

## Chapter 2

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# Sterilization Incidence and Prevalence

### Highlights:

- Approximately 222 million women of reproductive age around the world are protected from unintended pregnancy by sterilization—180 million using female sterilization and nearly 43 million relying on male sterilization.
- The incidence of female sterilization (the number of sterilization procedures performed each year) is highest in Latin America and the Caribbean and is lowest in Eastern Europe, North Africa, and the Middle East.
- The prevalence of female sterilization (the total number of people using the method at a particular point in time) is highest in Latin America and the Caribbean and in Asia. In contrast, the prevalence of male sterilization is highest in parts of Western Europe, in North America, and in Asia.
- Most sterilization users live in Asia, with China and India accounting for 75% of the world's total number of sterilization users.

In 1985, Ross, Hong, and Huber concluded that overall use of contraceptive sterilization had been growing considerably worldwide over a number of years and showed no signs of decline anywhere. Here, we examine trends in new and continued use of sterilization that have taken place since 1985 and explore some of the factors that have produced these changes. Because of this chapter's population-level focus, the analysis here will be limited primarily to the demographic factors affecting change. Programmatic, political, sociocultural, and technological factors affecting choice and use are discussed more fully in subsequent chapters.

Information on the use of sterilization within a population is usually expressed in terms of incidence and prevalence. Sterilization *incidence* refers to the rate at which people in a given population begin to use sterilization, over a specified period of time (usually one year), relative to the number of women aged 15–44 or 15–49 who were married or in union during that time period. In practical terms, it reflects the number of sterilization procedures performed annually among people of reproductive age. Because it is difficult to obtain the accurate national-level service statistics needed to derive direct measures of sterilization incidence, we rely on surveys of women of reproductive age to estimate an approximate incidence measure.<sup>1</sup>

Within the context of sterilization, *prevalence* provides a “snapshot” of overall levels of sterilization use, measuring the number of people in a population using this

<sup>1</sup> In this chapter, we present a proxy measure of incidence derived from demographic surveys, as direct measures of incidence were not obtainable. For these analyses, sterilizations in the year are obtained among women ever in union, either by using questions about the respondent's age at sterilization compared with her current age or by using the date of sterilization. Information on the number of new vasectomy users in the year is obtained from female partners who answered the survey. In general, the countries reviewed in this chapter all had a total sterilization prevalence of at least 2%, as given in recent surveys. (Although this threshold is arbitrary, any percentage smaller than 2% would be statistically unreliable for performing calculations of incidence.)

method at a given point in time. According to conventional practice, sterilization prevalence is often presented as a percentage, with the number of sterilization users expressed relative to the number of women currently married or in union (Bertrand, Magnani, & Knowles, 1994), and is measured using data from surveys of women of reproductive age (generally aged 15–49). In countries where there is substantial use of vasectomy, the prevalence of sterilization among men is obtainable through women’s reports of their partner’s use of vasectomy.

Any family planning method’s prevalence and incidence are linked, since “in the long run, the prevalence of any method is directly proportional to the annual acceptance rate (or incidence) and the mean continuation time” (Ross, 1992). Although prevalence is often used to compare levels of use across different contraceptive methods within a population, sterilization’s uniqueness as a permanent method warrants special consideration in this type of analysis. Unlike temporary methods, such as the pill or condom, that can be discontinued at any time, protection with sterilization continues throughout the reproductive years (except in the case of failure). As a result, the number of sterilization users grows over time. Women leave this “pool” of users only when they exceed reproductive age.

The data presented in this chapter are derived primarily from the Demographic and Health Survey (DHS) and the U.S. Centers for Disease Control and Prevention (CDC) series of family planning and reproductive health surveys. Most are nationally representative household-based sample surveys. For North America, Oceania (Australia and New Zealand), and Western Europe, most data are derived from surveys conducted by agencies within the country. In general, these surveys tend to present information on contraceptive use as reported by women, though this practice is changing to include male interviews as well (e.g., in Bangladesh, Colombia, Kenya, Pakistan, and Tanzania). For this analysis, however, we present data as reported by women. Also, we include consecutive reproductive health surveys whenever possible, starting from 1985. The data presented for these multiple surveys are cross-sectional, as different sets of respondents were sampled and interviewed each time the survey was carried out.

## Global Status of Sterilization

Worldwide, at least 222.4 million women in union currently use sterilization (whether tubal ligation or vasectomy) as their method of family planning. Supplements 2.1 and 2.2 (page 47) report the estimated numbers of sterilization users for different regions and countries. Two factors affect the number of users in a country: the overall population, and the prevalence of sterilization (Ross et al., 1985). In turn, sterilization prevalence is a product of sterilization incidence and the continuation time of the method.

In this chapter, we look at global data on overall sterilization incidence and prevalence, as well as the number of users since the 1980s. All three measures are broken down separately for female and male sterilization, when possible. In addition, we include information on sterilization as a percentage of total contraceptive prevalence (use of both traditional and modern methods), to provide a context in which to consider sterilization’s contribution to overall contraceptive use.

## Incidence

Recent data show that regions vary considerably in their sterilization incidence. Table 2.1 (page 20) summarizes the approximate average incidence of female and male sterilization for selected countries with data available from the DHS or CDC surveys, calculated over five-year periods.<sup>2</sup> (Annual estimates are presented in Supplements 2.3 and 2.4, pages 52 and 54, respectively.)

<sup>2</sup> U.S. data are derived from the National Survey of Fertility Growth (NSFG).

## What accounts for changes in incidence?

Demographic, policy, or program factors all can cause changes in the incidence of sterilization. Demographic factors that may influence sterilization incidence include changes in the age distribution, the percentage married or cohabiting, the average age at marriage, the average parity, and mean educational attainment. Policy factors that can influence incidence are illustrated historically in countries such as Bangladesh, India, and Sri Lanka, where sterilization incidence has fluctuated over the past three decades (Ross et al., 1985). Incidence in these countries dropped substantially in the late 1970s, at the end of an era of special national sterilization campaigns.

For example, in India, changes in sterilization incidence coincided in the 1970s with government-led interventions to increase the sterilization acceptance rate through massive recruitment campaigns and some coercion, and with the ebb and flow of payments made to new users. In India, sterilization incidence reached a high of 7% of all couples at the time of the 1976 Emergency Campaign and dropped to about 2% among married women five years later (Ross et al., 1985). This decline in sterilization incidence coincided with a governmental effort to remove method-specific contraceptive targets nationwide. This effort was followed by India's approval, in 2000, of a national population policy articulating demographic goals but balancing the twin objectives of reducing fertility and promoting reproductive health, as was advocated in the Programme of Action adopted at the 1994 International Conference on Population and Development in Cairo (Pachauri, 2000).

Changes in incidence may also correspond to shifts in demographics. As couples age or reach their desired family size, the incidence of sterilization may change year by year, growing sometimes more quickly and sometimes more slowly. In a number of Latin American countries, for example, both the number of couples reaching their reproductive years and the number seeking to limit their family size have increased greatly since the 1960s (Merrick, 1994); these factors may explain the growth in incidence of sterilization, particularly female sterilization. The influence of demographic factors on sterilization incidence is well illustrated in the case of China. China's irregular age distribution, influenced by famines and changes in the legally permissible marriage age, produced dramatic changes in the number of new users of sterilization over the past several decades (Ross & Frejka, 1998).

Demographic and policy factors are generally considered to have less influence on incidence than program factors. Sterilization incidence fluctuates depending on the numbers of unsterilized couples in the relevant age-groups, which change from year to year. It can decline when the prevalence of use of other modern contraceptive methods is quite high, or when sterilization prevalence itself has risen to a high level (Ross & Potter, 1980; Ross et al., 1985), as in countries such as India, Sri Lanka, and Thailand. Findings from a recent sterilization assessment in Bangladesh show that policy, program, and management factors all had an impact on the decline in sterilization incidence (Begum et al., 2000).

A change in the method mix—i.e., in the range of modern contraceptive methods available to couples—can also influence the rate of acceptance of sterilization. For example, in many countries where the intrauterine device (IUD) has been made available and accessible, this long-acting method may have become a partial substitute for earlier sterilization. The IUD has played a significant role in some countries where sterilization has never caught on—for example, in many Middle Eastern countries, such as Egypt, Jordan, Syria, and Turkey. In Indonesia, Norplant implants have had the same effect. The injectable hormonal contraceptive Depo-Provera has also become a popular method, perhaps especially in countries where social acceptance of family planning may be limited, where clandestine use (i.e., women's use of a method without their partner's knowledge) is more prevalent, or where fertility preferences reinforce a high demand for reversible family planning methods.

**Table 2.1. Average five-year incidence of female and male sterilization per 100 women of reproductive age (15–49) who were ever in union, by selected countries, year, and source of data**

Country/year/source	Female sterilization	Male sterilization
Bangladesh, 1987 (DHS)	2.2*	0.5
Bangladesh, 1993–1994 (DHS)	0.4	0.0
Bangladesh, 1996–1997 (DHS)	0.2	md
Belize, 1991 (CDC)†	1.7	<0.1
Bolivia, 1989 (DHS)	0.4	0.0
Bolivia, 1993–1994 (DHS)	0.4	0.0
Bolivia, 1998 (DHS)	0.5	0.0
Brazil, 1986 (DHS)†	3.0	0.1
Brazil, 1991 (DHS)‡	3.3	0.0
Brazil, 1996 (DHS)	2.5	0.3
Cape Verde, 1998 (CDC)	1.4	<0.1
Colombia, 1986 (DHS)	1.7	0.0
Colombia, 1990 (DHS)	1.7	0.1
Colombia, 1995 (DHS)	1.8	0.1
Costa Rica, 1993 (CDC)	1.6	<0.1
Dominican Republic, 1986 (DHS)	2.7	0.0
Dominican Republic, 1991 (DHS)	2.9	0.0
Dominican Republic, 1996 (DHS)	2.6	0.0
Ecuador, 1987 (DHS)	1.4	0.0
Ecuador, 1989 (CDC)	1.4	0.0
Ecuador, 1994 (CDC)	1.5	0.0
Ecuador, 1999 (CDC)	1.6	0.0
Egypt, 1988 (DHS)	0.1	0.0
Egypt, 1992 (DHS)	0.1	0.0
Egypt, 1995–1996 (DHS)	0.1	0.0
El Salvador, 1985 (DHS)	3.0	0.0
El Salvador, 1988 (CDC)†	2.5	0.0
El Salvador, 1993 (CDC)	2.0	0.0
El Salvador, 1998 (CDC)	1.9	0.0
Ghana, 1988 (DHS)	0.0	0.0
Ghana, 1993 (DHS)	0.1	0.0
Guatemala, 1987 (DHS)†	1.0	0.1
Guatemala, 1995 (DHS)	1.0	0.1
Honduras, 1996 (CDC)	1.5	0.0
India, 1992–1993 (DHS)	1.8	0.1
Indonesia, 1987 (DHS)	0.3	0.0
Indonesia, 1991 (DHS)	0.2	0.0
Indonesia, 1994 (DHS)	0.2	0.1
Indonesia, 1997 (DHS)	0.2	0.0
Jamaica, 1997 (CDC)	0.8	0.0
Jordan, 1990 (DHS)§	0.5	0.0
Kenya, 1989 (DHS)	0.0	0.0
Kenya, 1993 (DHS)	0.7	0.0
Kenya, 1998 (DHS)	0.4	0.0
Mauritius, 1985 (CDC)	0.5	0.0
Mauritius, 1991 (CDC)†	0.7	0.0

(cont'd.)

**Table 2.1. Average five-year incidence of female and male sterilization per 100 women of reproductive age (15–49) who were ever in union, by selected countries, year, and source of data (*cont'd.*)**

Country/year/source	Female sterilization	Male sterilization
Mexico, 1987 (DHS)	1.9	0.1
Morocco, 1987 (DHS)	0.2	0.0
Morocco, 1992 (DHS)	0.2	0.0
Namibia, 1992 (DHS)	0.7	0.0
Nepal, 1996 (DHS)	1.0	0.4
Nicaragua, 1992–1993 (CDC)	1.6	0.0
Nicaragua, 1998 (DHS)	2.5	0.0
Panama, 1984 (CDC)	2.7	0.0
Paraguay, 1987 (CDC)	0.4	0.0
Paraguay, 1990 (DHS)	0.8	0.0
Paraguay, 1995–1996 (CDC)	0.5	0.0
Paraguay, 1998 (CDC)	0.9	0.0
Peru, 1986 (DHS)	0.5	0.0
Peru, 1991–1992 (DHS)	0.6	0.0
Peru, 1996 (DHS)	0.8	0.0
Philippines, 1993 (DHS)	0.7	0.0
Philippines, 1998 (DHS)	0.5	0.0
Puerto Rico, 1995–1996 (CDC)	2.4	md
Romania, 1999 (CDC)†	0.1	0.0
Sri Lanka, 1987 (DHS)	2.2	0.5
Swaziland, 1988 (CDC)	0.4	md
Tanzania, 1991–1992 (DHS)	0.3	0.0
Tanzania, 1996 (DHS)	0.2	0.0
Thailand, 1987 (DHS)	1.9	0.5
Trinidad and Tobago, 1987 (DHS)	0.8	0.0
Tunisia, 1988 (DHS)	1.1	0.0
Turkey, 1993 (DHS)	0.3	0.0
Ukraine, 1999 (CDC)†	0.1	0.0
United States, 1988 (NSFG)	8.4	md
United States, 1995 (NSFG)	6.5	md
Zambia, 1992 (DHS)	0.2	0.0
Zambia, 1996 (DHS)	0.2	0.0
Zimbabwe, 1988–1989 (DHS)	0.2	0.0
Zimbabwe, 1994 (DHS)	0.3	0.0

\* Meaning 0.4 sterilizations per 100 ever-married women per year.

† Data refer to ages 15–44.

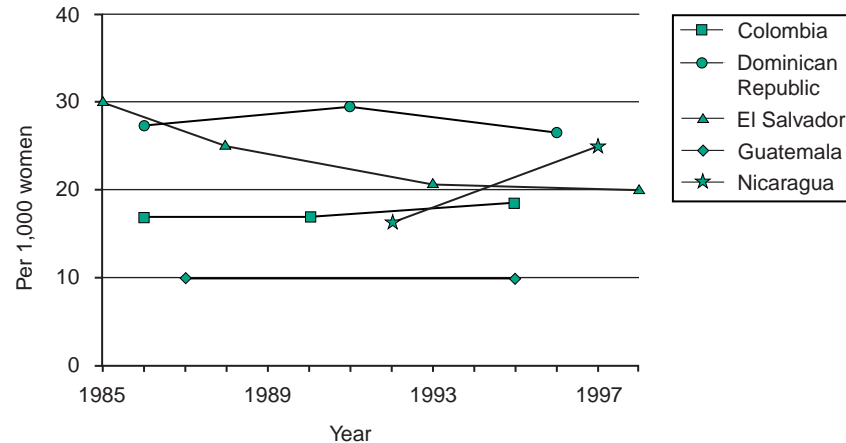
‡ Data are limited to Northeastern Brazil.

§ Excludes the West Bank.

|| Data are not weighted.

Notes: md=missing data. Data included here were generated at the request of EngenderHealth by Measure-DHS+ and by the Division of Reproductive Health, CDC.

Figure 2.1. Five-year average incidence of female sterilization per 1,000 women of reproductive age who were ever in union, selected Latin American countries, 1985–1998



### Incidence of female sterilization

Sterilization users (both new and continuing) are still overwhelmingly female (Ross, Hong, & Huber, 1985). (Chapters 1 and 5 explore some of the supply and demand issues that may explain the more widespread use and greater acceptance of female sterilization.)

