


**ABORTION  
WORLDWIDE  
2017** Uneven Progress  
and Unequal Access





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# Executive Summary

**T**he situation of induced abortion has changed markedly over the past few decades. This report provides updated information on the incidence of abortion worldwide, the laws that regulate abortion and the safety of its provision. It also looks at unintended pregnancy, its relationship to abortion, and the impact that both have on women and couples who increasingly want smaller families and more control over the timing of their births.

## **Abortion incidence**

- As of 2010–2014, an estimated 36 abortions occur each year per 1,000 women aged 15–44 in developing regions, compared with 27 in developed regions. The abortion rate declined significantly in developed regions since 1990–1994; however, no significant change occurred in developing regions.
- By far, the steepest decline in abortion rates occurred in Eastern Europe, where use of effective contraceptives increased dramatically; the abortion rate also declined significantly in the developing subregion of Central Asia. Both subregions are made up of former Soviet Bloc states where the availability of modern contraceptives increased sharply after political independence—exemplifying how abortion goes down when use of effective contraceptives goes up.
- Abortions occur as frequently in the two most-restrictive categories of countries (banned outright or allowed only to save the woman's life) as in the least-restrictive category (allowed without restriction as to reason)—37 and 34 per 1,000 women, respectively.
- In much of the world, 20–24-year-old women tend to have the highest abortion rate of any age-group, and the bulk of abortions are accounted for by women in their twenties.
- Adolescent abortion rates in countries in developed regions are fairly low (e.g., 3–16 per 1,000

women aged 15–19) and have been declining steadily in many of these countries; comparable data are unavailable for developing regions.

## **Abortion law**

- Laws fall along a continuum from outright prohibition to allowing abortion without restriction as to reason. As of 2017, 42% of women of reproductive age live in the 125 countries where abortion is highly restricted (prohibited altogether, or allowed only to save a woman's life or protect her health).
- The vast majority (93%) of countries with such highly restrictive laws are in developing regions. In contrast, broadly liberal laws are found in nearly all countries in Europe and Northern America, as well as in several countries in Asia.
- Nonetheless, some countries with broadly liberal laws have increasingly added restrictions that chip away at access to legal procedures; these include the United States and several countries in the former Soviet Bloc or zone of influence.
- Since 2000, 28 countries changed their abortion law—all but one expanding legal grounds to allow abortions to protect a woman's health, for socioeconomic reasons or without restriction as to reason. Moreover, 24 added at least one of three additional grounds: in cases of rape or incest, or when the fetus is diagnosed with a grave anomaly.
- Implementing access under expanded legal grounds can take many years; however, with political will, change can be achieved much more quickly.

## **Abortion safety**

- The development and application of clinical guidelines and standards have likely facilitated the provision of safe abortion. Furthermore, the reach of safe services has been extended by allowing trained, midlevel health professionals to provide abortion in many countries.

- In highly restrictive contexts, clandestine abortions are now safer because fewer occur by dangerous and invasive methods. Women increasingly use medication abortion methods—primarily the drug misoprostol alone, as it is typically more available in these contexts than the method of mifepristone and misoprostol combined.
- As access to health care overall improves and national governments increasingly prioritize implementing World Health Organization (WHO) guidelines, access to quality postabortion care also improves. The combined result of these trends and safer procedures means that fewer women are dying from unsafe abortion.
- Of all abortions, an estimated 55% are safe (i.e., done using a recommended method and by an appropriately trained provider); 31% are less safe (meet either method or provider criterion); and 14% are least safe (meet neither criterion). The more restrictive the legal setting, the higher the proportion of abortions that are least safe—ranging from less than 1% in the least-restrictive countries to 31% in the most-restrictive countries.
- Unsafe abortions occur overwhelmingly in developing regions, where countries that highly restrict abortion are concentrated. But even where abortion is broadly legal, inadequate provision of affordable services can limit access to safe services. In addition, persistent stigma can affect the willingness of providers to offer abortions, and can lead women to prioritize secrecy over safety.
- In 14 developing countries where unsafe abortion is prevalent, 40% of women who have an abortion develop complications that require medical attention. In all developing regions combined (except Eastern Asia), an estimated 6.9 million women are treated annually for such complications; however, many more who need treatment do not get timely care.

### Unintended pregnancy

- The vast majority of abortions result from unintended pregnancies. The estimated unintended pregnancy rates in developed and developing regions are 45 and 65 per 1,000 women aged 15–44, respectively, as of 2010–2014; both values represent significant declines since 1990–1994. Current rates are highest in Latin America and the Caribbean (96 per 1,000) and Africa (89 per 1,000).
- Globally, 56% of unintended pregnancies end in induced abortion; regionally, this proportion ranges from 36% in Northern America to 70% in Europe.

- To act on their growing preferences for smaller families and for better control over the timing of their births, women need improved access to modern contraceptives.
- Levels of unmet need for modern contraception are much higher among single, sexually active women than among in-union women because stigma continues to impede single women—especially adolescents—from getting contraceptive counseling and services.

The path toward safer abortions is clear: The benefits of expanding legal grounds for abortion begin to accrue as soon as women no longer have to risk their health by resorting to clandestine abortion. Although legality is the first step toward safer abortion, legal reform is not enough in itself. It must be accompanied by political will and full implementation of the law so that all women—despite inability to pay or reluctance to face social stigma—can seek out a legal, safe abortion.

Legality alone does not guarantee access, and vigilance is required to prevent backsliding where onerous restrictions that are not based on safety erode the availability of safe and legal abortion services. Highly restrictive laws do not eliminate the practice of abortion, but make those that do occur more likely to be unsafe. In these countries, improving the quality and coverage of postabortion care—which all countries accept as an essential reproductive health service that they must provide—is crucial to saving lives and protecting women's health.

Where abortion is highly restricted, accurate information on how to safely use misoprostol alone should be widely conveyed to help make clandestine abortions safer, improve women's health and chances of survival, and reduce the heavy financial burden of providing postabortion care that poor countries' health budgets must absorb. Where abortion is legal, it is important to ensure that women can choose between equally safe methods of surgery or medication.

In countries that highly restrict abortion, preventing unintended pregnancy goes a long way toward preventing unsafe abortion. Moreover, ensuring that women and couples who desire to avoid pregnancy can use effective contraceptives if they want to is key to keeping women and children healthy. Deciding when and how many children to have is a fundamental human right, the benefits of which reverberate at every level—each individual woman, her family and society as a whole.

**Legality alone does not guarantee access, and vigilance is required to prevent backsliding**

# 1 Introduction

Induced abortion is common across the globe. The vast majority of abortions occur in response to unintended pregnancies, which typically result from ineffective use or nonuse of contraceptives. Other factors are also important drivers of unintended pregnancy and the decision to have an abortion. Some unintended pregnancies result from rape and incest. Other pregnancies become unwanted after changes in life circumstances or because taking a pregnancy to term would have negative consequences on the woman's health and well-being. As a result, abortion continues to be part of how women and couples in all contexts manage their fertility and their lives, regardless of the laws in their country. Thus, safe abortion services will always be needed.

Substantial gaps in knowledge about abortion remain, however. To fill such gaps, researchers are developing and applying innovative approaches to better document the incidence of abortion and to better understand its causes, conditions and consequences. This report draws on this growing evidence base to examine the current state of abortion across legal settings and socioeconomic contexts, and considers abortion in light of factors known to influence its safety and incidence. By providing a comprehensive overview of key aspects of abortion—incidence, legal status, service provision and safety—and how they have changed in recent years, the report aims to inform future policies and programs.

## **What has changed in the last decade?**

Our last overview report, *Abortion Worldwide: A Decade of Uneven Progress*<sup>1</sup> examined abortion during the first decade of the 2000s. During that period, a number of countries changed their abortion law by expanding the grounds under which abortion is legally permitted. This update extends the time frame through 2017, and considers whether the access to and safety of abortion have changed, and the extent to which the practice of abortion aligns with how abortion is permitted by

law. In some settings, for example, women may legally qualify for an abortion, but have no real access to safe services; in others, safe procedures may be widely available, despite severe legal restrictions. Elsewhere, backlash against women's legal right to abortion has resulted in the enactment of restrictions and obstacles to timely procedures. Thus, it is crucial to monitor the evolving legal context and how it affects abortion practice, access and safety around the world.

One of the most important developments in terms of the safety of abortion is the steady increase in the use of medication abortion, which is likely having an important impact on abortion-related morbidity and mortality. In addition, the advent of medication abortion has profoundly altered the context in which safe abortions are provided and by whom—and these trends are continuing to evolve. Such changes in how abortions are carried out require a reconceptualization of safety and its measurement.<sup>2,3</sup> Newly available estimates enable us to assess this issue using a more refined categorization than a simple dichotomy of safe and unsafe.

Efforts continue to improve the quality and coverage of care for complications from unsafe procedures. Treating unsafe abortion has long been recognized as an important way to reduce maternal mortality and lessen the severity of maternal morbidity, and has officially been on the global public health agenda since the Programme of Action of the 1994 Cairo International Conference on Population and Development (ICPD).<sup>4</sup> Despite wide differences among United Nations (UN) member states in their abortion laws, all agreed to improve the access to and quality of postabortion care—an important component of essential emergency obstetric care. Such care saves women's lives, and over the past decade, many countries with highly restrictive laws have nonetheless issued evidence-based postabortion care guidelines.



Researchers continue to add to what is known about abortion. In the past decade, they have increased the evidence base on the incidence of abortion, conducted studies in countries where abortion is highly legally restricted, and compiled data for countries where abortion is permitted under broad criteria and good-quality data are available. Recently, researchers implemented a new statistical approach to estimate abortion incidence worldwide.<sup>5</sup> The study provides modeled estimates for a 25-year period, from 1990 to 2014, and improves the evidence base at the global, regional and subregional levels. In addition, the analysis was extended to produce current and trend data on the incidence of unintended pregnancy,<sup>6</sup> and the same statistical approach was employed to generate modeled estimates of abortion by safety for 2010–2014.<sup>7</sup>

As women and couples increasingly desire smaller families,<sup>8</sup> they need to be able to act on these preferences. One essential step toward their doing so is having access to high-quality contraceptive care. Another important step is ensuring that women who experience an unintended pregnancy are able to obtain safe abortion care. Helping women to have only the children they want, when they want them, is key to making progress toward the goals in the 2030 Agenda for Sustainable Development—specifically, Target 3.7, which supports universal access to reproductive health care, and Target 5.6, which supports individuals’ ability to exercise their reproductive rights.<sup>9</sup> In addition, the FP2020 initiative includes a commitment to expanding family planning services to reach 120 million more women in the world’s 69 poorest countries by 2020.<sup>10</sup> Furthermore, international and regional human rights agreements have played an important role in holding countries accountable for denying women their right to legal abortion.

### **Structure of the report**

The following chapters of this report address some key questions, including how have women’s use of and access to safe abortion changed in the past decade, and what key factors promote or reduce access to safe abortion services in different economic and legal settings. Chapter 2 provides data on the incidence and safety of abortion across regions and legal contexts; the information comes from a wide range of sources (Data and Methods Appendix, page 46). To the extent to which the available data permit, the chapter also examines how abortion incidence varies by women’s characteristics, such as age and union status (i.e., in either

a formal marriage or an informal union). Chapter 3 reviews the current legal status of abortion around the world; countries and women of reproductive age are classified along a broadly defined continuum of abortion legality ranging from absolute prohibition to abortion without restriction as to reason (Appendix Table 1, page 50).

The next two chapters examine the current practice of induced abortion and its consequences. Chapter 4 provides an overview of abortion services in different legal settings; discusses updated World Health Organization (WHO) guidelines for best practices, including recommendations on the types of health workers best suited to provide abortion care; and examines changes in abortion methods. It also discusses barriers that keep women from obtaining the safe procedures that they legally qualify for, and describes the environments in which many clandestine—and often unsafe—abortions still occur. Chapter 5 details the consequences of abortions that occur under clandestine conditions, in terms of women’s social and economic well-being and their immediate and long-term health, and the broader impact of unsafe abortion on health systems. The chapter also discusses recommended standards of postabortion care and summarizes available evidence on conditions under which it is provided.

Chapter 6 presents updated evidence on the factors that lead to the unintended pregnancies that are behind the vast majority of abortions. The chapter provides new worldwide estimates of unintended pregnancy, by which we mean those that come too soon or are not wanted at all. It also examines factors that directly contribute to unintended pregnancy: unmet need for effective contraception and method failure. Finally, Chapter 7 summarizes the report’s main findings, and proposes recommendations and ways forward.

**As women and couples increasingly desire smaller families, they need to be able to act on these preferences**

## 2 Incidence of Induced Abortion—Current Levels and Recent Trends

**A**ssessing the incidence and safety of induced abortion is essential to improving access to services that protect and enhance women’s reproductive health. In addition, ascertaining the magnitude of abortion where it is highly legally restricted—and thus practiced clandestinely—is essential to understanding unsafe abortion’s toll on women’s health and survival, and to gauging the extent of the need for appropriate postabortion services. Estimates of abortion incidence also permit the estimation of the incidence of unintended pregnancy—a robust indicator of gaps in effective contraceptive use and, in turn, the need to improve contraceptive information and services.

Reliable, high-quality data on the incidence of abortion are not consistently available for all countries. Where abortion is highly legally restricted, reliable reporting systems are usually absent. And even where the procedure is broadly legal, official records can be incomplete. Regardless of the legal setting, women are often highly reluctant to admit to having had an abortion in response to direct questioning because of the stigma surrounding the issue. To address these formidable data challenges, population scientists have devised a range of methodologies to estimate abortion incidence at the national level.<sup>11–14</sup>

Estimating abortion at the global level calls for a different approach. Researchers recently developed a statistical model that combined all available national-level estimates with information on factors known to be linked to abortion incidence to “fill in the blanks” where direct information is missing (Data and Methods Appendix, page 46). These estimates are annual averages for each five-year period from 1990 through 2014, at the global level, as well as the regional and subregional levels. This approach enables assessment of changes over the past 25 years and of variation across regions. We also present data from a related model that incorporates factors known to influence abortion safety. The results, at global, regional and

subregional levels, distribute annual abortions as of 2010–2014 into three categories: safe, less safe and least safe.

### Global and regional incidence

**Current levels.** As of 2010–2014, an estimated 55.9 million abortions occur each year—49.3 million in developing regions and 6.6 million in developed regions.<sup>a,15</sup> Whereas absolute numbers are influenced by population size, annual rates are not. Overall, 35 abortions occur each year per 1,000 women aged 15–44 worldwide (Figure 2.1, page 9); the rate in developed regions is significantly lower than that in developing regions (27 vs. 36 per 1,000). To put these estimates into real-life terms, an annual rate of 35 per 1,000 suggests that, on average, a woman would have one abortion in her lifetime.<sup>b</sup>

Abortion incidence varies little by countries’ economic conditions: Rates are similar among the World Bank’s four income groups<sup>16</sup>—the highest and lowest income-groups range narrowly (rates of 29 and 32 per 1,000 women, respectively). Moreover, women living under the most restrictive laws (i.e., where abortion is prohibited altogether or allowed only to save a woman’s life) have abortions at about the same rate as those living where the procedure is available without restriction as to reason (37 and 34 abortions per 1,000, respectively; Appendix Table 2, page 51).

Regionally, the highest estimated abortion rate is in Latin America and the Caribbean (44 abortions per 1,000 women; Figure 2.1), and the lowest rates are in Northern America and Oceania (17 and 19 per 1,000, respectively). Rates in Africa and Asia are very close to the world average (34 and 36 per 1,000). At the subregional level, rates are fairly homogenous within Africa and Asia; however, they vary widely within Latin America and the Caribbean (from 33 per 1,000 in Central America to 59 per 1,000 in the Caribbean), and within Europe (from 16 per 1,000 in Western Europe to 42 per 1,000 in Eastern Europe).

a) We use the UN definition of developed regions that includes Northern America, Europe and the countries of Japan, Australia and New Zealand. Developing regions encompass Africa, Asia (except for Japan), Latin America and the Caribbean, and Oceania (except for Australia and New Zealand). Source: reference 17.

b) The total abortion rate is typically computed as the average number of abortions a woman would have in her lifetime if she were to pass through her childbearing years having abortions according to current age-specific abortion rates. Lacking age-specific abortion rates, we use a crude approximation that does not account for variation by age or the age-structure of the population. The product of the rate (35 abortions per 1,000 women aged 15–44) and number of reproductive years (30) results in a lifetime total of 1,050 abortions per 1,000 women, or about one abortion per woman over her reproductive years.

**Trends over time.** Globally, the estimated annual number of abortions increased by 5.7 million—or 11%—between 1990–1994 and 2010–2014, from 50.2 million to 55.9 million.<sup>15</sup> The number of women of reproductive age increased much more (40% globally),<sup>17</sup> however, which indicates that the rise in the number of abortions mainly reflects growth in the population of women of reproductive age. The use of modern contraceptives also rose over this period,<sup>18</sup> but apparently not by enough to meet the demand created by the growing number of women needing contraception. Time trends in the numbers of abortions for developed and developing regions were in opposite directions: The annual number rose by 28% in developing regions (from 38.4 million to 49.3 million), but fell by 44% in developed regions (from 11.8 million to 6.6 million, primarily because of changes in Eastern Europe).

Trends in abortion rates provide a better measure of change because rates take into account population growth. Although the global rate fell significantly between 1990–1994 and 2010–2014, the drop was relatively small in absolute terms (from 40 to 35 abortions per 1,000 women; Figure 2.2, page 10); however, a large and statistically significant decline in the rate did occur in developed regions (from 46 to 27 per 1,000). The rate in developing regions remained basically unchanged (36–39 per 1,000).

The drop in the abortion rate in developed regions was largely driven by declines in Eastern Europe, where the rate fell by more than half (from 88 to 42 abortions per 1,000 women); declines in countries in the former Soviet Bloc or zone of influence located in Southern and Northern Europe also contributed to this downward trend. In addition, although there was no change in the developing regions as a whole, the abortion rate in Central Asia—which is made up of five former Soviet Republics—declined significantly (from 54 to 42 per 1,000). The steady increase in access to and use of modern contraceptives<sup>18</sup> in these newly independent countries after the dissolution of the Soviet Union is reflected in the systematic drop from the high abortion rates that used to predominate.<sup>19</sup>

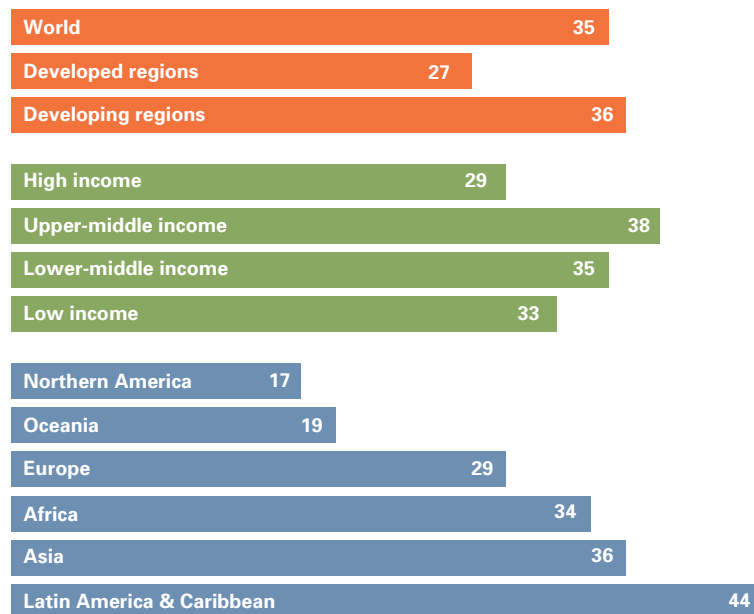
### Country-level incidence

Reliable country-level data are available for only the minority of countries with comprehensive reporting systems and broadly liberal abortion laws. Among 18 developed countries with complete official statistics, abortion rates range

FIGURE

## 2.1 Abortion rates are lower in developed regions than in developing regions; by major region, they are highest in Latin America and the Caribbean and lowest in Northern America.

No. of abortions per 1,000 women aged 15–44



narrowly, from five to 18 abortions per 1,000 women of reproductive age,<sup>c</sup> with many below 10 (Figure 2.3, page 11). However, countries in which abortion is highly legally restricted generally lack official statistics on it, so estimates need to be based on a range of indirect methodologies.<sup>12</sup> Rates in 15 developing countries estimated using an indirect approach<sup>d</sup> are far higher than those in the 18 countries with complete statistics mentioned above—ranging from 16–28 per 1,000 in Burkina Faso, Ethiopia, Rwanda and Senegal, to 48 and 50 per 1,000 in Kenya and Pakistan, respectively.

Another data source is nationally representative surveys of women. Rates from such surveys are available primarily for countries of the former Soviet Union where abortion is legal and self-reported levels of abortion incidence exceed rates based on official statistics indicating that the latter are incomplete. Surveys in three such countries—Armenia (2015–2016),<sup>20</sup> the Russian Federation (2011)<sup>21</sup> and Georgia (2010)<sup>22</sup>—found rates of 21, 34 and 56 abortions per 1,000 women of reproductive age, respectively. (This 2010 rate for Georgia is much lower than earlier survey-based estimates, namely 125 per 1,000 in 1999 and 104 per 1,000 in 2005.<sup>23</sup>) However, because women are known to underreport their experience of abortion when questioned directly,<sup>11,24</sup> rates from surveys should be interpreted as minimum

### NOTES TO FIGURE 2.1

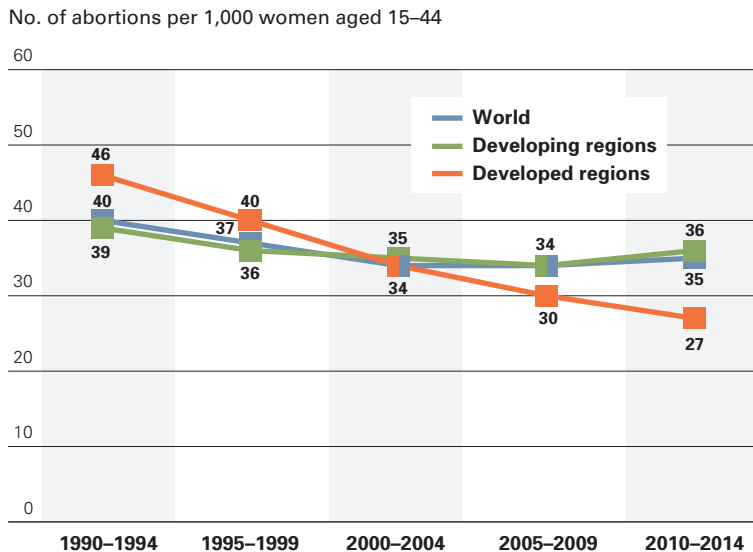
Annual rates are averages for 2010–2014. In this and all other figures and tables, we use the UN definition of developed regions that includes Northern America, Europe and the countries of Japan, Australia and New Zealand. Developing regions encompass Africa, Asia (except for Japan), Latin America and the Caribbean, and Oceania (except for Australia and New Zealand). Sources: Abortion rates by geographic areas—reference 15; by income group—reference 16.

c) Whereas the global and regional rates presented in this chapter are per 1,000 women 15–44, these national rates are per 1,000 women 15–49. Both are routinely used, and rates among 15–49-year-olds will be slightly lower because very few women aged 45–49 have abortions.

d) This methodology, known as the Abortion Incidence Complications Method (AICM), was originally developed to estimate incidence in countries with restrictive laws, but has recently been adapted and applied in broadly legal countries with high levels of unsafe abortion. It takes as its base the only visible evidence of cases of induced abortion in countries where data are lacking: the number of treated complications of unsafe abortion. A multiplier derived from the estimated proportion that treated cases represent of all abortions is then applied to the known quantity. Source: reference 12.

FIGURE

**2.2 The annual abortion rate has declined significantly in developed regions, but not in developing regions.**



**FIGURE 2.2**  
Source: reference 15.

estimates. And given that levels of underreporting can vary across countries, these estimates do not necessarily reflect true country differences.

Abortion rates also range widely within a country's borders—for example, across states or regions, and between urban and rural areas. In most countries for which data are available, rates are higher in urban areas than in rural ones. In the United States, for example, the rate in metropolitan areas in 2000 was double that in nonmetropolitan areas (24 vs. 12 per 1,000 women);<sup>25</sup> a similar pattern is seen in Mexico (54 per 1,000 in the most-developed subregion containing the capital vs. 26 per 1,000 in the least-developed subregion).<sup>26</sup> Moreover, in some countries with high levels of immigration, low and high abortion rates can coexist if immigrants have abortions at different rates than native-born women. In Switzerland, for example, the 2014 abortion rate among Swiss citizens was less than half that among noncitizens (four vs. 10 per 1,000).<sup>27</sup> Similarly, the rate among native-born women in Italy in 2013 was one-third that among women born in other countries (six vs. 19 per 1,000).<sup>28</sup>

**Incidence by safety and gestational age**

Severe complications from unsafe abortion—especially if left untreated—contribute to maternal morbidity,<sup>29</sup> and sometimes to long-term disability and maternal mortality.<sup>30,31</sup> Changes in abortion provision and methods have led to a need to revise the earlier dichotomy of safe and

unsafe abortions. Researchers recently proposed a broader, more nuanced conceptual framework that reflects the changing reality on the ground.<sup>7</sup> This new framework statistically accounts for as many factors known to influence abortion safety as data availability allows.

According to this framework, abortions fall into one of three categories: safe, less safe and least safe (with the latter two together making up all unsafe abortions).<sup>7</sup> An abortion is classified as safe if it takes place using a safe method and is done by an appropriately trained provider (i.e., per WHO health worker guidelines<sup>32</sup>); less-safe abortions are those that meet only one of the two criteria, and least-safe abortions are those that meet neither. This means that less-safe procedures include those done by a trained provider but using an outdated method (e.g., dilation and curettage, or D&C), as well as self-induced abortions using a relatively safe method (e.g., misoprostol, a drug that can be used to induce abortion, and is noninvasive and effective). Least-safe abortions are those done by an untrained person (a provider or the woman herself) using a dangerous method (e.g., ingestion of caustic substances or insertion of a sharp object).

As of 2010–2014, an estimated 55% of all abortions are safe, 31% are less safe, and 14% are least safe (Appendix Table 2).<sup>7</sup> These proportions differ dramatically by major region. When we combine the less- and least-safe abortions into one category, an estimated 12% of abortions in the developed world (primarily in Eastern Europe) and 49% of those in the developing world are considered unsafe. These proportions translate to more than 25 million unsafe abortions per year—virtually all (97%) of which are in the developing world.

The study of abortion safety also examined the relationship between safety and legality using three specially defined categories of countries by restrictiveness: those that ban abortion, allow it only to save a woman's life, or allow it to save her life and protect her physical health; those that allow abortion to preserve a woman's mental health or for socioeconomic reasons, plus all narrower reasons; and those that allow abortion without restriction as to reason. The study found that the prevalence of least-safe abortions increased with increasing restrictions, from 1% of all abortions in countries in the least-restrictive category to 17% in those in the moderately restrictive category to 31% in those in the most-restrictive category (Figure 2.4, page 12).<sup>7</sup>

These findings echo results by World Bank income groups: The proportion of least-safe abortions increases monotonically from 1% in high-income countries to 5% in upper-middle-income countries, 20% in lower-middle-income countries and 54% in low-income countries.<sup>7</sup> Relatedly, the proportions of abortions that are safe increase monotonically from the lowest to the highest income-group (22%, 42%, 67% and 82%, respectively), and all differences compared with the lowest income-group are statistically significant.

