



## Adding It Up: Costs and Benefits of Contraceptive Services Estimates for 2012

Susheela Singh and Jacqueline E. Darroch

### HIGHLIGHTS

- In 2012, an estimated 645 million women in the developing world were using modern methods—42 million more than in 2008. About half of this increase was due to population growth.
- The proportion of married women using modern contraceptives in the developing world as a whole barely changed between 2008 (56%) and 2012 (57%). Larger-than-average increases were seen in Eastern Africa and Southeast Asia, but there was no increase in Western Africa and Middle Africa.
- The number of women who have an unmet need for modern contraception in 2012 is 222 million. This number declined slightly between 2008 and 2012 in the developing world overall, but increased in some subregions, as well as in the 69 poorest countries.
- Contraceptive care in 2012 will cost \$4.0 billion in the developing world. To fully meet the existing need for modern contraceptive methods of all women in the developing world would cost \$8.1 billion per year.
- Current contraceptive use will prevent 218 million unintended pregnancies in developing countries in 2012, and, in turn, will avert 55 million unplanned births, 138 million abortions (of which 40 million are unsafe), 25 million miscarriages and 118,000 maternal deaths.
- Serving all women in developing countries who currently have an unmet need for modern methods would prevent an additional 54 million unintended pregnancies, including 21 million unplanned births, 26 million abortions (of which 16 million would be unsafe) and seven million miscarriages; this would also prevent 79,000 maternal deaths and 1.1 million infant deaths.
- Special attention is needed to ensure that the contraceptive needs of vulnerable groups such as unmarried young women, poor women and rural women are met and that inequities in knowledge and access are reduced.
- Improving services for current users and adequately meeting the needs of all women who currently need but are not using modern contraceptives will require increased financial commitment from governments and other stakeholders, as well as changes to a range of laws, policies, factors related to service provision and practices that significantly impede access to and use of contraceptive services.



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# Context and Goal of this Report

Growing concerns about inadequate progress in advancing maternal and reproductive health over the last two decades have sparked a number of efforts, now underway, to increase attention, support and resources for family planning in developing countries. Some key examples of these efforts are the HandtoHand Campaign; the Alliance for Reproductive, Maternal and Newborn Health; the Partnership for Maternal, Newborn and Child Health; Women Deliver; activities to monitor relevant milestones for global development and poverty alleviation (ICPD+20 and the MDG+15); initiatives by donor agencies and foundations, and the 2012 London Summit on Family Planning.<sup>1–7</sup> One goal that these initiatives have in common is to increase access to contraceptive services and thereby better serve women who want to delay or stop childbearing, because doing so will reduce unintended pregnancy, help women and couples attain their desired family size and better time their pregnancies, and prevent many deaths and disabilities related to pregnancy.<sup>8</sup> In addition to these short-term health benefits, increased prevention of unintended pregnancies would have broader, longer-term benefits for women, families and society, ranging from increased education for women and better child health to greater family savings, lower rates of population growth and stronger national economies.<sup>9,10</sup>

A 2009 study, *Adding It Up: The Costs and Benefits of Investing in Family Planning and Maternal and Newborn Health*, highlighted these issues by quantifying the number of women with an unmet need for modern contraceptive services—215 million women in the developing world in 2008.<sup>11</sup> This study also estimated the costs and benefits of addressing unmet need for contraceptive services. With these estimates in mind, some initiatives have set goals to increase the number of women using modern methods in certain groups of focus countries. The United Nations' Every Woman Every Child initiative and others are currently assessing progress toward meeting women's contraceptive needs, as well as the additional efforts needed to continue improving access to modern family planning services, and some countries have set their own goals for specific increases in the numbers of new contraceptive users.<sup>12</sup>

These initiatives have generally set their goals in terms of expected increases in the number of users of modern methods because this is a direct and straightforward indica-

tor that typically increases in response to interventions. For example, the London Summit on Family Planning is launching an effort to make modern contraceptive services available to an additional 120 million women in the world's poorest 69 countries by 2020.<sup>13</sup> An underlying goal of these initiatives is to also reduce the number of women who have an unmet need for modern methods. However, this indicator is less often used to measure progress because unmet need may increase—even as the number of modern method users rises—in response to couples' increasing desire for smaller families and better control over the timing of pregnancy.