As shown in Table 2.1, the highest average incidence rates are found in Latin America and Caribbean, where female sterilization has been the leading family planning method for decades. Brazil, the Dominican Republic, Nicaragua, Panama, and Puerto Rico all have female sterilization acceptance rates of 2–3% per year. Incidence is also high in El Salvador and Mexico (1.9%) and moderately high in several other Latin American countries. In these countries, interest in female sterilization is high, as is the availability of the method, thus contributing to relatively high incidence rates.

Over time, no trend is identifiable in the region's overall average incidence of female sterilization (Figure 2.1). Despite fluctuations, the rate in the Dominican Republic remained above 2.5%. Incidence still is fairly stable in Guatemala and has increased minimally in Colombia. In this region, the most dramatic changes have taken place in Nicaragua, where average rates have risen from 1.6% to 2.5%, and in El Salvador, where average incidence has declined steadily since 1985 (from 3.0% to 1.9%).

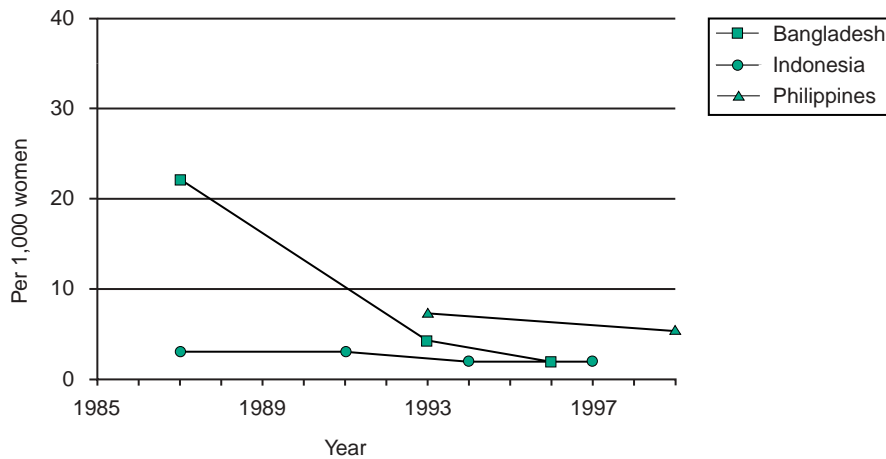
The approximate five-year average incidence of female sterilization in the United States, however, surpasses even rates found in Latin America and the Caribbean (Table 2.1). Although the U.S. rate has decreased since around 1988 (when it averaged 8.4% over a five-year period), the average 1995 rate of 6.5%<sup>3</sup> is higher than that of any other country. As in Latin America, the wide availability and historical popularity of female sterilization explain its high incidence in the United States.

Current incidence levels for parts of Asia and for Australia, Canada, and Western Europe are largely unavailable, but demographics, past history, and current prevalence levels (Supplement 2.5, page 55) suggest that Australia and many Western European countries may also have modest-to-high incidence levels of female sterilization (1–3%). For selected Asian countries for which data were available, Figure 2.2 suggests that incidence rates are falling in Bangladesh, Indonesia, and the Philippines.

In contrast to countries with moderate-to-high incidence of female sterilization, countries in Eastern Europe, the Middle East, and North Africa tend to have incidence rates of 0.5% or less. Historically, use of female sterilization has been rare in these regions because of the lack of available services, coupled in some cases with religious

<sup>3</sup> Data are from a special analysis by Anjani Chandra of 1995 NSFG data, National Center for Health Statistics, 2000.

Figure 2.2. Five-year average incidence of female sterilization per 1,000 women of reproductive age who were ever in union, selected Asian countries, 1985–1999



opposition to or legal restrictions on sterilization. In the Middle East and North Africa, only Jordan and Tunisia have estimated incidence rates of 0.5% or higher. In Central Asia and Eastern Europe, sterilization is much more rare than in neighboring countries to the west, but incidence is at measurable levels in Romania and Ukraine (0.1%).

Similarly, until relatively recently, few countries in Sub-Saharan Africa have made use of female sterilization. Incidence is highest in Cape Verde (1.4%), Mauritius (0.7%), Kenya and Swaziland (0.4%), Zimbabwe (0.3%), and Tanzania and Zambia (0.2%). Time trends indicate that over a five-year period, the average annual incidence has remained stable or has even decreased. Figure 2.3 presents trend data for four selected North African and Sub-Saharan African countries. Estimated annual incidence rates in Egypt, Morocco, and Tanzania have remained steady over a 10-year period, while Kenya had a large increase between 1989 and 1993 and then saw incidence level off. The increase in Kenya is attributable to program factors, mainly the introduction of minilaparotomy (Church & Geller, 1990). Despite the low incidence of female sterilization in Sub-Saharan Africa, sterilization prevalence is projected to rise in coming years in many of these countries (see Chapter 8), in part because of the future demographic momentum of the younger populations in Africa.

Figure 2.3. Five-year average incidence of female sterilization per 1,000 women of reproductive age who were ever in union, selected North African and Sub-Saharan African countries, 1985–1998

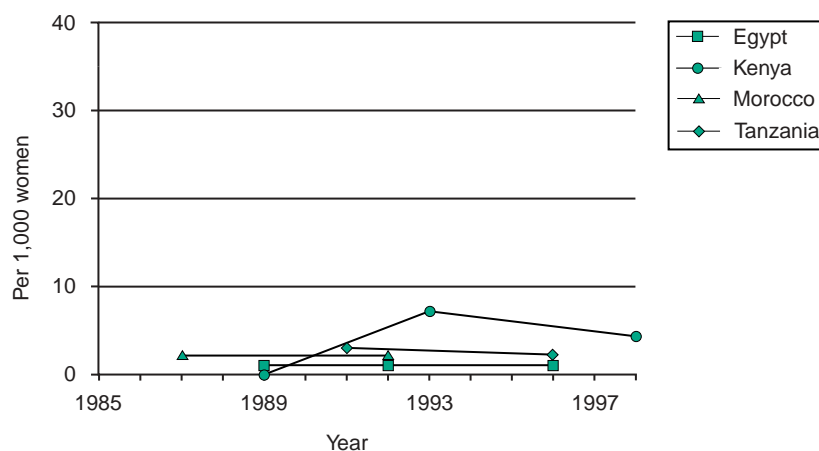
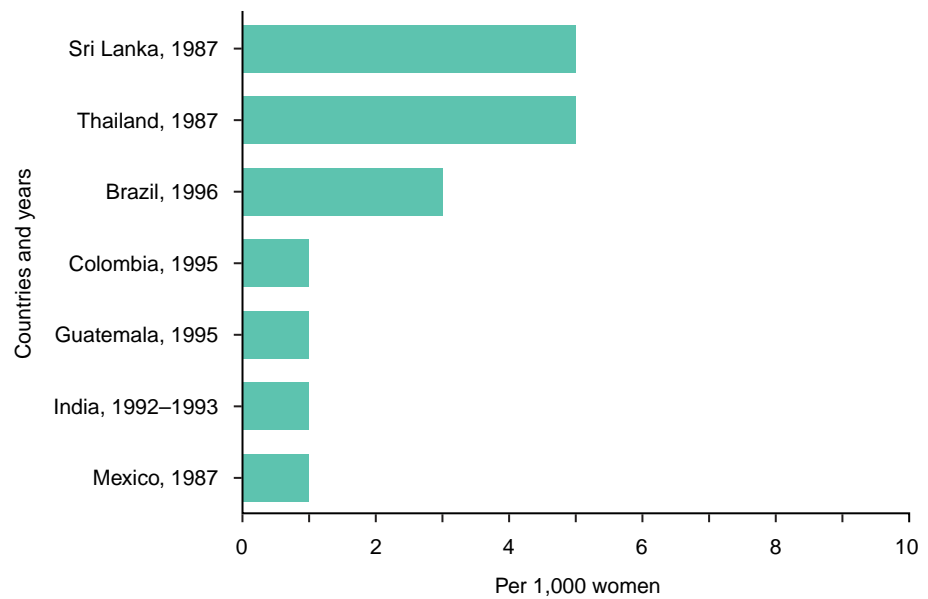


Figure 2.4. Five-year average incidence of male sterilization per 1,000 women of reproductive age who were ever in union, selected countries and years



### Incidence of male sterilization

Data on the incidence of vasectomy are difficult to obtain, as vasectomy is neither widely available nor commonly used in many countries. However, while sterilization use is greatly weighted toward female sterilization, Ross, Hong, and Huber (1985) noted that “there are significant breaks in the pattern.” Data for the past 15–20 years reveal that in some countries male sterilization contributes to overall prevalence and incidence levels for sterilization and represents an important family planning method.

As shown in Figure 2.4, moderately high estimates of vasectomy incidence are seen in Sri Lanka and Thailand (5 per 1,000 each) over the five years prior to 1987. These countries have a fairly well-developed family planning and sterilization program that includes vasectomy. In contrast, incidence in India remains low but measurable, at an estimated five-year average of 1 per 1,000 in 1992–1993. Acceptance of vasectomy has been less in Latin America: Brazil has the highest incidence in the region, an average of 3 per 1,000 for the five years prior to the most recent survey; Colombia, Guatemala, and Mexico average 1 per 1,000. Worldwide, little change has occurred over time in the average rate of vasectomy (Supplement 2.4), although in Bangladesh five-year incidence levels declined substantially.

Although vasectomy incidence data for China and the Republic of Korea were not available for this review, these countries have the highest vasectomy prevalence rates in Asia, and it is likely that vasectomy incidence is similarly high. Incidence data for Hong Kong also were not available, but prevalence data (Supplement 2.2) suggest that vasectomy is also popular there.

In the United States, estimates for 1991 and 1995 show vasectomy incidence to be relatively stable at 1.0% (or 10 per 1,000 men aged 25–49) (Magnani et al., 1999). In Canada, New Zealand, and the United Kingdom, where male sterilization’s prevalence is quite high relative to other developed countries, vasectomy incidence is also likely to be very high.

### Prevalence

Patterns of sterilization prevalence are similar to those of incidence. However, as noted earlier, data on prevalence represent the cumulative number of sterilization users, as a



proportion of the population of reproductive age currently in union. (Because these data are easier to obtain than are incidence data, we are able to present prevalence information for a much larger number of countries.)

The most recent data on the prevalence of sterilization (both female and male) show that levels are highest in Asia, Latin America and the Caribbean, North America, Oceania, and selected countries in Western Europe (Supplement 2.5). Where sterilization prevalence is relatively high, between one-fourth and one-half of all couples use the method. The countries and territories where the prevalence of female and male sterilization is highest (Table 2.2) include Puerto Rico (49%), the Republic of Korea (47%), Canada and China (46%), Brazil (43%), the Dominican Republic (41%), the United States (39%), Australia (38%), Panama (34%), and New Zealand (33%).

In much of Africa and the Middle East and in parts of Eastern Europe, the prevalence of both female and male sterilization is far lower (less than 2%). The biggest exception is South Africa (at 18%). In addition, nations such as Botswana, Cape Verde, Kenya, Mauritius, Namibia, and Swaziland now have sterilization prevalence rates of 5% or higher. The introduction of minilaparotomy services into family planning programs in Sub-Saharan Africa may account for some of this increase in use (Church & Geller, 1990).

Four factors that affect prevalence are age at sterilization, the historical availability of sterilization in a country, incidence rates, and continuation (Ross, 1992; Rutenberg & Landry, 1993). Many countries with high prevalence are generally characterized as having more established sterilization programs (Rutenberg & Landry, 1993). In comparison, those with lower prevalence—for example, countries in Africa, Eastern Europe,

**Table 2.2. Twenty countries with the highest total sterilization prevalence (female and male) among women who are married or in union, by country and year of survey**

Country/date	Prevalence (%)
Puerto Rico, 1995–1996	48.7
Korea, Republic of, 1991	47.3
China, 1992	46.1
Canada, 1995	46.0
Brazil, 1996	42.7
Dominican Republic, 1996	41.0
United States, 1995	38.7
Australia, 1986	38.1
Panama, 1984	33.5
New Zealand, 1995	33.0
El Salvador, 1998	32.4
United Kingdom, 1993	32.0
India, 1992–1993	30.7
Mexico, 1995	27.3
Sri Lanka, 1993	27.2
Nicaragua, 1998	26.6
Colombia, 1995	26.4
Hong Kong, 1987	23.8
Thailand, 1993	22.6
Ecuador, 1999	22.5

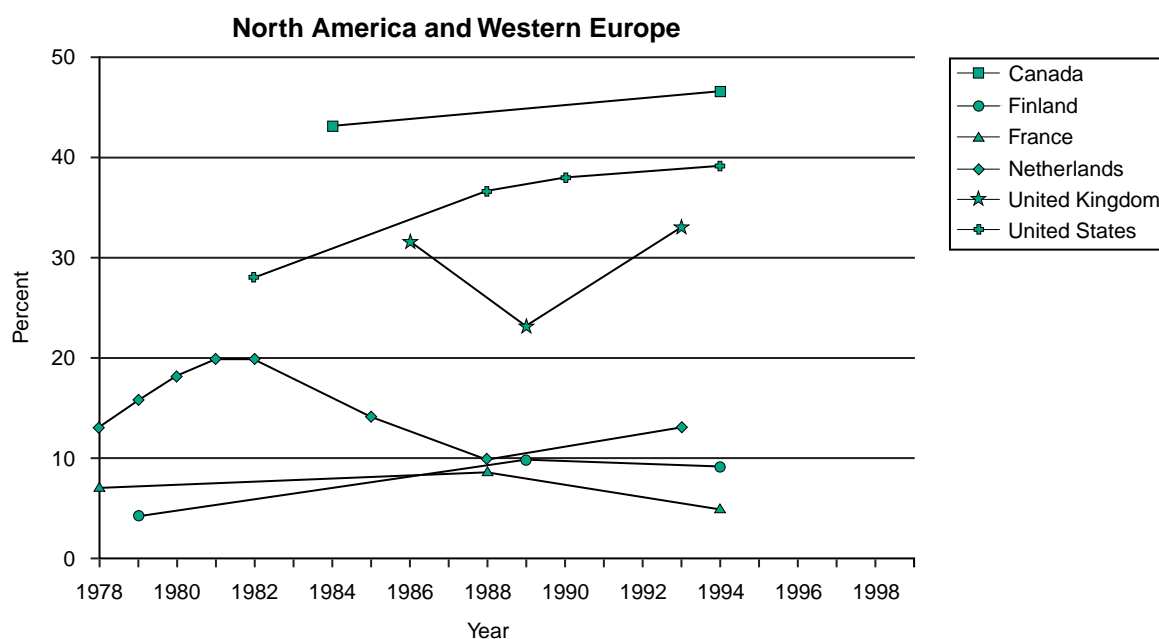
and the Middle East—tend to have newer programs, and legal restrictions may bar establishment of formal sterilization programs (see Chapter 4).

Another factor that may result in differences in prevalence is age at sterilization. In much of Latin America, women who choose sterilization do so at younger ages than women in Africa (see Chapter 3). As noted above, Asia and Latin America are also regions with comparatively high sterilization incidence, which contributes to high prevalence. Lastly, methodologies used in designing surveys in developed and developing countries may also influence reported rates; surveys conducted in developing countries tend to include women aged 45–49, whereas in developed countries the upper cutoff is usually set at age 44 (UN Population Division, 1999).

In 1985, Ross, Huber, and Hong examined survey data on sterilization for a previous 10-year period and reported a “rapid, historic, and unprecedented movement toward permanent contraception, in a diversity of settings.” They identified Asia and Latin America as regions with high levels of sterilization prevalence. Puerto Rico and the United States had the highest levels (46% and 39%, respectively, including hysterectomies), followed by Panama (30%), the Republic of Korea (28%), China (25%), and Thailand (23%). Costa Rica, the Dominican Republic, El Salvador, Hong Kong, India, Singapore, Sri Lanka, and Taiwan had high rates, ranging from 18% to 22%. In Western Europe, the highest levels of sterilization prevalence stood at 20% in the Netherlands and 16% in England and Wales combined.