The timeliness of an abortion can be linked to its safety in legally restrictive settings. Moreover, delays in accessing abortion can result in women's being denied legal services in countries that have early gestational requirements,<sup>33</sup> (Appendix Table 1, page 50). Although we lack government statistics for many countries, in 16 with reliable data (all countries where safe abortion services are broadly accessible),<sup>34</sup> abortions take place overwhelmingly in the first trimester: Such abortions account for very large majorities (81–89%) of all abortions in three of these 16, and for the vast majority (92–97%) in the remaining 13. The proportion of very early abortions—that is, those done by nine weeks—has been rising: Among 13 of the above countries with trend data, 10 experienced an increase from 2005–2006 to 2012–2015 in the proportion of abortions that take place by nine weeks' gestation.<sup>35</sup> This trend is at least partially explained by technology enabling increasingly earlier detection of pregnancy, as well as by the rising use of combination medication abortion—the majority of which occurs by the recommended gestation for the method of nine weeks.<sup>36</sup>

### Characteristics of women who have an abortion

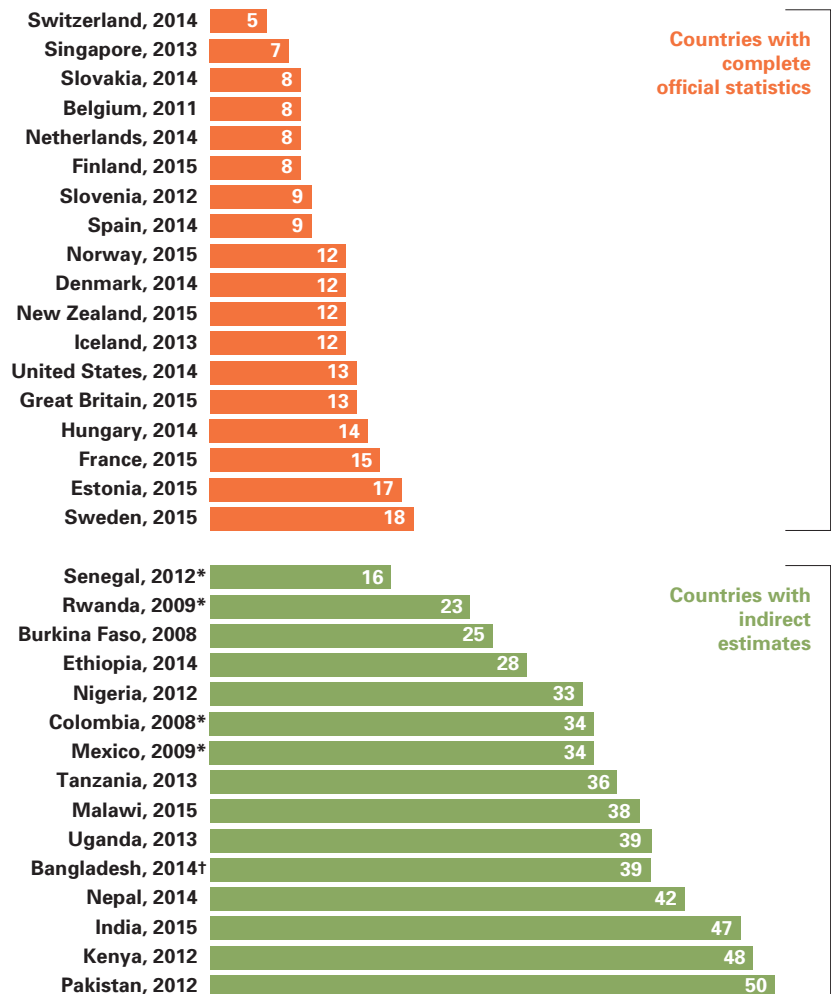
Information on whether certain groups of women are more likely than others to have an abortion is useful for developing and targeting interventions to prevent unintended pregnancy and to better serve women who have abortions. Below we discuss the available evidence on abortion according to women's age, union status and parity. Although these data provide some sense of which groups of women are more or less likely to have abortions, the limited evidence base means that patterns may not be generalizable to all countries.

A woman's age is broadly associated with her probability of having an unintended pregnancy and with her motivation to avoid an unplanned birth, given that age is closely related to where women are in

FIGURE

### 2.3 Abortion rates range somewhat narrowly in countries with complete official statistics, and widely in countries with indirect estimates.

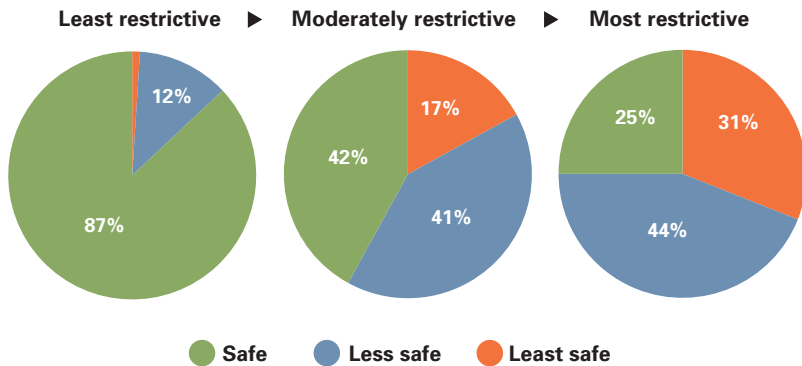
No. of abortions per 1,000 women aged 15–49



• NOTES TO FIGURE 2.3 \*Recalculated from published estimates, which were per 1,000 15–44-year-old women. †Includes menstrual regulation procedures. Sources: For countries with complete official statistics—special tabulations of most recent government-issued numbers of abortions with population of 15–49-year-old women from reference 17. For countries with indirect estimates—see references 26, 63, 65, 79, 95, 125, 160 and 198–201; and Sedgh G et al., Estimates of the incidence of induced abortion and consequences of unsafe abortion in Senegal, *International Perspectives on Sexual and Reproductive Health*, 2015, 41(1):11–19; Sedgh G et al., Estimating abortion incidence in Burkina Faso using two methodologies, *Studies in Family Planning*, 2011, 42(3):147–154; Bankole A et al., The incidence of abortion in Nigeria, *International Perspectives on Sexual and Reproductive Health*, 2015, 41(4):170–181; and Singh S et al., The incidence of menstrual regulation procedures and abortion in Bangladesh, 2014, *International Perspectives on Sexual and Reproductive Health*, 2017, 43(1):1–11.

FIGURE

**2.4 The proportion of all abortions that are estimated to be least safe increases as abortion laws become more restrictive.**



**NOTES TO FIGURE 2.4**

Least restrictive consists of countries in abortion legality category 6; moderately restrictive, categories 4 and 5; and most restrictive, categories 1–3. Safe abortions are those performed using a safe method with an appropriately trained provider; less-safe abortions meet only one of those criteria; and least-safe abortions meet neither. *Source:* reference 7.

the life course—i.e., whether they have entered into a union and started a family or are still in school. However, age-specific abortion rates are available only for the relatively small group of countries that collect reliable data, primarily those that allow legal abortion under broad criteria.

Age-specific abortion rates are determined by at least three factors: when women are most likely to get pregnant, when pregnancies are most likely to be unintended, and when women are most likely to resolve an unintended pregnancy by abortion rather than go on to have an unplanned birth. Among 17 countries with complete official statistics, abortion rates in 12 are highest for women aged 20–24 (Figure 2.5, page 13). This peak in the early-to-mid twenties makes sense, because those are women’s most fecund years, and a relatively high proportion of 20–24-year-olds in these countries are likely to be single, sexually active and highly motivated to avoid taking an unintended pregnancy to term.<sup>37</sup>

In another 21 countries for which abortion data are incomplete (or of unknown completeness) and that range in income and abortion legality,<sup>e</sup> the percentage distribution of abortions by age was used—rather than age-specific abortion rates—as an indicator of differential concentration of abortion among age-groups. This is a useful measure of the women who account for larger or smaller shares of all abortions, assuming similar levels of underreporting by women across age-groups, which is plausible given that stigma is likely to similarly affect all women’s reporting of their abortion experience. The results for some countries broadly reinforce the pattern described above—that is, use of abortion is concentrated among women in their twenties;<sup>38</sup> however, in a few countries, women

in their early thirties have a larger proportion of abortions.

Whether a woman is in a union at the time can influence her response to an unintended pregnancy. In many cultures, childbearing is approved of only within formal legal marriages, but in many others, childbearing within cohabiting and informal unions is also socially acceptable. The relative strength of social sanctions against sexual activity and childbearing outside any type of union can also be key; these sanctions tend to be stronger in developing than in developed countries.

As the majority of women in developing countries are in a union for most of their childbearing years, the number of abortions to in-union women is far greater than that to single women. In contrast, in some developed countries (e.g., France, Portugal, Spain and the United States), women spend a substantial proportion of their reproductive years not in a union; as a result, women not in a union account for slightly more than half (51–55%) of all abortions in these countries.<sup>39–42</sup>

The decision to have an abortion can also depend on how many children a woman already has and how many she ultimately wants. As we will discuss in Chapter 6, desired family size has fallen steadily over recent decades, and small families of about two children have become the norm in most parts of the world.<sup>8</sup> In six high-income countries with relevant government statistics,<sup>f</sup> women who do not yet have a child account for a large minority of all abortions (39–48%);<sup>39,41,43–46</sup> these women likely want to postpone childbearing. The bulk of the remaining abortions is more or less equally divided between those occurring after a first birth and those after a second birth.

In 12 of 19 countries (all low- and middle-income) with national survey data on the economic status of women who have had an abortion, the wealthiest two-fifths of women account for a disproportionately large share of abortions.<sup>38</sup> In two of these countries (Armenia and Azerbaijan), however, the pattern is reversed, and poorer women have disproportionately more abortions. In the remaining countries, there is little relationship between wealth and reported experience of abortion.

**Reasons why women have abortions**

The reasons why women choose to have an abortion are often closely related to union status and age; however, the decision to have an abortion is

e) Four in Africa, three in Asia, 12 in Europe, one in Northern America, and one in Latin America and the Caribbean.

f) Belgium, France, Germany, Great Britain, the Netherlands and Spain.

also influenced by other social, economic, partnership and health factors. Data on the main reason women give for having an abortion are available for 13 countries,<sup>9,47</sup> and although these countries span a broad range of economic and abortion-law contexts, some commonalities emerge. Socio-economic concerns is the most frequently cited type of reason, followed by wanting to stop child-bearing and wanting to postpone or space a birth. Other main reasons include partner- and health-related issues, which vary widely in prevalence by country.

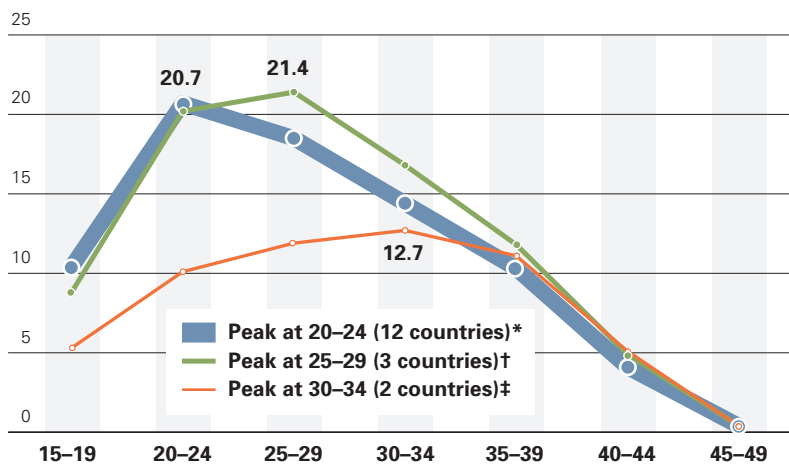
A somewhat different pattern emerges among the three Sub-Saharan African countries than among the other 10: Women in these three countries are far more likely than other women to cite a main reason related to being very young (i.e., not being ready to have a child, wanting to continue schooling and fearing parents' reactions). In addition, limiting family size is a much less common main reason in these Sub-Saharan African countries, where many women and their husbands still desire large families. For all 13 countries, there is rarely a single dominant reason, however. A 2004 U.S. study, for example, found that 72% of women reported at least three reasons for why they had had an abortion.<sup>48</sup>

The extent to which male partners are involved in and influence whether a woman has an abortion and the type of care she receives, for example, is important but rarely studied. According to a study in Nigeria, lack of partner support for the abortion decision has been linked to both relatively late (second-trimester) abortions and the use of untrained providers.<sup>49</sup> In Ghana and Uganda, partners' knowledge of and support for the decision to have an abortion have been associated with women's obtaining a safe abortion, partly because partner support often means help with the costs.<sup>50,51</sup>

FIGURE

**2.5** Averaged age-specific abortion rates for countries with complete data generally peak at ages 20–24, with few peaking at later ages.

No. of abortions per 1,000 women in each age-group



**NOTES TO FIGURE 2.5**  
 \*Belgium, Denmark, Estonia, Finland, France, Great Britain, Iceland, Netherlands, New Zealand, Spain, Switzerland and United States. †Norway, Singapore and Sweden. ‡Slovakia and Slovenia.  
 Sources: Special tabulations of most recent government-issued numbers of abortions by age-group, with population numbers of women in each age-group from reference 17.

g) The 13 countries include three in the developed world (Belgium, Russia and the United States) and 10 in the developing world. Of the developing countries, six are in Asia (Armenia, Azerbaijan, Georgia, Kyrgyzstan, Nepal and Turkey), one is in the Caribbean (Jamaica) and three are in Sub-Saharan Africa (Congo-Brazzaville, Gabon and Ghana).

# 3 Legality of Abortion — Current Status and Recent Trends

As the previous chapter showed, abortions take place around the world, no matter the legal setting. Legal abortions are a relatively recent phenomenon: The mid-to-late 20th century saw a wave of amendments to criminal codes, where most countries spell out exceptions under which induced abortion is not subject to penalties.<sup>52</sup> The reforms started in the early-to-mid 1950s in Soviet Bloc and satellite states across subregions of Europe (Eastern, Northern and Southern) and Asia (Western and Central). In the 1960s and 1970s, reform extended to much of the developed world—and to some developing countries, including China, Cuba, India and Tunisia. By the mid-1980s, abortions were broadly legal throughout most of Europe and in Northern America. From 1985 to 2010, nearly all remaining European countries lifted restrictions to permit abortion on broad grounds (Appendix Table 1, page 50), as did one country in Sub-Saharan Africa (South Africa),<sup>53</sup> three in South or Southeast Asia (Cambodia, Nepal and Vietnam) and one in South America (Guyana).<sup>54</sup> Finally, Mexico's federal district became the only part of the country to allow abortion without restriction in 2007.

Examples of this slow and steady historical shift can be found in every world region.<sup>1,54</sup> Many nations—especially former colonies with inherited penal codes—continue to add exceptions to penal codes or pass separate laws to regulate abortion. Countries that lift restrictions do so through a wide array of paths. Evidence that unsafe abortion is a pressing public health concern and a preventable cause of ill-health and death often plays an important role in advocacy for reform. This evidence continues to be useful in arguments in support of drafting laws, passing legislation and deciding court cases. In addition, pressure from international treaty bodies can be very effective in holding signatory governments accountable to the agreements that use rights to health, privacy and life to ensure access to abortions currently permitted by law, and to argue for expanding legal grounds.<sup>55</sup>

## Abortion laws fall along a continuum

We use an existing six-category legality continuum to understand how the UN's 193 member states and six other entities<sup>h</sup> currently stand on abortion. (For brevity, we refer to all as "countries.") We acknowledge that there is often a large gap between what is specified in a country's abortion laws and the services that women can actually obtain. Nevertheless, organizing the world according to a legality framework is an important first step to understand the broader picture of where abortion is allowed under the law.

The legality continuum ranges from category 1, outright prohibition on any ground, to category 6, allowing abortion without restriction as to reason. The four intermediate categories permit abortion on progressively broader grounds: to save a woman's life, to protect a woman's physical health, to protect her mental health, and for socioeconomic reasons. Many countries permit abortion on at least one of the following three additional grounds: if the pregnancy resulted from rape or incest, or if the fetus has a grave anomaly.<sup>56,57</sup> These additional grounds do not affect a country's placement along the continuum, but can be meaningful avenues for affording women the possibility of obtaining a safe and legal abortion. Both components are important and together broadly reflect each country's commitment to making safe, legal abortions available.

Currently, some 6% of the world's 1.64 billion women of reproductive age live in a country where abortion is prohibited altogether, without any explicit exception<sup>56</sup> (Figure 3.1, page 15). Twenty-one percent of reproductive-aged women live in a country where abortion is explicitly allowed only to save a woman's life. An additional 11% live where abortion is also permitted to protect a woman's physical health,<sup>i</sup> another 4% where abortion is also permitted to protect a woman's mental health, and 21% where abortion is also permitted on socioeconomic grounds—the specifics of which vary by country (e.g., age, union and economic status, and

h) Includes two disputed states (Kosovo, and the West Bank and Gaza Strip) and four special jurisdictions (Hong Kong, Northern Ireland, Puerto Rico and Taiwan).

i) The Center for Reproductive Rights classifies most countries whose laws use the unmodified term "health" as allowing the exception of physical health. Such laws are often interpreted within countries as also permitting abortion for mental health reasons.



ability to care for existing children<sup>53</sup>). Finally, some 37% of the world's women of reproductive age live in countries where abortion is available without restriction as to reason—with maximum gestational limits specified in almost all cases.

### Broad legal status differs between developed and developing regions

A nominal proportion—0.04%—of women of reproductive age in developed regions live under laws that prohibit all abortions with no explicit exception, compared with 7% of their developing-world counterparts (Figure 3.1). At the other end of the spectrum, 81% of women in developed regions live under laws that allow abortion without restriction as to reason, compared with 29% in developing regions. Given that the population of women in the developing world is nearly six times that in the developed world,<sup>17</sup> absolute numbers are needed to clarify the human scale. When the world's largest countries—China and India—are included, twice as many women who live where abortion is broadly legal<sup>j</sup> are in the developing rather than the developed world (404 million vs. 194 million). But removing these two countries reduces this number in the developing world to 97 million, providing a very different perspective.

We also assessed the situation through the lens of gross national income, using the World Bank's classification of countries into four income groups.<sup>k</sup> The proportions of women living in countries where abortion is most broadly legal rises consistently with income, from 19% in low-income countries to 80% in high-income countries (Figure 3.2, page 16). Relatedly, the pattern reverses for the most restricted category: Less than 0.05% of women in high-income countries live where all abortions are prohibited, compared with 17% in low-income countries.

### At the country level, laws vary substantially

Looking at how countries fall across the spectrum is telling (Appendix Table 1). Of the 26 countries that prohibit abortion without any exception, only Andorra, Malta and San Marino—each with a small population<sup>17</sup>—are in developed regions. In contrast, three developing-region countries—Congo-Kinshasa, Egypt and the Philippines—account for 60% of the population of women in countries that ban abortion under all circumstances.

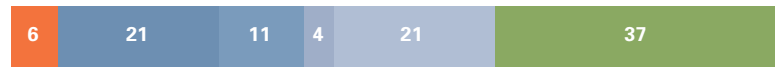
Abortion is explicitly permitted in only the most dire of circumstances—when needed to save a woman's life—in 39 countries; of those, only one (Ireland) is in the developed world. Because the

FIGURE

## 3.1 Greater proportions of women in developing regions than in developed regions live under restrictive abortion laws.

% of women aged 15–44

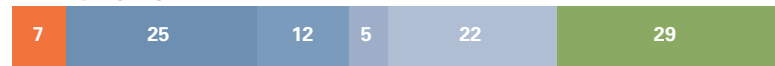
Total (1.64 billion women)



Developed regions (244 million women)



Developing regions (1.39 billion women)



Developing regions without China and India (784 million women)



Prohibited altogether

To save woman's life and to protect her physical health  
 To preserve woman's physical health  
 To preserve woman's mental health  
 on socioeconomic grounds

Without restriction as to reason

laws in four very populous developing nations (Bangladesh, Brazil, Mexico<sup>l</sup> and Nigeria) limit legal abortions to this single reason, the category accounts for one-fifth of the world's women of reproductive age. Although Bangladesh technically has such a severely restrictive abortion law, menstrual regulation has been officially recognized there as "an interim method for establishing nonpregnancy" since 1979.<sup>58</sup> Women in Bangladesh can obtain menstrual regulation services in the government's family planning program as a public health measure.

The laws in another 36 countries allow abortion to save a woman's life and to protect her physical health—the vast majority (33) of which are in developing regions. As with all laws, how legal criteria for abortion are interpreted and whether implementation mechanisms are in place to provide services vary markedly within this group. In high-income South Korea, for example, safe but clandestine procedures are widely available, despite a fairly restrictive law.<sup>59</sup>

In 24 more countries, the laws explicitly specify a threat to a woman's mental health as grounds for legal abortion. These countries span a range of cultural and economic settings: Two are in the

● **NOTES TO FIGURE 3.1**  
 Proportions based on 2015 population and law status as of 2017. Sources: special tabulations based on references 17 and 56.

j) By broadly legal, we mean the two least-restrictive categories: 5 (allowed for all health and socioeconomic grounds) and 6 (allowed without restriction as to reason).

k) The four World Bank gross national income (GNI) groups, whose country composition is updated annually, include the following: high income, upper-middle income, lower-middle income and low income. Source: reference 16.

l) Mexico is one of three federal countries (along with Australia and the United States) that decide abortion law at the local rather than national level; for these countries, we use the legality classification that covers the majority of the population.

FIGURE

**3.2 Greater proportions of women in higher-income countries than of women in lower-income countries live where abortion is broadly legal.**

% of women aged 15–44

**Low-income countries (139 million women)**



**Lower-middle-income countries (675 million women)**



**Upper-middle-income countries (546 million women)**



**High-income countries (276 million women)**



Prohibited altogether

To save woman's life and to preserve woman's physical health

to preserve woman's mental health

on socioeconomic grounds

Without restriction as to reason

**NOTES TO FIGURE 3.2**

The world's 1.64 billion women of reproductive age are distributed into the World Bank's four income groups as follows: Nine percent in the 34 low-income countries, 41% in the 50 lower-middle-income countries, 33% in the 55 upper-middle-income countries and 17% in the 60 high-income countries. Sources: special tabulations based on references 16, 17 and 56.

developed world (New Zealand and the special jurisdiction of Northern Ireland), while the remaining 22 developing-world countries range from the small island of Nauru to the midsize nations of Algeria, Colombia and Thailand. The extent to which these grounds make a real difference in women's lives differs dramatically among these countries. In Israel and New Zealand, for example, safe and government-subsidized abortion services are widely available.<sup>61,62</sup> In contrast, abortions under the specified legal criteria are still rare in Colombia. Of the roughly 400,000 abortions estimated to have occurred in Colombia in 2008, only 0.1% were reported as legal;<sup>63</sup> however, the limited available data indicate a sustained increase in reported legal abortions each year since expansion of legal grounds in 2006, from 322 in 2008 to 5,688 in 2013.<sup>64</sup>

Some 13 countries add socioeconomic reasons to the three medical grounds (life, physical health and mental health) enumerated above. India, one of the countries in this category, illustrates how having a broadly liberal law is no guarantee that legal abortion services will be widely available. Despite the law, there are many barriers to safe abortion, such as onerous certification regulations

for private-sector providers, inadequate access to public-sector facilities, stigma, and a poor understanding of the law among both women and providers. Indeed, as of 2015, an estimated 78% of abortions in India occur outside of a health facility, and the large majority do not meet the criteria for legality.<sup>65</sup> Moreover, amendments offered in 2014 have still not been approved; proposed changes include allowing more types of health practitioners to provide abortion, improving patient confidentiality and adding further legal grounds to permit abortion without restriction as to reason.<sup>66</sup>

Finally, the laws in 61 countries—24 in developing regions and 37 in developed ones—allow women to have an induced abortion without restriction as to reason. For these countries, regulations ensuring the safety of induced abortions are generally set out in government guidelines, as are the specified gestational limits. The exceptions to legislating such limits are Canada, China, North Korea and Vietnam, which have none. Most of the other 57 countries permit abortions only during the first trimester of pregnancy (i.e., with a gestational limit of 12 weeks).<sup>67</sup> However, Cambodia and eight countries in Europe, allow abortion up to gestations of 14 or 18 weeks; in Singapore, the gestational limit is 24 weeks; and the Netherlands and the United States specify before viability. Moreover, four countries have legal limits before the end of the first trimester: eight weeks in Guyana, and 10 weeks in Kosovo, Portugal and Turkey. Limiting legal abortion to so early in pregnancy means many women would not qualify for one should they experience delays in recognizing their pregnancy or in getting to a source of care.

**Many countries also permit abortion on additional grounds**

As mentioned earlier, countries may also legally permit abortion for grounds that are not part of the legality continuum: in cases in which the pregnancy resulted from rape or incest, or the fetus has a grave anomaly. These grounds are relevant for countries in the middle-four legal categories, as no country in category 1 allows for any of these three exceptions (consistent with their prohibition of all abortions), and all countries in category 6 allow abortion without restriction as to reason.

As of 2017, some 46 of the 112 countries in categories 2–5 legally allow abortion if the pregnancy resulted from rape, 34 if the pregnancy resulted from incest, and 45 if the fetus had a grave anomaly. Yet, as with the criteria underlying the legality

continuum, legalizing abortion under such grounds does not guarantee that women who qualify will actually be able to exercise their right to a legal abortion. For example, in some countries where rape or incest are grounds for abortion, police and court protocols can routinely cause delays to the point that the woman must obtain a procedure later in pregnancy, when it is riskier to her health. Such delays can also cause a woman's pregnancy to exceed specified gestational limits—denying the woman a legal abortion altogether. In addition, many fetal anomalies cannot be diagnosed until relatively late in pregnancy; if countries lack timely approval processes or the trained personnel and facilities to carry out later abortions, legal abortions for this indication may end up out of reach for the women who need and legally qualify for them.

Rather than decriminalize abortion in cases of rape, some countries lighten the penalties involved. For example, Bolivia, Ecuador, Iraq and Jordan consider it an “extenuating” or “mitigating” circumstance (i.e., still illegal, but subject to reduced sentences or fines) if an abortion is needed to protect a woman's or her family's honor.<sup>68–71</sup> Similarly, Cyprus frames the rape exception as needed to avoid “seriously jeopardiz[ing] the social status of the pregnant woman or that of her family.”<sup>72</sup>

### **Implementation mechanisms vary substantially**

As countries extend grounds for abortion, they lay out how exceptions are to be implemented through procedural and bureaucratic requirements. In contrast, where abortion has been broadly legal for decades, such requirements are sometimes changed in the opposite direction, toward adding restrictions to legal abortion. Such procedural and bureaucratic requirements fall into five broad categories: certification needed for each indication (e.g., for the determination of rape or the diagnosis of a fetal anomaly); gestational age limits (see Appendix Table 1 for countries' general limits); facility-focused requirements (e.g., mandated equipment and supplies); provider-focused requirements (e.g., which health worker types are allowed to perform specific tasks); and woman-focused requirements (e.g., third-party authorization, counseling, waiting periods and ultrasound viewing). Many of the woman-focused requirements have little to do with the procedure's safety and may, in fact, end up compromising it if they result in delaying the procedure to later in gestation when procedures are riskier.<sup>36</sup> In addition, issues unrelated to the laws or their

implementation—such as provider biases that lead to refusing services to unmarried and young women—often curtail access to legal abortion at the site of care (see Chapter 4).

Some countries' approval processes cross the line between ensuring the safety of abortion and curtailing its access. For example, from 2010 to 2016, some 32 U.S. states collectively enacted 338 laws restricting access to legal abortion.<sup>73</sup> Moreover, from 2003 through 2013, several countries in the former Soviet Bloc or sphere of influence (e.g., Latvia, Macedonia, the Russian Federation and the Slovak Republic) introduced waiting periods between asking for a legal procedure and obtaining one.<sup>54</sup> Such waiting periods are often paired with requirements for in-person, preabortion counseling (e.g., in Latvia, Macedonia and the Russian Federation).

In addition, 25 of the 61 countries where abortion is available on request require minors to obtain parental consent, which often leads to delays in getting an abortion—especially in contexts where minors must consult a judge to bypass this requirement. Adolescent women across the globe are already more likely than older women to delay seeking an abortion, because they tend to recognize and acknowledge their pregnancy later.<sup>74</sup> Such delays can deny young women a legal abortion if they put pregnancies past the defined legal gestational limit. Delays also increase distress, especially among adolescents, who are already vulnerable.

