Arab States Regional Office

PAN ARAB PROJECT FOR FAMILY HEALTH

PRB INFORM EMPOWER ADVANCE

JULY 2012

WOMEN'S NEED FOR FAMILY PLANNING IN ARAB COUNTRIES

Four in 10 married women of reproductive age living in Arab countries use modern contraception.

77%

of maternal deaths in the Arab region occur in Somalia, Sudan, and Yemen, where contraceptive use is the lowest.

Reducing unmet need for family planning helps governments enhance individual rights and achieve their development goals—especially MDG5, improving maternal health.

Family planning is critical for the health of women and their families, and it can accelerate a country's progress toward reducing poverty and achieving development goals. Because of its importance, universal access to reproductive health services, including family planning, is identified as one of the targets of the United Nations Millennium Development Goals (MDGs).[1] Moreover, other international agreements, including the Programme of Action of the 1994 International Conference on Population and Development, promote individuals' freedom to decide the number and timing of their children as a basic human right and reproductive right.[2]

A growing number of women are using contraception, as family planning services have expanded in the Arab region.[3] Still, not all of the need has been satisfied. A significant number of women have "unmet need" for family planning—that is, they prefer to avoid a pregnancy for at least two years but are not using a family planning method. These women are at risk of having unintended pregnancies, which jeopardize the health of the women and their families and also put a burden on society as a whole.

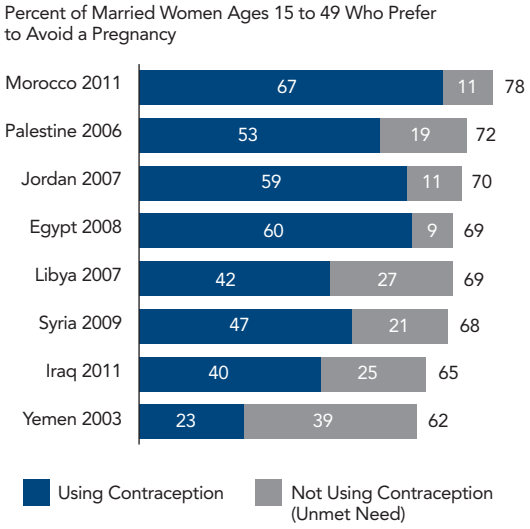
This policy brief examines women's need for family planning in Arab countries, drawing from national surveys of married women conducted over the past 10 years by the Pan Arab Project for Family Health (PAPFAM) and the Demographic and Health Surveys (DHS).[4] The brief also describes why countries should work to reduce unmet need by addressing both the demand for and supply of family planning services. Governments and nongovernmental organizations can help remove social and economic barriers to using family planning, expand coverage of family planning services, and improve the quality of information and services.

Defining the Need for Family Planning

The total need for family planning, shown in Figure 1, consists of all married women who are able to become pregnant but prefer to avoid a pregnancy. They may wish to wait for at least two years or want to stop childbearing altogether. Women's preferences are derived from national surveys that ask respondents whether they wish to have a child (or another child) now or in the future. Some women who say they would prefer to avoid a pregnancy are currently using a family planning method, while others—those with unmet need—are not. Combining

FIGURE 1

Need for Family Planning



Note: Palestine refers to the Arab population of Gaza and the West Bank, including East Jerusalem.
Sources: PAPFAM and DHS.

BY **BY FARZANEH ROUDI-FAHIMI, AHMED ABDUL MONEM, LORI ASHFORD,** AND **MAHA EL-ADAWY**

these groups of women is useful for program planners because it estimates the size of the "market" for family planning—that is, what the need for contraception would be if all married women acted on their stated preferences.[5]

For example, 78 percent of married women in Morocco would prefer to avoid a pregnancy, yet 67 percent are using family planning—the remaining 11 percent have unmet need. By contrast, in Yemen, more than half the women who want to avoid a pregnancy are not using family planning. These women are at risk of having unintended pregnancies.

Why Should Policymakers Be Concerned About Unmet Need?

Globally, women who want to avoid pregnancy but are not using an effective method of contraception account for 82 percent of unintended pregnancies.[6] Unintended pregnancies are widespread in the Arab region, placing a burden on individuals, families, health systems, and socioeconomic development.[7]

For individuals, having the information and means to decide the number, timing, and spacing of their children is fundamental to protecting their reproductive rights. As described in numerous international agreements and human rights documents, reproductive rights are derived from the basic rights of all individuals and couples to make decisions in their reproductive lives, free of discrimination, coercion, or violence. They encompass rights regarding marriage, family planning, healthy childbearing, and protection from HIV and other sexually transmitted infections.[8]

Although couples may treasure a child born as the result of an unintended pregnancy as much as one born from a planned pregnancy, international studies have shown that unintended pregnancies are associated with harmful health consequences.[9] A woman with an unintended pregnancy is more likely to delay seeking prenatal care or receive inadequate care, which can affect the health of both the mother and the child. In addition, children born as the result of an unintended pregnancy are at a higher risk of illness because they are more likely to be born with a low birth weight, be breastfed for fewer months, and experience developmental problems. These children are particularly at risk when they are born soon after a sibling. Also, the death of a mother substantially increases the risk of death for her newborn child.

