



INFO Project
Center for Communication
Programs

*For ordering print
copies, please see
“Obtaining
Full-Text
Resources” on
the back cover.*

Closing the Effectiveness Gap



Key Points

The most effective contraceptive method for any individual is usually the one that the person uses correctly and consistently. Family planning clients can ensure the greatest protection against unintended pregnancy if they choose a contraceptive that combines the greatest inherent effectiveness—that is, its biological ability to protect against pregnancy—with their own ability to use it correctly and consistently.

Two standard measures of contraceptive effectiveness are perfect-use and typical-use pregnancy rates. The best indicators of the inherent effectiveness of a method are perfect-use pregnancy rates, which measure unintended pregnancies when methods are used correctly and consistently. Typical-use pregnancy rates indicate contraceptive effectiveness as the average person uses a method. They measure unintended pregnancies among users who make contraceptive use mistakes as well as among those who use the method correctly and consistently.

The gap between perfect-use and typical-use pregnancy rates differs by method. Some long-acting contraceptives, such as sterilization, intrauterine devices, and implants, require little or no user action to ensure the greatest effectiveness possible with the method. For these methods, typical-use pregnancy rates are nearly the same as perfect-use rates. For most methods, however, typical-use rates are higher than perfect-use rates, and much higher for some methods, because many people do not use them correctly and consistently.





Contraceptive users themselves have primary responsibility for closing the gap between typical-use and perfect-use effectiveness, by following the rules for effective use of their chosen methods. Many clients have poor knowledge about contraceptive effectiveness, however, or what they should do to achieve maximum protection against unintended pregnancy.

Family planning providers and programs, too, have a responsibility for closing the effectiveness gap. Providers and programs can help their clients use contraception more effectively if they:

Compare the effectiveness of methods during typical use. Such comparison can give clients a basis for deciding on the general level of pregnancy risk they are prepared to accept. Providers can compare risks of pregnancy by grouping methods in order of their effectiveness, ranked from the more effective to the less effective.

Counsel clients to use their chosen methods properly. Counseling about the gap between the typical-use and perfect-use pregnancy rates of the client's method and what the client can do to close this gap can encourage correct and consistent use. Providers can emphasize the most important behavior for effective use of the client's chosen method and offer tips on how to continue with that behavior.

Prepare clients in advance about common side effects. Contraceptive side effects often interfere with correct and consistent use, especially of hormonal methods. Side effects are the most commonly reported method-related reason—and sometimes the most common reason overall—that women discontinue a contraceptive method.

Provide convenient access to a range of methods. The more contraceptive methods that a family planning program offers, the more clients will be able to choose a method that suits their individual needs—one that they will be able to use effectively. Programs also can provide clients with an adequate supply of their chosen method right at the start or offer supplies in the community so that clients do not interrupt use of their methods because they have difficulty returning to the clinic.



**This report was prepared by
Ruwaida M. Salem, MPH.**

Research assistance by
Amanda Rider, MHS and Jenny Bernstein, MPH
Bryant Robey, Editor
Linda Sadler and Francine Mueller, Designers

The INFO Project appreciates the assistance of the following reviewers: John Guillebaud, Roy Jacobstein, Robert Lande, Linda Potter, Ward Rinehart, Stephen Settimi, James D. Shelton, Markus Steiner, James Trussell, Ushma Upadhyay, and Vera Zlizar.

Suggested citation: Salem, R.M. "Closing the Effectiveness Gap." *INFO Reports*, No. 13. Baltimore, INFO Project, Johns Hopkins Bloomberg School of Public Health, June 2007.

Available online:
<http://www.infoforhealth.org/inforeports/>



INFO Project
Center for Communication Programs
Johns Hopkins Bloomberg
School of Public Health
111 Market Place, Suite 310
Baltimore, Maryland 21202 USA
410-659-6300
410-659-6266 (fax)
www.infoforhealth.org
infoproject@jhuccp.org

Earle Lawrence, Project Director
Theresa Norton, Associate Editor
Rafael Avila, Production Manager

INFO Reports is designed to provide an accurate and authoritative report on important developments in family planning and related health issues. The opinions expressed herein are those of the authors and do not necessarily reflect the views of the U.S. Agency for International Development (USAID) or Johns Hopkins University.

Published with support from USAID, Global, GH/PRH/PEC, under the terms of Grant No. GPH-A-00-02-00003-00.

COVER PHOTO and PHOTO TOP RIGHT:

In Botswana members of the Bolokang Matshelo Support Group demonstrate how to put on a female condom correctly using a model. For methods that require user action, contraceptive effectiveness depends not only on the method's inherent effectiveness but also on the extent to which the user follows the method's rules for correct and consistent use. © 2006 Sean Blaschke

ACHIEVING CONTRACEPTIVE EFFECTIVENESS

For most people, the most important reason given for choosing a particular contraceptive method is how well it protects against pregnancy (48, 100, 106, 111, 112, 132). Many contraceptive users, however, do not achieve the protection from pregnancy that they want.

The World Health Organization (WHO) has estimated that, worldwide, nearly one-third of unintended pregnancies—an estimated 26.5 million in 1993 (the most recent data available)—result from either incorrect or inconsistent contraceptive use or from method failures (that is, because the contraceptive itself did not work properly) (138). Most unintended pregnancies among contraceptive users occur because of errors in use rather than method failure (25, 41).

For most people, the most important reason for choosing a contraceptive method is how well it protects against pregnancy.

Most unintended pregnancies among contraceptive users occur because of errors in use rather than method failure.

An estimated 40% to 60% of total unintended pregnancies are due to incorrect or inconsistent method use, while method failure is estimated to account for less than 10%. Unintended pregnancies among women not using any contraceptive method account for the remainder (28, 63, 77).

Choosing a long-acting method that requires little or no user action, such as intrauterine devices (IUDs), contraceptive implants, or sterilization, is the best way to ensure high contraceptive effectiveness. Still, if these methods are not suitable to clients, other methods that require user action can provide effective contraceptive protection—including oral contraceptives, barrier methods, and fertility awareness methods.

For most methods that require user action, generally the most effective method for any individual is the one that the person uses correctly and consistently (88, 110, 119). For these methods, contraceptive effectiveness depends not only on the method's inherent effectiveness—that is, its biological ability to protect against pregnancy when used correctly and consistently—but also on the extent to which the user follows the method's rules for correct and consistent use (110, 118, 119). Following the method's rules for correct and consistent use will enable many clients to close the gap between the effectiveness of the method as typically used and its inherent effectiveness.

Perfect Use and Typical Use

Two standard measures of contraceptive effectiveness—"perfect-use" and "typical-use" pregnancy rates—have been developed to distinguish between unintended pregnancies due to method failure and those due to contraceptive use errors.¹ Perfect-use pregnancy rates provide the best measurement of the effectiveness of contraceptive methods when used correctly and consistently; these rates point to the probabilities of pregnancy due to the method itself failing and provide the best measurement of a method's inherent protection (118).

Typical-use pregnancy rates represent contraceptive effectiveness as the average person uses the methods (119). Typical-use rates include pregnancies that occur among both users who make mistakes and users who always use the method and always use it correctly. An individual user could achieve much more or much less contraceptive protection than the typical-use rate indicates, depending on the extent to which she or he is able to achieve correct and consistent use.

Perfect-use pregnancy rates are obtained from clinical trials of contraceptive effectiveness and safety. In clinical trials participants closely monitor their contraceptive use to identify and report monthly cycles when they used the method

correctly and consistently. Perfect-use pregnancy rates reflect the number of women using the method correctly and consistently who become pregnant (110).

Typical-use pregnancy rates reflect the total number of women using the method

who become pregnant (including both people using the method correctly and consistently and users who make mistakes) (110). Typical-use rates generally are obtained from nationally representative surveys of contraceptive users (41, 119). Participants in such surveys are more likely than those in clinical trials to represent typical users under typical conditions.

For long-acting contraceptive methods that require little or no action on the part of the user, typical-use pregnancy rates are either exactly the same or nearly the same as perfect-use pregnancy rates. For other methods that require more user action, however, typical-use pregnancy rates are measurably higher than perfect-use rates, and often substantially higher (see "Effectiveness gap differs by method" and Table 1, p. 4).

Perfect-use and typical-use pregnancy rates usually are measured in the first year of contraceptive use. Pregnancy

¹In epidemiological studies, the inherent protection of a contraceptive method—that is, how well the method works when used perfectly—is referred to as its "efficacy," and how effective a method is in typical use, which includes incorrect and inconsistent use, is referred to as its "effectiveness" (72, 128). To distinguish between effectiveness when a method is used perfectly and as typically used, this report uses the terms "inherent effectiveness," "greatest effectiveness," and "effectiveness when used correctly and consistently" to refer to perfect-use conditions, and uses "effectiveness as typically used" to refer to typical-use conditions.



rates over several years of use generally are available only for long-acting methods, such as IUDs, implants, and sterilization, because enough people use these methods for longer than one year to permit measurement. Long-term pregnancy rates are difficult to compare among contraceptive methods because the time peri-

ods measured vary according to the effective life span of the method under study (105, 127). (For long-term pregnancy rates of IUDs, implants, female sterilization, and vasectomy, see the publication, *Family Planning: A Global Handbook for Providers* (136). See back cover for more information.)

First-year pregnancy rates provide a good indication of the risk of pregnancy with contraceptive use, whether in perfect use or in typical use. In general, pregnancy rates are highest in the first year of use, because contraceptive users who are most likely to become pregnant do so within a year of use. Also, some methods are more likely to fail in the first year of use than later. Nonetheless, pregnancy rates with contraceptive use continue to increase over each year of use, and family planning clients should be aware of this important fact (see “Explain Long-Term Effectiveness,” p. 12).

Effectiveness gap differs by method. The gap between perfect-use and typical-use pregnancy rates depends both on a method’s inherent protection and on how difficult the method is to use perfectly. Methods have been grouped into three categories based on differences between perfect-use and typical-use pregnancy rates (108, 118):

- **Methods that are inherently highly protective against pregnancy and are nearly impossible to use imperfectly.** Long-acting contraceptive methods—female sterilization, IUDs, and implants—fall into this category. Once the procedure is done, little or nothing is required of users to assure effectiveness. In other words, there are no mistakes for the user to make. Therefore typical-use

and perfect-use pregnancy rates, as shown in Table 1, are almost the same. Vasectomy is also a long-acting and highly effective method that requires little of the user, except to use a backup method for three months after the vasectomy procedure, until the method takes effect (141).

