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Reproductive Health in the Middle East and North Africa

Well-Being for All

Atsuko Aoyama

The World Bank

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Foreword

The countries of the Middle East and North Africa (MENA) region face unprecedented challenges to promoting social and economic development in this rapidly changing and competitive world. Governments in the region are struggling to sustain the improvements in the quality of life of their citizens that they have worked hard to bring about. Each government tries to achieve equity in terms of the basic needs of all citizens, and to guarantee the rights of each individual, while respecting the cultural values of the people and preserving the unity and integrity of the country.

Good health is a basic human right, as well as a prerequisite of social and economic development. In many countries and cultures, women are not allowed to participate fully in the decisionmaking processes that directly affect their health status. Because women play major roles in raising children and caring for family members, deaths and ill health among women affect the health and well-being of the family as a whole, and consequently of the entire population.

In the MENA region, despite achievements in the population and health sectors during the last three decades, several reproductive health issues remain, while new issues have emerged. High rates of maternal mortality are found in a few countries in the region. Contrary to the global experience, fertility rates in MENA countries have not necessarily decreased as income and women's educational levels have risen. Even in the countries that have committed to population programs, the pace of fertility decline is now slowing. Although relatively few people have died of AIDS in the region, the death toll from the disease has increased almost sixfold since the early 1990s.

Reproductive health is a relatively new concept, and this paper constitutes the World Bank's first comprehensive overview of reproductive health issues in the MENA region. It will be an essential tool for those who are to design, implement, and monitor programs for improving reproductive health in the region. It is also intended to help stimulate discussions among various stakeholders in MENA countries in the context of economic and social development efforts. The results, I hope, will be effective strategies and policies that contribute to achieving well-being for future generations.

Jacques Baudouy
Sector Director
Human Development Group
Middle East and North Africa Region

Abstract

This reproductive health review of the Middle East and North Africa (MENA) region provides an overview of the issues and establishes a base of knowledge upon which a strategy could be constructed. Despite achievements in the population and health sectors during the last three decades, several reproductive health issues remain, while new challenges have emerged. Major reproductive health issues in the region include high maternal mortality, particularly in Yemen, Morocco, Egypt, and Iraq; high fertility and slowing fertility decline; early marriage and high teenage fertility; the increasing prevalence of sexually transmitted infections and HIV/AIDS; and female genital cutting in Egypt and Yemen.

There is a correlation between reproductive health issues, a country's level of social development, and the size of gaps within a country: between men and women, urban and rural, rich and poor. Therefore, it is necessary to plan and implement programs targeted to specific issues and underprivileged groups; develop effective and sustainable health systems with high-quality services; raise awareness and change behaviors of both the public and policymakers; and empower women. Strong political commitment is essential to overcoming social and cultural constraints. Possible intervention components and possible roles of the World Bank are suggested.

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Acronyms and Abbreviations

AIDS	Acquired immune deficiency syndrome
BMI	Body mass index
CDC	Centers for Disease Control and Prevention
CTD	Division of Control of Tropical Diseases (of the WHO)
DAC	Development Assistance Committee (of the OECD)
EMRO	Regional Office for the Eastern Mediterranean (of the WHO)
EOC	Essential obstetric care
FAO	Food and Agriculture Organization
FGC	Female genital cutting
GNP	Gross national product
GCC	Gulf Cooperation Council
GNP/c	Gross national product per capita
G6PD	Glucose-6-phosphate dehydrogenase
Hb	Hemoglobin
HIV	Human immunodeficiency virus
HNP	Health, nutrition, and population
ICPD	International Conference on Population and Development
IEC	Information, education, and communication
IMR	Infant mortality rate
IPPF	International Planned Parenthood Federation
IUD	Intrauterine device

JAFPP	Jordanian Association for Family Planning and Protection
JICA	Japan International Cooperation Agency
MENA	Middle East and North Africa
MCH	Maternal and child health
MMR	Maternal mortality ratio
MNSHD	Human Development Group, Middle East and North Africa Region (of the World Bank)
NGO	Nongovernmental organization
OECD	Organisation for Economic Co-operation and Development
PAHO	Pan American Health Organization
PAPCHILD	Pan Arab Project for Child Development
PAPFAM	Pan Arab Project for Family Health
PHC	Primary health care
QAF	Queen Alia Fund for Social Development
RTI	Reproductive tract infection
STI	Sexually transmitted infection
STD	Sexually transmitted disease
TBA	Traditional birth attendant
TFR	Total fertility rate
TOT	Training of trainers
U5MR	Under-five mortality rate
UAE	United Arab Emirates
U.N.	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNRWA	United Nations Relief and Work Agency for Palestine Refugees in the Near East
USAID	United States Agency for International Development
WBG	West Bank and Gaza
WFP	World Food Programme
WHO	World Health Organization

Executive Summary

Good health is one of the basic human rights endorsed by various international initiatives, as well as a prerequisite of social and economic development. In many countries and cultures, women are not allowed to participate fully in the decisionmaking processes that directly affect their health status. Because women play major roles in raising children and caring for family members, deaths and illness among women affect the health and well-being of the family as a whole, and consequently of the entire population.

Reproductive health is a relatively new concept that comprehensively addresses all of the health issues regarding reproduction for both women and men, whether young or old. Reproductive health sometimes addresses women's health issues as a whole, since most of them are closely related to reproduction.

This review assesses reproductive health issues in the Middle East and North Africa (MENA) region and identifies determining factors, causes, and consequences of reproductive health problems. Its objective is to establish a base of knowledge upon which a strategy can be constructed. As recognized in the population and reproductive health strategy paper of the World Bank, one of the major challenges is regional and cultural diversity; therefore both a regional strategy and country-specific strategies need to be developed.

Reproductive Health in the MENA Region

MENA countries have achieved significant improvements in terms of health outcomes during the last three decades. For instance, total fertility rates declined remarkably in the 1980s in several countries, and infant mortality rates decreased in most MENA countries. Despite these achievements, however, several reproductive health problems persist, while new issues have emerged. Current major reproductive health problems in the MENA region include high maternal mortality in several countries; high fertility and a slowing of the decline in fertility rates; early marriage and high teenage fertility; increasing prevalence of sexually transmitted infections (STIs) including HIV/AIDS; and female genital cutting (FGC) in Egypt and Yemen.

Maternal mortality ratios (MMR) remain high in several MENA countries such as Yemen, Egypt, and Morocco, and the rate has increased in Iraq. Among the 18,000 maternal deaths in the region each year, 7,800 occur in Yemen, 3,000 in Egypt, and 1,600 in Morocco. Overall, a leading cause of death among women of reproductive age is pregnancy-related illness. The major causes of maternal mortality are bleeding, infection, and pregnancy-induced hypertension: about 25–30 percent of maternal deaths are attributable to severe bleeding. The share of maternal deaths caused by unsafe abortion in the region is lower than the global average. In Egypt, one-quarter of maternal death cases also involved the death of the fetus, and one-third of the cases involved the subsequent deaths of infants that were born alive.

Both increased prenatal care coverage and increased rates of deliveries assisted by skilled attendants correlate with a decrease in MMR. The most effective intervention for preventing maternal deaths is attendance at birth by health professionals trained in life-saving skills, with backup for care of severe complications. Better postpartum care and postabortion care also reduces MMR. Among MENA countries, there are significant gaps between urban and rural areas in terms of access to and quality of services, and the gaps are particularly large within lower-income countries and countries

with higher MMRs. This indicates that interventions should be targeted to decreasing maternal deaths among the underprivileged population.

Although fertility has declined substantially in the MENA countries over the past 15 to 20 years, the region has the second-highest rate of natural increase in the world. The total fertility rate (TFR), or expected number of children per woman, is approximately five in the MENA region, much higher than the global average of 3.2. Among MENA countries, TFRs range from less than three in Iran and Tunisia to almost six in Yemen, Saudi Arabia, and West Bank and Gaza. The decline in fertility in MENA is due to the increased age of women at marriage, increased age at first childbirth, and increased use of contraception. Fertility decline started to occur in the region in the early 1970s and accelerated considerably in the early to mid-1980s. In several countries, however, the pace of decline slowed in the 1990s.

Fertility decline is encouraged by several factors, including low infant and child mortality, high female literacy and education, and family planning programs. Even without widespread use of contraception, fertility decline may occur as a result of broader changes in the social environment that affect the status of women, better health services that reduce infant mortality, and increased income levels and urbanization. In the MENA region, however, the relationship between income and fertility is less clear-cut: TFRs in MENA countries are high compared with those of countries in other regions that have similar income levels.

High fertility and rapid population growth place pressure on various sectors and can therefore hinder economic and social progress. Frequent, closely spaced births often take a toll on the health status of both mothers and their children. Despite recognition of the negative impacts of rapid population growth, fewer than half the countries in the region have explicit policies to lower fertility, and access to family planning is still limited.

The prevalence rate of modern contraceptive methods is only 10 percent in Yemen and is less than 30 percent in countries such as Oman, Syria, and the United Arab Emirates. The two primary

reasons for not using family planning services or for discontinuing the use of contraceptives are the desire for another child and the fear of side effects. Lack of access to quality services is a major reason for unmet need, indicating that both access and quality issues must be addressed. Expanding the mix of methods, improving counseling, and strengthening the technical competence of providers are essential steps for improving access and quality.

To some extent, higher income levels, increased health expenditures, and rising educational levels for women are each linked to a decrease in MMR. However, contrary to the global experience, these factors do not necessarily correlate with the expected number of children per woman in MENA countries. In addition, women's increased share of household income does not correlate with either decreased MMR or the expected number of children per woman.

Although the estimated prevalence of STIs in the MENA region was the second-lowest among six developing regions, around 12 million people in the region suffer from STIs. Compared with other regions, estimated adult HIV prevalence also remains low; however, the total number of AIDS deaths has increased almost sixfold since the early 1990s. Main transmission routes include intravenous drug use in Iran and sexual contact in Yemen.

About 1.6 million girls are married before age 20, and every year about 900,000 babies are born to teenage mothers. High teenage fertility in MENA countries is due to the high incidence of early marriage. Approximately 60 percent of married women under age 24 in Yemen and Oman, and more than 40 percent in Egypt, were married before the age of 20. Teenage fertility rates in Yemen, Oman, and Libya are twice the global average. The health risks associated with pregnancy and childbirth are generally higher for young teenage mothers than for women in their twenties.

Despite international condemnation and a government ban, FGC of young girls is practiced in Egypt. Most Egyptians have a positive attitude toward the practice, and almost all Egyptian women have undergone the procedure. FGC is practiced in Yemen as well, particularly in coastal areas.

Improving Reproductive Health

MENA countries fall into three broad groups in relation to reproductive health issues:

1. Low-income and lower-middle-income countries with high maternal mortality, high fertility, and high adolescent fertility.
2. Lower-middle-income and upper-middle-income countries with high fertility, high adolescent fertility, and moderately high maternal mortality.
3. High-income countries with moderately high fertility and increasing prevalence of STIs.

Compared with countries at similar income levels in other regions, particularly upper-middle-income countries, the MENA region is unique with regard to its high total fertility and adolescent fertility. Countries with high maternal mortality have an urgent need to improve maternal care; those with high fertility need to develop effective strategies and improve access to and quality of services; and all countries should strengthen STI/HIV prevention programs. Strategies and interventions will differ depending on each country's economic and social situation.