One particularly harmful consequence of unintended pregnancy is unsafe abortion, which the World Health Organization (WHO) defines as a procedure for terminating a pregnancy carried out by individuals lacking the necessary skills or in an environment not conforming to minimal medical standards, or both.[10] Women who decide to terminate their unintended pregnancy may resort to unsafe abortion, especially if they face legal barriers to obtaining a safe abortion, as is the case in most of the Arab region.[11] According to WHO, in countries of northern Africa alone, nearly 1 million unsafe abortions were performed in 2008. Complications of these abortions accounted for 12 percent of maternal deaths in that region.[12]

In countries where contraceptive use is lower and fertility is higher, women are at higher risk of dying due to pregnancy and childbirth (see Table 1, page 3). In Somalia, where women give birth to more than six children on average and few women use modern contraception, the lifetime risk of death due to complications of pregnancy or childbirth is one in 16. Together, three countries—Somalia, Sudan, and Yemen—account for three-quarters (77 percent) of the maternal deaths in the region.[13] In addition, complications during pregnancy and delivery result in a large number of illnesses and injuries such as damage to the reproductive organs, including obstetric fistula.

Reducing unmet need will also help balance population increase, social and economic development, and environmental resources in the Arab region. In particular, the Middle East and North Africa region has the most severe freshwater shortage of any world region.[14] An analysis of the 2008 DHS in Egypt shows that if Egyptian women could successfully avoid births resulting from unintended pregnancies, the country's total fertility rate (lifetime births per woman) would decline from 3.0 children per woman to 2.4.[15] In Egypt, 14 percent of pregnancies are unintended.[16] The impact of reducing unintended pregnancies on fertility would be even greater in countries with higher rates of unintended pregnancy. A study conducted by the Higher Population Council in Jordan shows that if unmet need for family planning in Jordan had been reduced by 50 percent in 2009, the number of unintended births in that year would have been reduced by 10,000, or 6 percent of all births in that year.[17]

The Growing Need for Family Planning Services

The need for family planning commodities and services is increasing throughout the region in part because the number of women of reproductive age is growing. According to the United Nations Population Division, the number of women of reproductive age (defined as ages 15 to 49) in the Arab region grew from 69 million in 2000 to 93 million in 2012—an increase of 35 percent. This age group will increase by another 25 million, or 26 percent, by 2025. In Iraq and Yemen between 2012 and 2025, the number of women of reproductive age will grow by around 50 percent—the highest growth rate in the region. Because of its large population, Egypt ranks first in terms of growth in absolute numbers.

The need for family planning services is also increasing because a large share of married women are using modern contraceptives. Today, four out of 10 married women in the Arab region use a modern method. In Algeria, Egypt, Morocco, and Tunisia, more than half of married women use a modern method—the highest rates in the region. In Egypt, the IUD is the most popular method, used by 36 percent of married women, followed by the pill (12 percent) and injectable contraceptives (7 percent).[18] In Jordan, the IUD is the most commonly used method, but in Morocco the pill is most widely used (see Figure 2, page 4).

TABLE 1

Population and Reproductive Health Indicators for Selected Arab Countries

COUNTRY	FEMALE POPULATION, AGES 15-49 IN MILLIONS 2012	FEMALE POPULATION, AGES 15-49 IN MILLIONS 2025	FEMALE POPULATION, AGES 15-49 % CHANGE 2012 -2025	PERCENT OF WOMEN AGES 20-24 WHO ARE CURRENTLY MARRIED	TOTAL FERTILITY RATE	PERCENT OF MARRIED WOMEN AGES 15-49 USING CONTRACEPTION ANY METHOD	PERCENT OF MARRIED WOMEN AGES 15-49 USING CONTRACEPTION MODERN METHOD	LIFETIME RISK OF MATERNAL DEATH 1 IN:
Egypt	21.8	26.5	21	50	3.0	60	58	490
Iraq	8.0	12.0	50	53	4.3	51	33	310
Jordan	1.7	2.2	30	39	3.8	59	42	470
Lebanon	1.2	1.2	0	18	1.9	58	34	2,100
Libya	1.8	2.1	15	9	2.7	42	20	620
Morocco	9.2	9.9	7	38	2.6	67	57	400
Palestine[a]	1.0	1.5	45	48	4.6	53	40	330
Somalia	2.2	3.3	45	60	6.4	15	1	16
Sudan[b]	8.9	12.3	39	52	5.5	9	6	31
Syria	5.4	7.0	31	41	3.5	47	33	460
Tunisia	3.0	3.1	2	14	2.1	63	53	860
Yemen	6.1	9.3	53	57	6.2	23	13	90
Regional Total *	93.1	117.8	26	41	3.5	46	40	–