- **Methods for which proper use plays an important role in contraceptive effectiveness.** Oral contraceptives have low pregnancy rates if women use them correctly and consistently. Typical-use pregnancy rates are substantially higher than perfect-use rates, however. These are clear signs that following the method’s rules for correct

Table 1. Contraceptive Effectiveness

Number of Unintended Pregnancies Per 100 Women During the First Year of Contraceptive Use		
Contraceptive Method	Number of Unintended Pregnancies Per 100 Women	
	During Typical Use ^a	During Correct and Consistent Use ^a
Implants	0.05	0.05
Vasectomy	0.15	0.1
Levonorgestrel-releasing IUD	0.2	0.2
Female sterilization	0.5	0.5
Copper-bearing IUD (TCu-380A)	0.8	0.6
Lactational amenorrhea method (LAM) (for 6 months only)	2	0.9
Combined monthly injectables	3	0.05
Progestin-only injectables	3	0.3
Combined oral contraceptives	8	0.3
Progestin-only oral pills	8	0.3
Combined patch	8	0.3
Combined vaginal ring	8	0.3
Male condom (without spermicide)	15	2
Diaphragm with spermicide	16	6
Female condom (without spermicide)	21	5
Fertility awareness methods	25	^b
Ovulation method	^c	3
<i>TwoDay Method</i> [®]	^c	4
<i>Standard Days Method</i> [®]	^c	5
Withdrawal	27	4
Spermicides	29	18
Cervical cap	32 ^d , 16 ^e	26 ^d , 9 ^e

Key
0–0.9
Very effective
1–9
Effective
10–25
Moderately effective
26–32
Less effective

Based on Appendix A in World Health Organization and Johns Hopkins Bloomberg School of Public Health 2007 (136).

^a First-year contraceptive pregnancy rates largely from the United States. Source: Trussell 2007 (120). Rates for monthly injectables and cervical cap are from Trussell 2004 (118). Six-month rate for LAM during correct and consistent use is the weighted average from Kazi 1995 (64), Labbok 1997 (69), Pérez 1992 (84), and Ramos 1996 (92); during typical use from Kennedy 1996 (65).

^b For fertility awareness methods, pregnancy rates during correct and consistent use are not given because inherent effectiveness varies widely among the different methods.

^c Pregnancy rates during typical use are not available from population-based surveys.

^d Pregnancy rate for women who have given birth.

^e Pregnancy rate for women who have never given birth.

and consistent use largely determines effectiveness of oral contraceptives (122). Injectable contraceptives fall between these first two categories. That is, users of injectables need only to remember to have repeat injections—either monthly for combined injectables or every three months for progestin-only injectables—to ensure contraceptive effectiveness.

To achieve the best possible contraceptive protection against unintended pregnancy, family planning clients must make an informed decision to choose the method that combines the greatest inherent effectiveness with their own ability to use it correctly and consistently.

- **Methods that have a wide range of typical-use pregnancy rates among different studies and groups of users.** Barrier methods, fertility awareness methods, spermicides, and withdrawal are in this category. Perfect-use pregnancy rates are substantially lower than typical-use rates, illustrating that proper use of these methods plays an important role in their effectiveness. The difference between this category and the category above is that typical-use pregnancy rates vary widely from one study to another and from one group of users to another (for example, see Figure 1, below). For these methods, the large variations in effectiveness suggest that personal characteristics, user behavior, and programmatic factors often are more important than the inherent effectiveness of these contraceptives in determining probability of pregnancy (41, 50, 81, 88, 110, 120).

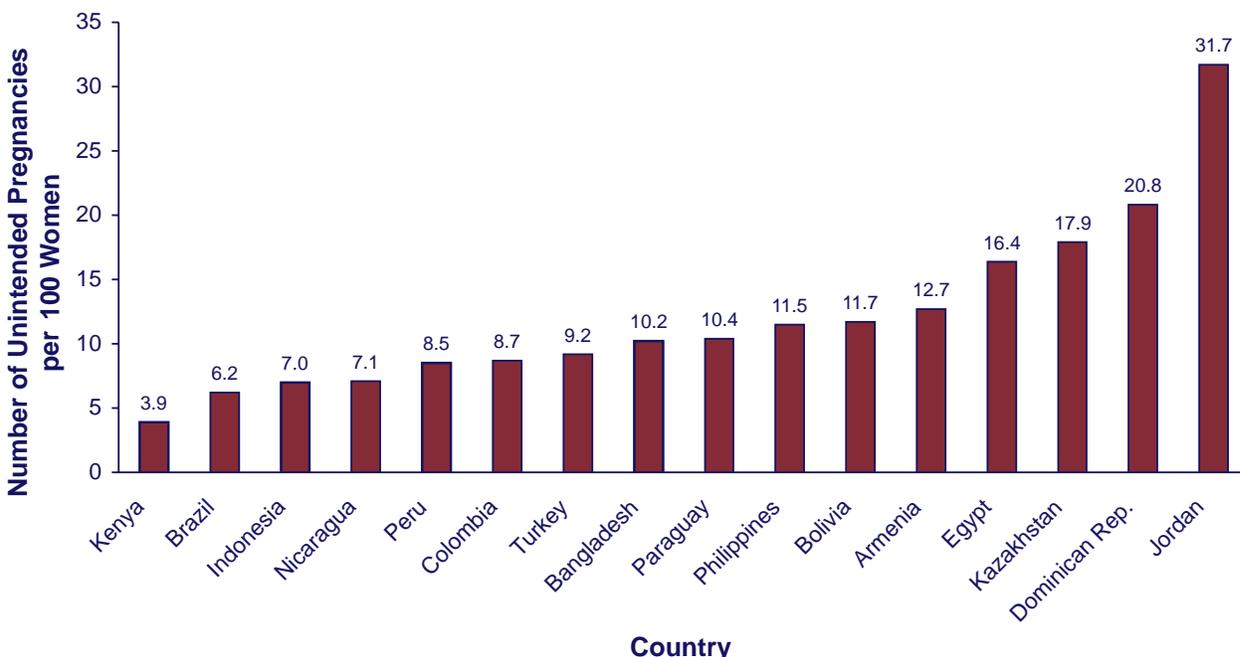
an informed decision to choose, from among available methods suitable to their individual circumstances, the one that combines the greatest inherent effectiveness with their own ability to use it correctly and consistently. Many people, however, have poor knowledge about contraceptive effectiveness—including people who have discussed family planning with a health care provider (32, 111, 112).

Family planning programs can help close the gap. While contraceptive effectiveness depends primarily on the method and the user, programs can help clients ensure maximum protection against unintended pregnancy by keeping a range of methods continuously in stock so that clients can choose the method they prefer, by offering convenient ways to obtain methods so that clients do not interrupt use because their method is unavailable, and by ensuring that providers counsel clients about common side effects with the methods that their clients are considering—a problem that often interferes with correct and consistent contraceptive use (see box, “How Programs Can Improve Contraceptive Effectiveness,” pp. 6–7).

Closing the Effectiveness Gap

To achieve the best possible contraceptive protection against unintended pregnancy, family planning clients must make

Figure 1. Condom Effectiveness Varies by Country
 12-Month Typical-Use Pregnancy Rates Among Married Women Relying on Condoms, Selected Countries



Source: Cleland 2004 (24)

INFO Reports

How Programs Can Improve

The quality of services that family planning programs provide often influences how well a client's method protects against unintended pregnancy (7, 88). Providing good-quality services ensures that a range of contraceptive methods are available and easily accessible. Good quality services also emphasize informative contraceptive counseling (56, 88). To improve effective use of contraception, programs can:

- **Provide access to a range of contraceptive methods.** When programs offer a range of methods from which to choose, clients are more likely to find a method that suits them—one that they will be able to use correctly and consistently.
- **Help clients address contraceptive side effects.** When programs help clients address common side effects of the methods they are

considering, they can enable many clients to deal successfully with concerns that often interfere with correct and consistent use.

- **Provide supplies conveniently.** When clients can easily obtain oral contraceptives, condoms, and other supply methods, they are more likely to continue using contraception without interruption.

Provide Access to a Range of Contraceptive Methods

Offering a full range of methods, kept continuously in stock, allows clients to choose the methods they prefer and to use them consistently (49). In contrast, relying too heavily on one family planning method over others can make it difficult for many clients to find the method they would

In Ethiopia, a community-based reproductive health agent serves as a source of contraceptive information and methods while selling vegetables in markets. Offering contraceptive supplies conveniently can encourage consistent contraceptive use. Pills, condoms, and even injectable contraceptives can be provided in the community, since some clients have difficulty returning to the clinic for resupply.
© 2006 Jennifer Wilder/Pathfinder International



Contraceptive Effectiveness

prefer (52). The more methods available, the more clients will be able to choose one that they can continue using effectively.

When many contraceptive methods are readily available, programs are better able to help continuing clients switch to another method if their current method proves difficult to use effectively, or no longer meets their needs (14, 91). Programs that focus on helping clients find the method that best suits their individual circumstances and meets their reproductive health needs can help clients continue to prevent unintended pregnancy effectively over the course of their reproductive lifetime (68).

Family planning programs can help ensure a reliable supply of contraceptives by setting up good logistics management systems. Many country programs now forecast demand for contraceptives and maintain adequate stocks by using computerized logistics management information systems, especially at the central level (71). Family planning programs in over 20 countries of Africa, Asia, and Latin America rely on PipeLine, a free logistics software program, to help program managers with forecasting and plan procurement of contraceptive supplies (26). (See *Population Reports*, “Family Planning Logistics: Strengthening the Supply Chain,” Series J, No. 51, Winter 2002.) Adequate donor funding and coordination among national governments and donors play a key role in ensuring a consistent supply of contraceptives (86).