### **Many countries have reformed their laws since 2000**

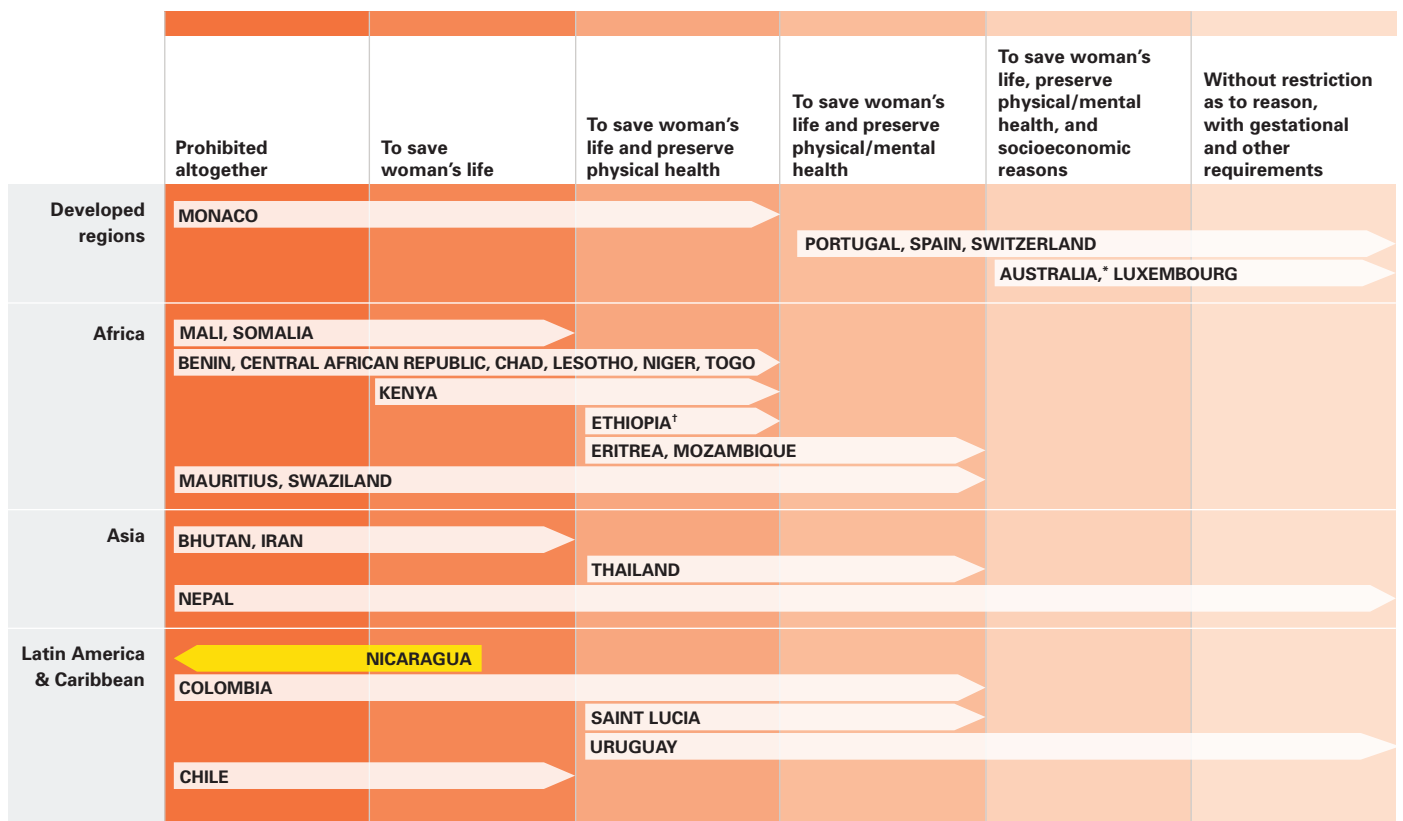
Between 2000 and 2017, a total of 28 countries moved across the continuum (i.e., by at least one of six categories), all but one broadening legal grounds (Figure 3.3, page 18). The single exception, Nicaragua, had allowed abortions to save a woman's life, but moved to prohibit abortion under all circumstances. Nicaragua's removal of “scientifically determined therapeutic abortion” from its penal code in 2006 shows how abortion can become captive to politics.<sup>75</sup> On the other hand, Nepal is the sole country of this group to move across the full continuum with a single change in the law: from outright prohibition to allowing abortion without restriction as to reason.<sup>76</sup>

Sixteen countries—nearly three-fifths of those that changed their law—moved away from an absolute ban. Eight of these moved to allow abortions to save a woman's life or protect her physical

**Some countries' approval processes cross the line between ensuring the safety of abortion and curtailing its access**

FIGURE

**3.3 All countries that have changed categories within the legal continuum since 2000 have broadened criteria for legal abortion, with the sole exception of Nicaragua.**



• NOTES TO FIGURE 3.3

\*We reclassify Australia on the basis of the Northern Territory's 2017 reform, which means that the majority now live in the most legal category. †We show Ethiopia even though it is not among the 27 countries moving to the right along the continuum, because it is one of the six countries that added an exception for rape, incest or fetal anomaly (i.e., Argentina, Ethiopia, Fiji, Guinea, Indonesia and Rwanda). Thus, a total of 33 countries expanded criteria overall. Notably, Ethiopia's 2004 reform went beyond the standard categories, adding exceptions for minors and those with a physical or mental injury or disability. Furthermore, 2006 guidelines broadly enhanced access by specifying that victims would not be forced to provide evidence of rape, and authorizing midlevel providers to provide certain abortion services. Sources: references 54 and 56; *Journal Officiel de la République Centrafricaine*, Loi No. 06.005 du juin 2006 *Bangayassi relative à la santé de reproduction*, Sept. 2007; and Republic of Mozambique, Lei n° 35/2014, *Lei da revisão do Código Penal*, Artigo 168, *Aborto não punível*, Maputo, Mozambique, 2014.

m) Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa.

health. And of the 13 Sub-Saharan African nations that changed their laws since 2000, six—Benin, Central African Republic, Chad, Lesotho, Niger and Togo—moved from prohibition to allowing abortion to protect life and physical health, or across two categories of the continuum. In South America, Uruguay's decriminalization in 2012 made this high-income country only the second in that subregion (after Guyana) to allow abortion on request. Although the only other high-income country in that subregion, Chile, moved in August 2017 from absolute prohibition to allowing abortion when the woman's life is in danger, that limited reform took two and a half years to make its way through the legislature.<sup>77</sup> In addition, changes in four developed countries (Luxembourg, Portugal and Spain, as well as three states in Australia) provide examples of laws finally catching up with reality in places where safe abortion was already widely available and accessible.

In addition to the movement across the six-category legality spectrum, since 2000, a total of 24 countries approved at least one of the three additional grounds: Twenty added an exception

for rape, 17 for incest and 19 for fetal anomaly. Taking these changes into account means that, as of 2017, just 55 of the 112 countries in categories 2 through 5 allow abortion on at least one of these additional grounds.

**A range of strategies can lead to reform**

Change in abortion law can be achieved through several channels. One of the most direct—yet, the least prevalent—is through regional protocols that specify the right to abortion in specific circumstances. For example, Article 14 of the African Union's Maputo Protocol<sup>m</sup> directs signatory states to legalize abortion to protect a woman's physical and mental health, as well as in cases of rape, incest and fetal anomaly.<sup>78</sup> Indeed, before Rwanda could pass its abortion law reform in 2012, it first had to lift its reservation to Article 14.<sup>79</sup>

Regional partnerships have proven to be promising avenues for reform. For example, a partnership of civil society organizations, the Conakry Forum,<sup>80</sup> catalyzed the development of a model national reproductive health law, which included language allowing abortion to save a woman's life

and health; five forum nations (Benin, Chad, Mali, Niger and Togo) adopted such a law between 2002 and 2007.<sup>81–85</sup> Furthermore, Argentina's Supreme Court cited the country's noncompliance with human rights treaties such as the Inter-American Convention on the Prevention, Punishment and Eradication of Violence Against Women in its ruling that all rape victims who become pregnant—not just those who are mentally disabled—have the legal right to an abortion.<sup>86</sup>

Global treaties and conventions also have been used to effect reform. Colombia's landmark 2006 Constitutional Court decision is a seminal example of holding countries accountable to rights guaranteed in treaties that they have ratified. The UN Committee on the Elimination of all Forms of Discrimination Against Women (CEDAW) was instrumental in moving Mauritius's parliament to act in 2012. One CEDAW member happened to be a citizen of the African island nation, which illustrates how a reform-minded national champion can sway local political approval.<sup>87</sup> Chile's 2017 reform also exemplifies the potential of a national champion to effect abortion law reform, together with support from a range of civil society organizations. The President of Chile, Michelle Bachelet, introduced the draft law to decriminalize abortion when the life of the pregnant woman is threatened, and for pregnancies resulting from rape and when the fetus has a fatal anomaly.<sup>88</sup> Proponents of the law argued that the state had an obligation to protect the health of its pregnant citizens, and the reform withstood a constitutional challenge.<sup>89</sup> Kenya is yet another approach to adding legal grounds—that is, through a referendum as part of a broader package of constitutional reforms.<sup>54,90</sup>

Associations of obstetricians and gynecologists (Ethiopia and Nepal) or the national medical council (Brazil) can help influence court decisions.<sup>91–93</sup> Nepal's reform—the broadest of all—highlights how medical associations together with civil society and research organizations can use evidence on unsafe abortion's contribution to high maternal mortality to advocate for reform.<sup>94–96</sup> Even though Brazil's addition of an abortion exception for one type of fetal anomaly (anencephaly) does not rise to our definition of a full additional ground, it warrants mention. Local ethics and rights organizations—sparked by an individual woman's experience—collaborated with the national Brazilian medical council to argue that the lack of an exception for a fatal fetal diagnosis contravened human rights norms.<sup>91,97</sup>

Countries also need to be flexible to address emerging public health issues, such as the Zika outbreak in 2016. Two South American countries provide illustrative examples. Colombia's well-coordinated efforts culminated with the Ministry of Health issuing woman-centered guidelines on how to help infected women get the contraceptive care they needed and the legal abortions that they qualified for under the health exception.<sup>98</sup> On the other hand, Brazil's official response fell far short, as its Zika protocol did not even mention abortion in response to the UN's declaration of a Public Health Emergency of International Concern.<sup>99</sup>

But law change is just the first step toward making abortion safer and more accessible. Governments, medical associations and civil society organizations must spread the word about any changes in abortion law—most urgently to women, medical personnel (including administrative staff) and law-enforcement professionals. In addition, national health systems must create the required service-provision infrastructure and train personnel, as well as develop, issue, communicate and apply new guidelines. It may take years to implement these steps at a national scale; however, implementation of reform can move quickly where its support is broad-based and where political will exists to establish clear guidelines and provide the necessary resources.

**Some 42% of the world's women of reproductive age live where abortion is highly restricted (categories 1 through 4)**

# 4 How Is Abortion Practiced and How Has It Changed?

Abortion services are delivered in a wide variety of ways across countries. The letter of the law is highly relevant to the accessibility and safety of induced abortion, because it can constrain what is feasible to provide and what is possible to advocate for in terms of service delivery. However, it is important to assess the actual conditions of abortion provision in a country, because countries with the same legal criteria for abortion can differ substantially in how their laws are implemented. The coverage and structure of a country's health system also influence the conditions under which women can obtain abortions. For example, although the long-established surgical method of vacuum aspiration needs only basic facilities and simple equipment, new guidelines for task-sharing and task-shifting now make the provision of safe abortion even less demanding on health care systems. Furthermore, infrastructure for abortion provision matters even less with medication abortion technologies that can be provided in primary-level facilities and that women can use themselves, although access to backup medical services must be ensured with all abortions—medication and surgical.

The social context of abortion in a country—particularly the stigma associated with the procedure—is also important to whether women can openly obtain information about abortion and seek services (see stigma box, page 30). Abortion stigma also compromises researchers' ability to get representative information on actual practices, which makes it more difficult to address barriers to care. In addition, stigma can result in providers opting out of abortion services entirely—sometimes out of conscientious objection, but also out of a preference to avoid association with a culturally proscribed health service.

### **Following standards of abortion care can improve safety**

When provided by a trained practitioner in an environment that meets minimum medical standards, an abortion is a safe medical procedure with an

extremely low likelihood of complications.<sup>100</sup> To assure this high level of safety, WHO developed<sup>101</sup> and later updated<sup>36</sup> guidelines for the provision of safe abortions, which cover each component of comprehensive abortion care. A separate set of recommendations identifies the personnel appropriate to each task involved (Table 5.1, page 31).<sup>32</sup>

Care should start with confidential, nondirective counseling on all reproductive options, so women fully understand what to expect, can freely decide whether to have the abortion and can be secure about that decision. And as with all medical procedures, abortion patients benefit from counseling about follow-up care, especially to ensure that women know what action to take should complications arise. For the very small group of women who do experience complications, WHO guidelines detail recommended treatments.

The standards make clear that trained counselors should offer women a choice of any of the recommended abortion methods that are appropriate to the stage of pregnancy and clients' medical considerations. WHO's recommendations on which method is appropriate are based on rigorous evidence and specify vacuum aspiration as the recommended surgical procedure in the first trimester; they advise against the surgical D&C procedure, which they describe as "obsolete."<sup>36(p. 31)</sup> For surgical abortions after the first trimester, which require more highly trained personnel, dilation and evacuation (D&E) is recommended.

For combination medication abortion, which is preferred over the less-effective, misoprostol-only protocol,<sup>36,102</sup> clinical guidelines specify the recommended dosage, timing and route of administration of each drug. Where mifepristone is unavailable, WHO and associations of obstetricians and gynecologists recommend that misoprostol alone be used (see misoprostol-only box, page 27). A body of evidence supports the use of misoprostol alone, even though it is less effective than the

combination protocol: In clinical studies, misoprostol alone was effective in completing first-trimester abortion 75–90% of the time, whereas the effectiveness rates of combination medication within nine weeks cluster between 95% and 98%.<sup>36,103</sup> For combination medication abortion after the first trimester, WHO guidelines specify a regimen of mifepristone followed by repeated doses of misoprostol, as needed.

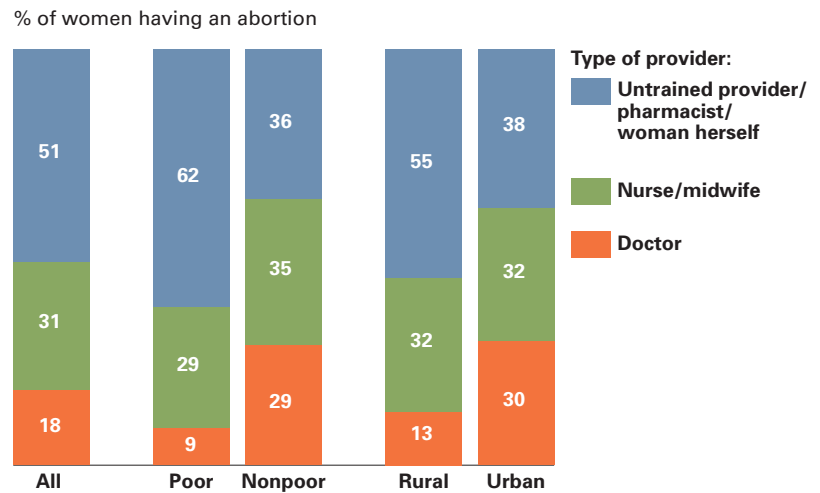
To ensure the broadest possible availability of abortion in the first trimester (when abortions are safest), WHO recommends that in contexts in which doing so would expand access and reduce costs, abortions be provided by trained midlevel<sup>n</sup> personnel instead of doctors, and at primary rather than higher-level facilities (see Table 5.1). These recommendations are based on evidence showing no difference in safety or efficacy by type of trained provider (and whether the abortion is done in a primary or higher-level health facility).<sup>32,104</sup>

Given that the vast majority of induced abortions occur because of an unintended pregnancy, WHO guidelines emphasize that contraceptive counseling and method provision be integrated into comprehensive abortion care.<sup>105</sup> If women wish to do so, they should be able to obtain a contraceptive method where they receive abortion care, which eliminates the need for referral to another source of care. Furthermore, it is crucial that women who want to use a contraceptive method are offered a wide range of choices, that women who have experienced method failure be given the option to switch, and that all women can freely choose a method based on their preferences and needs.

Even when standards are well defined and publicized, the conditions under which women obtain induced abortions in practice vary widely across countries depending on many factors. Legality is one key factor linked to making safe abortion services widely available. Government commitment to implementing access to safe services—whatever the criteria under which abortions are legally permitted—is a related factor. In addition, the amount of time abortion has been legal in the country can also be important, because it often takes many years to achieve real change in terms of access to safe services. With this in mind, we describe abortion provision in three overarching legal contexts: where abortion is highly legally restricted, where the law has been liberalized within the past 20 years and where abortion has been broadly legal for more than 20 years.

FIGURE

**4.1 In 10 legally restrictive countries with low levels of misoprostol use at the time, poor and rural women were more likely than urban and nonpoor women to use an untrained provider or self-induce.**



**Conditions are usually poor in countries where abortion is highly restricted**

Of the 125 countries where induced abortion is highly restricted by law (i.e., categories 1–4), 116, or 93%, are in developing regions. For these countries, which are home to 42% of the world’s women of reproductive age, safe procedures are likely most accessible to those who are well connected, who can afford to pay for a well-trained provider or who know about and have access to misoprostol. (These women tend to live in large urban areas, where such providers and methods are concentrated.) As indicated earlier, there are exceptions: A few countries, such as New Zealand (category 4) and South Korea (category 3), have relatively restrictive laws but interpret them liberally, so safe abortion services are widely accessible.<sup>60,62</sup>

However, most women in these countries who seek to terminate a pregnancy, but who cannot afford or obtain a safe procedure, have no choice but to turn to less safe options. The process involves many steps, each of which must be taken quickly because every additional week of gestation increases the cost and difficulty of obtaining a safe abortion. These steps include finding a clandestine, often informal-sector provider (who is most likely unskilled); getting together the money to pay the provider or for the product to use on one’s own; and finding someone trustworthy to help out. The greater the number of steps and the longer the process, the later the stage of pregnancy at which the abortion occurs and the higher the costs. In

**NOTES TO FIGURE 4.1**  
Countries include Burkina Faso (2009), Ethiopia (2014), Kenya (2012), Malawi (2015), Nigeria (2012), Pakistan (2012), Rwanda (2009), Senegal (2012), Tanzania (2013) and Uganda (2013). For each population subgroup, values are unweighted averages across all 10 countries. Source: reference 114.

<sup>n</sup> Midlevel providers are nurses and nurse midwives, and other nonphysician providers whose titles vary by country, including auxiliary nurses and auxiliary nurse midwives, advanced associate clinicians and associate clinicians, among others.

## Traditional abortion methods can be damaging to women's health

Women and untrained providers use many types of traditional and nonmedical methods to end unintended pregnancies. Not only do these methods often fail, they can lead to severe complications. The main categories of these methods, with examples from studies published over the past 10 years, are summarized below.

- Inserting into the vagina or cervix a catheter or other foreign object, such as cassava sticks, parsley stems, tree roots, crushed herbs, ground seeds, chicken bones, pencils, metal probes, wires, coat hangers, knitting needles, bicycle spokes, crushed bottles, potassium nitrate (saltpeter) or potassium permanganate tablets.<sup>1-8</sup>
- Introducing liquids into the vagina, such as saline solutions (saline instillation), concentrated herbal concoctions prepared with water or alcohol, soapy solutions, detergent or bleach.<sup>1,2,7</sup>
- Drinking alcohol, detergent, laundry bluing, fabric softener, bleach, acid, methylated spirits, castor oil, turpentine, tea brewed with livestock feces, blood tonics, concentrates of traditional plants<sup>2,4,9-15</sup> or, in South Africa, Dutch remedies (i.e., alcohol-based products containing small amounts of active ingredients).<sup>13</sup>
- Ingesting pharmaceutical products, including aspirin, painkillers, flu medicine, laxatives, chloroquine, nivaquine, quinine, panadol, ergometrine (ergot alkaloids), oral hormonal medications or injectable oxytocin.<sup>1,2,16-19</sup>
- Manipulating the abdomen, by locating the fetal mass through external palpations and then attempting to dislodge it by massaging or beating the lower abdomen.<sup>2,4,10,11,19,20</sup>
- Engaging in traumatic or injurious physical activity, such as jumping from the top of the stairs or roof, falling, lifting heavy objects or exercising excessively.<sup>2,11,19,21</sup>
- Trying other folk techniques, such as inserting a tube to blow air into the uterus to induce labor or placing a hot stone on the abdomen to “melt” the fetus.<sup>20</sup>

general, a later abortion is riskier for the woman's health than an earlier one,<sup>36</sup> and any complications that occur may be magnified and even harder to manage in low-resource settings<sup>106</sup> (see Chapter 5).

Studies in a few countries show that untrained abortion providers—including pharmacists or market sellers, who may know little about misoprostol—are usually more plentiful, easier to find and less expensive than trained and informed ones.<sup>37,107,108</sup> Reliance on poorly informed providers often means that the resulting abortion or advice is more likely to lead to an incomplete abortion.<sup>109</sup> Moreover, if a first abortion attempt fails, a woman has to start again with another provider at an increasingly later stage of pregnancy. In addition to being riskier, abortions at later gestations tend to cost more because they require more-advanced training and specialized equipment (or in their absence, a traditional provider who is willing to perform a more difficult procedure). And if a woman cannot afford to go to a trained professional, she may resort to more traditional methods and risk

more severe complications as the pregnancy advances.

Available data from legally restrictive settings show increases in the use of vacuum aspiration, which is a less-invasive surgical technique than D&C. Perhaps even more important, use of misoprostol alone (the second drug in the combination protocol) has risen substantially.<sup>37,63</sup> In countries that legally restrict abortion, mifepristone (the first drug) is either prohibitively expensive or unavailable altogether. Misoprostol, which is widely registered to treat gastric ulcers (and less-widely registered for obstetric indications), is far less expensive than mifepristone and much more available<sup>110,111</sup> (see misoprostol-only box).

Information on trends in abortion methods used in legally restrictive settings is available for just three countries: Colombia and Mexico (between 1992 and 2008), and Pakistan (between 2002 and 2012). Data on misoprostol use were not collected for the earlier years in Colombia and Mexico because its use was considered to be very limited at that time. According to surveys of health professionals, an estimated one-half of all abortions in Colombia in 2008 and nearly one-third in Mexico in 2007 were done using misoprostol alone. At the same time, the proportions of procedures performed by physicians and untrained providers have declined, which suggests that reliance on surgical methods and unsafe traditional methods have both dropped.<sup>112</sup> In Pakistan, the proportion of health professionals who responded that misoprostol was commonly used was much higher in 2012 than in 2002, and this change was more evident in urban areas than in rural areas.<sup>113</sup>

Comparable data are available on how abortions are carried out in 10 countries where use of misoprostol for inducing abortions was considered to be relatively low at the time of data collection (2009–2015). These data suggest that an average of 18% of all abortions are performed by physicians, and 31% by such midlevel professionals as nurses and midwives (Figure 4.1, page 21).<sup>114</sup> The remainder—about half—are provided by untrained providers or are self-induced (mainly with methods other than misoprostol); the latter group includes the use of various unsafe traditional methods (see traditional methods box).

The pattern of inequity in access to safe abortion, as seen through the lens of urban-rural residence and poverty status, is consistent across countries



where abortion is highly legally restricted. The riskiest abortions—i.e., those performed by untrained providers or self-induced not using misoprostol—are estimated to account for much higher proportions of procedures among poor and rural women (62% and 55%) than among nonpoor and urban women (36% and 38%).<sup>114</sup> In addition, this inequity is intensified when access to post-abortion care is considered, because the disadvantaged women who can least afford the costs of treating complications from unsafe abortion are the ones most likely to develop complications and need care.<sup>115,116</sup>

How much women pay for an abortion varies widely by country, which reflects differences in the types of providers primarily used, the specific procedures used and the local cost of living. For example, based on information from health professional surveys conducted from 2008 to 2012, the average amount women paid for a first-trimester abortion (adjusted for inflation up to 2015) was US\$21 for two countries in South Asia, US\$38 for five countries in Sub-Saharan Africa and US\$76 for the sole Latin American country with a comparable cost estimate, Colombia.<sup>117</sup> According to a 2011–2012 study in Uganda, women paid an average of US\$49 for an unsafe abortion and follow-up care—an exorbitant amount in a country where the monthly per capita income is just US\$43.<sup>115</sup>

### **Conditions are variable where abortion was liberalized recently**

The abortion-provision picture is mixed for the countries that liberalized their laws within roughly the past two decades (Figure 3.3, page 18). One of the first challenges to instituting safe services is communicating that abortion is now legal and where it is available. Informing health professionals and women of a newly granted right is an enormous challenge, especially where rates of illiteracy and poverty are high, and where abortion continues to be strongly stigmatized. The fact that many countries have unclear laws and service provision guidelines that sometimes conflict with the law makes this challenge even more difficult to overcome.

Scaling-up provision of a recently legalized but still highly stigmatized service can take years. Not only does it require a large-scale cultural shift, but also the political will to create an environment favorable to implementation. Establishing and improving essential health infrastructure, as well as training a sufficient number of providers, are time-consuming

steps and require financial resources that many of these countries do not have. To the extent that medication abortion requires relatively little training and few resources, its widespread adoption can help speed the process. At the same time, the situation needs to be monitored, because an overemphasis on medication abortion could reduce access to surgical abortion—limiting women's choice.