Notes

a The data for Palestine refer to the Arab population of Gaza and the West Bank, including East Jerusalem.

b Population data refer to North Sudan (estimated at 80 percent of the total population for South and North Sudan); other data refer to all of Sudan.

– Data are not available.

* Regional total includes all 22 members of the League of Arab States; those not shown in the table are Algeria, Bahrain, Comoros, Djibouti, Kuwait, Mauritania, Oman, Qatar, Saudi Arabia, and United Arab Emirates.

Definitions: Total fertility rate is the average number of children a woman would have if current age-specific fertility rates remain constant throughout her childbearing years. Any method includes modern and traditional methods. Traditional methods include periodic abstience, withdrawal, prolonged breastfeeding, and folk methods. Modern methods: include sterilization, IUDs, the pill, injectables, implants, condom, foam/jelly, and diaphragm.

Sources: United Nations Population Division, *World Population Prospects: The 2010 Revision* (New York: United Nations, 2011); United Nations Population Division, *World Marriage Data 2008* (New York: United Nations, 2009); Carl Haub and Toshiko Kaneda, *2011 World Popuation Data Sheet* (Washington, DC: Population Reference Bureau, 2011); WHO et al., *Trends in Maternal Mortality: 1990 to 2010: Estimates Developed by WHO, UNICEF, UNFPA, and The World Bank* (Geneva: WHO, 2012); Iraq Central Organization for Statistics & Information Technology and Kurdistan Regional Statistics Office, *Iraq Multiple Indicator Cluster Survey 2006, Final Report* (New York: UNICEF, 2007); and special tabulations by PAPFAM.

As with other aspects of women's lives, the desire and ability to practice family planning are affected by women's socioeconomic characteristics. Key factors include how much education a woman and her husband have completed, how easily she can access family planning services, her household wealth, and her family's and community's attitudes toward family size and contraceptive use. In Yemen, 12 percent of married women in the poorest fifth of the population use a family planning method, compared with 42 percent of married women in the richest fifth.

In the family-centered cultures of Arab countries, women are expected to marry and have a child early in the marriage, regardless of their socioeconomic background. Indeed, the lowest rates of contraceptive use are among women who have no children, and nearly all of their pregnancies are wanted. After the birth of the first and second child, the likelihood that a married woman will practice family planning increases. In both Egypt and Palestine, less than 1 percent of married women with no children practice family planning. But this percentage is higher in Morocco, where 11 percent of married women with no children practice family planning.

Fifty-seven percent of all married women in Morocco use a modern contraceptive method—one of the highest rates in the region. Morocco has been a success story in expanding its family planning services throughout the country, closing gaps in modern contraceptive use among women in rural and urban areas, with different levels of education and with different levels of household wealth. However, gaps in unmet need across socioeconomic groups persist in Morocco as they do in other countries in the region.

Unmet Need for Spacing Births and Limiting Family Size

Women with unmet need for family planning are those who want to have a child either later or not at all but are not using contraception. They are referred to as having a need for spacing

or limiting, respectively (see Figure 3). Generally speaking, women have a greater need for family planning for spacing (or delaying) births in the early years of marriage. As they grow older and have their desired number of children, their need shifts to limiting births. Figure 4 (page 6) illustrates this pattern among married women with unmet need in Libya.

Another pattern that appears from the survey data is that less-educated women with unmet need have a greater need to limit births than their more-educated counterparts. This pattern can be explained by differences in the average age at marriage among these groups of women. Less-educated women, who tend to marry and start childbearing at a younger age than more-educated women, tend to reach their desired family size and to need family planning to stop having children sooner in life than more-educated women.

Overall, poor women are more likely to have unmet need than their better-off counterparts (see Table 2, page 5). Poor women with no or limited schooling may find it more challenging to access family planning information and services than other women. More important, poor women are less likely to be empowered to make decisions affecting their health. Egypt has a strong family planning program and lower rates of unmet need than other countries in the region. Still, women in the poorest fifth of the population are twice as likely to experience unmet need as those in the richest fifth (see Figure 5, page 6).