Reproductive health problems are attributable to complex factors, and issues are deeply related to a country's levels of social development and gender equity. Possible causes of problems and obstacles to improving reproductive health status include:

- Lack of explicit policy guidelines and strong commitment by governments.
- Lack or shortage of financial resources, due in part to competing priorities.
- Lack of awareness of problems on the part of policymakers and the general public.
- Cultural and social barriers, including relatively large gender inequity.

- Poor quality of services.
- Ineffective program design and unclear targets.
- Delayed development of other critical sectors.

Key components of strategies for improving reproductive health in the region are as follows:

- Focus on priority issues, such as high maternal mortality and high fertility. Programs should be designed to achieve tangible impacts on the priority issues.
- Target the underprivileged, especially the poor and those living in rural areas. A strategy should be developed to decrease the gaps within countries.
- Overcome the obstacles, such as shortage of financial and human resources, and cultural resistance. Comprehensive approaches will work best in this regard.
- Improve quality of care by establishing standard protocols, setting up systems for quality monitoring and regulation, training and deploying skilled health professionals, and securing essential equipment and drugs. Managerial capacity must be improved at all levels.
- Develop sustainable financing mechanisms to ensure access to essential services and to provide incentives that encourage preventive care. Health system reform efforts must include reproductive health services. Private sector involvement and community financing measures should be explored.
- Raise awareness and change behaviors through effective information, education, and communication (IEC) strategies. Target audiences include women, husbands, elders, community leaders, and policymakers.
- Empower women by promoting women's participation in decisionmaking and overall developmental process.

Possible interventions for each issue are:

- High maternal mortality: Establish essential obstetric care at the basic and first-referral level with effective linkage and high-quality prenatal care; raise awareness.
- High fertility: Improve access and quality of family planning services; enhance IEC to increase demand.
- Increasing prevalence of STIs: Establish surveillance systems; develop clinical protocols; provide counseling and high-quality services; raise awareness of risky behaviors.
- Early marriage and high teenage fertility: Raise awareness of decisionmakers in families and communities; promote girls' education.
- FGC in Egypt and Yemen: Raise awareness of decisionmakers in families and communities.

Possible Roles of the World Bank

The World Bank's comparative advantage is its capacity for policy dialogue and resource mobilization. Because of its access to both finance and planning ministries, as well as functional ministries such as health, education, and women's affairs, the Bank is well positioned to facilitate synergistic policies that link investments in different sectors to achieve optimum impacts. The Bank's long-term commitment is also important, because it takes at least 15 years to achieve results in human development interventions in general; it may take even longer in reproductive health interventions. Further, the Bank has the financial capacity to support the strengthening of obstetric referral systems, including first-referral hospitals, which are essential. Strengthening partnerships with other agencies that are active in reproductive health will help the Bank improve the effectiveness of its operations.

For the Well-Being of Future Generations

Reproductive health problems have direct negative impacts on women and their children, who constitute approximately three-quarters of the world population. These problems also impede the long-term economic and social development of a country because they diminish productivity, educational attainment, and quality of life, while increasing health care costs and social inequity.

Improved reproductive health will contribute to reducing poverty and inequity and to developing human capital comprehensively. It is a key to achieving the well-being of future generations and prosperity for society as a whole.

CHAPTER 1

Introduction

Reproductive Health and Rights

During the 1990s, the United Nations organized a series of global conferences that resulted in an ambitious agenda to promote socially equitable, sustainable development.[1] These conferences adopted agreements based on principles of human rights and the eradication of poverty through the development of human potential. More specifically, the 1994 International Conference on Population and Development (ICPD) in Cairo and the 1995 Fourth World Conference on Women in Beijing established sexual and reproductive health and rights as fundamental to human rights and development.(46)

The ICPD Programme of Action defined reproductive health and rights as follows: (147)

- Reproductive health is a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes.
- Reproductive rights embrace certain human rights that are already recognized in national laws, international human rights documents, and other consensus documents. These rights rest on the recognition of the basic right of all couples and individuals to

decide freely and responsibly the number, spacing, and timing of their children, to have the information and means to do so, and to have the right to attain the highest standard of sexual and reproductive health.

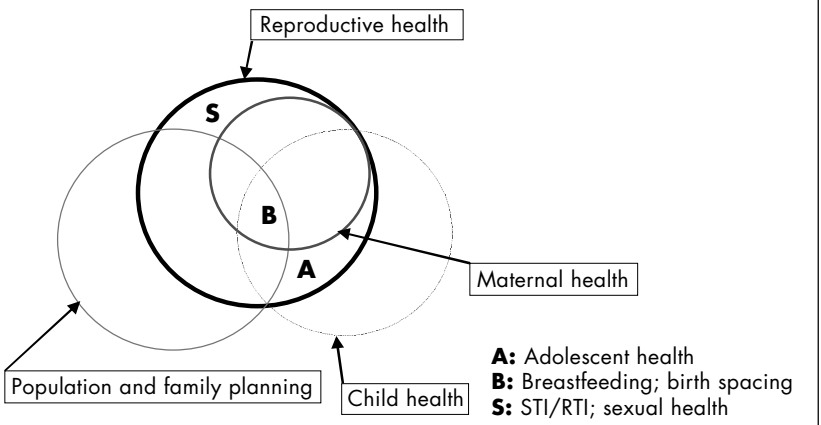
The aspects of reproductive health care are defined as follows:

- Family planning services, counseling, information, and education.
- Prenatal care, safe delivery, postnatal care, and the management of complications of pregnancy and delivery.
- Prevention, diagnosis, and treatment of infertility.
- Prevention of abortion and management of the consequences of abortion.
- Diagnosis and treatment of reproductive tract infections (RTIs) and sexually transmitted infections (STIs), including HIV/AIDS.
- Information, education, and counseling on human sexuality, reproductive health, and responsible parenthood.
- Diagnosis and treatment of breast cancer and cancers of the reproductive system.
- Active discouragement of harmful practices such as female genital cutting (FGC) and gender-related violence.

Recognizing that the health of newborns is inextricably linked to the well-being of the mother, the Programme of Action linked reproductive health and infant health in a number of commitments. For example, it states that family planning and reproductive health programs should emphasize breastfeeding education and support services, which can simultaneously contribute to birth spacing, better maternal and child health, and higher child survival.

As described above, reproductive health comprehensively addresses all of the health issues regarding reproduction for both women and men, whether young or old. Sometimes reproductive health addresses women's health issues as a whole, as most of these

Figure 1. Reproductive Health, Maternal and Child Health, and Family Planning



issues are closely related to human reproduction. In short, reproductive health covers maternal health, family planning, STIs and RTIs , and adolescent health. However, most child health issues and population issues related to other sectors are generally not included (figure 1).

Global Perspectives on Reproductive Health

Reproductive health problems remain prevalent among the poor throughout the world. Although the majority of women go through pregnancy and childbirth without any problem, 40 percent of pregnant women experience a pregnancy-related complication, and 15 percent of pregnant women develop a serious complication requiring medical intervention. A leading cause of death among women of reproductive age is pregnancy-related illness.

Recognizing the magnitude of the problem, delegates to the Global Safe Motherhood Conference in Nairobi in 1987 launched

the Safe Motherhood Initiative. By the late 1990s, however, the picture of women's reproductive health status was still discouraging. Every year, throughout the world:

- 585,000 women died from complications of pregnancy and childbirth.[190, 232]
- 64 million women experienced dangerous pregnancy complications.
- 120 million women had an unmet need for family planning.[234]
- 125–165 million women contracted an STI.[46]

Moreover, the ill health of mothers affects their children directly. About 20 percent of the burden of disease among children under five years of age is attributable to perinatal conditions associated with poor maternal health. These conditions are also responsible for the deaths of more than 3 million newborns annually.

In developing countries, children up to the age of 10 whose mothers have died are 3 to 10 times more likely to die within two years than are children with living parents.[135] In addition, a mother's death has negative impacts on her children's educational attainment, as motherless children often drop out of school in order to assume household tasks.

Maternal and child health (MCH) programs have often failed to address maternal health problems, concentrating instead on improving child health. More recently, attention to maternal health issues, as well as reproductive health issues in general, has increasingly been recognized not only as a crucial means to achieve good health outcomes for women and children but also as a means to promote the broader objectives of social and economic development and stability.

The risk of maternal death is one of the most striking differences between rich and poor countries, but substantial gaps also exist between rich and poor households within countries in terms of maternal care coverage and the associated risks of morbidity and mortality. Maternal health indicators show larger gaps between the

rich and the poor than do child health indicators for these groups.[232] There are also considerable regional variations, as disparities exist between countries from different world regions even when those countries have otherwise comparable economic characteristics.

Women in developing countries are at greater risk during pregnancy, childbirth, and the postpartum period than are women in industrial countries. Women in developing countries are less likely to be assisted during childbirth by a skilled attendant, and they have less access to medical care in case of an emergency. In addition to the availability and quality of medical care, a woman's health and nutritional status and the number of previous pregnancies also help to determine her risk during pregnancy and childbirth.

Fertility reduction is critical for reducing maternal deaths. With each pregnancy, a woman is at risk of developing a pregnancy-related complication, and the risk increases with each subsequent pregnancy. By providing the means to space or limit pregnancies and births, family planning can prevent at least 25 percent of all maternal deaths.[130] In addition, spacing births at least two years apart can prevent almost one in four infant deaths in developing countries.

Reduction in human fertility, known as the fertility transition, results in smaller family size and slower population growth. Family planning, an important factor in fertility reduction, has helped alter world population size. Without family planning programs, total fertility for developing countries in 1980–85 would have been 5.4 instead of 4.2 children per woman. As of 1990, family planning programs were estimated to have averted more than 400 million births. Infant mortality rates (IMR) in developing countries are estimated to have declined by 10 points per 1,000 as a result of family planning use.[214]

Most countries at first sought to slow population growth through the provision of family planning services. However, this supply-driven approach often led to backlashes or else did not work well because not enough demand was created. Therefore, population programs have been rethought. The new emphasis is on taking a comprehensive reproductive health approach, by working to improve the nutrition, health, education, and empowerment of

women while providing continued support for family planning services.

STIs and RTIs cause various complications, including infertility and even death, as in the case of HIV/AIDS. Unfortunately, accurate data about the prevalence of STIs and RTIs are often unavailable for various reasons, particularly within conservative societies. For instance, women suffering from STIs and RTIs are often reluctant to seek care because of the stigma that is usually attached. Moreover, many women do not even realize that they are experiencing problems that require medical attention because they either lack proper information or do not receive regular health screenings. Therefore, STIs, RTIs, and HIV/AIDS should be effectively addressed in the context of comprehensive reproductive health services.

In recent years, adolescent reproductive health issues have received increased attention globally. Risks during pregnancy and childbirth are higher for adolescent girls than for adult women. However, adolescents often lack access to reproductive health information and services that could help them avoid high-risk behaviors and delay pregnancy. Health professionals also find it difficult to reach adolescents because of values and biases or the intimidating environment of health facilities.