Help Clients Address Contraceptive Side Effects

Of the method characteristics that can interfere with correct and consistent use, the most important is side effects (32, 42, 100, 106, 112, 132). Fear of side effects is one of the main reasons that women give for not using certain contraceptive methods, especially some of the more effective long-acting methods such as injectable contraceptives and implants (113). Side effects also are the most commonly reported method-related reason—and sometimes the most common reason overall—that women discontinue a contraceptive method (2, 3, 14, 15, 35, 57, 67, 97, 116, 124, 132).

Programs can help clients address common side effects. Clients need to be aware of possible side effects in advance and be prepared to wait a few months for them to subside if they occur, or else to return to the health care provider for help in managing them (91, 101). Women who receive in-depth information about side effects when

they are starting contraceptive use and are encouraged to return to the clinic if they face problems continue using their methods longer than women who receive little information about side effects (22, 57, 73).

Common side effects include menstrual bleeding changes with hormonal methods and IUDs, and headaches and nausea with hormonal methods. Some contraceptive users switch to a less effective method because of such side effects (89, 100, 129). Also, in an attempt to relieve menstrual bleeding changes and nausea from use of oral contraceptives, women sometimes skip pills, thinking that doing so will relieve these side effects. In fact, inconsistent use can worsen such side effects, as well as reduce effectiveness (11, 17, 87, 117).

Provide Supplies Conveniently

Family planning programs can encourage consistent contraceptive use by giving clients an adequate supply of their chosen methods right at the start. For example, women given a full year’s supply of oral contraceptives are more likely to use the method effectively, without interruption, than women given only three pill packs at a time (40). WHO advises that clients using oral contraceptives receive up to one year’s supply of pills (13 cycles) at the first visit (141).

Programs also can encourage consistent contraceptive use by offering oral contraceptives, condoms, and other supply methods in the community—for example, through community-based staff or volunteers—rather than requiring clients to return to the clinic for resupply (74). Even injectable contraceptives provided in the community through mobile, village, or temporary outreach clinics or at the homes of clients or community-based workers have proved feasible. The percentage of clients receiving their repeat injections on time has been comparable between both community and clinic sources (1, 71, 107).

In addition, governments and programs can improve access to contraceptive supplies by offering supply methods, such as oral contraceptives and condoms, through the commercial sector, including physicians, clinics, pharmacies and hospitals. In Latin America and the Near East some countries have developed a strong commercial market in family planning supplies and services—with trained commercial providers, a dependable supply system for commodities, and a pool of potential customers that enable the commercial supply system to succeed (38).



For a client to use a contraceptive method well, the characteristics of the method must fit the individual's circumstances (119). A person's life stage, social and economic status, religious and cultural beliefs, reproductive intentions, family responsibilities, and work schedule all contribute to the

initial choice of a family planning method and affect its continued use (7, 41, 56, 88, 119, 122). The characteristics of contraceptives themselves also influence a client's preference for a specific method and affect how well the client can use the method. Side effects are the contraceptive characteristic that most commonly affect people's preferences and proper use. Other characteristics include whether or not the method interferes with sex, how often a user has to take action to use it correctly, and the need for a partner's cooperation to ensure effectiveness (119).

Ideally, counseling should be able to improve people's ability to use family planning effectively. Successful counseling approaches to improve contraceptive use are difficult to define, however. The few studies that have addressed this issue have limitations, including small sample sizes, short follow-up periods, high loss of participants to follow-up, and varying counseling approaches that limit comparisons and conclusions (53, 80, 103).

Still, family planning providers can help clients make informed choices about effective contraceptive use. They can apply evidence on communicating risk information to explain contraceptive effectiveness in ways that clients are able to understand and can apply to the task of choosing a suitable method (see "How to Explain Contraceptive Effectiveness," below). Also, they can counsel clients to use their chosen methods correctly and consistently, so that their clients can achieve the greatest effectiveness possible with their chosen method (see "Counseling for Effective Use," p. 12).

HOW TO EXPLAIN CONTRACEPTIVE EFFECTIVENESS

A family planning provider's approach to explaining contraceptive effectiveness to their clients should be flexible, because people differ in their preferences for the kind of information and level of detail they prefer to receive (29, 47, 75). Some prefer to receive risk information as numbers (20, 133)—for example, "2 women in every 100 become pregnant." But others understand risk information better when it is expressed in descriptive, comparative terms, such as "more effective" and "less effective" (133).

To explain contraceptive effectiveness, family planning providers can benefit from approaches based on research-

based evidence about communicating risk information (13, 18-20, 27, 37, 51, 54, 59, 78, 79, 94, 115, 131, 133). Two studies deal specifically with communicating the risk of pregnancy during contraceptive use (111, 112).

Three communication approaches appear to be particularly valuable for family planning providers to adopt in explaining effectiveness to their clients:

- **Rank methods in order of effectiveness.** When clients are considering different contraceptive methods, rank them in order of effectiveness as typically used, to show how they compare in preventing pregnancy.
- **Sometimes numbers can help.** Provide statistics on typical-use pregnancy rates, if the client prefers to understand the numbers behind the rank-ordering.
- **Explain long-term effectiveness.** Explain long-term effectiveness, in order to help clients understand the risk of pregnancy over years of use of a given contraceptive method, as well as in the first year of use.

Family planning providers should be flexible in their approach to explaining contraceptive effectiveness to their clients.

Providers can compare the risk of pregnancy among different contraceptive methods by grouping them in order of their effectiveness, ranked from the more effective to the less effective.

Rank Methods in Order of Effectiveness

Comparing family planning methods based on the risk of pregnancy during typical use helps give clients a basis for deciding on the general level of risk they are prepared to accept. Providers can compare the risk of pregnancy among different methods by grouping methods in order of their effectiveness, ranked from the more effective to the less effective.

Providers can also compare the risk of pregnancy when using contraception with the risk of pregnancy when not using any method. In focus-group discussions among women from the United Kingdom, participants said this type of comparison was useful to them (32). The risks of becoming pregnant in the absence of contraceptive use are substantially higher, of course, than when using contraception. On average, 3 women in every 100 will become pregnant from a single act of sexual intercourse (134). Over one year, an average of 85 in every 100 sexually active women not using contraception will become pregnant (120).

When comparing methods, focus on typical-use pregnancy rates. Between 2004 and 2006 a group of contraceptive experts convened on behalf of WHO and the

(Continued on p. 11)

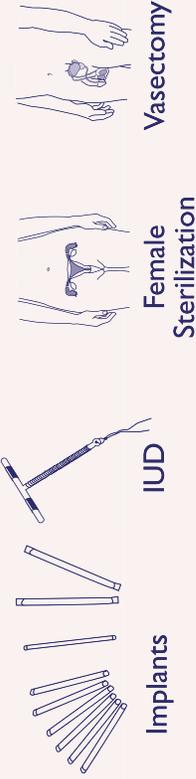


Figure 2.

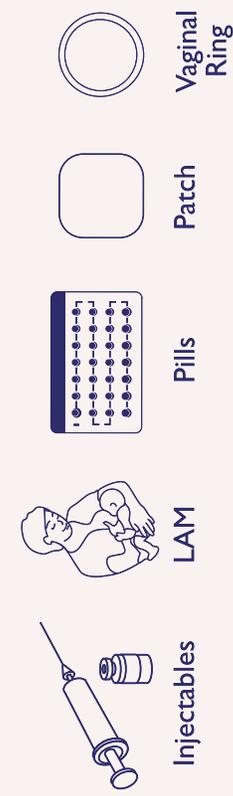
Comparing Effectiveness of Family Planning Methods

More effective

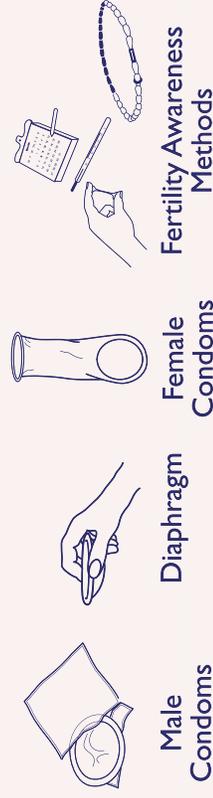
Less than 1 pregnancy per 100 women in one year



Implants, IUD, female sterilization: After procedure, little or nothing to do or remember
Vasectomy: Use another method for first 3 months



Injectables: Get repeat injections on time
Lactational Amenorrhea Method (for 6 months): Breastfeed often, day and night
Pills: Take a pill each day
Patch, ring: Keep in place, change on time



Condoms, diaphragm: Use correctly every time you have sex
Fertility awareness methods: Abstain or use condoms on fertile days. Newest methods (Standard Days Method and TwoDay Method) may be easier to use.



Withdrawal, spermicides: Use correctly every time you have sex



Less effective

About 30 pregnancies per 100 women in one year



Figure 3. Counseling Aid: Explaining Effectiveness of Injectable Contraceptives

The Paling Palette® below is a visual representation of a woman’s risk of becoming pregnant during one year of not using any contraception at all (left) and during the first year of use of progestin-only injectables (right). The illustration depicts 100 women and shows pregnancy risk in both positive and negative terms at the same time. For example, among 100 women using progestin-only injectables 3 would become pregnant during the first year (shown by shading three women in the illustration on the right) (120). The risk is shown in positive terms by leaving the remaining 97 women unshaded. In contrast, among 100 women not using contraception 85 would become pregnant over the course of one year (left) (120). (Conventionally, the Paling Palette uses 1,000 human figures to show risks with probabilities as low as 1 in 1,000.) Family planning providers can use such tools with their clients to help show the risks of pregnancy with contraceptive methods visually rather than with numbers, which can be difficult to grasp.