This report presents new 2012 estimates of the numbers and proportions of women in the developing world using modern methods and in need of modern contraception, as well as the cost and impact of meeting this need.\* The 2012 *Adding It Up* estimates are comparable to those from the 2009 report and will therefore enable us to assess progress between 2008 and 2012. The estimates presented here incorporate the most recent available survey data on need for and use of contraception and updated 2012 estimates of the direct costs of providing contraceptive services. They also draw on updated estimates of pregnancies and maternal deaths. In some cases, where more recent information is not available, we draw on measures from the 2009 analysis—the most important such instance being estimates of program and systems costs (see Appendix, pages 19–22, for more detail).

We present estimates in this report for all developing countries (as defined by the United Nations Statistics Division), for the three major regions (Asia, Africa, and Latin America and the Caribbean), for 14 subregions and for the 69 poorest countries in the developing world (Appendix Table 1, page 23).<sup>14,15</sup> The goal of this report is to inform the decisions and activities of donors, developing country governments and advocates aimed at improving and expanding access to contraceptive services for all women and couples in developing countries.

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\*We plan to publish a more comprehensive set of estimates, including other sexual and reproductive health services, in early 2014.

# Need for and Use of Modern Contraceptives

The widespread shift in the developing world from large families to smaller families is arguably one of the most important social transformations of the 20th century, and it parallels a similar transition that took place in the developed world much earlier and at a much slower pace.<sup>16,17</sup> Starting from an average of more than five children per family in the 1970s, couples in the developing world had about 2.5 children on average in the decade 1994–2005, although the range across countries has remained very wide.<sup>18</sup>

While many factors have had a role in this transformation in childbearing, one of the main mechanisms through which smaller family size has been achieved is the increased use of contraception, made available through public sector family planning programs, nongovernmental organizations and the private sector, including clinics and pharmacies.<sup>19–22</sup> Compilations of data by the United Nations show that the use of modern contraceptive methods by married women\* aged 15–49 in the developing world rose from negligible levels in the 1960s to an estimated 47% in 1990 and 55% in 2000<sup>23</sup> and has since stabilized, remaining at this level in 2009.<sup>24</sup> At the same time, the motivation to have small families and to better time births remains strong and is increasing in many parts of the developing world.<sup>25</sup> Other worldwide trends, such as increasing levels of sexual activity among young, unmarried women—related to a rising age at marriage<sup>26</sup>—imply a growing need for effective contraception among the unmarried. In this chapter we discuss the current situation and recent trends in regard to existing needs and the use of modern contraception.

## Need for contraceptive services

While the large majority of women are sexually active for much of their reproductive years, most want only a few

children. To achieve their desired family size and avoid unintended pregnancies, they will spend most of this time in need of contraception (see box). In 2012, of the 1,520 million women of reproductive age in the developing world, 57%, or an estimated 867 million, are in need of contraception.<sup>27</sup> Most of these women are using a modern contraceptive method (645 million), but a significant minority are not, and these women have an unmet need for modern contraception (222 million; Figure 1).

Another 653 million women—43% of all women of reproductive age—do not currently need contraception.<sup>27</sup> More than half of these women (24% of all women of reproductive age) are unmarried and not sexually active;† the remaining women have recently had an intended birth, are currently pregnant with an intended pregnancy or want to be pregnant soon (11%), or are sexually active but are infecund (8%). As women’s contraceptive needs and

### Defining the need for modern contraception

- Women of reproductive age (15–49) are considered to be **in need of contraception** if they are using contraceptives—modern or traditional—or are using no method but are married or are unmarried and sexually active (i.e., had had sex in the three months prior to being surveyed), are fecund and do not want a child soon (in the next two years) or at all; identify their current pregnancy as unintended; or are experiencing postpartum amenorrhea after an unintended pregnancy.
- Women in need who are not currently using a modern contraceptive method—that is, women who use no method or a traditional method—are considered to have an **unmet need for modern methods**. Women who use traditional methods are included as having unmet need for modern contraception because the methods they are using are more likely to fail than modern methods. **Modern methods** include male and female sterilization, IUDs, implants, injectables, pills, male condoms and other supply methods, such as spermicides and female condoms. **Traditional methods** mainly include withdrawal and periodic abstinence.