The case of Mexico City, the only one of Mexico's 32 federal entities that has liberalized abortion, is a good example of what is possible with strong political commitment. Immediately after the liberalization of the abortion law in 2007, public-sector facilities had a hard time responding to demand. Adaptive strategies of shifting provision to specialized public health clinics<sup>118</sup> and of using misoprostol alone (until mifepristone was approved in 2011<sup>119</sup>) helped extend and improve services. The proportion of public-sector procedures that were medication abortions thus rose from 25% in 2007 to 83% in 2014<sup>119</sup> (Figure 4.2, page 24). Uruguay—another Latin American setting where abortion was recently liberalized—has taken steps to extend the availability of legal abortion throughout the country: As of 2014, roughly equal proportions of legal abortions take place in the private and public sectors.<sup>120</sup>

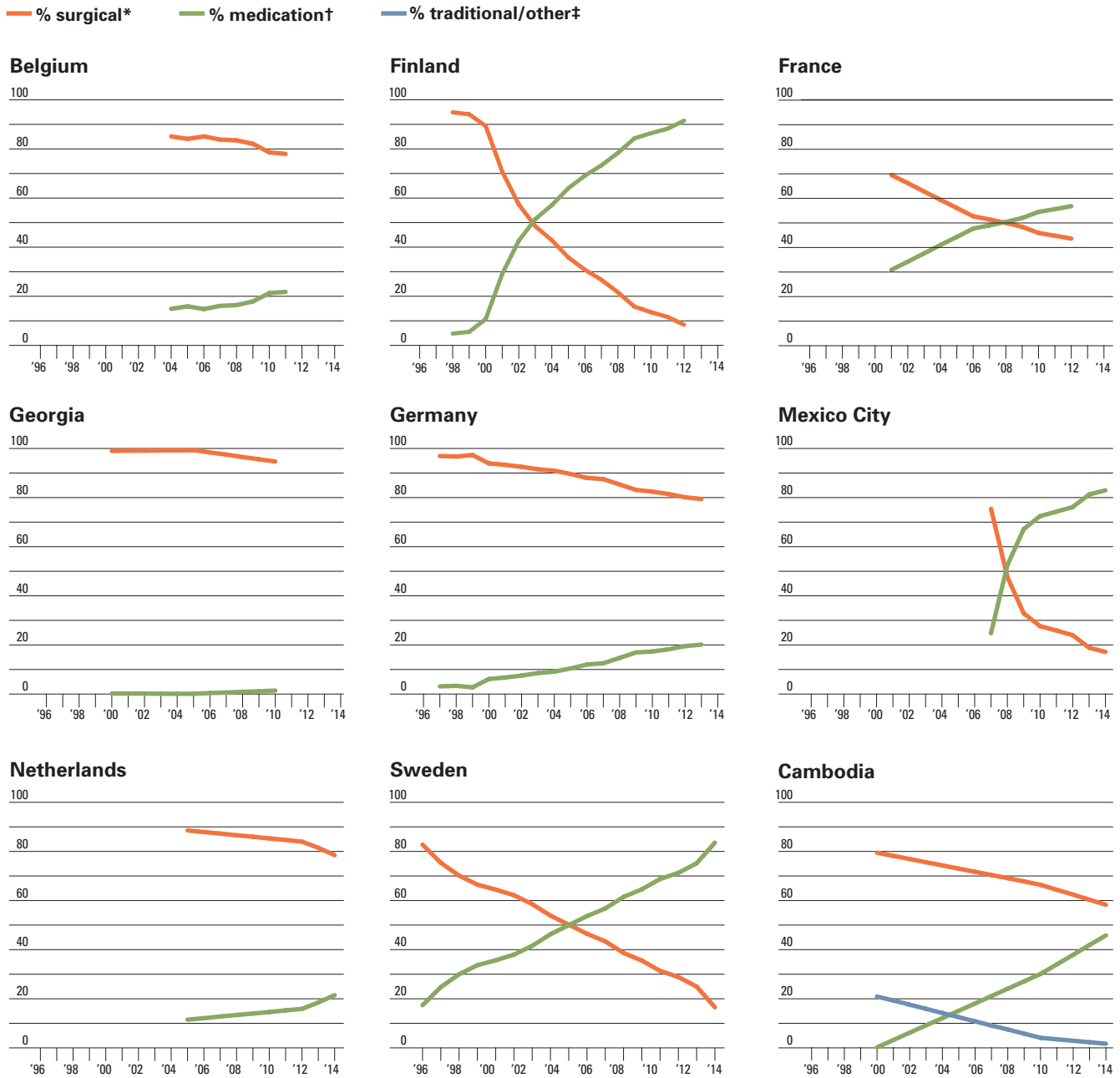
Access to legal abortion can be impeded if large numbers of providers claim conscientious objection, which in the absence of efficient referral systems can translate to delays, in turn leading to riskier procedures at later gestations, or even the denial of legal care.<sup>121</sup> Greater acceptability of medication abortion could help address this barrier to timely care, especially right after legal reform when health professionals are expected to transition to provision of a new service.<sup>122</sup> In fact, evidence from several countries shows that health professionals may be more willing to provide medication abortion than surgical abortion, because they are more removed from the process of the abortion itself.<sup>123</sup>

However, widespread refusal by both public- and private-sector providers to offer abortion at all—or to refer women to willing providers nearby, which is usually required in conscientious objection policies—continues to be a substantial barrier to implementing abortion services in countries that recently liberalized their law. Indeed, a legal challenge in Uruguay succeeded in allowing a wider range of medical professionals to refuse to provide a legal service on the basis of conscientious objection.<sup>124</sup> Laws or guidelines that permit

**Nepal enacted more sweeping legal change than any other country since 2000**

FIGURE

**4.2** The proportion of all abortions that are combination medication abortions has increased in most countries and areas with data, although the pace of this increase has been slow in some.



• **NOTES TO FIGURE 4.2** \*Vacuum aspiration and D&C. Abortions classified by countries as using both vacuum aspiration and misoprostol were considered to be surgical. †Combination medication abortion for all countries and years, except for Mexico City. In that single district, the only area of Mexico where abortion is legal, medication abortion refers to misoprostol alone before mifepristone was approved in 2011 (i.e., from legalization in 2007 through 2010). ‡Includes traditional methods of abortion and other unspecified methods for Cambodia only, because of the way the data were collected. *Sources:* For all countries except Cambodia and Georgia, the data are the most recent government data; for Cambodia, the data come from DHS surveys conducted in 2000, 2010 and 2014; and for Georgia, the data come from RHS surveys conducted in 1999, 2005 and 2010.

only doctors to provide abortions or that require abortions to be provided only in certain levels of health facilities—restrictions that likely date from when operating-room D&C procedures were the norm—can further reduce the availability of legal procedures, especially in resource-poor settings.

Sometimes, safe services can coexist with clandestine and unsafe ones years after liberalization. In Ethiopia,<sup>o</sup> for example, only a little over half (53%) of abortions in 2014 were legal procedures about nine years after law reform; nevertheless, that constituted significant progress as the level in 2008 was about half that (27%).<sup>125</sup> In Nepal, which enacted more sweeping legal change than any other country since 2000, 63% of health facilities provided legal abortions as of 2014, and 42% of all abortions that year were legal.<sup>95</sup> Barriers to safe abortion care that persist in Nepal include women's inadequate knowledge of its legality and of where to obtain services; poor availability, especially in rural areas; long distances to health facilities; and high costs, despite legislation ensuring the contrary.

### **Provision of abortion is safest where it has long been legal**

The third group of countries are those where abortion has been legal for 20 years or more under broad criteria (categories 5 and 6). Most of the 69 countries in this group are in the developed world (Appendix Table 1, page 50). As expected, most have robust health care systems and low ratios of population to trained providers; many have national health insurance that covers abortion services. These conditions allow the majority of women in these countries to exercise their right to a safe and legal abortion. That said, in some of these countries, services tend to be proportionately less available in the areas where the majority of women live. For example, in six Indian states,<sup>p</sup> just 5–34% of health facilities that provide induced abortions are located in rural areas,<sup>126</sup> even though 49–87% of the population of reproductive-age women in these states lives in rural areas.<sup>127</sup> In addition, access to services in this group of countries is often worse among women who are disadvantaged in some respect, including women who are young or single, those who live in poverty or lack health insurance, and those who are recent immigrants and thus may have inadequate knowledge of the legality of abortion and the availability of services.<sup>25</sup>

The institutional framework of service delivery also varies markedly across countries where abortion

is broadly legal. For example, in some countries, clinics that specialize in providing abortions can be the main or sole source of abortion care, whereas in others, abortion can be offered as one of an integrated range of reproductive health services. In addition, countries vary in the extent to which abortion services are provided by public, private and nongovernmental-organization facilities.

Aspects of high-quality care that should apply to all service delivery contexts include providers' nonjudgmental and supportive attitudes, and their counseling on and provision of contraceptive options following an abortion. However, in Georgia and Russia, just 7% and 20% of recent abortion clients, respectively, left the source of their abortion with a contraceptive method.<sup>21,22</sup> This service component is amenable to improvement, as results from a comprehensive three-year intervention in India show: Only about one-third of abortion clients at baseline left with a postabortion contraceptive method, compared with two-thirds at the study's midpoint and nearly nine-tenths by the end.<sup>128</sup>

The specific methods of abortion used in broadly legal countries have undergone a sea change since mifepristone was approved, starting with China and France in 1988.<sup>110</sup> By about the mid-2000s, combination medication abortions outnumbered surgical procedures in several countries, including Finland, France and Sweden (Figure 4.2). However, use of the surgical D&C procedure, which is no longer recommended by WHO, was still common in some former Soviet Bloc and satellite countries: In Armenia, nearly six out of 10 abortions in 2010 were by D&C, as were three out of 10 that year in Georgia<sup>129</sup> and four out of 10 in Belarus in 2013.<sup>130</sup>

Combination medication abortion accounts for solid to vast majorities—from roughly 60% to 90%—of all induced abortions in nine<sup>q</sup> of 13 additional European countries with data. In just four European countries with data (Belgium, Germany, Italy and the Netherlands), the proportion accounted for by medication abortions is fairly low as of this writing (the situation is in flux), at less than 25%.<sup>131</sup> Possible reasons for the predominance of surgical abortions in these four include preferences among women or providers for vacuum aspiration, because it takes much less time and costs far less. Indeed, mifepristone's high cost can limit medication abortion's availability in national health services, for example, if few dedicated products are on the market, lowering competition and raising costs; this was the case in the Netherlands until roughly

**Sometimes, safe services can coexist with clandestine and unsafe ones years after liberalization**

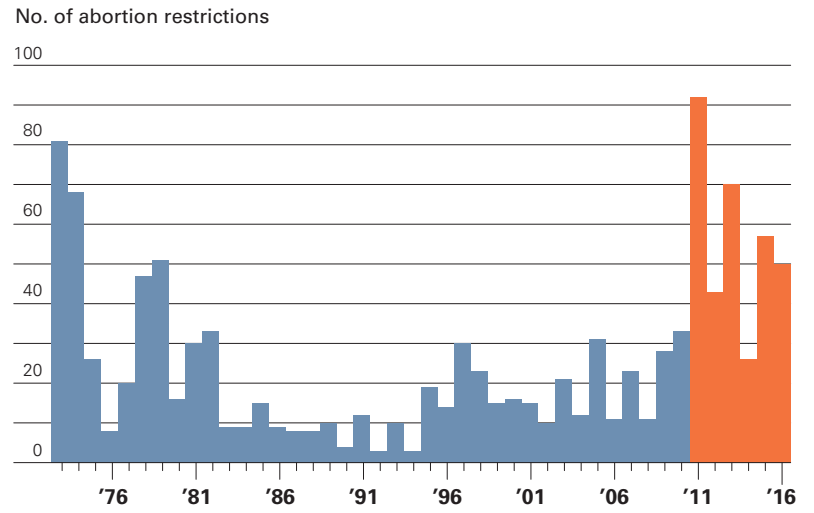
o) We use Ethiopia as an example even though its 2004 reform stopped short of making abortion broadly legal, because the law is liberally interpreted and comprehensive guidelines were fully implemented early on.

p) Assam, Bihar, Gujarat, Madhya Pradesh, Tamil Nadu and Uttar Pradesh.

q) Estonia, Finland, France, Great Britain, Portugal, Norway, Slovenia, Sweden and Switzerland.

FIGURE

**4.3 In the United States, the total number of state-level abortion restrictions enacted in 2011–2016 greatly exceeded the number in other recent periods.**



**FIGURE 4.3**  
Source: reference 73.

2015.<sup>132</sup> Moreover, extensive delays in registering mifepristone can result in this specific medication method being unavailable, which was the case in Canada until 2016.<sup>133</sup>

In some developing countries with legal abortion where surgical procedures had been the only choice, the introduction of combination medication abortion proved highly acceptable: In a province of South Africa, for example, the vast majority of patients given the choice decided on combination medication abortion.<sup>134,135</sup> Having midlevel, public-sector health professionals provide medication abortion can not only satisfy many women’s preferences for female caregivers, but can also lower costs and improve overall access and availability. Innovations to the protocol hold further promise: Studies of combination medication abortion in seven countries<sup>r</sup> have found no differences in terms of acceptability and efficacy between women who took the second drug—misoprostol—at the clinic and those who took it in the privacy of their home.<sup>136</sup>

For the vast majority of countries where abortion is broadly legal, abortion is part of the standard package of public-sector health services and is often covered by national health insurance. But for poorer countries in this group, such as Zambia, cost has been shown to limit access to the point that many women seek out cheaper, not necessarily safer, abortions.<sup>137</sup> In other countries, such as Bangladesh, Cambodia and Turkey, some women use private-sector providers even though they

usually have to pay more for them than for public services.<sup>138–140</sup> Possible reasons for seeking higher-cost care include women’s expectations that, compared with public services, private services offer better overall quality, especially more privacy and confidentiality. In addition, women in the rural Indian states of Maharashtra and Rajasthan prefer more expensive private providers because of a perceived higher quality of care.<sup>141,142</sup>

In other countries, such as the United States, regulations enacted at the state level are chipping away at abortion access and creating a patchwork of availability. These laws, combined with other factors, have left broad swaths of the country severely underserved by abortion providers. As of 2011, 89% of U.S. counties lacked any abortion provider;<sup>143</sup> thus, the 38% of women of reproductive age living in those counties would have to travel—great distances, for some—to obtain an abortion. Furthermore, the pace of such state-level procedural and bureaucratic restrictions has quickened in recent years (Figure 4.3).<sup>73</sup> In India, another country with long-standing legal abortion, public facilities at the primary level and higher are automatically approved as abortion providers, as long as they are staffed with a certified provider; however, private facilities are required to be registered and to use certified providers. Yet, even after the government tried to speed approvals by decentralizing the process to the district level in 2002, onerous requirements continue to be a barrier and many unregistered private facilities were still providing abortions as of 2015.<sup>126</sup>

Small-scale studies in Nepal, South Africa and Tunisia found that women are sometimes denied care even when they legally qualify for an abortion.<sup>33</sup> Some of these women were turned away because they could not pay for their abortions; others because the clinics lacked the staff or equipment to perform the abortion, or required the woman to first undergo unnecessary laboratory tests. Women denied services might obtain referrals and receive legal abortions elsewhere, but they may also turn to unsafe abortions from untrained providers or continue with an unwanted pregnancy.

r) Albania, France, India, Nepal, Tunisia, Turkey and Vietnam.

## BOX Misoprostol-only abortions are increasing in countries with restrictive laws

The availability of combination medication abortion (mifepristone followed by misoprostol) gives women living where abortion is broadly legal a highly effective choice other than surgery. However, this option is essentially out of reach for the 687 million women of reproductive age who live where abortion is severely restricted. In these countries, only misoprostol—originally marketed to treat gastric ulcers, but which can be an effective method of medication abortion—is likely to be available.<sup>1,2</sup>

Compared with mifepristone, misoprostol costs much less and is far more widely available and accessible (officially with a prescription, but prescriptions are often not required at the point of sale in many countries); however, compared with the combination medication protocol, misoprostol alone is more likely to result in incomplete abortion and ongoing pregnancy, even when used correctly.<sup>3</sup> When used in the first trimester, misoprostol-only regimens result in a complete abortion 75–90% of the time,<sup>4(p.46)</sup> whereas the comparable efficacy rates for the combination medication protocol at nine weeks cluster between 95% and 98%.<sup>4,5</sup> Thus, WHO and the International Federation of Gynecology and Obstetrics recommend the use of misoprostol alone only when mifepristone is unavailable.<sup>4,6</sup>

### USE IS WIDESPREAD IN LATIN AMERICA

The advent of the use of misoprostol alone to induce abortion means that, in many countries, the once broad range of clandestine abortion methods—many of which are highly risky—has narrowed primarily to this one method. The transition started in the late 1980s, when medical personnel in Brazil first noticed the clinical results of a “natural experiment” in treating women who had learned about misoprostol by word of mouth and came in for care. The shift toward less-severe symptoms among postabortion patients was assumed to be attributable to increasingly widespread use of misoprostol alone for abortion.<sup>7,8</sup>

Its use is now common in much of Latin America and the Caribbean, a region in which nearly every country has highly restrictive abortion laws. Limited national-level data from surveys of health professionals and others familiar with abortion suggest that misoprostol alone was used in an estimated 30% of abortions in Mexico (2007)<sup>9</sup> and in half of those in Colombia (2008).<sup>10</sup> A survey using two methodological approaches similarly found that half of abortions in urban Brazil (2010) involved misoprostol alone.<sup>11</sup> Postabortion care studies also provide a glimpse into the methods that women use, although by definition, these exclude women who did not need or were unable to reach care. In Gabon in 2008, for example, some two-thirds of postabortion care patients at the major hospital in the capital city had used misoprostol,<sup>12</sup> as had nearly three-fifths in the second-largest hospital in Ghana in 2010.<sup>13</sup>

The likelihood of needing medical treatment after using misoprostol probably ranges widely. The rate of experiencing an incomplete abortion and needing care is likely low among women

who get and follow accurate instructions from a knowledgeable medical professional or another reliable source. But the need for care can rise among women who are given no or minimal instructions about how to correctly use the drug and what to expect. The vast majority of misoprostol use in legally restrictive settings likely occurs outside the formal medical sector; in these countries, misoprostol is likely purchased from pharmacies, street vendors and to some extent, over the Internet.

### INNOVATIVE APPROACHES CAN IMPROVE QUALITY OF USE

Misoprostol use is still highest in Latin America, where the drug has been widely known and available from informal sources for the past two decades; recently, improved access to the Internet in urban areas worldwide has sped up one-to-one interpersonal communication about misoprostol. One strategy that has been commonly used in Latin America to improve the quality of misoprostol use has been telephone hotlines to answer women’s questions, although the extent of their coverage is unknown and may be limited.<sup>14,15</sup> These have been set up in several countries, including Argentina, Chile, Ecuador, Mexico, Peru and Venezuela. Moreover, before abortion was decriminalized in Uruguay, harm-reduction efforts in the capital, Montevideo,<sup>16</sup> and on the border with Brazil<sup>17</sup> showed that neutral counseling followed by provision of accurate information on misoprostol—without dispensing the drug itself—yielded clear improvements in safety. In Sub-Saharan Africa, by comparison, use of misoprostol to induce abortion is more recent and occurs primarily in urban areas (see Chapter 4). Community involvement in educating diverse groups of women about misoprostol in Kenya and Tanzania,<sup>18</sup> and training pharmacy workers about misoprostol in Zambia,<sup>19</sup> have shown promise in creating opportunities for safer abortions in the subregion.

Women may choose misoprostol because its use mimics the culturally acceptable “bringing on (or down) of menses,” a perception that is shared across a broad range of countries, from Argentina<sup>20</sup> to Bangladesh<sup>21</sup> to Cambodia.<sup>22</sup> Its use also allows women to exert control over a highly personal and private process. All women who use misoprostol need accurate information about how to use it correctly and how it works, because without a full understanding, they can unnecessarily experience problems or seek unneeded care. Just as important, women also need to know how to recognize symptoms of an incomplete abortion, which can occur even with correct use.

With continued efforts to inform women about misoprostol, women in highly restrictive settings will benefit from the early trial-and-error years in Brazil, and from recent clinical research on the acceptability and efficacy of misoprostol. That misoprostol has irrevocably changed the safety profile of self-induced abortions is uncontested—as is the likelihood that its use will only spread further.

# 5 Consequences of Clandestine Abortion

The consequences of clandestine—and often unsafe—abortions predominantly affect women in countries with highly restrictive laws, which are concentrated in developing regions. Although women seeking to terminate a pregnancy in these countries are increasingly able to obtain misoprostol to self-induce an abortion, they still could be at risk of negative health consequences if they cannot get the necessary information to use the method correctly. In countries with highly restrictive laws where access to misoprostol is poor, an abortion under unsafe conditions remains the main option available to many women, especially poor women. But once such countries expand the legal grounds for abortion and implement access to safe and legal abortion services, recourse to clandestine and unsafe abortions usually goes down. In societies where restrictive laws and stigma persist, however, women tend to prioritize secrecy over health—with consequences that reverberate at the individual, family and national levels. The prevalence and severity of these consequences vary across settings, and also by women’s economic resources and social circumstances.

## What are the standards of postabortion care?

Women who experience complications from unsafe abortion need immediate postabortion care. In countries that severely restrict abortion,

however, many women put off seeking care until their symptoms become life-threatening.<sup>144,145</sup> The longer they remain untreated, the worse the outcome; thus, much of the mortality associated with induced abortion can be attributed to treatment delays.<sup>146</sup> Recommended standards of postabortion care incorporate the following key elements: immediate treatment of complications, including pain management; provision of contraceptive counseling and services, and STI/HIV care; and mobilization of community partnerships to improve services and spread information about their availability.<sup>147</sup>

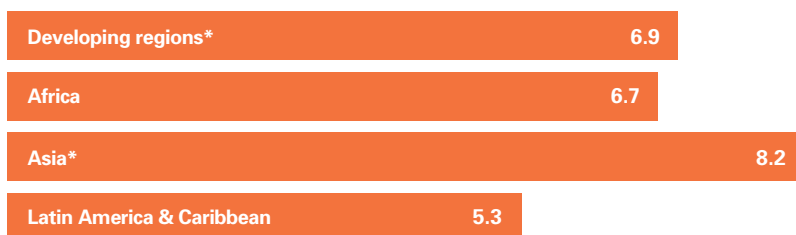
Even in countries with restrictive abortion laws, the provision of postabortion care is generally accepted by governments and health care providers as part of standard women’s health care, consistent with the Cairo Programme of Action, which was agreed to by all countries.<sup>4</sup> As a result, it would be extremely difficult for postabortion care to be denied on the grounds of conscientious objection. Global efforts stressing the importance of postabortion care to save lives have led some legally restrictive countries to issue laws that make provision of postabortion care obligatory.<sup>83,148</sup>

Several countries have issued their own national guidelines on postabortion care. Paraguay, a highly restrictive country, provides a good example of obligatory services outlined in what the country refers to as “humanistic” postabortion care standards, which are rights-based and ensure confidentiality.<sup>149</sup> WHO’s guidelines for managing abortion complications vary by the severity of the woman’s symptoms and the stage of pregnancy in which the termination attempt occurred (Table 5.1, page 31).<sup>32,105</sup> To treat incomplete abortions in the first trimester, WHO recommends either misoprostol or vacuum aspiration. For the most severe, life-threatening complications (e.g., uterine perforation, peritonitis, septic or hemorrhagic shock), women generally need emergency interventions, which could include blood transfusions, intravenous

FIGURE

### 5.1 Almost seven per 1,000 women in developing regions are estimated to be treated annually in health facilities for complications of induced abortion.

No. of treated cases per 1,000 women aged 15–44



• NOTES TO FIGURE 5.1 \*Excluding Eastern Asia. Estimates are for 2012. Source: reference 169.

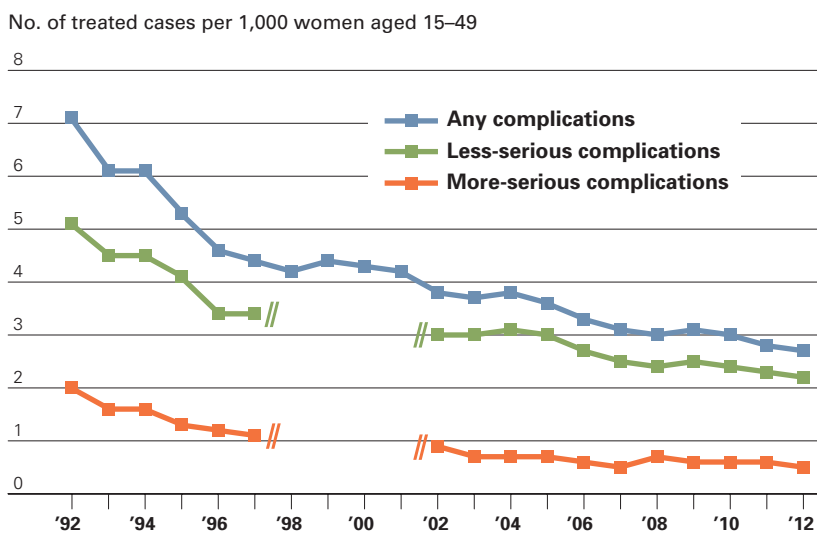
rehydration therapy, antibiotics and surgery. Moreover, to address critical shortages in highly trained personnel, WHO specifies the health worker type that is most plentiful and most appropriate to the task (on the basis of a substantial body of evidence from intervention evaluations).<sup>32</sup> This strategy not only expands access to life-saving care, but simultaneously reduces costs.

In many countries with highly restrictive abortion laws, however, the quality of postabortion care falls far short of WHO's guidelines. Delaying care for an incomplete abortion can make a mild problem much worse, because doing so can lead to sepsis, shock and even death. Medical personnel's discriminatory attitudes toward women who have had an abortion often manifest in neglect and mistreatment: For example, in Sudan and Gabon, postabortion patients experienced excessively long waits—significantly longer than all other obstetric patients.<sup>150,151</sup> An unknown level of risk is borne by women who forgo care altogether, which likely occurs most often among those disadvantaged by their lower socioeconomic status: According to surveys of a wide variety of health professionals in 14 countries with recent abortion incidence studies, forgoing needed care is estimated to be far more common among rural poor women than among urban nonpoor women: Whereas, on average, an estimated 49% of rural poor women who need care from complications do not obtain it, only 21% of similar urban nonpoor women forgo such care.<sup>152</sup>

Until relatively recently, vacuum aspiration (either manual or electric) and D&C were the procedures recommended for treating incomplete abortion and serious complications, respectively. After studies demonstrated misoprostol's safety, researchers conducted clinical studies comparing it with vacuum aspiration and found it at least as effective and acceptable.<sup>153–157</sup> Misoprostol can be a good option for women with mild complications who want to avoid surgery;<sup>158</sup> on the other hand, vacuum aspiration takes much less time, which can be an important consideration in resource-poor countries with overcrowded facilities. Moreover, despite WHO's long-standing advice to move away from and replace the invasive technique of D&C for postabortion care,<sup>101</sup> it continues to be broadly used in some resource-poor countries. For example, D&C was used in roughly four-fifths of postabortion cases in South Sudan in 2008,<sup>150</sup> two-thirds in Colombia in 2010,<sup>159</sup> and nearly three-fifths in Pakistan in 2012—a proportion that barely changed from that reported in 2002.<sup>113,160</sup>

FIGURE

**5.2 In Brazil, the treatment rate for complications of abortion declined sharply in the 1990s, after use of misoprostol became widespread, and continued to drop but at a slower pace after 2000.**



• **NOTES TO FIGURE 5.2** Abortion-complication treatment rates include some women who were treated for miscarriages. International Classification of Disease diagnosis codes reported by the Brazilian health systems were used to create categories for less- and more-serious complications. Less-serious complications cover women who were treated for symptoms of pregnancy loss (excluding abnormal pregnancies) and were categorized under diagnosis code of “sem complicação” or “without complications,” which means they presented with less-serious symptoms that required care. The most common symptom for this group was heavy bleeding. More-serious complications include diagnosis codes for specified complications (i.e., pelvic/genital tract infection, prolonged or excessive hemorrhage, lesions, renal insufficiency/failure, metabolic disturbance, shock and embolism), and cases with unspecified complications. Data are adjusted to account for differences in the diagnosis classification system to obtain comparable measures of less-serious and more-serious complications over the period 1992–2012. However, discontinuities in diagnosis codes over the years 1998–2001 were too large and could not be adjusted to obtain comparable measures; therefore, results are not shown for these four years. Sources: references 170 and 171.