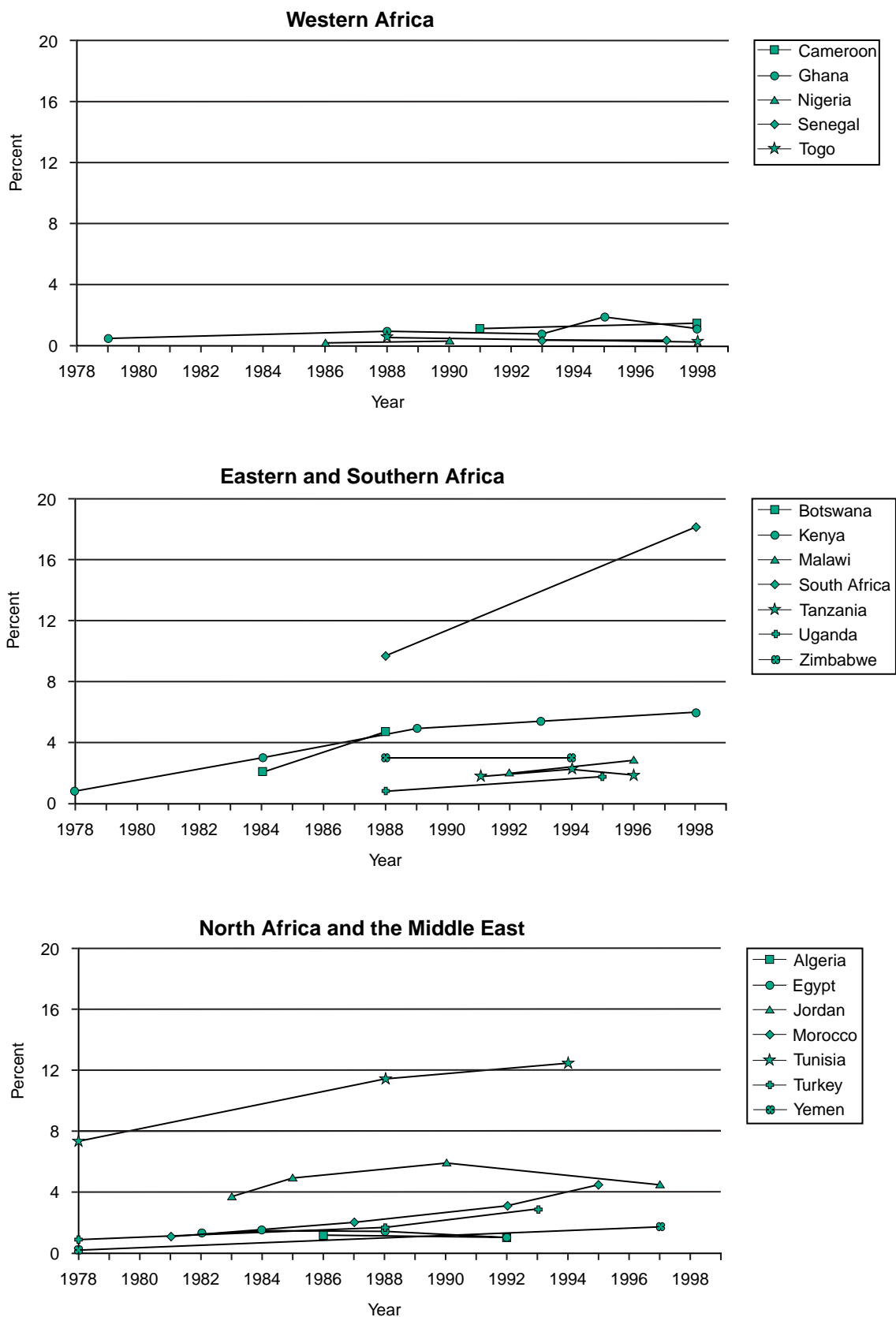
Many regional patterns noted in 1985 have remained the same. Asia, Latin America, and parts of North America and Western Europe still have some of the highest prevalence. In fact, since 1985, sterilization prevalence has continued to grow in many of the countries (Figure 2.5). The largest increases have taken place in Brazil and the Dominican Republic. In these countries, as well as in Colombia, Mexico, and Nicaragua, prevalence has increased by at least eight percentage points within a 10-year period. For the most part, these five countries are characterized by high acceptance rates and young age at sterilization (less than 30), which may contribute to these changes. Rates have also increased in China, where prevalence now stands at 46%. High acceptance rates (in China’s case, a product of its one-child policy) and decreasing age at sterilization in most of these countries may explain these trends.

Figure 2.5. Total prevalence of sterilization among women of reproductive age who were ever in union, selected countries, 1978–1999



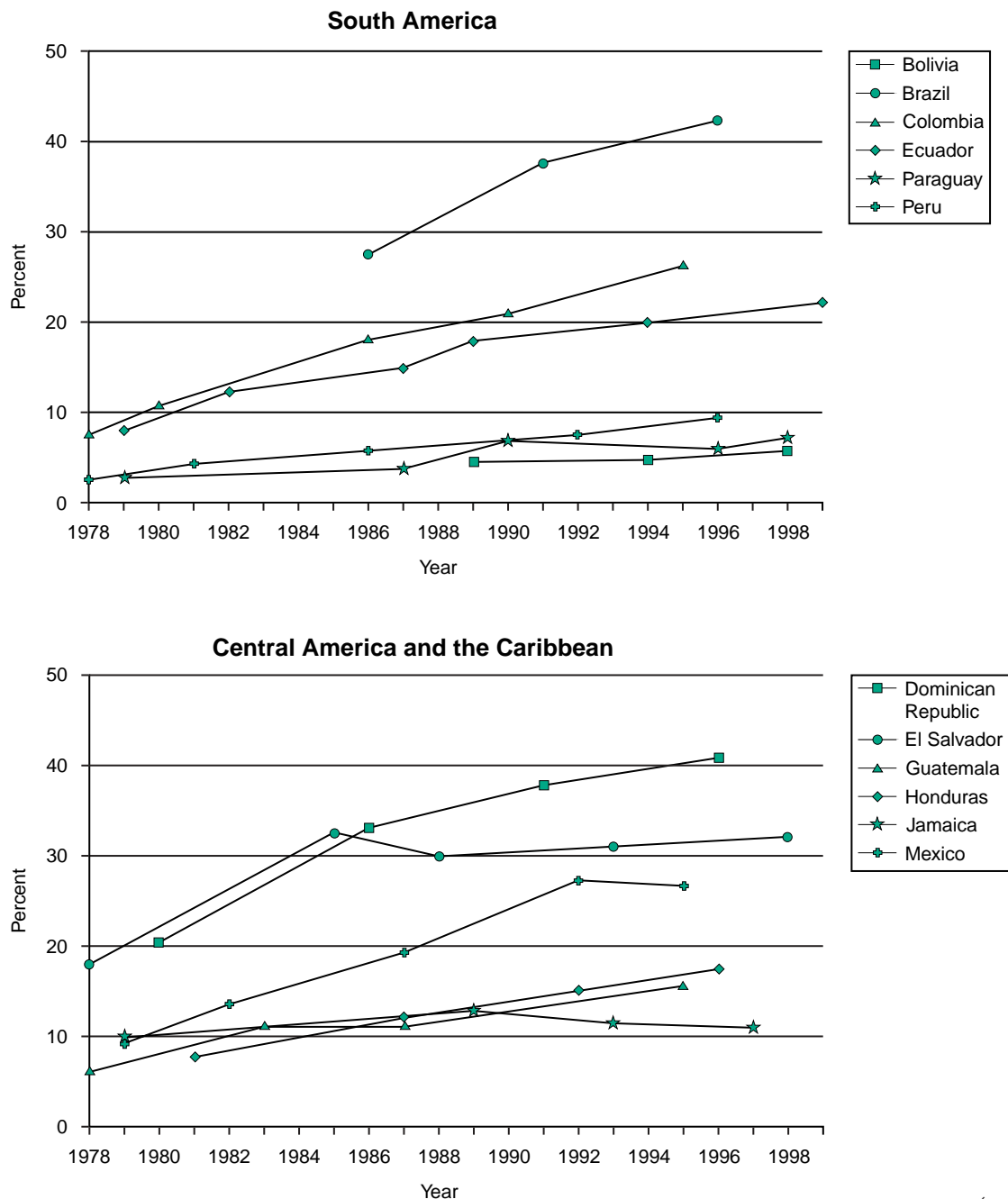
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Figure 2.5. Total prevalence of sterilization among women of reproductive age who were ever in union, selected countries, 1978–1999 (cont'd.)



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Figure 2.5. Total prevalence of sterilization among women of reproductive age who were ever in union, selected countries, 1978–1999 (*cont'd.*)

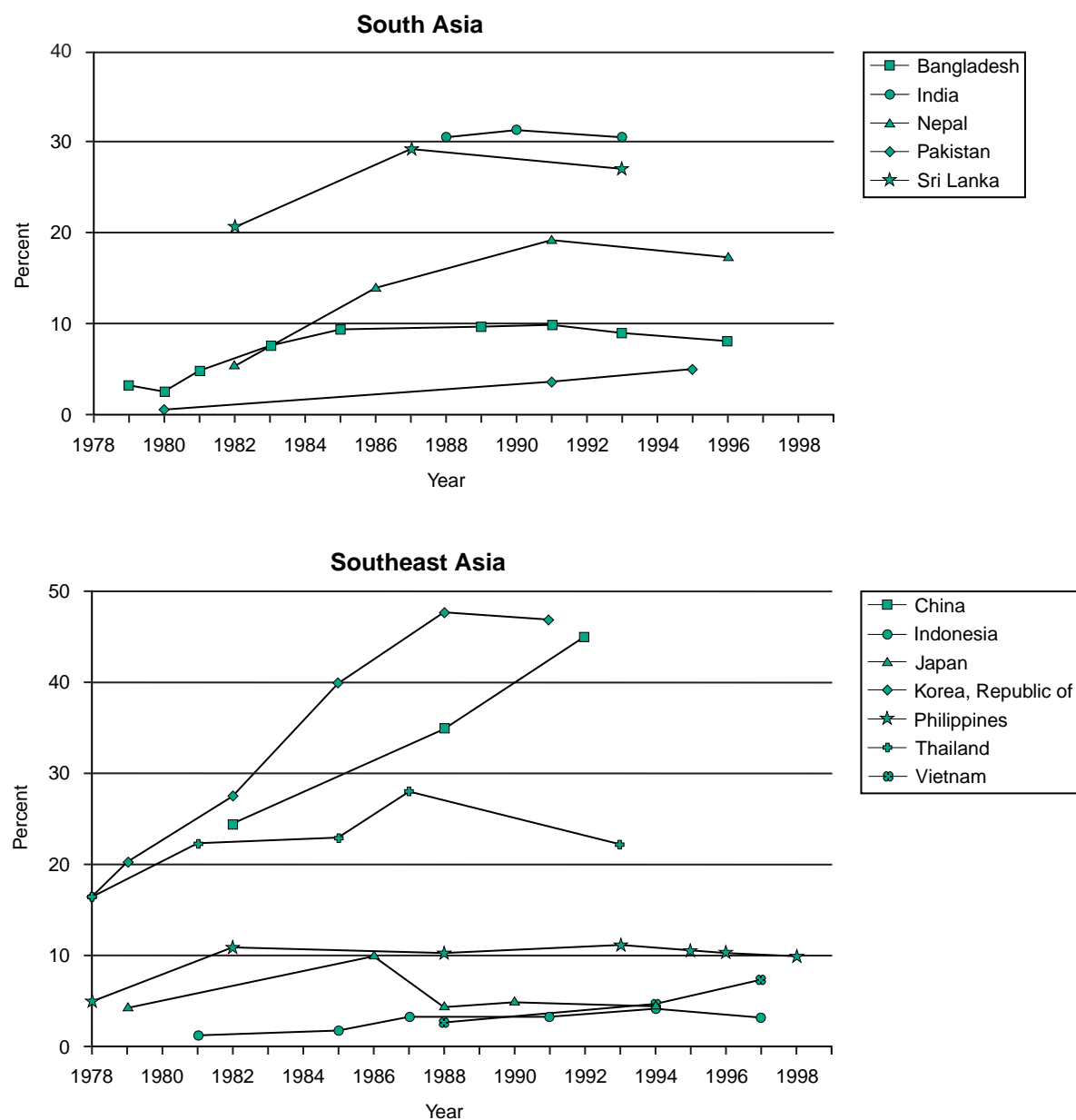


(*cont'd.*)

Smaller increases can be observed in a number of North African and Sub-Saharan African nations: In Kenya, Malawi, Mauritius, Morocco, Namibia, Tunisia, and Uganda, increases ranged from 0.5 to five percentage points between about 1985 and 1998. Lower acceptance of sterilization, older age at sterilization, and less-established programs are some characteristics associated with lower sterilization use in many of these countries.

Sterilization prevalence has also decreased in a number of countries. The largest occurred in Japan (about six percentage points) over an eight-year period. Low acceptance, brought on by restrictive policies for sterilization, high reliance on abortion, high re-

Figure 2.5. Total prevalence of sterilization among women of reproductive age who were ever in union, selected countries, 1978–1999 (*cont'd.*)



liance on condoms, and an aging population may explain low and declining sterilization prevalence in Japan (Turner, 1993). Slight decreases (of 1–2 percentage points) in total sterilization prevalence have taken place in Jamaica, the Philippines, and Sri Lanka. Such decreases suggest that couples are using sterilization less and other family planning methods more. Declines have also been noted in Finland (0.4 percentage points) and in France (3.8 percentage points). In Bangladesh, Ghana, and the Philippines, sterilization prevalence has fluctuated, in some cases falling back to levels that are similar to or slightly higher than those of the early 1980s. In Bangladesh, a rise in overall contraceptive prevalence relative to the decrease in sterilization prevalence suggests greater use of alternative family planning methods. After sterilization prevalence increased sharply in India, as a result of aggressive governmental campaigns (from 21% to 31% over a six-year period), it has now settled at roughly 31%.

## Prevalence of female sterilization

The prevalence of female sterilization is highest in Latin America and parts of Asia. Puerto Rico, the Dominican Republic, and Brazil have the highest rates anywhere, at 45%, 41%, and 40%, respectively (Table 2.3). Moreover, because the prevalence of male sterilization is extremely low in these countries, their high levels of overall sterilization prevalence are usually a direct product of high levels of female sterilization. High acceptance rates, a comparatively low age at sterilization, and the broad availability of services all contribute to the high prevalence of female sterilization. These factors tend to be less common in parts of Africa, Eastern Europe, and the Middle East, where sterilization prevalence is lower. Other countries with comparatively high levels of female sterilization include China (36%), the Republic of Korea (35%), Panama (33%), and El Salvador (32%). (No recent information is available on the prevalence of female sterilization in Mexico; however, given relatively high past levels of sterilization and overall low use of vasectomy, we infer that female sterilization prevalence is higher than 25% there.)