\*In this report, “married women” refers to those who are legally married, cohabiting or in a consensual union. “Formerly married” refers to women who have previously been in a union and were not in union at the time of interview, and “never married” refers to women who have never been in union.

†We consider unmarried women sexually active if they reported having had sex in the three months prior to being surveyed.

life circumstances vary over their reproductive lifespan, women will move between needing and not needing contraception, and many will move between using modern methods and having unmet need. The current estimates presented here represent a snapshot of the status of all women in developing countries in 2012.

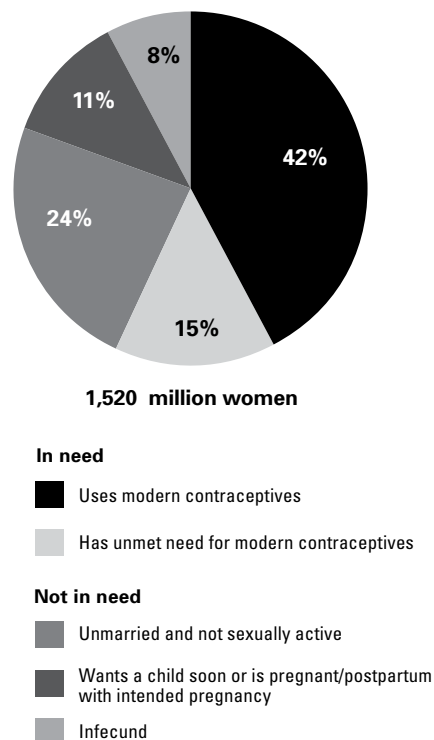
### Use of modern contraceptive methods

Of the 645 million women in the developing world using modern methods of contraception in 2012, the large majority are married (596 million), an estimated 20 million have previously been married, and 29 million have never been married (data not shown).<sup>27</sup> We focus on modern contraceptive methods because of their higher effectiveness in preventing pregnancy, compared with traditional methods, such as withdrawal and periodic abstinence.

In 2012 in the developing world, modern methods are used by 57% of married women (on whom data are more complete and arguably better reported, compared with other groups; Table 1, page 6).<sup>27</sup> The level of use is higher in some subregions (an estimated 88% in Eastern Asia and 70% in South America), and lower than average in others (17% in Sub-Saharan Africa, 34% in Western Asia and 46% in South Asia). In the 69 poorest countries in the world, 40% of married women are using modern methods in 2012.

Between 2008 and 2012, the number of modern method users increased by 42 million in the developing world as a whole, an average annual increase of roughly 10 million users.<sup>27,28</sup> In comparison, between 2003 and 2008, the number of modern method users rose by almost 100 million in developing countries, from 504 million to 603 million, an annual increase of 20 million users (not shown).<sup>28</sup> The increase between 2008 and 2012 was partly due to population growth (52%), and partly to the small increase in the contraceptive prevalence rate (48%). For example, the proportion of currently married women in the developing world using modern methods barely changed between 2008 (56%) and 2012 (57%).<sup>27</sup> Stabilization in the level of modern contraceptive use in recent years has been reported elsewhere for some countries, and is consistent with these updated aggregate estimates.<sup>29</sup> Despite overall stabilization, there have been some important changes within regions. More substantial increases in modern method prevalence rates among married women were seen in Eastern Africa (from 20% in 2008 to 27% in 2012) and in Southeast Asia (from 50% to 56%).<sup>27</sup> Notably, there was no increase in Western Africa and Middle Africa, areas where modern contraceptive use continues to be very low. In these subregions, health systems are especially weak and mortality rates very high, and the

**FIGURE 1. More than half of all reproductive-age women in developing countries are in need of modern contraceptives.**



Source: reference 27

need for comprehensive care that includes contraceptive, maternal, infant and child health services—relevant for all countries—is particularly great.

