



Adolescent Women's Need for and Use of Sexual and Reproductive Health Services in Developing Countries

Vanessa Woog, Susheela Singh, Alyssa Browne and Jesse Philbin

HIGHLIGHTS

- This report draws on national survey data from 70 developing countries to provide an overview of adolescent women's needs for and use of sexual and reproductive health services.
- The proportion of recent births to mothers younger than age 20 that are unplanned is particularly high—more than half—in most Latin American and Caribbean countries. In a third of countries in Africa, more than 40% of such births are unplanned. Levels are lower in Asian countries, typically within the range of 10–20%.
- Adolescent women who have an unmet need for contraception report that their main reasons for nonuse of a contraceptive method are infrequent sex and not being married. A number of other factors, such as lack of access, health concerns and worry about side effects, are also important.
- A minority of sexually active adolescent women who have an STI or STI symptoms seek care in a health facility. Adolescent women in Africa and Asia are more likely than those in Latin America and the Caribbean to either receive no treatment at all or to obtain care from a source other than a health facility.
- Compared with older women, adolescents are more likely to seek abortions from untrained providers or to have a self-induced abortion. They also tend to take longer to recognize their pregnancies and consequently have abortions at later gestations, and they know less about their rights concerning abortion and postabortion care.
- While the proportion of women giving birth before age 20 who receive some antenatal care from a skilled provider is generally high (more than 75%) across all three regions, far smaller proportions received antenatal care early in their pregnancy or made the recommended minimum of four antenatal visits.
- Adolescents have a right to health, including sexual and reproductive health, and a right to receive accurate information and confidential services—but they currently experience many barriers and utilization of essential services falls far short of need.



August 2015

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ACKNOWLEDGMENTS

This report was written by Vanessa Woog, Susheela Singh, Alyssa Browne and Jesse Philbin, all of the Guttmacher Institute. It was edited by Haley Ball. The authors thank the following Guttmacher Institute colleagues: Heather Boonstra, Sophia Chae, Sarah Keogh and Cynthia Summers for their review and comments; and Suzette Audam, Liz Carlin, Vivian Gor and Fatima Juarez for research assistance. In addition, the authors are grateful to the following people for reviewing the report: Ann Biddlecom, Population Division, United Nations Department of Economic and Social Affairs; Venkatraman Chandra-Mouli, World Health Organization; Jose Miguel Guzman, ICF International; Sarah Neal, University of Southampton; Laura Villas-Torres, doctoral student, Department of Health Behavior, University of North Carolina Gillings School of Global Public Health; and Sylvia Wong, United Nations Population Fund.

This report was funded by a grant from the Dutch Ministry of Foreign Affairs. The findings and conclusions are those of the authors and do not necessarily reflect the positions and policies of the donor.

The Guttmacher Institute gratefully acknowledges the general support it receives from individuals and foundations—including major grants from The William and Flora Hewlett Foundation and the David and Lucile Packard Foundation—which undergirds all of the Institute’s work.

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Suggested citation: Woog V et al., *Adolescent Women’s Need for and Use of Sexual and Reproductive Health Services in Developing Countries*, New York: Guttmacher Institute, 2015, www.guttmacher.org/pubs/Adolescent-SRHS-Need-Developing-Countries.pdf.

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Introduction

The sexual and reproductive health of adolescents is a pressing concern, especially because the world has a larger population of adolescents now than ever before.¹ Adolescence is a period of emerging sexual desires, behaviors and relationships. These are a normal part of development and, when supported by healthy decision-making and access to information and services, can form the basis of lifelong sexual health and overall well-being. However, due to a host of biological, social and economic factors, adolescents can be at high risk of adverse sexual and reproductive health outcomes, including unintended pregnancy, unsafe abortion, HIV and other STIs. Should they give birth, adolescents are also at elevated risk for poor health outcomes for themselves and their newborns, including at the extreme, death. Access to needed health services among adolescents is vital in helping prevent these outcomes and necessary for protecting the health of future generations. Adolescents have a widely recognized right to accurate and comprehensive reproductive health information, education and services.^{2,3} Yet too little is being done to help adolescents fulfill this right and obtain the sexual and reproductive health services they need.⁴

Objectives of This Report

This report focuses on providing a comprehensive overview of adolescent women's need for and use of sexual and reproductive health services. We focus on adolescent women because the evidence base on adolescent men is much more limited, an evidence gap that urgently needs addressing.

According to the World Health Organization (WHO) and United Nations (UN), adolescents are defined as those aged 10–19. However, for this report, we present data for 15–19-year-olds because national survey data on younger adolescents is lacking. Unless otherwise stated, we use the term adolescents to mean young people aged 15–19.

Although data on the use of sexual and reproductive health services among adolescent women aged 15–19 are relatively scarce, national surveys do provide some useful evidence on the topic. We draw on this underutilized evidence base, analyzing nationally representative surveys

in 70 countries in developing regions* to present data related to contraceptive use and services, pregnancy-related health care, care-seeking for STIs and testing for HIV. Although we present a few indicators on knowledge about sexual and reproductive health issues and recognize that adolescents need information about sexual and reproductive health in general and sex education specifically, our analyses focus on the need for and use of services.

Recent cross-national literature on the sexual and reproductive health needs of adolescents has provided a wealth of information. These studies have included trend data on selected sexual and reproductive health indicators in multiple countries;⁵ reviews of interventions providing sexual and reproductive health information or services to adolescents;^{6–10} and an assessment of the barriers adolescents face in obtaining contraceptive information and services.¹¹ Our report adds value to this evidence base by providing broad geographical coverage of the most recent national data on a range of key indicators related to sexual and reproductive health. As a result, we provide comprehensive information that can be used at the global, regional and national level to better understand the needs of adolescents and to highlight existing gaps in access to services. Furthermore, to reflect the diversity among adolescents, we present selected indicators by residence and wealth to identify groups most at risk for poor sexual and reproductive health outcomes. Although we recognize that adolescents' development, needs and level of vulnerability may vary by specific age, we do not present data disaggregated by age-groups.

We hope this report will provide solid evidence to support providers, educators, researchers, community leaders and policymakers as they work toward bringing about urgently needed changes to improve adolescent women's access to accurate information, education, and sexual and reproductive health services.

*We use UN Statistical Division definitions of developing regions and subregions and the countries they include. Most countries defined by the UN as developing are classified by the World Bank as low- or lower-middle-income, but 18 are classified as upper-middle-income.

Global Commitments

There is growing recognition of the benefits of investing in the sexual and reproductive health of adolescents and of the costs of failing to do so.^{4,12} Supporting adolescents to protect their sexual and reproductive health is critical to achieving broader development goals, including reducing poverty and improving educational attainment.

In 2015, world leaders will set new sustainable development goals, building on the global commitments outlined two decades ago in the International Conference on Population and Development Programme of Action and the Millennium Development Goals, including Target 5B, which focuses on achieving universal access to reproductive health. These commitments have been reinforced at Women Deliver and other international conferences,¹³ during special workshops and sessions (including the 2009 International Federation of Gynecology and Obstetrics/WHO Precongress workshop¹⁴ and the 2012 United Nations Commission on Population and Development¹⁵) dedicated to addressing the unique needs of young people, in setting research priorities on adolescent sexual and reproductive health^{16,17} and in guidelines to prevent poor reproductive outcomes.¹⁸ Despite progress toward advancing the reproductive health agenda to address the needs of adolescents, international commitments have yet to be fully realized.

At the national level, a number of countries have set forth comprehensive adolescent reproductive health policies and demonstrated a strong political commitment; however, in many countries these policies do not translate to programmatic changes. While these countries are making a step in the right direction, this is not the case for some countries, where political will and policies to improve adolescent sexual and reproductive health are lacking. As a result, adolescents and young people continue to face barriers in accessing sexual and reproductive health services.

Context

Approximately 13 million young women aged 15–19 give birth each year—accounting for 11% of all births worldwide—and 95% of births among women in this age-group occur in developing countries.¹ Early childbearing is associated with elevated health risks for both the adolescent and her child, and risks are highest among the youngest adolescents. Complications of pregnancy and childbirth are the second leading cause of death among adolescent women aged 15–19 globally.¹⁹ Recent evidence suggests that adolescent women are more likely than women in their early 20s to die during pregnancy or childbirth.^{20,21} Compared with women aged 20–24, adolescent women

are also more likely to experience maternal morbidities, such as eclampsia and systemic infections.²² Babies born to adolescents also face significantly higher risks of pre-term birth, low birth weight, malformations and asphyxia than babies born to older women.¹⁹

The costs of early childbearing are high not only in terms of maternal and infant mortality and morbidity, but also in terms of social and economic well-being. They can contribute to low levels of education and poor employment opportunities among women and continuing poverty among families.²³

Cultural and social factors contribute to early childbearing in developing countries. Most early childbearing occurs in the context of marriage. Adolescents may be under pressure or forced to marry and bear children early.

In low- and lower-middle-income countries across Latin America and the Caribbean, Africa and Asia, about one-third of married adolescent women who want to avoid pregnancy are using a modern contraceptive method; this leaves two-thirds at risk of having an unintended pregnancy, which may result in abortion.²⁴ In most developing countries, abortions are unsafe and legally restricted. Of the estimated 22 million unsafe abortions that occurred in 2008, 15% (about 3.2 million) were among adolescents.²⁵ Approximately one-third of all abortion-related deaths are among women younger than 25.²⁶

Not only are young women at risk of poor reproductive health outcomes related to childbearing and pregnancy, they are also vulnerable to STIs, including HIV. According to the most recent data available for this age-group, young men and women aged 15–24 represent almost 50% of all newly acquired STIs worldwide (no data are available disaggregated by gender or specific to adolescents).²⁷ Women younger than 25 are also at greater risk for acquiring an STI compared with either men or older women.^{27,28}

In low- and lower-middle-income countries, an estimated 2.1 million adolescent men and women aged 10–19 were living with HIV in 2012; of these, 1.2 million were 15–19-year-olds.^{29,30} Young women aged 15–24 face a higher risk of HIV infection than young men, particularly in Sub-Saharan Africa, where women's HIV prevalence is more than twice that of men in the same age-group.²⁹

Although globally there has been a reduction in the estimated number of new infections among young people aged 15–24, AIDS-related deaths among this group are increasing.³⁰ This increase likely reflects a lack of commitment to providing testing and treatment services specifically for young people.²⁹ There is little regional- or global-level data on treatment and need for treatment among adolescents living with HIV, and this represents a major gap in evidence.³⁰ Data are only available for two age-

groups: younger than 15 and 15–49. In 2012, only 34% of those younger than 15 who were diagnosed with HIV received treatment.³¹ Prior studies have shown that for adolescents who test positive for HIV, linkages to care and retention in care are poor.³²

An estimated 29% of adolescent women aged 15–19 have experienced intimate partner violence, which is the most common form of gender-based violence.³³ Violence against adolescent women is associated with increased risk of negative sexual and reproductive health outcomes.

Clearly, adolescent women are at risk of adverse reproductive health outcomes, and some adolescents are at higher risk than others. Risk varies according to socioeconomic status, age, schooling, marital status, residence and other characteristics. It is therefore critical to identify and target the groups that are most vulnerable to poor sexual and reproductive health outcomes.

Barriers to Obtaining Sexual and Reproductive Health Services

The fact that adolescent women in developing countries face structural, cultural and legal barriers to obtaining reproductive health information and services has been well-documented.^{11,34,35} These barriers operate at the individual, family and community levels. Understanding and addressing them is essential for enabling adolescent women to exercise their right to sexual and reproductive health information and services.

System and structural barriers. In many developing countries, providing universal access to sexual and reproductive health care is beyond the capacity of the country. In some cases, even if the health facilities exist, there is not enough trained staff to provide the needed services, and supplies of drugs and contraceptives are often lacking. Weak infrastructure for health, communications and transport can make access to services in rural areas particularly difficult—especially access to maternal health care, which often relies on referrals to higher-level facilities to prevent mortality.^{36–40}

Other important structural barriers that prevent young people from obtaining sexual and reproductive health services include inconvenient location and hours of operation of facilities, the cost of services and not knowing where services exist.^{34,41,42}

Social norms and legal restrictions. One of the greatest barriers adolescents face in obtaining sexual and reproductive health services is social stigma: Cultural norms around adolescent sexuality may discourage young people from seeking the services they need.³⁴ Adolescents often report

that they do not seek services due to fear of being stigmatized or punished for having been sexually active.^{43,44}

Sexually active unmarried women are at a particular disadvantage, facing barriers such as legal provisions or community norms that exclude them from receiving information, counseling and services.^{41,45} In many countries, young people under the age of majority require parental consent to obtain medical care, including HIV testing and counseling.⁴⁶ In some countries where sexual activity under the age of 16 is illegal, health care providers may not be allowed to maintain patient confidentiality when serving young adolescents.

Provider bias. Even where there are no legal restrictions to obtaining services, young people often face bias and negative attitudes from providers.^{34,44} In many places, health providers refuse to provide unmarried adolescents with contraceptive information and services because they do not approve of premarital sexual activity.^{11,35} Young people may be deterred from seeking the services they need if they feel they will be ill-treated or judged, or if they are concerned that their confidentiality and privacy will not be maintained.⁴⁴

Layout of the Report

With this report, we aim to provide an up-to-date and comprehensive overview of the use of sexual and reproductive health services by adolescent women aged 15–19 in the developing world. Using reliable nationally representative surveys in 70 countries, the report presents 30 indicators that cover a wide range of topics related to the sexual and reproductive health of adolescent women. Chapter 2 outlines the methods and data sources used for this report. Chapter 3 focuses on marriage, sexual activity and contraception. The emphasis in Chapter 4 is on condom use, access to testing for HIV and treatment of STIs. Chapter 5 provides information on childbearing and a synthesis of the literature on abortion among adolescents in the developing world. Chapter 6 presents key indicators on maternal and newborn health care. We conclude with a chapter on recommendations and future actions, based on the evidence presented.

Data Sources and Methods

The 70 countries covered in the report include 35 countries in Africa (representing 79% of the population of that region), 22 in Asia (representing 51% of the population) and 13 in Latin America and the Caribbean (representing 74% of the population). The main sources of data on these countries are national quantitative surveys, from which original tabulations were conducted. For 52 of the countries, we used data from Demographic Health Surveys (DHS), and for 16 countries, we drew on data from the highly comparable Multiple Indicator Cluster Survey (MICS). These quantitative data were supplemented by data from a review of published studies, which focused on adolescents' use of sexual and reproductive health services, including abortion services, a topic on which national surveys generally do not provide data.

Quantitative Data Sources

The DHS collects information on population and health, including sexual and reproductive health, in developing countries. The surveys are nationally representative and use large samples of men and women typically between the ages of 15 and 59, though age range varies slightly by country. For the most part, surveys are standardized, allowing for the comparison of findings across countries. The most recent survey for each country was analyzed for this report. For the majority of countries, these were phase VI surveys (fielded in 2008–2013). For a few countries, the most recent survey was from the phase V series (2003–2008).

For countries not covered by the DHS, the report draws on data from MICS Cycle 4 (conducted in 2009–2014); MICS Cycle 3 surveys were not included, as many of the countries lacked the indicators of interest. Because of the greater availability of indicators through the DHS, for countries that had conducted both DHS and MICS surveys, we included data from the DHS only.

Most of the data in this report come from original analyses conducted by the Guttmacher Institute using the original data files from the surveys. The remaining data were obtained from DHS country reports and from STATcompiler, the DHS online data service. The cutoff date for including new surveys was October 2014. As a

result, the report does not include newer surveys that may have become available for some countries since the publication of this report.

Neither DHS nor MICS are carried out for Mexico and Brazil, so for these countries we used independent nationally representative surveys. For Mexico we included data from the 2006⁴⁷ and 2009 Encuesta Nacional de la Dinámica Demográfica⁴⁸ and the 2012 Encuesta Nacional de Salud y Nutrición.⁴⁹ For Brazil, we included data from the 2006 Pesquisa Nacional de Demografia e Saúde da Criança e da Mulher.⁵⁰ We chose these surveys because they are large-scale and nationally representative and have measures comparable to those in the DHS.

Selection and Coverage of Types of Services

Our coverage of sexual and reproductive health services is limited to topics on which applicable data are available from nationally representative surveys: contraception, HIV testing and treatment of other STIs, and maternal health (with a focus on prenatal care and delivery).

Data on the use of abortion services is generally not included in nationally representative surveys such as the DHS and MICS. Given the limited coverage of this topic, the variability in measures used in the few countries that cover it and the likelihood of a high level of underreporting of abortion in these countries, we do not present any original survey-based data on this topic. Instead, we present a summary of information gathered from published reports for the few countries that collected DHS data on the topic and otherwise rely on information from a literature review.

Because of gaps in available survey data, the data we present do not cover the use of some aspects of sexual and reproductive health care. For instance, we are unable to present any original data on the use of services related to sexual violence or HIV treatment.

The focus of this report is on adolescent's actual use of sexual and reproductive health services, but when possible we also provide information on barriers to use. Because the literature on barriers to use is quite extensive, we mainly draw on existing reviews to inform our findings and thus provide limited original data (four indicators) on this topic.

Selection and Coverage of Indicators

The indicators were selected using the following criteria:

- Availability of the indicator for a large number of countries
- Comparability across countries
- Provision of the most meaningful, policy-relevant information
- Representation of adolescent women’s most telling needs for sexual and reproductive health information and services.

Selection was also guided by WHO’s proposed use of 16 indicators to measure the coverage of health services both for universal access to reproductive health and for preventing HIV among young people.⁵¹ The indicators draw from a variety of sources, but rely on national surveys as the main source for 10 of their 16 indicators. All 16 indicators are included to some degree in our analysis.

Our report presents eight indicators on sexual and reproductive health needs and contraceptive behavior; 10 indicators related to HIV, other STIs and condom use; three indicators on childbearing; and nine indicators related to maternal and newborn health. Data are missing on some of these indicators for 4–32% of adolescent women, depending on the region and the indicator (Table 1).

The report presents national-level data for all indicators, as well as breakdowns for selected key indicators by residence (urban versus rural) and household wealth (the lower two quintiles versus the upper three): unmet need, condom use at last sex, HIV testing in the past 12 months, unplanned births and delivery in a health facility. Since we were not able to analyze all indicators by subgroups, we selected those we deemed best repre-

sent and describe the needs and behaviors of adolescent women. We were also limited by sample size: For some indicators the sample sizes by subgroup were too small to report on (i.e., fewer than 25). Although additional subgroup analyses are needed to better document the diversity of adolescent lives and to understand the needs of adolescents, more in-depth analyses were beyond the scope of our report.

Results are interpreted in terms of the range and size of differentials for each indicator across countries and because the range differs among indicators, cutoffs differ for each indicator. As a result, we use the terms “low,” “moderate,” “high” and “very high” to describe differences relative to the range and level of values for each indicator; these terms do not correspond systematically to the same range of values for all indicators.

Important Gaps and Limitations in the Survey Data

Data on men. Although men are integral to any population’s sexual and reproductive health, and we strongly recommend that future work focus on adolescent men’s needs and use of services, we have omitted them in our analyses for the following reasons:

- Only a limited set of indicators are available for adolescent men, including only a few service-related indicators.
- Data on men are available in substantially fewer countries than data on women.

Data on never-married women. Surveys in Afghanistan, Bangladesh, Egypt, Jordan, Maldives and Pakistan include only women who have ever been married; as a result, for these countries, no information is available for never-married women, a group that accounts for a large proportion of adolescent women. The exception is for indicators

TABLE 1. Number of countries included in the analysis and percentage in each region with missing data on some indicators, according to category of indicator

Region	Total no. of countries	% of countries with missing data, according to indicator category			
		Sexual and reproductive health needs*	HIV, other STIs and condom use	Childbearing	Maternal and newborn health
Africa	35	7	7	4	17
Asia	22	25	32	14	25
Latin America and the Caribbean	13	20	21	15	31

*Marriage, sexual activity, contraceptive use, unmet need, reasons for not using contraceptives and access to contraception.

on the proportion ever married and proportion who have begun childbearing: Household survey data are used to calculate these two measures and the surveys work off the assumption that no never-married women have begun childbearing.

Social desirability bias. The surveys used in our report rely on self-reports of sexual and reproductive behaviors, some of which may be underreported because they are stigmatized or proscribed by social norms.

Service use indicators. The available survey data do not measure all aspects of sexual and reproductive health services. We present what is available on service use, excluding only a few indicators that were difficult to compare across countries (for instance, source for current contraceptive method and place where last HIV test was taken).

Comparability of data. Although the MICS and DHS are similar in many ways, some of the MICS measures do not correspond exactly to those of the DHS. Differences were noted in the tables. In addition, although the questionnaires are standardized, surveys may be adapted to the needs of a country and, as a result, differences across countries on the same indicator may occur. Any differences between countries within surveys were noted, as well.

Literature Review Methods

Literature review on adolescent sexual and reproductive health services. We conducted a literature review on adolescents' use of sexual and reproductive health services in developing regions using the Popline and PubMed databases. In addition, Google searches were performed to identify additional literature and to identify organizations, including multilateral organizations, involved in work related to adolescent sexual and reproductive health. The searches were conducted in June and July of 2013 and used combinations of targeted keywords: "developing countries" and "youth," "adolescents" or "young people" and any or a combination of "reproductive health," "sexual and reproductive health," "sexual and reproductive health services," "services," "utilization of health care," "utilization of services," "family planning," "family planning centers," "family planning services," "HIV testing," "HIV services," "sexually transmitted diseases," "maternal health services" and "barriers." Searches were limited to studies published in English no earlier than 2000. The reference list of articles and reports selected for review was systematically checked in order to capture additional studies that had not been found through our electronic searches. Resources did not permit an extensive search of the gray (unpublished) literature.

The searches yielded 1,219 references. Studies deemed relevant on the basis of their title and abstract were retrieved. The full articles were then read and evaluated for inclusion; we excluded articles that did not focus on the specific topic of concern or that did not present separate findings on adolescents. We also eliminated duplicate references and those that were not peer-reviewed, such as editorials or brief communication pieces. Forty-one references focusing on adolescent's access to and use of services were selected for review. Nine studies using DHS data were then excluded because they were outdated. A total of 32 studies were summarized.

This review was not intended to provide a comprehensive systematic review of evidence on the use of sexual and reproductive health services for adolescents. However, it was key in developing the focus and scope of the project by identifying gaps in research. It also provided useful information to guide the interpretation of our findings and in supporting policy recommendations to meet adolescent women's sexual and reproductive health needs and improve their access to services.

Literature review on abortion. We searched two databases, Popline and Pubmed, using the following keywords: "adolescents" and "abortion" plus either "developing countries" or the specific name of a developing country included in the United Nations list of developing countries. We limited the search to literature in English published in 2000–2014. For the Pubmed search, we relied on the medical subject headings terms to limit the search to citations in which our search terms were the major focus of the article. These database searches yielded 164 items. After eliminating duplicate references and pieces that were not peer-reviewed, we assessed the remaining studies for relevance. We identified 16 articles as relevant and current (i.e., using data collected since 2000). Of these, the majority used a mixed method design; four were qualitative only and two were quantitative only. Most (10) were published between 2010 and 2014.

We did a more refined search using Popline, Pubmed and Google Scholar on postabortion care, using the keywords "adolescents," "postabortion care" and "developing countries," which yielded a total of 736 results. We conducted the same review process as above, using the same criteria for inclusion. This search yielded a total of six additional studies, which were included in the review.

The reference lists of articles and reports selected for review were checked to identify any additional studies that may not have been found through our electronic searches. Ultimately, none of these additional sources were included in this review.

Marriage, Sexual Activity and Contraception

This chapter provides a broad picture of adolescent sexual and reproductive health needs by presenting data on adolescent women for a variety of indicators: marriage, sexual activity, knowledge about a source of contraception, contraceptive use, unmet need, reasons for not using contraceptives, decision-making about contraception and health facility visits (Appendix Tables 1–3, pages 48–53). Data are presented for all adolescent women for all indicators except the following: contraceptive use (shown among married adolescent women and unmarried sexually active adolescent women), unmet need (shown among married adolescent women and unmarried sexually active adolescent women), reasons for nonuse (shown among adolescent women with unmet need) and decision-making about contraception (shown among married adolescent women). Subgroup analyses by residence and wealth are shown for unmet need (Appendix Table 2).