Because female sterilization contributes greatly to overall sterilization prevalence in many countries, it mirrors many of the changes that have occurred in overall prevalence. For example, female sterilization has grown mostly in China and Latin America, with smaller increases noted throughout Africa. Use of female sterilization has increased in Australia, Belgium, New Zealand, Norway, and the United States, often by 5–10 percentage points; however, compared with trends in Latin America, these increases have occurred less rapidly. In their review of sterilization data in Scotland, Hunt and Annan-

**Table 2.3. Twenty countries with the highest prevalence of female sterilization among women who are married or in union, by country and year of survey**

Country/date	Prevalence (%)
Puerto Rico, 1995–1996	45.2
Dominican Republic, 1996	40.9
Brazil, 1996	40.1
China, 1992	35.9
Korea, Republic of, 1991	35.3
Panama, 1984	33.1
El Salvador, 1998	32.4
Canada, 1995	29.8
Australia, 1986	27.7
India, 1992–1993	27.3
Mexico, 1995*	27.3
Nicaragua, 1998	26.1
Colombia, 1995	25.7
United States, 1995	23.8
Sri Lanka, 1993	23.5
Hong Kong, 1987	22.9
Ecuador, 1999	22.5
Cuba, 1987	22.0
Costa Rica, 1993	20.0
Thailand, 1993	19.8

\* Prevalence data are not available by type of sterilization (male vs. female). We assume that the prevalence of male sterilization is 1% or less.

dale (1990) speculated that concern over hormonal methods, coupled with a low tolerance for contraceptive failure and prior unsatisfactory experiences with contraceptive methods, led to higher acceptance and use of sterilization. The same may be true in some other developed countries.

Decreases in the prevalence of female sterilization have also been observed in a few other countries, such as in Bangladesh, France, India, Japan, the Republic of Korea, and Thailand. Reasons for these changes may include greater interest in alternative methods (in Bangladesh, the Republic of Korea, and Thailand), changes in government policies or incentive programs (Bangladesh and India), and aging populations (France and Japan).

### Prevalence of male sterilization

The prevalence of male sterilization is highest in parts of Asia, North America, Oceania, and Western Europe. Specifically, Canada, New Zealand, the United Kingdom, and the United States have the highest rates, ranging from about 15% to 18% (Table 2.4). China and the Republic of Korea have the highest levels in Asia, at 10% and 12%, respectively. Most of these countries are characterized as having well developed sterilization programs, including programs for vasectomy. In much of Africa, Eastern Europe, and Latin America, male sterilization rarely exceeds 1%.

Figure 2.6 (page 33) illustrates that the level of male sterilization is lower than that of female sterilization in all countries except the United Kingdom (18% vs. 14%), the Netherlands (9% vs. 4%), Bhutan (8% vs. 3%), and New Zealand (18% vs. 15%). Ross et al. (1985) suggest that the improved surgical technology of the female sterilization procedure and the lack of institutional motivation to establish programs for men explain

**Table 2.4. Twenty countries with the highest prevalence of male sterilization among women who are married or in union, by country and year of survey**

Country/date	Prevalence (%)
New Zealand, 1995	18.0
United Kingdom, 1993	18.0
Canada, 1995	16.2
United States, 1995	14.9
Korea, Republic of, 1991	12.0
Australia, 1986	10.4
China, 1992	10.2
Netherlands, 1993	9.0
Switzerland, 1995	8.3
Bhutan, 1994	8.0
Nepal, 1996	5.4
Denmark, 1988	5.0
Norway, 1988–1989	4.3
Sri Lanka, 1993	3.7
Puerto Rico, 1995–1996	3.5
India, 1992–1993	3.4
Thailand, 1993	2.8
Brazil, 1996	2.6
Guatemala, 1995	1.5
Bangladesh, 1996–1997	1.1

low acceptance rates for vasectomy. In addition, gender differences in sterilization prevalence may also be attributed to antipathy and poor information about vasectomy. (Further discussions of these factors can be found in Chapters 1 and 5.)

Since the late 1970s and early 1980s, male sterilization prevalence has grown in Belgium, Canada, China, Norway, the Republic of Korea, and the United States.<sup>4</sup> Minor fluctuations also have been noted in much of Asia.

Use of male sterilization has also increased, albeit by smaller increments, in countries such as Brazil, Colombia, and Guatemala. Educational and mass media promotional campaigns in these and other countries have established the existence of a market for vasectomy (Atkins & Jezowski, 1983; Liskin, Benoit, & Blackburn, 1992; Lynam et al., 1993; Vernon, 1996). Experience has shown that where providers and the media have promoted vasectomy and where quality services are made available, clients are drawn to services and use increases (Bertrand et al., 1987; Haws et al., 1997; Kincaid et al., 1996; Kiragu et al., 1995; Landry & Ward, 1997; Muhondwa & Rutenberg, 1997). In addition, overall numbers have been low in most areas because of what are termed “provider determinants,” such as the reluctance of national programs to establish widespread male services and to publicize them adequately (Kiragu et al., 1995; Ross et al., 1985), and the negative attitudes of individual providers toward vasectomy provision (Landry & Ward, 1997; Wilkinson et al., 1996).

## Current Numbers of Users

Most of the world’s sterilization users are found in Asia (Figure 2.7, page 34), particularly China and India. Combined, China and India account for nearly 75% of the world’s total users (not shown). In comparison, Africa and the Middle East have about 2.2 million and 1.5 million sterilization users, respectively, or 1.6% of all users worldwide. Supplement 2.2 lists the number of sterilization users by country.

It should come as no surprise that China and India account for the highest number of sterilization users: Both countries have large overall populations and relatively high sterilization prevalence (46% and 31%, respectively), producing a powerful combined effect on the numbers of users (Table 2.5, page 34). Countries and territories such as the Republic of Korea and Puerto Rico have higher total prevalence levels (47% and 49%, respectively) than China and India, but the overall number of women in union in these areas is considerably lower. As a result, the numbers of sterilization users in both represent little more than 2% of the worldwide estimate. In Africa and the Near East, the small number of sterilization users can be attributed primarily to the low prevalence of sterilization.

With few exceptions, the number of sterilization users has increased across countries since the 1985 review. Such increases have been especially marked in Brazil, China, and Colombia, where the number of current users is about six, three, and four times greater, respectively, than levels noted in the 1980s; in general, increases in other countries have been relatively less sizable. As previously mentioned, the rising prevalence of sterilization may account in part for these increases, but the overall populations of these countries also appear to have grown considerably, with an ever more youthful population structure (Merrick, 1994). In comparison, decreases have been noted in a few countries in Africa (Côte d’Ivoire and Ghana) and Europe (Denmark and France).

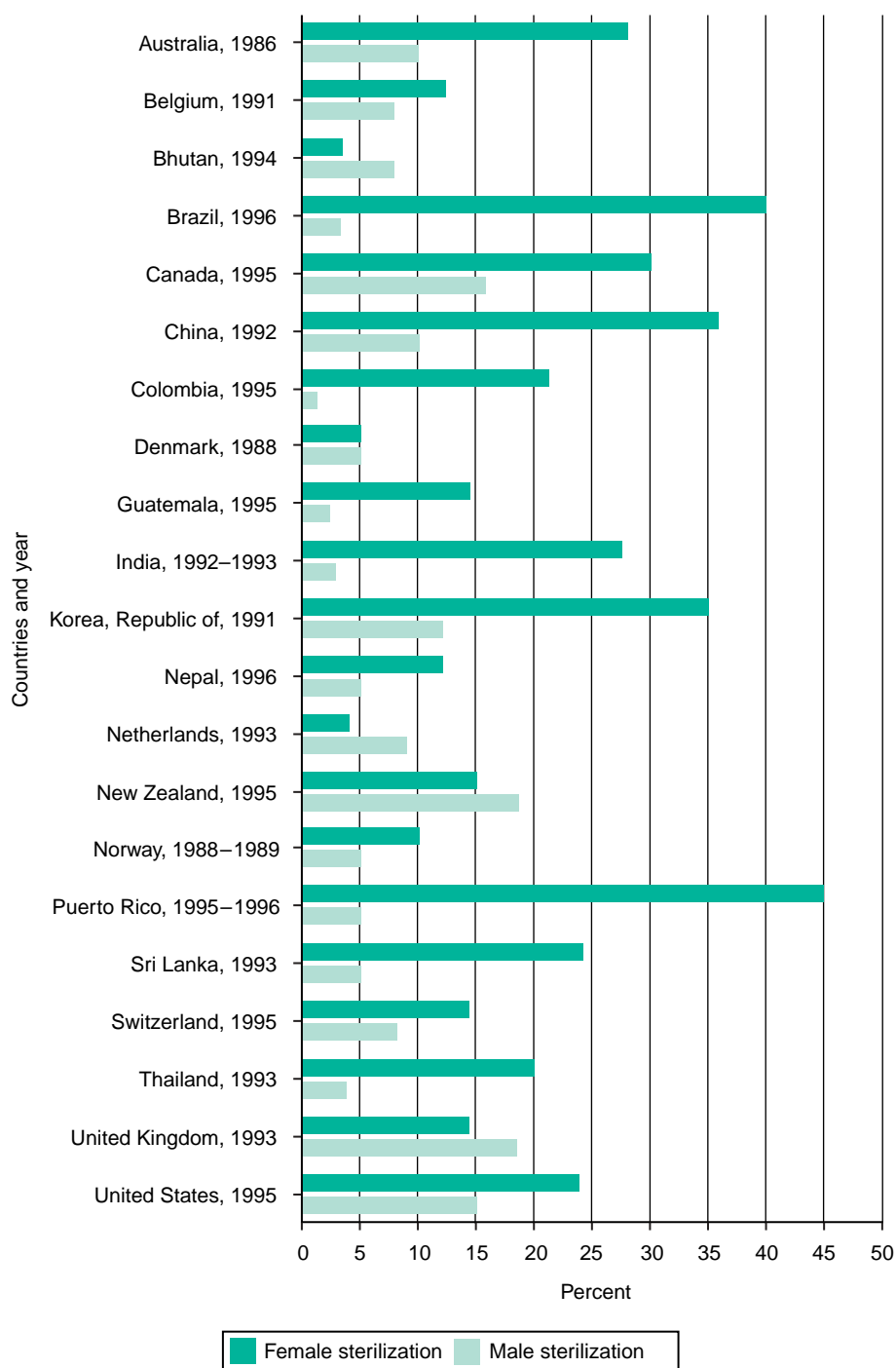
## Number of female sterilization users

In general, users of female sterilization outnumber users of male sterilization. Worldwide totals show approximately 180 million female sterilization users and almost 43

<sup>4</sup> In these six countries, vasectomy prevalence prior to 1985 was 0.0% in Belgium (1976), 8.7% in Canada (1984), 6.9% in China (1982), 1.7% in Norway (1977), 5.2% in the Republic of Korea (1982), and 10.4% in the United States (1982) (Ross et al., 1985).



Figure 2.6. Prevalence of female sterilization and male sterilization, selected countries, 1986–1996



million male sterilization users, a ratio of about four to one. Asia has the most users of female sterilization (147 million, or 82% of the world's total); most are concentrated in China (86 million) and India (48 million). Latin America and the Caribbean has the second-highest number of female sterilization users (about 15 million), followed by North America (excluding Mexico) and Western Europe combined, with 13 million; these two regions represent about 8% and 7% of the world's total, respectively.

Figure 2.7. Percentage distribution of sterilization users, by region

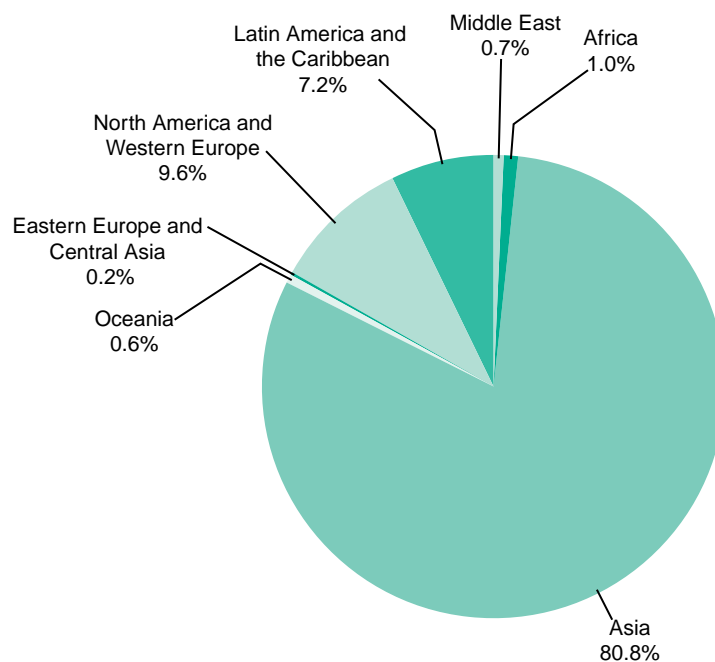


Table 2.5. Twenty countries with the highest total prevalence of sterilization and 20 countries with the highest total number of sterilization users, by country and year of survey

Prevalence	%	Users	No. (in millions)*
Puerto Rico, 1995–1996	48.7	China, 1992	110.13
Korea, Republic of, 1991	47.3	India, 1992–1993	54.49
China, 1992	46.1	United States, 1995	14.44
Canada, 1995	46.0	Brazil, 1996	11.44
Brazil, 1996	42.7	Korea, Republic of, 1991	3.78
Dominican Republic, 1996	41.0	United Kingdom, 1993	2.98
United States, 1995	38.7	Thailand, 1993	2.24
Australia, 1986	38.1	Canada, 1995	2.12
Panama, 1984	33.5	Bangladesh, 1996–1997	1.94
New Zealand, 1995	33.0	Colombia, 1995	1.37
El Salvador, 1998	32.4	Indonesia, 1997	1.19
United Kingdom, 1993	32.0	Philippines, 1998	1.11
India, 1992–1993	30.7	Pakistan, 1994–1995	1.07
Mexico, 1995	27.3	Australia, 1986	1.03
Sri Lanka, 1993	27.2	Iran, 1992	0.95
Nicaragua, 1998	26.6	South Africa, 1998	0.86
Colombia, 1995	26.4	Sri Lanka, 1993	0.79
Hong Kong, 1987	23.8	Vietnam, 1997	0.78
Thailand, 1993	22.6	Japan, 1994	0.75
Ecuador, 1999	22.5	Nepal, 1996	0.70

\* Number of users is calculated by multiplying sterilization prevalence (obtained through reproductive health surveys) by the number of women in union (obtained from United Nations surveys).

**Table 2.6. Relationship between levels of contraceptive prevalence and sterilization prevalence, and country examples**

Contraceptive prevalence	Sterilization prevalence	Sterilization prevalence as a % of contraceptive prevalence	Country examples
Low	Low	Low	Bolivia, Uganda
Low	High	High	Guatemala, Nepal
High	Low	Low	France, Vietnam
High	High	High	Brazil, Dominican Republic

## Number of male sterilization users

With regard to numbers, male sterilization users appear to be concentrated in Asia, North America, Oceania, and Western Europe. Because of the many vasectomy users in China (24 million), Asia accounts for 77% of all male sterilization users worldwide. Combined, North America, Oceania, and Western Europe contribute about 20% of vasectomy users.

## Sterilization's Share of Contraceptive Prevalence

Supplement 2.5 displays information on sterilization as a percentage of all contraceptive prevalence. This measure represents the degree to which permanent methods contribute to all family planning use in a country. Table 2.6 summarizes the different scenarios that have occurred with regard to this percentage, with some country examples.

In developing countries, longer-acting and highly effective clinic methods, such as female sterilization and the IUD, generally account for much of the method mix, a pattern very unlike that seen in more developed areas (UN Population Division, 1999).

Where total contraceptive use is high but sterilization prevalence is low, sterilization's share of the total is low (Table 2.6), showing that most people rely on family planning methods besides vasectomy and female sterilization. In France, for instance, contraceptive prevalence is 75%, but sterilization represents only a fraction of that total prevalence level, because most users rely instead on oral contraceptives (de Guilbert-Lantoine & Leridon, 1998).