These different regional trends are illustrated by some country examples (Figure 2, page 7).<sup>30–35</sup> Ethiopia, Malawi and Rwanda saw substantial increases, while India, Nepal, Nigeria, Pakistan and Zimbabwe witnessed less change in recent years. All countries that have experienced little recent growth in contraceptive prevalence need attention, but the situation of countries such as Nigeria and Pakistan, where change is slow and modern method use is very low, requires particularly careful examination to determine how to meet existing contraceptive needs.

Never-married women make up a large and important group that accounts for 26% of all women aged 15–49 in the developing world in 2012 and comprises mostly adolescents and young adult women aged 15–24.<sup>27</sup> There has been a steady long-term trend toward increased levels of sexual activity among these women due to a combination of factors: the declining age of menarche, the rising age at marriage and changing societal values.<sup>26</sup> When

**TABLE 1. Number of women aged 15–49 using modern contraceptive methods and proportion of married women aged 15–49 using modern methods and annual percent change, by region and subregion of the developing world and for the 69 poorest countries, 2008 and 2012.**

Region and subregion	Among all women aged 15–49, number using modern methods (millions)			Among married women aged 15–49 % using modern methods		
	2008	2012	Annual % change	2008	2012	Annual % change
<b>Developing world</b>	603	645	1.7	56	57	0.4
<b>Africa</b>	46	51	2.7	23	24	0.2
Sub-Saharan Africa*	31	36	4.2	17	17	0.7
Eastern Africa	12	17	11.7	20	27	8.6
Middle Africa	2	2	1.9	7	7	0.7
Southern Africa	7	9	5.8	54	58	1.9
Western Africa	6	7	2.8	9	9	–0.3
Northern Africa	19	16	–3.9	55	45	–4.8
<b>Asia</b>	485	514	1.5	62	62	0.3
Eastern Asia	261	267	0.5	89	88	–0.2
Central Asia	6	6	–1.2	51	52	0.3
South Asia	153	163	1.8	45	46	0.3
Southeast Asia	51	64	6.6	50	56	2.8
Western Asia	13	14	1.0	34	34	0.2
Oceania	1	1	–7.3	45	30	–8.4
<b>Latin America &amp; the Caribbean</b>	72	80	2.6	64	67	1.4
Caribbean	5	5	–1.3	56	56	0.1
Central America	17	17	1.2	60	64	1.7
South America	51	58	3.4	66	70	1.4
<b>69 poorest countries†</b>	229	252	2.6	39	40	0.7

\*Sub-Saharan Africa includes Sudan and South Sudan, both of which are in the Northern Africa region. †An analysis for the London Summit on Family Planning, projecting the percentage of women using modern methods based on the linear rate of change between the two most recent surveys, estimated that 258 million women in the 69 poorest countries were using modern methods in 2012, six million more than the 252 million shown here, which is based on the most recent information available without projection.

Sources: 2008—Reference 11; 2012—reference 27.