Reproductive health status is also deeply rooted in various gender and cultural issues. Women's status in their families and communities, as well as their levels of education, income, and participation in decisionmaking, are important determinants of their health status. Therefore, success in improving reproductive health requires a broad range of policy and program interventions involving the education and empowerment of women.

Objectives of the Review

The purpose of this review is to assess reproductive health issues in the Middle East and North Africa (MENA) region; develop a base of knowledge and augment regional knowledge management systems; identify determining factors, causes, and consequences of

reproductive health problems; and suggest strategic directions for future actions. This review is also intended to supplement the MENA regional Health, Nutrition, and Population (HNP) sector strategy paper.[221]

The following countries in the MENA region are discussed in this review: Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates (UAE), West Bank and Gaza (WBG), and Yemen.

CHAPTER 2

Reproductive Health Status in MENA Countries

Overview of the Health Situation

Most of the countries in the MENA region have economies that are in the lower-middle-income range in terms of their gross national product per capita (GNP/c).[2] However, the region includes both high-income countries, such as the oil-producing Gulf states, and one of the lowest-income countries in the world, Yemen. The region is generally characterized as having a harsh climate with little rainfall. The vast majority of land in the region is arid desert; less than 10 percent of the land is arable.[107] Most people in the region speak Arabic (except in Iran and Israel) and are Muslim (except in Israel).

Health and other social indicators vary among MENA countries, depending upon the level of economic and social development (table 1). Most social indicators are comparable to those of countries in other regions with similar levels of economic development. Local traditions, which are not necessarily related to religion, often have significant implications for health, nutrition, education, and other social sectors.

Table 1. Basic Indicators in MENA Countries (most recent data between 1990 and 1998)

COUNTRY	GNP PER CAPITA (US$)	TOTAL POPULATION (MILLIONS)	ANNUAL POPULATION GROWTH RATE (%)	LITERACY RATE		SECONDARY SCHOOL ENROLLMENT		FEMALE SHARE OF EARNED INCOME (%)	HEALTH EXPENDITURE PER CAPITA (US$)	ACCESS TO SAFE WATER (% OF POPULATION)
				FEMALE (%)	MALE (%)	FEMALE (%)	MALE (%)			
Low-income										
Yemen	270	15.7	3.3	26	53	9	37	21	19	45
Lower-middle-income										
Iraq	—	20.6	2.8	45	71	34	53	14	—	77
Syria	1,150	14.6	2.7	56	86	41	50	20	—	99
Egypt	1,180	63.3	1.9	39	64	71	82	25	38	84
Morocco	1,250	27.0	1.9	31	57	32	43	28	41	63
Algeria	1,490	28.8	2.2	49	74	58	66	19	73	78
Jordan	1,570	5.6	2.7	79	93	54	52	19	118	98
Iran	1,780	70.0	2.1	59	78	62	76	19	60	95
WBG	1,870	2.3	5.8	84	84	—	—	—	129	84
Tunisia	2,090	9.2	1.6	55	79	53	58	25	105	90
Lebanon	3,350	3.1	1.8	90	95	83	75	23	375	95
Upper-middle-income										
Oman	4,950	2.3	1.8	46	71	61	67	11	—	95
Libya	—	5.6	2.4	63	88	95	95	16	—	100
Saudi Arabia	6,790	18.8	2.2	50	72	47	57	10	536	99
Bahrain	7,840	0.6	3.7	79	89	100	97	15	497	100
High-income										
Qatar	11,600	0.6	2.5	80	79	82	82	10	319	100
Israel	15,810	5.7	2.6	93	97	89	83	33	—	—
UAE	17,360	2.5	2.9	80	79	97	88	10	338	99
Kuwait	17,390	1.7	2.8	75	82	64	65	25	—	100

Table 1 Continued. (most recent data between 1990 and 1998)

COUNTRY	LIFE EXPECTANCY		INFANT MORTALITY RATE (PER 1,000 LIVE BIRTHS)	UNDER–5 MORTALITY RATE (PER 1,000 LIVE BIRTHS)	MATERNAL MORTALITY RATIO (PER 100,000 LIVE BIRTHS)	TOTAL FERTILITY RATE	CONTRACEPTIVE PREVALENCE (%)	LOW BIRTH-WEIGHT (%)	ANEMIA (AMONG PREGNANT WOMEN) (%)[a]	STUNTING (UNDER AGE 5) (%)
	FEMALE (YEARS)	MALE (YEARS)								
Low-income										
Yemen	57	56	76	100	1,000	5.9	21	19	—	39
Lower-middle-income										
Iraq	63	60	94	122	310	4.7	18	6	—	28
Syria	71	66	27	33	97	4.0	60	11	49–52	21
Egypt	67	64	54	73	174	3.3	54	10	21–79	30
Morocco	68	64	58	72	228	3.3	59	9	20–40	24
Algeria	72	68	34	39	140	3.6	51	9	42	18
Jordan	72	69	20	24	40	4.4	53	7	25–46	16
Iran	70	69	32	35	37	2.6	72	9	20–50	19
WBG	69	67	25	28	70	6	32	—	23–56	14
Tunisia	71	69	27	33	69	2.8	60	8	41	23
Lebanon	71	68	30	37	104	2.5	63	10	49	12
Upper-middle-income										
Oman	73	69	15	18	21	4.8	28	8	49–54	23
Libya	70	66	22	25	40	4	45	5	—	15
Saudi Arabia	71	69	24	28	18	5.9	—	7	5–57	14
Bahrain	75	71	18	22	39	3.3	62	6	—	10
High-income										
Qatar	75	70	16	20	10	2.8	32	5	30	8
Israel	79	75	6	6	5	2.6	53	7	10–32	—
UAE	76	74	9	10	2	3.5	28	6	22–62	—
Kuwait	79	74	12	13	9	2.9	61	7	40	12

— Not available.

Note: The definitions of income groups are as follows: Low-income = GNP/c $785 or less; lower-middle-income = $786–$3,125; upper-middle-income = $3,126–$9,655; and high-income = $9,656 or more.

a. Anemia values are expressed as a range due to multiple data sources (based on small, regional surveys, not national surveys).

Sources: 9, 89, 158, 166, 204, 230, 231, 233.

Population growth rates in MENA countries are relatively high when compared with those for countries in other regions with similar levels of economic development. Although countries such as Tunisia and Egypt have implemented successful family planning programs, the region's overall population is expected to double within 30 years, even if its annual population growth rate declines to 2.3 percent. In addition to the consequences of natural growth, increased migration will have significant social and economic impacts. This migration is not only from rural to urban areas, but also from low-income and lower-middle-income countries both within and outside of the region to the high-income Gulf states. Influxes of foreign workers to the Gulf states resulted in an annual population growth rate of 5 to 7 percent in the 1970s.[107] The oil-producing countries attract workers from Egypt, Jordan, Syria, WBG, Yemen, Bangladesh, India, Indonesia, Korea, Pakistan, the Philippines, and others. Jordan exports workers to the Gulf states and imports workers from Egypt.

The epidemiological transition is underway in most MENA countries, as incidences of noncommunicable diseases are increasing significantly. Major causes of adult deaths are circulatory diseases and cancers (table 2). However, infectious diseases, such as diarrhea and acute respiratory infection, also remain major causes of morbidity and mortality among the poor and underprivileged, especially in places such as Yemen, rural Egypt, and Morocco.

As a result of the current difficulties of the economic environment, which are in part due to declining oil revenues, most MENA countries now face pressures to reform their health care systems in order to make them more efficient, effective, equitable, and sustainable. The epidemiological transition has financial implications for the health care system in each country, because the treatment of noncommunicable diseases is much more costly than the treatment of communicable diseases through public health interventions. In addition, the unregulated introduction of modern medical technology rapidly increases health care costs.

Overview of Reproductive Health Status

In comparison with countries of similar income levels in other regions, the MENA countries have particularly large gender gaps in education and social participation. Although MENA countries vary widely in terms of economic development and the status of social sectors, they often share similar cultural constraints that make it difficult to address various reproductive health issues directly. While many remarkable improvements in social sectors have been achieved in the past several decades, various health problems continue to threaten women's well-being in the MENA region.

The two most serious issues are high maternal mortality and high fertility. It is estimated that about 18,000 maternal deaths occur in the region each year, of which 7,800 are in Yemen, 3,000 in Egypt, and 1,600 in Morocco. Total fertility rates (TFRs) are high in MENA countries, regardless of a country's income level. For instance, in

Table 2. Causes of Adult Death in MENA Countries (percentage of total deaths)

COUNTRY	CIRCULATORY SYSTEM DISEASES	CANCERS	ACCIDENTS AND INJURIES	YEAR(S)
Iraq	28.0	10.0	—	1982–87
Syria	18.0	2.7	3.2	1992
Egypt				
Male	44.6	—	5.4	1991
Female	46.4	—	2.9	
Jordan				
Male	44.2	2.2	15.4	1991
Female	34.5	3.1	6.7	
Iran	29.0	8.0	—	1982–87
WBG	35.4	11.9	3.3	1997
Oman	24.3	11.3	6.3	1992
Bahrain	28.6	12.3	8.2	1993
Qatar	34.0	12.0	19.0	1994
UAE	25.0	8.0	—	1992
Kuwait	36.7	12.4	10.6	1994

— Not available.
Sources: 89, 104, 201, 220, 226, 227.

Yemen, Saudi Arabia, and WBG, the expected number of children per woman is around six.

Global experience suggests that the impacts of STIs and adolescent reproductive health problems are likely to increase in the near future. The estimated prevalence rates of STIs and HIV/AIDS are relatively low in the MENA region, compared with other regions; however, reported AIDS cases are increasing rapidly. Unmarried adolescents generally find it difficult to access reproductive health information and services, as sexual relationships outside of marriage are culturally unacceptable in most MENA countries. High teenage fertility is a result of the high incidence of early marriage. About 1.6 million girls are married before the age of 20 years, and every year about 900,000 babies are born to teenage mothers.

Maternal Health

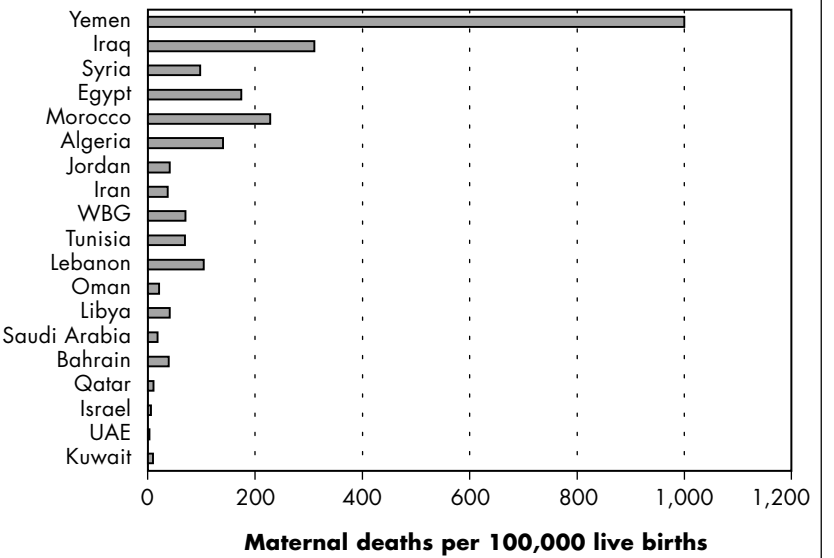
Maternal Mortality

The maternal mortality ratios (MMRs) in some MENA countries remain high.[3] About 18,000 deaths a year—or 3 percent of total maternal deaths in the world—occur in the MENA region, which has about 6 percent of the world's population. This figure may look relatively good, but maternal deaths in the MENA region are concentrated in a handful of countries: about one-half occur in Yemen, one-fifth in Egypt, and one-tenth in Morocco (figure 2; table 3).