Exploring the Causes of Unmet Need

The causes of unmet need for family planning are complex. A range of obstacles and constraints can undermine a woman's ability to act on her childbearing preferences. For example, many women fear the side effects of contraceptive methods, having heard rumors or experienced some side effects themselves. Others fear their husband's disapproval or retribution if they use family planning, or they oppose family planning themselves for religious or personal reasons. Some women believe (incorrectly) that they are unlikely to become pregnant because they are breastfeeding, approaching menopause, or having infrequent intercourse. Or they may feel ambivalent about whether they want a pregnancy.

Also, some women lack knowledge about contraceptive methods or where to get them. Family planning supplies and services may not be available where they live, or women may not have access to the methods that they want or can afford. Finally, some aspects of the health system or the family planning program may deter women from using the services, such as negative attitudes of health care providers and the low quality of health services.

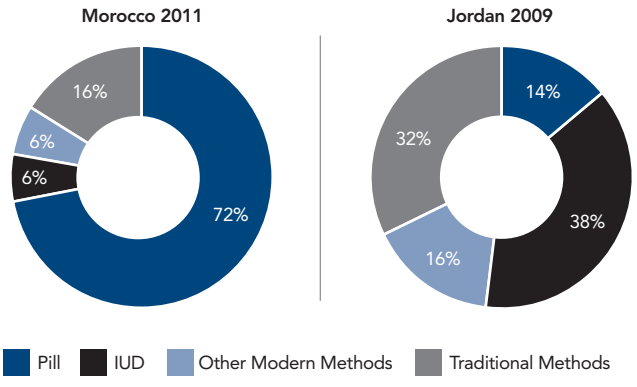
Survey data collected by PAPFAM and DHS suggest that, in most countries, religion is not a major factor preventing women from seeking family planning services. The data show that women's ambivalence is a major factor, although it diminishes as women grow older. Women's ambivalence about whether to use contraception can be explained by fatalistic attitudes common in the Arab region, and also by women's subordinate position in the family and in society.

Among women with unmet need in Syria who said they were not intending to use contraception in the future, around 3 percent mentioned religious prohibition as the main reason. Twelve percent cited fatalistic beliefs, generally saying that conception is up to God; 13 percent cited their husband's disapproval; 9 percent said they did not like the existing methods; and 19 percent cited their fear of side effects as the main reason for not using contraception. And in Libya, less than 3 percent of women with unmet

FIGURE 2

Contraceptive Use in Morocco and Jordan, by Method

Distribution of Married Women Ages 15 to 49 Using Contraception

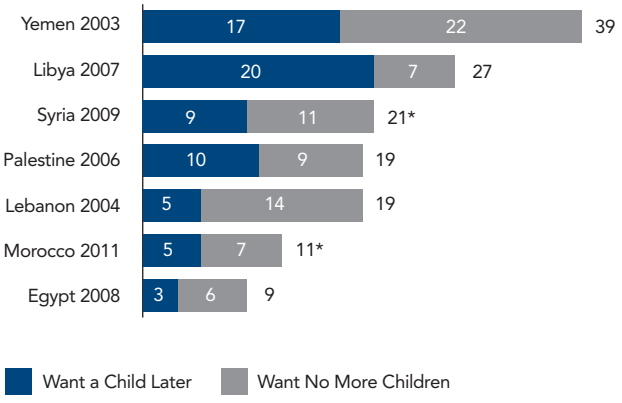


Sources: PAPFAM and DHS.

FIGURE 3

Unmet Need for Family Planning

Percent of Married Women Ages 15 to 49 Who Prefer to Avoid a Pregnancy but Are Not Using Contraception



* Numbers do not add up due to rounding.
Note: Palestine refers to the Arab population of Gaza and the West Bank, including East Jerusalem.
Sources: PAPFAM and DHS.

TABLE 2

Women With Unmet Need by Background Characteristics

Percent of Married Women Ages 15 to 49 Who Prefer to Avoid a Pregnancy but Are Not Using Contraception

	NUMBER OF LIVING CHILDREN				EDUCATIONAL LEVEL*			WEALTH QUINTILE**		
COUNTRY	NONE	1-2	3-4	5+	LIMITED	BASIC	SECONDARY+	POOREST	MIDDLE	RICHEST
Egypt	2	10	9	14	11	9	8	13	9	6
Jordan	0	2	21	24	29	16	10	13	9	10
Lebanon	10	19	19	20	19	21	20	14	23	19
Libya	32	34	24	24	29	28	27	29	27	25
Morocco	8	11	12	14	12	9	9	14	10	10
Palestine	8	25	18	19	21	20	17	23	20	15
Syria	14	15	19	30	30	19	15	28	20	14
Tunisia	1	6	11	16	10	9	10	10	8	9
Yemen	22	39	40	42	40	32	33	40	44	28