In comparison, contraceptive users in countries such as Brazil and the Dominican Republic rely heavily on sterilization. In these countries, contraceptive prevalence is high (50% to 75%), and sterilization represents anywhere from 50% to 64% of the total. Where the sterilization percentage is high but the total is low, what little contraceptive use exists clearly consists mainly of sterilization. Bhutan, Guatemala, and Nepal are examples of countries in which overall contraceptive prevalence is comparatively low (less than 30%), but sterilization's share of prevalence is relatively high. The lack of availability of alternative methods and method preference are two factors that help explain this scenario.

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**Supplement 2.1. Number (in millions) of women of reproductive age currently in union who are using sterilization, by type of sterilization, according to region**

Region	Total	Male sterilization	Female sterilization
<b>Worldwide</b>	<b>222.359</b>	<b>42.580</b>	<b>179.779</b>
Asia	179.661	32.702	146.959
Oceania	1.248	0.372	0.876
Latin America and the Caribbean	15.999	0.793	15.206
North America and Western Europe	21.414	8.497	12.917
Eastern Europe and Central Asia	0.372	0.000	0.372
Middle East	1.482	0.104	1.378
Africa	2.183	0.112	2.071

**Supplement 2.2. Percentage and number of women of reproductive age currently in union who are using sterilization, by type of sterilization, according to region and country**

Country/year	Source	% using sterilization			No. of women in union* (in millions)	Total no. of users† (in millions)	No. of couples using male sterilization (in millions)	No. of couples using female sterilization (in millions)	Notes
		Total	Male	Female					
<b>Asia</b>						<b>179.865</b>	<b>32.702</b>	<b>146.959</b>	
Bangladesh, 1996–1997	DHS	8.7	1.1	7.6	22.3	1.940	0.245	1.695	1
Bhutan, 1994	UN/ESA	11.1	8.0	3.1	0.3	0.033	0.024	0.009	2
China, 1992	CDC	46.1	10.2	35.9	238.9	110.133	24.368	85.765	
Hong Kong, 1987	WP/98 Survey	23.8	0.9	22.9	1.0	0.238	0.009	0.229	
India, 1992–1993	DHS	30.7	3.4	27.3	177.5	54.493	6.035	48.458	3
Indonesia, 1997	DHS	3.4	0.4	3.0	34.9	1.187	0.140	1.047	
Japan, 1994	UN/ESA	4.1	0.7	3.4	18.4	0.754	0.129	0.626	
Korea, Republic of, 1991	UN/ESA	47.3	12.0	35.3	8.0	3.784	0.960	2.824	4
Lao People's Democratic Republic, 1993	UN/ESA	5.1	NA	5.1	0.7	0.036	NA	0.036	
Malaysia, 1988	UN/ESA	6.8	NA	NA	3.0	0.204	NA	NA	5
Mongolia, 1994	UN/ESA	0.9	0.3	0.6	0.4	0.004	0.001	0.002	
Myanmar, 1992	UN/ESA	5.5	1.8	3.7	6.8	0.374	0.122	0.252	
Nepal, 1996	DHS	17.5	5.4	12.1	4.0	0.700	0.216	0.484	
Pakistan, 1994–1995	UN/ESA	5.0	Z	5.0	21.3	1.065	NA	1.065	
Philippines, 1998	DHS	10.4	0.1	10.3	10.7	1.113	0.011	1.102	
Sri Lanka, 1993	UN/ESA	27.2	3.7	23.5	2.9	0.789	0.107	0.682	6
Thailand, 1993	UN/ESA	22.6	2.8	19.8	9.9	2.237	0.277	1.960	4
Vietnam, 1997	DHS	6.8	0.5	6.3	11.5	0.782	0.058	0.725	
<b>Oceania</b>						<b>1.248</b>	<b>0.372</b>	<b>0.876</b>	
Australia, 1986	WP/98 Survey	38.1	10.4	27.7	2.7	1.029	0.281	0.748	7
New Zealand, 1995	UN/ESA	33.0	18.0	15.0	0.5	0.165	0.090	0.075	7, 8
Papua New Guinea, 1996	UN/ESA	7.8	0.2	7.6	0.7	0.055	0.001	0.053	

(cont'd.)

Supplement 2.2. Percentage and number of women of reproductive age currently in union who are using sterilization, by type of sterilization, according to region and country (*cont'd.*)

Country/year	Source	% using sterilization			No. of women in union* (in millions)	Total no. of users† (in millions)	No. of couples using male sterilization (in millions)	No. of couples using female sterilization (in millions)	Notes
		Total	Male	Female					
<b>Latin America and the Caribbean</b>						<b>16.158</b>	<b>0.793</b>	<b>15.206</b>	
Antigua and Barbuda, 1988	WP/98 CPS	11.0	NA	11.0	NA	NA	NA	NA	4
Bahamas, 1988	WP/98 CPS	17.2	NA	17.2	NA	NA	NA	NA	4
Barbados, 1988	UN/ESA	10.7	0.3	10.4	NA	NA	NA	NA	
Belize, 1991	CDC	18.7	NA	18.7	NA	NA	NA	NA	4
Bolivia, 1998	DHS	6.5	Z	6.5	1.1	0.072	NA	0.072	
Brazil, 1996	DHS	42.7	2.6	40.1	26.8	11.444	0.697	10.747	
Colombia, 1995	DHS	26.4	0.7	25.7	5.2	1.373	0.036	1.336	
Costa Rica, 1993	CDC	21.0	1.3	19.7	0.5	0.105	0.007	0.099	
Cuba, 1987	UN/ESA	22.0	NA	22.0	1.9	0.418	NA	0.418	
Dominica, 1987	UN/ESA	12.6	NA	12.6	NA	NA	NA	NA	4
Dominican Republic, 1996	DHS	41.0	0.1	40.9	1.1	0.451	0.001	0.450	
Ecuador, 1999	CDC	22.5	NA	22.5	1.9	0.428	NA	0.428	
El Salvador, 1998	CDC	32.4	NA	32.4	0.9	0.292	NA	0.292	4, 9
Guatemala, 1995	DHS	15.8	1.5	14.3	1.5	0.237	0.023	0.215	
Haiti, 1994–1995	DHS	3.1	NA	3.1	1.1	0.034	NA	0.034	
Honduras, 1996	CDC	18.1	NA	18.1	0.8	0.145	NA	0.145	4
Jamaica, 1997	CDC	12.3	NA	12.3	0.5	0.062	NA	0.062	
Mexico, 1995	UN/ESA	27.3	NA	NA	14.6	0.160	NA	NA	8
Nicaragua, 1998	DHS	26.6	0.5	26.1	0.6	0.160	0.003	0.157	
Panama, 1984	CDC	33.5	0.4	33.1	0.4	0.134	0.002	0.132	4
Paraguay, 1998	CDC	8.0	Z	8.0	0.7	0.056	NA	0.056	4
Peru, 1996	DHS	9.7	0.2	9.5	3.4	0.330	0.007	0.323	
Puerto Rico, 1995–1996	CDC	48.7	3.5	45.2	0.5	0.244	0.018	0.226	
Saint Lucia, 1988	WP/98 CPS	8.6	Z	8.6	NA	NA	NA	NA	4
Saint Vincent and the Grenadines, 1988	WP/98 CPS	13.1	Z	13.1	NA	NA	NA	NA	4
Trinidad and Tobago, 1987	DHS	8.4	0.2	8.2	0.2	0.017	0.000	0.016	
<b>North America</b>						<b>16.551</b>	<b>6.303</b>	<b>10.248</b>	
Canada, 1995	UN/ESA	46.0	16.2	29.8	4.6	2.116	0.745	1.371	8
United States, 1995	VHS	38.7	14.9	23.8	37.3	14.435	5.558	8.877	4
<b>Western Europe</b>						<b>4.863</b>	<b>2.194</b>	<b>2.669</b>	
Belgium, 1991	UN/ESA	19.1	7.6	11.5	1.7	0.325	0.129	0.196	10, 11, 12
Denmark, 1988	UN/ESA	10.0	5.0	5.0	0.7	0.070	0.035	0.035	4, 13

(*cont'd.*)



Supplement 2.2. Percentage and number of women of reproductive age currently in union who are using sterilization, by type of sterilization, according to region and country (*cont'd.*)

Country/year	Source	% using sterilization			No. of women in union* (in millions)	Total no. of users† (in millions)	No. of couples using male sterilization (in millions)	No. of couples using female sterilization (in millions)	Notes
		Total	Male	Female					
<b>Western Europe (<i>cont'd.</i>)</b>									
Finland, 1994	WP/98 Survey	9.3	1.0	8.3	0.7	0.065	0.007	0.058	14
France, 1994	WP/98 Survey	4.9	0.3	4.6	8.8	0.431	0.026	0.405	
Germany, 1992	UN/ESA	0.9	NA	0.9	12.0	0.108	NA	0.108	15
Netherlands, 1993	WP/98 Survey	13.0	9.0	4.0	2.2	0.286	0.198	0.088	16
Norway, 1988–1989	WP/98 Survey	14.7	4.3	10.4	0.5	0.074	0.022	0.052	17
Spain, 1985	UN/ESA	4.6	0.3	4.3	6.7	0.308	0.020	0.288	18
Switzerland, 1995	WP/98 Survey	22.0	8.3	13.7	1.0	0.220	0.083	0.137	7, 19
United Kingdom, 1993	UN/ESA	32.0	18.0	14.0	9.3	2.976	1.674	1.302	20, 21
<b>Eastern Europe and Central Asia</b>						<b>0.487</b>	<b>0.000</b>	<b>0.372</b>	
Azerbaijan, 2001	CDC	1.2	Z	1.2	1.0	0.012	NA	0.012	4
Belarus, 1995	UN/ESA	0.8	Z	0.8	1.8	0.014	NA	NA	22
Czech Republic, 1993	CDC	2.7	NA	2.7	1.9	0.051	NA	0.051	4
Georgia, 1999	CDC	1.6	Z	1.6	0.7	0.012	0.000	0.012	
Hungary, 1993	WP/98 Survey	5.1	NA	NA	1.8	0.092	NA	NA	23
Kazakhstan, 1995	DHS	0.7	NA	0.7	3.0	0.021	NA	0.021	
Kyrgyz Republic, 1997	DHS	1.8	NA	1.8	NA	NA	NA	NA	
Latvia, 1995	WP/98 Survey	2.1	NA	NA	0.4	0.008	NA	NA	18
Moldova, 1997	CDC	3.4	NA	3.4	0.8	0.027	NA	0.027	2
Romania, 1999	CDC	2.5	Z	2.5	3.2	0.080	0.000	0.080	
Russia, 1996	CDC	2.0	NA	2.0	NA	NA	NA	NA	4, 24
Slovakia, 1991	WP/98 UN	4.0	Z	4.0	1.0	0.040	NA	0.040	4, 13
Slovenia, 1989	WP/98 Survey	0.2	NA	NA	NA	NA	NA	NA	4
Ukraine, 1999	CDC	1.4	Z	1.4	7.3	0.102	0.000	0.102	
Uzbekistan, 1996	DHS	0.7	NA	0.7	3.8	0.027	NA	0.027	
<b>Middle East</b>						<b>1.482</b>	<b>0.104</b>	<b>1.378</b>	
Bahrain, 1995	UN/ESA	7.1	1.1	6.0	0.1	0.007	0.001	0.006	8, 25
Iran, 1992	UN/ESA	8.5	0.9	7.6	11.2	0.952	0.101	0.851	4
Iraq, 1989	UN/ESA	1.4	NA	1.4	2.8	0.039	NA	0.039	25
Jordan, 1997	DHS	4.2	NA	4.2	0.7	0.029	NA	0.029	
Kuwait, 1987	UN/ESA	2.0	NA	2.0	0.3	0.006	NA	0.006	25, 26
Lebanon, 1996	WP/98 PAPCHILD	4.2	NA	4.2	0.5	0.021	NA	0.021	
Oman, 1995	UN/ESA	4.5	Z	4.5	0.3	0.014	NA	0.014	8, 25
Qatar, 1987	UN/ESA	4.5	NA	4.5	0.1	0.005	NA	0.005	26
Syria, 1993	WP/98 PAPCHILD	2.2	Z	2.2	2.1	0.046	NA	0.046	
Turkey, 1993	DHS	2.9	Z	2.9	11.1	0.322	NA	0.322	

*(cont'd.)*

Supplement 2.2. Percentage and number of women of reproductive age currently in union who are using sterilization, by type of sterilization, according to region and country (*cont'd.*)

Country/year	Source	% using sterilization			No. of women in union* (in millions)	Total no. of users† (in millions)	No. of couples using male sterilization (in millions)	No. of couples using female sterilization (in millions)	Notes
		Total	Male	Female					
<b>Middle East (<i>cont'd.</i>)</b>									
United Arab Emirates, 1995	UN/ESA	4.3	0.1	4.2	0.2	0.009	0.000	0.008	8, 25
Yemen, 1997	DHS	1.5	0.1	1.4	2.2	0.033	0.002	0.031	
<b>Sub-Saharan Africa</b>						<b>1.675</b>	<b>0.112</b>	<b>1.563</b>	
Benin, 1996	DHS	0.4	NA	0.4	1.0	0.004	NA	0.004	
Botswana, 1988	DHS	4.6	0.3	4.3	0.1	0.005	0.000	0.004	
Burkina Faso, 1992–1993	DHS	0.2	Z	0.2	1.8	0.004	NA	0.004	
Burundi, 1987	DHS	0.1	NA	0.1	0.9	0.001	NA	0.001	
Cameroon, 1998	DHS	1.5	NA	1.5	1.9	0.029	NA	0.029	
Cape Verde, 1998	CDC	12.8	Z	12.8	0.1	0.015	0.000	0.015	
Central African Republic, 1994–1995	DHS	0.4	NA	0.4	0.5	0.002	NA	0.002	
Chad, 1996–1997	DHS	0.2	Z	0.2	NA	NA	NA	NA	
Comoros, 1996	DHS	2.8	NA	2.8	0.1	0.003	NA	0.003	
Congo, Democratic Republic of (Kinshasa), 1991	UN/ESA	0.3	0.1	0.2	6.7	0.020	0.007	0.013	
Côte d'Ivoire, 1998–1999	DHS	0.1	NA	0.1	2.3	0.002	NA	0.002	
Eritrea, 1995–1996	DHS	0.3	NA	0.3	0.6	0.002	NA	0.002	
Ethiopia, 1990	UN/ESA	0.2	Z	0.2	9.2	0.018	NA	0.018	27, 28
Gambia, 1990	UN/ESA	0.4	Z	0.4	0.2	0.001	NA	0.001	
Ghana, 1998	DHS	1.3	Z	1.3	2.7	0.035	NA	0.035	
Guinea, 1992–1993	UN/ESA	0.1	Z	0.1	1.2	0.001	NA	0.001	
Kenya, 1998	DHS	6.2	NA	6.2	3.9	0.242	NA	0.242	
Lesotho, 1991–1992	UN/ESA	1.4	Z	1.4	0.2	0.003	NA	0.003	
Liberia, 1986	DHS	1.1	NA	1.1	0.3	0.003	NA	0.003	
Madagascar, 1997	DHS	1.0	Z	1.0	2.1	0.021	NA	0.021	
Malawi, 1996	DHS	2.5	NA	2.5	1.4	0.035	NA	0.035	
Mali, 1995–1996	DHS	0.3	NA	0.3	2.2	0.007	NA	0.007	
Mauritius, 1991	CDC	7.2	Z	7.2	0.2	0.014	NA	0.014	4
Mozambique, 1997	DHS	0.7	NA	0.7	3.0	0.021	NA	0.021	
Namibia, 1992	DHS	7.6	0.2	7.4	0.2	0.015	0.000	0.015	
Niger, 1998	DHS	0.1	NA	0.1	1.5	0.002	NA	0.002	
Nigeria, 1990	DHS	0.3	NA	0.3	19.1	0.057	NA	0.057	
Réunion, 1990	WP/98 Survey	5.1	Z	5.1	0.1	0.005	NA	0.005	
Rwanda, 1992	DHS	0.7	NA	0.7	0.7	0.005	NA	0.005	
Senegal, 1997	DHS	0.5	NA	0.5	1.4	0.007	NA	0.007	