The MMR in Yemen is one of the highest in the world, comparable to those of the poorest Sub-Saharan African countries.(230) Although the MMRs in Morocco, Egypt, and Syria have declined in the past 15 years, they remain relatively high (figure 3). The MMR in Morocco is 1.8 times higher than that in the Philippines, although the per capita incomes of the two countries are similar. After the Gulf War, the MMR in Iraq increased rapidly while international sanctions were in effect.(189)

In one Egyptian governorate, 23 percent of the deaths of married women of reproductive age were due to complications resulting from pregnancy, childbirth, and the puerperium.(239) Even if women

Figure 2. Maternal Mortality Ratios in MENA Countries



Sources: 165, 204, 222, 230, 233.

survive such conditions, they may suffer from persistent, long-term complications that substantially damage their quality of life and productivity.

The death of a pregnant woman often results in the death of her unborn child. For example, among 718 maternal mortality cases in Egypt, 25 percent entailed the deaths of both the mother and the fetus, while 32 percent resulted in the subsequent death of the live-born infant.[87]

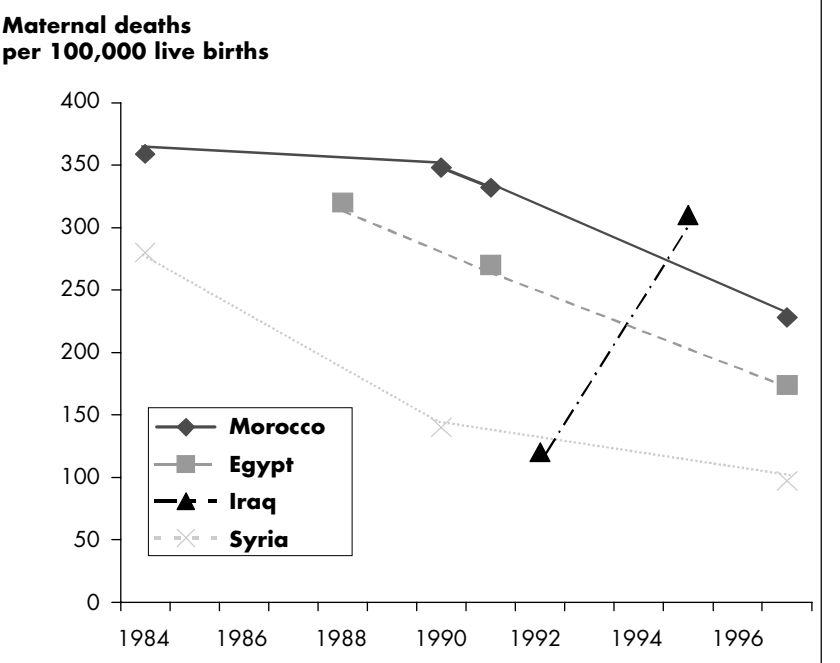
The major causes of maternal mortality are bleeding, infection, and eclampsia (or pregnancy-induced hypertension with or without convulsion) (table 4). On average, about one-quarter of maternal deaths are attributable to severe bleeding. A national maternal mor-

Table 3. Maternal Health Indicators in MENA Countries

COUNTRY	MATERNAL MORTALITY RATIO (PER 100,000 LIVE BIRTHS)	LOW BIRTH-WEIGHT (%)	ANEMIA (AMONG PREGNANT WOMEN) (%)[a]	PRENATAL CARE COVERAGE (% OF) PREGNANT WOMEN			ANTI-TETANUS VACCINATION (%)	DELIVERIES ASSISTED BY SKILLED ATTENDANTS (% OF TOTAL DELIVERIES)			DELIVERIES IN HEALTH FACILITIES (% OF TOTAL DELIVERIES)			POSTNATAL CARE (% OF TOTAL DELIVERIES)
				URBAN	RURAL	TOTAL		URBAN	RURAL	TOTAL	URBAN	RURAL	TOTAL	
Low-income														
Yemen	1,000	19	—	61	27	35	17	61	37	43	33	8	12	5
Lower-middle-income														
Iraq	310	21	—	—	—	87	56	—	—	54	—	—	—	—
Syria	97	11	49–52	64	37	51	19	92	62	76	61	19	37	27
Egypt	174	10	21–79	71	40	52	72	—	—	56	64	24	40	—
Morocco	228	9	20–40			45	42	64	14	40[a]	59	13	28	—
Algeria	140	9	42	72	48	58	52	87	68	77	86	68	76	—
Jordan	40	7	25–46	97	92	96	40	98	92	97	85	69	80	—
Iran	37	9	20–50	58	44	62	76	90	51	74	86	41	65	—
WBG	70	—	23–56	—	—	92	—	—	—	88	—	—	87	87
Tunisia	69	8	41	88	69	79	61	94	66	81	—	—		—
Lebanon	104	10	49	—	—	92	—	—	—	98	—	—	88	39
Upper-middle-income														
Oman	21	8	49–54	99	97	98	74	93	88	91	91	86	89	74
Libya	40	5	—	85	71	81	42	97	89	94	96	88	94	—
Saudi Arabia	18	7	5–57	89	84	87	65	95	82	90	93	72	86	—
Bahrain	39	6	—	99	93	96	56	97	91	98[b]	99	95	97	62
High-income														
Qatar	10	5	30	96	90	94	—	97	95	97	83	88	87	—
Israel	5	7	10–32	—	—	90	—	—	—	99	—	—	100	—
UAE	2	6	22–62	—	—	95	—	100	99	99	88	90	89	42
Kuwait	9	7	40	97	95	95	21	94	96	98	99	97	97	35

— Not available.
a. The total figure is more recent than the urban-rural figures.
b. Anemia values are expressed as a range due to multiple data sources (based on small, regional surveys, not national surveys).
Sources: 4, 6, 26, 36, 37, 44, 81, 82, 110, 112, 113, 114, 115, 136, 165, 166, 172, 182, 185, 191, 204, 230, 233, 236.

Figure 3. Decline in Maternal Mortality Ratios



Sources: 81, 160, 161, 162, 163, 164, 165, 189, 204, 230, 233.

tality study in Egypt showed that bleeding (mostly postpartum bleeding) caused more than 30 percent of maternal deaths (figure 4). The share of maternal deaths caused by unsafe abortion in the region, as well as in Egypt, is lower than the global average.

Anemia prevalence among pregnant women is high in all MENA countries, regardless of the income level of the country (table 3). Anemia during pregnancy increases the risk of maternal mortality, as it lowers both tolerance of blood loss and resistance to infection. Frequent, closely spaced pregnancies impede a woman's recovery from the worsened nutritional status during pregnancy and lactation. In

addition, women often do not recognize the symptoms of anemia, as it is a chronic disorder. Worldwide, bleeding is the direct cause of 25 percent of maternal deaths, while 15 percent are attributable to infection; however, in developing countries, anemia is a contributing factor in between 25 and 100 percent of all maternal deaths.[185, 193]

Although the MMR is one of the best-known indicators of the maternal health status of a country, it cannot reveal short-term changes among relatively small portions of a population. Various indicators are also applied in order to better monitor the status and progress of maternal health care.[98, 173] These indicators include: met need for essential obstetric care (EOC); unmet obstetric need; cesarean section rates; proportions of deliveries assisted by skilled attendants; proportions of births by site; case fatality rates; and referral rates. Other process indicators are also used to monitor the progress of interventions.[132]

Prenatal Care

The purpose of prenatal care is to ensure the well-being of both the pregnant woman and the fetus, to enhance birth planning, and to identify and manage complications.[64] Such care can be provided at relatively low cost through primary health care (PHC) channels. Prenatal checkups include the management of pregnancy-induced hypertension, recognition of abnormal lie, tetanus toxoid

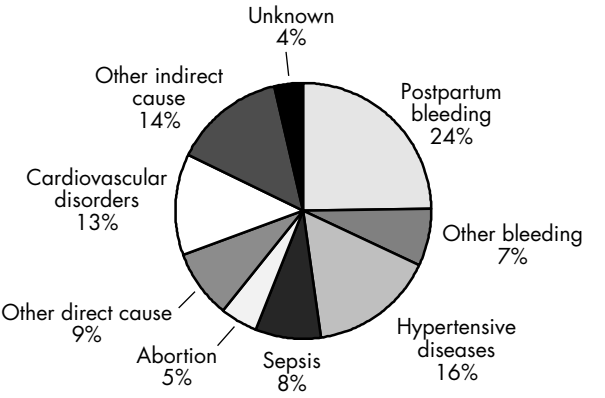
Table 4. Causes of Maternal Mortality

CAUSE	MIDDLE EASTERN CRESCENT[a] (% OF TOTAL MATERNAL DEATHS)	WORLD (% OF TOTAL MATERNAL DEATHS)
Severe bleeding	25	25
Infection	17	15
Eclampsia	17	13
Obstructed labor	8	7
Unsafe abortion	8	13
Other causes	27	27

a. Includes the following countries in addition to the countries of the MENA region: Afghanistan, Armenia, Azerbaijan, Cyprus, Georgia, Kazakhstan, Kyrgyz Republic, Pakistan, Tajikistan, Turkey, Turkmenistan, and Uzbekistan.

Source: 103.

Figure 4. Causes of Maternal Death in Egypt, 1992–93

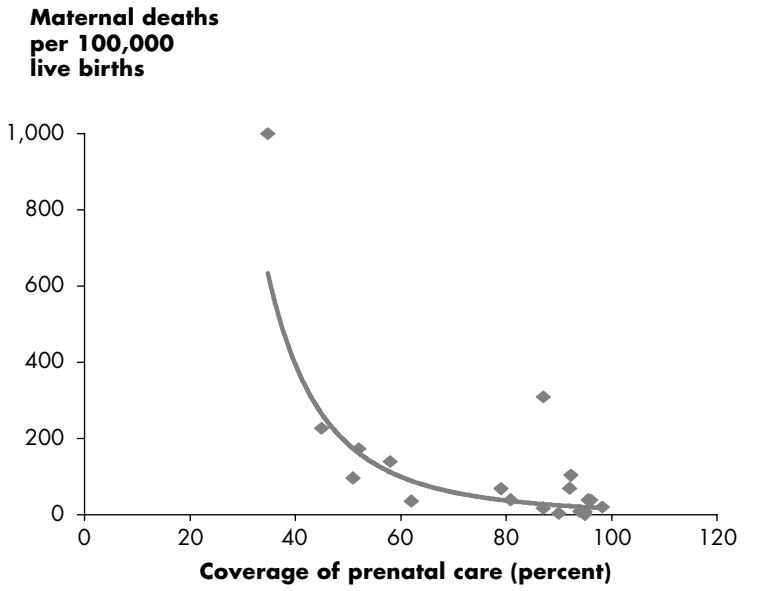


Source: 93.

immunization, nutrition management including prevention and treatment of anemia, and health and nutrition education including promotion of breastfeeding. Prenatal care also provides links to delivery care.