A woman's ability to conceive can return very soon after an abortion—most often within a few weeks.<sup>161,162</sup> WHO guidelines indicate that all women seeking abortion may initiate contraceptive use immediately following surgical or medication abortion. The full range of methods should be offered, including the most effective reversible methods—the injectable, the IUD and the implant, each of which can be provided at the site of post-abortion care. For women who have been counseled about all methods, want no more children and freely choose tubal ligation, the immediate postabortion period is an opportune time for this procedure. However, in many settings, women do not receive adequate postabortion contraceptive counseling. Barriers to contraceptive services include shortages of trained staff, method stock-outs and providers' lack of knowledge about how long it takes for fertility to return.<sup>163</sup>

Limited research assesses contraceptive counseling and services specifically among postabortion clients. Usually, studies in developing countries include women having an abortion and those

## BOX Stigma strongly affects women's access to abortion care

Abortion-related stigma, which cuts across all contexts, continues to negatively affect women's health and well-being. As long as such stigma persists, so will unsafe procedures, because fear of being recognized by family and friends moves women to avoid trained providers in formal medical settings for both abortion and postabortion care. Stigma is also an important reason why data on induced abortion are so scarce and unreliable: For fear of being shamed or judged, women worldwide underreport their abortions in data collection efforts.<sup>1,2</sup>

Moreover, many women living where abortion is highly legally restricted who end up needing care for complications from unsafe procedures (see Chapter 5) report having had a miscarriage rather than an abortion.<sup>3</sup> This makes the accurate assessment of abortion complication rates through facility-based studies very difficult. The fear of being stigmatized also extends to health personnel: For example, a synthesis of 36 studies conducted in 15 Sub-Saharan African and Southeast Asian countries found that many providers reported being judged harshly by their peers for providing abortions,<sup>4</sup> and researchers have mentioned that health professionals in Kenya and Zambia feel stigmatized for providing abortion.<sup>5</sup>

Although legal restrictions on abortion strongly reinforce stigma, removing such restrictions does not automatically eliminate it. Even in countries where abortion is broadly legal, women's feelings of isolation and anxiety over having a stigmatized procedure can result in their fear of being judged harshly by health professionals, and of being treated as an outcast by their family and community.<sup>1,6,7</sup> In legally restrictive settings, by comparison, seeking either an induced abortion or care afterward can mean running the risk of arrest. Indeed, the available data show that the majority of women prosecuted for the crime of abortion are brought to the attention of authorities by the health facility personnel they turned to for care.<sup>8,9</sup> In El Salvador, one of six Latin American countries with total bans (Chile used to be the seventh, but it now allows abortion in very limited circumstances<sup>10</sup>), offers a typical example: Three-quarters of 129 women handed over to police between January 2000 and March 2011 for the crime of abortion were reported by hospital personnel.<sup>11</sup>

Qualitative research in legally restrictive settings shows that public objections to legalization can coexist with and eventually be overridden by concerns over women's health.<sup>12,13</sup> Sensitizing the general population and providers to the preventable health risks posed by unsafe abortion is key to reducing cultural and religious objections. To this end, designing interventions to reduce stigma has become a priority, as has developing the research tools to measure stigma—from both providers'<sup>14</sup> and women's<sup>15</sup> perspectives.

presenting for postabortion care after an induced abortion or a complicated miscarriage. The available studies show high rates of contraceptive acceptance: For example, a prospective study in Bangladesh reported that 85% of women who had had menstrual regulation or care for complications after menstrual regulation or a miscarriage were practicing contraception four months later.<sup>164</sup>

Other studies have found that younger women are less likely than older women to accept a method.<sup>165,166</sup> In addition, abortion clients who attended primary-level health facilities were more

likely than those treated at secondary- or tertiary-level facilities to accept a method.<sup>128,165</sup> However, according to a Kenyan study, although 80% of clients received family planning counseling after an abortion, women were offered a method only about half of the time.<sup>167</sup>

### Evidence suggests that complications are becoming less serious

Treatment rates are influenced not only by the probability of adverse outcomes occurring in the first place, but also by the accessibility and availability of emergency care. Access to obstetric services overall has been improving steadily across the globe, as evidenced by the rise in the proportions of women delivering in a health facility.<sup>168</sup> In addition, even as safer, misoprostol-only abortions increase as a share of all abortions, postabortion care treatment rates might not necessarily decline for a few main reasons: the drug has a clinical first-trimester failure rate of 10–25%,<sup>36</sup> many misoprostol users are inadequately informed about what to expect and may seek unneeded treatment after experiencing the bleeding that is part of the normal process of a misoprostol abortion, and some providers specifically instruct women to go to facilities for treatment soon after bleeding starts.

The toll on medical systems from clandestine abortion is still high. As of 2012, an estimated seven million women in developing regions (excluding Eastern Asia) were treated in facilities for complications from unsafe induced abortions.<sup>169</sup> This translates to an annual rate of 6.9 treated cases per 1,000 women of reproductive age in developing regions (Figure 5.1, page 28). The rate ranges from 5.3 per 1,000 in Latin America to 8.2 per 1,000 in Asia (excluding Eastern Asia). The treatment rate for Latin America declined by nearly one-third since 2005 (7.7 per 1,000), and given that access to health care overall and to postabortion care in particular did not fall over the period, the decline likely reflects a real decrease in the incidence of complications requiring care. Furthermore, national health-systems data for Latin America's largest country, Brazil, show a sustained decline in the treatment rate, as well as in the severity of abortion complications that occurred in tandem with misoprostol's introduction and continued use: From 1992 through 2012, Brazil's treatment rate fell by 76% for severe complications, and by 57% for less-serious ones (Figure 5.2, page 29).<sup>170,171</sup>

Evidence from small-scale studies points to similar declines in severe complications in other countries, possibly resulting from increases in the use of



TABLE

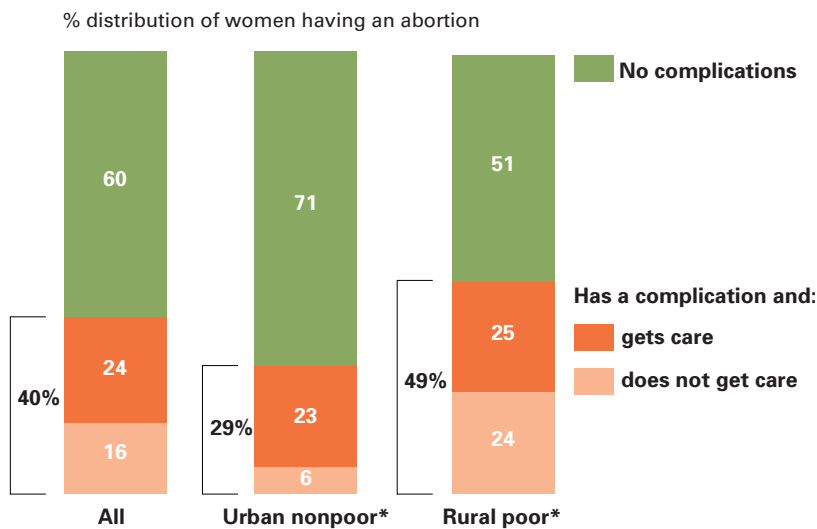
## 5.1 WHO recommendations for health personnel types appropriate to perform specific abortion and postabortion care tasks

TASK	HEALTH WORKER TYPE			
	Lay health workers* Pharmacy workers Pharmacists	Auxiliary nurses Auxiliary nurse-midwives	Nurses Midwives Associate/advanced associate clinicians	Nonspecialist doctors Specialist doctors
LEVEL OF RECOMMENDATION FOR TASK (NEVER, IN SPECIFIC CIRCUMSTANCES, ALWAYS)				
<b>Method of first-trimester abortion</b>				
<b>Vacuum aspiration</b>	Never†	In specific circumstances	Always	Always‡
<b>Combination medication and misoprostol only</b>	Never for pharmacy workers; subtasks feasible for lay health workers and pharmacists	Always	Always	Always‡
<b>Method of second-trimester abortion or of postabortion care</b>				
<b>Dilation and evacuation</b>	Never†	Never§	Nurses/midwives:** never All others: more research needed	Always††
<b>Medication</b>	Never†	Never	In specific circumstances	Always††
<b>Method of management of uncomplicated incomplete abortion</b>				
<b>Vacuum aspiration</b>	Never†	In specific circumstances	Always	Always‡
<b>Misoprostol</b>	Pharmacists/pharmacy workers: never All others: more research needed	Always	Always	Always‡
<b>Type of non-life-threatening complication for initial management</b>				
<b>Postabortion infection</b>	Never†	Always	Always	Always‡
<b>Postabortion hemorrhage</b>	Never†	Always	Always	Always‡
<b>Postabortion contraceptive method provision</b>				
<b>IUD</b>	Never	ANMs: always All others: more research needed	Always‡‡	Always‡
<b>Implant</b>	Pharmacists/pharmacy workers: never All others: more research needed	In specific circumstances	Always‡‡	Always‡
<b>Injectable</b>	Pharmacists: always All others: in specific circumstances	Always	Always‡‡,§§	Always‡
<b>Tubal ligation</b>	Never†	Never	Associate/advanced associate clinicians:‡‡ always All others: more research needed	Always‡

• **NOTES TO TABLE 5.1** No recommendations specified for managing life-threatening complications. Never=recommended against, or health worker type should not undertake the task. In specific circumstances—the benefits of having the health worker type perform this task outweigh the possible harms in specific circumstances, which are outlined for each task in reference 32. Always—the benefits of having the health worker type perform this task, including at scale, outweigh the possible harms. ANM=auxiliary nurse-midwife. \*Lay health worker is someone who performs functions related to health care delivery/information provision and was trained in some way in the context of the task, but has received no formal professional or paraprofessional certificate or tertiary education degree. They are commonly community health workers, village health workers or female community health volunteers. †Considered outside typical scope of practice so evidence not assessed for lay health workers, pharmacy workers and pharmacists. ‡Considered within typical scope of practice so evidence not assessed for nonspecialist doctors/specialist doctors. §Considered outside typical scope of practice so evidence not assessed for auxiliary nurses and ANMs. \*\*Considered outside typical scope of practice so evidence not assessed for nurses and midwives. ††Considered within typical scope of practice so evidence not assessed for specialist doctors. ‡‡Considered within typical scope of practice so evidence not assessed for associate/advanced associate clinicians. §§Considered within typical scope of practice so evidence not assessed for nurses and midwives. *Source:* reference 32.

FIGURE

**5.3 In 14 countries where unsafe abortion is prevalent, rural poor women are estimated to be far more likely than urban nonpoor women to experience complications.**



**NOTES TO FIGURE 5.3**

\*We present data for the subgroups at each extreme of access; data for women with intermediate access—urban poor women and rural nonpoor women—are not shown. Data are unweighted averages for the following 14 countries: Bangladesh (2014), Burkina Faso (2009), Colombia (2008), Ethiopia (2014), Kenya (2012), Malawi (2015), Mexico (2007), Nepal (2014), Nigeria (2012), Pakistan (2012), Rwanda (2009), Senegal (2012), Tanzania (2013) and Uganda (2013). *Source:* reference 152.

misoprostol relative to more invasive and harmful techniques. Anecdotal or large-scale evidence of declines in complication severity has been reported for several countries in Latin America and the Caribbean (e.g., Chile,<sup>172</sup> the Dominican Republic<sup>173</sup> and Uruguay<sup>174</sup>) and Sub-Saharan Africa (e.g., Gabon<sup>175</sup> and South Africa<sup>176</sup>), as well as in Nepal.<sup>96</sup>

Researchers have hypothesized that many other countries will likely follow the specific example of Brazil, where studies began documenting declines in the severity of complications in the late-1980s to mid-1990s.<sup>177,178</sup> According to projections, if all women having unsafe abortions used misoprostol, deaths from induced abortion would decline by two-thirds in developing regions,<sup>179</sup> and by 31% and 56% in Ethiopia and Tanzania, respectively.<sup>180</sup>

The heterogeneity in the design of studies assessing the severity of complications, and in the definitions of “mild,” “moderate” and “high” severity, is too large to enable comparisons and conclusions from this body of studies.<sup>5,181</sup> An alternative approach uses a uniformly defined, acute-severity measure known as “near miss,” for which clinically defined life-threatening symptoms signal that the woman would have died if she had not received emergency care in time. A pooled analysis of data from 11 countries in Africa, Asia and Latin America estimates that 240 near-miss events from complicated abortions and miscarriages occur each year per 100,000 live births.<sup>29</sup>

s) Ascertaining how often clandestine abortions lead to complications using data from studies of postabortion care is difficult for several reasons, not the least of which is the need to first assess whether the studies removed women who had had a miscarriage. Unfortunately, most facility-based studies that collect data from women include miscarriages, because stigma leads many women who have had an induced abortion to report having had a miscarriage instead. Moreover, it is generally hard for providers to distinguish between complications from these two outcomes. This data issue must be borne in mind when interpreting results and making comparisons.

Although severe complications from clandestine abortions seem to be declining, the incidence of women seeking care has not. Although some of this can be attributed to overall improvements in access to health facilities and to some women’s seeking unneeded care (e.g., when a misoprostol abortion is in progress and would have completed without intervention), it is also an indicator that substantial numbers of women continue to have unsafe abortions. Each of the following situations can result in women going for care after a clandestine abortion: a surgical procedure done by an unskilled provider; an incomplete abortion via misoprostol, despite correct use (the method has a failure rate of 10–25%); uninformed, incorrect use of misoprostol; use of adulterated misoprostol; and use of a damaging traditional abortion method (see traditional methods box, page 22). According to estimates based on the perceptions of key informants in 14 developing countries, most with highly restrictive laws, 40% of abortions result in complications that require care in a medical facility (Figure 5.3).<sup>152</sup>

Moreover, the stage of pregnancy at the time of abortion influences the severity of possible complications. According to hospital-based studies in Kenya and South Africa, more than one-third of women presenting with complications from unsafe abortions had had a second-trimester procedure.<sup>182,183</sup> Research on women receiving such care in Malawi and Kenya found that those who had had a second-trimester abortion disproportionately experienced severe complications.<sup>184</sup> Moreover, a Kenyan study showed that women were more likely to die from complications if they presented in the second trimester than if they sought care during the first trimester.<sup>185</sup>

**Some women die following an unsafe abortion**

When women fail to get the care they need, they risk dying from untreated complications. This rarely occurs in developed countries such as the United States, where the risk of dying from legal abortion is far lower than the risk of dying from pregnancy and childbirth. Fewer than one U.S. woman dies for every 100,000 legal abortions, a rate that has remained unchanged over the past few decades;<sup>186,187</sup> in contrast, nearly nine (8.8) U.S. women die during pregnancy or delivery per 100,000 live births.<sup>188</sup> Because the countries that legally restrict abortion are concentrated in the developing world, the risk of death following an abortion is much higher in developing regions than in developed regions.

At the global level, 8–11% of all maternal deaths are related to abortion.<sup>t,189,190</sup> (We report a range of estimates, because these deaths are extremely difficult to estimate, and different methodological approaches are used.) In human terms, this translates to some 22,800–31,000 lives unnecessarily lost each year. Yet, these numbers reflect sustained improvements in avoidable deaths. Globally, the estimated abortion-related case fatality rate (i.e., the number of deaths per 100,000 induced abortions) dropped by 42% between 1990–1994 and 2010–2014, from 108 to 63.<sup>190,191</sup> Of the major developing regions, the current case-fatality rate is highest in Africa (141 per 100,000), roughly equal to the global average in Asia (62 per 100,000), and lowest in Latin America and the Caribbean (22 per 100,000).

One common way to reduce abortion mortality is to broaden legal grounds—along with ensuring adequate mechanisms to implement the law and make safe services widely available. Evidence documenting the drop in mortality postlegalization is available for a few countries. In Romania, for example, the maternal mortality ratio fell 16-fold after restrictions on abortion were lifted following a 28-year crackdown, from 148 maternal deaths per 100,000 live births in 1989 to nine per 100,000 in 2002.<sup>192</sup> In South Africa, annual deaths in public facilities from unsafe procedures fell by 91% soon after the 1996 law that moved the country from legality category 2 to 6—from 425 deaths in 1994 to 40 in 1999–2001.<sup>183</sup>

### **Postabortion costs continue to burden nations and families that can least afford it**

Provision of postabortion care is necessary to protect women's health, but it can be costly where unsafe abortion is still widespread. Countries where abortion is highly restricted (categories 1–4, Appendix Table 1) largely are low- and middle-income countries with underfunded public health systems. Yet, these are the very countries where unsafe abortion is most prevalent and costs of postabortion care to the health system are highest. In these countries, the public sector shoulders most of the burden of treatment, which means that already limited public resources are further depleted by a preventable condition.

Recent estimates put the annual cost of providing postabortion care in all developing countries at some \$232 million.<sup>168</sup> If all abortions were to be provided safely, by comparison, this cost would drop more than 10-fold, to \$20 million. At the

country level, providing postabortion care is a substantial financial burden: The average (direct and indirect) cost per patient to the health system is approximately \$93 in Rwanda (2012), \$131 in Uganda (2010) and \$429 in Colombia (2012).<sup>193–195</sup> By comparison, providing a woman with a full year of modern contraception (that could prevent the unintended pregnancy in the first place) would cost just 3–9% of the average cost of postabortion care in these three countries.<sup>196</sup>

Because the large majority of women suffering complications are poor to begin with, the costs of care can be overwhelming for them, especially when related costs—i.e., transportation, child care and lost income—are considered. According to the limited research assessing the impact of unsafe abortion on household finances, nearly three-quarters of Ugandan women who had had an unsafe abortion experienced a loss in productivity, three-fifths reported that their children had suffered negative consequences, and one-third reported that their household economic situation had deteriorated.<sup>115</sup>

**Anecdotal or large-scale evidence of declines in complication severity has been reported for several countries**

t) Includes deaths from induced and spontaneous abortions, and from ectopic pregnancies; deaths from unsafely induced abortions make up the vast majority of these deaths.

# 6 Unintended Pregnancy

Whether to have children, when to have them and how many to have are questions that most people face over the course of their life, and their decisions can depend on a wide range of sometimes contradictory factors. Why do individuals want to plan the timing of their families? The reasons are myriad. For instance, a young woman may seek to delay a first child to finish school or start a career. She may be especially motivated to postpone motherhood if she is single and lives where being pregnant and giving birth outside of a union means being rejected by her family or community. If a woman who is in a union already has children, she may want to space her pregnancies to achieve adequate intervals between births, which benefits her own health and that of her children.<sup>197</sup> Waiting to have another child may also be a practical response to changing personal and economic circumstances. And after reaching their desired family size, couples may want to stop having children to achieve the goals they set for their own lives, and to fulfill their plans for how to bring up their children.

Because the large majority of women and couples have particular childbearing preferences, and because of the many challenges to successfully realizing these preferences, unintended pregnancies are quite common. Many factors contribute to impede women or couples from preventing unintended pregnancies. These include limited access to high-quality contraceptive services and low satisfaction with the methods available to them, which in turn affect individuals' ability to practice contraception effectively. Misperceptions about whether and when women are at risk of becoming pregnant also come into play. Women who experience an unintended pregnancy have to decide whether to have a child or have an abortion, and this decision has to be made quickly. The vast majority of abortions occur in response to unintended pregnancies; a very small proportion are sought to terminate intended pregnancies—for example, when the fetus has a grave anomaly.<sup>47,48</sup>

## Unintended pregnancies remain common, despite recent decline

Globally, an estimated 99 million unintended pregnancies occur each year as of 2010–2014 (see Data and Methods Appendix, page 46, for how these are calculated).<sup>6</sup> This means that roughly 44% of the 227 million annual pregnancies happen too soon (are mistimed) or are unwanted altogether (Appendix Table 3, page 52). Expressed as a rate, 62 unintended pregnancies occur each year per 1,000 women aged 15–44 (Figure 6.1, page 35); unintended pregnancy happens more frequently in developing regions than developed ones—at rates of 65 and 45 per 1,000, respectively.

Within developed regions, the unintended pregnancy rate is highest in Eastern Europe (54 per 1,000 women; Appendix Table 3), the sole developed-world subregion where unmet need for modern contraceptives is still relatively high.<sup>4,18</sup> The highest rates in developing regions are in Latin America and the Caribbean (96 per 1,000) and in Africa (89 per 1,000).<sup>6</sup> Within these major regions, rates are highest in the subregion of the Caribbean (116 per 1,000), and in Eastern and Middle Africa (112 and 103 per 1,000, respectively). Unintended pregnancy rates are lowest in Northern and Western Europe (27–28 per 1,000), and somewhat higher in Southern Europe (40 per 1,000) and in Northern America and Oceania (47–48 per 1,000). In one subregion—Eastern Africa—for which six country-level estimates are available, the unintended pregnancy rate varies widely. Data show that annual rates are highest in Uganda (149 per 1,000 women),<sup>198</sup> followed by Malawi (126),<sup>199</sup> Kenya (120),<sup>200</sup> Rwanda (114),<sup>79</sup> Tanzania (93)<sup>201</sup> and Ethiopia (85).<sup>125</sup>

Globally, the annual rate of unintended pregnancies declined significantly—by about 16%—between 1990–1994 and 2010–2014, from 74 to 62 per 1,000 women 15–44 (Figure 6.2, page 36 and Appendix Table 3).<sup>6</sup> The rate declined more sharply in developed than in developing regions (30% vs.

u) A woman is considered to have unmet need for a modern method if she is able to conceive, is in a union or currently sexually active and wants to avoid a pregnancy for at least two years, but is using a traditional contraceptive method or is not using a method at all.

16%), with Eastern Europe contributing most to the steep decline in developed regions. In developing subregions, rates of unintended pregnancy fell significantly in Eastern, Western and Northern Africa, and in Western, Central and Southeastern Asia.

What a woman does when faced with an unintended pregnancy depends on a range of factors, including how critical it is to her to avoid a birth and the extent to which she is empowered to act on her desires. Worldwide, an estimated 56% of unintended pregnancies end in an abortion (Appendix Table 3);<sup>6</sup> 32% result in an unplanned birth, and the remaining 12% in a miscarriage (not shown). The subregions in which the greatest proportions of unintended pregnancies end in an abortion are Central and Eastern Asia, and Eastern Europe (77–78%); far smaller proportions of unintended pregnancies are resolved through abortion in Northern America and Oceania (36–38%), and in Eastern, Middle and Southern Africa (30–36%).

The proportion of unintended pregnancies that end in an abortion has fallen significantly in the developed world over the past 25 years, from 71% to 59%; the subregion that contributed most to this trend is Eastern Europe. One possible reason for this shift toward fewer unintended pregnancies ending in abortion is higher proportions of them being mistimed (or less acutely unwanted), which would decrease the likelihood that women would choose abortion. Another possibility is a change in values toward greater acceptance of mistimed births, as women increasingly have fewer children (in Europe overall, 1.6 lifetime births, on average<sup>17</sup>). A growing number of restrictions on abortion access in some contexts may also contribute to this trend. In contrast, the share of unintended pregnancies in the developing world that end in an abortion has increased by a small but significant amount (from 50% to 55%). This rise may be because of intensifying desires for fewer children and greater opportunity costs associated with unplanned births.

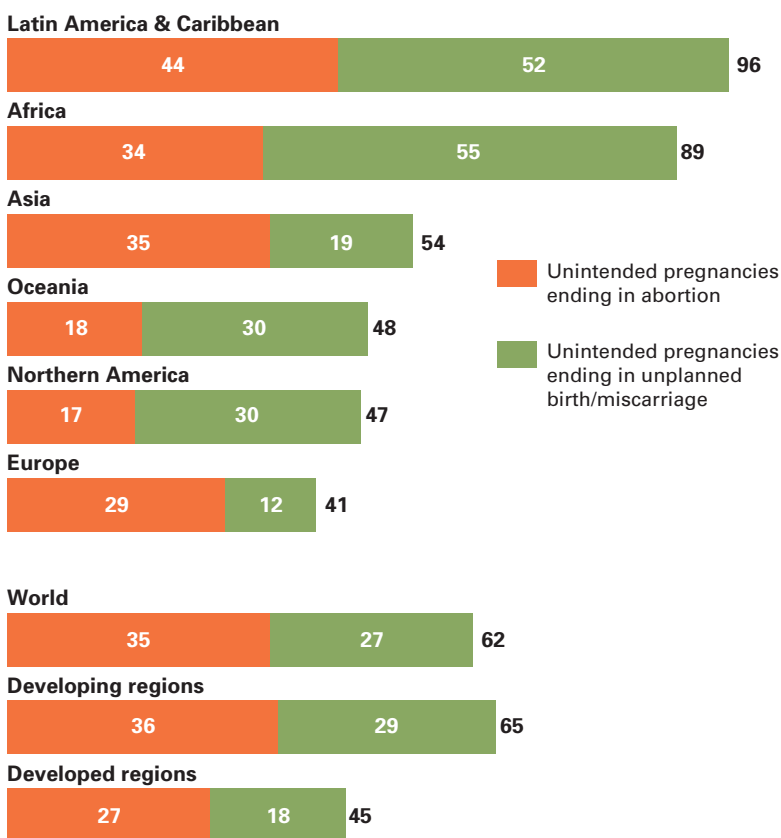
### Small families and timed births are increasingly important goals

In response to such influences as changing social values, higher costs of childrearing, increasing urbanization and decreasing child mortality, women and couples now want fewer children than before. In nearly every developing country with data, the trend toward preferring smaller families is well documented in surveys carried out over the past few decades.<sup>8</sup> For example, wanted total fertility rates<sup>v</sup> fell between 1998 and 2015 in

FIGURE

## 6.1 Estimated rates of unintended pregnancy are highest in Latin America and the Caribbean and in Africa.

No. of unintended pregnancies per 1,000 women aged 15–44



36 of 39 developing-region countries with data (see reference 8 combined with data in Appendix Table 4, page 53). Large gaps between actual total fertility and wanted total fertility reflect widespread unmet need for effective contraception, which itself can stem from women’s lack of empowerment to act on their fertility preferences. Women having more children than they want may also indicate the need for increased access to safe abortion services.

In a few Asian countries and in other parts of the world where large numbers of immigrants from these countries now live, the preference for small families creates tension with the desire to have at least one son—a preference that has proved resistant to change.<sup>202</sup> In countries where this “fertility squeeze” occurs and prenatal diagnostic testing is widely available and affordable, the consequence can be sex-selective terminations.<sup>203</sup> Evidence of this practice shows up in clear departures from the biological norm of the sex ratio at birth (the number of males born relative to the number of females born).

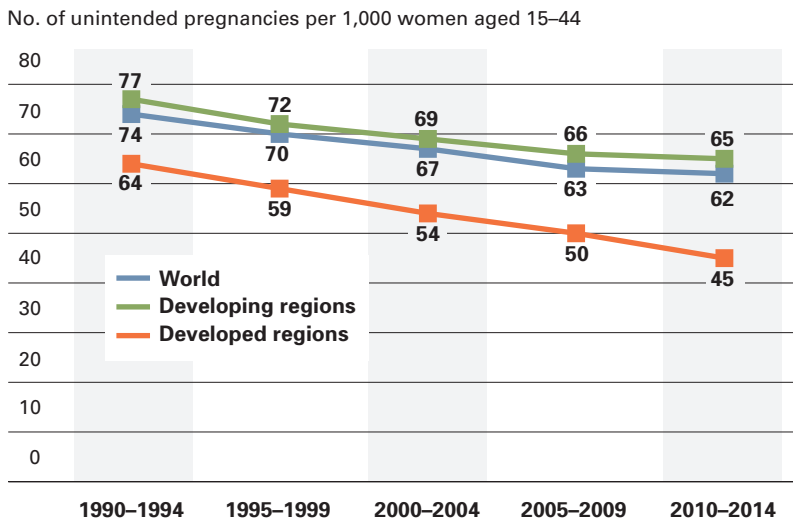
#### NOTES TO FIGURE 6.1

A pregnancy is considered unintended if the woman reported not wanting to become pregnant at the time (mistimed pregnancy) or not wanting the pregnancy at all (unwanted pregnancy). Data are for 2010–2014. Source: reference 6.

v) When calculating wanted fertility rates, births are considered as “wanted” when they occur before a woman reaches her reported ideal family size.

FIGURE

**6.2 Worldwide, the unintended pregnancy rate declined steadily from 1990–1994 through 2010–2014, but declines were steeper in developed regions than in developing regions.**



● FIGURE 6.2  
Source: reference 6.

Skewed sex ratios at birth have been documented in countries in Western Asia (e.g., Armenia, Azerbaijan and Georgia),<sup>204,205</sup> Eastern Asia (China<sup>206</sup> and South Korea<sup>207</sup>) and Southern Asia (India<sup>208</sup> and Nepal<sup>209</sup>). Conditional sex ratios at birth (i.e., the ratio of male births to female births, depending on the sex of the previous birth) show similar deviations from expected norms among immigrants to Canada from China, India and other South Asian countries,<sup>210</sup> and among immigrants to the United States<sup>211</sup> and the United Kingdom from India.<sup>212</sup>

This problem has no easy solution, because it requires changing deeply entrenched values and beliefs that males have greater value to family and society than females. The broader, longer-term need is to increase the social value of girls and women, which itself would reduce and eventually eliminate gender discrimination overall and the associated practice of sex-selective abortion. Laws that prohibit gender-biased abortions have not been very effective in stopping the practice<sup>208,213</sup> and, in fact, can restrict women’s reproductive choice (and thus, affect their health) by reducing access to safe and legal abortion services.<sup>214,215</sup> However, sometimes rapid economic development and government-sponsored information campaigns can speed change, as demonstrated in South Korea, where skewed sex ratios reverted to normal within about 12 years.<sup>207</sup> In the meantime, the formidable challenge ahead involves balancing the equal imperatives of eliminating this practice and keeping abortion safe, legal and accessible.