No Method

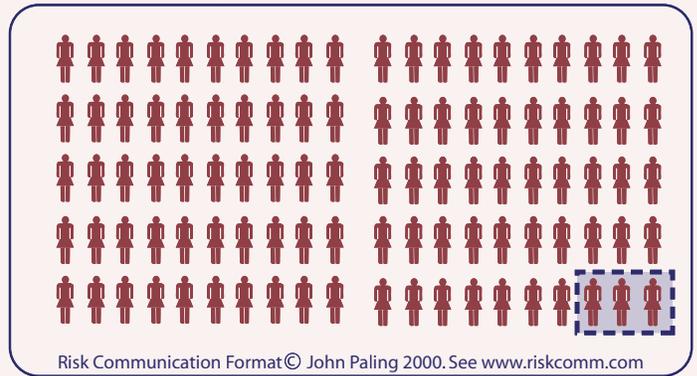
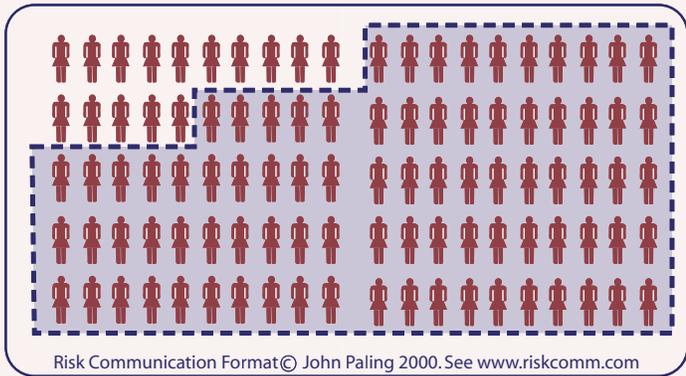
Progestin-Only Injectables

 **85** = Women not using contraception who become pregnant over the course of one year

 **3** = Women using progestin-only injectables who become pregnant during the first year

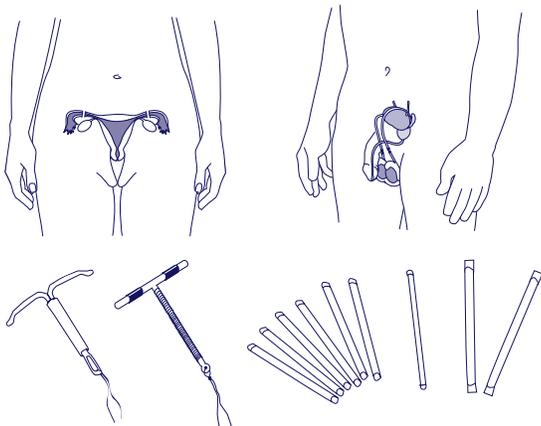
 **15** = Women not using contraception who do **not** become pregnant over the course of one year

 **97** = Women using progestin-only injectables who do **not** become pregnant during the first year

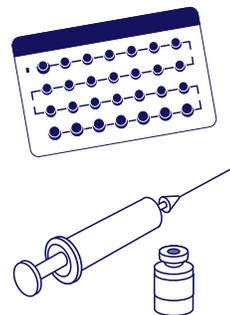


The Three Categories of Contraceptive Methods

1 Methods that are inherently highly protective against pregnancy and are nearly impossible to use imperfectly: female sterilization, vasectomy, hormonal IUD, copper IUD, and implants.



2 Methods for which proper use plays an important role in contraceptive effectiveness: oral contraceptives and injectables.



3 Methods that have a wide range of typical-use pregnancy rates among different studies and groups of users: diaphragm, fertility awareness methods, female condom, male condom, withdrawal, and spermicide.



Illustrations by: Rita Meyer, Fran Mueller, Mark Beisser, and Rafael Avila/CCP

INFO Reports



U.S. Agency for International Development (USAID) to develop recommendations for communicating contraceptive effectiveness (58). The group recommended that, when clients are choosing from among different methods, providers should compare the contraceptive effectiveness of the methods by discussing only pregnancy risks during typical use, rather than comparing pregnancy risks during both typical use and perfect use (58, 112). Once a client has chosen a method, the provider can explain that the method has both a perfect-use and a typical-use pregnancy rate to give the client a goal for achieving the best contraceptive protection possible (see “Discuss the Effectiveness Gap to Encourage Correct and Consistent Use,” p. 13).

The expert group based its recommendation on findings from a study of data from India and Jamaica. In the study, two groups of women from each country were shown contraceptive effectiveness charts that presented only typical-use pregnancy rates, while a third group was shown a chart that presented both typical-use and perfect-use rates. The women shown only typical-use rates were significantly more likely to describe their charts as easy to understand. They were also slightly more likely to improve their knowledge of comparative effectiveness (112).

When comparing methods, providers must take care to be consistent and avoid giving perfect-use pregnancy rates for some methods and typical-use pregnancy rates for others. Some providers give perfect-use pregnancy rates for the more effective methods but give typical-use rates for the less effective methods. For example, in the United States an early study showed that family planning providers tended to give clients perfect-use pregnancy rates for pills and IUDs but to give typical-use pregnancy rates for diaphragms and spermicides (123). Mixing rates in this way can make it appear that differences in effectiveness among the methods being compared are greater than they actually are.

Rank methods without using descriptive terms. Most clients are able to rank methods in order of effectiveness better when given descriptive categories of effectiveness rather than pregnancy rates. In a recent study in the United States, for example, women were shown one of three charts: (1) a chart with pregnancy risk statistics only (both perfect-use and typical-use pregnancy rates), (2) a chart with both statistics (perfect-use and typical-use rates) and descriptive effectiveness terms, or (3) a chart with descriptive effectiveness terms only (as in the second chart), based on typical-use rates. Among women who were shown the third chart—descriptive effectiveness terms only—knowledge that injectable contraceptives are more effective than oral contraceptives increased by 37%. By comparison, such knowledge among women shown either of the other two charts increased much less, by 20% (for the first chart) and 19% (for the second chart) (111).

People often interpret or understand descriptive terms differently, however. As a result, they may interpret the

levels of risk differently. In the U.S. study, for example, women who were given only descriptive terms of effectiveness, without also being shown statistics, were likely to overestimate the risk of pregnancy during contraceptive use.

For instance, 41% of the study participants thought “effective contraceptive methods” were methods that would allow 30 women or more in every 100 to become pregnant over a year’s time (111). In contrast, an early (and now discontinued) WHO effectiveness table used the term “effective” to describe contraceptive methods that result in pregnancies to only 2 to 9 women in every 100 each year (137). Similar overestimating of health risks, such as risks with medications or breast cancer chemotherapy, has been reported in other studies of how people interpret descriptive categories (13, 18, 37, 51, 59, 78, 79, 94, 115, 131, 133).

Some studies have shown that people understand descriptive terms better when the terms are rank-ordered according to the numerical risks associated with the terms (19, 27, 54). For example, in a study that asked participants to assign numerical values to descriptive terms, listed either in rank order or randomly, the participants were more likely to give consistent numerical values when the descriptive terms were rank-ordered, rather than randomized (54).

Because differences in interpretation of descriptive categories affect people’s decisions (13, 20, 27), the expert group convened by WHO and USAID recommended against using descriptive terms, such as “very effective” or “effective,” to characterize effectiveness of contraceptive methods. Instead, the group developed a chart that ranks methods in order of effectiveness, without descriptive terms (see Figure 2, p. 9). Providers can use this chart to help explain comparative typical effectiveness to clients.

Sometimes Numbers Can Help

Some clients may want to make their own objective comparisons among the methods they are considering and thus want to know the typical-use pregnancy rates for these methods. Some tested approaches to stating medical risks can help family planning providers explain pregnancy risk statistics to their clients:

People often interpret or understand descriptive terms differently, and thus they may interpret the levels of risk differently.

- **Use frequencies, not percentages.** Clients generally interpret statistics on risk more accurately when providers express them as frequencies, rather than as percentages (4, 29, 44). For example, people often find it easier to understand that 8 women in every 100 (a frequency) will become pregnant during the first year of use of combined oral contraceptives, rather than that 8% of women will become pregnant. To some people, percentages are abstract figures because the denominator, or the group to which the percentage applies, is not stated explicitly (47).



- **When comparing risks, use the same denominator.** Most people find it easier to compare statistics on risk when providers express the pregnancy rates using the same denominator. When given comparisons using different denominators—for example, one rate with a denominator of 100 people and another

with a denominator of 1,000 people—many people mistake which is the greater risk (8, 31).

- **Explain risks using both positive and negative statements.**

Most experts think that providers should state risks in both positive and negative terms to avoid influencing clients' perceptions of whether a particular level of risk is worth taking (30, 44, 83). To state pregnancy risks both ways, family planning providers could point out, for example, that in typical use of oral contraceptives during the first year, 92 women in every 100 *do not* become pregnant and, put the other way, 8 women in every 100 *do* become pregnant (47).

Information about long-term effectiveness helps clients look ahead and recognize the continuing risk of pregnancy during contraceptive use.

Following a contraceptive method's rules for correct and consistent use will enable many clients to close the gap between effectiveness of the method as typically used and its inherent effectiveness.

- **Use visual aids to help clients understand pregnancy risk statistics.** Visual aids help put the risk of pregnancy into perspective. The Paling Palette®, for example, shows risks in both positive and negative terms at the same time and thus presents an unbiased view (83) (see Figure 3, p. 10). Some studies show that people find visual aids with human figures, such as the Paling Palette, more meaningful, easier to understand, and easier to identify with than bar charts (102). Other studies find that people prefer bar charts (39). Providers can use different visual formats to match the needs of the client. Providers also should keep in mind that, while visual aids can help with understanding, they do not replace face-to-face client-provider communication (135). Many clients say they want and need providers to explain illustrations depicting data (5).

Explain Long-Term Effectiveness

Providers should explain long-term contraceptive effectiveness, as well as discuss first-year pregnancy rates. Information about long-term effectiveness helps clients look ahead and recognize the continuing risk of pregnancy during contraceptive use. Long-term effectiveness is particularly important to convey because many

contraceptive users believe the first-year pregnancy rate is their total risk of pregnancy, no matter how long they use their method, rather than their risk for the first year and with at least some further risk each and every year thereafter, as long as they continue use (88, 104).

In general, pregnancy rates are highest in the first year of use. The risk of pregnancy for a group of people during *each year* thereafter generally declines. The risk declines in part because those who are more likely to become pregnant—either because they are more fertile or they are more likely to make contraceptive use errors—do so early on. The

group left consists of those people who are less fertile, have sex less frequently, or make fewer contraceptive use errors (118).