In order to minimize the risk of maternal mortality, all pregnant women should have access to quality prenatal care with good linkage to referral-level services. High-quality prenatal care can reduce avoidable obstetric risks through the early identification of complications and prompt referral to the appropriate backup medical facility. In addition, effective prenatal care could address an additional 20 percent of maternal deaths resulting from indirect causes, such as anemia and malaria.[232] Among MENA countries, increased prenatal care coverage correlates with decreased MMR. However, the correlation is less significant when the MMR is lower than 50 percent and coverage is higher than 70 percent (figure 5).

Figure 5. Coverage of Prenatal Care and Maternal Mortality Ratio in MENA Countries



Sources: 4, 6, 26, 37, 44, 82, 112, 113, 114, 115, 136, 172, 191, 204, 233, 236.

Because of a lack of regular checkups, many problems that pregnant women experience go unrecognized. Nevertheless, most pregnant women in MENA countries attend prenatal checkups only when they have complaints (table 5). Another major reason for not receiving prenatal care in Yemen and Algeria, where people live in remote or sparsely populated areas, is the difficulty of accessing health facilities. In Lebanon, the cost of prenatal care is a main prohibitory factor. In addition, cultural obstacles, such as the absence of female health professionals in a facility, can hinder women from seeking

Table 5. Reasons for Not Attending Prenatal Care
(% of pregnant women who do not attend prenatal care)

REASON FOR NOT ATTENDING	YEMEN	SYRIA	ALGERIA	LEBANON	LIBYA
Have no complaint to make	33	75	58	59	80
Facility too far away	24	—	—	—	—
No service available	14	1	18	—	1
Costs too much	9	3	6	24	1
Poor previous experience	2	16	11	10	9
Other	18	5	8	6	9

Sources: 25, 110, 112, 114, 115.

services. Health policies and systems should be planned in such a way that physical, financial, and cultural obstacles can be removed.

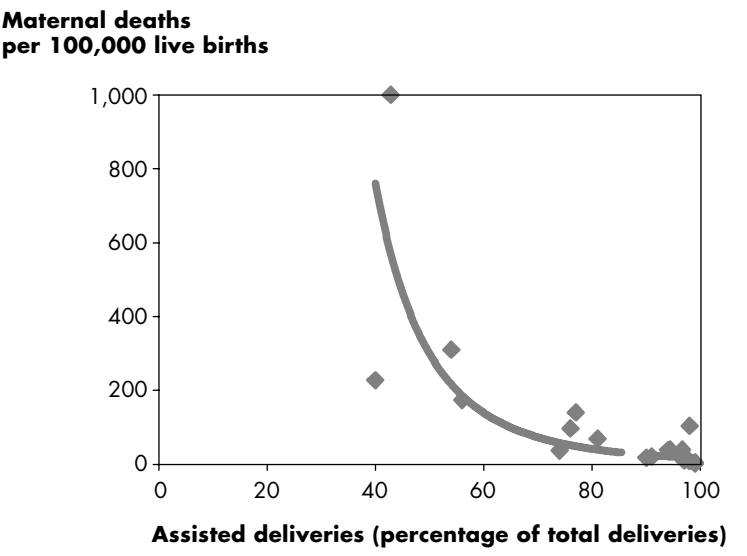
Essential Obstetric Care

To save the lives of the majority of women with obstetric complications, EOC should be accessible for all women during pregnancy and delivery.[173]

Unpredictable, life-threatening obstetric complications are responsible for nearly three-quarters of maternal deaths. Unfortunately, risk-screening methodologies are simply unable to reliably predict which women will experience these complications. Health care systems should establish effective linkages between prenatal care at the PHC level and timely intervention for obstetric emergencies at the first-referral level.

Referral medical services must be accessible and of good quality. "Good quality" implies that services have essential equipment, drugs, and other medical supplies; well-trained, qualified health professionals; technically effective and efficient treatment protocols; a sanitary and comfortable environment; good client-staff communication and counseling services; an environment of confidentiality and privacy; and polite attitude of health staff. As seen in Yemen and rural Egypt, patients may not go to, or PHC staff may not send patients to, referral services that are of poor quality.

Figure 6. Deliveries Assisted by Skilled Attendants and Maternal Mortality Ratio in MENA Countries



Sources: 4, 6, 26, 37, 44, 82, 112, 113, 114, 115, 136, 191, 204, 233, 236.

The increased proportion of deliveries assisted by skilled attendants correlates with the decreased MMRs among MENA countries (figure 6). The proportion of deliveries assisted by skilled attendants is regarded as a good proxy of maternal mortality. One of the most effective interventions for preventing maternal deaths is attendance at birth by health professionals trained in life-saving skills, who can provide prompt diagnosis and treatment of complications, or, if necessary, speedy referral to a better-equipped facility. Skilled attendants include formally trained health professionals such as physicians, nurses, and midwives, but do not include traditional birth

attendants (TBAs), who cannot be relied on to perform emergency life-saving medical interventions.[98, 132]

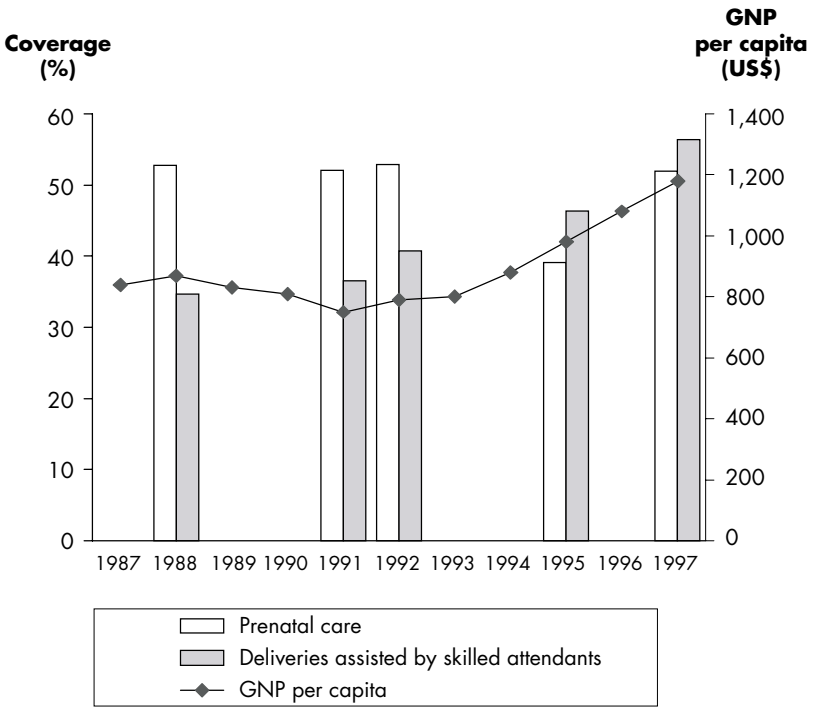
EOC can be categorized as basic or comprehensive. Basic EOC includes assisted vaginal delivery, management of convulsions and bleeding, and treatment of infection. Comprehensive EOC also includes blood transfusion and cesarean section.

It is estimated that at least 15 percent of all births in the population lead to a potentially life-threatening complication requiring qualified care.[173] Thus, for every 500,000 population, there should be one facility providing comprehensive EOC, including cesarean section and blood transfusion, and four facilities providing basic EOC, including assisted vaginal deliveries. The proportion of births by site is a useful indicator to understand accessibility and coverage of EOC.[98]

The proportion of deliveries in health facilities is higher among higher-income countries in the MENA region (table 3). In addition, the proportion is three to four times higher in urban areas than in rural areas within lower-income countries, such as Egypt, Morocco, and Syria. Because deliveries in health facilities are usually assisted by skilled attendants, and obstetric emergencies can be handled promptly, the increase in deliveries in health facilities contributes to decreasing maternal mortality. However, the statistics often do not specify whether or not health facilities can provide EOC. The facilities range from well-equipped hospitals with specialized staffs to community-level health centers with auxiliary staffs, so life-saving interventions are not necessarily available at all facilities where deliveries take place. As long as skilled attendants and referral mechanisms are secured for home deliveries, normal deliveries do not necessarily have to take place at health facilities, where quality of care can vary widely.

In Egypt, the proportion of deliveries assisted by skilled attendants has increased by about 20 percent since 1988; however, the coverage of prenatal care remained at about 50 percent during this time (figure 7). GNP/c in Egypt has also increased steadily since 1993. The increase in the proportion of deliveries assisted by skilled attendants may be due to the increase in deliveries in health facilities, as well as the increase in the availability of trained health

Figure 7. Trend of Maternal Care Coverage in Egypt



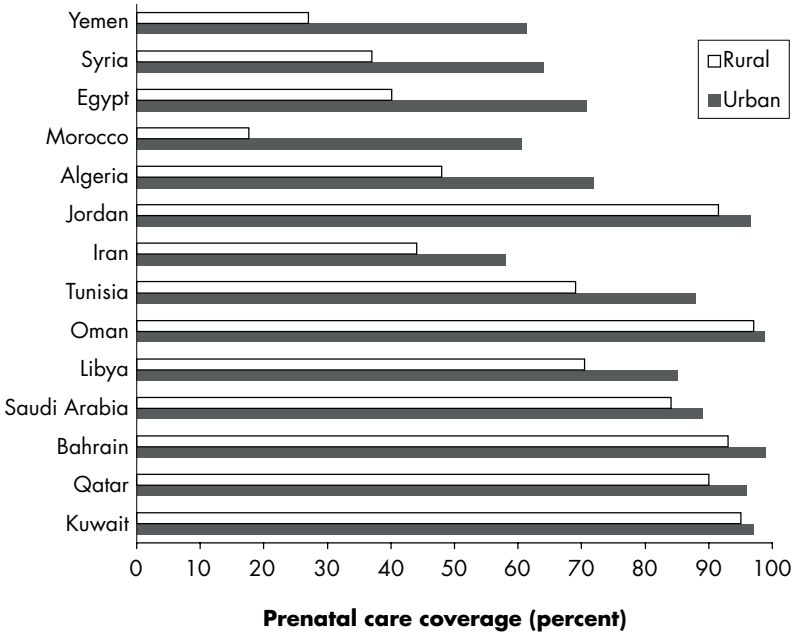
Sources: 44, 230.

personnel. Meanwhile, prenatal care coverage has not improved, most likely because of poor quality of services and lack of public awareness.