**Unmet need for contraception is falling—but slowly**

Improving contraceptive services is key to preventing unintended pregnancy. Women and men increasingly want small families, typically two or three children.<sup>8</sup> To achieve this goal, they will need to prevent unintended pregnancy for the large majority of their reproductive years.<sup>216</sup> And as countries move through fertility transition and contraceptive use increases, a growing share of abortions in such countries will be to contraceptive users. Indeed, among the few countries that collect such data, the proportion of women having an abortion who reported using a method at the time they became pregnant ranges from one-quarter (in Georgia<sup>22</sup>) to roughly one-half (in Belgium,<sup>43</sup> Cambodia<sup>217</sup> and the United States<sup>218</sup>) to two-thirds (in France<sup>219</sup> and Switzerland<sup>27</sup>). Moreover, pregnancies can start out as intended and become unwanted because of personal circumstances, such as a change in relationship or employment status, or the diagnosis of a fetal anomaly or a health problem in the pregnant woman.

Overall, modern contraceptive use is growing—but at a slow pace that has not kept up with the growing need for it. As of 2015, some 58% of all women in a union worldwide were using a modern method, up from 48% in 1990.<sup>18</sup> Current levels and trends during the more recent period are similar across developed regions (from 58% to 61% between 2000 and 2015) and developing regions (from 55% to 57%). However, the increase has been faster than average in groupings of countries in which the starting point was very low: Between 1990 and 2015, modern method use rose in the 48 least-developed countries, from 11% to 34%, and in Sub-Saharan Africa, from 8% to 25%.

The most common reasons women give for not practicing contraception—e.g., concerns about method side effects and perceiving low or no risk of pregnancy—indicate a great need for better quality contraceptive care, including accurate information, and adequate counseling and follow-up care.<sup>220</sup> Another common reason—opposition to contraceptive use by a husband or partner—requires different solutions, such as increasing women’s self-efficacy and decision-making power. Also integral to the solution is educating men about the wide range of benefits from having better control over family size and the timing of births.

The concept of unmet need measures the extent to which fecund, sexually active women who want

to avoid pregnancy have the means to do so. As of 2015, some 18% of women in a union worldwide had an unmet need for modern contraception;<sup>18</sup> no difference was found between developed and developing regions, largely because China pulled down the average for the developing world. Such unmet need is highest in the least-developed countries (27%), a finding mostly explained by a high level for Africa overall (26%), and especially high levels in Middle Africa (36%) and Western Asia (32%). In terms of change over time, however, Latin America and the Caribbean shows the most progress, as unmet need among in-union women dropped by nearly two-fifths between 1990 and 2015 (from 26% to 16%; Figure 6.3, page 38). Rather than have unmet need per se, some women want to avoid having a child but decide to not use contraceptives, aware that if they become pregnant, they will need to carry to term or have an abortion.

The above information refers only to women in a union. Comprehensive global data are unavailable for single women, because such women are not included in reproductive health surveys in some countries, and even where they are, stigmatization of premarital sexual activity can result in their reluctance to report being sexually active.<sup>w</sup> Nonetheless, the available data for developing countries indicate that levels of unmet need for contraception are usually much higher among sexually active single women—especially those who are young—than among women in a union: Among adolescent women, the level of unmet need for any contraceptive method is typically 2–3 times as high among those who are single and sexually active as among those who are in a union.<sup>221,222</sup> Although single and sexually active young women make up a small proportion of all women with unmet need, they have a high probability of turning to abortion if they experience an unintended pregnancy. This is because young single women's opportunity costs from giving birth are so high: They have the most to lose by cutting short their schooling and job preparation, not to mention their being subjected to the widespread stigma against childbearing out of wedlock.

Poorer and less-educated women—single and those in a union—tend to have higher levels of unmet need and, therefore, higher levels of unintended pregnancy than their more affluent and educated counterparts. Whereas substantial recent gains have been made in reducing inequalities in coverage and use of reproductive health services globally, gains were larger for middle-income countries than for

low-income countries, and large differences remain between poorer and more affluent women, and between urban and rural residents.<sup>223,224</sup> This is not surprising given that, compared with more disadvantaged women, those who are better off are more likely to have a say in their childbearing decisions, know about effective contraception and where to get it, and be able to pay for it.

The steady growth in the number of reproductive-age women in the developing world means that the number who want to avoid pregnancy—and thus require effective contraception to do so—is a moving target. Those who want to avoid pregnancy include both women who are in a union and sexually active single women, and both women who want to postpone having a child and those who want to stop having children altogether. Between 2003 and 2014, the number of such women in the developing world increased by more than one-fifth, from 720 million to 877 million;<sup>168</sup> population growth alone contributed three-quarters of this increase, whereas the remaining one-quarter can be attributed to changing fertility preferences.

The specific mix of contraceptive methods used by women also contributes to how well they can prevent pregnancy. Over the past decade and a half, the use of specific modern methods among all women (in union and not) in developing countries has shifted away from sterilization and toward less effective methods.<sup>225</sup> For example, the proportion of all modern contraceptive use accounted for by female sterilization fell from 47% in 2003 to 38% in 2012. During that period, use of the condom—which is much less effective than sterilization—increased from 7% to 13%. This suggests that the overall population at risk of unintended pregnancy—and thus abortion—would also have increased. Therefore, these changes not only highlight the need for health professionals to offer women the full range of contraceptive methods from which to choose, but suggest that the need for abortion will vary according to the contraceptive method mix. The primary goal is to ensure that women are able to access and use the method of their choice, which is at least partly influenced by their having adequate knowledge of each method, including its effectiveness.

Although traditional methods—mainly withdrawal and periodic abstinence—provide some protection against pregnancy, they have typical-use failure rates of 22–24% and thus leave women very vulnerable to unintended pregnancy.<sup>226</sup> As of 2015, most

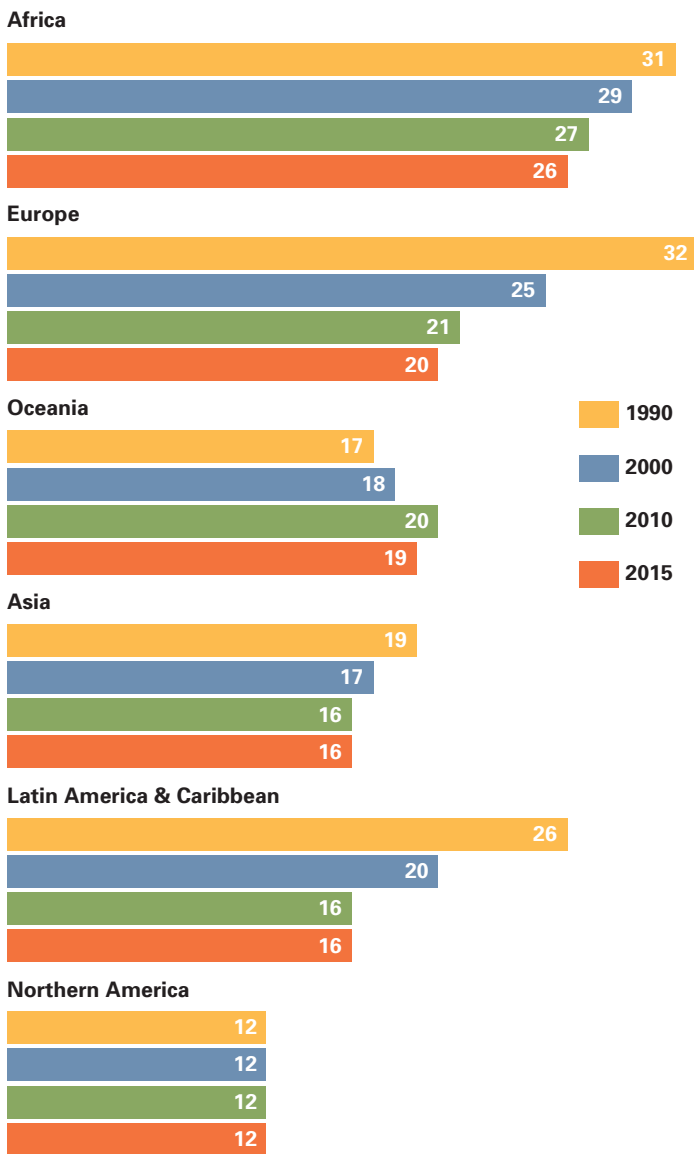
**Worldwide,  
an estimated  
56% of  
unintended  
pregnancies  
end in an  
abortion**

w) Refers to having had sex in a recent period, defined as the past month in some surveys, in the past three months in others and in the last year in still others.

FIGURE

**6.3 Unmet need for modern contraception among in-union women is highest in Africa, and declines from 1990 to 2015 were steepest in Latin America and the Caribbean, and in Europe.**

% of in-union women aged 15–49



● **NOTES TO FIGURE 6.3** In-union women have unmet need for a modern method if they are able to conceive and want to postpone pregnancy for at least two years, but are using a traditional contraceptive method or are not using any method. Modern methods include female and male sterilization, pills, IUDs, male and female condoms, injectables, implants, vaginal barrier methods and emergency contraception; traditional methods include rhythm (periodic abstinence), withdrawal, lactational amenorrhoea method (LAM) and folk methods. Source: reference 18.

world subregions had levels of traditional method use at or below 10% among in-union women, with the notable exceptions of Western Asia (17%), and Eastern and Southern Europe (13–14%).<sup>18</sup>

Contraceptive discontinuation can also leave women exposed to the risk of unintended pregnancy.<sup>227</sup> Many women start a method, but then stop for a range of reasons. Indeed, according to data from 34 developing countries, women who have discontinued contraceptive use make up 38% of all women with unmet need for a modern method.<sup>228</sup> To help women use contraceptives consistently and effectively, providers must offer high-quality contraceptive services, including a range of methods; prevent stock-outs of supplies; provide adequate counseling and follow-up; and facilitate women’s switching of methods, if desired. Investing in the development of new highly effective and easy-to-use methods should also remain a priority.

**Young women are at high risk of unintended pregnancy**

The reproductive health needs of the youngest women of reproductive age are often the most acute, given that age alone creates a set of cultural and social expectations that can limit young women’s ability to act on their preferences to practice contraception. This, in turn, can translate to high levels of unintended pregnancy and a strong motivation to resolve these pregnancies through abortion (see adolescents and abortion box, page 40). Across the globe, the very trends behind growing preferences for small families are also increasingly leading women to postpone a first union, most often to complete schooling and be better prepared for the labor force. For example, among 15–19-year-old women worldwide, the proportion who have yet to marry or form a union rose from 82% to 87% between 1990 and 2015.<sup>229</sup> In developed regions, the proportions still single during adolescence have been high over the past few decades (Figure 6.4, page 39). In developing regions, however, they are now trending upward, except in Latin America and the Caribbean, where the proportion of adolescents who have never been in a union (85%) has not risen over the past 25 years.

At the same time, adolescent women are increasingly likely to be sexually active. The proportion of 15–19-year-olds who report having had sexual intercourse in the past year increased in 12 of 24 countries with trend data in Sub-Saharan Africa, and in five of six in Latin America and the Caribbean;<sup>230</sup> generally, increases were greater in countries in



Latin America and the Caribbean than those in Sub-Saharan Africa. Although part of this trend may be traceable to better-quality data, much of it is likely real and is consistent with slowly changing norms regarding the acceptability of sexual activity outside of union and of postponing a first union.

Broadening the perspective to include young adult women shows that the proportions of single 15–24-year-olds who are currently sexually active (i.e., had sex in the past one or three months) tend to be highest in Sub-Saharan Africa. In about half of the 35 countries in the subregion with data, the level of current sexual activity is in the 20–40% range (see Appendix Table 4 for data sources). In the other half, nine have a much lower level of less than 10% (Burundi, Comoros, Ethiopia, Gambia, Niger, Rwanda, Senegal, Tanzania and Zimbabwe) and five have a much higher level of at least 50% (Congo-Brazzaville, Gabon, Guinea-Bissau, Liberia and Sierra Leone). In the 15 countries in Latin America and the Caribbean with data, the proportion of single young adult women who are currently sexually active tends to be somewhat lower (8–46%); only Cuba has a high level (62%).

These trends of later union formation and earlier sexual activity combine to lengthen the period that single young women are at risk of unintended pregnancies. In many developing countries, single young women—especially adolescents—face formidable obstacles to obtaining sexual and reproductive health services, including contraceptive

methods. First and foremost among these is the strong stigma attached to sexual activity outside of culturally accepted unions. In societies that severely punish such activity, some young women forgo contraceptive care out of fear that seeking services will reveal that they are sexually active.

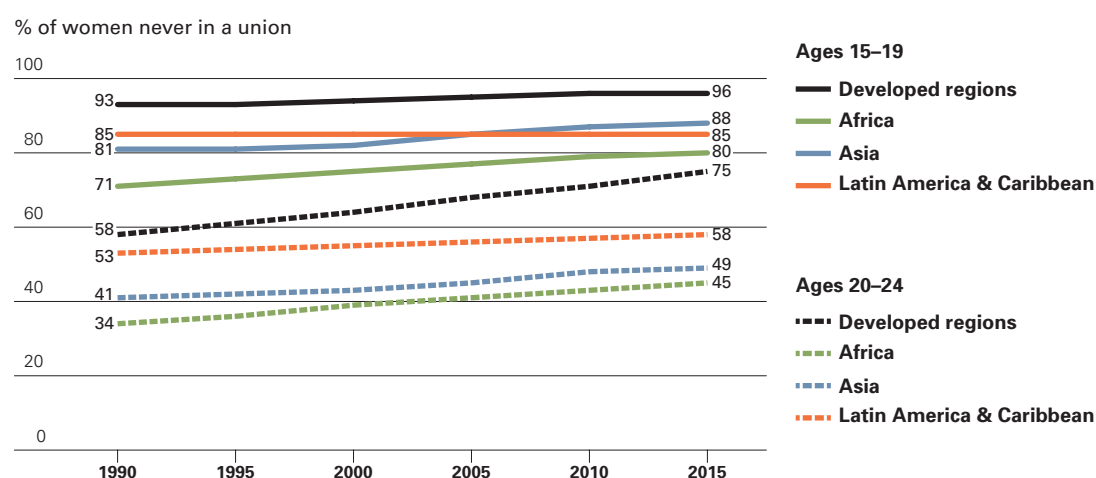
Given single women’s strong motivation to avoid pregnancy, the obstacles to contraceptive use lead directly to high levels of unmet need for effective contraception. Among the 35 Sub-Saharan African countries with data on single, sexually active women aged 15–24, the proportions with unmet need for modern contraception cluster in the 40–59% range; 10 countries have levels of 60–70%. In the 14 Latin American and Caribbean countries with data, levels of unmet need among single, sexually active young women generally are in the 26–58% range; Cuba has the lowest level (12%), whereas Bolivia, Guyana and Haiti have the highest (63–67%).

Very young women who are in a union face different obstacles to achieving their fertility preferences, and also experience unintended pregnancy. In countries and communities where conservative values are dominant, strong social pressure to start families soon after entering a union is the norm, and many adolescent brides lack the means to counter the wishes of powerful mothers-in-law and often older partners.<sup>231</sup> In-union adolescents in these contexts nevertheless report unplanned births, and some likely turn to abortion.

**Unmet need for contraception is usually much higher among sexually active single women than among women in a union**

FIGURE

**6.4 Adolescent and young adult women are increasingly postponing their first union: The proportion who have never been in a union increased from 1990 to 2015 in every major region, with one exception—adolescents in Latin America and the Caribbean.**



● FIGURE 6.4 Source: reference 229.

## BOX Adolescents and abortion

As young women increasingly aspire to higher levels of education and careers, they tend to postpone forming a first union. At the same time, the age at first sex has been declining in most parts of the world. These trends combine to lengthen the time in which young women—especially adolescents—are single and sexually active, which increases their exposure to the risk of pregnancy if they are not practicing contraception. Given the high opportunity costs of such pregnancies, the vast majority are unintended.

Adolescents not in a union arguably have the most to lose from carrying an unintended pregnancy to term; thus, many choose to resolve such pregnancies through abortion. Should these young women happen to live where the law highly restricts abortion, they run a high risk of having an unsafe abortion, since they are very motivated to avoid giving birth and thus often prioritize secrecy. Of course, many in-union adolescents also experience unintended pregnancies and seek abortions—to delay motherhood or postpone a second birth; however, in-union adolescents likely face fewer barriers to good contraceptive care, and their pregnancies are also more likely to be intended.

### QUALITY OF INCIDENCE DATA FOR ADOLESCENTS VARIES WIDELY

Data on the extent to which adolescents—especially those who have yet to enter into a union—have abortions are particularly scarce in the developing world. The available estimates date from 2008 and are for all 15–19-year-old women and for unsafe abortions only: Estimated rates are relatively high in Africa and in Latin America and the Caribbean (25–26 unsafe abortions per 1,000 women aged 15–19), and low in Asia, excluding Eastern Asia (nine per 1,000).<sup>1</sup> The low unsafe rate for the 40-some countries throughout the rest of Asia is likely influenced by many factors—starting with abortion being legal, and thus likely safe, in some of the larger countries. Moreover, early unions are still common, and levels of sexual activity outside of union are low, so adolescents in these countries are less likely to experience unintended pregnancy—and thus have an abortion—to begin with.

The situation is far different in developed countries where abortion is legally permitted under broad criteria and virtually no unsafe abortions occur: Of 17 such countries with age-specific data, annual rates of safe abortion among 15–19-year-olds range from three abortions per 1,000 in Singapore to 16 per 1,000 in Estonia (see Figure 2.5, page 13, for sources). Moreover, the adolescent abortion rate has declined in recent years in nearly every one of these 17 countries.<sup>2,3</sup> In the United States at least, declines in abortion rates have been disproportionately steeper among adolescents than among older age-groups. Such declines among adolescents are linked to the large drops in their pregnancy rates, a development that researchers attribute to improved contraceptive use, given that

there has been little change in U.S. adolescents' levels of sexual activity.<sup>4</sup>

Furthermore, where parental consent laws are in effect—i.e., in 38 countries (25 of which allow abortion without restriction as to reason),<sup>5</sup> these requirements act as legal restrictions do overall: They do not prevent minors from having abortions, but they often make the abortions that do occur less safe, because they are pushed to later in gestation when they are riskier.<sup>6</sup> Such bureaucratic delays worsen the existing disadvantage adolescents have relative to older women in recognizing and accepting the reality of their pregnancies later in gestation.

### STIGMA CAN INCREASE RISK AMONG ADOLESCENTS

In South Korea, where stigma against premarital sex is pervasive, adolescents' abortions are three times as likely as all women's abortions to occur in the second trimester (12% vs. 4%).<sup>7</sup> Moreover, in the Indian states of Bihar and Jharkhand, recognizing pregnancy later in gestation is inversely associated with age, as 39% of 15–17-year-olds did not recognize their pregnancy until after two months, compared with 5% of 22–24-year-olds.<sup>8</sup>

Concerns over cost and confidentiality can assume special importance among adolescents. Indeed, these issues can overtake concerns for safety and lead adolescents to seek out traditional providers or self-induce with harmful substances—not only where expected, in legally restricted contexts, but also where legal abortion coexists with strong stigma against giving birth outside of a union (e.g., Hong Kong and India).<sup>9</sup> Furthermore, many adolescents' preference for clandestine procedures stems from well-founded fears that providers will be judgmental of them. Adolescents' later and thus potentially less-safe abortions often lead to their need to seek out postabortion care. And even if adolescents realize they need care for complications, they are more likely than older women to delay getting that essential care,<sup>6</sup> a fact that further endangers their short- and long-term health.

Clearly, adolescents need better information on pregnancy risk, and the signs and symptoms of pregnancy, so they can recognize one sooner. They also need to be fully informed about their country's abortion law. To prevent unintended pregnancy, adolescents need both comprehensive contraceptive services that are tailored to their specific needs and comprehensive sexuality education—with clear information about how contraceptives work and where to get them. Research has shown that comprehensive programs are not associated with starting sexual activity sooner, but instead with delaying first sex.<sup>9,10</sup> Moreover, successful programs can increase adolescents' knowledge and self-esteem, improve their decision-making and communication skills, increase their contraceptive use and reduce rates of unintended pregnancy.<sup>11,12</sup>

# 7 Conclusions and Recommendations

Overall, how has the practice of induced abortion around the world changed over the past decade? Better access to medication abortion, and steady progress toward expanding legal services and access to them in the countries that have recently expanded legal criteria, are among the main developments that have improved the safety and availability of abortion services. Heightened global efforts to reduce abortion-related mortality, and updated guidelines and service provision improvements, have also helped to make post-abortion care more available and effective, as has increased reliance on midlevel providers.

However, progress has been uneven in ensuring that abortions are safe and that care for all women—regardless of where they live or their family income—meets recommended standards. Unsafe abortion is still widespread: As of 2010–2014, an estimated 45% of all women worldwide who terminated a pregnancy had an unsafe abortion. And because women who have an unsafe abortion often live in the poorest countries with the fewest resources, they may not receive the care they need if they experience complications.

## Changes in the incidence of abortion and unintended pregnancy vary greatly by geographic area

- Over the past 25 years, the worldwide abortion rate declined significantly but slightly, and the rate among developed regions dropped sharply. However, there was no notable change in developing regions.
- The drop in abortion in Eastern Europe, where the rate fell by nearly half over the period, was the largest of any subregion. The decline was also significant in the developing subregion of Central Asia. These declines were connected to the dramatic rise in modern contraceptive use in these two subregions, which are composed entirely of former Soviet Bloc or influenced states transitioning to market economies.

- Worldwide, as the rate of modern contraceptive use improved, the unintended pregnancy rate declined significantly, from 74 unintended pregnancies per 1,000 women in 1990–1994 to 62 per 1,000 in 2010–2014.

## Access to safe abortion continues to improve, as does contraceptive use

- Overall, an estimated 55% of the world's abortions each year are safe, 31% are less safe and 14% are least safe; safety is strongly related to both the legality of abortion and to national income.
- Since 2000, some 27 countries expanded the health and socioeconomic grounds under which abortion is permitted. In addition, 24 countries added one or more of the three additional grounds under which abortion is legal: rape, incest and fetal anomaly.
- Multidisciplinary strategies to widen legal grounds for safe abortion are being advanced by advocates from legal, medical and human rights backgrounds. These strategies often highlight the evidence that criminalizing abortion does not prevent it from happening, but instead forces women to seek clandestine procedures. Specific strategies that have been used include holding countries accountable to their legal commitments to protocols that protect women's rights and health, and highlighting the consequences of unsafe abortion for public health.
- The quality of abortion provision in countries that recently broadened legal grounds has steadily improved. The reach of safe services likely has also expanded worldwide with the broadening of the provider base to include more midlevel health professionals, the increased availability of medication abortion and the expanding adoption of clear guidelines for safe abortion provision.
- Clandestine abortion in legally restrictive settings is becoming safer as the use of misoprostol alone to induce abortion replaces more harmful

Clandestine abortion in legally restrictive settings is becoming safer as the use of misoprostol alone replaces more harmful methods

**The toll of unsafe abortion on women's health is greatest where abortion is highly legally restricted**

methods. Increased use of the safe and highly effective surgical technique of vacuum aspiration has also helped reduce the severity of complications in these settings.

- The estimated global case-fatality rate associated with abortion<sup>x</sup> fell by 42% between 1990–1994 and 2010–2014. Improvements in the safety of abortion procedures, and in the quality and coverage of postabortion care, contributed to the decreased likelihood of dying from unsafe abortion.

**But unsafe abortion continues to be prevalent in many countries, and restrictions on legal abortion are increasing**

Millions of women still undergo unsafe abortions each year—both in countries where abortion is highly restricted and where it is broadly legal but out of the reach of poor and marginalized women. For example, where abortion is highly legally restricted, well-connected women who know about and can afford safe services usually can obtain them; most other women still risk unsafe abortion because they can only afford to seek care from unskilled providers. Even where abortion is broadly legal, women may unnecessarily risk their health by seeking a clandestine abortion. This can happen if the availability of timely and safe services is limited by insufficient numbers of providers, burdensome bureaucratic requirements, or the refusal to provide abortion on the basis of conscientious objection, which can result in women being denied services that they legally qualify for.

- Despite the recent expansion of legal grounds in some countries, two-fifths of the world's women still live where induced abortion is highly legally restricted—that is, not permitted at all or only permitted in limited circumstances (i.e., to save a woman's life, or to protect her physical or mental health).
- Abortion remains strongly stigmatized in many parts of the world. Barriers rooted in stigma not only impede legal reform, but also slow implementation when legal criteria have been expanded. The persistence of stigma—even where abortion has been safe and legal for many years—means that many women remain reluctant to openly seek services and may instead decide on a clandestine abortion even when they have legal options.
- In legally restrictive settings, women often get inadequate information on the correct use of misoprostol, and the medication itself may be

counterfeit or of poor quality. Moreover, high levels of postabortion care-seeking may occur even with correct misoprostol use, because women are often unaware that heavy bleeding is part of the method's normal process.

- Delays in seeking treatment can have life-threatening consequences, given that the severity of complications and the related risk of death rise the longer a woman goes without care. And should a woman suffer discriminatory treatment, sometimes in the form of excessive wait times, her prognosis can worsen further.

**Recommendations to address existing challenges and achieve further progress**

Access to safe abortion is constrained by many factors: widespread stigma, lack of trained and willing providers, poor-quality and underfunded health services, inadequate supplies of surgical equipment and medication abortion drugs, and legal restrictions on abortion. Even as legality varies widely, so does the extent to which law and safety align. In a few countries with highly restrictive abortion laws, safe services are widely available, whereas in other countries that legally permit abortion without restriction, access to abortion is obstructed by onerous approval and counseling requirements. Complicating matters further is the fact that although the majority of highly restrictive countries allow abortion under at least one legal indication, very few have the regulatory systems in place to ensure that women who legally qualify have access to safe abortion under such indications.

Although difficult, it is possible to accelerate the rate of progress toward the goal of ensuring that all women have access to the reproductive health care they need, including abortion and postabortion services. Doing so will require sustained collaboration from all stakeholders to create or expand access to high-quality abortion care under all legally permitted indications and to postabortion care should complications occur. Equally essential to reducing unsafe abortion in restrictive settings is doing what is possible to reduce unintended pregnancies—by ensuring that women and couples have access to quality contraceptive services, while acknowledging that some unintended pregnancies stem from factors that are unrelated to contraceptive use, such as those resulting from rape or incest.

Below we present recommendations under three broad areas: access to safe abortion services, the

x) Includes deaths from induced and spontaneous abortions, and from ectopic pregnancies; deaths from unsafe induced abortions make up the vast proportion of these deaths.

## BOX Service and Policy Recommendations

### WHERE LEGAL UNDER BROAD GROUNDS

#### Provision of induced abortion

- Adopt, adapt and implement WHO guidelines for the provision of safe abortion services, including task-shifting and task-sharing.
- Update clinical guidelines as necessary to keep pace with technological advances.
- Counter medically unnecessary restrictions with accurate evidence on the threat they pose to women's health and rights.
- Inform women of the availability and location of safe and legal abortion services, and ensure that women who are poor or otherwise vulnerable have access.
- Manage conscientious objection so that it does not impede access to legal abortion care.
- Reduce stigma through public education and awareness campaigns.

### WHERE HIGHLY RESTRICTED BY LAW

#### Provision of induced abortion

- Ensure availability of abortions for all permitted indications by informing women of legal criteria and by establishing clear processes for timely access.
- Consider whether it is feasible to implement harm-reduction strategies that have worked, such as giving women correct information about misoprostol but not the drug itself.
- Train professionals in current safe abortion methods for allowed indications, and provide values clarification training to ensure nonjudgmental attitudes and improve quality of care.
- Widely disseminate evidence on the incidence and consequences of unsafe abortion; bring attention to human rights agreements and treaties in support of safe, legal abortion; and advocate for expansion of safe, legal abortion services.
- Reform restrictive laws to improve the safety of abortion by expanding legal grounds, implement reform once passed and scale-up provision of abortion services.