(*cont'd.*)

**Supplement 2.2. Percentage and number of women of reproductive age currently in union who are using sterilization, by type of sterilization, according to region and country (cont'd.)**

Country/year	Source	% using sterilization			No. of women in union* (in millions)	Total no. of users† (in millions)	No. of couples using male sterilization (in millions)	No. of couples using female sterilization (in millions)	Notes
		Total	Male	Female					
<b>Sub-Saharan Africa (cont'd.)</b>									
South Africa, 1998	DHS	17.9	2.1	15.8	4.8	0.859	0.101	0.758	
Sudan (Northern), 1992–1993	UN/ESA	0.9	Z	0.9	4.2	0.038	NA	0.038	
Swaziland, 1988	CDC	5.0	0.3	4.7	0.1	0.005	0.000	0.005	29
Tanzania, 1996	DHS	1.9	NA	1.9	4.6	0.087	NA	0.087	
Togo, 1998	DHS	0.4	NA	0.4	0.7	0.003	NA	0.003	
Uganda, 1995	DHS	1.4	NA	1.4	2.9	0.041	NA	0.041	
Zambia, 1996	DHS	2.0	Z	2.0	1.2	0.024	NA	0.024	
Zimbabwe, 1994	DHS	2.5	0.2	2.3	1.6	0.040	0.003	0.037	
<b>North Africa</b>						<b>0.508</b>	<b>0.000</b>	<b>0.508</b>	
Algeria, 1992	WP/98 PAPCHILD	1.1	Z	1.1	4.0	0.044	NA	0.044	
Egypt, 1995–1996	DHS	1.1	NA	1.1	10.0	0.110	NA	0.110	
Libya, 1995	WP/98 PAPCHILD	3.8	NA	3.8	0.7	0.027	NA	0.027	
Morocco, 1995	DHS	4.3	NA	4.3	3.8	0.163	NA	0.163	
Tunisia, 1994	WP/98 PAPCHILD	12.6	NA	12.6	1.3	0.164	NA	0.164	

\* Based on 1995 UN estimates from censuses and surveys.

† Total may exceed sum of male and female sterilizations because for some countries totals are the only data available.

**Source notes:**

CDC = data from a maternal health, contraceptive prevalence or reproductive health survey conducted by the Division of Reproductive Health, U.S. Centers for Disease Control and Prevention (CDC).

CPS = data from Contraceptive Prevalence Survey program data (either Westinghouse Health Systems or the CDC).

DHS = Demographic and Health Survey data.

PAPCHILD = data from the Pan Arab Project for Child Development of the League of Arab States.

Survey = data taken from a nationwide survey conducted by a national government or independent organization that is not a contraceptive prevalence survey or survey conducted as part of the DHS or World Fertility Survey.

UN/ESA = data from the United Nations Department of Economic and Social Affairs, Population Division, as published in UN Population Division, 1999.

VHS = U.S. Vital and Health Statistics.

WP/98 = data taken from U.S. Bureau of the Census, *World Population Profile, 1998*.

NA = data not available.

Z = negligible (<0.1%).

**Explanatory notes:**

1. Data refer to women aged 10–49.
2. Data refer to all women aged 15–49, regardless of marital status.
3. Data refer to women aged 13–49.
4. Data refer to women aged 15–44.
5. Data refer to peninsular Malaysia only.
6. Coverage is not national.
7. Data refer to women aged 20–49.
8. Preliminary or provisional data.
9. Male sterilization rates represent <0.7%.
10. Data refer to women aged 20–54.
11. Data refer to the Flemish population only.
12. Data include individuals sterilized for noncontraceptive purposes.
13. Data refer to all sexually active women.
14. Data refer to women aged 18–44.
15. Data refer to women aged 20–39.
16. Data refer to women aged 18–42.
17. Data are for women born in 1945, 1950, 1965, and 1968 only. These women were 20, 23, 28, and 43 at the time of the survey.
18. Data refer to women aged 18–49.
19. From unpublished tables, Swiss Federal Statistical Office, Family and Fertility Survey 1994–1995.
20. Data refer to women aged 16–49.
21. Data refer to Great Britain, and do not include Northern Ireland.
22. Data refer to women aged 18–34.
23. Data refer to women aged 18–41.
24. Survey was limited to three sites (Ivanovo, Yekaterinburg, and Perm); the percentages noted here represent averages.
25. Data refer to nationals only.
26. Data refer to ages <50.
27. Data refer to ever-married women.
28. Excludes Eritrea, Tigray, Asseb, Ogaden, parts of Gondar and Wello, and nomadic populations.
29. Data refer to ever-married women and unmarried women who have had a child.

**Supplement 2.3. Approximate annual incidence of female sterilization per 100 women of reproductive age who were ever in union, by number of years prior to survey**

Country/year/source	No. of years prior to survey					5-year average
	5	4	3	2	1	
Bangladesh, 1987 (DHS)	1.9	2.5	2.4	2.3	1.8	2.2
Bangladesh, 1993–1994 (DHS)	0.5	0.5	0.5	0.3	0.2	0.4
Bangladesh, 1996–1997 (DHS)	0.4	0.3	0.2	0.2	0.1	0.2
Belize, 1991 (CDC)*	1.6	1.3	1.5	2.4	1.6	1.7
Bolivia, 1989 (DHS)	0.4	0.4	0.4	0.2	0.5	0.4
Bolivia, 1993–1994 (DHS)	0.4	0.2	0.4	0.4	0.5	0.4
Bolivia, 1998 (DHS)	0.5	0.4	0.6	0.5	0.7	0.5
Brazil, 1986 (DHS)*	2.8	3.3	2.6	2.7	3.4	3.0
Brazil, 1991 (DHS)†	2.4	3.5	3.5	3.4	3.7	3.3
Brazil, 1996 (DHS)	2.1	2.7	2.5	2.6	2.5	2.5
Cape Verde, 1998 (CDC)	1.1	1.5	1.5	1.2	1.7	1.4
Colombia, 1986 (DHS)	1.4	1.7	1.9	1.7	2.0	1.7
Colombia, 1990 (DHS)	1.2	1.6	2.3	1.5	2.1	1.7
Colombia, 1995 (DHS)	1.5	1.6	2.1	1.8	1.9	1.8
Costa Rica, 1993 (CDC)	1.2	1.0	2.2	1.5	2.0	1.6
Dominican Republic, 1986 (DHS)	2.2	2.1	3.1	2.5	3.5	2.7
Dominican Republic, 1991 (DHS)	3.1	2.4	2.9	2.5	3.5	2.9
Dominican Republic, 1996 (DHS)	2.4	2.4	2.8	2.9	2.6	2.6
Ecuador, 1987 (DHS)	1.5	1.0	1.3	1.6	1.5	1.4
Ecuador, 1989 (CDC)	1.3	1.4	1.3	1.6	1.5	1.4
Ecuador, 1994 (CDC)	1.3	1.5	1.5	1.4	1.8	1.5
Ecuador, 1999 (CDC)	1.4	1.5	1.7	1.7	1.8	1.6
Egypt, 1989 (DHS)	0.1	0.1	0.1	0.2	0.1	0.1
Egypt, 1992 (DHS)	0.1	0.1	0.1	0.1	0.1	0.1
Egypt, 1995–1996 (DHS)	0.1	0.1	0.0	0.1	0.1	0.1
El Salvador, 1985 (DHS)	3.2	2.4	2.9	3.1	3.2	3.0
El Salvador, 1988 (CDC)*	2.1	2.8	2.3	2.7	2.5	2.5
El Salvador, 1993 (CDC)	1.5	1.8	2.0	2.5	2.2	2.0
El Salvador, 1998 (CDC)	1.7	1.8	1.7	2.0	2.3	1.9
Ghana, 1988 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Ghana, 1993–1994 (DHS)	0.1	0.1	0.2	0.1	0.1	0.1
Guatemala, 1987 (DHS)*	0.9	1.0	1.1	0.9	0.9	1.0
Guatemala, 1995 (DHS)	1.1	0.8	1.0	1.0	1.3	1.0
Honduras, 1996 (CDC)	1.2	1.2	1.9	1.6	1.8	1.5
India, 1992–1993 (DHS)	2.0	1.7	1.8	2.0	1.7	1.8
Indonesia, 1987 (DHS)	0.3	0.3	0.3	0.4	0.3	0.3
Indonesia, 1991 (DHS)	0.2	0.2	0.2	0.2	0.2	0.2
Indonesia, 1994 (DHS)	0.2	0.2	0.2	0.2	0.3	0.2
Indonesia, 1997 (DHS)	0.1	0.2	0.1	0.2	0.2	0.2
Jamaica, 1997 (CDC)	1.1	0.5	0.8	0.9	0.7	0.8
Jordan, 1990 (DHS)‡	0.4	0.5	0.6	0.6	0.5	0.5
Kenya, 1989	0.0	0.0	0.0	0.0	0.0	0.0
Kenya, 1993 (DHS)	0.6	0.7	0.5	0.8	0.8	0.7
Kenya, 1998 (DHS)	0.5	0.3	0.5	0.4	0.5	0.4

*(cont'd.)*

**Supplement 2.3. Approximate annual incidence of female sterilization per 100 women of reproductive age who were ever in union, by number of years prior to survey (*cont'd.*)**

Country/year/source	No. of years prior to survey					5-year average
	5	4	3	2	1	
Mauritius, 1985 (CDC)§	0.5	0.4	0.4	0.5	0.5	0.5
Mauritius, 1991 (CDC)*	0.8	0.6	0.5	1.1	0.7	0.7
Mexico, 1987 (DHS)	1.3	1.5	2.0	2.3	2.3	1.9
Morocco, 1987 (DHS)	0.2	0.2	0.2	0.3	0.2	0.2
Morocco, 1992 (DHS)	0.1	0.3	0.2	0.2	0.4	0.2
Namibia, 1992 (DHS)	0.5	0.6	0.7	0.6	0.9	0.7
Nepal, 1996	0.7	0.7	1.1	1.2	1.4	1.0
Nicaragua, 1992–1993 (CDC)	1.6	1.7	1.2	1.4	2.3	1.6
Nicaragua, 1998 (DHS)	1.7	2.1	2.6	2.9	3.1	2.5
Panama, 1984 (CDC)	2.2	2.9	3.0	2.9	2.7	2.7
Paraguay, 1987 (CDC)*	0.1	0.5	0.5	0.7	0.4	0.4
Paraguay, 1990 (DHS)	0.5	0.7	0.7	0.9	1.0	0.8
Paraguay, 1995–1996 (CDC)	0.4	0.6	0.5	0.6	0.5	0.5
Paraguay, 1998 (CDC)*	0.5	1.0	0.8	1.0	1.0	0.9
Peru, 1986 (DHS)	0.6	0.5	0.4	0.6	0.4	0.5
Peru, 1991–1992 (DHS)	0.5	0.5	0.6	0.7	0.6	0.6
Peru, 1996 (DHS)	0.5	0.7	0.7	0.9	1.1	0.8
Philippines, 1993 (DHS)	0.7	0.8	0.7	0.7	0.7	0.7
Philippines, 1998 (DHS)	0.4	0.4	0.5	0.5	0.7	0.5
Puerto Rico, 1995–1996 (CDC)	2.4	2.7	2.5	2.2	2.2	2.4
Romania, 1999 (CDC)*	0.1	0.1	0.1	0.2	0.1	0.1
Sri Lanka, 1987 (DHS)	1.9	2.5	2.4	2.3	1.8	2.2
Swaziland, 1988 (CDC)	0.3	0.4	0.2	0.6	0.3	0.4
Tanzania, 1991–1992 (DHS)	0.2	0.2	0.2	0.4	0.3	0.3
Tanzania, 1996 (DHS)	0.2	0.2	0.2	0.2	0.3	0.2
Thailand, 1987 (DHS)	1.7	1.9	1.5	2.3	2.0	1.9
Trinidad and Tobago, 1987 (DHS)	0.4	0.6	0.8	0.9	1.1	0.8
Tunisia, 1988 (DHS)	1.0	1.3	0.9	0.8	1.3	1.1
Turkey, 1993 (DHS)	0.2	0.2	0.3	0.2	0.4	0.3
Ukraine, 1999 (CDC)*	0.1	0.1	0.2	0.2	0.1	0.1
United States, 1988 (NSFG)*	9.2	9.2	7.4	7.5	8.5	8.4
United States, 1995 (NSFG)*	6.3	6.1	6.3	6.9	7.1	6.5
Zambia, 1992 (DHS)	0.2	0.1	0.3	0.2	0.3	0.2
Zambia, 1996–1997 (DHS)	0.1	0.2	0.2	0.2	0.1	0.2
Zimbabwe, 1988–1989 (DHS)	0.2	0.2	0.3	0.3	0.2	0.2
Zimbabwe, 1994 (DHS)	0.2	0.2	0.2	0.4	0.3	0.3

\* Data refer to ages 15–44.

† Data limited to Northeastern Brazil.

‡ Excludes the West Bank.

§ Data are not weighted.

Note: Data included here were generated at the request of EngenderHealth by Measure-DHS+ and by the Division of Reproductive Health, CDC.

**Supplement 2.4. Approximate annual incidence of male sterilization among partners of women of reproductive age who were ever in union, per 100 couples ever in union, by number of years prior to survey**

Country/year/source	No. of years prior to survey					5-year average
	5	4	3	2	1	
Bangladesh, 1987 (DHS)	0.5	0.6	0.5	0.4	0.4	0.5
Bangladesh, 1993–1994 (DHS)	0.1	0.0	0.1	0.0	0.0	0.0
Bangladesh, 1996–1997 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Bolivia, 1989 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Bolivia, 1993–1994 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Bolivia, 1998 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Brazil, 1986 (DHS)*	0.1	0.1	0.0	0.1	0.0	0.1
Brazil, 1991 (DHS)†	0.0	0.0	0.0	0.0	0.0	0.0
Brazil, 1996 (DHS)	0.1	0.4	0.3	0.3	0.2	0.3
Colombia, 1986 (DHS)	0.1	0.0	0.0	0.0	0.0	0.0
Colombia, 1990 (DHS)	0.1	0.0	0.1	0.1	0.1	0.1
Colombia, 1995 (DHS)	0.0	0.1	0.1	0.1	0.1	0.1
Dominican Republic, 1986 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Dominican Republic, 1991 (DHS)	0.0	0.0	0.0	0.1	0.0	0.0
Dominican Republic, 1996 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Ecuador, 1987 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Egypt, 1988–1989 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Egypt, 1992 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Egypt, 1995–1996 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
El Salvador, 1985 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Ghana, 1988 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Ghana, 1993–1994 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Guatemala, 1987 (DHS)*	0.1	0.1	0.1	0.1	0.1	0.1
Guatemala, 1995 (DHS)	0.1	0.1	0.1	0.1	0.2	0.1
India, 1992–1993 (DHS)	0.1	0.1	0.1	0.1	0.1	0.1
Indonesia, 1987 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Indonesia, 1991 (DHS)	0.0	0.0	0.0	0.1	0.1	0.0
Indonesia, 1994 (DHS)	0.1	0.1	0.1	0.1	0.0	0.1
Indonesia, 1997 (DHS)	0.0	0.0	0.0	0.1	0.0	0.0
Jordan, 1990 (DHS)‡	0.0	0.0	0.0	0.0	0.0	0.0
Kenya, 1989 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Kenya, 1993 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Kenya, 1998 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Mexico, 1987 (DHS)	0.0	0.1	0.0	0.1	0.1	0.1
Morocco, 1987 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Morocco, 1992 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Namibia, 1992 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Nepal, 1996 (DHS)	0.3	0.4	0.4	0.4	0.5	0.4
Nicaragua, 1998 (DHS)	0.0	0.0	0.0	0.1	0.0	0.0
Paraguay, 1990 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Peru, 1986 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Peru, 1991–1992 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Peru, 1996 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Philippines, 1993 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Philippines, 1998 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0

(cont'd.)