Marriage

In many developing countries, married adolescent women tend to bear children soon after marriage. Because nine out of 10 adolescent births occur within the context of marriage, these adolescents face health risks.⁵² Furthermore, marriage does not offer much protection against HIV and other STIs, since adolescent women tend to marry older men who have more sexual experience and exposure to infections.^{53,54}

- According to the most recent data available, in the majority of African countries, more than one in five adolescent women aged 15–19 reported having ever been married. The proportion was particularly high in Niger (63%), Central African Republic (61%) and Chad (51%). In only five countries (Ghana, Namibia, Rwanda, Swaziland and Tunisia) had fewer than 10% of adolescent women ever been married.
- In most countries in Asia, fewer than 20% of adolescent women had ever married. Levels were highest in the Southern Asian countries of Bangladesh (46%), Nepal (29%) and India (28%).
- In Latin America and the Caribbean, 13–28% of adolescent women had ever been married.

Sexual Activity Among Unmarried Women

Particularly in contexts where sexual activity before marriage is strongly sanctioned, adolescent women may be reluctant to report their sexual behaviors.^{55,56} Therefore, reports of sexual activity among unmarried women in these settings are likely to be underestimates. Underreporting may occur in less conservative contexts, as well, but to a lesser extent.

Nonetheless, recent data show that in many countries, a sizable proportion of adolescent women have engaged in sex outside of marriage (Figure 1, page 11).

- In eight countries in Africa, more than one-third of never-married adolescent women reported ever having had sex. Liberia and Gabon reported the highest proportions, 53% and 50%, respectively. In only seven countries in Africa (mostly Francophone countries) did fewer than one-tenth of never-married adolescent women report ever having had sex.
- In Asia, surveys in a number of countries excluded unmarried women. In those countries where never-married adolescent women were surveyed and asked about sexual activity, the overwhelming majority of unmarried adolescents reported having never had sex.
- In Latin America and the Caribbean, the proportion of never-married adolescent women who reported ever having had sex ranged from 11% in Mexico to 45% in Cuba, with most countries falling in the 10–30% range.

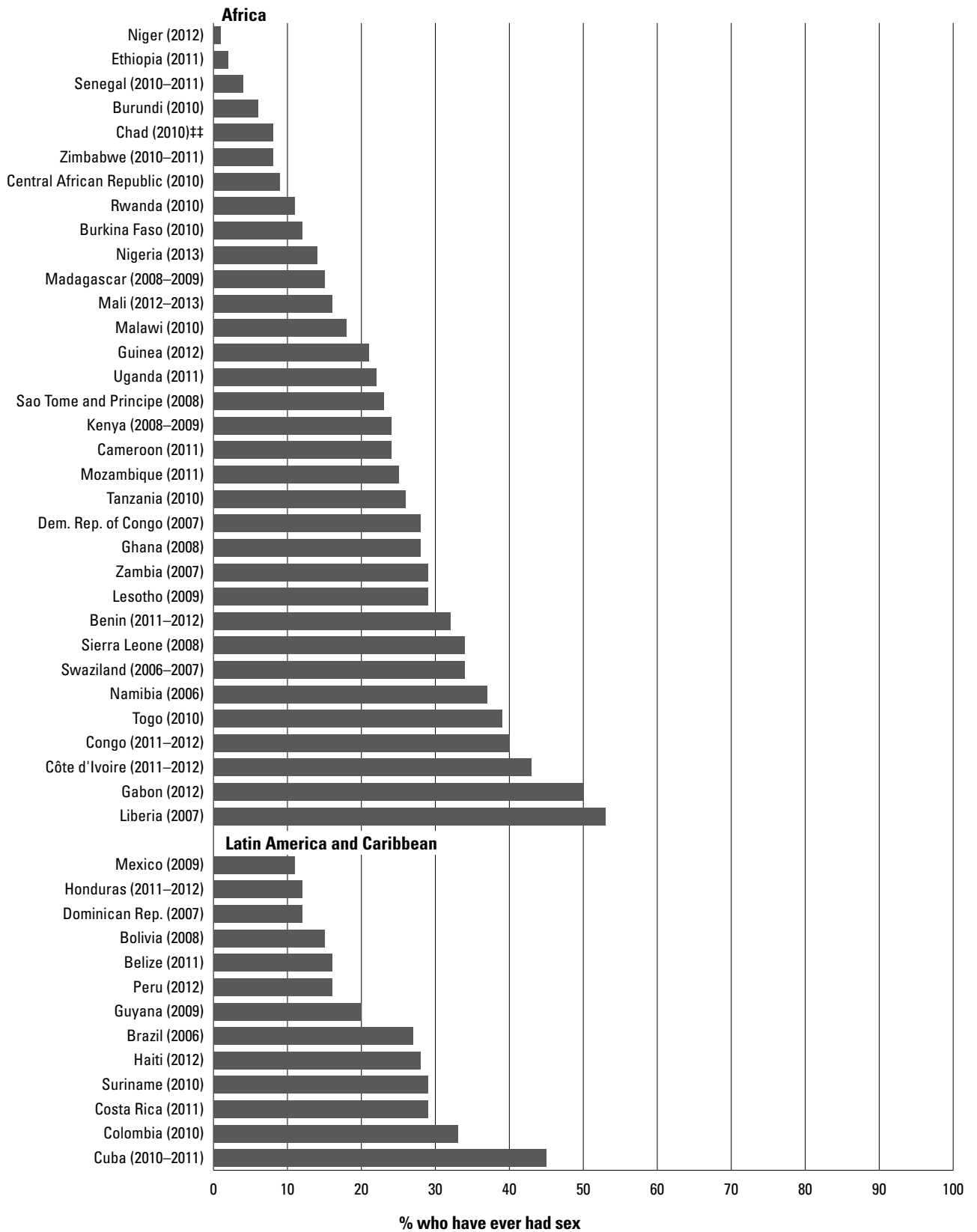
Knowledge of a Source for Contraceptives*

It is important to assess the extent to which adolescent women are able to make informed decisions about contraception, and knowing where to obtain a method is a prerequisite to obtaining and using a method.

- In 13 African countries, the proportion of adolescent women who reported knowing of a source for contraceptive methods was moderate (40–60%). In three countries, fewer than a third of adolescent women

*“Family planning” is the term used in the survey question. A follow-up question was asked to find out the name of the source. We did not include this in our analysis.

FIGURE 1. In many countries in Africa and Latin America and the Caribbean, sizeable proportions of never-married women aged 15–19 report ever having had sex.



Note: Asian countries are not shown because levels of sexual experience among never-married adolescents are very low.

reported knowing a source; the lowest proportion (18%) was found in the Democratic Republic of Congo. The highest proportions were reported in Rwanda (85%), Namibia (79%), Swaziland (79%), Malawi (73%) and Uganda (71%).

- In one-third of Asian countries, all located in Southern and Southeast Asia, the proportion of adolescent women who reported knowing about a source for contraceptives was higher than 70%. Levels were very low in three countries: Azerbaijan (15%), Tajikistan (15%) and Kyrgyzstan (18%). For the remaining countries, levels were moderate.
- The proportion of adolescent women who reported knowing of a source for contraceptives was high in most of Latin America and the Caribbean, reaching 91% in Peru. Moderate levels were found in Bolivia (44%), Brazil (57%) and Guyana (63%).

Current Use of Modern Contraceptives

Use of modern contraceptive methods—contraceptive pills, patches, IUDs, injectables, implants, male or female condoms, diaphragms, spermicides or sterilization—is the most effective way of preventing unintended pregnancies.

- Recent surveys show that modern contraceptive use was low among married adolescents in all regions of Africa. In more than two-thirds of the countries in Africa, contraceptive use was lower than 20%. The proportions were highest by far in Swaziland (43%), Namibia (39%) and Zimbabwe (35%). Levels were particularly low (less than 5%) in nine countries, many of which are in Western Africa.
- There was great variation in modern contraceptive use among married adolescents across and within subregions of Asia. Overall, proportions ranged from 0% in Armenia, where all married 15–19-year-old women currently using a method reported traditional method use, to 52% in Mongolia. In only two countries other than Mongolia did the proportions reach above 40%: Indonesia (48%) and Bangladesh (42%).
- In Latin America and the Caribbean, the proportion of married adolescents using modern contraceptives ranged from 24% in Haiti to 67% in Cuba.
- In about half of the countries for which data are available, no more than 30% of sexually active unmarried adolescent women were currently using a modern method. In a few countries in each African subregion, proportions were between 35% and 50%; the highest proportion was in Namibia (69%). Levels of use among unmarried adolescents were substantially and consistently higher in Latin America and the Caribbean, ranging from 26% in Haiti to 83% in Cuba. Levels were fairly low

in Asia: With the exception of Kazakhstan (70%), they ranged from 2% in Indonesia (where the law prohibits providing contraceptives to unmarried women) to 33% in Mongolia.

Unmet Need for Contraception

Sexually active, fecund women who report wanting to delay their next birth by at least two years or to stop childbearing altogether but are not using a contraceptive method are considered to have an unmet need for contraception.

Married women

- The proportion of married adolescent women with an unmet need for contraception varied widely within most regions (Figure 2, page 14). In Africa, unmet need among married women aged 15–19 was lowest in Rwanda (6%) and highest in Ghana (62%). In more than half of the countries in Africa, the proportion of women with unmet need was 25% or greater.
- Unmet need among married adolescent women in Central, Western and Eastern Asia ranged from 9% in Iraq to 27% in Armenia. In Southern and Southeast Asia, it ranged from 7% in Indonesia to 42% in Nepal.
- Unmet need among married adolescent women in Latin America and the Caribbean ranged from 13% in Cuba to 57% in Haiti.

Unmarried sexually active women

- Overall, unmet need for contraception was higher among unmarried sexually active adolescent women than among their married counterparts.
- Unmet need among this group was especially acute in Africa: In 20 countries, more than 50% of unmarried, sexually active 15–19-year-olds had an unmet need for contraception.
- For the few countries in Asia with data, unmet need among this group varied greatly from 25% in Kazakhstan to 94% in Laos.
- In most countries in Latin America and the Caribbean, the proportion with unmet need for contraception fell within the 32–55% range. In Cuba, however, only 14% of unmarried, sexually active adolescent women had an unmet need.

Unmet need by household wealth. Unmet need among married women aged 15–19 tended to be higher among those in the three upper wealth quintiles than among those in the two lower wealth quintiles. This pattern was evident in a third of African and Asian countries, but in only a few Latin American and Caribbean countries. Where

apparent, this pattern suggests that wealthier adolescent women, may be more strongly motivated than poorer adolescents to avoid an early pregnancy but nonetheless face barriers to using contraceptives and therefore experience unmet need. In seven countries, married adolescent women in poorer households had a level of unmet need at least five percentage points higher than that among their counterparts in better-off households. For the remaining 36 countries, unmet need among married adolescents did not vary by wealth.

Unmet need by residence. In close to half of countries in Africa and Asia, unmet need among urban, married adolescent women was higher than that among married adolescents in rural areas. For most of the remaining countries, there was little or no difference in unmet need by residence. In 12 countries, unmet need was higher in rural areas than in urban areas.

Reasons for Not Using Contraceptives

Women who were not using a contraceptive at the time of the survey were asked the reasons why they were not using a method. Although these reasons may also characterize the contraceptive behaviors of method users, the surveys do not ask users about their perceptions of side effects, cost or other barriers to use.

- In all regions, the main reasons for nonuse of contraceptives reported by adolescents with unmet need are not being married and having sex infrequently. Not being married was reported as a reason by 0–44% of women in Africa, 0–26% of women in Asia and 5–36% of women in Latin America and the Caribbean. Infrequent sex was cited by larger and wider-ranging proportions of adolescent women: 10–56% in Africa, 15–68% in Asia and 29–74% in Latin America and the Caribbean.
- In Africa, the next most common reason cited for not using a method was breast-feeding, postpartum amenorrhea or subfecundity. In 24 of the 31 countries with data on this indicator, 10–30% of adolescent women cited this set of reasons for not using contraceptives. Supply-related reasons (not aware of a method, cost too high, no access to a method) were reported by 6–40% of respondents in Middle Africa and by 7–33% in Western Africa; in contrast, in Eastern Africa, supply was seemingly less of a concern (4–16%). Opposition to use (on the part of the respondent, her partner or family) was greatest in Western Africa, where in six out of 11 countries more than 20% of adolescent women cited this reason for not using a method. In 21 African countries, health and side effects were a concern for at least one in 10 adolescent women.

- In Asia, out of the 13 countries with data on nonuse among women aged 15–19, five countries had data for fewer than 25 respondents (suppressed), and three countries for which data are shown had small sample sizes (25–49 respondents). Breast-feeding, postpartum amenorrhea or subfecundity were cited as a reason by 11–30% of respondents. Health and side effects were cited by 6–27%. Opposition to use was the most prominent reason for nonuse of a method in India (36%), Pakistan (58%) and Timor-Leste (71%). Supply-related reasons were the reasons least likely to be mentioned in Asia.
- Data were available for eight countries in Latin America and the Caribbean. Breast-feeding, postpartum amenorrhea or subfecundity were mentioned by 3–21% of adolescent women as a reason for nonuse. Other reasons were generally mentioned by smaller proportions of adolescent women. Opposition to use ranged from 3% to 17% in most countries, with the lowest proportion in Peru (1%) and highest in Haiti (33%). Reasons related to health and side effects were reported by 5–17% of adolescent women in all countries but Haiti, where 31% reported these reasons. Supply-related reasons for nonuse were least common and ranged from 1% in Peru to 11% in Bolivia and Mexico.

Contraceptive Decision-Making

Even if women have access to contraception, actual use may be compromised if they have limited agency in deciding whether or not to use a method. Each married woman currently using contraception was asked whether decisions about using contraceptives were made mainly by she, her husband or partner, or both she and her husband together. We present the proportion who reported that their husband had the main say in whether or not to use contraceptives, an indicator that points to women's level of empowerment. Although most women reported making decisions about contraception jointly with their husband or partner, the results show that in some countries, particularly those in Africa, a nonnegligible proportion of adolescent women's husbands are the primary decision-makers.

- In most African countries, 10–20% of adolescent women who were currently married and using contraceptives reported their husbands are the main decision-makers about contraceptive use. In five countries, this proportion was greater than one in five. However, because sample sizes were often small, these data need to be interpreted with caution.

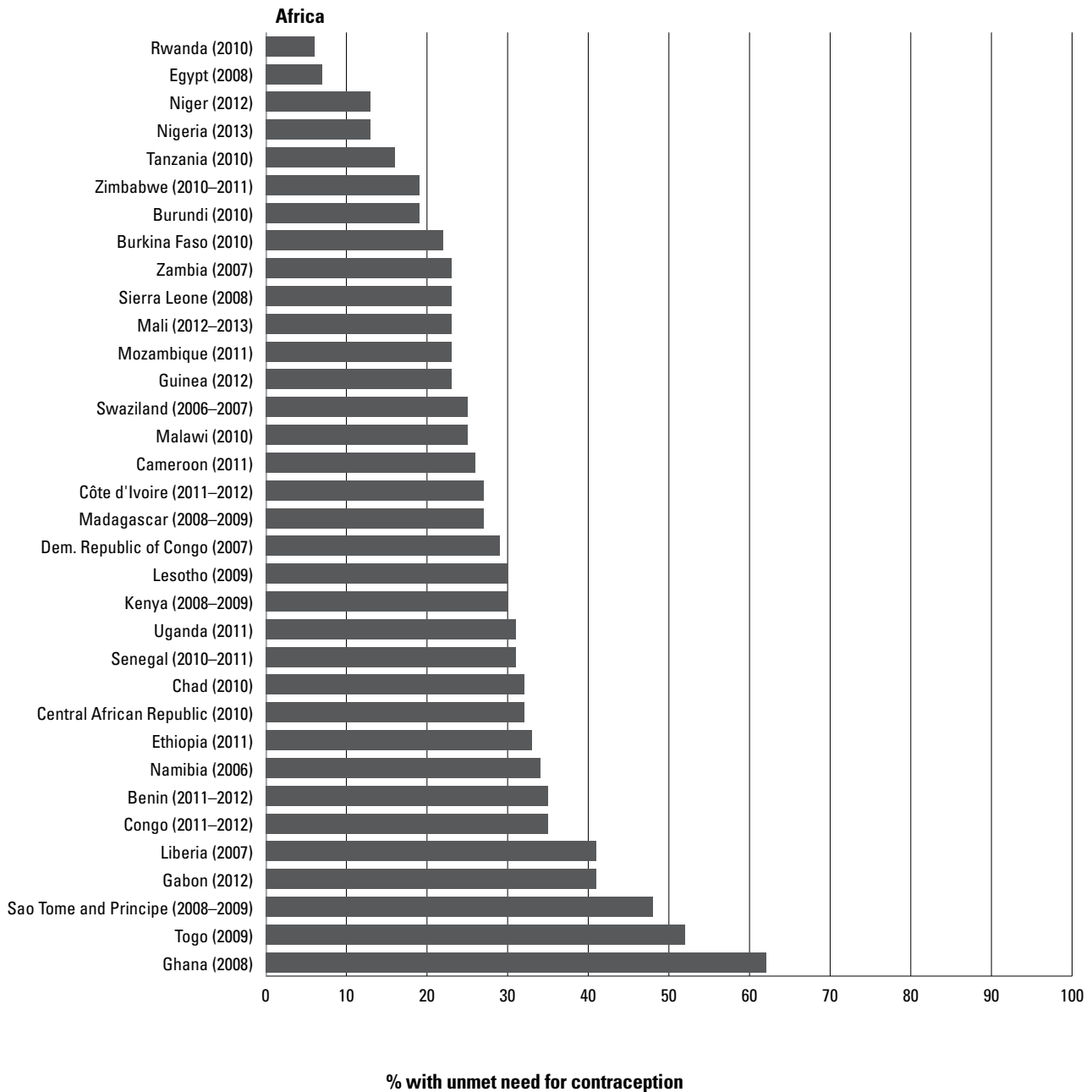
- In Asia, only eight countries had large enough sample sizes for this indicator. The proportion whose husband mainly decided about contraception ranged from 6% in Nepal to 12% in India and Indonesia.
- In Latin America and the Caribbean, the proportion of adolescent women reporting that their husbands mainly decided about the use of contraceptives ranged from 2% in Colombia and Peru to 15% in Haiti.

Health Facility Visits

Women were asked whether they had been to a health facility in the past 12 months and whether any staff member at the facility had spoken to them about family planning during their visit.

- In all but four countries in Africa (Egypt, Liberia, Malawi and Sao Tome and Principe) and two countries in Asia (Jordan and Maldives), 10% or fewer of all adoles-

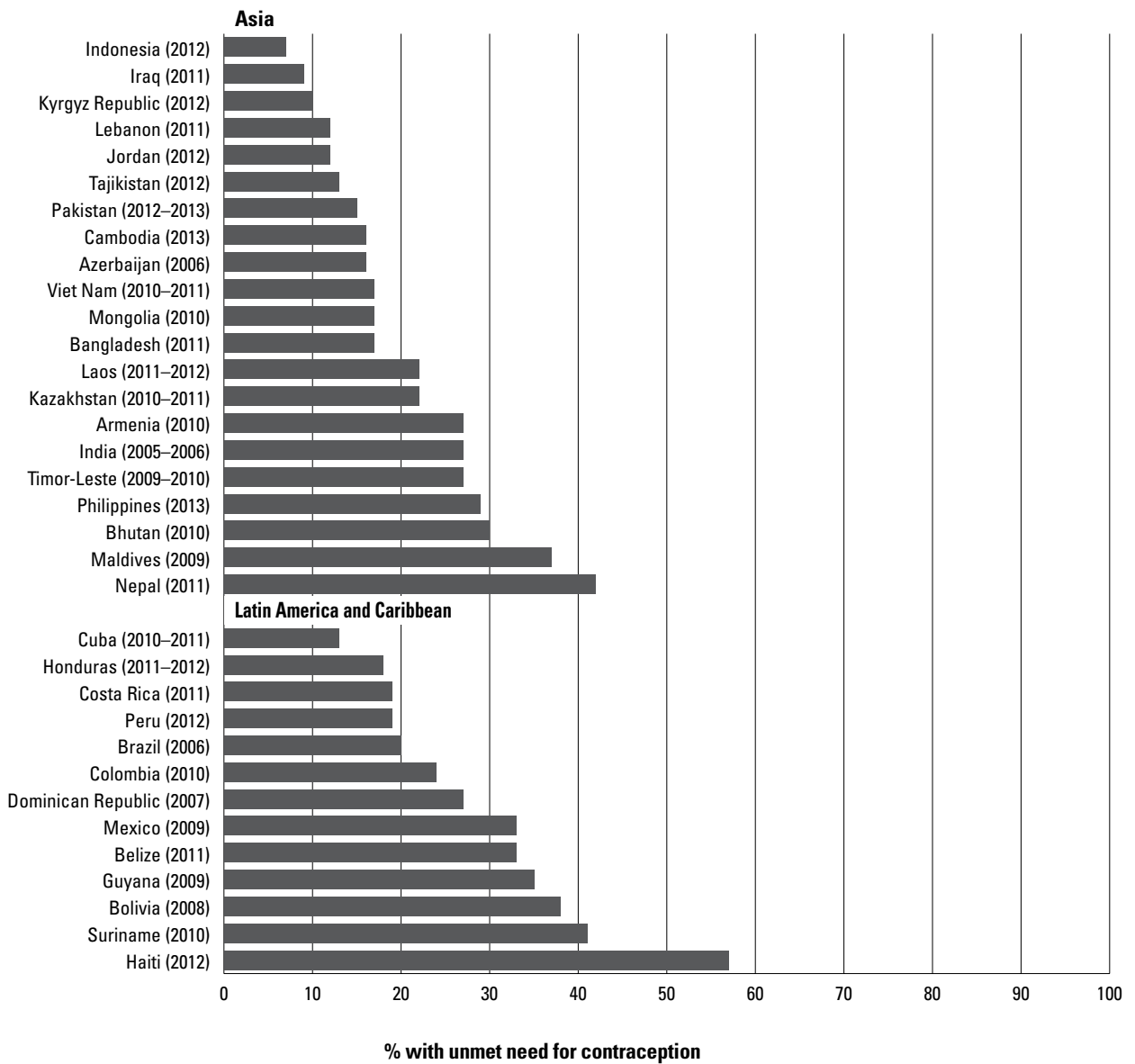
FIGURE 2. Unmet need among married women aged 15–19 varies widely within developing regions.



cent women had visited a health facility in the past 12 months and been told about family planning.

- In Latin America and the Caribbean, proportions were slightly higher: In five out of eight countries with data, at least 10% of adolescent women had visited a health facility and been told about family planning. Proportions ranged from 10% in Bolivia to 23% in Colombia.

FIGURE 2, continued



HIV and Other STIs: Prevalence, Protection and Health-Seeking Behaviors Among Adolescent Women

Various biological, behavioral, social and structural factors contribute to young women's vulnerability to HIV and other STIs and influence the risk of transmission. Among these are strictly defined gender roles, gender-based violence and poverty—all of which may undermine young women's ability to protect themselves and obtain the services they need.⁵⁷

STIs can lead to both short- and long-term health consequences of varying severity, including pain during intercourse, infertility and long-term disability.²⁸ Some STIs can also increase the risk of HIV transmission by threefold or more.⁵⁸ Prompt and appropriate treatment is therefore a public health priority.

This chapter provides data on key indicators related to HIV and other STIs among adolescent women. We begin by presenting data on HIV prevalence and then show data about knowledge of a source of condoms and ability to get a condom. This is followed by data on adolescent women's protective behavior by looking at the proportion of never-married women who used a condom at last sex. We follow by presenting information on the proportion of adolescent women experiencing STI symptoms who sought treatment; the proportion who reported knowing of a place to get tested for HIV, and the proportions who obtained an HIV test and who received the test results. All data are shown in Appendix Tables 4 and 5, pages 54–57.

The subgroup analyses presented focus on condom use at last sex by residence and HIV testing by residence. Although we wanted to include subgroups on STI-related care-seeking behavior, the sample sizes were too small to allow for such an analysis. The subgroup analysis on condom use had a very small number of cases for Asia, given that a very low proportion of never-married adolescent women reported being sexually active. As a result, for this region, only two countries had data available for comparison.