Also, the risk declines because some contraceptive methods are more likely to fail in the first few months of use. For example, most IUD expulsions occur in the first year, and especially during the first three months after insertion (6, 126, 142).

Even a low *annual* risk of pregnancy associated with a highly effective method turns into a higher risk over *several years* of use (88, 98, 118, 119). For example, in typical use of the copper-bearing TCU-380A IUD, a highly effective method, 0.8 women in every 100 (that is, 8 women in every 1,000) become pregnant during the first year (120). Over a 12-year

period of typical use, 2.2 women in 100 (22 women in 1,000) relying on the TCU-380A IUD would become pregnant (127).

COUNSELING FOR EFFECTIVE USE



The provider, as well as the client, plays a key role in contraceptive effectiveness. Providers can counsel family planning clients to use their chosen methods as effectively as possible. Counseling can help clients achieve the greatest protection against unintended pregnancy that their contraceptive method can provide. Family planning programs, too, play an essential role in promoting effective use (see box, “How Programs Can Improve Contraceptive Effectiveness,” pp. 6–7).

In counseling, providers can focus on three issues that encourage and support clients' effective use of contraception. Providers can:

- **Discuss the effectiveness gap to encourage correct and consistent use.** To emphasize the client's role in ensuring contraceptive effectiveness, explain how clients can close the gap between the typical-use pregnancy rate of the client's chosen method and its perfect-use pregnancy rate.

- **Discuss when and whether to use two methods together.** Depending on when they start, some contraceptive users will also need to use a second method at the same time until their method becomes effective. Also, couples using a less effective method who want to ensure greater protection against pregnancy can use two contraceptive methods together.
- **Counsel clients on what they must do to ensure greatest effectiveness.** Providers can give clients instructions and emphasize easy-to-remember tips on how to use their contraceptive method properly to ensure greatest effectiveness, particularly for methods that require user action.

Among contraceptives that require user action to be effective, the most effective method is generally the one that the person uses correctly and consistently.

The provider also can tell the client about emergency contraception. Even the best intentioned and most careful people do not always use their contraceptive methods correctly and consistently. Providers can advise clients that they still have a chance to prevent pregnancy even *after* having sex and making a contraceptive mistake—if they use emergency contraception within five days (see “Feature: Emergency Contraception: A Second Chance,” p. 14).

Discuss the Effectiveness Gap to Encourage Correct and Consistent Use

Once a client has chosen a family planning method, the provider can help the client get the greatest possible protection against pregnancy by counseling how to close the gap between perfect-use contraceptive effectiveness and effectiveness as the method is typically used (see “Perfect Use and Typical Use,” p. 3). If the client has chosen a method with a large gap between the two rates, the provider can start by explaining that its effectiveness depends largely on how well the user can close the gap by following the method’s rules for correct and consistent use.

As mentioned, a contraceptive method can be as effective in typical use as the perfect-use pregnancy rate indicates, but only if the client uses it correctly and consistently. Because the typical-use rate is an average rate, an individual client could achieve much more or much less contraceptive protection than this rate indicates, particularly for methods with which user action plays a large role in determining actual effectiveness.

If a client has chosen a less effective method than other available methods, or one that requires more action from the client to be effective, the provider should explore with the client how important it is for the client to avoid pregnancy and how well the client will be able to use the chosen method properly. If this client wants to avoid pregnancy as much as possible but does not want to switch to a more effective method, or to a method that requires less of the user for its effectiveness, the provider can discuss whether using two methods together to lower the risk of unintended pregnancy would be feasible (see “Discuss When and Whether to Use Two Methods Together,” p. 15).

For women with certain medical conditions that make pregnancy riskier to their health, providers should emphasize the special importance of ensuring contraceptive effectiveness. Such conditions include some reproductive tract infections and disorders, cardiovascular disease, and endocrine and gastrointestinal disorders (139). (For a complete list see the WHO publication, *Medical Eligibility Criteria for Contraceptive Use*: <<http://www.who.int/reproductive-health/publications/mec/increasedrisk.html>>.) Providers should advise women with these conditions that a family planning method requiring correct use on a daily basis or each time they have sex may not be the most appropriate choice (61, 139).



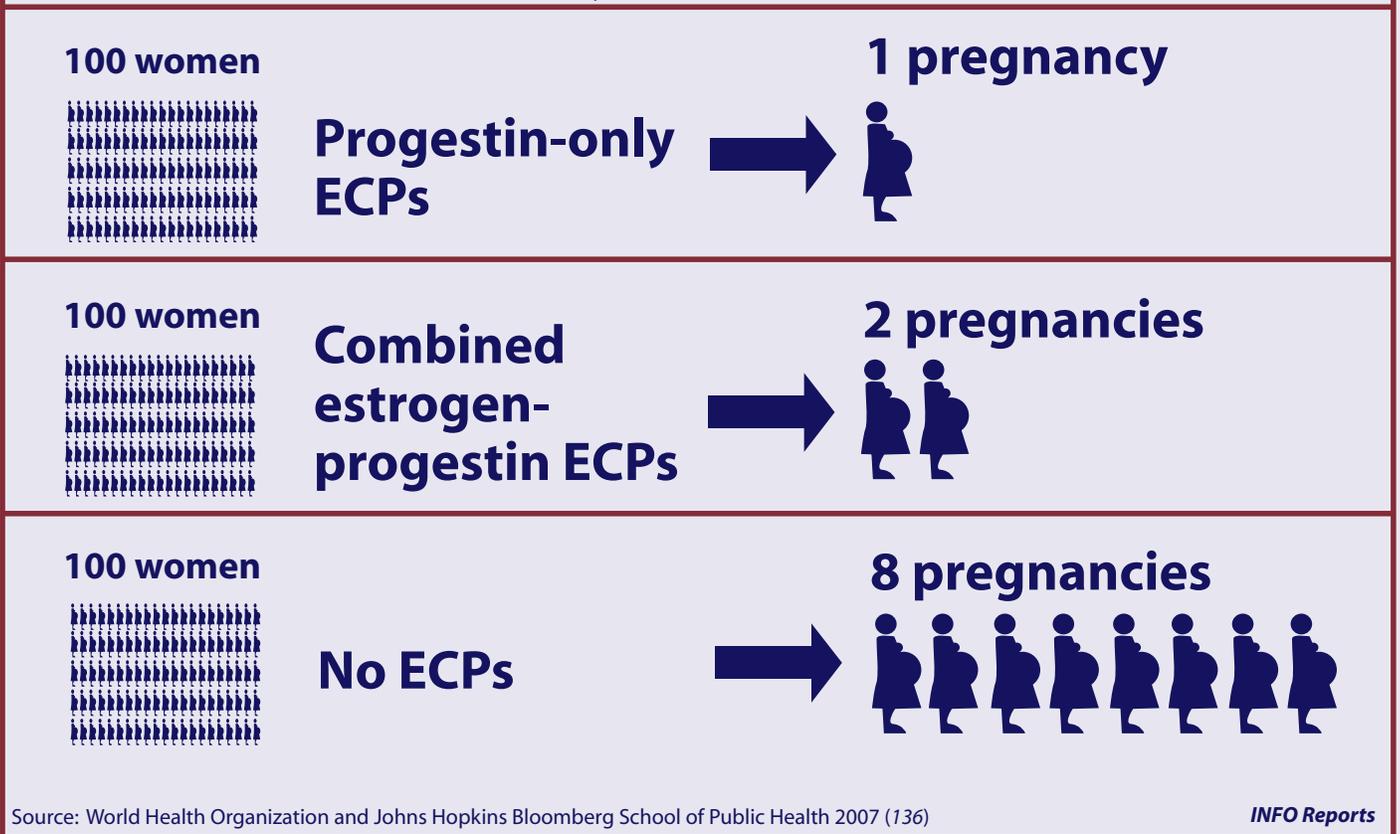
In Jordan a health worker counsels a family planning client that she must remember to obtain a repeat injection of the progestin-only DMPA injectable every three months. Emphasizing the most important action for effective use of contraceptive methods helps clients ensure greatest effectiveness against unintended pregnancy. © 1998 Jennifer Knox/CCP, Courtesy of Photoshare

Emergency Contraception: A Second Chance

Figure 4. Effectiveness of Emergency Contraceptive Pills (ECPs)

Using progestin-only or combined estrogen-progestin ECPs can dramatically reduce pregnancies after unprotected sex compared with not using ECPs.

If 100 women **each** had unprotected sex once during the second or third week of the menstrual cycle and then used:



Source: World Health Organization and Johns Hopkins Bloomberg School of Public Health 2007 (136)

INFO Reports

People tend to think of emergency contraceptive pills (ECPs) as a second chance to prevent pregnancy after having sex without contraception, or after sex was forced or coerced. But ECPs also give women a second chance in the event of a contraceptive mistake or an obvious contraceptive failure. If a woman wants an IUD as her continuing contraceptive method, she can have a copper-bearing IUD inserted, and that, too, will provide emergency contraception (60).

Emergency contraception, whether pills or the IUD, can help women avoid unintended pregnancy in the event of such contraceptive mistakes as:

- Condom slipped, broke, or was otherwise used incorrectly.

- Fertility awareness method was used incorrectly (for example, failed to abstain or to use another method on a fertile day).
- Using withdrawal as a family planning method, man failed to withdraw before he ejaculated.
- Woman missed three or more combined oral contraceptive pills or started a new pill pack three or more days late.
- Woman is more than 2 weeks late for her repeat progestin-only injection or more than 7 days late for her repeat monthly injection.
- IUD has come out of place (60, 136).

How emergency contraceptive pills work. ECPs contain the same hormones used in oral contraceptives but in higher one-time or two-time doses. ECPs work

primarily by preventing or delaying the release of eggs from the ovaries. They do *not* disrupt an existing pregnancy (60). All women can safely use ECPs, even women who cannot use hormonal contraceptives on an ongoing basis, because the treatment is brief and the hormonal dose is low (136).