Urban-Rural Gaps

Across the region, there are significant gaps between urban and rural areas in terms of prenatal care coverage and the proportion of deliveries assisted by skilled attendants (figures 8, 9). The gaps are particularly large within lower-income countries. For instance,

Figure 8. Lower Prenatal Care Coverage in Rural Areas

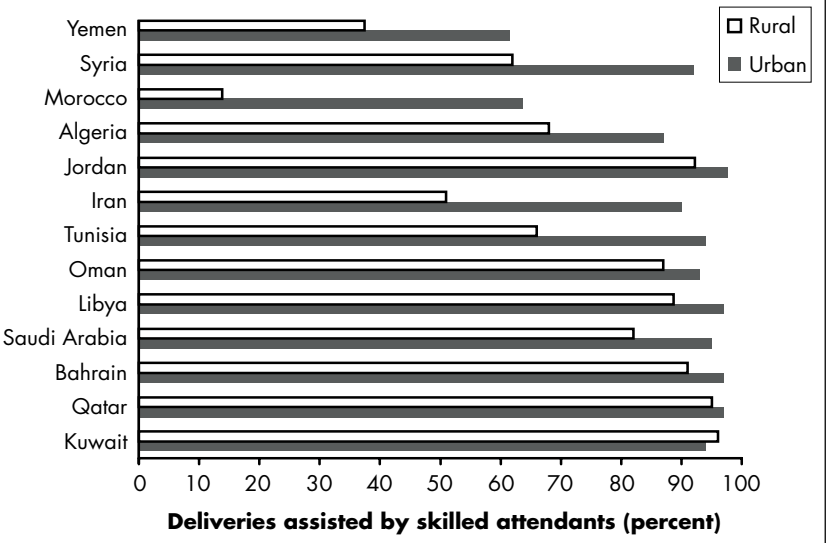


Sources: 6, 26, 37, 44, 82, 112, 113, 114, 136, 191.

in Morocco, 64 percent of deliveries in urban areas but only 14 percent of deliveries in rural areas are assisted by skilled attendants. Urban Moroccan women are three times more likely to receive prenatal care than are their rural counterparts. This suggests that maternal mortality in rural areas is much higher than in urban areas. A national maternal mortality study in Egypt also showed significant regional differences within the country (table 6).

MMRs in MENA countries increase along with the increase in urban-rural gaps in deliveries assisted by skilled attendants

Figure 9. Fewer Deliveries Assisted by Skilled Attendants in Rural Areas



Sources: 6, 26, 37, 82, 112, 113, 114, 136, 191.

(figure 10). This indicates that poor maternal care in rural areas is a factor that contributes to high MMRs.

Postnatal Care

Although prenatal care coverage has increased in most MENA countries, postnatal care coverage remains much lower (table 3). A mother may visit a health facility for consultation concerning her infant's health but will not often come for postnatal care for herself, and health personnel do not routinely visit mothers in their homes. Another reason for poor coverage of postnatal care in certain areas may be the cultural belief that women should stay home for a certain period of time following childbirth. Postnatal care provides

an important opportunity to reduce reproductive morbidity, as well as to promote breastfeeding and family planning. Therefore, postnatal care should be encouraged more vigorously, especially when there are complications in the first one to two weeks after birth. When it is too difficult for women to come, health personnel should visit women in their homes.

Maternal Morbidity

Maternal morbidity, or the prevalence of pregnancy-related nonfatal illnesses, is difficult to evaluate accurately in developing countries. Based on the estimation that 40 percent of pregnant women experience pregnancy-related health problems, each year about 300 million women in the world suffer from pregnancy-related health problems and disabilities. Of these, 15 percent suffer serious or long-term complications.[232] Therefore, one can calculate that 9 to 10 million women a year in MENA countries suffer from pregnancy-related health problems, whether acute or chronic.

Both acute and chronic complications during pregnancy were often observed in MENA countries, as well as in other developing countries. Pregnancy-related illnesses can be categorized as follows:[78]

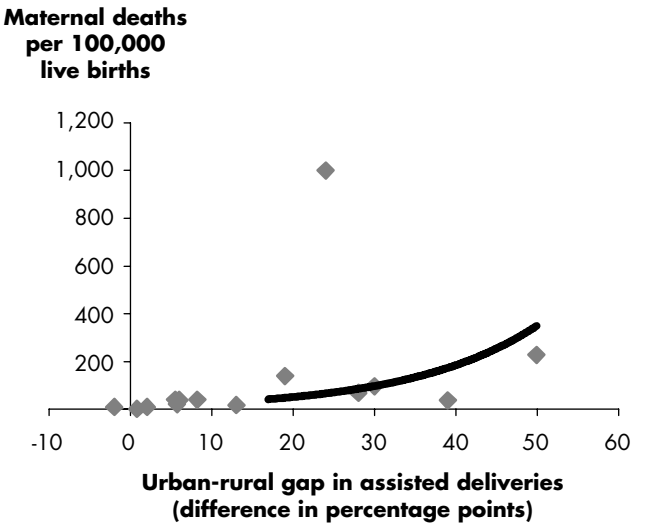
- Short-term, acute complications directly related to pregnancy and the puerperium, such as bleeding, obstructed labor, pregnancy-induced hypertension (pre-eclampsia and eclampsia), ectopic pregnancy, and postpartum infection.

Table 6. Maternal Mortality Ratios in Egypt, 1992–93

SUBREGION	MMR (PER 100,000 LIVE BIRTHS)
National	174
Metropolitan governorates	233
Lower Egypt	132
Upper Egypt	217
3 Upper Egyptian governorates (Sohag, Assuit, Qena)	323–471

Source: 93.

Figure 10. Urban-Rural Gap in Deliveries Assisted by Skilled Attendants and Maternal Mortality Ratio in MENA Countries



Sources: 6, 26, 37, 82, 112, 113, 114, 136, 191, 204, 233.

- Long-term, chronic complications, such as vaginal fistulas, which may occur at the time of labor and delivery, or uterine prolapse, which may occur many years later.
- Associated illnesses, such as malaria and hepatitis, that either occur for the first time, or if already present, progress rapidly, because of reduced immune capacity during pregnancy.

Based on a community study in a developing country, it is estimated that there are 16 episodes of illness for every maternal death.[78] Another community study among relatively low-risk women indicated that 37 percent experienced some illness during pregnancy, 21 percent had difficulties during labor, and 6

percent experienced postpartum complications. Hospital studies in developing countries are available, but the studies do not consider long-term consequences, and the results may not be representative of the population as a whole. Morbidity can be even higher among women with higher risks, such as teenagers or multiparous women.

Minor complaints associated with pregnancy, such as nausea, vomiting, backache, and fatigue, are rarely addressed, because most research in developing countries focuses on measurable and potentially life-threatening illnesses such as hypertension and bleeding. In addition, women often do not recognize that some complications are actually illnesses. However, even the more minor conditions may significantly impair women's well-being and productivity.

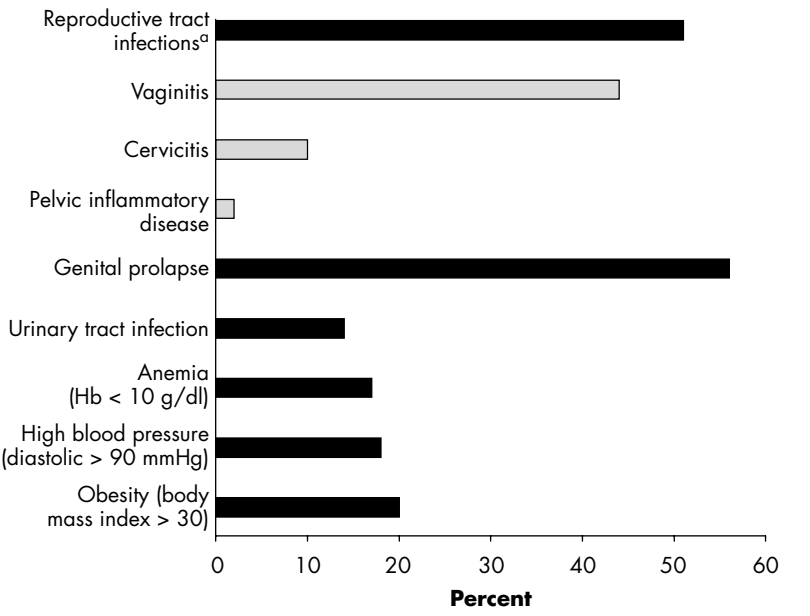
Prevalence of low birthweight is another indicator of poor health among pregnant women, as low birthweight among newborn babies is primarily the result of the poor health and nutritional status of mothers during pregnancy.[9, 35] Low birthweight prevalence rates of more than 10 percent have been observed in Egypt, Iraq, Lebanon, Syria, and Yemen (table 3).

A study conducted in rural Egypt showed that more than half of ever-married women between the ages of 14 and 60 years who were not pregnant at the time of the study suffered from various afflictions of the reproductive system, such as infections and genital prolapse (figure 11). These problems affect women's health, quality of life, and social status. For example, genital prolapse, which is caused by frequent deliveries, improper delivery management, and heavy physical workload, disturbs the daily life of women as it causes pain and infection and makes it difficult to urinate, defecate, and do daily physical work.

Abortion

Unsafe abortions, whether legal or illegal, cause the deaths of about 80,000 women worldwide each year, or about 13 percent of all maternal deaths.[196] When performed by qualified persons using correct techniques under sanitary conditions, induced abortion is a relatively safe surgical procedure, with a mortality rate of

Figure 11. Reproductive Morbidity in Rural Egypt



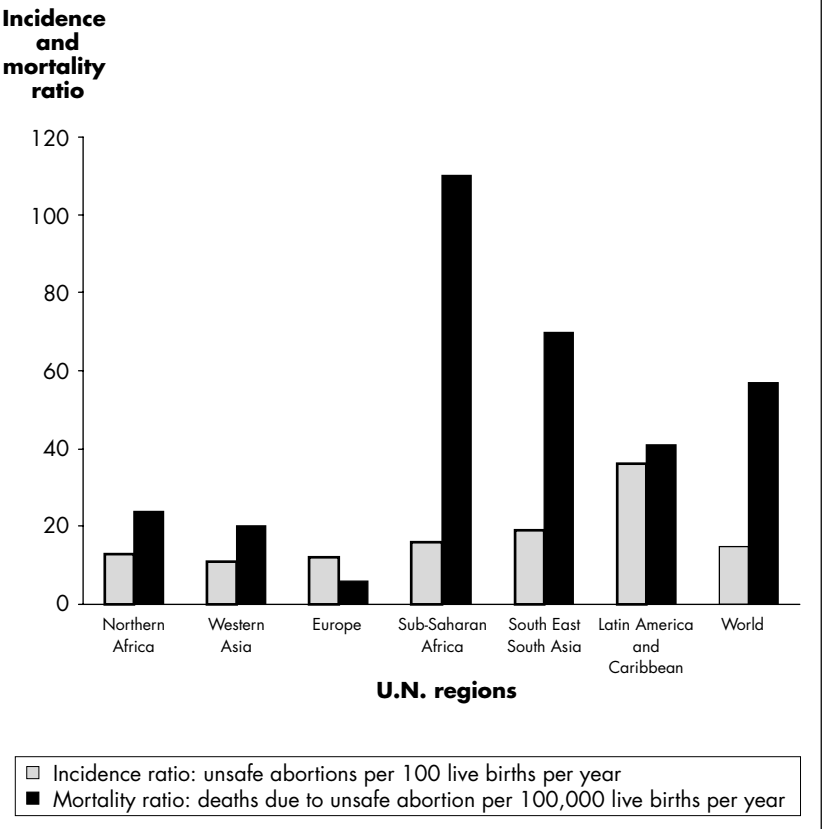
a. Includes vaginitis, cervicitis, and pelvic inflammatory disease.