HIV Prevalence

Because data on HIV prevalence among adolescent women aged 15–19 are unavailable for a large number of countries, we present data from the Joint United Nations Programme on HIV/AIDS, for 15–24-year-olds.²⁹

- In Africa, the Southern and Eastern subregions were the most heavily affected regions. Lesotho and Swaziland had the highest HIV prevalence among young women aged 15–24 (11% and 20% infected, respectively). Prevalence was low (less than 1%) in most Western African countries and extremely low (less than 0.1%) in Northern Africa. In Eastern Africa, prevalence ranged from a low of 0.3% in Madagascar to a high of almost 7% in Mozambique.
- HIV prevalence among women aged 15–24 was lowest in Asia (below 0.5% in all countries).
- In all countries in Latin America and the Caribbean, HIV prevalence among 15–24-year-old women was less than 1%.

Estimates of HIV prevalence for 15–19-year-olds are available through DHS biomarker surveys for only a third of the countries included in this report; almost all of these were in Africa (Table 2, page 17). According to this source, HIV prevalence among adolescent women ranged from 0.2% to 6% in Eastern Africa and from 4% to 10% in Southern Africa. In Western and Middle Africa, HIV prevalence ranged from zero in Niger to 2% in Cameroon.

Access to Condoms

Efforts to increase knowledge that condom use is an effective method for preventing STIs are critical to HIV prevention. Strategies to ensure that adolescents know where to get a condom and have access to that source are equally necessary. However, measuring adolescent women's knowledge of a source for condoms or ability to get a condom is difficult because cultural attitudes in some areas proscribe education about or use of contraceptives, especially among young women.^{56,59} As a result, respondents in some countries may have underreported their actual level of knowledge and ability to get a condom.

- In a third of countries in Africa, mainly in West Africa, fewer than half of all adolescent women, irrespective of marital status, reported knowing where to obtain condoms. Proportions were very high (above 80%) only in a few countries: Gabon (81%), Namibia (86%), Rwanda (82%) and Swaziland (83%).

TABLE 2. HIV prevalence among women aged 15–19, developing regions

Region, subregion and country	% of women aged 15–19 living with HIV
AFRICA	
Eastern Africa	
Burundi (2010)	0.2
Ethiopia (2011)	0.2
Kenya (2008–2009)	2.7
Malawi (2010)	4.2
Rwanda (2010)	0.8
Uganda (2011)	3.0
Zambia (2007)	5.7
Zimbabwe (2010–2011)	4.2
Middle Africa	
Cameroon (2011)	2.0
Democratic Republic of Congo (2007)	0.7
Gabon (2012)	1.5
Sao Tome and Principe (2008–2009)	0.6
Southern Africa	
Lesotho (2009)	4.1
Swaziland (2006–2007)	10.1
Western Africa	
Benin (2011–2012)	0.1
Burkina Faso (2010)	0.1
Côte d'Ivoire (2011–2012)	0.8
Guinea (2012)	1.5
Liberia (2007)	1.3
Mali (2012–2013)	0.8
Niger (2012)	0.0
Senegal (2010–2011)	0.2
Sierra Leone (2008)	1.3
ASIA	
India (2005–2006)	0.1
LATIN AMERICA AND THE CARIBBEAN	
Dominican Republic (2007)	0.2
Haiti (2012)	0.5

Source: Demographic and Health Surveys (DHS). Notes: Data are from the most recent survey available (years denoted parenthetically).

- In Asia, in the 12 countries where data were available, proportions varied widely, from 11% in Timor-Leste to 83% in Nepal. There were also wide differences in knowledge within subregions. For example, in Central Asia, 16% of adolescent women in Tajikistan and 54% in Kyrgyzstan Republic knew a source for obtaining a condom.

- Knowledge of a place to obtain condoms was high throughout Latin America and the Caribbean, ranging from 65% in Bolivia to 95% in Peru and Brazil.

Knowing a source for condoms does not guarantee that one is able to obtain a condom, however. Structural barriers and cultural sanctions may make it difficult for adolescent women to access condoms.

- In only six countries in Africa (Gabon, Namibia, Rwanda, Sao Tome and Principe, Swaziland and Tanzania) did more than half of adolescent women report that they could get a condom on their own. In the majority of countries in Africa, 20–40% reported that they could get a condom. Proportions were lowest in Western Africa, where fewer than 20% of adolescent women in seven of the 11 countries reported that they could get a condom on their own; the lowest proportion was in Niger (7%).

- For five Asian countries out of the 11 for which data on this measure were available, the proportion reporting being able to get a condom on their own varied between 11% and 31%. It was highest in Cambodia (51%) and Maldives (60%) and was less than 10% in India, Tajikistan and Timor-Leste.

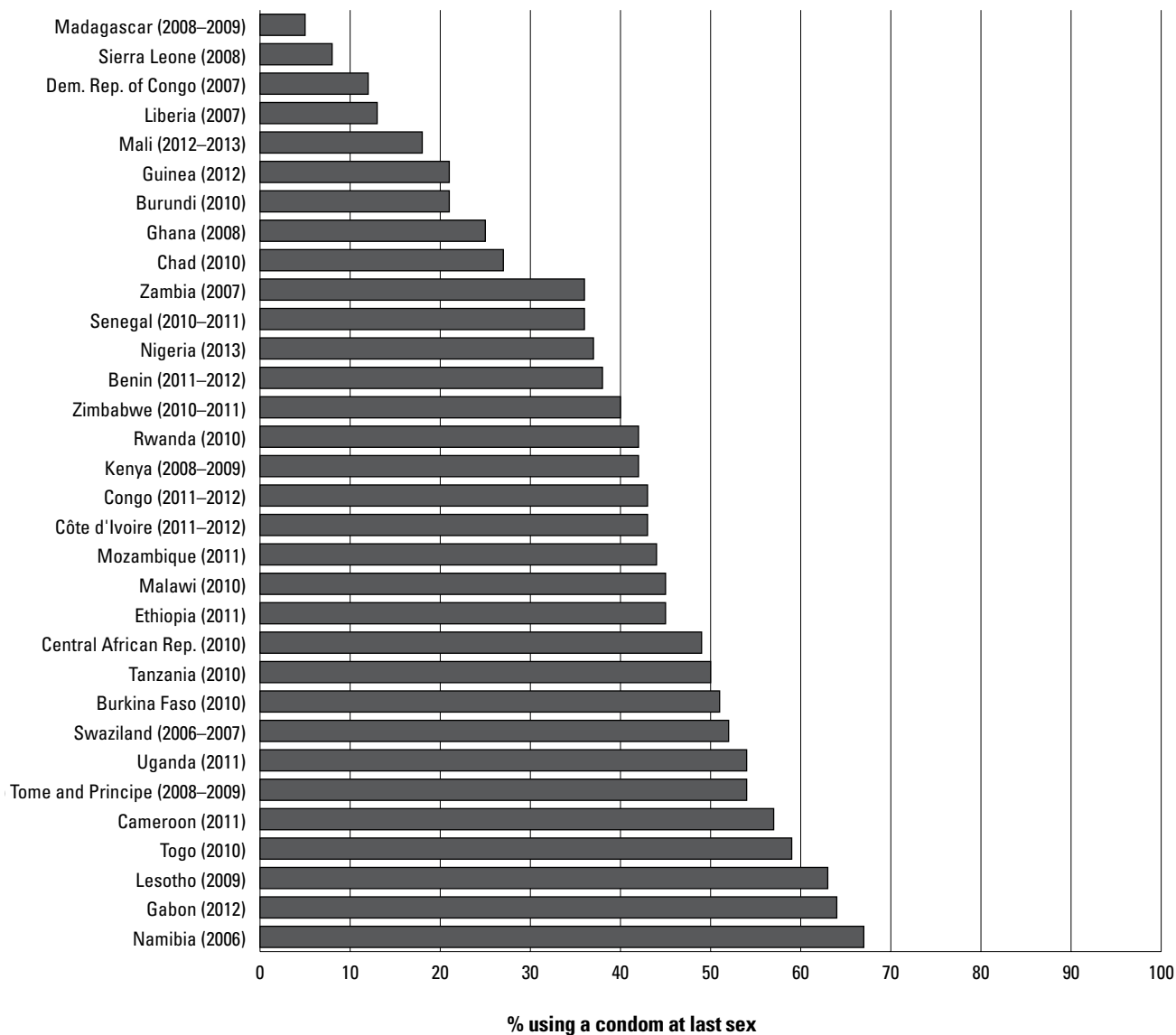
- Large proportions of adolescent women reported that they could get a condom on their own in Brazil (90%), Colombia (75%), Haiti (74%) and Dominican Republic (63%). In the rest of Latin America and the Caribbean, the proportions ranged from 28% in Bolivia to 59% in Guyana.

Condom Use at Last Sex

Condoms, when used correctly and consistently, remain a key strategy in the prevention of HIV and other STIs. They are also a means for preventing pregnancy when more reliable methods are not available and tend to be more easily accessible to young people than other methods.

- In the majority of African countries, 21–50% of never-married adolescent women who were sexually active in the 12 months prior to being surveyed had used a condom at last sex (Figure 3, page 18). The proportion was higher in nine countries: Burkina Faso (51%), Cameroon (57%), Gabon (64%), Sao Tome and Principe (54%), Lesotho (63%), Namibia (67%), Swaziland (52%), Togo (59%) and Uganda (54%). It was much lower (5–13%) in

FIGURE 3. In most African countries, fewer than half of never-married sexually active* women aged 15–19 report using a condom at last sex.



*In the past 12 months.

Democratic Republic of Congo, Liberia, Madagascar and Sierra Leone.

- Only six out of the 22 countries in Asia included in this report had data available for this measure (either because the survey did not sample unmarried women or because the number of sexually active unmarried women interviewed was too small). Among these six countries, condom use at last sex ranged widely from 4% in the Philippines to 69% in Kazakhstan.
- Condom use at last sex among never-married adolescent women was high in Latin America and the Caribbean, ranging from 51% to 74% in most countries. For

this region, condom use was lowest in Mexico (20%), Peru (34%) and Honduras (41%) and the Dominican Republic (47%).

Condom use at last sex, by residence. Generally, in rural areas access to services or contraceptives tend to be more challenging than in urban areas, as these services may be unavailable or difficult to access (due to distance to a facility for example). Data on condom use by residence presents an indirect measure of access.

- In most countries in Africa, condom use at last sex among never-married, sexually active adolescent women

was substantially higher among those living in urban areas than among those in rural areas. For example, in Zambia, 49% of adolescent women in urban areas used a condom at last sex, compared with 26% of adolescent women in rural areas. In Ethiopia (small sample size) and Kenya, the reverse was true.

- In the two countries in Asia with available data, India and the Philippines, there were no apparent differences by residence (20% and 4% in urban areas, respectively, vs. 18% and 3% in rural areas).
- In most countries in Latin America and the Caribbean, as in Africa, higher percentages of adolescent women in urban areas used a condom at last sex than did those in rural areas. However, in Colombia, Cuba and Guyana, there were no differences between the two groups. In Brazil, a lower proportion of adolescent women in urban areas used a condom at last sex than did those in rural areas (66% vs. 73%).

Knowledge of Where to Obtain an HIV Test

Knowing where to go for an HIV test is a prerequisite for getting an HIV test, though other obstacles also play a role in determining whether or not an adolescent gets HIV counseling and testing.³² Data on this measure are useful in identifying the countries in which information and communication about locations for testing are most needed.

- In Africa, the proportion of adolescent women who reported knowing where to obtain an HIV test was highest (70% or more) in the Eastern and Southern subregions. No countries in Western Africa reached levels above 70%. In a third of all the countries in Africa and in half of the countries in Western Africa, fewer than 50% of adolescent women knew of a place to get tested. The lowest levels of knowledge were in Egypt (9%) and Liberia (19%).
- In most countries in Asia, the proportion knowing where to obtain an HIV test was low (under 40%); it was extremely low in Iraq (1%), Indonesia (5%) and Pakistan (5%). Only in Cambodia, Kazakhstan, Maldives and Viet Nam were levels higher than 50%.
- In most of Latin America and the Caribbean, high proportions (70% or higher) of adolescent women reported knowing where to obtain a test. Substantially lower levels were found only in Bolivia (33%) and Costa Rica (52%).

HIV Testing and Receipt of Results

Testing for HIV is an important entry point for prevention and treatment. An adolescent woman who is tested and learns she is living with HIV is more likely than one who remains untested to obtain counseling and treatment and

to practice preventive behaviors to protect sexual partners from infection.³² Those who test negative may be linked to prevention services and be educated about strategies for remaining disease free.

- In Africa, the proportion of adolescent women who had had an HIV test in the past 12 months was lowest in Western Africa, where 2–11% had been tested. Proportions were higher in Eastern Africa, generally falling between 15% and 33%, with the exception of Madagascar (4%). In Middle Africa, proportions ranged from 3% in Chad and Democratic Republic of Congo to 22% in Gabon. In the three Southern African countries analyzed, the proportions spanned 12–34%. While it is an important step to be tested, it is equally necessary that individuals who are tested receive the results of the test. In most African countries, at least 85% of adolescent women who had an HIV test received their results.
- In most of the 14 Asian countries with data, no more than 4% of adolescent women had had an HIV test in the past 12 months. Only in Kazakhstan (15%), Mongolia (6%) and Kyrgyzstan (6%) were proportions somewhat higher. In most Asian countries (excluding Armenia and the Philippines), 81–99% of adolescent women obtaining a test received their result.
- In the Latin American and Caribbean countries of Bolivia, Colombia, Costa Rica, Haiti, Honduras and Mexico, no more than 10% of adolescent women had had an HIV test in the past year. The proportions who had been tested were highest in Cuba (23%) and Guyana (24%). In all other countries, the proportions ranged from 11% to 15%. About nine in 10 adolescent women received their test result.

HIV testing and receipt of results, by residence. In Asia and Latin America and the Caribbean, access to HIV testing did not seem to vary by residence. In about a third of African countries, however, higher proportions of adolescent women residing in urban areas than in rural areas were tested and received their result. The differences between countries were not very large and averaged about seven percentage points.

STI Treatment

National surveys obtain information from sexually active women about whether they have had an STI or experienced symptoms (i.e., discharge, ulcers or sores) in the past 12 months and about whether they obtained care for the STI or symptoms. Because effective treatments are most likely to be provided in a health facility, the proportion of all adolescent women with an STI or symptoms receiving care in a health facility is an important indicator of access to care.

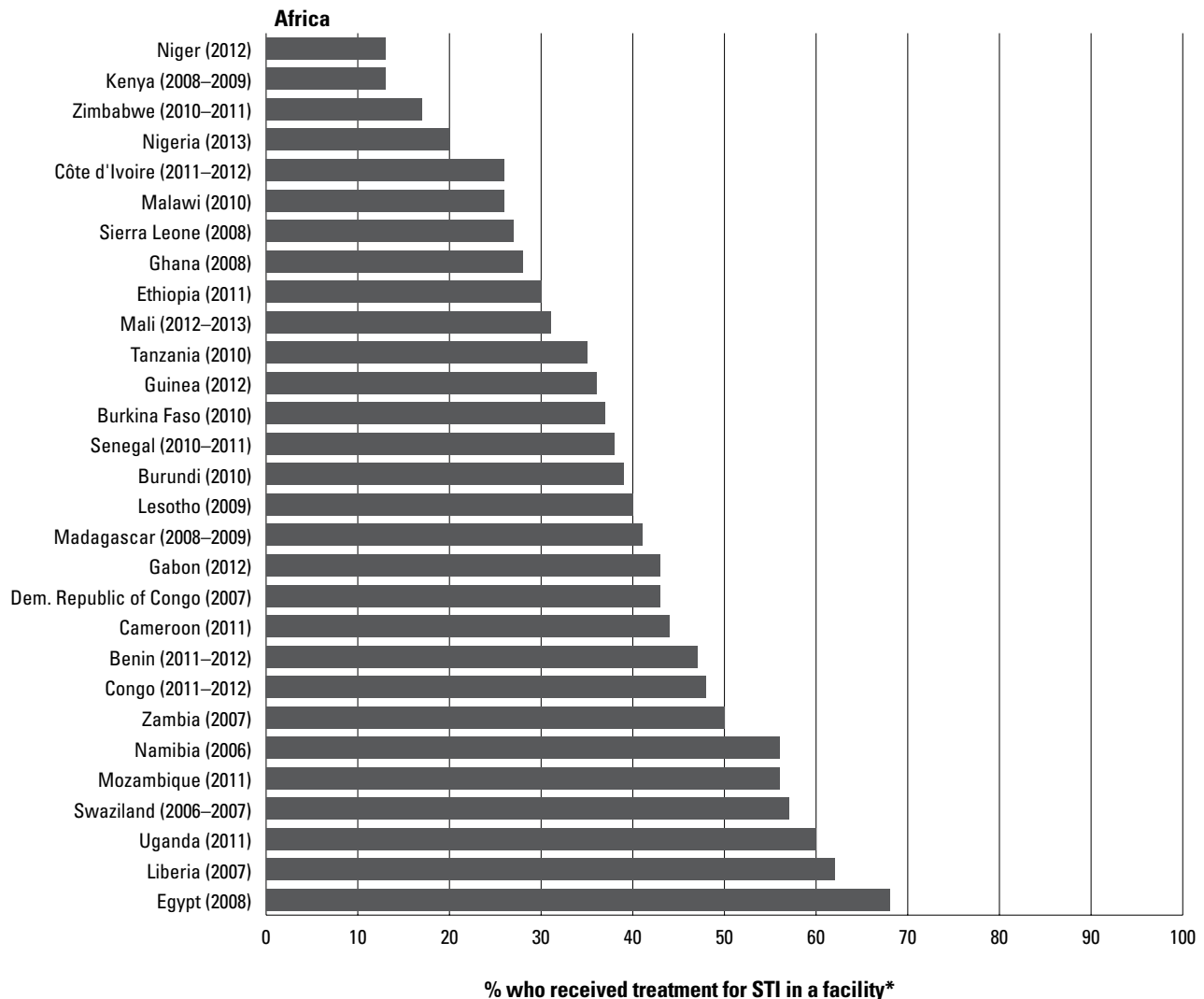
STIs and STI symptoms. The proportion of women reporting having an STI or STI symptoms underestimates the proportion having STIs because it is based on self-reported data (rather than clinical data) and thus does not include asymptomatic cases, which, according to WHO data, account for 66% of all STI cases among women.²⁸ It is nevertheless useful in providing a minimum estimate of the prevalence of STIs and, more relevant for this report, permits us to document what proportion of these women obtain care for the STIs or symptoms.

Among adolescent women aged 15–19 who had sex in the past year, the range of proportions who reported having either an STI or STI symptoms in the past year varied somewhat by region: 3–41% in Africa, 4–22% in Asia and 7–38% in Latin America and the Caribbean.

STI treatment and source of treatment. Women who reported having had an STI or STI symptoms in the past year were asked whether they obtained treatment and, if so, where. These data were not collected in 18 countries. For nine countries, the sample size for adolescent women who reported obtaining care was small (25–49 cases) and results should be interpreted with caution. Data based on valid sample sizes (50 or more cases) were available for 37 countries.

- In 16 of the 29 African countries with data, at least 50% of adolescent women who had an STI or related symptoms sought treatment (Figure 4). For eight countries, the proportion was between 50% and 60%, and in 13 countries, the proportion was less than 50%. In three countries (Ethiopia, Niger and Zimbabwe), fewer than

FIGURE 4. In the majority of African countries, fewer than half of women aged 15–19 with an STI or STI symptoms received treatment in a health facility.



*Among those who were sexually active in the past 12 months and reported having an STI or STI symptoms during that period.

one in three adolescent women with an STI or an STI symptom obtained care.

In only a quarter of the African countries with data available did 50% or more of adolescents with an STI or related symptoms obtain treatment from a health facility; the highest level was in Egypt (68%). The proportion who went to a health facility was lowest in Kenya (13%), Niger (13%) and Zimbabwe (17%).

- Nine of the 22 Asian countries had data available. In only five countries (Cambodia, Laos, Maldives, Pakistan and Timor-Leste) did 50% or more of adolescents seek treatment for an STI or STI symptoms, with an upper range of 78%. The lowest proportions were reported in India (26%) and Nepal (33%). In Indonesia and Bangladesh, the proportion was 47%.

In all but two countries in Asia, most adolescents with an STI or STI symptoms obtained treatment from a source other than a health facility or sought no treatment at all. Only in Maldives and Timor-Leste did more than 50% seek treatment from a health facility (74% and 53%, respectively).*

- In Latin America and the Caribbean, eight out of 13 countries had data on adolescent women's STI treatment-seeking behavior. The proportions of adolescent women in Latin America and the Caribbean who sought treatment for an STI or STI symptoms were generally higher than that in Africa and Asia, ranging from 52% in Bolivia to 84% in Peru. The lowest levels were reported in Brazil (47%) and Guyana (48%).

The proportion of adolescent women with an STI or STI symptoms who sought treatment in a health facility was also moderate to high, ranging from 50% in Bolivia to 72% in Colombia. Only in Guyana and Brazil did fewer than 50% of adolescents seek treatment from a health facility.

*Results based on only 25–49 cases in each country.

Pregnancy, Childbearing and Abortion

The average global birthrate among adolescents is 50 births per 1,000 women aged 15–19, and the majority of these births are concentrated in developing countries.⁶⁰ Comprehensive data on the number and rate of adolescent pregnancies in developing countries are scarce. An estimate from Sub-Saharan Africa, however, shows that in 2007, among all pregnancies experienced by adolescent women, about 70% ended in births, 13% resulted in abortions and 16% resulted in miscarriages.⁶¹ Approximately a third of adolescent pregnancies in this subregion are unintended, ending in either unplanned births (22%) or abortions (13%).

This chapter presents data for adolescent women on the proportion who have begun childbearing, the fertility rate, unplanned births (by subgroups) and abortion incidence, and it summarizes findings from the literature review on adolescent abortion and postabortion care in developing regions (Appendix Table 6, pages 58–59).

Childbearing Among Adolescent Women

In many countries, a substantial proportion of adolescent women had already begun childbearing—they either had already experienced a birth by the time of the survey or were pregnant with their first child (Figure 5, page 24).

- In Africa, there was wide variation in the proportion of 15–19-year-old women who had begun childbearing, ranging from 1% in Tunisia to 49% in Central African Republic. In Congo, Guinea, Liberia, Madagascar and Sierra Leone, about one in three adolescent women had begun childbearing.
- In Asia, fewer than one-fifth of adolescent women had begun childbearing in every country but Bangladesh, where the proportion was 30%. With an average proportion around 10%, Asian countries generally had a lower proportion of adolescent women who had begun childbearing, compared with Latin America and the Caribbean and Africa.
- In Latin America and the Caribbean, the proportion of women who had begun childbearing ranged from 13% in Peru to 24% in Honduras.

Age-Specific Fertility Rate

- Many of the countries with the highest rates of adolescent fertility were in Africa, where most countries reported more than 100 births per 1,000 adolescent women. Only a third of countries had an age-specific fertility rate of less than 100. Rates were particularly high in the following Francophone countries: Central African Republic (229), Niger (206) and Chad (203).
- In most Asian countries the age-specific fertility rate was low, ranging from 10 to 59 per 1,000. With rates exceeding 80, Bangladesh, India, Iraq, Laos and Nepal were exceptions.
- In Latin America and the Caribbean, the age-specific fertility rate was consistently higher than the global average, ranging from 54 in Costa Rica to 101 in Honduras and Guyana.

Unplanned Births

Births during adolescence resulting from unintended pregnancies are associated with adverse reproductive health outcomes and indicate that these women may be encountering barriers to obtaining and using contraceptives and to obtaining safe abortion services. During the adolescent years, especially before age 18, unplanned births are associated with low rates of school completion and limited future opportunities, thereby impacting these women's long-term economic status and that of their families.⁶²

In many countries in the developing world, there is an expectation that regardless of their age, married women will have a child soon after marriage. Married adolescent women are likely to be influenced by those expectations and report their births as planned, even if that is not actually the case. As a result, the proportion of adolescent births that are reported as unplanned will be a conservative estimate. We can expect that in countries where early marriage is prevalent, unplanned births are more likely to be somewhat underreported. The data below refer to women's most recent birth that occurred in the 2–5 years preceding the survey* and before the woman reached

*For the 16 countries with MICS surveys, the time frame for this measure is the two years preceding interview; for the 52 countries with DHS and other surveys, the time frame is five years preceding interview.

age 20. This measure thus includes births occurring during adolescence, as well as a small number of births occurring among women younger than 15.