* Limited education ranges from no schooling to less than six years of school attendance. Basic education is defined as six to nine years of school attendance. Secondary+ includes high school graduates with 12 or more years of education.
** Wealth quintiles (five groups of equal population size) are based on an index of surveyed household assets. Data are shown for the first (poorest), third, and fifth (richest) quintiles.
Sources: PAPFAM and DHS.

need who were not intending to use a method reported religious prohibition as the main reason. Only 4 percent of these women mentioned their husband's disapproval; 9 percent cited fear of side effects; and 19 percent gave a fatalistic reason.

While the great majority of women reported that they decide together with their husbands whether to use contraception, a much higher percentage of women reported that their husbands alone had the final say than women who reported that they themselves had the final say. In Syria, for example, 63 percent of women said that they decide jointly with their husbands; 27 percent said that their husbands had the final say; and only 5 percent said that they have the final say. Regarding husbands' and wives' attitudes toward contraception, women more often report that their husbands oppose contraception than they do. In Syria, 30 percent of women said their husbands oppose contraception compared to 22 percent of women who report being opposed.

These survey data are limited to women in conventional marriages. Little is known about the need for family planning among women in unconventional marriages that are generally secret and unacceptable socially and legally. As a result, women in such relationships are faced with an array of social and legal constraints to access family planning services. Unconventional marriages are associated with thousands of contested paternity cases.[19]

An emerging body of evidence from the region suggests that contraceptive use among unmarried women is infrequent and irregular. One national survey conducted in the region shows that only 3 percent of unmarried sexually active women ages 15 to 24 used a modern method of contraception. Surveys of unmarried youth are likely to underestimate both sexual activity and contraceptive use, because young women are reluctant to admit to premarital sex and to contraceptive use. Single men and women may avoid family planning and reproductive health services because of a lack of confidentiality as well as moral judgments by providers.

Moreover, because of the secrecy and lack of social acceptance of unconventional marriages, pregnancies that occur within such marriages are more likely to be unintended and voluntarily aborted, putting women's health, dignity, and life in danger. Pregnant women in these unions face more barriers in accessing safe abortion services and post-abortion care.

Stopping Contraceptive Use Also Contributes to Unmet Need

Many women have unmet need for family planning because they have stopped using a contraceptive method even though they still do not want to become pregnant. The 2008 DHS in Egypt revealed that 26 percent of women who started using a method stopped using it within 12 months, but only 8 percent switched to another method. Women practicing prolonged breastfeeding as a contraceptive method and those using the pill were most likely to stop. Women using IUDs, the most common long-term method, were least likely to stop—although one in 10 did. Among those who discontinued using a method, more than one-third did so because they wanted to become pregnant, and more than one-fourth did so because of side effects. Nine

percent of those who discontinued did so because they became pregnant while using the method—in other words, the method failed.[20] In Egypt, 7 percent of all pregnancies and 29 percent of unintended pregnancies were due to contraceptive failure.[21]

Discontinuation and method failure are even more common in Jordan, where 45 percent of women who use contraception stop using the method within a year. The largest percentage of women who discontinued did so because they wanted to become pregnant (35 percent). The second largest group (17 percent) discontinued because they became pregnant while using a contraceptive method.[22]

Contraceptive methods can fail for two reasons: incorrect use or a problem with the method itself. Oral contraceptives are almost 100 percent effective when used properly, but international studies show that, on average, 8 percent of women relying on the pill experience an unintended pregnancy within a year. Male condoms, even if used correctly all the time, occasionally fail because of breakage. Traditional methods, such as periodic abstinence and withdrawal, are more prone to failure than modern methods. Typically, 27 percent of women relying on withdrawal become pregnant within a year, even though the method can be more effective if used correctly. Sterilization and IUDs are nearly 100 percent effective.[23]

Addressing Unmet Need

Addressing unmet need requires both political and financial commitments to expand and improve family planning information and services. An analysis conducted by the United Nations Population Fund-UNFPA, using data from 14 Arab countries, estimated that an increase in contraceptive prevalence of 2 percent annually for three years, with a shift toward modern methods, would cost nearly US$20 million in commodities alone. Such an investment would result in lower fertility (a decline from 3.7 births per woman to 3.3 births per woman) and around 3,500 fewer maternal deaths.[24] A related study found that providing modern contraception to all women who need it is as cost-effective as full childhood immunization when measured in terms of disability-adjusted life years saved, a commonly used measure to compare health interventions.[25]