What are the regimens? Progestin-only oral contraceptives and combined oral contraceptives can act as emergency contraceptives. Also, special emergency contraceptive pills that contain either only the progestin levonorgestrel or both estrogen and levonorgestrel can be used, if available. Progestin-only emergency contraceptives are taken in a single dose. Combined estrogen-progestin emergency contraceptives are taken in two doses.

The number of pills a woman has to take for emergency contraception for each dose depends on the type of pills she is using. It ranges from 1 or 2 pills with special progestin-only or combined estrogen-progestin ECPs to 40 or 50 pills with progestin-only oral contraceptives.

How effective are emergency contraceptive pills?

The sooner ECPs are taken after unprotected sex, the better they prevent pregnancy. ECPs can prevent pregnancy when taken any time up to five days after sex (34, 85, 95, 130). ECPs should be used only in the event of a contraceptive mistake, however, or after having had sex without contraception.

WHO does not recommend regular use of ECPs as an ongoing contraceptive method (140). ECPs are less effective than nearly all regular contraceptive methods when used correctly and consistently over the long term (60).

Progestin-only ECPs are more effective than combined estrogen-progestin ECPs, and they cause fewer side effects. Progestin-only ECPs reduce the risk of pregnancy by an estimated 88%, while estrogen-progestin ECPs reduce the risk by about 75% (114, 121) (see Figure 4, p. 14).

Providing ECPs. Women are more likely to use ECPs if they already have them on hand, studies show (12, 33, 45, 62, 76, 90, 99). Providers can give women, or men, a prescription for or supply of ECPs in advance so that the woman can have them on hand to be able to take them as soon as possible if needed (141).

Research shows that women who receive ECPs in advance are not more likely to have unprotected sex than women who only receive information about ECPs. Also, women who receive ECPs in advance are not more likely than other women to rely on ECP use repeatedly, and not less likely to use regular contraception (12, 33, 45, 62, 93, 99).

Moreover, they are not more likely to make contraceptive use errors with their regular method (33, 45, 62). In fact, women who have ECPs on hand in advance, as well as women who are given information about ECPs, are likely to use more effective contraception after receiving the advance supply of or information about ECPs (45, 46, 62).

For more information about emergency contraception, including specific pill formulations and dosing, consult the publication *Family Planning: A Global Handbook for Providers* (136) or the International Consortium for Emergency Contraception (<http://www.cecinfo.org/>), a group of international organizations formed to expand access to and ensure safe and appropriate use of emergency contraception.

Discuss When and Whether to Use Two Methods Together

Using two family planning methods simultaneously can dramatically lower the risk of unintended pregnancy, particularly if a couple uses both methods consistently and correctly (66, 119). To obtain extra contraceptive protection, combining some of the less effective nonhormonal methods with a more effective hormonal method, or combining a barrier method with any other type of method, could be a good choice. It is not practical, however, and probably also not advisable medically, for a woman to use two hormonal methods together—for example contraceptive implants and oral contraceptive pills.

Dual method use also could be a good option for couples who want to reduce the risk of pregnancy as much as possible but do not want to or cannot use a long-term or permanent method, such as an IUD or sterilization. Couples who do not always use a single method correctly, as well as women for whom pregnancy is especially risky, also could benefit from using two methods together, provided they use

both methods consistently (66). Using male or female condoms along with another contraceptive method would offer more effective protection against pregnancy than using just one method, and would also help protect the couple from sexually transmitted infections, including HIV.

Providers can advise clients that they still have a chance to prevent pregnancy even after having sex and making a contraceptive mistake—if they use emergency contraception within five days.



Starting hormonal methods or vasectomy. Some people just starting contraceptive use, as well as some current users switching to another method, need to use an immediately effective backup method along with their new method (or should abstain from sex) until the new method becomes effective.

Whether the user needs to use a backup method, and for how long, depends on both the new method itself and when the client starts using it (136).

For example, for hormonal methods not started early in the menstrual cycle, the need for a backup method ranges from two days to seven days. For vasectomy, a couple needs to use another method as well for the first three months (136). (For more information on whether and when to use a backup method when starting a method, see the publication *Family Planning: A Global Handbook for Providers* (136).)

Appropriate backup methods include male and female condoms, spermicides, and withdrawal. These methods provide immediate protection against pregnancy when used correctly and consistently. Male condoms are more effective than either spermicides or withdrawal in both perfect and typical use. Female condoms also are more effective than spermicides or withdrawal in perfect use. Effectiveness of female condoms and withdrawal in typical use is similar (see Table 1, p. 4).

Counsel Clients on What They Must Do to Ensure Greatest Effectiveness

Providers should counsel clients on what specific behavior is required to ensure greatest effectiveness of their chosen method—particularly for methods that require substantial user action.

During counseling, providers can emphasize the most important action for effective use of their method and can offer tips on how to stick to the key action.

Focusing on the most important action will avoid the possibility of overwhelming clients with too much information, as most people can grasp only two or three important pieces of information in a brief time (43).

Providers can give clients take-home materials to reinforce the full set of instructions for effective use. For example, Table 2 (see pp. 17–18), offers instructions and tips for effective use of the most widely used contraceptive methods that require user action.

Family planning clients, providers, and program managers share responsibility for ensuring contraceptive effectiveness.

Providers can emphasize the most important action for effective use of a client’s method and offer tips on how to stick to the key action.

For users of oral contraceptives, the most important action needed for effective use is taking a pill every day. The provider can emphasize this behavior and suggest that the client keep her pill pack next to something she uses every day, such as her toothbrush, to help her remember (23).

Technological solutions also have been developed to help women solve the problem of remembering to take a pill every day. They range from having the client set her mobile phone’s reminder alarm to go off when it is time to take her pill, or having the family planning clinic send automatic daily text-message reminders to clients’ mobile phones, to having clients carry electronic reminder devices that make a beeping sound each day when it is time to take the pill (9, 10, 70, 82). In developing countries mobile phone technology is being used in many health service delivery areas, for example, to encourage patients with diabetes, tuberculosis, or HIV to continue and complete their treatment regimens (9, 16, 125).

Family planning clients, providers, and program managers share responsibility for ensuring contraceptive effectiveness. Clients are ultimately responsible for choosing the contraceptive that suits them best—one that combines the greatest inherent effectiveness with their own ability to use it properly. Particularly for methods that require user action, clients have primary responsibility for using the method correctly and consistently to ensure greatest effectiveness.

Providers are responsible for explaining contraceptive effectiveness so that clients have the understanding to make informed choices. Providers also can help clients close the gap between the inherent effectiveness of a method and its effectiveness as typically used. They can offer counseling and practical guidance on instructions for effective use of clients’ chosen methods.

Family planning programs also have a responsibility to offer good-quality services. Clients who have convenient and continuous access to a range of contraceptive methods are better able to choose the methods most

suitable to their individual situations and to use them continuously, as long as they want to avoid pregnancy.

Working together, family planning clients, providers, and programs can improve contraceptive effectiveness—enabling women and men around the world to choose more effective methods, and to use their chosen methods more correctly and consistently. In doing so, they could help avoid millions of unintended pregnancies.

Table 2. (Side 1)

Client Educational Materials: Tips for Using Contraceptives Effectively

How to use these educational materials: Family planning providers can photocopy these instruction and tip cards for contraceptive methods that require user action. (Instruction and tip cards for withdrawal, spermicides, and the cervical cap—the least effective group of methods—are not provided.) Providers can give clients the relevant tip card to remind them how to use their chosen method correctly and consistently and ensure the greatest protection against unintended pregnancy with their method. **The most important action required to ensure effectiveness is printed in bold type.**

Vasectomy	
Instructions for Correct and Consistent Use	Tips for Correct and Consistent Use
<ul style="list-style-type: none"> • Use condoms or another contraceptive method for 3 months after the vasectomy, when it becomes effective. • If semen analysis is available, return 3 months after the vasectomy to have your semen checked under a microscope. 	<ul style="list-style-type: none"> • If using condoms as your backup method, take enough condoms from your provider to keep you supplied for 3 months. • Keep extra condoms with you all the time so that you can have them on hand when you need them. But do not keep them in your wallet for more than 1 month. • Link the 3-month date to a holiday or other event to help you remember it. • Program a reminder alarm into your mobile phone or pager if you have one.

Lactational Amenorrhea Method (LAM)	
Instructions for Correct and Consistent Use	Tips for Correct and Consistent Use
<ul style="list-style-type: none"> • Begin using another contraceptive method if: (1) menstrual bleeding begins, (2) your baby is no longer fully or nearly fully breastfeeding frequently, day and night, OR (3) your baby reaches 6 months of age. 	<ul style="list-style-type: none"> • Start breastfeeding as early as possible after giving birth to stimulate production of your breastmilk. • Breastfeed whenever your baby wants to be fed. • Do not give your baby regular supplemental liquids or foods for the first 6 months of age. • Join a community breastfeeding support group to help you with breastfeeding. • Plan ahead with your provider on which contraceptive method to begin when still using LAM or to switch to after LAM stops being effective.

Injectable Contraceptives	
Instructions for Correct and Consistent Use	Tips for Correct and Consistent Use
<ul style="list-style-type: none"> • Do not massage the injection site. • Use a backup method for the first 7 days of having your first injection, if directed by your provider, until the injection becomes effective. • Return on schedule for next injection: Every 3 months (13 weeks) for DMPA, 2 months (8 weeks) for NET-EN, or 1 month (4 weeks) for combined monthly injectables. • If you cannot return on schedule, you can always have your next injection up to 2 weeks early or 2 weeks late for progestin-only injectables (DMPA or NET-EN), or 7 days early or 7 days late for combined monthly injectables. • Return for next injection no matter how late you are. But if you are going to be more than 2 weeks late for your next progestin-only injection or more than 7 days late for your next combined monthly injection, use a backup method or abstain from sex until you can get an injection. If you do, you can still have your next injection. Consider using emergency contraceptive pills (ECPs) if you have had unprotected sex, since your injectable may no longer provide protection. 	<ul style="list-style-type: none"> • Link the date for your next injection to a holiday or other event to help you remember it. • Program a reminder alarm into your mobile phone or pager if you have one.