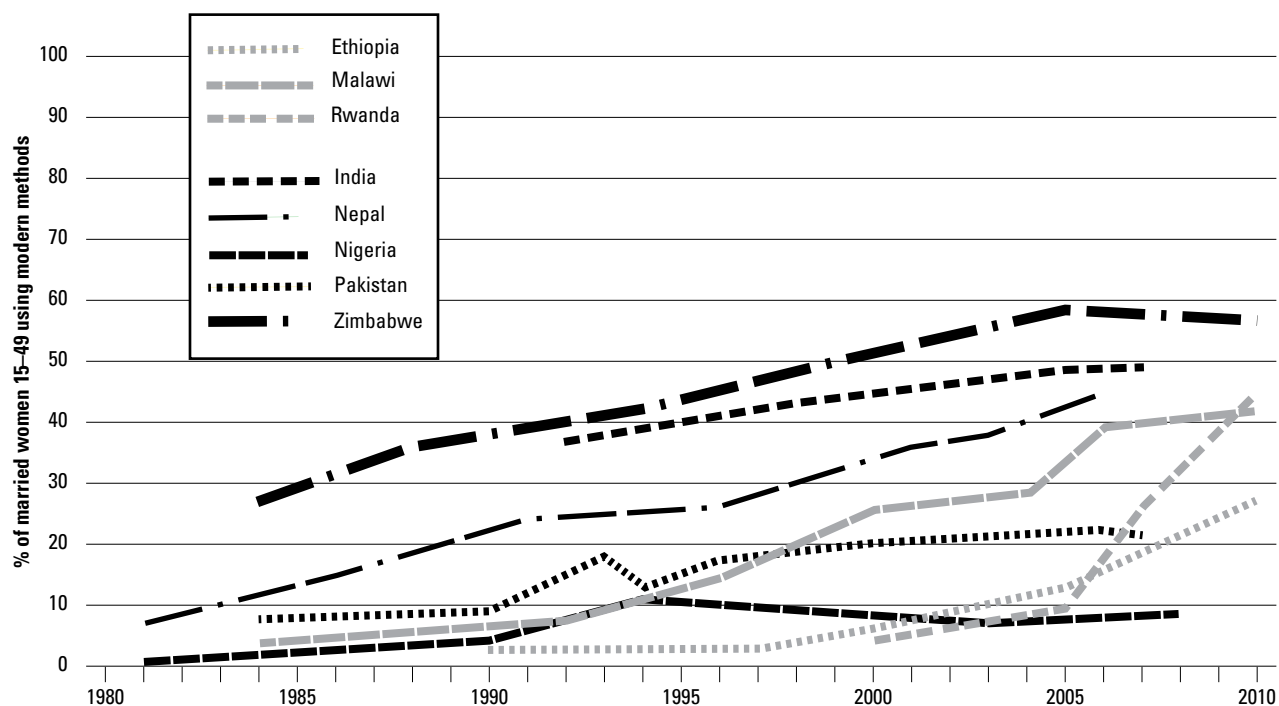
they become sexually active, young never-married women face much greater difficulties in obtaining contraceptives than do married women, in large part because of the stigma attached to being sexually active before marriage. Information on the level of and trends in contraceptive use among never-married sexually active women is thus of great relevance for policymakers and program planners.

However, data on the sexual and reproductive behavior of never-married women are limited (especially in Asia and Northern Africa), and underreporting of sexual activity and contraceptive use is likely high in these regions. In Sub-Saharan Africa and Latin America and the Caribbean, data on unmarried women are more plentiful and of better quality than in other regions, although underreporting may still be significant. Because of these constraints, we supplemented available national survey data with estimates from subnational studies in Asia and Northern Africa to estimate that 52 million never-married women in the developing world as a whole are sexually active and in need of con-

traceptives to prevent pregnancy in 2012.<sup>27</sup> About 56% of never-married women in need are using modern contraceptive methods, with some variation across regions: 49% in Asia, 55% in Sub-Saharan Africa and 69% in Latin America and the Caribbean; and in the 69 poorest countries, the equivalent proportion is 41% (not shown).

The disadvantage that never-married women have in obtaining contraceptives is apparent in the following statistics: In the developing world as a whole, among women in need of contraceptives, use of modern methods is 20 percentage points lower among never-married women than among married women (not shown).<sup>27</sup> In Asia, this difference is 31 percentage points; in Latin America and the Caribbean, it is 10; and in the 69 poorest countries, it is 20 percentage points. The situation is reversed in Sub-Saharan Africa, where the proportion of never-married women in need using modern contraceptives is 19 percentage points higher than among their married counterparts, an indication of the strength of motivation of

**FIGURE 2. Some countries have seen rapid increases in contraceptive prevalence since 2000, while others have seen little improvement.**



Source: references 30–35.

unmarried women to avoid childbearing before marriage and HIV/STI infection, as the condom is the predominant method used by never married women in this region.