- In a third of countries in Africa, 40% or more of births were unplanned. Proportions were more than 50% in Gabon, Ghana, Lesotho, Namibia, Sao Tome and Principe, and Swaziland. In only four countries—Burkina Faso, Egypt, Niger and Nigeria—was this proportion less than 10%.
- In the 14 countries with available data in Asia, the proportion of births that were unplanned ranged from less than 2% in Kyrgyzstan and Tajikistan to 32% in the Philippines.
- In the majority of countries in Latin America and the Caribbean, more than half of births were unplanned. The lowest reported proportion of unplanned births was in Mexico (41%).

Unplanned births, by wealth. In most African countries, the proportion whose most recent birth was unplanned was as much as 20 percentage points higher among those from better-off households than among those from poorer households, suggesting that adolescent women from wealthier households are more likely to want to delay childbearing. Except in the Philippines, this pattern does not hold true in Asian countries, where wealth generally seemed to be positively associated with the planning status of births. In Latin America and the Caribbean, the pattern is mixed: In four countries, higher proportions from better-off households than from poor households had an unplanned birth, while the reverse was true in three countries, all of which are in South America.

Abortion Incidence

The most recent research on unsafe abortion estimated that in 2008, about 3.2 million adolescent women in developing regions underwent unsafe abortions, at an annual rate of 16 unsafe abortions per 1,000 adolescents.²⁵ The unsafe abortion rate among adolescents is estimated to be 26 per 1,000 women aged 15–19 in Africa, 9 per 1,000 in Asia (excluding East Asia) and 25 per 1,000 in Latin America and the Caribbean.²⁵

In addition, evidence on abortion among adolescents is presented in DHS reports from nine developing countries: Armenia, Azerbaijan, Cameroon, Congo, Gabon, Ghana, Haiti, Kyrgyz Republic and Tajikistan. The proportion of adolescent women who reported ever having had an abortion was 0.2% in Armenia, 0.4% in Azerbaijan, 2% in Cameroon, 7% in Congo, 5% in Gabon, 3% in Ghana, 1% in Haiti, 0% in Kyrgyz Republic and 0.2% in Tajikistan.^{63–71} The proportion of 20–24-year-olds who reported having an abortion prior to age 20 was 15% in Congo, 13% in Gabon

and 1% in Haiti (these data were not presented in the survey reports for the other six countries). Because abortion is widely underreported, these DHS abortion estimates represent minimum levels of abortion among adolescents in these countries.

Country-level studies using indirect estimation approaches (as opposed to the self-reports used in the DHS) have recently found adolescent abortion rates (the number of abortions per 1,000 women aged 15–19) of 30 in Burkina Faso, 11 in Ethiopia, 38 in Kenya, 21 in Malawi and 44 in Mexico.⁷² For comparison, the adolescent abortion rates in developed countries range from 5 in Switzerland to 20 in England and Wales and in Sweden.⁷²

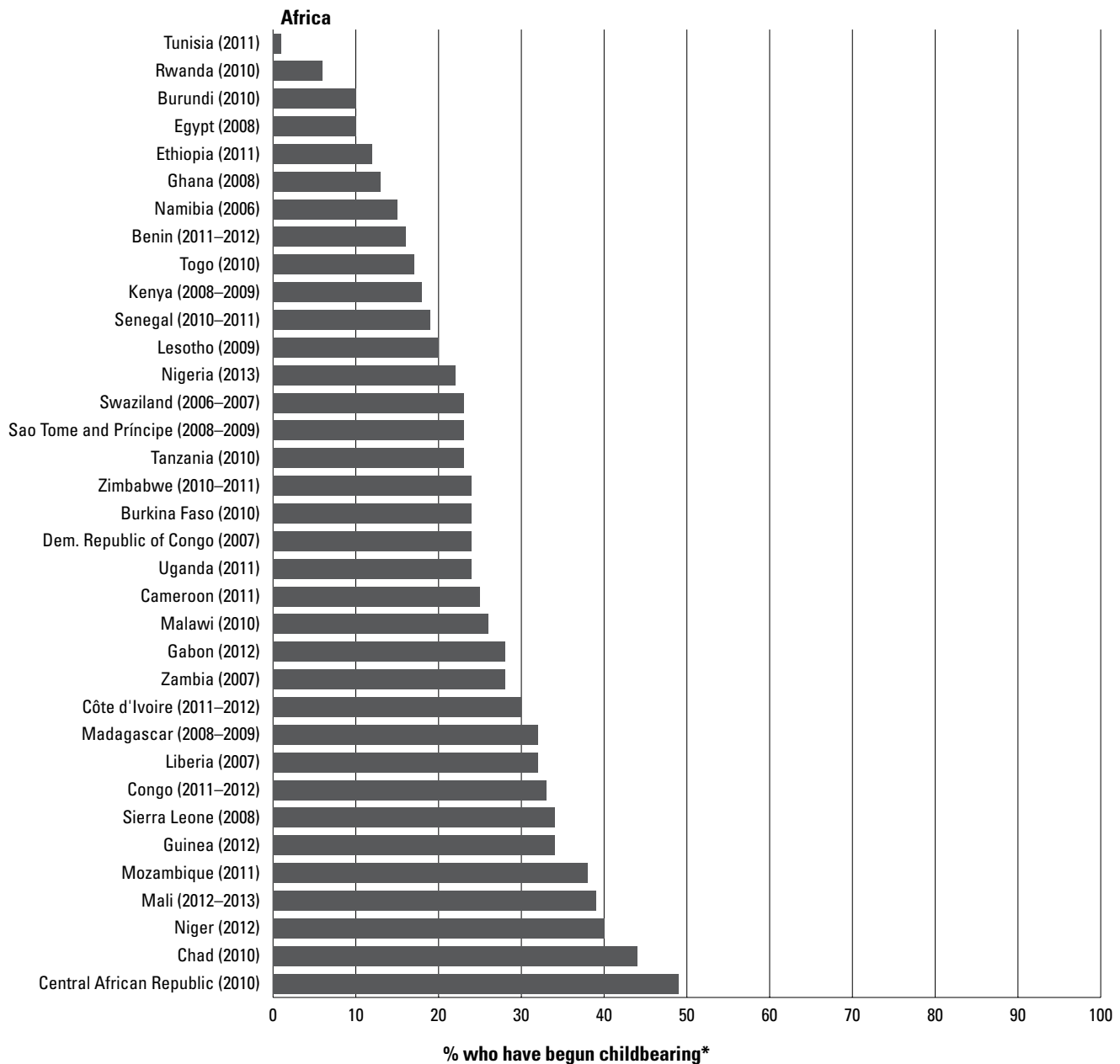
Abortion Care

Because very little comprehensive, nationally representative data on adolescents' use of abortion services is available from sources such as DHS, we conducted a review of the available literature on this topic. Taken as a whole, these data show that adolescents are less likely than older women to obtain safe abortions and more likely to terminate pregnancies after the first trimester. They are also more inclined to seek abortions from traditional providers, go to private providers operating clandestinely outside of the health system (many of whom are untrained and unlicensed to perform abortions) or to attempt to induce abortion themselves.

One caveat to the findings presented here is that access to abortion-inducing drugs, especially misoprostol, has expanded dramatically in many developing countries within just the past year or two. These drugs are typically less expensive, easier to obtain and more discreet than surgical abortion procedures. As we discuss in the following section, cost and privacy are two of the biggest barriers to abortion care faced by adolescents in developing countries; therefore, the context of teenagers' access to abortion services is likely to be changing in countries where access to medication abortion has expanded. Unfortunately, the literature searches for this review did not turn up any studies about adolescents' use of or access to medication abortion, likely because the development is too new for research on this topic to have been published.

Abortions from untrained practitioners. Thirteen studies provided information on adolescents' sources of abortion care in seven countries. Traditional medical practitioners and unlicensed providers in private facilities were often a first resort for adolescents seeking to terminate their pregnancies.^{73–85} While this is hardly surprising in countries where abortion is legally restricted (Malawi,

FIGURE 5. In countries in all developing regions, sizeable proportions of women aged 15–19 have begun childbearing.



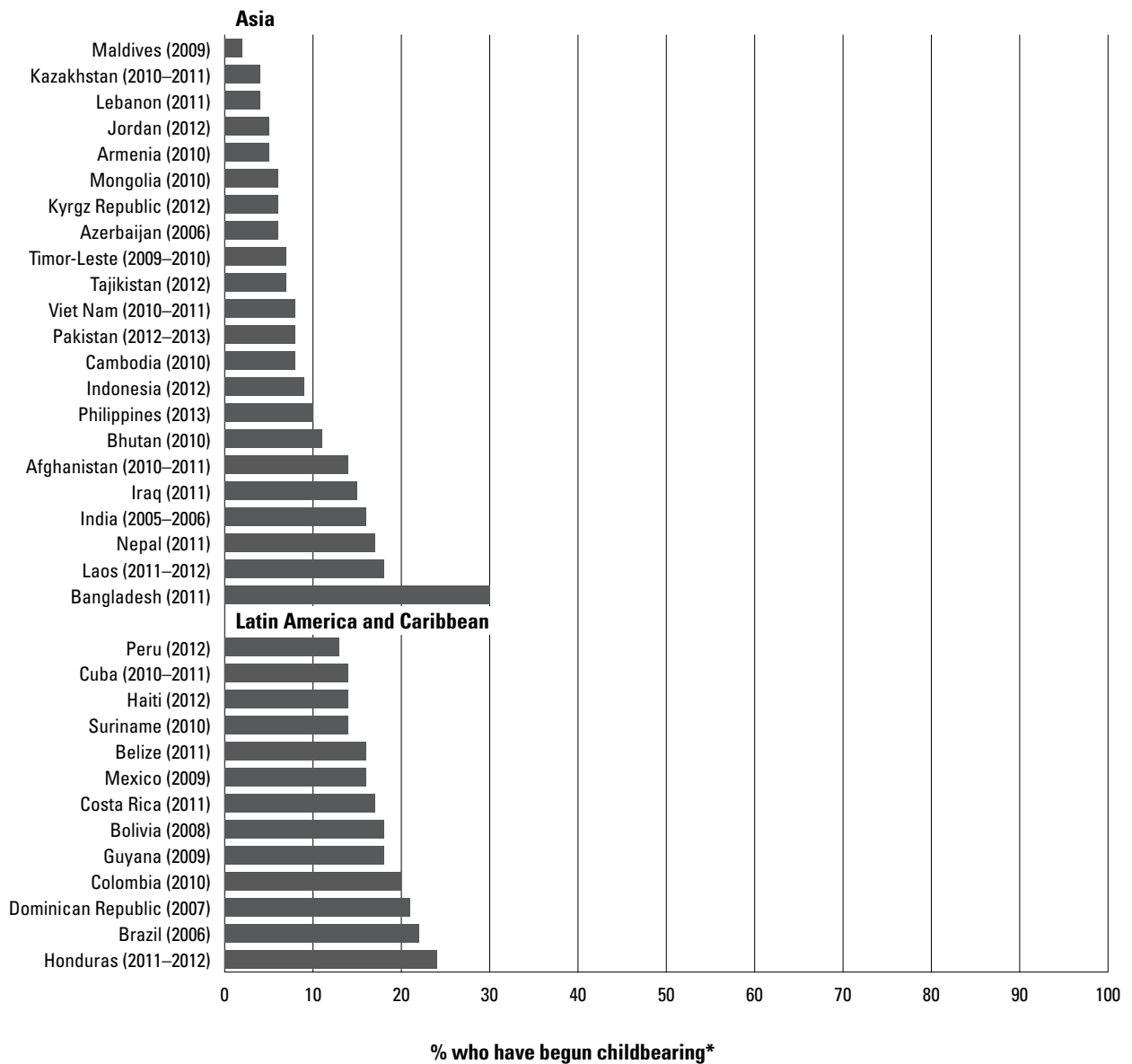
*Includes women who are currently pregnant with their first child.

Nigeria, Tanzania and Zambia), the pattern holds even where abortion is legal or available on broad grounds (Ghana, India and Hong Kong).

Methods employed by traditional practitioners reported in these studies included teas and herbal solutions,^{73,75–83,85,86} quinine or other malaria drugs,^{73,75,80,82,83,86} a paste of mashed roots,^{75,80,83} and the insertion of sharpened cassava sticks into the vagina and cervix.^{73,75,82,83}

Private providers used standard clinical abortion procedures such as dilation and curettage (D&C), but typically performed them without proper equipment in unhygienic conditions, often without any formal training on performing abortions.^{76,79,80,82}

FIGURE 5, continued



*Includes women who are currently pregnant with their first child.

Self-induced abortion. Many studies reported that adolescents attempted to terminate pregnancies by taking medications they bought in markets or at chemist shops, typically without first consulting any type of medical provider or obtaining information about the correct dosage. Methods these women used for self-inducing abortion in India, Malawi, Tanzania and Zambia included caffeine pills,^{73,75–77,79,83} painkillers,^{73,75,76,79,83} laundry detergent,^{73,75,79,83} and overdoses of chloroquine (a malaria drug) or oral contraceptive pills.^{73,75–77,79,83}

Barriers to the use of safe abortion services. In settings where abortion is highly legally restricted—and even where the law allows for safe abortion and trained providers are available to perform them—adolescents may turn to unsafe services and may be more likely than older women to do so. This is likely due to a range of factors, including poor knowledge of sources of safe abortion services, the high cost of such services, stigma attached to nonmarital sexuality and pregnancy, and delays in recognizing a pregnancy due to poor knowledge of pregnancy risk and early symptoms.

- In a survey of 1,000 female students at Ibadan University in Nigeria, 60% reported having obtained at least one abortion.⁸⁰ Of these women (reporting on their most recent abortion), 30% self-induced, 59% obtained the procedure from a private hospital or clinic (some of which were not licensed) and 11% went to a government-owned hospital or clinic.
- In Ghana, a study using nationally representative data from the 2007 Maternal Health Survey found that among women who obtained an abortion in the past five years, 44% of those younger than 20 did so with a safe provider, compared with 57% of 20–29-year-olds and 65% of women aged 30 and older.⁸⁷ Even after controlling for a variety of demographic and socioeconomic characteristics, knowledge of the legal status of abortion and partner support, adolescents had 77% lower odds of obtaining a safe abortion, compared with women aged 30 and older.

While adolescents' use of safe abortion services and disparities between adolescents and older women's use of these services vary across countries, one consistent finding was that cost and confidentiality were often of primary concern for adolescents—more so than safety. The literature suggests that the decision to seek unsafe, clandestine abortions even when safe, legal options are available is driven by difficulty paying for the procedure and by a desire to keep the abortion secret by avoiding parental involvement requirements.

- A study in the northern Indian city of Rohtak interviewed 83 adolescents aged 10–19 who had received an abortion and found that 56% went to an untrained provider in an unlicensed facility.⁸⁸ For 89% of respondents, confidentiality and low cost were more important to them than safety when choosing a provider.
- According to in-depth interviews with 29 economically disadvantaged young women aged 13–24 in Hong Kong who had obtained at least one induced abortion during their teenage years, the women who were youngest at the time of their abortions were the most likely to seek and use illegal, unsafe abortion services.⁷⁶ These respondents cited cost, confidentiality or inability to obtain parental consent as their main concerns.
- A mixed methods study on the provision of abortion services and counseling that involved the use of 20 teenage mystery client visits to 11 facilities (three NGO clinics and eight public-sector facilities) in Mexico City found that all of the mystery clients were refused access to counseling on abortion unless accompanied by an adult, even though it is not a legal requirement and even though counseling (unlike actually obtaining an abortion) does not require adult involvement or consent.⁸⁹

Timing of seeking abortion care. All of the seven studies that addressed this question showed that even when obtaining safe abortions, adolescents are more likely than older women to terminate pregnancies in the second trimester. The studies found that adolescents take longer than older women to recognize their pregnancies and to locate safe providers, and many resort first to traditional healers or to self-inducing abortion. Many have difficulty obtaining money to pay for the procedure. These characteristics of adolescents likely contribute to their higher proportion of late-gestation abortions. Young women in rural areas and those who are unmarried are also more likely to delay abortion care. Overall, difficulty affording services was identified as a reason for seeking unsafe or self-induced abortions, second-trimester abortions and delayed postabortion care in all 14 of the studies that collected information on this issue.

- A study of the patient records of 1,080 women obtaining abortions from a Kenyan clinic in 2006 found that a higher proportion of younger women than older women had obtained second-trimester abortions: About 45% of adolescents aged 10–18 came in during the second trimester, compared with 30% or less of older women.⁹⁰
- Differences in abortion knowledge, practice and help-seeking between urban and rural adolescents were observed in India,^{78,79} Malawi,⁷³ Tanzania⁸³ and Zambia.⁷⁵ Rural adolescents were more likely than those in urban areas to undergo second-trimester abortions, to make multiple abortion attempts due to first seeking care from traditional practitioners or attempting to self-induce, to delay seeking needed postabortion care and to have limited knowledge about their legal rights to safe abortion in settings where such rights exist.
- In Bihar and Jharkhand, unmarried teenagers were more likely than married teenagers to recognize and confirm the pregnancy later than two months' gestation, to attempt to self-induce abortion before going to a clinic or hospital, and to undergo a second-trimester abortion.^{77,79}
- The same study also found that out of 549 young women who had obtained an abortion, 39% of 15–17-year-olds and 20% of 18–19-year-olds took at least two months to recognize their pregnancy, compared with only 10% of 20–21-year-olds and 5% of 22–24-year-olds.⁷⁸ Women aged 15–17 experienced 10% higher odds of having had a second-trimester abortion, compared with older women.

Postabortion Care

In countries with restrictive abortion laws, postabortion care is critical to saving lives and protecting women's health. By providing contraceptive counseling and ser-

vices, effective postabortion counseling can also be an important avenue for preventing future unwanted pregnancies and repeat abortions. The literature indicates that adolescents are more likely than older women both to delay seeking treatment for abortion complications and to forego treatment altogether.

Findings from four prospective facility-based studies conducted in Colombia,⁹¹ Dominican Republic,⁹² Kenya⁹⁰ and Malawi⁹³ indicate that adolescents account for sizeable shares of postabortion care patients, ranging from 21% of all such patients in Malawi to 51% in the Dominican Republic.

Findings from a prospective study of postabortion care patients from a nationally representative sample of health facilities in Malawi indicated that adolescents may also be more vulnerable to severe complications from unsafe abortion.⁹³ Physicians reported treating 3.5 times as many mechanical injuries to the cervix or uterus among adolescents as among older women.

Although adolescents make up a large proportion of postabortion care patients, studies indicate that many adolescents may not be receiving the services they need.

- A study in Owerri, Nigeria found that in a sample of 62 10–19-year-olds who had obtained an abortion, 73% experienced a complication; of these, only 30% sought postabortion care.⁹⁴
- A qualitative study consisting of in-depth interviews with 34 13–19-year-olds seeking postabortion care at a hospital in Lusaka, Zambia found that many of the patients delayed seeking services because they were told they would be refused treatment or be reported to the police.⁷⁴

Postabortion contraceptive care. Because adolescents who arrive for postabortion treatment are demonstrably at risk for unintended pregnancy, contraceptive counseling and supplies are essential to preventing future unintended pregnancies and averting potential unsafe abortions. Studies examining postabortion contraceptive care among adolescents generally found that young women are less likely than older women to obtain a contraceptive method as part of postabortion care.

- In a 2006 study of postabortion care patients in Kenya, 35% of those aged 15–24 received a contraceptive method after their treatment, compared with 48% of those aged 25 and older.⁹⁰
- This differential was smaller in the Dominican Republic, where 40% of postabortion care patients aged 24 and younger were discharged with a method, compared with 45% of clients aged 25–30.⁹²

A number of factors impede adolescent women's use of contraception following an induced abortion.

- Five studies provided information on adolescents' reasons for failing to adopt a method of contraception following an induced abortion: Three studies identified concerns about infertility,^{81,83,90,95} three identified fear of parents' discovery,^{90,92,95} four mentioned a belief that family planning was only for women who were married or had already had a child,^{81,83,90,95} and two mentioned adolescent women's belief that they could not get pregnant.^{90,92}
- Among teenage postabortion care patients at five hospitals in the Dominican Republic, parental opposition and the belief that they would not get pregnant again (despite education about their pregnancy risk) were the two most important barriers to adopting a method of contraception after receiving postabortion counseling.⁹²

Maternal Health Care

This chapter presents findings on the use of antenatal care and delivery services among women whose most recent birth occurred before age 20 and in the past 2–5 years.* Thus the indicators refer to recent births occurring during adolescence (ages 15–19), as well as the small proportion occurring among women younger than 15.

The indicators included in this chapter are receipt of any antenatal care from a skilled provider; receipt of four antenatal care visits, at least one of which was to a skilled provider; median months pregnant at first antenatal care visit; receipt of information from an antenatal provider of where to seek care for pregnancy complications; delivery at a health facility and reasons for not delivering in a health facility; delivery attended by a skilled provider; cesarean section delivery; and barriers to getting medical advice or treatment.

We focus the subgroup analysis on the indicator “delivery in a health facility” because among the indicators we selected, it is the most direct measure of access to maternal health care. The data by residence and wealth provide information on where needs are greatest in obtaining delivery care. All data are shown in Appendix Tables 7 and 8, pages 60–63.

This report does not compare adolescent mothers† to older women, but prior analyses have shown that older mothers are more likely than adolescents to use antenatal care services.^{96–99} More specifically, adolescent mothers have been found to be more likely to delay seeking antenatal care¹⁰⁰ and less likely to receive adequate antenatal care, compared with older mothers.^{98,99}

Antenatal Care

We report findings on three indicators related to receipt of antenatal care by women whose most recent birth occurred in the past 2–5 years and before age 20. First, we report on the proportion who received any professional antenatal care for their most recent birth to understand

the extent to which pregnant adolescent women are able to gain access to the health care system. Visiting a skilled antenatal care provider (a midwife, nurse or doctor) presents an opportunity for pregnant women to receive preventive care, treatment for underlying conditions that threaten their health and the health of their newborns, and education to encourage safe birth practices and the use of emergency obstetric care, if necessary.^{101,102} This is important for understanding access, but women’s receipt of professional antenatal care does not guarantee they receive all the necessary components of pregnancy care. WHO recommends a minimum of four antenatal care visits, beginning in the first trimester, to afford sufficient opportunity to identify and treat underlying health problems, such as anemia, malaria and syphilis, that would threaten the health of pregnant women and their newborns.^{101,103} For that reason, we also report findings on the proportion of women who had their most recent birth in the past 2–5 years and before age 20 who received at least four antenatal care visits and the gestational age at which they first sought this care.

Receipt of any antenatal care from a skilled provider

- In nearly one-third of African countries surveyed, 95% or more of women giving birth before age 20 had made at least one antenatal care visit to a skilled provider (i.e., a doctor, midwife, nurse or any other qualified health professional, including any provider accessed via the national health system, a health plan or health insurance). In only four countries (Central African Republic, Chad, Ethiopia and Nigeria) was the proportion less than 75%.
- Similarly, in only five Asian countries (Afghanistan, Azerbaijan, Bangladesh, Laos and Nepal) was that proportion lower than 75%. At 50% each, Laos and Afghanistan had the lowest proportion among all Asian countries.
- While the proportion of women giving birth before age 20 who received some antenatal care from a skilled provider was generally high across all three surveyed regions, it was most consistently high in Latin American

*For MICS, the time frame for this measure is the two years preceding the study; for DHS and other surveys, the time frame is five years.

†Atuyambe et al. defined adolescents as women aged 13–19.

and Caribbean countries, where the proportion was at least 89% in every country.

- Of all of the countries surveyed, Ethiopia had the lowest proportion of women giving birth before age 20 who had received care from a skilled provider (43%). By contrast, 100% had received at least some antenatal care from a skilled provider in Maldives, Mongolia and Sao Tome and Principe.