Sources: 237, 239, 240.

around 0.6 per 100,000 procedures.[8] However, complications such as bleeding, infection, and injury to the cervix and uterus due to improper practices sometimes cause deaths or long-term disabilities.

The estimated incidence of unsafe abortion is 130 per 1,000 live births in northern Africa and 110 per 1,000 live births in western Asia (figure 12). The estimated mortality ratios for unsafe abortion in Northern Africa and Western Asia are 24 and 20 per 100,000 live births, respectively. In both regions, the incidence and mortality ratio are lower than those in other developing regions, such as Sub-Saharan Africa, Asia, and Latin America. Studies in Egypt have

Figure 12. Incidence and Mortality of Unsafe Abortion



Source: 196.

reported that mortality as a result of unsafe abortion ranges from 3 to 194 per 100,000 live births (table 7).

Approximately 8 percent of maternal deaths in the MENA region are the result of unsafe abortion (table 4, figure 4), which is lower than the corresponding figures for other developing regions.

Globally, when maternal mortality is lowered, unsafe abortion mortality accounts for an important proportion of maternal mortality. Thus, the low proportion may indicate that the overall number of maternal deaths, which are caused primarily by the improper management of pregnancies and deliveries, is still high in the MENA region.

Abortion is legally restricted in most MENA countries (table 8). In Tunisia, where abortion is legal, the incidence of unsafe abortion is very low. Although induced abortion cannot be performed in public health facilities in Egypt, studies in rural Egypt indicate that many women have had abortions performed by private physicians.[52, 237] In Algeria, Islamic scholars may condone abortion as an option for women who are victims of terrorism.[29]

Abortion is an issue too sensitive to discuss openly in the MENA region, as some people firmly object to abortion regardless of the reason for the procedure or the length of the pregnancy. Available statistics often do not even discriminate between induced abortion

Table 7. Frequency and Mortality of Unsafe Abortion

			FREQUENCY		MORTALITY	
COUNTRY	LEVEL[a]	YEAR(S)	PER 1,000 LIVE BIRTHS	% OF PREGNANCIES	PER 100,000 LIVE BIRTHS	% OF ALL MATERNAL DEATHS
Iraq	S	1980	—	2.6	—	—
Syria	S	1973	—	7.9–11.6	—	—
Egypt	N	1992–93	—	—	8	—
	S	1971–94	10–289	0.8–28.4	3–194	1.6–13.5
Algeria	N	1990–92	105	—	—	—
Iran	N	1972	—	15–25	—	—
	S	1973–74	108	7.4	—	—
Lebanon	S	1971–82	—	—	11	8.9
	S	1983–86	69	4.6	—	—
Libya	S	1984	197	15.4	—	—
Bahrain	N	1977–86	—	—	2	5.4
Israel	N	1980–83	83	6.8	—	—

— Not available.
Note: Unsafe abortions are defined as abortions not provided through approved facilities and/or persons.
a. N = national; S = subnational.
Source: 196.

and spontaneous abortion (miscarriage), as women are often afraid to disclose the truth about how or why their pregnancy was terminated. Therefore, current figures on the incidence of unsafe abortion, as well as on its rates of mortality and morbidity, may not be accurate.

To reduce the risks of complications of abortion, easily accessible high-quality emergency services should be provided at all levels of the health care system. In most countries, however, emergency treatment for incomplete abortion is usually a surgical procedure that is available only in hospitals in major cities. In addition, family planning services are rarely offered to patients who have received emergency treatment, despite the obvious importance of linking the two types of care. Therefore, developing countries need

Table 8. Legal Conditions of Abortion

	GROUNDS ON WHICH ABORTION IS PERMITTED						
COUNTRY	TO SAVE WOMAN'S LIFE	TO PRESERVE PHYSICAL HEALTH	TO PRESERVE MENTAL HEALTH	RAPE OR INCEST	FETAL IMPAIRMENT	ECONOMIC OR SOCIAL REASONS	OTHER REQUEST
Yemen	O						
Iraq	O	O	O	O	O		
Syria	O						
Morocco	O	O					
Algeria	O	O	O	O			
Jordan	O	O	O				
Tunisia	O	O	O	O	O	O	O
Lebanon	O						
Oman	O						
Libya	O						
Saudi Arabia	O	O					
Bahrain	O	O	O				
Qatar	O	O			O		
Israel	O	O	O	O	O		
UAE	O						
Kuwait	O	O	O		O		
United States	O	O	O	O	O	O	O
United Kingdom	O	O	O		O	O	
Sweden	O	O	O	O	O	O	O
Japan	O	O	O	O		O	

Source: 148.

to establish postabortion services at various levels of their health care systems, although it may be too sensitive to address safe abortion directly.

Postabortion care includes emergency treatment of incomplete abortion and potentially life-threatening complications, provision of family planning counseling and services, and links between emergency care and other reproductive health services.[53] Manual vacuum aspiration is an effective method of treating bleeding complications that can be provided in an outpatient setting by nurses and midwives using inexpensive, reusable instruments and equipment. The U.S. Agency for International Development (USAID) supports establishing postabortion care in developing countries in partnership with nongovernmental organizations (NGOs). In the MENA region, the Population Council has piloted postabortion care in Egypt. Another important element in postabortion care is nondiscriminatory treatment. All too often, women seeking care for postabortion complications are met by negative staff attitudes. At ICPD in Cairo, therefore, it was agreed that the following should be provided to all women suffering from abortion complications: adequate medical treatment; family planning counseling and provision; and nondiscriminatory treatment.

Cesarean Section

Cesarean section is one of the most effective life-saving interventions and is considered a necessary component of EOC. The cesarean section rate is a useful indicator of availability of, access to, and use of services, as well as of the functioning of the health service system.[98, 173] Acceptable levels for cesarean section are between 5 and 15 percent of all births in the population.[4] Cesarean section rates are about 21 percent in the United States (1995), 13 percent in Japan (1996), and 10–15 percent in most developed countries.[33, 100, 79] Unnecessary cesarean sections should be avoided, as the procedure carries substantial risk of injury, infection, and even death for the patient. Overuse of cesarean section also raises the costs of health care. Various factors have contributed to increased cesarean section rates: poor management of

pregnancy and delivery; fear of litigation; payment systems that provide incentives for performing cesarean sections; the misconception of cesarean section as being a "modern" method of delivery among patients of higher socio-economic status; and convenience for physicians and patients.[34] Cesarean section rates are abnormally high among Latin American countries (for example, 36 percent in Brazil).[28]

The cesarean section rates in MENA countries where data were available are generally within the acceptable range, although slightly high rates were reported in Bahrain (table 9). This indicates that unnecessary cesarean sections due to social factors are relatively rare, even in the high-income countries in the region. The proportion of cesarean sections in tertiary care hospitals in Yemen was 7 to 10 percent,[222] while the proportions in hospitals in other developing countries were higher, because these hospitals usually handle many high-risk emergency cases. This may indicate that, in Yemen, a significant number of cases that might have required cesarean section did not receive the proper intervention.

Fertility and Family Planning

Fertility

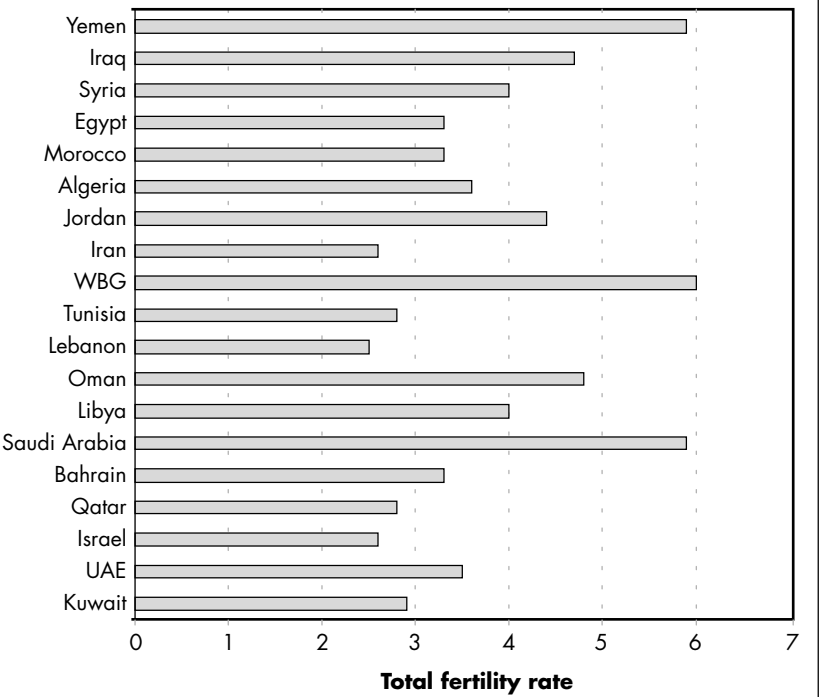
Although fertility has declined substantially in the MENA countries over the past 15 to 20 years, the region has the second-highest rate

Table 9. Cesarean Section Rates

MENA COUNTRY	% OF TOTAL DELIVERIES	OTHER COUNTRY		% OF TOTAL DELIVERIES
Algeria	6.3	Brazil	(1996)	36.4
Oman	6.6	United States	(1995)	20.8
Bahrain	16.1	Scotland	(1992)	14.0
UAE	8.3	Japan	(1984)	7.3
Kuwait	11.2		(1996)	12.6

Sources: 4, 6, 28, 33, 79, 100, 110, 136, 236.

Figure 13. Total Fertility Rates



Sources: 89, 204, 230, 233.

of natural increase in the world, exceeded only by Sub-Saharan Africa. The TFR in the region is approximately 5, much higher than the global average of 3.2. Among the MENA countries, there are significant variations in fertility, ranging from a TFR of less than 3 in Iran, Israel, Lebanon, and Tunisia to almost 6 in Yemen, Saudi Arabia, and WBG (figure 13). The decline in fertility in the MENA region is due to the higher age of women at marriage, increased age at first childbirth, and increased use of contraception.[125]

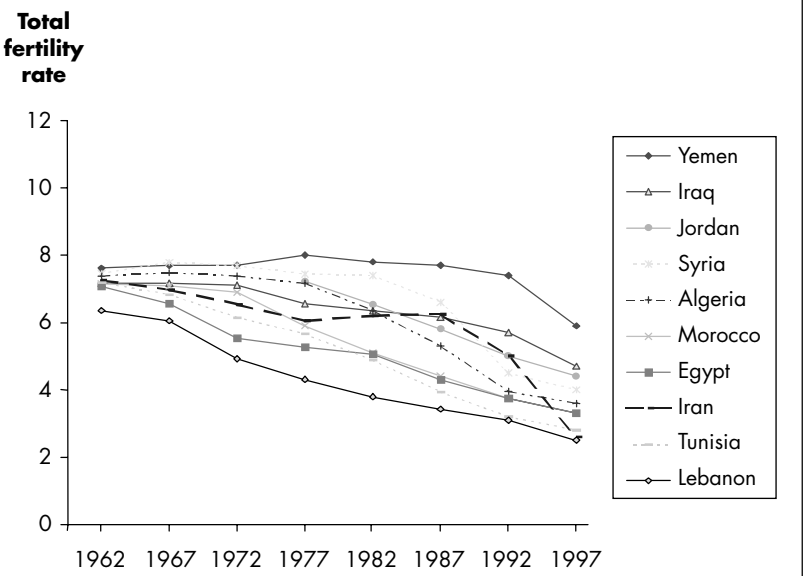
Worldwide, fertility generally declines as income levels increase, societies become more urbanized, demand for education and other social services increases, and changes occur in sociocultural factors that affect the status of women. Use of measures to control fertility increases with improvement in socioeconomic development, as couples realize that the cost of having children exceeds the economic contributions to the household that children made in the past.[214] Within a country, TFR is higher in rural areas and among lower socioeconomic groups. Reasons include a lack of awareness of the benefits of having a smaller number of children, the need for children as part of the agricultural labor force, the influence of various traditional values, and the lack of access to quality family planning services.