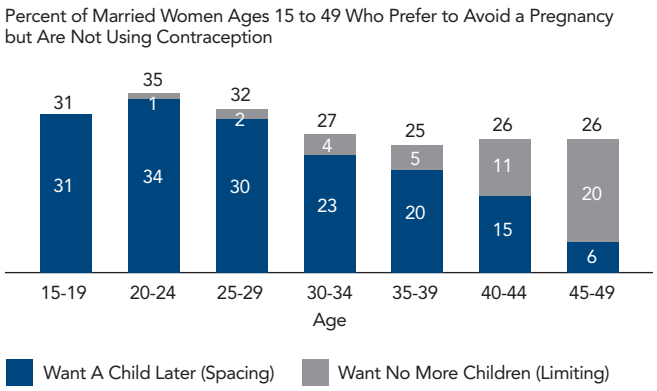
Family planning program planners need to understand the size and major causes of unmet need in their particular countries. In Somalia and Yemen, for example, where access to family planning services is limited, expanding coverage to make quality services universally available could reduce unmet need. In Morocco, where 72 percent of women practicing family planning rely on the pill and 16 percent rely on traditional methods, the expansion of services to include long-term family planning methods such as IUD, injectables, and female and male sterilization would greatly benefit couples who do not want to have more children. Also, in Egypt and Jordan, providing a wider range of contraceptives and better counseling could improve women's ability to choose an appropriate method. The box (page 7) discusses strategies undertaken in Iran to increase family planning use. Only 6 percent of Iranian women who don't want to become pregnant are not using contraception.

The public and private health sectors need to collaborate to ensure that family planning commodities and services are universally available and accessible to those who need them. To help women and couples satisfy their contraceptive needs, providers in these sectors should maintain stocks of a mix of contraceptives and provide counseling so that women can choose the method that best matches their individual circumstances and intentions.

Providers should be trained to give women correct information on contraceptive methods, especially on side effects and how to manage them. Women who are postpartum, breastfeeding, or approaching menopause need to be counseled on their likelihood of becoming pregnant and on

FIGURE 4

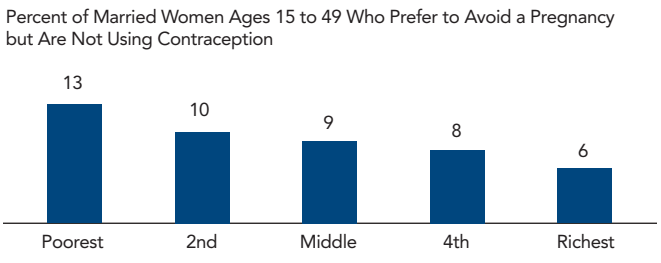
Unmet Need for Spacing and Limiting Births, by Age Group, Libya 2007



Source: PAPFAM.

FIGURE 5

Unmet Need by Wealth Quintile*, Egypt 2008



* Wealth quintiles (five groups of equal population size) are based on an index of surveyed household assets.
Source: Egypt DHS, 2008: table 9.4.

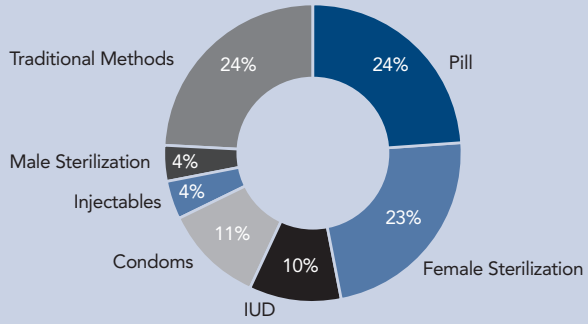
Meeting the Need for Family Planning in Iran

In Iran, where women give birth to 1.9 children on average, 79 percent of married women ages 15 to 49 use contraception, with 60 percent using a modern method. Such a high level of family planning use can be attributed in part to counseling and the use of long-term contraceptive methods. In rural areas, health workers called *behvarz* counsel women and couples on modern family planning methods; in cities, women volunteers connect women to neighborhood clinics for family planning and other health services. Since the mid-1990s, prospective brides and grooms have been required to take government-sponsored family planning classes in order to receive a marriage license. Young Iranian women and men are also exposed to age-appropriate and reliable sources of information on reproductive health issues when they are in high school and college.

The Iranian government's provision of long-term contraceptive methods distinguishes its family planning program from those of other Muslim countries. In Iran, 24 percent of married women using contraception rely on the pill, 23 percent have chosen female sterilization, and 4 percent have a husband who has been sterilized (see figure).