**Supplement 2.4. Approximate annual incidence of male sterilization among partners of women of reproductive age who were ever in union, per 100 couples ever in union, by number of years prior to survey (cont'd.)**

Country/year/source	No. of years prior to survey					5-year average
	5	4	3	2	1	
Sri Lanka, 1987 (DHS)	0.5	0.6	0.5	0.4	0.4	0.5
Tanzania, 1991–1992 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Tanzania, 1996 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Thailand, 1987 (DHS)	0.4	0.2	0.5	0.7	0.5	0.5
Trinidad and Tobago, 1987 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Tunisia, 1988 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Turkey, 1993 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Zambia, 1992 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Zambia, 1996–1997 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0
Zimbabwe, 1988–1989 (DHS)	0.0	0.0	0.1	0.0	0.0	0.0
Zimbabwe, 1994 (DHS)	0.0	0.0	0.0	0.0	0.0	0.0

\* Data refer to ages 15–44.

† Data limited to Northeastern Brazil.

‡ Excludes the West Bank.

Note: Data included here were generated at the request of EngenderHealth by Measure-DHS+ and by the Division of Reproductive Health, CDC.

**Supplement 2.5. Percentage of women of reproductive age currently in union who are using contraception, percentage who are using sterilization, by type, and share of sterilization as percentage of overall prevalence**

Country/year	Source	% using any method	% using sterilization			Sterilization as a % of overall prevalence	Notes
			Total	Male	Female		
<b>Asia</b>							
<b>Bangladesh</b>							
1985	WP/98 CPS	25.3	9.4	1.5	7.9	37.2	1
1989	WP/98 Survey	31.4	10.0	1.2	8.8	31.8	1
1991	WP/98 Survey	39.9	10.3	1.2	9.1	25.8	1
1993–1994	DHS	44.9	9.3	1.1	8.2	20.7	
1996–1997	DHS	49.2	8.7	1.1	7.6	17.7	2
<b>Bhutan</b>							
1994	UN/ESA	18.8	11.1	8.0	3.1	59.0	3
<b>Cambodia</b>							
2000	DHS	23.8	1.5	Z	1.5	6.3	
<b>China</b>							
1988	WP/98 Survey	71.1	35.0	7.8	27.2	49.2	
1992	CDC	84.6	46.1	10.2	35.9	54.5	
<b>Hong Kong</b>							
1984	WP/98 PC	72.4	21.0	NA	NA	29.0	4
1987	WP/98 Survey	80.8	23.8	0.9	22.9	29.5	
<b>India</b>							
1988	WP/98 Survey	42.9	30.8	NA	30.8	71.8	4
1990	WP/98 Survey	44.9	31.3	NA	NA	69.7	4
1992–1993	DHS	40.6	30.7	3.4	27.3	75.6	5

(cont'd.)

Supplement 2.5. Percentage of women of reproductive age currently in union who are using contraception, percentage who are using sterilization, by type, and share of sterilization as percentage of overall prevalence (*cont'd.*)

Country/year	Source	% using any method	% using sterilization			Sterilization as a % of overall prevalence	Notes
			Total	Male	Female		
<b>Asia (<i>cont'd.</i>)</b>							
<b>Indonesia</b>							
1985	WP/98 Survey	38.5	1.6	0.4	1.2	4.2	
1987	DHS	47.7	3.3	0.2	3.1	6.9	
1991	DHS	49.7	3.3	0.6	2.7	6.6	
1994	DHS	54.7	3.8	0.7	3.1	6.9	
1997	DHS	57.4	3.4	0.4	3.0	5.9	
<b>Japan</b>							
1986	UN/ESA	64.3	9.9	1.6	8.3	15.4	
1988	UN/ESA	56.3	4.2	0.9	3.3	7.5	
1990	UN/ESA	58.0	5.7	NA	NA	9.8	
1994	UN/ESA	58.6	4.1	0.7	3.4	7.0	
<b>Korea, Republic of</b>							
1985	UN/ESA	70.4	40.5	8.9	31.6	57.5	4
1988	UN/ESA	77.3	48.2	11.0	37.2	62.4	4
1991	UN/ESA	79.4	47.3	12.0	35.3	59.6	4
<b>Lao People's Democratic Republic</b>							
1993	UN/ESA	18.6	5.1	NA	5.1	27.4	
<b>Malaysia</b>							
1988	UN/ESA	48.3	6.8	NA	NA	14.1	6
<b>Mongolia</b>							
1994	UN/ESA	60.7	0.9	0.3	0.6	1.5	
<b>Myanmar</b>							
1992	UN/ESA	16.8	5.5	1.8	3.7	32.7	
<b>Nepal</b>							
1986	WP/98 Survey	16.8	13.7	6.4	7.3	81.5	7
1991	WP/98 Survey	25.1	19.6	7.5	12.1	78.1	
1996	DHS	28.5	17.5	5.4	12.1	61.4	
<b>Pakistan</b>							
1990–1991	DHS	11.8	3.5	Z	3.5	29.7	
1994–1995	UN/ESA	17.8	5.0	Z	5.0	28.1	
<b>Philippines</b>							
1988	WP/98 Survey	36.2	11.4	0.4	11.0	31.5	4
1993	DHS	40.0	12.3	0.4	11.9	30.8	
1995	WP/98 Survey	53.1	11.4	0.1	11.3	21.5	
1996	WP/98 Survey	48.1	10.8	0.2	10.6	22.5	
1998	DHS	46.5	10.4	0.1	10.3	22.4	
<b>Sri Lanka</b>							
1987	DHS	61.7	29.8	4.9	24.9	48.3	8
1993	UN/ESA	66.1	27.2	3.7	23.5	41.1	9
<b>Thailand</b>							
1985	WP/98 Survey	59.0	23.2	3.7	19.5	39.3	
1987	DHS	65.5	28.5	5.7	22.8	43.5	
1993	UN/ESA	73.9	22.6	2.8	19.8	30.6	4
<b>Vietnam</b>							
1988	WP/98 Survey	53.2	3.0	0.3	2.7	5.6	
1994	WP/98 Nguyen	65.0	4.1	0.2	3.9	6.3	
1997	DHS	75.3	6.8	0.5	6.3	9.0	

*(cont'd.)*



Supplement 2.5. Percentage of women of reproductive age currently in union who are using contraception, percentage who are using sterilization, by type, and share of sterilization as percentage of overall prevalence (*cont'd.*)

Country/year	Source	% using any method	% using sterilization			Sterilization as a % of overall prevalence	Notes
			Total	Male	Female		
<b>Oceania</b>							
<b>Australia</b>							
1986	WP/98 Survey	76.1	38.1	10.4	27.7	50.1	10
<b>New Zealand</b>							
1995	UN/ESA	74.9	33.0	18.0	15.0	44.1	10, 11
<b>Papua New Guinea</b>							
1996	UN/ESA	25.9	7.8	0.2	7.6	30.1	
<b>Latin America and the Caribbean</b>							
<b>Antigua and Barbuda</b>							
1988	WP/98 CPS	52.6	11.0	NA	11.0	20.9	4
<b>Bahamas</b>							
1988	WP/98 CPS	64.9	17.2	NA	17.2	26.5	4
<b>Barbados</b>							
1988	UN/ESA	55.0	10.7	0.3	10.4	19.5	4
<b>Belize</b>							
1985	WP/98 Survey	42.9	11.1	0.1	11.0	25.9	4
1991	CDC	46.7	18.7	NA	18.7	40.0	4
<b>Bolivia</b>							
1989	WP/98 DHS	30.3	4.4	NA	4.4	14.5	
1993–1994	WP/98 DHS	45.3	4.6	NA	4.6	10.2	
1998	DHS	48.3	6.5	Z	6.5	13.5	
<b>Brazil</b>							
1986	DHS	65.8	27.6	0.8	26.8	41.9	4
1991	DHS	59.2	37.8	0.1	37.7	63.9	12
1996	DHS	76.7	42.7	2.6	40.1	55.7	
<b>Colombia</b>							
1986	DHS	64.8	18.7	0.4	18.3	28.9	
1990	DHS	66.1	21.4	0.5	20.9	32.4	
1995	DHS	72.2	26.4	0.7	25.7	36.6	
<b>Costa Rica</b>							
1986	CDC	69.0	17.2	0.5	16.7	24.9	
1993	CDC	75.0	21.0	1.3	19.7	28.0	
<b>Cuba</b>							
1987	UN/ESA	70.0	22.0	NA	22.0	31.4	
<b>Dominica</b>							
1987	UN/ESA	49.8	12.6	NA	12.6	25.3	4
<b>Dominican Republic</b>							
1986	WP/98 DHS	50.0	33.0	0.1	32.9	66.0	
1991	WP/98 DHS	56.4	38.5	NA	38.5	68.3	
1996	DHS	63.7	41.0	0.1	40.9	64.4	
<b>Ecuador</b>							
1987	WP/98 DHS	44.3	15.0	NA	15.0	33.9	
1989	CDC	52.9	18.3	NA	18.3	34.6	
1994	CDC	56.8	19.8	NA	19.8	34.9	
1999	CDC	65.8	22.5	NA	22.5	34.2	

*(cont'd.)*

Supplement 2.5. Percentage of women of reproductive age currently in union who are using contraception, percentage who are using sterilization, by type, and share of sterilization as percentage of overall prevalence (*cont'd.*)

Country/year	Source	% using any method	% using sterilization			Sterilization as a % of overall prevalence	Notes
			Total	Male	Female		
<b>Latin America and the Caribbean (<i>cont'd.</i>)</b>							
<b>El Salvador</b>							
1985	DHS	47.3	32.5	0.7	31.8	68.7	
1988	CDC	47.1	30.2	0.6	29.6	64.1	4
1993	CDC	53.3	31.5	NA	31.5	59.1	4
1998	CDC	59.7	32.4	NA	32.4	54.3	4, 13
<b>Guatemala</b>							
1987	DHS	23.2	11.3	0.9	10.4	48.7	4
1995	DHS	31.4	15.8	1.5	14.3	50.3	
<b>Haiti</b>							
1989	CDC	10.2	2.5	NA	2.5	24.5	
1994–1995	DHS	18.0	3.1	NA	3.1	17.2	
<b>Honduras</b>							
1987	UN/ESA	40.6	12.8	0.2	12.6	31.5	4
1991–1992	UN/ESA	46.7	15.8	0.2	15.6	33.8	4
1996	CDC	50.0	18.1	NA	18.1	36.2	4
<b>Jamaica</b>							
1989	CDC	54.6	13.6	NA	13.6	24.9	
1993	CDC	62.0	12.5	NA	12.5	20.2	4
1997	CDC	66.0	12.3	NA	12.3	18.6	
<b>Mexico</b>							
1987	WP/98 DHS	52.7	19.4	0.8	18.6	36.8	
1992	ENADID	63.1	27.9	1.0	26.9	44.2	
1995	UN/ESA	66.5	27.3	NA	NA	41.1	11
<b>Nicaragua</b>							
1992–1993	CDC	48.7	18.8	0.3	18.5	38.6	
1998	DHS	60.3	26.6	0.5	26.1	44.1	
<b>Panama</b>							
1984	CDC	58.8	33.5	0.4	33.1	57.0	4
<b>Paraguay</b>							
1987	CDC	44.8	4.0	NA	4.0	8.9	4
1990	WP/98 DHS	48.4	7.4	NA	7.4	15.3	
1995–1996	CDC	50.7	6.8	Z	6.8	13.4	14
1998	CDC	57.4	8.0	Z	8.0	13.9	4, 14
<b>Peru</b>							
1986	WP/98 DHS	45.8	6.1	NA	6.1	13.3	
1991–1992	DHS	59.0	8.0	0.1	7.9	13.6	
1996	DHS	64.2	9.7	0.2	9.5	15.1	
<b>Puerto Rico</b>							
1995–1996	CDC	77.5	48.7	3.5	45.2	62.8	
<b>Saint Lucia</b>							
1988	WP/98 CPS	47.3	8.6	Z	8.6	18.2	4
<b>Saint Vincent and the Grenadines</b>							
1988	WP/98 CPS	58.3	13.1	Z	13.1	22.5	4
<b>Trinidad and Tobago</b>							
1987	DHS	52.7	8.4	0.2	8.2	15.9	
<b>North America</b>							
<b>Canada</b>							
1984	UN/ESA	73.1	43.5	12.9	30.6	59.5	15
1995	UN/ESA	75.2	46.0	16.2	29.8	61.2	11

*(cont'd.)*

Supplement 2.5. Percentage of women of reproductive age currently in union who are using contraception, percentage who are using sterilization, by type, and share of sterilization as percentage of overall prevalence (*cont'd.*)

Country/year	Source	% using any method	% using sterilization			Sterilization as a % of overall prevalence	Notes
			Total	Male	Female		
<b>North America (<i>cont'd.</i>)</b>							
<b>United States</b>							
1988	UN/ESA	74.3	36.3	12.9	23.4	48.9	4
1990	UN/ESA	70.7	37.3	13.6	23.7	52.8	4
1995	VHS	76.4	38.7	14.9	23.8	50.7	4
<b>Western Europe</b>							
<b>Belgium</b>							
1991	UN/ESA	79.6	19.1	7.6	11.5	24.0	16, 17, 18
<b>Denmark</b>							
1988	UN/ESA	78.0	10.0	5.0	5.0	12.8	4, 19
<b>Finland</b>							
1989	WP/98 Survey	70.4	9.7	1.0	8.7	13.8	20
1994	WP/98 Survey	79.3	9.3	1.0	8.3	11.7	21
<b>France</b>							
1988	WP/98 Survey	79.9	8.7	NA	8.7	10.9	15
1994	WP/98 Survey	75.1	4.9	0.3	4.6	6.5	
<b>Germany</b>							
1985	UN/ESA	77.9	12.4	2.1	10.3	15.9	4, 22
1992	UN/ESA	74.7	0.9	NA	0.9	1.2	23
<b>Netherlands</b>							
1985	WP/98 Survey	72.0	14.0	NA	NA	19.4	24
1988	WP/98 Survey	70.0	10.0	7.0	3.0	14.3	25
1993	WP/98 Survey	74.0	13.0	9.0	4.0	17.6	26
<b>Norway</b>							
1988–1989	WP/98 Survey	75.5	14.7	4.3	10.4	19.5	27
<b>Spain</b>							
1985	UN/ESA	59.4	4.6	0.3	4.3	7.7	15
<b>Switzerland</b>							
1995	WP/98 Survey	81.9	22.0	8.3	13.7	26.9	10, 28
<b>United Kingdom</b>							
1986	UN/ESA	81.0	31.0	16.0	15.0	38.3	29, 30
1989	WP/98 Survey	72.0	23.0	12.0	11.0	31.9	31
1993	UN/ESA	82.0	32.0	18.0	14.0	39.0	29, 30
<b>Eastern Europe and Central Asia</b>							
<b>Azerbaijan</b>							
2001	CDC	55.4	1.2	Z	1.2	2.2	4
<b>Belarus</b>							
1995	UN/ESA	50.4	0.8	Z	0.8	1.6	32
<b>Czech Republic</b>							
1993	CDC	68.9	2.7	NA	2.7	3.9	4
<b>Georgia</b>							
1999	CDC	40.5	1.6	Z	1.6	4.0	
<b>Hungary</b>							
1993	WP/98 Survey	84.4	5.1	NA	NA	6.0	33
<b>Kazakhstan</b>							
1995	DHS	59.1	0.7	NA	0.7	1.2	