### Unmet need for modern methods of contraception

Women and their partners who are able to have a child but are not using contraceptives or are using a traditional method have much higher chances of having an unintended pregnancy than those who use modern methods. As a result, unmet need for modern methods is a key indicator of the burden of unfulfilled demand for contraceptive services (see box, page 4). In 2012, an estimated 222 million women in the developing world have an unmet need for modern contraception.<sup>27</sup> Comparable estimates were calculated for 2008 and 2012, applying the recently released revised methodology<sup>36</sup> for calculating unmet need to both years (see Appendix, pages 20–21).\*

Although increases in the use of modern contraceptives will reduce the number of women with unmet need in the long term, this number may increase in the short run because of population growth and because the proportion of women and couples who want smaller families and greater control over the timing of births continues to grow. Our updated estimates show that the number of develop-

ing world women with an unmet need for modern contraception declined slightly between 2008 and 2012, from 226 million (using the revised methodology) to 222 million (Table 2, page 8).<sup>27,†</sup> However, the number of women with an unmet need for modern contraception increased in most of Africa and in some subregions of Asia and Latin America and the Caribbean. Unmet need for modern contraception in the 69 poorest countries—which account for 73% of all unmet need in the developing world—also increased, from 153 to 162 million women in 2008–2012.

The proportion of married women with unmet need for modern contraception is 18% in the developing world as a whole, but is much higher than average (30–37%) in Western Africa, Middle Africa, Eastern Africa and Western Asia, and is somewhat higher than average (22–24%) in South Asia and the Caribbean (Figure 3).<sup>27</sup> In general, among subregions, use of modern contraceptive methods

\*Although the calculation methodology was revised, the concept remains the same.

†The number of women with unmet need for modern methods in 2008 was previously estimated to be 215 million (see reference 11). We revised this estimate by applying the new unmet need calculation methodology (discussed in the Appendix), which resulted in a revised estimate of 226 million women in 2008.

**TABLE 2. Number of women with unmet need for modern methods and proportion with unmet need for modern methods among all women in need of modern contraception, by region and subregion of the developing world and for the 69 lowest-income countries, 2008 and 2012.**

Region and subregion	Women 15–49 with unmet need for modern methods (millions)			% of women 15–49 in need of contraception who have unmet need for modern methods		
	2008*	2012	Annual % change	2008*	2012	Annual % change
<b>Developing world</b>	226	222	–0.5	27	26	–1.5
<b>Africa</b>	55	58	1.6	54	53	–0.5
Sub-Saharan Africa†	50	53	1.6	62	60	–0.9
Eastern Africa	19	20	0.4	63	54	–3.5
Middle Africa	10	10	1.3	82	81	–0.1
Southern Africa	2	2	–6.2	25	17	–8.1
Western Africa	18	19	2.6	74	74	0.0
Northern Africa	6	8	5.8	25	32	7.8
<b>Asia</b>	147	140	–1.1	23	21	–1.9
Eastern Asia	24	16	–7.8	8	6	–7.7
Central Asia	3	2	–3.1	30	28	–1.4
South Asia	79	83	1.1	34	34	–0.4
Southeast Asia	25	25	–0.6	33	28	–4.2
Western Asia	15	14	–2.8	54	50	–1.8
Oceania	<1	1	2.1	39	49	6.8
<b>Latin America &amp; the Caribbean</b>	24	23	–1.4	25	22	–2.8
Caribbean	2	2	–2.4	31	30	–0.8
Central America	5	5	1.3	23	23	0.0
South America	17	16	–2.0	25	21	–3.8
<b>69 poorest countries‡</b>	153	162	1.5	40	39	–0.6

\*Revised from prior estimates (see references 11 and 28) using new specifications for calculating unmet need. †Sub-Saharan Africa includes Sudan and South Sudan, both of which are in the Northern Africa region. ‡An estimate of the number of women with unmet need for modern methods in the 69 poorest countries consistent with the London Summit on Family Planning projected number of 258 million women using modern methods (see footnote, Table 1) would be 160 million, compared with the 162 million shown in the table, which is based on the most recent available information.

Sources: 2008 and 2012—reference 27.

is higher where unmet need is lower.

The small overall decline in unmet need for modern methods is more impressive than it appears at first glance, given an increase in the number of women who want to avoid pregnancy, from 829 million in 2008 to 867 million in 2012.<sup>27</sup> In the developing world as a whole, the

### The need to improve modern method use

It is understandable that the level of unmet need for modern contraceptives generates so much attention, since nonuse and traditional method use put women and their partners at highest risk of unintended pregnancy, and

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