Contraceptive Use in Iran by Method, 2005

Distribution of Married Women Ages 15 to 49 Using Contraception



Sources: Farzaneh Roudi-Fahimi, *Iran's Family Planning Program: Responding to a Nation's Needs* (Washington, DC: Population Reference Bureau, 2002); and Iranian Ministry of Health and Medical Education.

which family planning methods might be appropriate for them. Providers must be mindful of women's childbearing preferences. Women who wish to delay a pregnancy need to be informed about and offered temporary or reversible family planning methods, and those who desire to have no more children require long-term or permanent methods.

Interpersonal relations between clients and health providers are an important aspect of quality care. Family planning providers require training to strengthen their communication skills so that they can meet their client's individual needs. Their training should also include involving men in family planning decisions and practices, as well as serving young people. Family planning programs can benefit from more information about young people's knowledge, attitudes, and practices before marriage.

Family planning programs should also reach out to broader audiences, such as religious and community leaders, and use the media to advocate for the benefits of family planning and of responsible parenthood. Through such efforts, the programs can emphasize the importance of the health and well-being of families and of having a child when parents are in a position to care and provide for that child. Both governments and nongovernmental organizations have a role to play in education and communication programs to help address social and cultural barriers to family planning. These efforts should address such issues as women's status, as well as myths and misconceptions about contraception. International development agencies should also play a role in advocating for meeting family planning needs and mobilizing funds to fill gaps if government efforts fall short.

Reducing unmet need for family planning helps governments enhance individual rights, slow population growth, and achieve their development goals—especially MDG 5, which calls for improving maternal health.

Acknowledgments

This brief was prepared by Farzaneh Roudi-Fahimi, director of the Middle East and North Africa Program at PRB; Ahmed Abdul Monem, manager of the PAPFAM surveys of the League of Arab States; independent consultant Lori Ashford; and Maha El Adawy, Reproductive Health Advisor at UNFPA Arab States Regional Office (UNFPA ASRO). Special thanks are due to Hafedh Chekir, Genevieve Ah Sue, Nada Chaya, and Abdallah Zoubi of UNFPA ASRO; Howard Friedman of UNFPA HQ; Laila Kamel of Cairo University; and Wendy Baldwin of PRB who reviewed and contributed to this brief. The authors also thank Mona El-Sayed Ahmed of PAPFAM and Donna Clifton of PRB who helped tabulate the data; and Fatma El-Zanaty of El-Zanaty and Associates in Cairo and Ikhlas Aranki of the Department of Statistics in Jordan who provided some of the data.

This work was funded by UNFPA, Arab States Regional Office (ASRO).

References

1 The United Nations Millennium Development Goals, accessed at www.un.org/millenniumgoals/, on May 16, 2012.

2 United Nations, *Programme of Action of the International Conference on Population and Development*, paragraph 7.3, accessed at www.unfpa.org/public/home/sitemap/icpd/International-Conference-on-Population-and-Development/ICPD-Programme, on May 14, 2012.

3 The Arab region discussed in this brief includes the 22 members of the League of Arab States: Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, North Sudan, Syria, Tunisia, United Arab Emirates, and Yemen.

4 Data on unmet need presented in this brief are from the Demographic and Health Surveys (DHS) for Egypt and Jordan, and from surveys conducted by the Pan Arab Project for Family Health (PAPFAM) for the rest of the countries.

5 Unmet need also includes pregnant women whose current pregnancy was mistimed or not wanted at all. The DHS definition also includes women whose last birth was unwanted. PAPFAM surveys do not ask whether a child was wanted.

6 Jacqueline E. Darroch, Gilda Sedgh, and Haley Ball, *Contraceptive Technologies: Responding to Women's Needs* (New York: Guttmacher Institute, 2011).

7 Farzaneh Roudi-Fahimi and Ahmed Abdul Monem, *Unintended Pregnancies in the Middle East and North Africa* (Washington, DC: PRB, 2010).

8 United Nations Population Fund, "Human Rights: The Foundation for UNFPA's Work," accessed at www.unfpa.org, on May 14, 2012.

9 Amber J. Hromi-Fiedler and Rafael Perez-Escamilia, "Unintended Pregnancies Are Associated With Less Likelihood of Prolonged Breastfeeding: An Analysis of 18 Demographic and Health Surveys," *Public Health Nutrition* 9, no. 3 (2006): 306-12; and "Unintended Pregnancy Is Linked to Inadequate Prenatal Care, But Not to Unattended Delivery or Child Health," DIGEST, *International Family Planning Perspectives* 29, no. 3 (2003).

10 World Health Organization (WHO), *Unsafe Abortion: Global and Regional Estimates of the Incidence of Unsafe Abortion and Associated Mortality in 2008* (Geneva: WHO, 2011): 2.