Receipt of four antenatal care visits, including at least one with a skilled provider

- In Africa, among women giving birth before age 20, the lowest proportions who had had four or more antenatal care visits—at least one of which was to a skilled provider—were in Ethiopia (16%), Chad (24%), Burundi (32%) and Niger (31%). In Burkina Faso, Burundi, Kenya, Niger and Tanzania, where very high proportions (more than 80%) of young women had received some skilled antenatal care, the proportion who had had at least four visits (including one or more with a skilled provider) was much lower (less than 40%).
- In two-thirds of African countries, 40–80% of women giving birth before age 20 had received four or more visits. In only five African countries (Congo, Gabon, Ghana, Sao Tome and Principe and Swaziland) was the proportion greater than 70%.
- In Asia, at least 80% of women giving birth before age 20 had four or more antenatal visits in almost one-third of countries surveyed. The highest proportions were found in Western Asia, specifically Armenia (94%) and Jordan (93%), while the lowest were found in Southern Asia, in Afghanistan (13%) and Bangladesh (21%).
- In all Latin American and Caribbean countries, 59% or more of women giving birth before age 20 had had at least four visits. In two-thirds of the countries, the proportion was higher than 80%.

Timing of first antenatal care visit*

- In the vast majority of countries surveyed, the median gestation at which women giving birth before age 20 first sought antenatal care fell between three months and five months.
- On average, women giving birth before age 20 in Africa waited longest to obtain antenatal care: Their median gestation at first visit was solidly in the second trimester,

*Among women reporting on their most recent birth before age 20 and in the past 2–5 years who received at least one antenatal visit. Data on this indicator were available for all African countries, except Central African Republic, Chad, Tunisia and Togo; for 60% of Asian countries; and for 40% of countries in Latin America and the Caribbean.

ter, between four and five months. Women in Kenya waited longer than in any other country, with a median gestation of six months.

- Across Asia and Latin America and the Caribbean, the median gestation at which women sought antenatal care fell between three and four months. Of all the countries surveyed with data for this indicator, Jordan and Maldives were the only ones where women tended to seek care earlier, at about two months' gestation.

Receipt of Information on Where to Obtain Care for Complications†

Because the risk of pregnancy complications is heightened among adolescent women,† it is important for health providers to ensure that young women know when and where to seek medical care in the event of a pregnancy complication. WHO highlights the importance of educating women about the emergency health resources available to them as a critical component of antenatal care, and points to encouraging evidence that improved knowledge may be associated with increased health-seeking behavior.¹⁰³

- In the 13 African countries for which data were available, among women giving birth before age 20 who had any antenatal care, the proportion who were told where to go if they experienced pregnancy complications ranged from 31% in Egypt to 75% in Malawi. In half of the African countries that reported on this indicator, fewer than 50% of respondents were provided with this information.
- In the six countries in Asia for which data were available, proportions were similar to those in African countries, ranging from 34% in Azerbaijan to 73% in Nepal.
- In general, a higher proportion of women giving birth before age 20 in Latin America and the Caribbean who had any antenatal care were told where they could receive care for complications. All five countries with these data reported proportions above 57%; the highest proportion was in Peru (89%).

†Among women reporting on their most recent birth before age 20 who received at least one antenatal visit. The data on this indicator are limited, available for only half of Latin American and Caribbean countries and fewer than half of the countries in Asia and Africa.

‡Pregnant adolescents are at an increased risk of eclampsia; premature, prolonged or obstructed labor; fistula; and anemia (source: UNICEF et al., *Facts for Life*, fourth ed., New York: UNICEF, WHO, UNESCO, UNFPA, UNDP, UNAIDS, WFP and the World Bank, 2010).

Delivery Attended by a Skilled Provider

In developing countries, receiving proper delivery care is especially critical, since the majority of maternal and newborn deaths occur around the time of delivery.¹⁰⁴ Skilled care at birth is recognized as an essential intervention to prevent maternal deaths, along with having the proper equipment, supplies and drugs to effectively manage complications.¹⁰¹ The following data refer to women's most recent birth occurring before age 20 and in the past 2–5 years.

- The proportion of women whose births were attended by a skilled provider varied widely across countries in Africa, ranging from 13% in Ethiopia to 94% in Congo. Only about one-fifth of African countries had proportions of 80% or more, and the majority of countries fell between 40% and 80%.
- In Asia, the proportion of women whose births were attended by a skilled provider ranged from 30% in Bangladesh to 100% in Armenia, Kazakhstan and the Kyrgyz Republic. In about half of the Asian countries for which data were available, the proportion was at least 80%.
- Latin America and the Caribbean had the most consistently high proportions of women whose births were attended by a skilled provider of the three major regions. With the exception of Haiti (44%), every country in the region had a proportion of 79% or higher, and proportions in two-thirds of the countries exceeded 90%.

Delivery in a Health Facility

Health facilities are best equipped to provide treatment for women experiencing obstetric complications, even compared with deliveries outside of a health facility that are attended by a trained health professional.¹⁰⁴ Women who deliver in a health facility are also more likely than those who do not to receive postnatal care from a skilled provider.¹⁰¹ We report findings on the proportion of women who delivered in a health facility, among those whose most recent birth occurred before age 20 and in the past 2–5 years. We also look at the differential experiences of these women by wealth and residence, as well as women's reasons for not delivering in a health facility.

- Overall, the proportion of women giving birth who delivered at a health facility was slightly lower than the proportion delivering under the supervision of a skilled provider, either in a health facility or elsewhere. Typically, the proportions of the two measures are very similar,¹⁰¹ and in roughly two-thirds of the countries surveyed, the difference between the two was less than five percentage points.
- A few countries in Africa and Asia saw a substantial difference between the proportion of women giving

birth before age 20 who sought skilled delivery assistance and the proportion who went to a health facility to deliver. In Sierra Leone, only 26% gave birth in a health facility, while 45% were attended by a professional. In Indonesia, the gap was even larger (23 percentage points).

- Countries in Latin America and the Caribbean generally had high proportions of women giving birth before age 20 and who had health facility deliveries—more than 90% in almost two-thirds of countries. The only country that fell below 76% was Haiti, where only 44% of women delivered their most recent birth in a health facility.

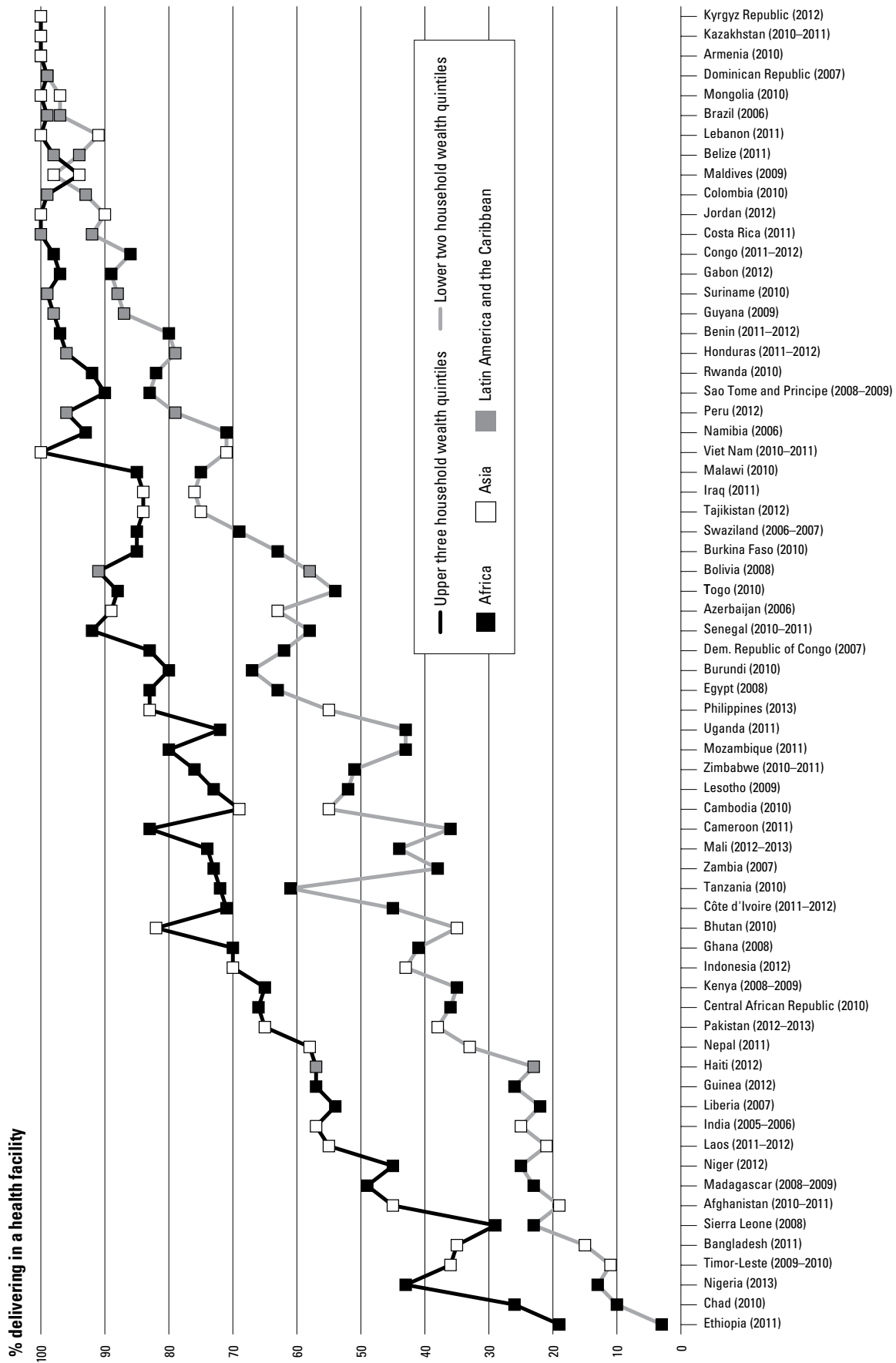
Delivery in a health facility, by wealth

- In all African countries, the proportion of women giving birth before age 20 who delivered in a health facility was much greater among those from better-off households (those in the top three wealth quintiles) than among those from poorer households (those in the bottom two quintiles; Figure 6, page 31). For example, in Cameroon, the proportions were 86% and 36%, respectively.
- This pattern generally held true for countries in Asia and Latin America and the Caribbean. However, for some countries in these regions, there was little difference between the two groups, especially where an overall high proportion of women giving birth before age 20 delivered in a health facility. For example, in Lebanon and Jordan, 90–91% of poorer women delivered in a health facility, compared with 100% of better-off women. In Latin America and the Caribbean, the differences between the groups were not as disparate as in Asia and Africa.

Delivery in a health facility, by residence

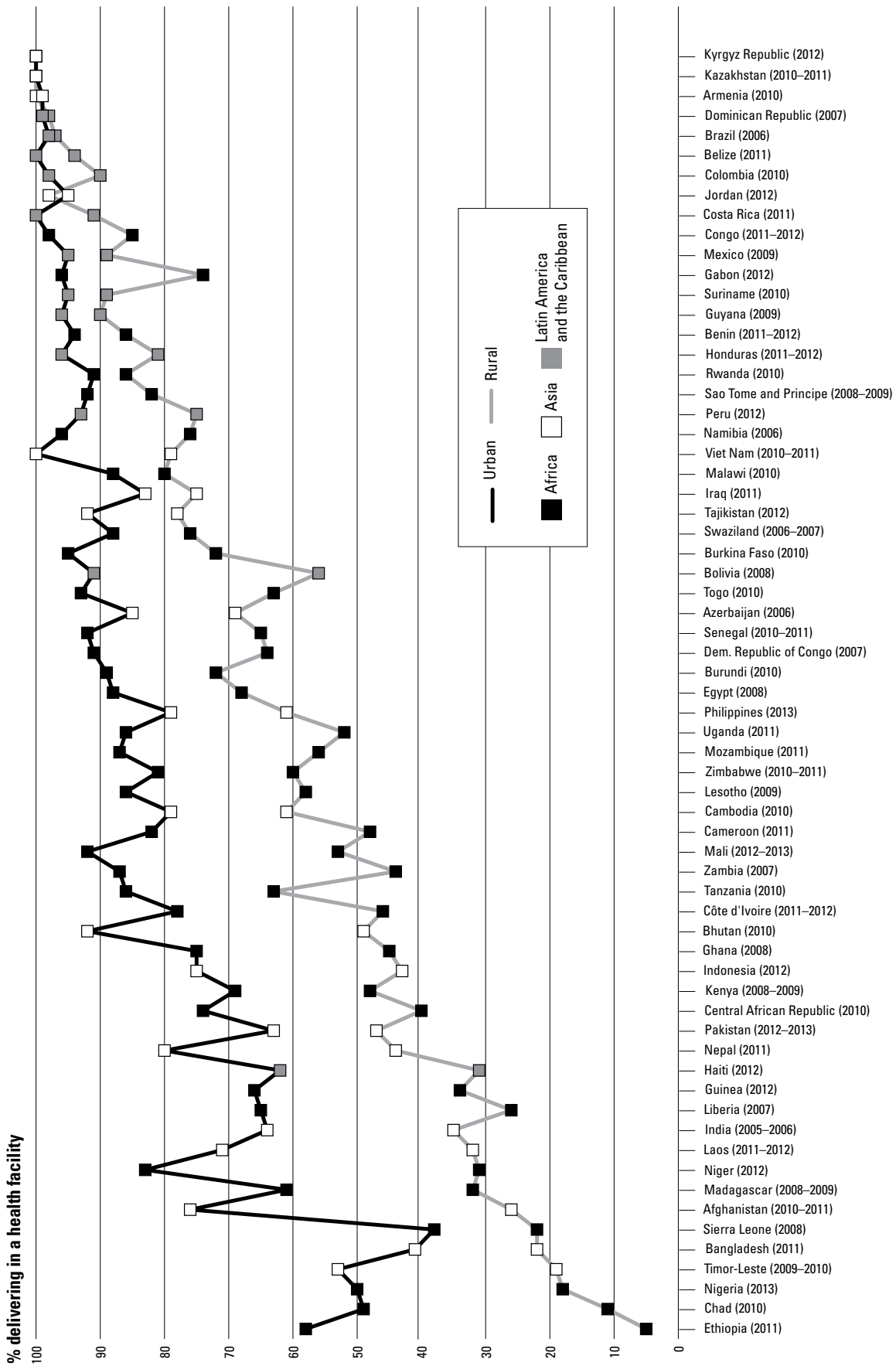
- In Africa, urban women giving birth before age 20 delivered in a health facility in substantially higher proportions compared with their rural counterparts (Figure 7, page 32). In three-quarters of African countries there was a difference of at least 20 percentage points between the two groups. In both Ethiopia and Niger, the proportion of urban women who delivered in a health facility exceeded the proportion among rural women by more than 50 percentage points (58% vs. 5% in Ethiopia and 83% vs. 31% in Niger).
- In Asia, aside from Armenia, Kazakhstan and Kyrgyz Republic, there were wide differences by area of residence. For example, in Nepal, 44% of women giving birth in rural areas delivered in a health facility, compared with 80% of those in urban areas.
- In Latin America and the Caribbean, the proportions of rural and urban women delivering in a health facility

FIGURE 6. Among women whose most recent birth occurred before age 20,* larger proportions from better-off households than from poorer households deliver in a facility.



*In past 2 years (for MICS) or in past 5 years (for DHS and other surveys).

FIGURE 7. Among women whose most recent birth* occurred before age 20, larger proportions of those living in urban areas, rather than rural areas, deliver in a health facility.



*In past 2 years (for MICS) or in past 5 years (for DHS and other surveys).

were more similar. Still, some large discrepancies existed, especially in Haiti, where the proportion delivering in a health facility was 62% in urban areas and half that (31%) in rural areas; in Bolivia, the proportions were 91% and 56%, respectively, and in Peru they were 93% and 75%.

Reasons for Not Delivering in a Health Facility

Given the benefits of delivering in a health facility, it is important to understand the reasons why women are unable or choose not to do so. This indicator is only available for 23 countries, three of which have very small sample sizes and for which the data have been suppressed.

We report findings on the reasons offered by women for not delivering in a health facility; as with the other indicators in this chapter, the denominator is women whose most recent birth occurred in the past 2–5 years and before age 20. We recoded the response categories from the questionnaires to fall under access reasons (cost, facility not open, too far or no transportation, don't trust facility or poor-quality service, no female provider, services not provided and country-specific categories) and cultural reasons (husband or family did not allow, not necessary and not customary).^{*} The surveys allowed women to give multiple reasons in response to this question.

- In eight out of the 13 African countries with data, among those giving birth before age 20 who did not deliver in a health facility, at least 60% reported at least one access-related reason. Cultural reasons were typically less prominent (reported by 3–48% of respondents), except in Egypt and Ethiopia, where proportions were high (73% and 87%, respectively).
- In Asia, only four countries had data available and there was wide variation across those countries. Among women giving birth who did not deliver in a facility, access-related reasons were mentioned by 16% in Nepal, 34% in India, 67% in Timor-Leste and 68% in the Philippines. Reasons related to cultural factors were most prominent in Nepal (73%) and India (80%) and less frequently mentioned in the Philippines (36%) and Timor-Leste (14%).
- In Latin America and the Caribbean, data was available in only three countries (Bolivia, Colombia and Guyana), and for Guyana the sample size was small. Between 59% and 67% of women giving birth before age 20 who did not deliver in a facility reported access-related reasons and 1–34% reported cultural reasons for why their delivery did not occur in a health facility.

^{*}For Colombia only, the category "cultural reasons" is based solely on the response "husband did not allow."

Cesarean-Section Births

Access to facility-based care offers women the opportunity to receive life-saving procedures, such as a cesarean section, when experiencing birth complications. While not a direct measure of service use, the proportion of births delivered by cesarean section indicates the extent to which access to facility-based delivery services exists. Since maternal complications remain a leading cause of morbidity among pregnant adolescents in developing regions,¹⁹ understanding access to facility-based care is of particular importance. However, WHO guidelines state that cesarean sections are indicated for only 10–15% of births; higher cesarean rates may indicate unnecessary health risks for mothers and their newborns. Cesarean-section deliveries tend to be underused in poor countries, while cesarean rates in better-off countries often exceed recommended levels.^{105,106} The data below refer to women whose most recent birth occurred in the past 2–5 years and before age 20.

- In Africa, the proportion of women giving birth before age 20 who delivered by cesarean section delivery fell within the WHO-recommended range only in Togo (11%) and Rwanda (12%). In all other countries, except Egypt (25%), the proportion was below expected levels (i.e., below 10%) in most of the region.
- In Asia, there was more variation in the use of cesarean sections. In about one-quarter of the surveyed countries, more than 15% of women giving birth before age 20 had a cesarean section delivery, while two-thirds of Asian countries had rates below 10%. Only Bangladesh, Pakistan and Viet Nam fell within the recommended 10–15% range.
- In Latin America and the Caribbean, the only two countries that fell within the recommended range were Suriname and Honduras. In almost two-thirds of countries, the proportion of women giving birth before age 20 who had a cesarean section delivery surpassed 15%, with rates as high as 39% in the Dominican Republic and 34% in Mexico (where women typically obtained the procedure in the private sector).¹⁰⁷ Only in Haiti (5%) and Guyana (9%) were cesarean sections underused.

Cesarean section births, by wealth

- In Africa, the proportion of women giving birth before age 20 who had a cesarean section was higher among better-off women than among their poorer counterparts (data for this section not shown). In Egypt, while cesarean section rates were high across wealth quintiles, there was a marked difference in proportions between poorer women (20%) and wealthier women (30%, respectively). In a few countries, cesarean rates were higher

among poorer adolescent women. For example, 13% of poorer women in Swaziland gave birth by cesarean section, compared with 5% among wealthier women. This pattern was also observed in Sao Tome and Principe (8% and 3%, respectively) and Ghana (5% and 4%).

- In Asia, wealthier adolescent women tended to have higher cesarean rates than poorer women, but the differences were not very pronounced. In the Philippines, for example, the proportions of women giving birth before age 20 who had cesarean sections were 4% and 9%, respectively. Slightly higher proportions of cesarean section births were to poorer women than wealthier women in Cambodia (5% and 2%, respectively) and Tajikistan (5% and 4%).
- The differences in cesarean rates among poorer versus wealthier women was especially evident in Latin America and the Caribbean, where the high rates among wealthier women largely accounted for the high rates observed across the region. For example, nearly 30% of births to wealthier adolescents in Peru were cesarean sections, while only 13% were cesareans among poorer adolescents. In Guyana, one of the only Latin American countries with a low cesarean section rate (9%), 14% of wealthier adolescents delivered by cesarean section, while only 5% of poorer adolescents did.

Barriers to Seeking Care when Sick

Although data on barriers to obtaining maternal health care are limited to the indicator presented above on reasons for not delivering in a health facility, data are available on the obstacles adolescent women face in obtaining primary health care in general. Information on such barriers is important in understanding and addressing the barriers women may face in seeking maternal and other sexual and reproductive health services.

Women aged 15–19 were asked whether or not each of the following factors would be a serious problem in seeking medical care when sick: getting permission to go for treatment, needing money for advice or treatment, distance to a health facility and not wanting to go alone. Other response categories that were only available for a few countries or were not comparable across countries were not tabulated. This measure is available for 47 countries.

- In most countries in Africa, the proportion of adolescents reporting concerns about getting permission to go for medical treatment fell in the 10–30% range. That concern was reported by 33–77% of adolescent women in seven countries and by fewer than 10% in eight. In Asia, proportions ranged from 2% to 25%, except in Cambodia (40%). A similar though slightly higher range

(7–28%) was reported in the six Latin American and Caribbean countries with data for this indicator.

- Getting money for medical treatment was a concern for more than 50% of adolescent women in 13 African countries, four Asian countries and two Latin American and Caribbean countries.
- Concerns about distance to a health facility were more prevalent both Africa and Latin America and the Caribbean than in Asia. In 20 African countries and four Latin American and Caribbean countries, 30% or more of adolescent women reported this barrier, whereas in most Asian countries, the proportion was lower than 30%.
- In much of Africa, not wanting to go alone to seek medical treatment was a problem for 10–40% of adolescent women. Proportions were highest among women in Ethiopia (54%) and Sao Tome and Principe (66%). In most countries in Asia, this barrier was reported by more than 40% of adolescent women and was especially high among women in Pakistan (78%), Nepal (66%) and Cambodia (54%). In Latin America and the Caribbean, the proportion ranged from 31% to 58%.

Implications for Policies and Programs

Adolescents have a right to health and a right to receive accurate information and confidential services without discrimination.^{2,3} As noted by the United Nations Committee on the Rights of the Child, governments have an obligation to fulfill these rights in all aspects of health, including sexual and reproductive health.² However, as the evidence in this report shows, despite the commitments that have been made to improve adolescent sexual and reproductive health, adolescent women continue to experience high levels of unmet need for sexual and reproductive health information and services. The data show that overall, particularly in Africa and Asia, adolescent women are not provided with the information, education and services they need to make well-informed decisions about their sexual and reproductive health and to prevent unintended pregnancy, unplanned births, unsafe abortion, HIV and other STIs, and the morbidities and mortality associated with early childbearing.

Gaps in Knowledge and the Need for Comprehensive Sexuality Education

Although ICPD highlighted young people's need for comprehensive, age-appropriate sexuality education, this commitment remains unfulfilled in many parts of the world.⁴ The data confirm this and point to gaps in knowledge.

In terms of knowing where to obtain a contraceptive method, the survey data show that knowledge about sources of contraception is lacking among many adolescent women in Africa and Asia, while it is far more widespread in Latin America and the Caribbean. Other studies have shown that young people's knowledge about various sexual and reproductive health issues is inadequate.^{61,108} A review of qualitative studies from developing countries found that even young women who were generally aware of modern hormonal contraceptive methods had limited knowledge of how they worked or how to use them properly.¹⁰⁸

Despite efforts to raise awareness of condoms' effectiveness in preventing HIV and other STIs, knowledge of a source for condoms remains lower in some countries in Africa and Asia than in Latin America and the Caribbean. In a third of countries in Africa, fewer than 50% of adoles-

cent women, irrespective of marital status, know where to obtain a condom.

Knowledge about where to go for an HIV test is also inadequate. In a third of all African countries and in half of countries in West Africa, fewer than 50% of adolescent women know of a place to get a test. In most countries in Asia, the proportion knowing where to obtain an HIV test is low, while in nearly all Latin American and Caribbean countries, the proportion is high.

