	54.0	271	185	456	59	75	134
Malawi DHS 2010												
never married	58.6	36.0	36.9	(36.9)	40.6	40.5	59	1,327	1,386	54	2552	2605
currently married	83.0	80.4	80.7	65.5	58.5	59.3	557	4,218	4,775	425	3256	3682
formerly married	81.6	77.7	79.0	(70.4)	59.0	61.8	298	632	931	51	160	210
Mozambique AIS 2009												
never married	46.2	24.9	26.7	33.3	14.8	15.6	53	569	622	53	1110	1163
currently married	41.6	32.0	33.0	29.4	15.8	17.2	413	3,422	3,835	260	2223	2483
formerly married	45.5	33.9	37.2	(29.9)	19.1	21.4	221	552	773	39	147	186
Rwanda DHS 2010												
never married	85.7	51.0	51.6	*	49.1	49.2	48	2,687	2,735	17	2,857	2,874
currently married	96.2	92.2	92.3	90.6	90.1	90.1	124	3,329	3,453	98	2,603	2,701
formerly married	87.3	80.2	81.0	*	79.9	81.0	85	644	729	11	103	114
Swaziland DHS 2006-07												
never married	39.8	23.4	27.7	22.1	8.3	9.7	573	1,640	2,213	250	2271	2520
currently married	45.6	41.7	43.0	33.2	29.1	30.6	589	1,222	1,811	385	674	1059
formerly married	50.9	42.2	46.9	28.9	16.6	23.7	216	183	400	107	77	184
Tanzania AIS/MIS 2007-08												
never married	(30.9)	23.5	23.7	(9.2)	19.4	19.3	47	1,901	1,948	55	2882	2937
currently married	43.4	40.4	40.6	36.9	31.4	31.7	319	4,916	5,235	218	3382	3600
formerly married	46.3	40.4	41.4	*	32.7	32.1	175	821	996	40	289	328
Uganda AIS 2011												
never married	64.7	41.4	42.3	43.1	29.9	30.2	100	2476	2576	64	3130	3195
currently married	76.8	73.4	73.6	59.4	53.3	53.7	502	6422	6924	380	4584	4963
formerly married	79.9	67.8	70.5	58.8	48.5	50.2	306	1078	1384	85	430	515
Zambia DHS 2007												
never married	41.4	24.3	25.8	19.4	16.5	16.7	129	1,292	1,421	94	2013	2107
currently married	45.8	37.9	39.1	31.5	20.8	22.5	496	2,878	3,375	420	2187	2607
formerly married	46.5	36.2	40.2	23.1	22.1	22.5	260	445	706	91	137	228
Zimbabwe DHS 2010-11												
never married	54.9	24.0	26.3	29.7	20.8	21.1	129	1,565	1,694	114	2732	2845
currently married	71.2	67.4	68.0	55.7	47.6	49.0	737	3,832	4,569	554	2578	3131
formerly married	75.5	65.6	69.6	52.2	45.8	48.2	429	620	1,049	102	172	273

Note: among countries with >3% adult HIV prevalence. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

¹ Total includes those with indeterminate results.

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