11 Farzaneh Roudi-Fahimi and Rasha Dabash, *Abortion in the Middle East and North Africa* (Washington, DC: Population Reference Bureau, 2008).

12 WHO, *Unsafe Abortion: Global and Regional Estimates of the Incidence of Unsafe Abortion and Associated Mortality in 2008:* tables 5 and 6.

13 WHO et al., *Trends in Maternal Mortality: 1990 to 2010: Estimates Developed by WHO, UNICEF, UNFPA, and the World Bank* (Geneva: WHO, 2012).

14 World Resources Institute, "Earth Trends Data Tables: Freshwater Resources," accessed at www.earthtrends.wri.org, on May 8, 2012.

15 Special tabulations by Sara Bradley, ICF Macro, using the 2008 Egypt DHS.

16 Sara E.K. Bradley, Trevor N. Croft, and Shea O. Rutstein, "The Impact of Contraceptive Failure on Unintended Births and Induced Abortions: Estimates and Strategies for Reduction," *DHS Analytical Studies* 22 (Calverton, MD: ICF Macro, September 2011).

17 Higher Population Council, *Reducing Discontinuation of Contraceptive Use and Unmet Need for Family Planning* (Amman, Jordan: Higher Population Council, 2011): table 3, accessed at www.hpc.org.jo/hpc/tabid/198/ctl/details/mid/580/articleID/125/checkType/Default.aspx, on May 16, 2012.

18 Fatma El-Zanaty and Ann Way, *Egypt Demographic and Health Survey 2008* (Cairo: Ministry of Health, El-Zanaty and Associates, and Macro International, 2010): figure 6.1.

19 Farzaneh Roudi-Fahimi and Shereen El Feki, *Facts of Life: Youth Sexuality and Reproductive Health in the Middle East and North Africa* (Washington, DC: PRB, 2011).

20 El-Zanaty and Way, *Egypt DHS 2008*: tables 7.1 and 7.2.

21 Special tabulations produced by Sara Bradley of ICF Macro using the 2008 Egypt DHS and 2007 Jordan DHS.

22 Higher Population Council, *Reducing Discontinuation of Contraceptive Use and Unmet Need for Family Planning:* table 3; and Jordan Department of Statistics and ICF Macro, *Jordan Population and Family Health Survey 2009* (Calverton, MD: Jordan Department of Statistics and ICF Macro, 2010).

23 Prolonged breastfeeding is not an effective family planning method after a breastfed infant reaches six months of age or supplemental food is introduced. James Trussell, "Contraceptive Efficacy," in *Contraceptive Technology*,19th ed., ed. Robert A. Hatcher et al. (New York: Ardent Media, 2007): summary table, accessed at www.contraceptivetechnology.org/table.html, on May 16, 2012.

24 Calculated by Howard Friedman, UNFPA Technical Advisor, based on survey findings and actual and average commodity costs, using the OneHealth tool. The countries included in the analysis are Algeria, Djibouti, Egypt, Jordan, Iraq, Lebanon, Libya, Morocco, Palestine, Somalia, Sudan, Tunisia, Syria, and Yemen. The analysis was sponsored by the UNFPA Arab States Regional Office in Cairo.

25 Susheela Singh and Jacqueline E. Darroch, *Adding It Up: Costs and Benefits of Contraceptive Services, Estimates for 2012* (New York: Guttmacher Institute, 2012); and WHO, *2009 State of the World's Vaccines and Immunization*, accessed at www.who.int/immunization/sowvi/en/, on May 31, 2012.

UNFPA

Arab States Regional Office

UNFPA, the United Nations Population Fund, is an international development agency that promotes the right of every woman, man and child to enjoy a life of health and equal opportunity. UNFPA supports countries in using population data for policies and programmes to reduce poverty and to ensure that every pregnancy is wanted, every birth is safe, every young person is free of HIV/AIDS, and every girl and woman is treated with dignity and respect.

UNFPA - because everyone counts | www.unfpa.org

PAN ARAB PROJECT FOR FAMILY HEALTH

Pan Arab Project for Family Health (PAPFAM) conducts surveys and other research to provide detailed information on family health in Arab countries, and helps build national capacities of statistical offices working in this area.

www.papfam.org

PRB INFORM EMPOWER ADVANCE

POPULATION REFERENCE BUREAU

The Population Reference Bureau **INFORMS** people around the world about population, health, and the environment, and **EMPOWERS** them to use that information to **ADVANCE** the well-being of current and future generations.

www.prb.org

POPULATION REFERENCE BUREAU

1875 Connecticut Ave., NW
Suite 520
Washington, DC 20009 USA

202 483 1100 **PHONE**
202 328 3937 **FAX**
popref@prb.org **E-MAIL**