- At a minimum, all adolescent men and women need sexual and reproductive health information and education that is medically accurate, complete and developmentally appropriate.^{13,35,43,109} Ideally, this information would be provided before the adolescent becomes sexually active, providing knowledge and skills to engage in protective behaviors when they become sexually active. Research has shown that comprehensive sexuality education can increase behaviors that protect sexual health.¹¹⁰⁻¹¹² Well-designed studies over the last 15 years have shown that abstinence-only programs are not effective at stopping or delaying sexual activity.^{111,113,114} Despite evidence regarding the effectiveness of comprehensive sexuality education on some important protective behaviors,^{110,111} most adolescents still do not receive crucial sexual and reproductive health information.¹¹
- With greater access to technology in developing countries, the use of new media, such as the Internet, social media and mHealth* initiatives, provides innovative ways to communicate reliable, up-to-date, confidential sexual and reproductive health information to adolescents.^{35,115} These media help to reach broad populations of adolescents and allow for targeted messaging for out-of-school and marginalized young people. Programs such as Pathfinder's mCenas! in Mozambique have developed a set of effective text messages on contraceptive methods, side effects and misconceptions about contraception, which adolescents can access via mobile phones.¹¹⁶ An evaluation of mCenas! showed

*Use of mobile phone technology for health.

increases in contraceptive knowledge, some increase in contraceptive use, greater intention to use a method, and positive changes in attitudes about contraceptives and their use.

- A review of interventions using new digital media to improve adolescent sexual health found that the few interventions that have been evaluated have been associated with changes in knowledge outcomes and, according to two studies, delayed sexual initiation.¹¹⁵ Given young people's increasing use of mobile phones, programs should consider integrating new media to distribute information to adolescents, as these provide a promising additional avenue for engaging and supporting adolescent's sexual and reproductive health.

The Needs of Unmarried Sexually Active Women

The data show that some adolescent women are sexually active and that sex among unmarried women is a reality, particularly among adolescent women living in Africa and Latin America and the Caribbean. In some contexts, sexual activity before or outside of marriage is strongly censored¹¹⁷ and, as a result, adolescent women may feel shame or fear in seeking and using sexual and reproductive health services, particularly if service providers exhibit negative attitudes toward them.¹⁸ Social and cultural norms that are very intolerant of unmarried adolescent women's sexual activity may put them at increased risk by impeding their access to the information and services they need to protect themselves.¹⁰⁸ Understanding and addressing these cultural barriers by challenging community norms is crucial.^{13,18}

Increased Provision of Contraceptive Services

The proportion of married adolescent women who are using modern contraceptives is generally higher in Latin America and the Caribbean (24–67%) than in other regions. Proportions tend to be low in Asia, although the range is very wide (0–52%), and low to moderate in Africa, where three-quarters of countries report levels below 20%. Contraceptive use is often reported among higher proportions of unmarried women than married women, but the same general pattern is observed: Use among unmarried women is low overall in Asia, low to moderate in Africa and higher in Latin America and the Caribbean. There is no doubt that there is room for improving access to and use of contraceptives among all sexually active adolescent women, regardless of marital status.

Without the proper knowledge or needed contraceptive services, sexually active adolescent women who do not want to have a child are at risk of unintended pregnancy. The evidence indicates that a high proportion of births

to adolescent women, particularly in Latin America and the Caribbean and in Africa, are unplanned—mistimed by two or more years or not wanted at all. In some countries, more than half of births to adolescent women are unplanned; in addition, the data available on abortion, though limited, indicates that abortion incidence among adolescents ranges across countries from moderate to high. The high level of unintended pregnancy among adolescents found in many countries highlights the high level of unmet need for effective contraception. Although there is great variation within and across regions in levels of unmet need, the data show that unmarried sexually active adolescent women experience overall higher levels of unmet need than those who are married.

These findings point to the large gaps in the basic services that adolescent women need to fulfill their reproductive goals. They also highlight the importance of improving policies and programs to close these gaps. The following approaches would help to improve access to and use of contraceptive services:

- Provide information, and improve the quality of information already offered, on contraceptive methods and sources, and specifically tailoring such messages to meet the diverse needs of adolescents.
- Offer a full range of contraceptive methods, including long-acting reversible contraceptives, female condoms and emergency contraception. The female condom is currently the only female-controlled method offering dual protection from HIV, other STIs and pregnancy, yet its use is not widely promoted.¹¹⁸ Similarly, although emergency contraception is available in some developing countries, few adolescents are properly informed about the method.^{119,120} No recently evaluated interventions promoting these methods among adolescents have been identified, clearly indicating a gap in ensuring greater availability of these methods to this group.
- Provide services through a variety of outlets—including social marketing outlets, educational and social venues, and health facilities⁴⁵—to maximize outreach to adolescents.
- Link the provision of contraceptive services to the provision of other sexual and reproductive health services, such as STI screening and treatment, prenatal care and maternal health services.⁴⁵
- Eliminate requirements for parental or guardian authorization for adolescents to receive sexual and reproductive health services, and reduce financial barriers to contraceptive use.¹²¹ Services must be equitable, accessible, acceptable, appropriate and effective for all adolescents, including those who are disadvantaged.

A review of interventions to improve adolescent contraceptive behaviors found that effective programs generally combined different program approaches and addressed both user and service-provision issues.⁷ Successful programs included adolescents in the planning process and sought buy-in from the community.^{7,45} A recent review found that programs that trained health providers to more appropriately respond to the needs of adolescents, improved friendliness toward adolescents in facilities, achieved community acceptance and performed demand-generation activities were most effective in promoting access to and uptake of sexual and reproductive health services among adolescents.¹²²

Community-based distribution and outreach programs provide an opportunity to reach a wide range of adolescents, particularly those who are not in school or who are otherwise hard to reach. One such type of program involves the provision of vouchers (available in paper or electronic format) for free or subsidized contraception or services for underserved and marginalized populations.⁶ Reviews of voucher programs in developing countries found these programs to be associated with an increase in service utilization.^{123,124} However, with respect to adolescents, the most recent published evaluated intervention dates from 2006. That voucher program showed an increase in access to sexual and reproductive health services among underserved and poor adolescent women in Nicaragua,^{125,126} but more research is needed to assess such programs' effectiveness.

Prevention and Treatment for HIV and Other STIs

A minority of adolescents who experience STIs or STI symptoms seek care at health facilities, in all countries for which data are presented. Young women in Africa and Asia are more likely than those in Latin America and the Caribbean to receive treatment from another source or to receive no treatment at all, indicating that access to care may be better there than in Africa or Asia. As echoed by other studies, many adolescents simply do not know where to seek STI services and those who do may feel too ashamed or afraid to get treatment from formal health care providers, or may perceive providers as unfriendly.^{34,127} Adolescents in these studies also reported that barriers to seeking STI care include cost, unavailability of services and fear of meeting other people they know at the health care facility, all of which may undermine facility use. An even broader gap exists for women who have curable STIs but whose infections are asymptomatic—approximately two-thirds of all women with these STIs.²⁸

Although HIV prevalence has decreased in many countries, particularly in Africa,²⁹ adolescent women in many

areas of the world remain at high risk of contracting the virus. The ability to obtain and correctly and consistently use condoms is critical to helping sexually active adolescents protect themselves against HIV and other STIs. In most African countries, we found the proportion of unmarried sexually active adolescent women using condoms to be 21–50%, meaning that many women and their partners are not protected. Condom use at last sex is higher in Latin America and the Caribbean; however, there is still room for improvement. Although these data give only a limited picture of adolescents' condom use patterns, it is clear:

- Providing adolescents with better access to condoms, greater knowledge about condom use and a social environment that does not stigmatize condom use are critical to preventing the spread of HIV and other STIs.
- Continued promotion and social marketing of condoms, including female condoms, is needed to increase condom use and reduce STI and HIV prevalence.^{128,129}

The data show that most adolescent women have not been tested for HIV, even in high-prevalence countries.

- More adolescent women, particularly those at high risk for HIV, need access to HIV testing outside the context of pregnancy-related care. Testing offers an opportunity for health providers to link young people living with HIV to appropriate care and treatment, including services to prevent mother-to-child transmission.
- Adolescents living with HIV, including those born with HIV, should have access to treatment and care services that are tailored to meet their particular needs.
- Treatment as prevention—the use of antiretroviral treatment to decrease the risk of HIV transmission between partners—is a potentially highly cost-effective approach to reducing both new HIV infections and the overall global HIV burden, though questions remain as to the possibility of implementing this intervention in developing country contexts (given the large financial investments and significant implementation challenges).¹³⁰
- One approach for increasing the availability of testing and treatment for HIV and other STIs is to integrate and link these services with other reproductive health services.¹³¹

New strategies such as offering social protection through cash payments or transfer interventions to address structural barriers such as poverty, gender inequality and lack of educational attainment have emerged in recent years and have been shown to reduce young women's vulnerability to HIV by having a positive impact on sexual behaviors and even reducing HIV prevalence.^{132,133} For example, in

a randomized controlled study in Zomba, Malawi, cash transfers for female students aged 13–22 were found to reduce new HIV infections.¹³⁴ Using cash transfer programs to address the broad structural barriers that young women face is a promising avenue for supporting HIV prevention among young people.

Need for Confidential, Affordable Abortion Care

The literature review on abortion shows that even in developing countries where abortion is legal and available in health facilities, adolescents are still less likely than older women to obtain safe abortions and to terminate their pregnancies before the second trimester; they are more likely than older women to obtain risky self-induced abortions or abortions performed by untrained providers. In countries where abortion is illegal, adolescents face challenges accessing clandestine abortions and may experience delays obtaining prompt medical attention for complications from unsafe abortions. A WHO review found a total lack of evidence on interventions to address unsafe abortion among adolescents.¹³⁵ However, data from WHO indicate that expanding access to medication abortion (that is, the use of drugs such as mifepristone and misoprostol) can help to prevent unnecessary mortality and morbidity caused by obsolete surgical practices (such as D&C) and lack of access to recommended surgical procedures (such as MVA) and by damaging unsafe abortion methods.¹³⁶

The main reasons behind adolescents' lack of access to abortion and postabortion care are inability to pay, fear of legal ramifications, worries about confidentiality and a wish to avoid parental notification, and difficulty recognizing that they are pregnant. These findings in the literature from countries in Africa, Asia, and Latin America and the Caribbean imply that adolescents' use of safe abortion and postabortion care can be improved through the following steps:

- Educate adolescent women about the dangers of unsafe abortion and the necessity of seeking care right away should they experience a complication.
- Inform adolescents about their legal rights to abortion and to postabortion care (where these rights exist), and the availability of these services at health facilities.
- Offer adolescents postabortion contraceptive information and services, regardless of the legality of the abortion.
- Given that many adolescents have no independent income, ensure that services are affordable or free of charge.
- Train providers to be sensitive to the needs of adolescents, particularly by offering confidential services.

- Where possible under the law, involve parents only at the adolescent's request.

More evidence is needed on the incidence and context of adolescent women's use of abortion and postabortion care services in developing countries.

Adequate Maternal Care

A substantial proportion of adolescent women in the developing world have begun childbearing. It is critical that adolescent mothers receive the interventions necessary to protect their health and the health of their newborns and to reduce pregnancy- and delivery-related morbidity and mortality. This includes receiving the basic antenatal care recommended by WHO (four or more visits with a skilled health provider, beginning in the first trimester), receiving needed care for pregnancy complications, giving birth in a health facility under the supervision of a skilled provider, and receiving treatment for complications of delivery, including a cesarean section when it is medically necessary.

Adolescents often lack knowledge about reproductive health and pregnancy in general, let alone what care they need, where they can obtain that care and how to recognize pregnancy complications urgently requiring care.¹³⁷ Data on the proportion of adolescent mothers' who know where to seek care for pregnancy complications are limited and what data are available indicate that many adolescent women are not receiving this critical information from their health care providers. We recommend that relevant stakeholders, including ministries of health and their partners (such as institutions that train medical professionals, professional associations and nongovernmental organizations), train providers to counsel adolescent women, impart accurate information and deliver quality services.¹³⁸

While evidence from this study shows that a substantial proportion of adolescent women receive some antenatal care from a skilled provider, far fewer receive antenatal care early in their pregnancy and make the recommended minimum of four antenatal visits. The value of increasing use of antenatal care is twofold. First, previous studies have demonstrated that women who receive adequate antenatal care are more likely than those who do not to be linked to other important services, including institutional delivery and postnatal care.^{139,140} Furthermore, antenatal care and skilled and institutional delivery care provide opportunities to identify and address complications, thus preventing maternal morbidity and mortality.^{101,103} Given these goals, it is essential to:

- Use interactive education models to increase the uptake of comprehensive reproductive health services. For

example, a program among married adolescent women proved successful in Nyanza Province, Kenya, when Well Told Story collaborated with the AIDS, Population, and Health Integrated Assistance (APHIA II) Operations Research Project to develop a radio soap opera that targeted young women and their partners, engaging them in a discussion on comprehensive reproductive health, including antenatal care, delivery and postnatal services; family planning; and HIV-prevention services.¹⁴¹ The soap opera, *Chakruok* (“Beginnings”), was designed to encourage listener interaction through text messaging, letters, call-ins, interviews and a Facebook page made available to promote discussion. Additionally, 194 community health workers in the region received training tailored toward addressing married adolescents’ reproductive health needs. An evaluation of the intervention found increased uptake of adequate antenatal care, skilled attendance at birth and postnatal care visits.

There is great inequity in the availability and use of cesarean sections worldwide, and efforts must be aimed at addressing both underuse and overuse of the procedure.¹⁰⁵

- Given that cesarean section is the WHO-recommended course of treatment for some pregnancy and delivery complications, including obstructed labor,¹⁴² low-income countries where cesarean sections are underused should invest in making this procedure more accessible by improving availability of trained staff, implementing well-functioning referral systems, and obtaining necessary equipment, including means for transporting patients in emergencies to higher-level facilities. Adolescent women in Western and Eastern Africa and in Southern and Southeast Asia, where cesarean rates are the lowest, would especially benefit from this investment.
- On the other hand, the extremely high rates of use of cesarean-section delivery among adolescent women in Latin America and the Caribbean and Western Asia may indicate unnecessary use of the procedure, possibly resulting in morbidity and misuse of resources. Better education for health care providers and the general population (including adolescent women) about the potential negative consequences of overuse of this medical procedure should be provided in these regions.

Overcoming Barriers to Adolescents’ Access to Sexual and Reproductive Health Services

Adolescents face a number of obstacles to obtaining sexual and reproductive health services. These barriers have been well documented and relate to the availability, accessibility and acceptability and equity of health services.^{11,34,41,143}

Our data show that adolescents encounter barriers in obtaining health services in general, not just sexual and reproductive health services. Getting permission to seek services, paying for services and living far from a facility are all real concerns for adolescent women.

Adolescent women are also faced with cultural and social norms that impede their ability to make and implement decisions about their sexual and reproductive health. Stigmatization of sexual activity outside marriage is one of the main reasons cited for why adolescent women with unmet need are not using a method of contraception. Furthermore, in some countries, a small but not negligible proportion of adolescent women report that their husband or partner is the main decision-maker about contraception. These restrictive cultural norms may also coexist with laws and policies that limit access to information and services.

- Laws, policies and practices that limit young people’s access to sexual and reproductive health information and services, such as those that require parental consent or spousal consent for a minor to obtain information or services, should be eliminated.^{13,143}
- Efforts are needed overall to promote gender equality such as enforcing laws that prevent early and forced marriage.
- It is important to engage a wide range of stakeholders, including religious leaders, to create positive norms and community support for adolescents to practice safe behaviors and gain access to the information and services they need.

Intimate partner violence and sexual violence. Intimate partner violence can start very early in women’s lives: Globally, 29% of ever-partnered women aged 15–19 have experienced this type of violence.³³ Exposure to violence can contribute to adverse sexual and reproductive health outcomes. With respect to HIV for example, deep-rooted gender inequalities and violence can contribute to adolescent women’s heightened vulnerability to HIV infection and difficulties obtaining treatment.¹⁴⁴

Adolescence is an important developmental stage for laying the foundation for healthy and stable relationships. Ensuring that adolescents enjoy relationships free of violence is an important investment in their future. Promoting girls’ access to education, ending child marriage, and working with boys and young men to promote gender-equitable norms and roles are key approaches to creating a supportive and safe environment for young women.^{52,145}

A recent review of interventions to address intimate partner violence and sexual violence found that despite the relatively weak designs in most studies and lack of

robust measures for behavioral outcomes, school-based dating programs (only evaluated in high-income settings), parenting and community-based interventions are promising avenues for preventing partner and sexual violence among adolescents.¹⁴⁶ Findings indicate that programs delivered in diverse settings over time with longer-term investments and recurring exposure to ideas have more favorable results than single awareness-raising or discussion sessions.

Strategies and types of interventions to overcome barriers to services. There is a need to build capacity within existing health systems to address challenges specific to adolescents.^{41,117,147} A recent systematic review found insufficient evidence to recommend widespread implementation of the youth center as a model for promoting sexual and reproductive health services.⁹ However, it is important to recognize that multiple strategies are needed to meet the needs of different population subgroups across varying contexts. Prior assessments have shown that investing in key elements of interventions, such as training service providers, improving facilities and mobilizing communities to generate demand for services, are all worthwhile.¹⁴⁸ Because youth participation in the design and development of programs and policies can lead to better sexual and reproductive health outcomes, youth involvement should be a priority.¹⁴⁹

Regardless of the approach that is implemented, it is crucial to keep in mind that adolescents are a diverse group with varying needs. Strategies and programs should be tailored not only to the context but also according to the specific needs of different subgroups of adolescents.

Remaining Research Gaps

This report compiles the most recent national data on a range of key indicators related to several major areas of utilization of sexual and reproductive health services throughout the developing world. To our knowledge, no other comprehensive overview of this kind has been published.

Still, the data we present is limited and offers only a glimpse of how and to what extent sexual and reproductive health services are accessible to and used by adolescent women. The evidence could be strengthened via the following recommendations:

- Collect data on additional key indicators related to adolescent's receipt of comprehensive sexuality education and their access to and use of sexual and reproductive health services. While some qualitative research has been done to better understand the quality of care or barriers adolescent people encounter, existing national

surveys do not cover a wide enough range of indicators on the important areas of barriers and quality of information and services.

- Fill the major gap in national surveys' reporting related to HIV treatment. These data are currently unavailable for the specific age range of 15–19. National and disaggregated data by age and sex on HIV treatment coverage for adolescents are desperately needed. Data collection efforts related to adherence to antiretroviral therapy regimens and quality of care are also necessary.
- Broaden the number of countries that collect national information on abortion and postabortion care to better understand adolescents' decision-making processes and the barriers they experience in obtaining safe and legal abortion and postabortion care services.
- Consistently include adolescent men in national surveys and collect representative data on their sexual and reproductive behaviors, receipt of information and services, and existing barriers and gaps. More specifically, these national surveys should include questions focused on communication about childbearing preferences and decision-making about contraceptive use.
- Focus on the specific needs of younger adolescents aged 10–14, a group for which sexuality education is a high priority. While this age-group is less likely to be sexually active and thus in need of sexual and reproductive health services than older adolescents, those in need of services are especially likely to be underserved by providers and neglected by national policies. Although national surveys provide some limited information on sexual and reproductive behaviors before age 15, very few survey adolescents those younger than age 15. Data should be more consistently collected through directly surveying younger adolescents.

Conclusion

In the context of an ever-growing population of adolescents and young people, investments supporting their transition toward leading healthy sexual and reproductive lives are critical not only for the well-being of young people themselves, but also for their families and communities. Adolescents need, and have the right to obtain, quality sexual and reproductive health information and services. Moreover, the provision of information and services should be adapted to the different realities of adolescents' lives to ensure that the sexual and reproductive rights of all adolescents are fulfilled. The development of the post-2015 Sustainable Development Goals (SDGs) is an opportunity to continue to bring global attention to adolescents' rights and needs. Having meaningful indicators and a comprehensive evidence base is essential if the

global community and national governments are to be able to quantify current needs, set goals and monitor adolescents' progress toward attaining sexual and reproductive health and fulfilling their rights in the coming years. This report aims to provide data that will contribute to this process, and it also highlights important gaps that exist in the evidence base. Given the breadth of the post-2015 SDGs, they are likely to include very few indicators relevant to adolescents' sexual and reproductive health and rights: In this context, it is important to ensure that stakeholders are aware of the full range of adolescents' needs for sexual and reproductive information and services as a first step toward addressing these needs.

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APPENDIX TABLE 1. Marriage, sexual activity and contraceptive use among adolescent women aged 15–19, developing regions

Region, subregion and country	% ever married	% never married who have ever had sex	% who know a source for family planning	% currently using a modern contraceptive method*	
				Married	Unmarried and sexually active†
AFRICA					
Eastern Africa					
Burundi (2010)	10	6	54	8	9
Ethiopia (2011)	23	2	64	23	38
Kenya (2008–2009)	13	24	47	19	19
Madagascar (2008–2009)	40	15	65	15	12
Malawi (2010)	26	18	73	26	24
Mozambique (2011)	41	25	57	6	26
Rwanda (2010)	4	11	85	29	20
Tanzania (2010)	20	26	50	12	35
Uganda (2011)	23	22	71	13	25
Zambia (2007)	19	29	65	17	27
Zimbabwe (2010–2011)	26	8	52	35	25
Middle Africa					
Cameroon (2011)	26	24	47	12	47
Central African Republic (2010)	61	9	u	7	15
Chad (2010)	51	8	u	1	8
Congo (2011–2012)	24	40	36	26	45
Democratic Republic of Congo (2007)	25	28	18	4	18
Gabon (2012)	15	50	47	16	50
Sao Tome and Principe (2008–2009)	23	23	68	21	46
Northern Africa					
Egypt (2008)‡	13	u	u	20	u
Tunisia (2011–2012)	1	u	u	§	u
Southern Africa					
Lesotho (2009)	17	29	48	27	33
Namibia (2006)	6	37	79	39	69
Swaziland (2006–2007)	7	34	79	43	48
Western Africa					
Benin (2011–2012)	14	32	34	3	23
Burkina Faso (2010)	32	12	67	6	44
Côte d'Ivoire (2011–2012)	22	43	46	7	28
Ghana (2008)	9	28	59	8	28
Guinea (2012)	34	21	28	1	20
Liberia (2007)	20	53	41	4	20
Mali (2012–2013)	44	16	35	7	23
Niger (2012)	63	1	48	3	§
Nigeria (2013)	30	14	37	1	44
Senegal (2010–2011)	25	4	48	5	15
Sierra Leone (2008)	31	34	26	1	22
Togo (2010)	13	39	u	4	39

*Modern methods: sterilization, contraceptive pill, patch, IUD, injectable, implant, male or female condom, diaphragm and spermicide
†Sexually active is generally defined as having engaged in sexual activity in the three months prior to the survey; it is defined as sexual activity in the month prior to the survey for Mexico and in the past 12 months for Brazil. ‡Sample consists of ever-married women (those who are currently married, widowed or divorced/separated) only; never-married women were not surveyed. The exception is the % ever married, in which household survey data are used to represent both ever-married and never-married women. (continued next page)

APPENDIX TABLE 1, continued

Region, subregion and country	% ever married	% never married who have ever had sex	% who know a source for family planning	% currently using a modern contraceptive method*	
				Married	Unmarried and sexually active†
ASIA					
Eastern Asia					
Mongolia (2010)	5	10	u	52	33
Central Asia					
Kazakhstan (2010–2011)	5	4	u	18	70
Kyrgyz Republic (2012)	10	0	18	4	§
Tajikistan (2012)	13	0	15	1	§
Southern Asia					
Afghanistan (2010–2011)	20	u	u	6	u
Bangladesh (2011)‡	46	u	87	42	u
Bhutan (2010)	16	2	u	30	§
India (2005–2006)	28	0	55	7	16
Maldives (2009)‡	6	u	81	10	u
Nepal (2011)	29	0	92	14	§
Pakistan (2012–2013)‡	14	u	46	6	u
Southeast Asia					
Cambodia (2010)	11	0	75	19	§
Indonesia (2012)	13	1	75	48	2**
Laos (2011–2012)	26	2	u	22	4
Philippines (2013)	10	4	49	19	12
Timor-Leste (2009–2010)	8	0	35	7	§
Viet Nam (2010–2011)	9	1	u	15	§
Western Asia					
Armenia (2010)	8	0	37	0	§
Azerbaijan (2006)	11	0	15	2	§
Iraq (2011)	22	u	u	11	u
Jordan (2012)‡	6	u	69	18	u
Lebanon (2011)	7	u	u	27	u
LATIN AMERICA AND THE CARIBBEAN					
Caribbean					
Cuba (2010–2011)	25	45	u	67	83
Dominican Republic (2007)	27	12	82	43	37
Haiti (2012)	13	28	74	24	26
Central America					
Belize (2011)	18	16	u	34	48
Costa Rica (2011)	19	29	u	64	47
Honduras (2011–2012)	27	12	86	49	34
Mexico (2009)	16	11	u	41	58
South America					
Bolivia (2008)	15	15	44	25	33
Brazil (2006)	28	27	57	64	65
Colombia (2010)	17	33	85	55	58
Guyana (2009)	19	20	63	30	51
Peru (2012)	13	16	91	51	43
Suriname (2010)	14	29	u	42	39

(continued) §Data suppressed because of insufficient sample size (fewer than 25 respondents). **Small sample size (25–49 respondents); the value will be less accurate than values based on at least 50 respondents. Notes: Data are from the most recent survey available (years denoted parenthetically). u=unavailable. Sources: Brazil—reference 50. Mexico—reference 48. Afghanistan, Belize, Bhutan, Central African Republic, Chad, Costa Rica, Cuba, Iraq, Kazakhstan, Laos, Lebanon, Mongolia, Suriname, Togo, Tunisia and Viet Nam—Multiple Indicator Cluster Survey (MICS). All other countries—Demographic and Health Surveys (DHS).