### WHERE HIGHLY RESTRICTED BY LAW

#### Provision of postabortion care

- Issue clinical guidelines for managing complications from unsafe abortions, effectively communicate the content of these guidelines and update when needed.
- Ensure that providers are trained and equipped to use the recommended methods of misoprostol and vacuum aspiration.
- Ensure professionals receive sensitivity training in nonjudgmental treatment and are informed of their legal, professional and ethical duty to provide abortion-related care.
- Implement recommendations on task-sharing and task-shifting to expand the availability of providers and thus women's access to high-quality postabortion care.
- Ensure treatment of complications is provided as promptly as possible to prevent avoidable health consequences caused by delays in care.
- Launch public education and awareness campaigns to reduce stigma that prevents women from seeking treatment for complications.

### ALL SETTINGS

#### Provision of contraceptive services

- Fully satisfy unmet need for contraceptive methods by improving availability and quality of services for all women who want to use them—whether in-union or not.
- Fully integrate contraceptive services into abortion care in legal settings and into postabortion care in restrictive settings.
- Expand access to emergency contraception, especially in rape protocols, and prioritize its provision, especially where abortion is highly restricted.
- Remove age-related barriers to contraceptive care, and expand the reach of comprehensive sexuality education, to help adolescents prevent unintended pregnancies and avoid the unsafe abortions that often follow.

quality and coverage of postabortion care, and access to high-quality contraceptive services. In addition, see boxes (above and page 45) for further service provision— and research-related recommendations.

#### ***Increase the grounds for legal abortion and access to safe services***

The toll of unsafe abortion on women's health is greatest where abortion is highly legally restricted. Decades of evidence reaffirms the benefit to the well-being of women and their families that comes with liberalizing abortion laws and broadening access to services. Law reform can be achieved in many ways, and usually a combination of strategies is used. For example, advocacy often integrates efforts from legal, medical, research and women's

associations and organizations to collectively present the benefits gained from reforming the law. In addition, global and regional treaties, agreements and conventions can provide the basis for urging signatory countries to change their abortion law to be in compliance with the provisions of such agreements.

But abortions do not automatically become safe with legalization. We now have a body of evidence on lessons learned once legal change has been accomplished. Nepal provides a good example of steps that contribute to efficient implementation: establish a simple process for certifying facilities, ensure that abortions are affordable, incorporate training into curricula of medical and nursing schools, permit trained midlevel staff to provide

Although difficult, stigma against abortion can and should be addressed

abortions, strengthen referrals between all reproductive health care services, and conduct information campaigns to educate the public about legal reform and to decrease stigma.<sup>232</sup>

Nepal's example demonstrates that high-quality, affordable abortion services can be provided in low-resource settings. The benefits of training an expanded range of workers tasked with abortion care include making optimal use of constrained health resources, addressing deficiencies in abortion training for a range of health professionals and enhancing women's comfort level by increasing the number of female providers. Such services should offer women the safest possible abortion methods, confidentiality and privacy, nonjudgmental and supportive medical care, short wait times, and contraceptive counseling and services so women can leave with an effective means of avoiding another unintended pregnancy. And although difficult, stigma against abortion can and should be addressed. Effective interventions to educate the public about stigma against abortion should be widely applied, and innovative approaches to address and reduce stigma should be developed and tested.

Absent comprehensive reform, governments are still legally bound to assure that women who meet the criteria have access to safe abortions to the fullest extent of the law. A good example of acting on this obligation is Colombia's well-coordinated response to the Zika epidemic, in which the Ministry of Health provided clear guidelines to fully apply existing health criteria under which abortion is permitted.<sup>98</sup> Uruguay provides an example of the benefits of reducing the harm caused by unsafe abortion by providing accurate information on misoprostol (but not the drug itself) to prevent its misuse.<sup>233</sup>

#### ***Improve the quality and coverage of care for complications from unsafe abortion***

Prompt treatment for abortion complications is cost-effective and prevents health problems from leading to long-term morbidity and even death. Every country has accepted the responsibility of offering quality postabortion care through its public health care system to save lives and protect health. The ethics code of medical personnel means that they have a moral and professional obligation to provide this care.

WHO's best practices guidelines for managing complications should be widely implemented in all countries—in particular, more widespread use of misoprostol to treat incomplete abortion should

improve access to this essential component of reproductive health care. Postabortion care must also include high-quality contraceptive counseling and services to help women prevent future unintended pregnancies.

#### ***Reduce the unintended pregnancies that lead to abortion***

As the preference for small families and the desire to control the timing of births continue to increase, so will the motivation to postpone motherhood, achieve healthy spacing between births and limit family size to the number of children desired. National governments and donors need to continue to invest in providing high-quality, comprehensive contraceptive services that women and couples need to achieve their desired family size and preferred timing of their births. Ensuring personal choice is essential to a woman's ability to use whichever method best suits her specific needs. Yet, because of human error or method failure, some pregnancies will be unintended despite contraceptive use.

In addition, all women need contraceptive care that is nonjudgmental, supportive and confidential; this is especially important for single sexually active women in settings where taboos against sex and childbearing outside of union remain strong. It is crucial to expand modern contraceptive services to all subgroups of women who want them. Doing so not only reduces unintended pregnancies, but also benefits societies overall by enhancing women's and infants' health through adequate birth intervals, by improving the status of women for whom postponing starting a family means more schooling and better job opportunities, and by improving the financial well-being of families.

#### ***Moving forward toward better reproductive health for all***

Policies and programs to protect women's health through reducing unsafe abortion have had some success, but they must be strengthened and sustained. The focus on preventable maternal mortality remains on the world stage with the global strategy of the Sustainable Development Goals. Target 3.1 is the reduction of maternal deaths (to fewer than 70 per 100,000 births),<sup>234</sup> to which deaths from abortions (and miscarriages and ectopic pregnancies) still contribute 8–11%.<sup>30,31</sup> Achieving Goal 5, gender equality, is just not possible unless women have the means to decide on the number and timing of births, which is itself achievable only through universal access to reproductive health care (Target

## BOX Research Recommendations

- Conduct rigorous, scientifically sound research on the practice of abortion, especially in restrictive settings, so local stakeholders understand what needs to be done to improve safety and women's health.
- Improve methodologies and study designs to measure abortion incidence and address underreporting of induced abortions.
- Explore the possibility of developing a measure of unmet need for induced abortion.
- Devise methodologies to better measure sexual activity and abortion among single women.
- Standardize measures of unsafe abortion and the severity of resulting complications.
- Conduct in-depth studies on the social, health and economic consequences of unsafe abortion.
- Innovate methodologies to quantify deaths specifically from unsafe induced abortions.
- Develop and use standardized approaches to measure abortion stigma and its consequences for women.
- Design, evaluate and implement interventions to reduce stigma.
- Study the factors that influence abortion decision making.

3.7). Even though this target does not identify specific services, it indirectly supports the inclusion of safe abortion services as part of the package of essential services to protect and enhance women's reproductive health. In addition, Target 5.6 provides broad support for universal access to reproductive health and rights, as defined in the Programme of Action of the ICPD<sup>4</sup> and the Beijing Declaration and Platform for Action.<sup>235</sup>

Progress toward safer abortion provision is evident in the broadened interpretation or expansion of grounds for legal abortion in several countries, including Ethiopia, Nepal and Uruguay. Before reform, unsafe abortion was the main option for women seeking to terminate a pregnancy in these countries. Ethiopia stands out as an example of how a high level of government commitment to implementation has expanded access rapidly over a relatively short period, even with a relatively narrow expansion of legal grounds for abortion. Broad application of WHO's health worker guidelines<sup>32</sup>—that recommend safe abortion technologies at specific gestational ages using the most accessible level of health facility and worker to provide abortion services—is also effective in increasing access to safe

services. In addition, should complications occur, the increase in training and equipping of a broad range of health personnel with manual vacuum aspiration and misoprostol for prompt postabortion care can prevent incomplete abortions from developing into more serious health problems.

Nevertheless, much about abortion either has not changed or has done so only recently. The challenge ahead is to protect and maintain the gains achieved, as well as work toward further improvements in access to high-quality, safe abortion care. Countries have typically taken a long time to implement expanded legal criteria and achieve widespread access to safe abortion services. And far from all change is positive: Although actual reversals of legality are rare, legislation that chips away at access to legal abortion is increasingly common, having occurred in several countries since 2000—most notably in the United States<sup>73</sup> and in some former Soviet Bloc or satellite countries, such as Belarus, Hungary, Latvia, Macedonia, Russia and the Slovak Republic.<sup>54</sup> In addition, stigma remains a formidable barrier throughout the world and an unnecessary impediment to abortion care, even under legal grounds. Its persistence contributes to keeping abortion clandestine and unsafe across the full range of legal settings.

Women's legal right to abortion is subject to changing political and ideological agendas, and the political realities that determine abortion law will continue to fluctuate. However, unwanted pregnancy will most likely persist at some level, despite gains in contraceptive use. Given this, induced abortion will remain a necessary response to a common problem. While the need for abortion will continue going forward, the implications for policies and programs will vary significantly among and within countries depending on the context.

As a result, multiple strategies are needed to improve safety and legality, including robust evidence, strong support from professional bodies, solid government backing and broad-based advocacy. It is imperative to build on recent progress while being vigilant to threats to undermine abortion's essential place within the full range of needed reproductive health services. To fulfill the human right of all individuals and couples to decide freely and responsibly on the number, spacing and timing of their children, it is essential that governments guarantee access to quality reproductive health information and services, including safe abortion care.

# Data and Methods Appendix

## Abortion Laws

Information on the legal status of abortion in all UN member states (and some territories) draws heavily on data gathered by the Center for Reproductive Rights.<sup>1</sup> To estimate the number and proportion of women of reproductive age living under the categories of abortion legality, we used country-specific population estimates from the UN Population Division (UNPD).<sup>2</sup> We also used each country's classification within the World Bank's four gross national income groupings.<sup>3</sup>

## Abortion Incidence

**Global and regional estimates.** This report draws from published estimates of levels of and trends in abortion worldwide, and across world regions and subregions, for each five-year period between 1990 and 2014.<sup>y</sup> The methods used to make these estimates are explained in detail in the main analysis<sup>4</sup> and are summarized briefly here.

Abortion incidence was modeled as the sum of abortions in four subgroups of women of reproductive age defined by their union status, and by their contraceptive need and use: in-union women with unmet need; in-union women with met need (i.e., those using a contraceptive method, which includes women who will experience method or user failure); in-union women with no need for contraception (mostly those who want a child within two years or are unable to get pregnant); and all women not in union. Data were not available to further classify these women not in union with respect to fertility preferences and contraceptive use. Thus, overall abortion rates are functions of the four modeled subgroup rates and the sizes of each subgroup. Abortion rates in each subgroup can be further influenced by unobserved factors, including behaviors, attitudes and societal factors (such as frequency of sexual intercourse, strength of motivation to avoid having

a child and women's ability to act on their fertility preferences).

Investigators developed a Bayesian hierarchical time-series model to represent the framework above and to account for the influence of the unobserved factors across countries and time periods. Data inputs for these estimates include country-specific data on abortion incidence and UNPD estimates of the number of women in each of the subgroups, by country and year. The country-specific data inputs on abortion are briefly described below. The estimates are for the five-year periods of 1990–1994, 1995–1999, 2000–2004, 2005–2009 and 2010–2014.

The modeling approach allowed the investigators to make statistical inference and to present 90% uncertainty intervals around the estimated abortion rates. These uncertainty intervals account for the variability in the quality and quantity of the available data across countries and time periods. The model also enabled the estimation of trends in incidence over time (from 1990–1994 to 2010–2014) and their statistical significance (i.e., the probability that a change in incidence would be greater than 95%).

### **Country-specific data on abortion incidence.**

For countries in which abortion is legal on most grounds and providers are required to report all abortions performed, the investigators used official statistics. These should closely reflect true incidence, but reporting might be incomplete if disincentives (political, financial or otherwise) to official reporting exist, if some providers (such as private-sector health professionals) are not held to reporting requirements or if medication abortion is available from sources that are not included in the reporting systems. To assess whether reports were complete, the investigators sought input from multiple sources, including contact persons from

y) Earlier published estimates for 1995, 2003 and 2008 were based on different sources: country-specific data followed by qualitative assessments of the generalizability of these data to infer values for countries lacking data. Source: Sedgh G et al., Induced abortion: incidence and trends worldwide from 1995 to 2008, *Lancet*, 2012, 379(9816):625–632. The model-based estimates for 1990–1994 through 2010–2014 are self-contained and specific to a single run of the model and thus should not be compared with other estimates.



national reporting agencies, and social scientists and service providers known to have expertise in abortion reporting. If the data were deemed incomplete, they were taken to represent the minimum number of abortions performed. For a few countries with an empirical basis on which to adjust for underreporting, adjustment factors were quantified and applied to account for a more realistic level of abortion.

Abortion incidence data were also obtained from nationally representative surveys of women, which are known to yield incomplete estimates of abortion incidence. The investigators used the mean level of reporting observed in a review of validation studies in broadly legal countries (55%) to adjust these survey-based estimates. National abortion studies using an indirect estimation approach—primarily conducted in countries with highly restrictive abortion laws—were used as well.

### **Characteristics of Women Who Have Abortions**

We present country-specific data on the characteristics of women who have had abortions. For countries in which abortion is broadly legal and that have complete abortion statistics, we present age-specific abortion rates. For countries where abortion incidence is underreported (i.e., those where abortion is broadly legal but abortion statistics are incomplete, and countries with community-based surveys, which suffer from underreporting), we discuss results on the percentage distribution of women having abortions according to age. In addition, we discuss differences according to household wealth based on published data for 19 countries with nationally representative surveys.

### **Unintended Pregnancy Incidence**

**Global and regional estimates.** We present new estimates of unintended pregnancy that build on the methodology to estimate global trends in abortion incidence. The unintended pregnancy estimates were developed using a Bayesian hierarchical time-series model to estimate the annual incidence of unintended pregnancy at the global, regional and subregional levels for the same five-year periods as the abortion incidence estimates discussed above, between 1990 and 2014.<sup>5</sup>

Pregnancies result in births, abortions and miscarriages. Key data sources needed to estimate pregnancy incidence include the numbers of births (estimated by the UNPD), the numbers of abortions (estimated as described above) and estimates of

the incidence of miscarriage (on the basis of the assumption—derived from life-table analyses—that the number of miscarriages equals approximately 20% of births plus 10% of abortions<sup>6,7</sup>). Estimates of the proportions of births that were reported as unplanned (described below) are also needed to estimate the proportions of pregnancies that end in an unplanned birth and in a planned birth.

**Country-specific data on the planning status of births.** Key data sources for estimates of the proportions of births that are unplanned include international survey programs such as Demographic and Health Surveys (DHS) and Reproductive Health Surveys (RHS). National-level surveys and other published surveys also contain these data. In most surveys, a birth is considered unplanned if it was mistimed (i.e., wanted later) or unwanted (i.e., not wanted at all). Estimates of the planning status of births from the above sources were available for more than 100 countries. For a few countries, estimates were based on the London Measure of Unintended Pregnancy. Data from these sources provide a range of estimates of the proportion of births or pregnancies that are unplanned, and these were used to represent maximum and minimum estimates. Surveys were considered nonrepresentative if the interview sample was subnational or a subpopulation of women (e.g., in-union women only or women presenting at prenatal clinics).

**Estimates of the intention status of pregnancies that end in abortion.** Unlike previous estimates of the incidence of unintended pregnancy, the current estimates classify a small number of abortions as terminations of intended pregnancies. The abortions of women not in need of contraception (primarily those who want a child within two years or who say that they are infecund)<sup>8</sup> are classified as terminations of intended pregnancies.

### **Safety of Abortions**

We present new estimates of the safety of abortion that classify abortions into three safety categories—safe, less safe and least safe.<sup>9</sup> This distribution was applied to abortions that took place in 2010–2014. The less-safe and least-safe abortions together comprise all unsafe abortions. Broadly speaking, an abortion is classified as safe if it was performed by a WHO-recommended method appropriate for the pregnancy duration and by someone who was appropriately trained; less-safe abortions are those that meet only one of these

criteria; and least-safe abortions are those that meet neither.

A model to estimate the proportion of abortions that were unsafe was informed by a theoretical framework in which safety is predicted by the service-delivery environment (i.e., the availability of safe methods, trained providers and facilities equipped to provide safe abortion); abortion stigma (which can influence women's empowerment, autonomy and agency, as well as providers' willingness to perform abortions); the overall quality and level of health infrastructure; the legal status of abortion; and women's ability to afford safe services. These last two predictors were not in the final model because they did not improve the model fit after the first three were included.

**Safety model covariates.** The indicators of the three theoretical predictors above were the number of years that mifepristone has been registered in the country, the proportion of the population that lives in an urban area, and the country's score on the gender inequality index—a composite measure of indicators of reproductive health, women's empowerment and economic status.<sup>10</sup> To further divide unsafe abortions into those that were less safe and least safe, a second model was used and the country-specific registration status of misoprostol for any indication was added as a service-delivery environment indicator.

**Data input on safety of abortions.** The investigators conducted a systematic literature search to collect data on the distribution of abortions by the abortion method used, the type of provider and the setting in which the abortion occurred. Data came from national statistics, DHS and RHS country reports, and national and subnational studies. In all, 150 data points on the distribution of abortions by safety were obtained for 61 countries, of which 87% were nationally representative.

### **Morbidity and Mortality from Unsafe Abortion**

We present estimates of the level of abortion-related deaths from two international health agencies: WHO and the Institute for Health Metrics and Evaluation (IHME).<sup>11,12</sup> These agencies' estimates differ with respect to the data sources used, how deaths are classified, the analytic methods employed and the reference periods to which the estimates refer. We present the range (based on values from the two agencies) of estimated annual numbers of abortion-related deaths and the proportions of all maternal deaths that these

represent. In these values, both agencies include deaths from ectopic pregnancy and miscarriage, which together represent a small proportion of all abortion-related deaths.<sup>13</sup>

One set of WHO estimates corresponds to 1998–2002, and a different set to 2003–2009. But because of differences in the evidence base and estimation approaches, WHO warns against using them to examine trends in abortion mortality over time. By comparison, IHME's estimates are derived from a single evidence base that yields yearly estimates from 1990 to 2015. As a result, we used the latter source to calculate trends in maternal mortality from abortion over time.

Common measures of abortion-related mortality include the percentage of all maternal deaths resulting from abortion, and the number of deaths for every 100,000 abortions (the case-fatality rate). The percentage of all maternal deaths that are abortion-related can change as the safety of induced abortion changes or as the incidence of other causes of maternal death changes; this measure is also sensitive to changes in the overall incidence of induced abortion. The case-fatality rate, however, is not sensitive to changes in the latter two factors. Our computed abortion-related case-fatality rates are calculated on the basis of IHME's data on the numbers of abortion-related deaths (numerator)<sup>12</sup> and recently published estimates of the numbers of induced abortions (denominator), described above.<sup>14</sup> The availability of comparable IHME data for multiple years enabled the calculation of trends over time in case-fatality rates. Because the numerator includes deaths from ectopic pregnancies and miscarriages, but the denominator includes induced abortions only, the resulting rates slightly overestimate case-fatality rates for induced abortions.

### **Rates of treatment for abortion complications.**

We took information from a study published in 2015 that used nationally representative data from 26 developing countries to estimate regional treatment rates of unsafe abortion complications for 2012.<sup>15</sup> These estimates used data from two main sources: representative country-specific surveys of health facilities and records from national health systems. The study provides estimates of the number and rate of women treated in health facilities for complications from unsafe abortion for three major regions and for the developing world (excluding Eastern Asia, where unsafe abortions are less prevalent).

### Information on Abortion Provision

Surveys of health professionals, also known as key informants, in developing countries are a major data source for this report. The surveys were carried out between 2007 and 2015 in 14 countries: Bangladesh, Burkina Faso, Colombia, Ethiopia, Kenya, Malawi, Mexico, Nepal, Nigeria, Pakistan, Rwanda, Senegal, Tanzania and Uganda.<sup>16</sup> Respondents were selected because of their expertise in and experience with abortion issues in their country; they included both those with medical backgrounds (e.g., nurses, midwives and physicians), as well as other experts with informed perspectives (e.g., policy advisers, researchers, advocates and public health specialists).

Respondents were interviewed in person about their perceptions concerning abortion provision: the types of providers and methods women use, women's risk of experiencing health complications with each type of provider, the likelihood that women will obtain treatment in a facility if complications occur, the costs of obtaining an abortion and sources of postabortion care. Because the use of misoprostol to self-induce is known to be prevalent in several of the study countries, respondents in those countries were also asked specifically about misoprostol use.

Because practices and outcomes vary across socioeconomic groups, respondents were asked about these issues separately for four key population subgroups of women: urban poor, urban nonpoor, rural poor and rural nonpoor. Being poor was variably defined as having a household income below the national average (or as earning less than the minimum salary, in countries where this concept is commonly used), having difficulties paying for basic necessities or having low educational attainment. Subgroup-specific responses were averaged across respondents to provide an approximate profile of abortion conditions for each of the four subgroups, and averages were weighted by the population size of the subgroups to provide averages for the country as a whole.

### Sexual and Reproductive Health Indicators

We also used nationally representative surveys of women of reproductive age that focus on sexual and reproductive health as data sources for this report. Wherever possible, we obtained actual and wanted total fertility rates, planning status of recent births, levels of contraceptive use and unmet need for contraception, and sexual activity among single young women from the most

recent survey with relevant data from seven survey programs. Four of these are international—DHS, RHS, Multiple Indicator Cluster Surveys (MICS) conducted by UNICEF, and Performance Monitoring and Accountability Surveys, carried out by FP2020. In addition, we used data from three single-country independent surveys—the U.S. National Survey of Family Growth, Mexico's Encuesta Nacional de la Dinámica Demográfica and Brazil's Pesquisa Nacional de Demografia e Saúde. Most surveys included are from 2008 onward; however, for a few countries, earlier surveys were used when data on specific indicators were unavailable from the most recent one. (See Appendix Table 4, page 53, for the year of the data and the type of survey program for each of 79 countries with data.)

To examine trends in levels of unmet need for modern contraception among in-union women by major regions and subregions, UNPD model-based estimates were used. These drew on survey data from DHS, RHS and other independent surveys and sources.<sup>17</sup> Lastly, the proportions of adolescent and young women who had ever entered into a union were obtained from the UNPD.<sup>18</sup>

Legality category	DEVELOPED REGIONS		DEVELOPING REGIONS				
			Africa	Asia & Oceania	Latin America & Caribbean		
<b>1 Prohibited altogether (no explicit legal exception)</b>	Andorra Malta San Marino		Angola Congo-Brazzaville Congo-Kinshasa Egypt Gabon	Guinea-Bissau Madagascar Mauritania Sao Tome & Principe Senegal	Iraq Laos Marshall Islands Micronesia	Palau Philippines Tonga	Dominican Republic El Salvador Haiti Honduras Nicaragua Suriname
<b>2 To save life of woman</b>	Ireland		Côte d'Ivoire Libya Malawi Mali (r,i) Nigeria Somalia South Sudan Sudan (r) Tanzania Uganda		Afghanistan Bangladesh Bhutan (r,i) Brunei Darussalam Indonesia* (r,f) Iran (f) Kiribati Lebanon Myanmar Oman	Papua New Guinea Solomon Islands Sri Lanka Syria*,† Timor-Leste† Tuvalu United Arab Emirates*,† West Bank & Gaza Yemen	Antigua & Barbuda Brazil (r) Chile (r,f) Dominica Guatemala Mexico (r,f) Panama† (r,f) Paraguay Venezuela
<b>3 To save life of woman/preserve physical health</b>	Liechtenstein Monaco (r,i,f) Poland† (r,i,f)		Benin (r,i,f) Burkina Faso (r,i,f) Burundi Cameroon (r) Cen. African Rep. (r,i,f) Chad (f) Comoros Djibouti Equatorial Guinea*,†	Ethiopia (r,i,f) Guinea (r,i,f) Kenya Lesotho (r,i,f) Morocco* Niger (f) Rwanda (r,i,f) Togo (r,i,f) Zimbabwe (r,i,f)	Jordan Kuwait*,† (f) Maldives* Pakistan Qatar (f) Saudi Arabia*,† South Korea* (r,i,f) Vanuatu		Argentina (r) Bahamas Bolivia (r,i) Costa Rica Ecuador Grenada Peru
<b>4 To save life of woman/preserve physical/mental health</b>	New Zealand (i,f) Northern Ireland		Algeria Botswana (r,i,f) Eritrea (r,i) Gambia Ghana (r,i,f) Liberia (r,i,f)	Mauritius† (r,i,f) Mozambique (r,i,f) Namibia (r,i,f) Seychelles (r,i,f) Sierra Leone Swaziland (r,i,f)	Israel (r,i,f) Malaysia Nauru Samoa Thailand (r,f)		Colombia (r,i,f) Jamaica St. Kitts & Nevis St. Lucia (r,i) Trinidad & Tobago
<b>5 To save life of woman/preserve physical/mental health/ on socioeconomic grounds</b>	Finland (r,f) Great Britain (f) Iceland (r,i,f) Japan* (r)		Zambia (f)		Cyprus (r,f) Fiji† (r,i,f) Hong Kong (r,i,f) India† (r,f) Taiwan*,† (r,i,f)		Barbados† (r,i,f) Belize (f) St. Vincent & Grenadines (r,i,f)
<b>6 No restriction as to reason (with gestational and other requirements)</b>	Albania† Australia Austria‡ Belarus Belgium‡ Bosnia-Herzegovina† Bulgaria Canada‡‡ Croatia† Czech Republic† Denmark† Estonia France‡ Germany‡ Greece† Hungary Italy** Kosovo†,*†	Latvia† Lithuania† Luxembourg‡ Macedonia† Moldova† Montenegro† Netherlands†† Norway† Portugal†,*† Romania‡ Russian Fed. Serbia† Slovakia† Slovenia† Spain†,‡ Sweden*‡ Switzerland Ukraine United States†,††	Cabo Verde South Africa Tunisia**		Armenia† Azerbaijan Bahrain Cambodia†,‡ China‡‡ Georgia† Kazakhstan Kyrgyzstan Mongolia** Nepal North Korea‡‡ Singapore§§ Tajikistan Turkey*,†,*† Turkmenistan Uzbekistan Vietnam‡‡		Cuba† Guyana§ Puerto Rico†† Uruguay†

Notes: Three additional legal grounds denoted by: r=rape, i=incest and f=fetal anomaly. Gestational-limit data are available only for countries in legality category 6. For these countries, unless indicated otherwise (i.e., by symbols † through \*† designated below), abortion is legally allowed through the 12th week of gestation; the 12-week limit applies to 37 countries. \*Spousal authorization required. †Parental authorization/notification required. ‡Gestational age limit through 14th week. §Gestational-age limit through 8th week. \*\*Gestational-age limit through 90 days/three months. ††No gestational-age limit for previability abortion. ‡‡Law does not indicate gestational-age limit. §§Gestational-age limit through 24th week. \*†Gestational-age limit through 10th week. \*‡Gestational-age limit through 18th week. Sources: references 56, 57 and 89; and Ministry of Health and Welfare, Republic of China, Genetic Health Act of 1985, amended as of 2009, Taipei, Taiwan; and Republic of Mozambique, Lei n° 35/2014, Lei da revisão do Código Penal, Artigo 168, Aborto não punível, Maputo, Mozambique, 2014.