*(cont'd.)*

Supplement 2.5. Percentage of women of reproductive age currently in union who are using contraception, percentage who are using sterilization, by type, and share of sterilization as percentage of overall prevalence (*cont'd.*)

Country/year	Source	% using any method	% using sterilization			Sterilization as a % of overall prevalence	Notes
			Total	Male	Female		
<b>Eastern Europe and Central Asia (<i>cont'd.</i>)</b>							
<b>Kyrgyz Republic</b>							
1997	DHS	59.5	1.8	NA	1.8	3.0	
<b>Latvia</b>							
1995	WP/98 Survey	67.8	2.1	NA	NA	3.1	15
<b>Moldova</b>							
1997	CDC	73.7	3.4	NA	3.4	4.6	4
<b>Romania</b>							
1993	CDC	57.3	1.4	NA	1.4	2.4	4
1999	CDC	63.8	2.5	Z	2.5	3.9	
<b>Russia</b>							
1996	CDC	71.8	2.0	NA	2.0	2.8	4, 34
<b>Slovakia</b>							
1991	WP/98 UN	74.0	4.0	Z	4.0	5.4	4, 19
<b>Slovenia</b>							
1989	WP/98 Survey	91.6	0.2	NA	NA	0.2	4
<b>Ukraine</b>							
1999	CDC	67.5	1.4	Z	1.4	2.1	
<b>Uzbekistan</b>							
1996	DHS	55.6	0.7	NA	0.7	1.3	
<b>Middle East</b>							
<b>Bahrain</b>							
1989	UN/ESA	53.4	7.1	NA	7.1	13.3	1, 35, 36
1995	UN/ESA	60.9	7.1	1.1	6.0	11.7	11, 35, 36
<b>Iran</b>							
1992	UN/ESA	64.6	8.5	0.9	7.6	13.2	4
<b>Iraq</b>							
1989	UN/ESA	13.7	1.4	NA	1.4	10.2	35, 36
<b>Jordan</b>							
1985	CDC	26.5	4.9	Z	4.9	18.5	37, 38
1990	DHS	40.0	5.6	Z	5.6	14.0	
1997	DHS	52.6	4.2	NA	4.2	8.0	
<b>Kuwait</b>							
1987	UN/ESA	34.6	2.0	NA	2.0	5.8	1, 36
<b>Lebanon</b>							
1996	WP/98 PAPCHILD	61.0	4.2	NA	4.2	6.9	
<b>Oman</b>							
1988	UN/ESA	8.6	2.2	NA	2.2	25.6	1, 36
1995	UN/ESA	21.5	4.5	Z	4.5	20.9	11, 35, 36
<b>Qatar</b>							
1987	UN/ESA	32.3	4.5	NA	4.5	13.9	1
<b>Syria</b>							
1993	WP/98 PAPCHILD	39.6	2.2	Z	2.2	5.6	
<b>Turkey</b>							
1988	CDC	63.4	1.8	0.1	1.7	2.8	39
1993	DHS	62.6	2.9	Z	2.9	4.6	

(*cont'd.*)

Supplement 2.5. Percentage of women of reproductive age currently in union who are using contraception, percentage who are using sterilization, by type, and share of sterilization as percentage of overall prevalence (*cont'd.*)

Country/year	Source	% using any method	% using sterilization			Sterilization as a % of overall prevalence	Notes
			Total	Male	Female		
<b>Middle East (<i>cont'd.</i>)</b>							
<b>United Arab Emirates</b>							
1995	UN/ESA	26.7	4.3	0.1	4.2	16.1	35, 36
<b>Yemen</b>							
1991–1992	DHS	9.7	0.9	0.1	0.8	9.3	
1997	DHS	20.8	1.5	0.1	1.4	7.2	35
<b>Sub-Saharan Africa</b>							
<b>Benin</b>							
1996	DHS	16.4	0.4	NA	0.4	2.4	
<b>Botswana</b>							
1984	UN/ESA	27.8	1.5	Z	1.5	5.4	
1988	DHS	33.0	4.6	0.3	4.3	13.9	
<b>Burkina Faso</b>							
1992–1993	DHS	24.9	0.2	Z	0.2	0.8	
<b>Burundi</b>							
1987	DHS	8.7	0.1	NA	0.1	1.1	
<b>Cameroon</b>							
1991	DHS	16.1	1.2	NA	1.2	7.5	
1998	DHS	19.3	1.5	NA	1.5	7.8	
<b>Cape Verde</b>							
1998	CDC	52.9	12.8	Z	12.8	24.2	
<b>Central African Republic</b>							
1994–1995	DHS	14.8	0.4	NA	0.4	2.7	
<b>Chad</b>							
1996–1997	DHS	4.1	0.2	Z	0.2	4.9	
<b>Comoros</b>							
1996	DHS	21.0	2.8	NA	2.8	13.3	
<b>Congo, Democratic Republic of (Kinshasa)</b>							
1991	UN/ESA	8.0	0.3	0.1	0.2	3.8	
<b>Côte d'Ivoire</b>							
1994	DHS	11.4	0.2	NA	0.2	1.8	
1998–1999	DHS	15.0	0.1	NA	0.1	0.6	
<b>Eritrea</b>							
1995–1996	DHS	8.0	0.3	NA	0.3	3.8	
<b>Ethiopia</b>							
1990	UN/ESA	4.3	0.2	Z	0.2	4.7	40, 41
<b>Gambia</b>							
1990	UN/ESA	11.8	0.4	Z	0.4	3.4	
<b>Ghana</b>							
1988	DHS	12.9	1.0	NA	1.0	7.8	
1993	DHS	20.3	0.9	NA	0.9	4.4	
1995	WP/98 Survey	28.0	2.0	NA	NA	7.1	
1998	DHS	22.0	1.3	Z	1.3	5.9	
<b>Guinea</b>							
1992–1993	UN	1.7	0.1	Z	0.1	5.9	

*(cont'd.)*

Supplement 2.5. Percentage of women of reproductive age currently in union who are using contraception, percentage who are using sterilization, by type, and share of sterilization as percentage of overall prevalence (*cont'd.*)

Country/year	Source	% using any method	% using sterilization			Sterilization as a % of overall prevalence	Notes
			Total	Male	Female		
<b>Sub-Saharan Africa (<i>cont'd.</i>)</b>							
<b>Kenya</b>							
1984	UN/ESA	17.0	2.6	Z	2.6	15.3	
1989	DHS	26.9	4.7	Z	4.7	17.5	
1993	DHS	32.7	5.5	NA	5.5	16.8	
1998	DHS	39.0	6.2	NA	6.2	15.9	
<b>Lesotho</b>							
1991–1992	UN/ESA	23.2	1.4	Z	1.4	6.0	
<b>Liberia</b>							
1986	DHS	6.4	1.1	NA	1.1	17.2	
<b>Madagascar</b>							
1992	DHS	16.7	0.9	Z	0.9	5.4	
1997	DHS	19.4	1.0	Z	1.0	5.2	
<b>Malawi</b>							
1992	DHS	13.0	1.7	Z	1.7	13.1	
1996	DHS	21.9	2.5	NA	2.5	11.4	
<b>Mali</b>							
1987	DHS	4.7	0.1	NA	0.1	2.1	
1995–1996	DHS	6.7	0.3	NA	0.3	4.5	
<b>Mauritius</b>							
1985	CDC	75.3	4.7	NA	4.7	6.2	
1991	CDC	74.7	7.2	NA	7.2	9.6	4
<b>Mozambique</b>							
1997	DHS	5.6	0.7	NA	0.7	12.5	
<b>Namibia</b>							
1989	WP/98 Survey	26.4	6.1	0.1	6.0	23.1	1
1992	DHS	28.9	7.6	0.2	7.4	26.3	
<b>Niger</b>							
1992	DHS	4.4	0.1	NA	0.1	2.3	
1998	DHS	8.2	0.1	NA	0.1	1.2	
<b>Nigeria</b>							
1986	DHS	6.1	0.1	NA	0.1	1.6	42.0
1990	DHS	6.0	0.3	NA	0.3	5.0	
<b>Réunion</b>							
1990	WP/98 Survey	72.9	5.1	Z	5.1	7.0	
<b>Rwanda</b>							
1983	UN/ESA	10.1	Z	Z	Z	Z	
1992	DHS	21.2	0.7	NA	0.7	3.3	43
<b>Senegal</b>							
1992–1993	DHS	7.5	0.4	NA	0.4	5.3	
1997	DHS	12.9	0.5	NA	0.5	3.9	
<b>South Africa</b>							
1988	UN/ESA	49.7	9.4	1.4	8.0	18.9	1
1998	DHS	56.3	17.9	2.1	15.8	32.0	
<b>Sudan</b>							
1989–1990	DHS	8.7	0.8	NA	0.8	9.2	

(*cont'd.*)

Supplement 2.5. Percentage of women of reproductive age currently in union who are using contraception, percentage who are using sterilization, by type, and share of sterilization as percentage of overall prevalence (*cont'd.*)

Country/year	Source	% using any method	% using sterilization			Sterilization as a % of overall prevalence	Notes
			Total	Male	Female		
<b>Sub-Saharan Africa (<i>cont'd.</i>)</b>							
<b>Sudan (Northern)</b>							
1992–1993	UN/ESA	8.3	0.9	Z	0.9	10.8	
<b>Swaziland</b>							
1988	CDC	20.8	5.0	0.3	4.7	24.0	44
<b>Tanzania</b>							
1988	WP/98 USAID	7.0	NA	NA	NA	NA	4
1991–1992	DHS	10.4	1.6	Z	1.6	15.4	
1994	DHS-KAP	20.4	2.0	NA	2.0	9.8	
1996	DHS	18.4	1.9	NA	1.9	10.3	
<b>Togo</b>							
1988	DHS	33.9	0.6	NA	0.6	1.8	
1998	DHS	23.5	0.4	NA	0.4	1.7	
<b>Uganda</b>							
1988–1989	DHS	4.9	0.8	NA	0.8	16.3	
1995	DHS	14.8	1.4	NA	1.4	9.5	
<b>Zambia</b>							
1992	DHS	15.2	2.1	Z	2.1	13.8	
1996	DHS	25.9	2.0	Z	2.0	7.7	
<b>Zimbabwe</b>							
1988–1989	DHS	43.1	2.5	0.2	2.3	5.8	
1994	DHS	48.1	2.5	0.2	2.3	5.2	
<b>North Africa</b>							
<b>Algeria</b>							
1986–1987	UN/ESA	35.5	1.3	Z	1.3	3.7	
1992	WP 98/PAPCHILD	50.9	1.1	Z	1.1	2.2	
<b>Egypt</b>							
1984	WP/98 CPS	30.3	1.5	NA	1.5	5.0	
1988	DHS	37.8	1.5	Z	1.5	4.0	
1992	DHS	47.1	1.1	NA	1.1	2.3	
1995–1996	DHS	47.9	1.1	NA	1.1	2.3	
<b>Libya</b>							
1995	WP/98 PAPCHILD	45.2	3.8	NA	3.8	8.4	
<b>Morocco</b>							
1987	DHS	35.9	2.2	NA	2.2	6.1	
1992	DHS	41.5	3.0	NA	3.0	7.2	
1995	DHS	50.3	4.3	NA	4.3	8.5	
<b>Tunisia</b>							
1988	DHS	49.8	11.5	NA	11.5	23.1	
1994	WP/98 PAPCHILD	59.7	12.6	NA	12.6	21.1	

**Source notes:**

CDC = data from a maternal health, contraceptive prevalence or reproductive health survey conducted by the Division of Reproductive Health, U.S. Centers for Disease Control and Prevention (CDC).

CPS = data from Contraceptive Prevalence Survey program data (either Westinghouse Health Systems or the CDC).

DHS = Demographic and Health Survey data.

ENADID = Encuesta Nacional de la Dinámica Demográfica de 1992.

KAP = knowledge, attitudes, and practices survey.

*(cont'd.)*

## Supplement 2.5. Percentage of women of reproductive age currently in union who are using contraception, percentage who are using sterilization, by type, and share of sterilization as percentage of overall prevalence (*cont'd.*)

### Source notes: (*cont'd.*)

PAPCHILD = data from the Pan Arab Project for Child Development of the League of Arab States.

PC = data from the Population Council, derived from service statistics, sometimes with an estimate for private-sector contraceptive use.

Survey = data taken from a nationwide survey conducted by a national government or independent organization that is not a contraceptive prevalence survey or survey conducted as part of the DHS or World Fertility Survey.

UN/ESA = data from the United Nations (UN) Department of Economic and Social Affairs, Population Division, as published in UN Population Division, 1999.

USAID = data from the U.S. Agency for International Development.

VHS = U.S. Vital and Health Statistics.

WP/98 = data taken from the U.S. Bureau of the Census 1999, *World Population Profile, 1998*.

WP/98 Nguyen = data from Nguyen et al. (1996), as reported in U.S. Bureau of the Census, 1999.

NA = data not available.

Z = negligible (<0.1%).

### Explanatory notes:

1. Data refer to ages <50.
2. Represents women aged 10–49.
3. Data refer to all women aged 15–49, regardless of marital status.
4. Data refer to women aged 15–44.
5. Data refer to women aged 13–49.
6. Data refer to peninsular Malaysia only.
7. Data refer to women aged 15–50.
8. Data exclude northern and eastern provinces.
9. Coverage is not national.
10. Data refer to women aged 20–49.
11. Preliminary or provisional data.
12. Data are limited to the population of Northeastern Brazil.
13. Male sterilization rates represent <0.7%.
14. Data on contraceptive prevalence do not include use of herbal medicines known as “yuyos.”
15. Data refer to women aged 18–49.
16. Data refer to women aged 20–40.
17. Data refer to the Flemish population only.
18. Data include individuals sterilized for noncontraceptive purposes.
19. Data refer to all sexually active women.
20. Data refer to women aged 21–49.
21. Data refer to women aged 18–44.
22. Data refer to the Federal Republic of Germany only.
23. Data refer to women aged 20–39.
24. Data refer to women aged 21–37.
25. Data refer to women aged 18–37.
26. Data refer to women aged 18–42.
27. Data are for women who were born in 1945, 1950, 1965, and 1968 only. These women were 20, 23, 28, and 43 at the time of the survey.
28. From unpublished tables, Swiss Federal Statistical Office, Family and Fertility Survey 1994–1995.
29. Data refer to women aged 16–49.
30. Data refer to Great Britain, and do not include Northern Ireland.
31. Data refer to all women aged 18–44.
32. Data refer to women aged 18–34.
33. Data refer to women aged 18–41.
34. Survey was limited to three sites (Ivanovo, Yekaterinburg, and Perm); the percentages noted here represent averages.
35. Adjusted from source to exclude breastfeeding.
36. Data refer to nationals only.
37. Data refer to women aged 17–51.
38. Excludes the West Bank.
39. The total prevalence rate refers to currently married women, while data by method are based on exposed women only.
40. Refers to ever-married women.
41. Excludes Eritrea, Tigray, Asseb, Ogaden, parts of Gondar and Wello, and nomadic populations.
42. Data refer to Ondo State only.
43. Data refer to women aged 15–50.
44. Data refer to ever-married women and unmarried women who have had a child.