APPENDIX TABLE 2. Unmet need among adolescent women aged 15–19, developing regions

Region, subregion and country	% with an unmet need for contraception*					Unmarried and sexually active
	Married	Married, by residence		Married, by household wealth		
		Rural	Urban	Lower 2 quintiles	Upper 3 quintiles	
AFRICA						
Eastern Africa						
Burundi (2010)	19	18	27 [†]	16	21	65
Ethiopia (2011)	33	33	35	31	34	37
Kenya (2008–2009)	30	30	29	29	31	73
Madagascar (2008–2009)	27	26	34	25	28	53
Malawi (2010)	25	25	28	21	28	64
Mozambique (2011)	23	20	33	17	28	56
Rwanda (2010)	6	7	‡	3 [†]	8 [†]	69
Tanzania (2010)	16	16	17 [†]	16	16	48
Uganda (2011)	31	32	26	31	32	55
Zambia (2007)	23	21	27	22	23	62
Zimbabwe (2010–2011)	19	15	28	19	19	63
Middle Africa						
Cameroon (2011)	26	24	28	21	30	36
Central African Republic (2010)	32	29	36	30	33	45
Chad (2010)	32	29	40	28	33	70
Congo (2011–2012)	35	31	37	34	35	22
Democratic Republic of Congo (2007)	29	26	33	21	34	45
Gabon (2012)	41	48	40	42	41	33
Sao Tome and Principe (2008–2009)	48	40	61 [†]	48	48 [†]	42
Northern Africa						
Egypt (2008)§	7	7	6	8	5	u
Tunisia (2011–2012)	‡	‡	‡	‡	‡	u
Southern Africa						
Lesotho (2009)	30	31	22 [†]	31	28	59
Namibia (2006)	34	40	22 [†]	35	34	24
Swaziland (2006–2007)	25	23	‡	18 [†]	31 [†]	45
Western Africa						
Benin (2011–2012)	35	33	39	35	33	56
Burkina Faso (2010)	22	22	22	21	22	49
Côte d'Ivoire (2011–2012)	27	26	27	28	25	55
Ghana (2008)	62	64	57 [†]	62	62 [†]	52
Guinea (2012)	23	22	29	18	29	62
Liberia (2007)	41	36	52	31	48	65
Mali (2012–2013)	23	24	19	23	24	66
Niger (2012)	13	13	15	13	13	‡
Nigeria (2013)	13	13	15	11	17	42
Senegal (2010–2011)	31	28	41	26	39	78
Sierra Leone (2008)	23	23	22	26	20	55
Togo (2010)	52	46	66 [†]	35	67	58

APPENDIX TABLE 2, continued

Region, subregion and country	% with an unmet need for contraception*					Unmarried and sexually active
	Married	Married, by residence		Married, by household wealth		
		Rural	Urban	Lower 2 quintiles	Upper 3 quintiles	
ASIA						
Eastern Asia						
Mongolia (2010)	17	‡	‡	11 [†]	‡	u
Central Asia						
Kazakhstan (2010–2011)	22	20	26 [†]	20 [†]	25 [†]	25
Kyrgyz Republic (2012)	10	8	14 [†]	4	14	‡
Tajikistan (2012)	13	12	17	10	14	‡
Southern Asia						
Afghanistan (2010–2011)	u	u	u	u	u	u
Bangladesh (2011)§	17	18	13	17	17	u
Bhutan (2010)	30	30	32 [†]	28	32	‡
India (2005–2006)	27	27	25	27	27	26
Maldives (2009)§	37	30	‡	23	48	u
Nepal (2011)	42	43	28	41	42	‡
Pakistan (2012–2013)§	15	13	22	12	18	u
Southeast Asia						
Cambodia (2010)	16	16	13	17	15	‡
Indonesia (2012)	7	7	7	9	4	85 [†]
Laos (2011–2012)	22	22	22	23	22	94
Philippines (2013)	29	27	31	28	30	60
Timor-Leste (2009–2010)	27	26	37 [†]	29	26	‡
Viet Nam (2010–2011)	17	15	25 [†]	14	20	‡
Western Asia						
Armenia (2010)	27	19 [†]	34 [†]	23 [†]	31 [†]	‡
Azerbaijan (2006)	16	17	15	19	13	‡
Iraq (2011)	9	7	10	9	9	u
Jordan (2012)§	12	25	11	14	11	u
Lebanon (2011)	12	‡	19 [†]	15 [†]	9 [†]	u
LATIN AMERICA AND THE CARIBBEAN						
Caribbean						
Cuba (2010–2011)	13	19	11	u	u	14
Dominican Republic (2007)	27	19	32	25	30	47
Haiti (2012)	57	53	61	59	55	68
Central America						
Belize (2011)	33	34	29 [†]	34	30 [†]	49
Costa Rica (2011)	19	20	17 [†]	12	38 [†]	50
Honduras (2011–2012)	18	17	19	18	17	48
Mexico (2009)	33	34	32	u	u	35
South America						
Bolivia (2008)	38	41	35	41	36	49
Brazil (2006)	20	18	21	22	18	32
Colombia (2010)	24	21	25	23	24	33
Guyana (2009)	35	38	‡	38	31	42
Peru (2012)	19	21	18	19	19	34
Suriname (2010)	41	42	40	46	35	55

*Women who are fecund, sexually active, and want to delay or stop having children but are not currently using any contraceptive method are considered to have unmet need for contraception. [†]Small sample size (25–49 respondents); the value will be less accurate than values based on at least 50 respondents. [‡]Data suppressed because of insufficient sample size (fewer than 25 respondents). [§]Sample consists of ever-married women (those who are currently married, widowed or divorced/separated) only; never-married women were not surveyed. *Notes:* Data are from the most recent survey available (years denoted parenthetically). u=unavailable. *Sources:* Brazil—reference 50. Mexico—reference 48. Afghanistan, Belize, Bhutan, Central African Republic, Chad, Costa Rica, Cuba, Iraq, Kazakhstan, Laos, Lebanon, Mongolia, Suriname, Togo, Tunisia and Viet Nam—Multiple Indicator Cluster Survey (MICS). All other countries—Demographic and Health Surveys (DHS).

APPENDIX TABLE 3. Reasons for contraceptive nonuse and access to contraception among adolescent women aged 15–19, developing regions

Region, subregion and country	Among women with unmet need, % reporting each reason for nonuse of contraceptives*						% of married users whose husband mainly decides about contraception	% who visited a health facility in the past 12 months and were told of family planning†
	Not married	Infrequent sex	Postpartum amenorrhea/ breast-feeding/ subfecundity	Opposition to use‡	Supply reasons§	Health/side effects		
AFRICA								
Eastern Africa								
Burundi (2010)	12**	29**	9**	34**	8**	11**	††	4
Ethiopia (2011)	1	14	20	24	16	13	4	3
Kenya (2008–2009)	20	28	14	13	10	14	14	4
Madagascar (2008–2009)	28	27	10	16	14	24	11	8
Malawi (2010)	32	28	21	9	6	12	13	16
Mozambique (2011)	12	30	36	17	11	7	24	10
Rwanda (2010)	44**	50**	27**	0**	7**	3**	0**	5
Tanzania (2010)	16	40	17	10	7	21	27	8
Uganda (2011)	24	27	16	15	12	35	12	7
Zambia (2007)	28	27	26	6	9	18	22	8
Zimbabwe (2010–2011)	25	56	10	14	4	5	10	5
Middle Africa								
Cameroon (2011)	5	48	20	15	22	15	11	5
Central African Republic (2010)	u	u	u	u	u	u	u	u
Chad (2010)	u	u	u	u	u	u	u	u
Congo (2011–2012)	15	21	31	9	40	8	9	7
Democratic Republic of Congo (2007)	18	27	19	21	24	17	23	2
Gabon (2012)	9	24	19	18	21	10	3	5
Sao Tome and Principe (2008–2009)	0	31	7	11	6	31	18**	12
Northern Africa								
Egypt (2008)††	u	43**	20**	17**	0**	11**	3	15
Tunisia (2011–2012)	u	u	u	u	u	u	u	u
Southern Africa								
Lesotho (2009)	34	33	14	7	11	8	10	4
Namibia (2006)	16	25	15	5	18	14	16	5
Swaziland (2006–2007)	13	10	16	9	13	37	20**	6
Western Africa								
Benin (2011–2012)	29	22	19	11	13	10	13**	3
Burkina Faso (2010)	5	25	28	21	18	12	6	8
Côte d'Ivoire (2011–2012)	13	18	17	18	22	18	21**	4
Ghana (2008)	19	24	7	8	11	45	††	4
Guinea (2012)	1	20	62	15	20	7	††	2
Liberia (2007)	5	13	17	18	33	26	††	23
Mali (2012–2013)	17	12	26	34	19	8	17	6
Niger (2012)	0	39	17	32	12	9	10	5
Nigeria (2013)	4	18	35	28	19	8	10**	2
Senegal (2010–2011)	2	25	29	27	7	11	18**	2
Sierra Leone (2008)	5	13	19	24	22	29	††	10
Togo (2010)	u	u	u	u	u	u	u	u

APPENDIX TABLE 3, continued

Region, subregion and country	Among women with unmet need, % reporting each reason for nonuse of contraceptives*						% of married users whose husband mainly decides about contraception	% who visited a health facility in the past 12 months and were told of family planning†
	Not married	Infrequent sex	Postpartum amenorrhea/ breast-feeding/ subfecundity	Opposition to use‡	Supply reasons§	Health/side effects		
ASIA								
Eastern Asia								
Mongolia (2010)	u	u	u	u	u	u	u	u
Central Asia								
Kazakhstan (2010–2011)	u	u	u	u	u	u	u	u
Kyrgyz Republic (2012)	††	††	††	††	††	††	††	5
Tajikistan (2012)	††	††	††	††	††	††	††	6
Southern Asia								
Afghanistan (2010–2011)	u	u	u	u	u	u	u	u
Bangladesh (2011)‡‡	u	52	30	5	2	15	10	u
Bhutan (2010)	u	u	u	u	u	u	u	u
India (2005–2006)	0	26	21	36	10	11	12	u
Maldives (2009)‡‡	u	u	u	u	u	u	††	15
Nepal (2011)	0	68	13	12	1	6	6	3
Pakistan (2012–2013)‡‡	0	30	24	58	2	21	8	4
Southeast Asia								
Cambodia (2010)	0**	35**	27**	13**	7**	27**	7	4
Indonesia (2012)	26**	15**	10**	3**	7**	16**	12	3
Laos (2011–2012)	u	u	u	u	u	u	u	u
Philippines (2013)	20	29	19	20	10	25	9	6
Timor-Leste (2009–2010)	0**	0**	30**	71**	4**	22**	*†	5
Viet Nam (2010–2011)	u	u	u	u	u	u	u	u
Western Asia								
Armenia (2010)	††	††	††	††	††	††	††	2
Azerbaijan (2006)	††	††	††	††	††	††	††	1
Iraq (2011)	u	u	u	u	u	u	u	u
Jordan (2012)‡‡	††	††	††	††	††	††	7	17
Lebanon (2011)	u	u	u	u	u	u	u	u
LATIN AMERICA AND THE CARIBBEAN								
Caribbean								
Cuba (2010–2011)	u	u	u	u	u	u	u	u
Dominican Republic (2007)	17	44	5	17	2	15	5	14
Haiti (2012)	21	36	14	33	8	31	15	7
Central America								
Belize (2011)	u	u	u	u	u	u	u	u
Costa Rica (2011)	u	u	u	u	u	u	u	u
Honduras (2011–2012)	31	63	11	7	2	7	13	15
Mexico (2009)	u	29	18	8	11	11	u	u
South America								
Bolivia (2008)	36	64	21	4	11	7	13	10
Brazil (2006)	12	48	5	3	3	13	u	15
Colombia (2010)	14	60	6	5	3	11	2	23
Guyana (2009)	5	41	3	8	10	17	8**	9
Peru (2012)	10	74	11	1	1	5	2	8
Suriname (2010)	u	u	u	u	u	u	u	u

*Women with an unmet need for contraception were not asked their reasons for nonuse if they were pregnant at the time of the survey, had indicated they were not sure whether they wanted to have a child or said they were not sure when they want to have a child. For Brazil and Mexico, women could choose only one main reason. For all other countries, respondents could answer more than one reason. Not all response categories are shown. †For Brazil, the indicator used is the proportion who were visited in past 12 months by a health worker who discussed family planning. ‡Includes opposition by the respondent, her partner/husband or other family members. §Includes unaware of methods, cost too high and no source/access. **Small sample size (25–49 respondents); the value will be less accurate than values based on at least 50 respondents. ††Data suppressed because of insufficient sample size (fewer than 25 respondents). ‡‡Sample consists of ever-married women (those who are currently married, widowed or divorced/separated) only; never-married women were not surveyed. *Notes:* Data are from the most recent survey available (years denoted parenthetically). u=unavailable. *Sources:* Brazil—reference 50. Mexico—reference 48. Afghanistan, Belize, Bhutan, Central African Republic, Chad, Costa Rica, Cuba, Iraq, Kazakhstan, Laos, Lebanon, Mongolia, Suriname, Togo, Tunisia and Viet Nam—Multiple Indicator Cluster Survey (MICS). All other countries—Demographic and Health Surveys (DHS).

APPENDIX TABLE 4. HIV prevalence among women aged 15–24 and knowledge about, access to and use of condoms among adolescent women aged 15–19, developing regions

Region, subregion and country	HIV prevalence among women aged 15–24	% who know a source for obtaining condoms*	% who report that they could get condoms	% never-married and sexually active in the past 12 months who used a condom at last sex†		
				All	Rural	Urban
AFRICA						
Eastern Africa						
Burundi (2010)	0.6	31	23	21	14‡	38
Ethiopia (2011)	0.5	41	30	45	55‡	39‡
Kenya (2008–2009)	3.6	54	28	42	43	37
Madagascar (2008–2009)	0.3	58	34	5	2	13
Malawi (2010)	4.5	72	38	45	40	61
Mozambique (2011)	6.6	61	38	44	21	62
Rwanda (2010)	1.3	82	51	42	37	56‡
Tanzania (2010)	3.6	75	62	50	48	54
Uganda (2011)	4.0	70	32	54	54	53
Zambia (2007)	4.6	66	27	36	26	49
Zimbabwe (2010–2011)	6.3	55	28	40	34	48
Middle Africa						
Cameroon (2011)	1.8	66	27	57	51	62
Central African Republic (2010)	§	u	u	49	31	62
Chad (2010)	1.1	u	u	27	12	42
Congo (2011–2012)	1.3	64	33	43	29	50
Democratic Republic of Congo (2007)	0.8	33	11	12	7	18
Gabon (2012)	1.6	81	57	64	52	66
Sao Tome and Principe (2008–2009)	0.4	79	60	54	49	58‡
Northern Africa						
Egypt (2008)**	<0.1	u	u	u	u	u
Tunisia (2011–2012)	<0.1	u	u	u	u	u
Southern Africa						
Lesotho (2009)	10.7	61	35	63	60	70
Namibia (2006)	4.1	86	70	67	60	77
Swaziland (2006–2007)	20.0	83	57	52	49	60
Western Africa						
Benin (2011–2012)	0.4	38	19	38	34	42
Burkina Faso (2010)	0.5	73	27	51	40	60
Côte d'Ivoire (2011–2012)	1.2	62	33	43	30	51
Ghana (2008)	0.5	69	23	25	24	26
Guinea (2012)	0.8	32	19	21	16	26
Liberia (2007)	0.1	41	27	13	8	16
Mali (2012–2013)	0.3	27	17	18	12	24
Niger (2012)	0.1	13	7	††	††	††
Nigeria (2013)	1.3	39	12	37	28	47
Senegal (2010–2011)	0.3	39	14	36	32	41
Sierra Leone (2008)	1.0	24	14	8	7	8
Togo (2010)	0.9	u	u	59	52	67

APPENDIX TABLE 4, continued

Region, subregion and country	HIV prevalence among women aged 15–24	% who know a source for obtaining condoms*	% who report that they could get condoms	% never-married and sexually active in the past 12 months who used a condom at last sex†		
				All	Rural	Urban
ASIA						
Eastern Asia						
Mongolia (2010)	§	u	u	u	u	u
Central Asia						
Kazakhstan (2010–2011)	§	u	u	69	††	69
Kyrgyz Republic (2012)	<0.1	54	17	††	††	††
Tajikistan (2012)	0.1	16	4	††	††	††
Southern Asia						
Afghanistan (2010–2011)	<0.1	u	u	u	u	u
Bangladesh (2011)**	<0.1	u	u	u	u	u
Bhutan (2010)	<0.1	u	u	56‡	††	††
India (2005–2006)	0.1	39	9	18	18	20‡
Maldives (2009)**	<0.1	78	60	u	u	u
Nepal (2011)	<0.1	83	31	††	††	††
Pakistan (2012–2013)**	<0.1	u	u	u	u	u
Southeast Asia						
Cambodia (2010)	0.2	60	51	††	††	††
Indonesia (2012)	0.5	42	18	27‡	26‡	††
Laos (2011–2012)	0.2	u	u	32	31	††
Philippines (2013)	<0.1	55	22	4	3‡	4
Timor-Leste (2009–2010)	§	11	2	††	††	††
Viet Nam (2010–2011)	0.1	u	u	††	††	††
Western Asia						
Armenia (2010)	<0.1	62	23	††	††	††
Azerbaijan (2006)	<0.1	24	11	††	††	††
Iraq (2011)	§	u	u	u	u	u
Jordan (2012)**	§	55	u	u	u	u
Lebanon (2011)	§	u	u	u	u	u
LATIN AMERICA AND THE CARIBBEAN						
Caribbean						
Cuba (2010–2011)	<0.1	u	u	74	76	73
Dominican Republic (2007)	0.2	89	63	47	38	50
Haiti (2012)	0.9	79	74	59	51	67
Central America						
Belize (2011)	0.6	u	u	68	60‡	74
Costa Rica (2011)	0.2	u	u	52	48	54
Honduras (2011–2012)	0.2	87	48	41	30	46
Mexico (2009)	<0.1	u	u	20	25	19
South America						
Bolivia (2008)	<0.1	65	28	u	u	u
Brazil (2006)	§	95	90	66	73	66
Colombia (2010)	0.2	93	75	51	50	51
Guyana (2009)	0.8	75	59	62	62	63
Peru (2012)	0.2	95	49	34	24	36
Suriname (2010)	0.7	u	u	55	41	62

*Sources other than friends, family members and home. For Mexico, sample is restricted to never-married women who were sexually active in the past month. †Small sample size (25–49 respondents); the value will be less accurate than values based on at least 50 respondents. §According to UNAIDS, the source for this measure, data are insufficient to provide a prevalence estimate. **Sample consists of ever-married women (those who are currently married, widowed or divorced/separated) only; never-married women were not surveyed. ††Data suppressed because of insufficient sample size (fewer than 25 respondents). *Notes:* Data are from the most recent survey available (years denoted parenthetically). u=unavailable. *Sources:* HIV prevalence—reference 29. Brazil—reference 50. Mexico—reference 48. Afghanistan, Belize, Bhutan, Central African Republic, Chad, Costa Rica, Cuba, Iraq, Kazakhstan, Laos, Lebanon, Mongolia, Suriname, Togo, Tunisia and Viet Nam—Multiple Indicator Cluster Survey (MICS). All other countries—Demographic and Health Surveys (DHS).