Sources: Calsyn 2006 (21), Felkey 2005 (36), Hatcher 2004 (55), Rosenberg 1995 (96), Steiner 2005 (109), World Health Organization and Johns Hopkins Bloomberg School of Public Health 2007 (136)

(Side 2 on back)



Table 2. (Side 2)

Client Educational Materials: Tips for Using Contraceptives Effectively

Oral Contraceptives	
Instructions for Correct and Consistent Use	Tips for Correct and Consistent Use
<ul style="list-style-type: none"> ● Take one pill each day. Take each pill in the correct order, until the pack is empty. ● Use a backup method for the first few days of starting your pills, if directed by your provider, until they become effective. ● Start the next pack of pills on time. <ul style="list-style-type: none"> — For progestin-only pills and 28-pill combined oral contraceptive packs: When you finish one pack, take the first pill from the next pack on the very next day. — For 21-pill combined oral contraceptive packs: After you take the last pill from one pack, wait 7 days—no more—and then take the first pill from the next pack. ● Ask your provider and remember what to do if you forget to take pills. ● Do not skip pills to try to reduce side effects. Skipping pills risks pregnancy and can make some side effects worse. ● There is no reason to take “breaks” or “rests” from pill use. You could get pregnant if you do so. ● If you vomit within 2 hours of taking a pill or have severe diarrhea or vomiting for more than 24 hours, your body might not have absorbed the hormones from the pill. Take a hormonal pill as soon as possible and then keep taking pills one each day at your usual pill-taking time. 	<ul style="list-style-type: none"> ● Link pill-taking to a daily activity, such as brushing your teeth or making a pot of coffee in the morning. ● Place brightly colored reminder stickers on calendars or other objects that you use daily to help you remember to take a pill daily. ● Program a daily reminder alarm into your mobile phone or pager if you have one. ● Use an electronic reminder device if available. ● Remember to take your pills with you if you will be away from home when it is time to take your next pill. ● Mark the days on a calendar to help you remember when to start your next pill pack.

Male Condom	
Instructions for Correct and Consistent Use	Tips for Correct and Consistent Use
<ul style="list-style-type: none"> ● Use a new condom each and every time you have sex. Do not reuse condoms. ● Before any genital contact, place the condom on the tip of the erect penis with the rolled side out. ● Unroll condom all the way to the base of the erect penis. ● Immediately after ejaculation, hold the rim of the condom in place and withdraw the penis while it is still erect. 	<ul style="list-style-type: none"> ● Take enough condoms from your provider to keep you supplied until you can return for more. ● Keep extra condoms with you all the time so that you can have them on hand when you need them. But do not keep them in your wallet for more than 1 month. ● If you are a new condom user, practice putting on and taking off a condom before the next time you have sex. Correct use becomes easier with practice.

Female Condom	
Instructions for Correct and Consistent Use	Tips for Correct and Consistent Use
<ul style="list-style-type: none"> ● Use a new condom each and every time you have sex. Reusing female condoms is not recommended. ● Before any genital contact, insert the condom into the vagina. Can be inserted up to 8 hours before sex. ● Make sure that the penis enters the condom—not between the condom and the vaginal wall—and stays inside the condom. 	<ul style="list-style-type: none"> ● Take enough condoms from your provider to keep you supplied until you can return for more condoms. ● Keep extra condoms with you all the time so that you have them on hand when you need them. ● If you are a new condom user, practice putting in and taking out a condom before the next time you have sex. Correct use becomes easier with practice.

Fertility Awareness Methods	
Instructions for Correct and Consistent Use	Tips for Correct and Consistent Use
<ul style="list-style-type: none"> ● Do not have unprotected sex—either avoid vaginal sex or use another contraceptive method—during fertile time. ● Consider symptoms-based methods (<i>TwoDay Method</i>®, ovulation method, or Basal Body Temperature method) if you have irregular menstrual cycles. ● Consider calendar-based methods (<i>Standard Days Method</i>® or calendar rhythm method) if you have difficulty recognizing the presence of cervical secretions. ● Do not use fertility awareness methods if you are not having monthly bleeding. Use another method until menstrual cycles return. 	<ul style="list-style-type: none"> ● If you are using a calendar-based method, use memory aids, such as a calendar or <i>CycleBeads</i>™ (a color-coded string of beads that identifies fertile and non-fertile days of a cycle), to help you identify the start and end of the fertile time during your menstrual cycle.



Bibliography

This bibliography includes only citations to the materials most helpful in the preparation of this report. In the text, reference numbers for these citations appear in *italic*. The complete bibliography can be found on the INFO Web site at: <http://www.inforhealth.org/inforeports/effectiveness/bib/shtml>. The links included in this report were up-to-date as of publication.