Legality categories 1–4: Highly legally restricted

Legality categories 5 and 6: Broadly legal

APPENDIX TABLE 2

**Estimates of the number of abortions and abortion rates for 1990–1994 and 2010–2014; and percentage distribution of abortions by safety for 2010–2014 only—all according to geographic area, income group and legal status of abortion**

Geographic area/ income group/legality	Annual no. of abortions (in millions)		Abortion rate*		Percentage distribution of abortions (2010–2014)			
	1990–1994	2010–2014	1990–1994	2010–2014	Safe	Less safe	Least safe	Total
<b>WORLD</b>	<b>50.2 (48.2–59.3)</b>	<b>55.9 (51.8–68.6)</b>	<b>40 (39–48)</b>	<b>35 (32–43)†</b>	<b>54.9 (49.9–59.4)</b>	<b>30.7 (25.5–35.6)</b>	<b>14.4 (11.5–18.1)</b>	<b>100</b>
Developed regions	11.8 (10.6–15.1)	6.6 (6.0–8.8)	46 (41–59)	27 (24–36)†	87.5 (81.9–89.6)	12.4 (10.2–17.9)	0.08 (0.0–1.36)	100
Developing regions	38.4 (36.4–46.1)	49.3 (45.0–61.4)	39 (37–47)	36 (33–45)	50.5 (45.2–55.9)	33.2 (27.0–38.3)	16.3 (13.1–20.7)	100
<b>AFRICA</b>	<b>4.6 (4.0–7.1)</b>	<b>8.2 (7.4–11.3)</b>	<b>33 (28–50)</b>	<b>34 (31–46)</b>	<b>24.4 (18.6–33.6)</b>	<b>27.6 (21.2–37.0)</b>	<b>48.0 (36.5–52.9)</b>	<b>100</b>
Eastern	1.4 (1.1–2.0)	2.7 (2.4–3.2)	32 (26–46)	34 (31–41)	23.9 (17.0–33.0)	29.2 (19.9–37.6)	46.9 (36.5–54.9)	100
Middle	0.5 (0.3–1.0)	1.0 (0.7–1.8)	32 (21–62)	35 (24–62)	11.8 (5.5–30.4)	19.2 (6.7–40.7)	69.0 (38.0–81.2)	100
Northern	1.3 (0.8–2.9)	1.9 (1.1–4.1)	41 (25–92)	38 (23–82)	29.0 (11.0–49.9)	26.6 (10.0–46.3)	44.4 (19.5–58.9)	100
Southern	0.3 (0.2–0.7)	0.5 (0.3–1.0)	32 (17–68)	34 (19–69)	73.5 (27.7–93.2)	19.4 (1.5–62.1)	7.1 (2.6–11.1)	100
Western	1.1 (0.9–1.6)	2.1 (1.9–2.7)	28 (23–41)	31 (28–39)	15.3 (10.4–24.1)	32.6 (24.1–42.8)	52.1 (40.0–59.8)	100
<b>ASIA</b>	<b>31.2 (28.4–38.5)</b>	<b>35.5 (30.5–45.9)</b>	<b>41 (37–50)</b>	<b>36 (31–46)</b>	<b>62.1 (54.8–67.2)</b>	<b>29.7 (23.5–36.6)</b>	<b>8.3 (4.9–13.3)</b>	<b>100</b>
Central‡	0.6 (0.6–0.7)	0.7 (0.5–0.9)	54 (49–63)	42 (33–56)†	u	u	u	na
Eastern	14.8 (13.0–19.0)	12.8 (9.2–19.2)	43 (38–56)	36 (26–53)	88.9 (78.3–95.7)	11.1 (4.1–21.3)	0.04 (0.0–0.6)	100
Southeastern	5.1 (3.8–8.1)	5.1 (3.7–9.1)	46 (35–74)	35 (25–62)	59.6 (38.4–77.7)	26.9 (10.8–45.9)	13.5 (2.3–30.0)	100
Southern‡	9.3 (7.3–12.6)	15.0 (11.9–20.6)	35 (27–47)	37 (29–50)	42.2 (34.1–49.6)	44.9 (35.1–53.3)	12.9 (7.0–19.2)	100
Western	1.4 (1.1–2.2)	1.9 (1.4–3.3)	42 (33–65)	34 (25–59)	51.5 (40.9–66.4)	36.3 (19.2–48.5)	12.3 (1.2–23.4)	100
<b>LATIN AMERICA &amp; CARIBBEAN</b>	<b>4.4 (4.0–5.2)</b>	<b>6.5 (5.3–8.9)</b>	<b>40 (37–47)</b>	<b>44 (36–61)</b>	<b>23.6 (8.8–47.0)</b>	<b>59.7 (32.7–72.2)</b>	<b>16.7 (8.8–33.4)</b>	<b>100</b>
Caribbean	0.5 (0.4–0.8)	0.6 (0.4–0.9)	60 (48–94)	59 (44–95)	25.4 (6.7–47.6)	49.6 (23.8–64.9)	24.9 (15.1–40.8)	100
Central America	0.8 (0.7–0.9)	1.3 (1.0–1.8)	27 (23–34)	33 (25–45)	18.4 (10.6–28.9)	52.1 (37.7–63.5)	29.6 (16.9–40.3)	100
South America	3.1 (2.8–3.8)	4.6 (3.4–6.9)	43 (38–52)	48 (35–71)	24.9 (4.7–53.7)	63.0 (28.9–79.3)	12.1 (3.0–31.9)	100
<b>NORTHERN AMERICA</b>	<b>1.6 (1.6–1.7)</b>	<b>1.2 (1.1–1.3)</b>	<b>25 (24–25)</b>	<b>17 (16–18)†</b>	<b>99.0 (97.7–99.8)</b>	<b>0.9 (0.2–2.3)</b>	<b>0.0 (0.0–0.03)</b>	<b>100</b>
<b>EUROPE</b>	<b>8.2 (7.6–10.1)</b>	<b>4.3 (4.0–5.5)</b>	<b>52 (48–64)</b>	<b>29 (27–37)†</b>	<b>88.8 (80.3–91.7)</b>	<b>11.2 (7.8–19.3)</b>	<b>0.0 (0.0–0.02)</b>	<b>100</b>
Eastern	6.0 (5.5–7.3)	2.6 (2.3–3.2)	88 (80–107)	42 (37–51)†	85.8 (73.3–91.1)	14.1 (8.4–26.5)	0.11 (0.0–2.4)	100
Northern	0.4 (0.4–0.5)	0.3 (0.3–0.4)	22 (20–25)	18 (17–20)†	97.9 (92.8–99.6)	2.1 (0.4–6.8)	0.03 (0.0–0.9)	100
Southern	1.2 (0.8–2.4)	0.8 (0.5–1.6)	37 (26–76)	26 (18–55)†	91.2 (85.6–92.9)	8.7 (6.0–13.9)	0.11 (0.0–2.9)	100
Western	0.6 (0.4–1.0)	0.6 (0.4–1.0)	14 (11–26)	16 (12–28)	93.5 (90.6–96.1)	6.5 (3.9–9.4)	0.0 (0.0–0.03)	100
<b>OCEANIA</b>	<b>0.1 (0.1–0.2)</b>	<b>0.1 (0.1–0.2)</b>	<b>20 (18–27)</b>	<b>19 (15–28)</b>	<b>66.3 (61.4–77.7)</b>	<b>7.8 (3.5–17.9)</b>	<b>25.9 (11.5–31.1)</b>	<b>100</b>
<b>WORLD BANK INCOME GROUP</b>								
Low (ref)	u	4.2 (3.8–5.5)	u	33 (30–43)	21.8 (17.4–30.7)	24.4 (18.6–34.6)	53.8 (40.4–58.3)	100
Lower-middle	u	23.0 (20.1–30.1)	u	35 (31–47)	42.3 (35.1–47.9)§	37.9 (31.1–45.9)	19.7 (13.9–25.7)§	100
Upper-middle	u	20.9 (17.3–27.9)	u	38 (31–50)	67.1 (58.7–75.7)§	27.8 (18.0–34.7)	5.1 (3.0–10.4)§	100
High	u	7.8 (7.1–10.3)	u	29 (26–38)	82.2 (75.8–85.7)§	16.9 (12.5–22.2)	0.9 (0.3–3.7)§	100
<b>LEGAL STATUS OF ABORTION</b>								
Prohibited altogether/ save life only	u	16.0 (14.4–21.4)	u	37 (34–50) (ref)	25.2 (14.5–41.0) (ref)	43.6 (27.6–54.2) (ref)	31.3 (21.0–41.9) (ref)	100
Save life/physical health	u	6.3 (5.9–7.9)	u	43 (40–53)				
Save life/physical health/ mental health	u	2.5 (2.1–3.7)	u	32 (27–48)				
Any health/socioeconomic	u	10.3 (7.5–15.6)	u	31 (22–47)	41.2 (35.9–46.7)	40.8 (34.6–47.1)	17.1 (13.3–22.0)§	100
Without restriction as to reason	u	20.7 (17.3–27.3)	u	34 (28–45)	87.4 (79.2–92.0)§	11.9 (7.3–19.8)§	0.7 (0.5–1.8)§	100

\*Number of annual abortions per 1,000 women aged 15–44. †Statistically significant when probability of change from 1990–1994 to 2010–2014 is >95%. ‡For the percentage distribution by safety only, the model used a single category of the five Central Asian countries plus the nine Southern Asian countries. §For income group in both the incidence and safety models, statistically significant when probability of differing from reference category (low-income countries) is >95%. For legal status, statistically significant when probability of differing from reference category—which varied between incidence and safety—is >95%. For example, for incidence, the reference category of “most restrictive” combines categories 1 (prohibited) and 2 (allowed to save life only). For safety, however, not only did the specific countries in each category differ, but these categories were collapsed differently: The reference category of “most restrictive” combines categories 1 (prohibited), 2 (save life only) and 3 (save life plus protect physical health); moreover, “moderately restrictive” combines categories 4 (all health through mental health) and 5 (all health plus socioeconomic grounds). Notes: u=unavailable. ref=reference category for significance testing. na=not applicable. Figures in parentheses are 90% uncertainty intervals, computed using the highest posterior density; they are the narrowest intervals containing 90% of the posterior distribution. Sources: special tabulations of data from references 7, 15 and 16.

APPENDIX TABLE 3

Estimates of overall and unintended pregnancy rates, and of the proportion of unintended pregnancies ending in abortion for 1990–1994 and 2010–2014; and numbers of overall and unintended pregnancies for 2010–2014—all by geographic area, income group and legal status of abortion

Geographic area/ income group/legality	Pregnancy rate*		Unintended pregnancy rate*		% of unintended pregnancies ending in abortion		Annual no. of pregnancies (in millions)	Annual no. of unintended pregnancies (in millions)
	1990–1994	2010–2014	1990–1994	2010–2014	1990–1994	2010–2014	2010–2014	2010–2014
<b>WORLD</b>	<b>175 (173–183)</b>	<b>142 (139–151)†</b>	<b>74 (72–84)</b>	<b>62 (59–72)†</b>	<b>54 (51–58)</b>	<b>56 (53–60)</b>	<b>227.3</b>	<b>99.1</b>
Developed regions	119 (114–133)	99 (96–109)†	64 (59–81)	45 (42–56)†	71 (65–76)	59 (54–65)†	24.1	11.0
Developing regions	189 (187–198)	150 (146–160)†	77 (74–88)	65 (62–76)†	50 (47–55)	55 (52–60)†	203.2	88.0
<b>AFRICA</b>	<b>268 (262–287)</b>	<b>228 (225–242)†</b>	<b>107 (101–127)</b>	<b>89 (85–103)†</b>	<b>31 (27–40)</b>	<b>38 (35–45)†</b>	<b>55.4</b>	<b>21.6</b>
Eastern	294 (287–309)	243 (240–251)†	127 (117–145)	112 (107–122)†	25 (21–32)	30 (28–34)	19.2	8.8
Middle	313 (301–347)	269 (256–299)	118 (101–156)	103 (89–134)	27 (19–41)	34 (25–47)	7.8	3.0
Northern	213 (196–269)	164 (147–213)†	98 (80–156)	68 (50–118)†	41 (30–59)	56 (41–71)†	8.3	3.4
Southern	183 (167–223)	143 (126–181)	106 (87–147)	94 (74–133)	30 (19–47)	36 (23–53)	2.1	1.4
Western	287 (281–301)	259 (256–268)†	87 (79–102)	72 (67–82)†	32 (27–41)	43 (39–48)†	18.0	5.0
<b>ASIA</b>	<b>175 (171–185)</b>	<b>131 (126–143)†</b>	<b>68 (64–82)</b>	<b>54 (49–68)†</b>	<b>59 (53–65)</b>	<b>65 (59–70)</b>	<b>129.5</b>	<b>53.8</b>
Central	213 (208–224)	157 (148–173)†	73 (66–91)	53 (43–70)†	73 (62–80)	78 (71–84)	2.5	0.8
Eastern	140 (134–154)	107 (96–126)	54 (47–71)	45 (34–67)	79 (67–86)	77 (64–85)	38.6	16.4
Southeastern	181 (168–212)	131 (120–160)†	84 (71–118)	58 (47–90)†	54 (45–65)	59 (50–70)	19.3	8.6
Southern	211 (203–224)	149 (141–164)†	76 (64–95)	59 (50–76)	45 (37–54)	61 (53–69)†	60.8	24.3
Western	213 (204–239)	151 (142–179)†	97 (85–127)	70 (58–100)†	42 (36–54)	48 (39–61)	8.4	3.9
<b>LATIN AMERICA &amp; CARIBBEAN</b>	<b>174 (171–182)</b>	<b>139 (130–157)†</b>	<b>103 (96–114)</b>	<b>96 (86–116)</b>	<b>39 (36–43)</b>	<b>46 (40–54)†</b>	<b>20.3</b>	<b>14.0</b>
Caribbean	189 (176–226)	159 (142–198)	119 (105–157)	116 (98–156)	50 (44–60)	51 (44–61)	1.5	1.1
Central America	181 (178–189)	136 (128–150)†	90 (77–111)	82 (67–107)	30 (24–37)	39 (30–50)†	5.5	3.3
South America	170 (165–180)	138 (125–164)	105 (97–118)	99 (85–126)	40 (37–45)	47 (40–57)	13.3	9.6
<b>NORTHERN AMERICA</b>	<b>107 (106–108)</b>	<b>99 (98–100)</b>	<b>50 (37–67)</b>	<b>47 (40–53)</b>	<b>49 (36–65)</b>	<b>36 (31–42)</b>	<b>6.9</b>	<b>3.2</b>
<b>EUROPE</b>	<b>122 (118–135)</b>	<b>98 (95–107)†</b>	<b>66 (62–81)</b>	<b>41 (38–50)†</b>	<b>78 (74–81)</b>	<b>70 (65–75)†</b>	<b>14.3</b>	<b>6.1</b>
Eastern	163 (154–183)	109 (104–120)†	104 (95–125)	54 (48–64)†	85 (80–87)	77 (71–82)†	6.9	3.4
Northern	98 (97–102)	93 (92–96)†	32 (28–43)	27 (24–32)†	66 (52–76)	64 (53–70)	1.8	0.5
Southern	99 (88–132)	90 (82–123)	53 (41–95)	40 (29–66)	70 (61–79)	64 (51–77)	2.7	1.2
Western	80 (76–93)	85 (81–98)†	28 (23–42)	28 (22–38)	50 (40–65)	56 (47–67)	3.0	1.0
<b>OCEANIA</b>	<b>122 (119–130)</b>	<b>118 (114–128)†</b>	<b>49 (41–65)</b>	<b>48 (40–63)</b>	<b>40 (32–50)</b>	<b>38 (31–50)</b>	<b>0.9</b>	<b>0.4</b>
<b>WORLD BANK INCOME GROUP</b>								
Low (ref)	u	237 (234–249)	u	95 (91–108)	u	35 (33–40)	30.3	12.1
Lower-middle	u	158 (153–170)‡	u	63 (57–76)‡	u	56 (52–62)‡	102.3	40.6
Upper-middle	u	120 (113–134)‡	u	58 (51–74)‡	u	64 (57–70)‡	66.4	32.3
High	u	104 (101–114)‡	u	52 (49–63)‡	u	54 (51–61)‡	28.1	14.2
<b>LEGAL STATUS OF ABORTION</b>								
Prohibited altogether/save life only (ref)	u	174 (170–188)	u	78 (74–92)	u	48 (45–54)	74.6	33.2
Save life/physical health	u	187 (184–198)	u	87 (83–99)	u	49 (47–54)	27.7	12.9
Save life/physical health/mental health	u	157 (151–174)	u	78 (71–96)	u	41 (36–50)	12.2	6.0
Any health/socioeconomic	u	136 (127–153)	u	52 (42–71)‡	u	58 (49–69)	45.4	17.5
Without restriction as to reason	u	110 (104–122)	u	48 (42–62)‡	u	69 (62–74)‡	67.5	29.7

\*Number of annual events per 1,000 women aged 15–44. †Statistically significant when probability of change from 1990–1994 to 2010–2014 is >95%. ‡Statistically significant by income group when probability of differing from reference category of low-income countries is >95%; and statistically significant by legal status when probability of differing from reference category of prohibited altogether/save life only is >95%. Notes: ref=reference category for significance testing. u=unavailable. Figures in parentheses are 90% uncertainty intervals, computed using the highest posterior density; they are the narrowest intervals containing 90% of the posterior distribution. Source: reference 6.

Country, survey year	Survey program	Total fertility rate*	Wanted total fertility rate†	Births		Women in union aged 15–49			Women not in union aged 15–24	
				% mistimed‡	% unwanted‡	% using modern method§	% using traditional method**	% with unmet need for modern method††	% sexually active‡‡	% with unmet need for modern method among sexually active††
<b>AFRICA</b>										
Benin, 2011–2012	DHS	4.9	4.0	14	6	7	6	38	31	63
Burkina Faso, 2010	DHS	6.0	5.2	7	1	16	1	26	17	41
Burundi, 2010	DHS	6.4	4.2	28	5	18	4	37	4	58
Cameroon, 2011	DHS	5.1	4.1	20	6	14	9	33	31	40
Chad, 2014–2015	DHS	6.4	6.1	11	1	4	2	25	14	62
Comoros, 2012	DHS	4.3	3.2	26	7	13	6	38	6	63
Congo-Brazzaville, 2012	DHS	5.1	4.5	27	4	20	25	43	50	47
Congo-Kinshasa, 2013–2014	DHS	6.6	5.7	26	5	8	13	40	30	70
Côte d'Ivoire, 2011–2012	DHS	5.0	4.1	24	4	12	6	33	49	60
Egypt, 2014	DHS	3.5	2.8	8	8	57	2	14	u	u
Ethiopia, 2016	DHS	4.6	3.6	22	10	35	1	23	5	44
Gabon, 2012	DHS	4.1	3.2	35	6	19	12	38	54	40
Gambia, 2013	DHS	5.6	4.7	13	1	8	1	26	4	49
Ghana, 2014	DHS	4.2	3.6	25	8	22	5	35	31	64
Guinea, 2012	DHS	5.1	4.6	17	2	3	2	26	28	60
Guinea-Bissau, 2014	MICS	4.9	u	u	u	12	4	26	58	32
Kenya, 2014	DHS	3.9	3.0	28	11	53	5	u	u	u
Lesotho, 2014	DHS	3.3	2.3	29	23	60	0	19	25	33
Liberia, 2013	DHS	4.7	4.2	28	4	19	1	32	58	58
Madagascar, 2008–2009	DHS	4.8	4.2	8	5	28	12	31	24	59
Malawi, 2015–2016	DHS	4.4	3.4	30	11	58	1	20	23	55
Mali, 2012–2013	DHS	6.1	5.3	12	3	10	0	26	22	64
Morocco, 2003–2004	DHS	2.5	1.8	16	15	52	11	23	u	u
Mozambique, 2011	DHS	5.9	5.1	12	4	11	0	29	39	48
Namibia, 2013	DHS	3.6	2.9	41	12	55	1	18	37	24
Niger, 2012	DHS	7.6	7.4	9	1	8	6	22	3	[49]
Nigeria, 2013	DHS	5.5	5.2	8	2	9	6	22	20	42
Rwanda, 2014–2015	DHS	4.2	3.1	26	12	47	6	25	7	66
Sao Tome & Principe, 2014	MICS	4.9	3.3	32	21	37	3	36	34	52
Senegal, 2014	DHS	5.0	4.3	18	3	20	2	27	4	67
Sierra Leone, 2013	DHS	4.9	4.5	12	2	15	2	27	53	38
Swaziland, 2014	MICS	3.3	u	28	39	66	1	16	31	17
Tanzania, 2015–2016	DHS	5.2	4.5	29	5	32	7	29	8	41
Togo, 2013–2014	DHS	4.8	4.1	23	7	17	3	36	35	53
Uganda, 2014–2015	PMAS	6.2	4.5	29	12	30	4	36	17	47
Zambia, 2013–2014	DHS	5.3	4.5	34	6	44	5	26	24	59
Zimbabwe, 2015	DHS	4.0	3.6	27	8	66	1	12	3	27

For notes and sources, see page 55.

Country, survey year	Survey program	Total fertility rate*	Wanted total fertility rate†	Births		Women in union aged 15–49			Women not in union aged 15–24	
				% mistimed‡	% unwanted‡	% using modern method§	% using traditional method**	% with unmet need for modern method††	% sexually active‡‡	% with unmet need for modern method among sexually active‡‡
<b>ASIA</b>										
Armenia, 2010	DHS	1.7	1.6	7	1	26	28	42	§§	§§
Azerbaijan, 2006	DHS	2.0	1.8	10	8	13	38	53	§§	§§
Bangladesh, 2014	DHS	2.3	1.6	15	10	54	8	20	u	u
Cambodia, 2014	DHS	2.7	2.4	11	6	39	18	30	1	45
Georgia, 2010	RHS	2.0	u	11	26	34	18	31	u	u
India, 2005–2006	DHS	2.7	1.9	10	11	49	8	22	§§	§§
Indonesia, 2015	PMAS	2.6	2.0	12	4	59	2	16	1	u
Jordan, 2012	DHS	3.5	2.4	17	10	41	20	32	u	u
Kyrgyzstan, 2014	MICS	3.6	3.4	3	1	38	3	23	2	[50]
Laos, 2011–2012	MICS	3.2	u	5	7	42	8	28	3	92
Maldives, 2009	DHS	2.5	2.2	10	16	27	8	36	u	u
Mongolia, 2013–2014	MICS	3.1	u	13	7	48	6	24	20	57
Nepal, 2014	MICS	2.6	1.8	12	14	47	2	28	u	u
Pakistan, 2012–2013	DHS	3.8	2.9	9	7	25	11	31	u	u
Philippines, 2013	DHS	3.0	2.2	18	12	37	18	35	5	69
Sri Lanka, 2006–2007	DHS	2.3	2.1	9	8	53	16	u	u	u
Tajikistan, 2012	DHS	3.8	3.3	2	3	26	2	25	§§	§§
Timor-Leste, 2009–2010	DHS	5.7	5.1	13	3	21	1	33	§§	§§
Turkey, 2008	DHS	2.2	1.6	11	17	46	27	36	u	u
Vietnam, 2013–2014	MICS	2.0	u	14	10	57	19	25	u	u
Yemen, 2013	DHS	4.4	3.1	23	15	25	8	37	u	u
<b>LATIN AMERICA &amp; CARIBBEAN</b>										
Bolivia, 2008	DHS	3.5	2.0	26	36	34	27	47	14	63
Brazil, 2006	PNDS	1.8	u	30	19	77	3	12	46	26
Colombia, 2010	DHS	2.1	1.6	29	23	73	6	14	42	32
Cuba, 2014	MICS	u	u	u	u	72	2	10	62	12
Dominican Rep., 2013	DHS	2.5	2.3	37	13	68	4	13	35	42
Ecuador, 2004	RHS	3.3	2.6	18	19	59	14	27	8	58
El Salvador, 2008	RHS	2.5	2.0	20	19	66	6	u	11	u
Guatemala, 2014–2015	DHS	3.1	2.6	22	16	49	12	26	10	51
Guyana, 2014	MICS	2.8	2.1	22	18	33	1	29	12	67
Haiti, 2012	DHS	3.5	2.2	27	22	31	4	39	28	66
Honduras, 2011–2012	DHS	2.9	2.2	30	13	64	9	20	15	49
Jamaica, 2008	RHS	2.4	5.1	31	16	68	4	32	17	31
Mexico, 2014	ENADID	2.2	u	18	22	68	4	u	u	u
Nicaragua, 2006–2007	RHS	2.7	2.3	23	13	69	4	13	14	43
Paraguay, 2008	RHS	2.5	2.2	24	7	70	9	16	36	28
Peru, 2014	DHS	2.5	1.8	34	20	52	23	32	22	47

For notes and sources, see page 55.



Country, survey year	Survey program	Total fertility rate*	Wanted total fertility rate†	Births		Women in union aged 15–49			Women not in union aged 15–24	
				% mistimed‡	% unwanted‡	% using modern method§	% using traditional method**	% with unmet need for modern method††	% sexually active‡‡	% with unmet need for modern method among sexually active††
<b>NORTHERN AMERICA</b>										
United States, 2013	NSFG	1.8*†	u	18	14	66	7	14	48	19
<b>EASTERN &amp; SOUTHERN EUROPE</b>										
Albania, 2008–2009	DHS	1.6	1.4	10	4	10	59	72	7	71
Moldova, 2012	MICS	2.2	u	12	9	42	18	28	25	39
Russia, 2011	RHS	1.6	u	18	18	55	13	21	u	u
Ukraine, 2012	MICS	1.2	1.1	7	6	47	18	24	30	24

\*The number of children a woman would have, assuming that current rates remain the same over her lifetime. For DHS and RHS countries, total fertility rates are calculated on the basis of fertility in the past three years; for the Brazilian PNDS, the period is the past four years; for PMAS surveys, the past two years; and for MICS surveys, the past year. †The number of children a woman would have if she could avoid births that exceed her stated ideal number. ‡Mistimed births are those that are wanted but later, and unwanted births are those that are not wanted at all. §We consider modern methods of contraception to include female and male sterilization, the pill, the IUD, the injectable, the implant, male and female condoms, the diaphragm, spermicides and the Standard Days Method. \*\*We consider traditional methods to include periodic abstinence, withdrawal, the lactational amenorrhea method and folk methods. ††The proportion of women who are able to become pregnant and do not want a pregnancy within the next two years, but are not using a modern method. ‡‡Among those currently not in a union, percentage that had sexual intercourse within the past three months, except in Brazil (had sex within the past 12 months) and Tanzania and Zimbabwe (had sex within past month). §§Too few single, 15–24-year-old women responded that they were sexually active to be meaningful and, for the same reason, we were unable to calculate unmet need for a modern method among such women. This occurred in five Asian countries—Armenia, Azerbaijan, India, Tajikistan and Timor-Leste. \*†Total fertility rate for the United States is for 2015, and is based on birth data from the U.S. National Vital Statistics System.

Notes: u=unavailable or unweighted n<25; data are in brackets if unweighted n=25–49. Data are for in-union women aged 15–44 in Georgia, Russia and the United States, because data for women aged 45–49 are unavailable. For most countries, the measure of unplanned births is calculated among all births in the three years preceding the survey, except for the following: all births in the five years preceding the survey for eight countries (Ecuador, El Salvador, Jamaica, Mexico, Paraguay, Sri Lanka, South Africa and the United States); and among all births in the two years preceding the survey in one (Laos). In addition, for six countries, the data cover the wantedness status of both recent births and current pregnancies. These include one country with data on all births in the preceding two years and current pregnancies (Mongolia); three countries with wantedness data on either the most recent birth within the past five years or the current pregnancy (Burkina Faso, Indonesia and Uganda); and two, on the most recent pregnancy within the past five years (Georgia and Russia). Totals may not equal the exact sum of constituent components because of rounding.

Sources: DHS=Demographic and Health Surveys; ENADID=Encuesta Nacional de Demografía Dinámica (Mexico); MICS=Multiple Indicator Cluster Surveys (conducted by UNICEF); NSFG=National Survey of Family Growth (United States); PNDS=Pesquisa Nacional de Demografia e Saúde (Brazil); PMAS=FP2020 Performance Monitoring and Accountability Surveys; and RHS=Reproductive Health Surveys (conducted by U.S. Centers for Disease Control and Prevention). Data from all seven survey programs are taken from published country reports, or downloaded from web-based data tools or archived data files. When relevant data were unavailable from the most recent survey, we needed to go to earlier DHS survey rounds for the following measures and countries: Total fertility rates and wanted fertility rates—Guyana, 2009; Indonesia, 2012; Kyrgyzstan, 2012; Nepal, 2011; Sao Tome & Principe, 2008–2009; Uganda, 2011; and Ukraine, 2007. Wantedness status of births—Guyana, 2009; Kyrgyzstan, 2012; Moldova, 2005; Nepal, 2011; Sao Tome and Principe, 2008–2009; Swaziland, 2006–2007; Ukraine, 2007; and Vietnam, 2002.

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