APPENDIX TABLE 5. Health-seeking behaviors related to HIV and other STIs, among adolescent women aged 15–19, developing regions

Region, subregion and country	% who know a place to get an HIV test*	% who had an HIV test in past 12 months	% who had an HIV test in the past 12 months and received results			Among those sexually active in the past 12 months, % who had an STI or STI symptoms during that period†	Among those who had an STI or STI symptoms in the past 12 months	
			All	Rural	Urban		% obtaining treatment‡	% obtaining treatment from a health facility
AFRICA								
Eastern Africa								
Burundi (2010)	73	12	11	10	20	12	48§	39§
Ethiopia (2011)	68	20	19	16	28	3	30§	30§
Kenya (2008–2009)	85	18	18	17	20	5	38§	13§
Madagascar (2008–2009)**	43	4	4	3	9	6	48	41
Malawi (2010)	93	25	25	24	28	9	40	26
Mozambique (2011)	69	19	18	14	23	8	57	56
Rwanda (2010)	96	30	27	28	23	10	++	++
Tanzania (2010)	84	22	20	19	24	8	57§	35§
Uganda (2011)	88	33	31	30	34	22	64	60
Zambia (2007)	78	15	13	11	15	4	63§	50§
Zimbabwe (2010–2011)	78	19	18	19	17	10	20	17
Middle Africa								
Cameroon (2011)**	78	15	15	12	17	20	55	44
Central African Republic (2010)	55	16	15	9	22	u	u	u
Chad (2010)	21	3	3	1	6	u	u	u
Congo (2011–2012)	59	9	8	8	8	19	58	48
Democratic Republic of Congo (2007)	30	3	2	1	4	14	51	43
Gabon (2012)	78	22	20	20	20	23	52	43
Sao Tome and Principe (2008–2009)	76	17	16	19	13	9	++	++
Northern Africa								
Egypt (2008)‡‡	9	u	u	u	u	19	71	68
Tunisia (2011–2012)	21	u	u	u	u	u	u	u
Southern Africa								
Lesotho (2009)	84	34	33	34	31	16	46	40
Namibia (2006)	87	14	13	11	16	8	63	56
Swaziland (2006–2007)	81	12	10	9	12	13	62	57
Western Africa								
Benin (2011–2012)	46	11	9	8	11	9	60	47
Burkina Faso (2010)	62	9	8	6	13	11	41	37
Côte d'Ivoire (2011–2012)	51	10	10	9	10	29	45	26
Ghana (2008)	62	4	3	2	3	31	52	28
Guinea (2012)	37	3	3	1	5	41	50	36
Liberia (2007)	19	2	2	1	2	31	75	62
Mali (2012–2013)	24	6	5	3	9	28	47	31
Niger (2012)	35	5	4	3	8	6	16	13
Nigeria (2013)	51	5	4	4	5	7	61	20
Senegal (2010–2011)	55	11	10	6	13	12	43	38
Sierra Leone (2008)	26	4	3	2	5	21	42	27
Togo (2010)	51	10	9	7	11	u	u	u

APPENDIX TABLE 5, continued

Region, subregion and country	% who know a place to get an HIV test*	% who had an HIV test in past 12 months	% who had an HIV test in the past 12 months and received results			Among those sexually active in the past 12 months, % who had an STI or STI symptoms during that period†	Among those who had an STI or STI symptoms in the past 12 months	
			All	Rural	Urban		% obtaining treatment‡	% obtaining treatment from a health facility
ASIA								
Eastern Asia								
Mongolia (2010)	44	6	6	4	7	u	u	u
Central Asia								
Kazakhstan (2010–2011)	59	15	14	14	13	u	u	u
Kyrgyz Republic (2012)	24	6	5	6	5	4	††	††
Tajikistan (2012)	17	1	1	1	2	4	††	††
Southern Asia								
Afghanistan (2010–2011)	u	u	u	u	u	u	u	u
Bangladesh (2011)‡‡	u	u	u	u	u	13	47	25
Bhutan (2010)	46	4	3	4	3	u	u	u
India (2005–2006)	27	1	1	0	1	11	26	15
Maldives (2009)‡‡	78	u	u	u	u	22	78§	74§
Nepal (2011)	38	2	2	2	2	9	33	28
Pakistan (2012–2013)‡‡	5	u	u	u	u	14	51	49
Southeast Asia								
Cambodia (2010)	65	4	4	4	3	10	59§	42§
Indonesia (2012)	5	u	u	u	u	19	47	20
Laos (2011–2012)	33	1	1	1	2	7	66	47
Philippines (2013)	41	0	0	0	0	u	u	u
Timor-Leste (2009–2010)	18	u	u	u	u	9	60§	53§
Viet Nam (2010–2011)	57	3	3	3	3	u	u	u
Western Asia								
Armenia (2010)	24	1	1	1	0	0	††	††
Azerbaijan (2006)	22	u	u	u	u	1	††	††
Iraq (2011)	1	0	0	0	0	u	u	u
Jordan (2012)‡‡	14	u	u	u	u	u	u	u
Lebanon (2011)	14	0	0	0	0	u	u	u
LATIN AMERICA AND THE CARIBBEAN								
Caribbean								
Cuba (2010–2011)	89	23	19	19	19	u	u	u
Dominican Republic (2007)	88	13	12	12	12	22	73	69
Haiti (2012)	76	10	9	8	11	28	64	54
Central America								
Belize (2011)	74	15	14	13	14	u	u	u
Costa Rica (2011)	52	10	9	10	9	u	u	u
Honduras (2011–2012)	73	10	10	10	9	13	65	58
Mexico (2009)	u	5	4	3	5	u	u	u
South America								
Bolivia (2008)	33	0	0	0	0	16	52	50
Brazil (2006)	u	u	u	u	u	38	47	47
Colombia (2010)	66	9	8	8	8	10	77	72
Guyana (2009)	86	24	22	22	21	7	48§	41§
Peru (2012)	90	u	u	u	u	20	84	52
Suriname (2010)	78	12	11	13	11	u	u	u

*Construction of variable includes respondents ever tested for HIV. For Indonesia, respondents are not asked if they have ever tested for HIV; instead, they are asked about knowledge about HIV counseling and testing. For Egypt, data come from the Health Issues Questionnaire and are pulled from the country report rather than the standard DHS report. †For Egypt and Maldives, data are only available for those ever sexually active. DHS asks about disease through sexual contact, genital sore or ulcer, and bad-smelling abnormal genital discharge. For Brazil, STI symptoms are defined as vaginal discharge and itching with discharge. ‡In Brazil, respondents were asked about having obtained treatment in the past 30 days. §Small sample size (25–49 respondents); the value will be less accurate than values based on at least 50 respondents. **Questions about HIV and other STIs are limited to a subsample (those in households selected for the male interview and HIV test). ††Data suppressed because of insufficient sample size (fewer than 25 respondents). ‡‡Sample consists of ever-married women (those who are currently married, widowed or divorced/separated) only; never-married women were not surveyed. *Notes:* Data are from the most recent survey available (years denoted parenthetically). u=unavailable. *Sources:* Brazil—reference 50. Mexico—references 48 and 49. Afghanistan, Belize, Bhutan, Central African Republic, Chad, Costa Rica, Cuba, Iraq, Kazakhstan, Laos, Lebanon, Mongolia, Suriname, Togo, Tunisia and Viet Nam—Multiple Indicator Cluster Survey (MICS). All other countries—Demographic and Health Surveys (DHS).

APPENDIX TABLE 6. Childbearing among adolescent women aged 15–19 and unplanned births among women whose most recent birth* occurred before age 20, developing regions

Region, subregion and country	% who have begun childbearing†	Age-specific fertility rate (births per 1,000 women aged 15–19)	% of births that are unplanned‡ among women whose most recent birth* occurred before age 20		
			All	Household wealth	
				Lower 2 quintiles	Upper 3 quintiles
AFRICA					
Eastern Africa					
Burundi (2010)	10	65	17	14	20
Ethiopia (2011)	12	79	28	26	30
Kenya (2008–2009)	18	103	46	45	47
Madagascar (2008–2009)	32	148	12	10	15
Malawi (2010)	26	152	35	32	38
Mozambique (2011)	38	167	20	9	27
Rwanda (2010)	6	41	40	36	43
Tanzania (2010)	23	116	41	41	41
Uganda (2011)	24	134	27	22	31
Zambia (2007)	28	146	43	31	51
Zimbabwe (2010–2011)	24	115	33	28	36
Middle Africa					
Cameroon (2011)	25	127	30	21	37
Central African Republic (2010)	49	229	u	u	u
Chad (2010)	44	203	u	u	u
Congo (2011–2012)	33	129	40	34	45
Democratic Republic of Congo (2007)	24	124	31	22	37
Gabon (2012)	28	114	51	51	51
Sao Tome and Principe (2008–2009)	23	93	51	53	49
Northern Africa					
Egypt (2008)§	10	50	4	4	4
Tunisia (2011–2012)	1	3	u	u	u
Southern Africa					
Lesotho (2009)	20	96	56	50	61
Namibia (2006)	15	78	65	64	66
Swaziland (2006–2007)	23	111	78	74	82
Western Africa					
Benin (2011–2012)	16	94	27	22	31
Burkina Faso (2010)	24	130	8	5	11
Côte d'Ivoire (2011–2012)	30	129	31	30	32
Ghana (2008)	13	66	56	49	63
Guinea (2012)	34	154	21	13	27
Liberia (2007)	32	177	33	24	41
Mali (2012–2013)	39	172	12	9	14
Niger (2012)	40	206	6	7	6
Nigeria (2013)	22	122	9	4	16
Senegal (2010–2011)	19	93	20	17	24
Sierra Leone (2008)	34	146	28	20	34
Togo (2010)	17	88	u	u	u

APPENDIX TABLE 6, continued

Region, subregion and country	% who have begun childbearing†	Age-specific fertility rate (births per 1,000 women aged 15–19)	% of births that are unplanned‡ among women whose most recent birth* occurred before age 20		
			All	Household wealth	
				Lower 2 quintiles	Upper 3 quintiles
ASIA					
Eastern Asia					
Mongolia (2010)	6	38	u	u	u
Central Asia					
Kazakhstan (2010–2011)	4	23	u	u	u
Kyrgyz Republic (2012)	6	44	1	0	2
Tajikistan (2012)	7	54	2	1	2
Southern Asia					
Afghanistan (2010–2011)	14	u	u	u	u
Bangladesh (2011)§	30	118	20	20	21
Bhutan (2010)	11	59	u	u	u
India (2005–2006)	16	90	14	13	15
Maldives (2009)§	2	10	30	31	29
Nepal (2011)	17	81	24	21	26
Pakistan (2012–2013)§	8	44	5	4	6
Southeast Asia					
Cambodia (2010)	8	46	10	9	11
Indonesia (2012)	9	48	6	6	6
Laos (2011–2012)	18	94	u	u	u
Philippines (2013)	10	57	32	23	40
Timor-Leste (2009–2010)	7	51	12	11	12
Viet Nam (2010–2011)	8	46	u	u	u
Western Asia					
Armenia (2010)	5	28	3	4	3
Azerbaijan (2006)	6	33	11	9	12
Iraq (2011)	15	82	u	u	u
Jordan (2012)§	5	32	10	12	8
Lebanon (2011)	4	32	u	u	u
LATIN AMERICA AND THE CARIBBEAN					
Caribbean					
Cuba (2010–2011)	14	u	u	u	u
Dominican Republic (2007)	21	92	47	46	48
Haiti (2012)	14	66	62	54	67
Central America					
Belize (2011)	16	64	u	u	u
Costa Rica (2011)	17	54	u	u	u
Honduras (2011–2012)	24	101	45	40	50
Mexico (2009)	16	67	41	u	u
South America					
Bolivia (2008)	18	88	62	65	59
Brazil (2006)	22	93	55	57	51
Colombia (2010)	20	84	62	59	67
Guyana (2009)	18	101	43	47	38
Peru (2012)	13	64	68	64	75
Suriname (2010)	14	u	u	u	u

*Includes only the most recent birth in the past 2 years (for MICS) or 5 years (for DHS and other surveys). †Includes women who are currently pregnant with their first child or who have had a birth. ‡For Mexico, data is only available on the status of currently pregnant women. §Indicator on the % with unplanned births refer to ever-married women only (i.e., those married, widowed or divorced/separated); never-married women were not surveyed. For the indicators on childbearing and the fertility rate, household survey data are used and include never-married women in the denominator. *Notes:* Data are from the most recent survey available (years denoted parenthetically). u=unavailable. *Sources:* Brazil—reference 50. Mexico—reference 48 and Consejo Nacional de Población, Datos de Proyecciones 1990–2010, Nacional 1990–2010, no date, http://www.conapo.gob.mx/es/CONAPO/Proyecciones_Datos. Afghanistan, Belize, Bhutan, Central African Republic, Chad, Costa Rica, Cuba, Iraq, Kazakhstan, Laos, Lebanon, Mongolia, Suriname, Togo, Tunisia and Viet Nam—Multiple Indicator Cluster Survey (MICS). All other countries—Demographic and Health Surveys (DHS).

APPENDIX TABLE 7. Use of maternal health services among women whose most recent birth* occurred before age 20, developing regions

Region, subregion and country	% who made at least one ANC visit with a skilled provider†	% who had 4+ ANC visits, at least one of which was to a skilled provider	Median no. of months pregnant at first ANC visit‡	% who were told where to go for pregnancy complications, among those receiving any ANC	% whose most recent birth was attended by a skilled provider	% whose most recent birth was delivered at a health facility§				
						All	Household wealth		Residence	
							Lower 2 quintiles	Upper 3 quintiles	Rural	Urban
AFRICA										
Eastern Africa										
Burundi (2010)	98	32	5.0	u	74	74	67	80	72	89
Ethiopia (2011)	43	16	5.0	u	13	12	3	19	5	58
Kenya (2008–2009)	89	39	5.9	37	54	53	35	65	48	69
Madagascar (2008–2009)	83	46	4.8	41	44	36	23	49	32	61
Malawi (2010)	96	44	5.4	75	78	81	75	85	80	88
Mozambique (2011)	92	51	5.4	u	66	66	43	80	56	87
Rwanda (2010)	97	35	4.4	u	88	87	82	92	86	91
Tanzania (2010)	95	38	5.4	u	69	60	61	72	63	86
Uganda (2011)	93	50	4.9	u	61	67	43	72	52	86
Zambia (2007)	94	54	5.1	67	58	60	38	73	44	87
Zimbabwe (2010–2011)	86	59	5.4	u	66	65	51	76	60	81
Middle Africa										
Cameroon (2011)	85	57	4.5	u	65	62	36	83	48	82
Central African Republic (2010)	67	38	u	u	52	52	36	66	40	74
Chad (2010)	54	24	u	u	27	20	10	26	11	49
Congo (2011–2012)	92	76	4.1	u	94	93	86	98	85	98
Democratic Republic of Congo (2007)	85	44	5.2	34	78	74	62	83	64	91
Gabon (2012)	96	78	3.7	u	92	93	89	97	74	96
Sao Tome and Principe (2008–2009)	100	76	3.6	62	90	86	83	90	82	92
Northern Africa										
Egypt (2008)**	76	67	2.6	31	79	73	63	83	68	88
Tunisia (2011–2012)	++	++	u	u	++	++	++	++	++	++
Southern Africa										
Lesotho (2009)	92	66	4.8	46	66	65	52	73	58	86
Namibia (2006)	95	63	5.3	51	84	83	71	93	76	96
Swaziland (2006–2007)	98	76	5.3	40	78	79	69	85	76	88
Western Africa										
Benin (2011–2012)	85	56	3.9	u	85	89	80	97	86	94
Burkina Faso (2010)	96	34	4.2	u	77	77	63	85	72	95
Côte d'Ivoire (2011–2012)	91	43	5.2	u	60	59	45	71	46	78
Ghana (2008)	97	70	4.0	51	58	57	41	70	45	75
Guinea (2012)	80	52	4.3	u	46	44	26	57	34	66
Liberia (2007)	80	60	3.7	37	57	42	22	54	26	65
Mali (2012–2013)	75	39	4.2	u	63	61	44	74	53	92
Niger (2012)	83	31	5.0	u	37	37	25	45	31	83
Nigeria (2013)	48	35	5.2	u	26	25	13	43	18	50
Senegal (2010–2011)	97	50	3.7	u	67	75	58	92	65	92
Sierra Leone (2008)	89	53	4.9	55	45	26	23	29	22	38
Togo (2010)	81	52	u	u	72	75	54	88	63	93

APPENDIX TABLE 7, continued

Region, subregion and country	% who made at least one ANC visit with a skilled provider†	% who had 4+ ANC visits, at least one of which was to a skilled provider	Median no. of months pregnant at first ANC visit‡	% who were told where to go for pregnancy complications, among those receiving any ANC	% whose most recent birth was attended by a skilled provider	% whose most recent birth was delivered at a health facility§				
						All	Household wealth		Residence	
							Lower 2 quintiles	Upper 3 quintiles	Rural	Urban
ASIA										
Eastern Asia										
Mongolia (2010)	100	89	u	u	98	98	97	100‡‡	‡‡	‡‡
Central Asia										
Kazakhstan (2010–2011)	97	75	u	u	100	100	100‡‡	100	100	100
Kyrgyz Republic (2012)	95	86	2.9	u	100	100	100	100	100	100‡‡
Tajikistan (2012)	86	61	3.4	u	94	81	75	84	78	92
Southern Asia										
Afghanistan (2010–2011)	50	13	u	u	39	34	19	45	26	76
Bangladesh (2011)**	55	21	u	u	30	26	15	35	22	41
Bhutan (2010)	96	74	u	u	58	57	35	82	49	92‡‡
India (2005–2006)	77	35	3.9	35	49	41	25	57	35	64
Maldives (2009)**	100	83	1.8	52	94	96	98	94	97	‡‡
Nepal (2011)	63	42	3.9	73	48	47	33	58	44	80
Pakistan (2012–2013)**	76	31	3.7	u	57	50	38	65	47	63
Southeast Asia										
Cambodia (2010)	92	62	3.1	u	79	63	55	69	61	79
Indonesia (2012)	95	83	3.1	u	78	55	43	70	43	75
Laos (2011–2012)	50	27	u	u	41	37	21	55	32	71
Philippines (2013)	96	83	3.8	75	81	70	55	83	61	79
Timor-Leste (2009–2010)	86	53	4.2	50	37	26	11	36	19	53
Viet Nam (2010–2011)	88	41	u	u	86	82	71	100‡‡	79	100‡‡
Western Asia										
Armenia (2010)	100	94	3.4	u	100	100	100‡‡	100‡‡	100‡‡	99‡‡
Azerbaijan (2006)	69	35	3.8	34	89	75	63	89	69	85
Iraq (2011)	83	53	u	u	92	81	76	84	75	83
Jordan (2012)**	98	93	2.2	u	98	95	90	100	98	95
Lebanon (2011)	95	85	u	u	98	96	91‡‡	100‡‡	‡‡	94‡‡
LATIN AMERICA AND THE CARIBBEAN										
Caribbean										
Cuba (2010–2011)	u	u	u	u	u	u	u	u	u	u
Dominican Republic (2007)	99	94	3.1	65	99	99	99	99	98	99
Haiti (2012)	90	59	3.9	u	44	44	23	57	31	62
Central America										
Belize (2011)	97	81	u	u	97	96	94	98‡‡	94	100‡‡
Costa Rica (2011)	95	87	u	u	96	95	92	100‡‡	91	100
Honduras (2011–2012)	97	87	2.9	u	88	88	79	96	81	96
Mexico (2009)	97	85	u	u	97	93	u	u	89	95
South America										
Bolivia (2008)	89	70	3.5	57	79	76	58	91	56	91
Brazil (2006)	99	86	u	u	96	98	97	99	97	98
Colombia (2010)	97	86	3.3	72	96	96	93	99	90	98
Guyana (2009)	93	74	4.3	59	95	91	87	98	90	96
Peru (2012)	95	87	3.4	89	88	86	79	96	75	93
Suriname (2010)	93	68	u	u	93	92	88	99‡‡	89	95

*Includes only the most recent birth in the past 2 years (for MICS) or 5 years (for DHS and other surveys). †For Brazil, the question is asked about source of antenatal care, not about the type of provider. ‡For Mexico, the data are incomplete and thus are not reported. §For Mexico, the data presented are for 2006; data on this measure were not collected in 2009. **Sample consists of ever-married women (those who are currently married, widowed or divorced/separated) only; never-married women were not surveyed. ††Data suppressed because of insufficient sample size (fewer than 25 respondents). ‡‡Small sample size (25–49 respondents); the value will be less accurate than values based on at least 50 respondents. *Notes:* Data are from the most recent survey available (years denoted parenthetically). Skilled providers are doctors, midwives, nurses or any other qualified health professionals. For Brazil, any ANC provider accessed via the national health system, a health plan or health insurance is considered skilled. ANC=antenatal care. u=unavailable. *Sources:* Brazil—reference 50. Mexico—references 47 and 48. Afghanistan, Belize, Bhutan, Central African Republic, Chad, Costa Rica, Cuba, Iraq, Kazakhstan, Laos, Lebanon, Mongolia, Suriname, Togo, Tunisia and Viet Nam—Multiple Indicator Cluster Survey (MICS). All other countries—Demographic and Health Surveys (DHS).

APPENDIX TABLE 8. Use of maternal health services among women whose most recent birth* occurred before age 20 and barriers to seeking general medical services among adolescents aged 15–19, developing regions

Region, subregion and country	Mothers aged <20			15–19-year-olds			
	% who did not deliver at a health facility, by reason		% whose last birth was delivered by cesarean section	% who say it is a big problem to get medical advice or treatment when sick, by reason†			
	Access‡	Culture§		Getting permission to go	Getting money needed for treatment	Distance to facility	Not wanting to go alone
AFRICA							
Eastern Africa							
Burundi (2010)	u	u	6	39	75	52	44
Ethiopia (2011)	15	87	2	30	60	62	54
Kenya (2008–2009)	65	27	6	u	u	u	u
Madagascar (2008–2009)	80	25	2	19	55	42	34
Malawi (2010)	u	u	7	13	49	55	34
Mozambique (2011)	u	u	5	10	35	49	18
Rwanda (2010)	u	u	12	4	49	24	18
Tanzania (2010)	u	u	5	7	43	36	23
Uganda (2011)	49	32	7	2	20	15	10
Zambia (2007)	60	25	4	4	31	34	27
Zimbabwe (2010–2011)	u	u	3	9	46	33	17
Middle Africa							
Cameroon (2011)	u	u	5	35	72	37	33
Central African Republic (2010)	u	u	5	u	u	u	u
Chad (2010)	u	u	2	u	u	u	u
Congo (2011–2012)	u	u	6	48	64	40	36
Democratic Republic of Congo (2007)	u	u	6	34	76	42	41
Gabon (2012)	u	u	8	47	73	53	40
Sao Tome and Principe (2008–2009)	††	††	5	77	88	72	66
Northern Africa							
Egypt (2008)**	32	73	25	10	46	21	37
Tunisia (2011–2012)	u	u	††	u	u	u	u
Southern Africa							
Lesotho (2009)	65	3	7	8	31	29	16
Namibia (2006)	73	8	9	12	38	42	32
Swaziland (2006–2007)	78	6	8	2	21	25	13
Western Africa							
Benin (2011–2012)	u	u	5	33	57	41	29
Burkina Faso (2010)	u	u	2	25	67	43	25
Côte d'Ivoire (2011–2012)	u	u	2	28	66	38	20
Ghana (2008)	44	37	4	9	46	26	25
Guinea (2012)	u	u	3	u	u	u	u
Liberia (2007)	81	12	3	10	47	38	u
Mali (2012–2013)	u	u	3	28	46	32	22
Niger (2012)	u	u	2	22	52	39	32
Nigeria (2013)	26	48	1	14	42	29	21
Senegal (2010–2011)	u	u	7	17	46	31	21
Sierra Leone (2008)	79	17	2	12	77	49	26
Togo (2010)	u	u	11	u	u	u	u

APPENDIX TABLE 8, continued

Region, subregion and country	Mothers aged <20			15–19-year-olds			
	% who did not deliver at a health facility, by reason		% whose last birth was delivered by cesarean section	% who say it is a big problem to get medical advice or treatment when sick, by reason†			
	Access‡	Culture§		Getting permission to go	Getting money needed for treatment	Distance to facility	Not wanting to go alone
ASIA							
Eastern Asia							
Mongolia (2010)	u	u	9	u	u	u	u
Central Asia							
Kazakhstan (2010–2011)	u	u	16	u	u	u	u
Kyrgyz Republic (2012)	u	u	7	22	37	18	30
Tajikistan (2012)	u	u	5	18	41	28	34
Southern Asia							
Afghanistan (2010–2011)	u	u	3	u	u	u	u
Bangladesh (2011)**	u	u	13	u	u	u	u
Bhutan (2010)	u	u	8	u	u	u	u
India (2005–2006)	34	80	8	9	16	25	13
Maldives (2009)**	††	††	36	2	11	19	31
Nepal (2011)	16	73	3	13	42	46	66
Pakistan (2012–2013)**	u	u	12	24	36	53	78
Southeast Asia							
Cambodia (2010)	u	u	4	40	69	39	54
Indonesia (2012)	u	u	6	9	20	15	41
Laos (2011–2012)	u	u	2	u	u	u	u
Philippines (2013)	68	36	6	11	52	31	32
Timor-Leste (2009–2010)	67	14	2	25	38	53	48
Viet Nam (2010–2011)	u	u	10	u	u	u	u
Western Asia							
Armenia (2010)	u	u	6	9	50	22	56
Azerbaijan (2006)	††	††	3	18	56	36	57
Iraq (2011)	u	u	18	u	u	u	u
Jordan (2012)**	u	u	23	10	25	29	56
Lebanon (2011)	u	u	19	u	u	u	u
LATIN AMERICA AND THE CARIBBEAN							
Caribbean							
Cuba (2010–2011)	u	u	u	u	u	u	u
Dominican Republic (2007)	u	u	39	7	27	20	36
Haiti (2012)	u	u	5	18	73	45	33
Central America							
Belize (2011)	u	u	26	u	u	u	u
Costa Rica (2011)	u	u	23	u	u	u	u
Honduras (2011–2012)	u	u	14	15	44	35	49
Mexico (2009)	u	u	34	u	u	u	u
South America							
Bolivia (2008)	55	25	17	28	55	47	58
Brazil (2006)	u	u	31	u	u	u	u
Colombia (2010)	67	1	30	u	u	u	u
Guyana (2009)	59††	34††	8	9	23	14	31
Peru (2012)	u	u	19	16	48	38	53
Suriname (2010)	u	u	10	u	u	u	u

*Last birth in the past 2 years (for MICS) or 5 years (for DHS and other surveys). †Some reasons are excluded because they were country-specific or were included in too few countries' surveys. For Madagascar and Cameroon, data on this indicator is limited to a subsample (those in households selected for the male interview and HIV test). ‡Cost, facility not open, too far/no transportation, don't trust facility/poor-quality services, no female provider, services not provided and country-specific categories. §Husband/family did not allow, not necessary and not customary. For Colombia, the measure is based on only one response category, "husband did not allow." **Sample consists of ever-married women (those who are currently married, widowed or divorced/separated) only; never-married women were not surveyed. ††Data suppressed because of insufficient sample size (fewer than 25 respondents). †††Small sample size (25–49 respondents); the value will be less accurate than values based on at least 50 respondents. *Notes:* Data are from the most recent survey available (years denoted parenthetically). u=unavailable. *Sources:* Brazil—reference 50. Mexico—reference 48. Afghanistan, Belize, Bhutan, Central African Republic, Chad, Costa Rica, Cuba, Iraq, Kazakhstan, Laos, Lebanon, Mongolia, Suriname, Togo, Tunisia and Viet Nam—Multiple Indicator Cluster Survey (MICS). All other countries—Demographic and Health Surveys (DHS).



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