3. ALI, M. and CLELAND, J. Contraceptive discontinuation in six developing countries: A cause-specific analysis. *International Family Planning Perspectives* 21(3): 92-97. Sep. 1995. (Available: <http://www.guttacher.org/pubs/journals/2109295.html>)
4. ANCKER, J. How writers can help readers understand health screening tests. *AMWA Journal* 20(2): 59-61. 2005. (Available: <http://www.dbmi.columbia.edu/~jsa7002/Assets/Ancker%20AMWA%202005.pdf>)
5. ANCKER, J.S., SENATHIRAJAH, Y., KUFATKA, R., and STARREN, J.B. Design features of graphs in health risk communications: A systematic review. *Journal of the American Medical Informatics Association* 13(6): 608-618. Aug. 23, 2006.
7. ASSOCIATION OF REPRODUCTIVE HEALTH PROFESSIONALS. Appropriate contraceptive choice and usage. *Clinical Proceedings*. Feb. 2000. (electronic edition)
8. ASSOCIATION OF REPRODUCTIVE HEALTH PROFESSIONALS. Helping your patients decide: Making informed health choices about hormonal contraception. *Clinical Proceedings*. Jun. 2006. (electronic edition) (Available: <http://www.arhp.org/files/CPHelpingYourPatientDecide.pdf>)
13. BERRY, D.C., RAYNOR, D.K., KNAPP, P., and BERSELLINI, E. Patients' understanding of risk associated with medication use: Impact of European Commission guidelines and other risk scales. *Drug Safety* 26(1): 1-11. 2003.
18. BRYANT, G.D. and NORMAN, G.R. Expressions of probability: Words and numbers. *New England Journal of Medicine* 302(7): 411. Feb. 14, 1980.
19. BUDESCU, D.V. and WALLSTEN, T.S. Consistency in interpretation of probabilistic phrases. *Organizational Behavior and Human Decision Processes* 36(3): 391-405. Dec. 1985.
20. BUDESCU, D.V., WEINBERG, S., and WALLSTEN, T.S. Decisions based on numerically and verbally expressed uncertainties. *Journal of Experimental Psychology: Human Perception and Performance* 14(2): 281-294. May 1988.
24. CLELAND, J. and ALI, M.M. Reproductive consequences of contraceptive failure in 19 developing countries. *Obstetrics and Gynecology* 104(2): 314-320. Aug. 2004.
25. CRAMER, J.A. Compliance with contraceptives and other treatments. *Obstetrics and Gynecology* 88(3 (Suppl.)): 4S-12S. Sep. 1996.
27. DHAMI, M.K. and WALLSTEN, T.S. Interpersonal comparison of subjective probabilities: Toward translating linguistic probabilities. *Memory and Cognition* 33(6): 1057-1068. Sep. 2005.
29. EDWARDS, A. Flexible rather than standardised approaches to communicating risks in health care. *Quality and Safety in Health Care* 13(3): 169-170. Jan. 2006.
30. EDWARDS, A. and ELWYN, G. Presenting risk information—A review of the effects of «framing» and other manipulations on patient outcomes. *Journal of Health Communication* 6(1): 61-82. Jan.-Mar. 2001.
31. EDWARDS, A., THOMAS, R., WILLIAMS, R., ELLNER, A.L., BROWN, P., and ELWYN, G. Presenting risk information to people with diabetes: Evaluating effects and preferences for different formats by a web-based randomised controlled trial. *Patient Education and Counseling* 63(3): 336-349. Nov. 2006.
32. EDWARDS, J.E., OLDMAN, A., SMITH, L., MCQUAY, H.J., and MOORE, R.A. Women's knowledge of, and attitudes to, contraceptive effectiveness and adverse health effects. *British Journal of Family Planning* 26(2): 73-80. Apr. 2000.
37. FETTING, J.H., SIMINOFF, L.A., PIANTADOSI, S., ABELOFF, M.D., DAMRON, D.J., and SARFIELD, A.M. Effect of patients' expectations of benefit with standard breast cancer adjuvant chemotherapy on participation in a randomised clinical trial: A clinical vignette study. *Journal of Clinical Oncology* 8(9): 1476-1482. Sep. 1990.
40. FOSTER, D.G., PARVATANENI, R., DE BOCA-NEGRA, H.T., LEWIS, C., BRADBERRY, M., and DARNEY, P. Number of oral contraceptive pill packages dispensed, method continuation, and costs. *Obstetrics and Gynecology* 108(5): 1107-1114. Nov. 2006.
41. FU, H., DAQRROCH, J.E., HAAS, T., and RANJIT, N. Contraceptive failure rates: New estimates from the 1995 National Survey of Family Growth. *Family Planning Perspectives* 31(2): 56-63. Mar./Apr. 1999. (Available: <http://www.guttacher.org/pubs/journals/3105699.html>)
44. GIGERENZER, G. and EDWARDS, A. Simple tools for understanding risks: From innumeracy to insight. *British Medical Journal* 327(7417): 741-744. Sep. 27, 2003.
47. GODWIN, K. Consumers' understanding of contraceptive efficacy. *British Journal of Family Planning* 23(2): 45-46. Jul. 1997.
48. GRADY, W.R., KLEPINGER, D.H., and NELSON-WALLY, A. Contraceptive characteristics: The perceptions and priorities of men and women. *Family Planning Perspectives* 31(4): 168-175. Jul./Aug. 1999. (Available: <http://www.guttacher.org/pubs/journals/3116899.html>)
51. GRISAFFE, D.B. and SHELLABARGER, S. Consumer comprehension of efficacy data in four experimental over-the-counter label conditions. *Drug Information Journal* 31(3): 937-961. 1997.
54. HAMM, R.M. Selection of verbal probabilities: A solution for some problems of verbal probability expression. *Organizational Behavior and Human Decision Processes* 48(2): 193-223. Apr. 1991.
59. INGLIS, S. and FARNILL, D. The effects of providing preoperative statistical anaesthetic-risk information. *Anaesthesia and Intensive Care* 21(6): 799-805. Dec. 1993.
66. KESTELMAN, P. and TRUSSELL, J. Efficacy of the simultaneous use of condoms and spermicides. *Family Planning Perspectives* 23(5): 226-227, 232. Sep./Oct. 1991.
75. LIPKUS, I.M. and HOLLANDS, J.G. The visual communication of risk. *Journal of the National Cancer Institute Monographs* (25): 149-163. 1999.
78. MAN-SON-HING, M., O'CONNOR, A.M., DRAKE, E., BIGGS, J., HUM, V., and LAUPACIS, A. The effect of qualitative vs. quantitative presentation of probability estimates on patient decision-making: A randomized trial. *Health Expectations* 5(3): 246-255. Sep. 2002.
79. MAZUR, D.J. and MERZ, J.F. Patients' interpretations of verbal expressions of probability: Implications for securing informed consent to medical interventions. *Behavioral Sciences and the Law* 12(4): 417-426. Autumn 1994.
81. MORENO, M. and GOLDMAN, N. Contraceptive failure rates in developing countries: Evidence from the Demographic and Health Surveys. *International Family Planning Perspectives* 17(2): 44-49. Jun. 1991.
83. PALING, J. Strategies to help patients understand risks. *British Medical Journal* 327(7417): 745-748. Sep. 27, 2003.
88. POTTER, L.S. How effective are contraceptives? The determination and measurement of pregnancy rates. *Obstetrics and Gynecology* 88(3 (Suppl.)): 13S-23S. Sep. 1996.
94. REAGAN, R.T., MOSTELLER, F., and YOUTZ, C. Quantitative meanings of verbal probability expressions. *Journal of Applied Psychology* 74(3): 433-442. Jun. 1989.
98. ROSS, J.A. Contraception: Short-term vs. long-term failure rates. *Family Planning Perspectives* 21(6): 275-277. Nov./Dec. 1989.
102. SCHAPIRA, M.M., NATTINGER, A.B., and MCHORNEY, C.A. Frequency or probability? A qualitative study of risk communication formats used in health care. *Medical Decision Making* 21: 459-467. 2001.
106. SNOW, R., GARCIA, S., KURESHY, N., SADANA, R., SINGH, S., BECERRA-VALDIVIA, M., LANCASTER, S., MOFOKENG, M., HOFFMAN, M., and AITKEN, I. Attributes of contraceptive technology: Women's preferences in seven countries. Cottingham, J., ed. In: *Beyond Acceptability: Users' Perspectives on Contraception*. London, Reproductive Health Matters for World Health Organization, 1997. p. 36-48. (Available: http://www.who.int/reproductive-health/publications/beyond_acceptability_users_perspectives_on_contraception/snow.en.pdf)
108. STEINER, M. Contraceptive effectiveness: What should the counseling message be? *Journal of the American Medical Association* 282(15): 1405-1407. Oct. 20, 1999.
110. STEINER, M., DOMINIK, R., TRUSSELL, J., and HERTZ-PICCIOTTO, I. Measuring contraceptive effectiveness: A conceptual framework. *Obstetrics and Gynecology* 88(3 Suppl): 24S-30S. Sep. 1996.
111. STEINER, M.J., DALEBOUT, S., CONDON, S., DOMINIK, R., and TRUSSELL, J. Understanding risk: A randomized controlled trial of communicating contraceptive effectiveness. *Obstetrics and Gynecology* 102(4): 709-717. Oct. 2003.
112. STEINER, M.J., TRUSSELL, J., MEHTA, N., CONDON, S., SUBRAMANIAM, S., and BOURNE, D. Communicating contraceptive effectiveness: A randomized controlled trial to inform a World Health Organization family planning handbook. *American Journal of Obstetrics and Gynecology* 195(1): 85-91. Jul. 2006.
115. TIMMERMANS, D. The roles of experience and domain of expertise in using numerical and verbal probability terms in medical decisions. *Medical Decision Making* 14(2): 146-156. Apr.-Jun. 1994.
118. TRUSSELL, J. Contraceptive failure in the United States. *Contraception* 70(2): 89-96. Aug. 2004.
119. TRUSSELL, J. The essentials of contraception: Efficacy, safety, and personal considerations. Hatcher, R.A., Trussell, J., Stewart, F., Nelson, A.L., Cates, W., Guest, F., and Kowal, D., eds. In: *Contraceptive Technology*. 18th ed. New York, Ardent Media, 2004. p. 221-252.
120. TRUSSELL, J. Contraceptive efficacy. Hatcher, R.A., Trussell, J., Nelson, A.L., Cates, W., Stewart, F.H., and Kowal, D., eds. In: *Contraceptive Technology*. 19th rev. ed. New York, Ardent Media, 2007. (In press)
122. TRUSSELL, J. and VAUGHAN, B. Contraceptive failure, method-related discontinuation and resumption of use: Results from the 1995 National Survey of Family Growth. *Family Planning Perspectives* 31(2): 64-72, 93. Mar.-Apr. 1999. (Available: <http://www.guttacher.org/pubs/journals/3106499.html>)
131. WALLSTEN, T.S., BUDESCU, D.V., RAPOPORT, A., ZWICK, R., and FORSYTH, B. Measuring the vague meaning of probability terms. *Journal of Experimental Psychology: General* 115: 348-365. 1986.
132. WALSH, J. Contraceptive choices: Supporting effective use of methods. Cottingham, J., ed. In: *Beyond Acceptability: Users' Perspectives on Contraception*. London, Reproductive Health Matters for World Health Organization, 1997. p. 89-96. (Available: http://www.who.int/reproductive-health/publications/beyond_acceptability_users_perspectives_on_contraception/walsh.en.pdf)
133. WALTER, F.M. and BRITTEN, N. Patients' understanding of risk: A qualitative study of decision-making about the menopause and hormone replacement therapy in general practice. *Family Practice* 19(6): 579-586. 2002.
136. WORLD HEALTH ORGANIZATION DEPARTMENT OF REPRODUCTIVE HEALTH AND RESEARCH (WHO/RHR) and JOHNS HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH (CENTER FOR COMMUNICATION PROGRAMS, INFO PROJECT). *Family planning: A global handbook for providers*. Baltimore and Geneva: CCP and WHO, 2007.



Subscribing to *INFO Reports*

There are three ways that you can make sure to receive ALL future issues of *INFO Reports*:

1. By e-mail: To receive *INFO Reports* issues fastest, please send an e-mail message with "Electronic subscription to *INFO Reports*" in the "Subject" line to **orders@jhuccp.org** and include your full name, complete mailing address, e-mail address, and client id (if known; found on top line of mailing label). We will send you future issues electronically, as e-mail attachments. (If you would prefer to just receive an e-mail notification that a new issue has been published online, please type "Electronic notification to *INFO Reports*" in the "Subject" line.)
2. By surface mail: To receive print copies of *INFO Reports*, please send an e-mail message with "Print subscription to *INFO Reports*" in the "Subject" line to **orders@jhuccp.org** and include your full name, complete mailing address, e-mail address, and client id (if known; found on top line of mailing label). English reports are available in print or electronic format; non-English reports are available in electronic format only. Alternatively, write to: Orders, INFO Project, Center for Communication Programs, Johns Hopkins Bloomberg School of Public Health, 111 Market Place, Suite 310, Baltimore, MD 21202, USA.
3. By the INFO Web site: Go to **http://www.inforhealth.org/inforeports/infoelectsub.php** and follow instructions for subscribing.

Please Note: If you do not want to subscribe but wish to order INDIVIDUAL issues of *INFO Reports* and other publications from the INFO Project, Johns Hopkins Bloomberg School of Public Health, please send an e-mail message to: **orders@jhuccp.org**, or go to our online order form at: **http://www.jhuccp.org/orders/**, or write to Orders, INFO Project, Center for Communication Programs, Johns Hopkins Bloomberg School of Public Health, 111 Market Place, Suite 310, Baltimore, MD 21202, USA.

Obtaining Full-Text Resources

You can obtain the full text of resources described in this publication in one or more ways, depending on the publisher:

POPLINE® Document Delivery Service: You can request full-text copies of most documents cited in POPLINE (see resources with a POPLINE ordering number) if you are in a developing country. POPLINE documents are **free of charge to individuals or institutions in developing countries**. Please note that POPLINE does not deliver documents over 100 pages, and orders are limited to 15 documents per request.

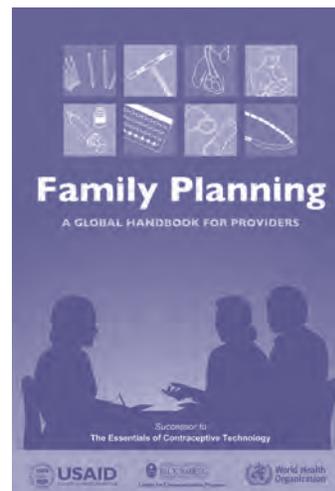
You can request documents from POPLINE by writing to:

POPLINE
INFO Project
Center for Communication Programs
Johns Hopkins Bloomberg School of Public Health
111 Market Place/Suite 310
Baltimore, MD 21202-4012, USA
Fax: 410-659-6266
E-mail: popline@jhuccp.org

You can request that the document be sent to you by postal mail (print copies) or by e-mail (electronic version) (with the exceptions noted above). **Please include the POPLINE ordering number and your address in your request.**

Download from the Internet: If the listing includes a Web site address and you have Web access, point your Web browser to the address or type the URL into the address field of your browser to download an electronic version (usually in HTML or Adobe Acrobat format)

Coming Soon! *Family Planning: A Global Handbook for Providers*



This new book revises and improves on its predecessor, The Essentials of Contraceptive Technology, to provide evidence-based family planning guidance developed through a global consensus process. See <http://www.fphandbook.org>