In the MENA region, the relationship between income and fertility is less clear-cut. TFRs of MENA countries are high in comparison to those of countries with similar income levels in other regions. TFRs of high-income and upper-middle-income MENA countries are comparable to TFRs of countries with much lower income levels in other regions. For instance, the TFR of the United Arab Emirates is similar to that of Bangladesh, while the TFR of Saudi Arabia is comparable to that of Mozambique.[230] The TFR in Yemen is 1.5 times higher than Kenya's and more than twice that of Vietnam, yet the three countries have similar income levels.

In the MENA region, fertility decline started to occur in the early 1970s and accelerated considerably in the early to mid-1980s. In several countries, however, the pace of decline slowed in the 1990s (figures 14, 15). TFRs have remained relatively constant in Saudi Arabia and Israel, but have dropped precipitously in Iran and Libya. Although Yemen still has one of the highest TFRs in the world, it dropped by 1.2 in the last six years.

In examining global patterns of fertility decline, there are several factors that are consistently present: low infant and child mortality; high female literacy and education; and family planning that provides information and services for contraceptive methods.[59] It is difficult to determine a direct link between policy and demographic

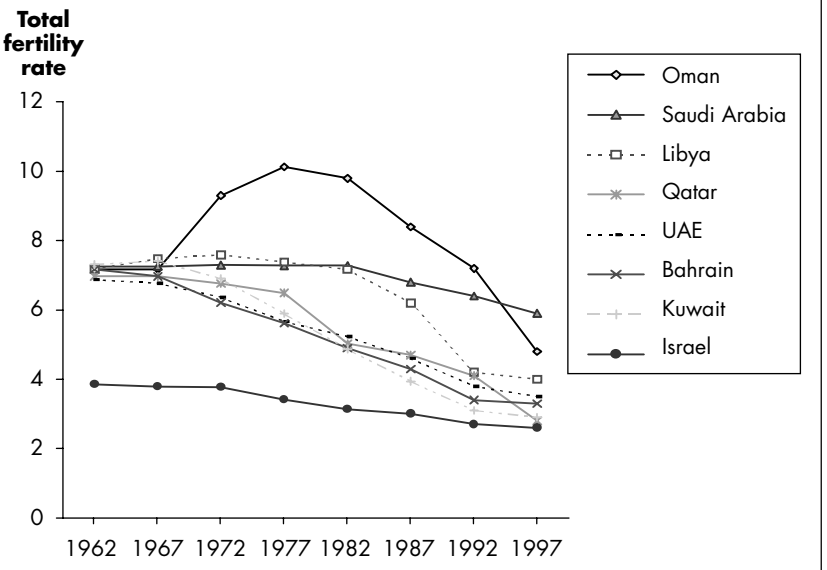
Figure 14. Fertility Decline in Low-Income and Lower-Middle-Income MENA Countries



Sources: 204, 230, 233.

change, and it is even more difficult to identify common factors that result in fertility transition. The availability of information and services will not induce individual couples to use contraception if they have a strong personal preference for a large family. But even without widespread use of contraception, fertility decline may occur due to broader changes in the social environment, such as increased education of girls, later age of marriage, improved employment opportunities for women, social security, and better health services to reduce infant mortality.[59] As seen in MENA countries, economic development and social change are not sufficient to achieve fertility decline; political commitment to ensure the adequate supply of services is also necessary.[234]

Figure 15. Fertility Decline in Upper-Middle-Income and High-Income MENA Countries



Sources: 204, 230, 233.

In Egypt, after fairly slow rates of fertility decline in the 1960s and 1970s, fertility began to drop rapidly in the mid-1980s. The rapid decline is attributed to an increase in age at marriage and to changing ideas about ideal family size, with the desire for fewer children leading to increased contraceptive use. Introduction of the intrauterine device (IUD) in Egypt also contributed to increased contraceptive use by making an effective and acceptable method available. During this period, infant and child mortality rates were also falling, making parents more confident that most or all children born to them would survive. Future fertility decline will require expanding access to education for girls, particularly in rural areas, and improvements in family planning programs.[30]

The TFR in Jordan is currently 4.4, which is 40 percent lower than in 1976, when it was 7.4. Fertility reductions that occurred between 1976 and 1983 are attributable more to increased age at marriage than to contraceptive use, which was only 3 percent at the time. Since then, the pace of fertility decline has steadily increased: Fertility declined by 11 percent from 1976 to 1983, by 15 percent from 1983 to 1990, and by 21 percent from 1990 to 1997. Reduced fertility rates among women in younger age cohorts, increased age of marriage, increased education of females, and increased contraceptive use all contributed to lowering the TFR.[38, 109]

Population Policy

At the World Population Conference in Bucharest in 1974, delegates from developing countries emphasized the importance of socioeconomic development in reducing population growth. Since that time, rapid population growth has been widely recognized as an obstacle to economic development, and national population policies have been formulated with that concern in mind.[59] Indeed, in outlining its national population strategy, the government of Yemen acknowledged rapid population growth as a national challenge and recognized the country's stagnating economic growth as a negative consequence.[24]

Population growth increases the pressure on various sectors, such as health, education, food supply, water, sewage, housing, and the labor market. Such pressures diminish both economic and social progress, as the country is forced to allocate a significant amount of resources just to maintain the current level of services. For example, unless population growth is curbed in Egypt, it is estimated that the government will have to spend an additional US$5 billion in the next 15 years just to maintain the current level of service in various sectors.[108] Water resources and arable lands in the region are also limited. In Yemen, current water supplies are low, amounting to a little over 134 cubic meters per capita each year, and the population may double in the next 20 years.[222]

Despite the recognition that population growth poses enormous challenges to socioeconomic development, fewer than half the

countries in the region have explicit policies to lower fertility. The governments of Egypt, Jordan, Morocco, Tunisia, and Yemen consider rapid population growth an obstacle to economic and social development and have adopted population policies that include fertility reduction among the objectives. By contrast, the governments of Iraq, Israel, and Kuwait want to increase fertility and use incentives such as child allowances to encourage large families. High-income and upper-middle-income countries, such as Bahrain, Saudi Arabia, and the UAE, have strong social welfare systems that are considered pronatalist.[125]

Fertility reduction as an objective of population policy will be achieved if the desire for small families is widespread and family planning information and services are made widely available. Analyzing the various factors that contribute to fertility reduction, it is evident that achieving reduced population growth requires the commitment of multiple government ministries and the participation of many sectors of society. However, the level of coordination required to develop an effective population policy—one that would include requisite linkages to social security policy, inheritance, girls' access to education, and labor policies pertaining to women's employment—is difficult to achieve. Thus, population issues are largely left to health ministries and vertical family planning programs.[59]

Three main strategies to limit population growth have been identified. The first is the development of family planning programs that make information and services available. This effort has received considerable support from international donors since the 1970s. The second strategy encourages investment in human development in areas such as education, employment, and improvement in the status of women as a way to increase demand for smaller families. The third strategy promotes raising the age of marriage, increasing the age at first childbirth, and increasing intervals between births.[125]

Family Planning

Population policies to reduce fertility are usually implemented through programs that provide contraceptive information and services, whether as vertical family planning programs or as more

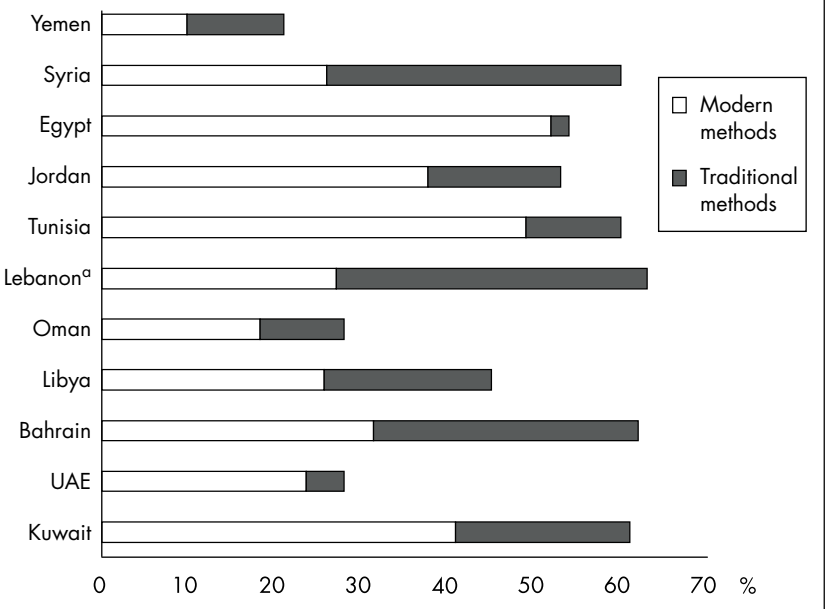
integrated reproductive health or maternal and child health (MCH) programs. In several MENA countries, organized family planning programs have contributed significantly to contraceptive availability and acceptability and therefore to fertility reduction.

Fertility reduction, in turn, contributes to reducing maternal and infant morbidity and mortality. Reducing the overall number of pregnancies reduces the risk of obstetric complications. Frequent births at short intervals often undermine the health status of both mothers and their children. Women typically cannot recover from health problems, such as anemia, before the next pregnancy. Particularly in the areas where early childbearing and closely spaced pregnancies are common and emergency obstetric services are scarce, people should be well informed of those risks and the benefits of family planning.[30]

Spacing births at least two years apart can prevent almost one in four infant deaths in developing countries. The MENA region has the world's highest prevalence of short birth intervals,[5] which have a significant impact on infant mortality in each country. In Yemen, the IMR is 131 per 1,000 live births for those born less than two years after a previous birth; this figure is more than twice as high as the rate for infants born after an interval of two to three years. In Egypt, the IMR is 129 per 1,000 live births for infants born after less than a two-year interval, versus 63 for infants with a two-to-three-year birth interval.[125] In Lebanon and Libya, an infant born after an interval of less than two years is two times more likely to die than one born after an interval of more than two years.[114, 115]

The contraceptive prevalence rate of modern methods is only 10 percent in Yemen and less than 30 percent in countries such as Oman, Syria, and UAE (figure 16). The low use of modern contraceptive methods results from either a lack of access to or a lack of demand for family planning services. In MENA countries, the two primary reasons for not using family planning services and for discontinuing the use of contraceptives are the desire for another child and the fear of side effects (table 10). Discontinuation rates are high within

Figure 16. Contraceptive Prevalence Rates



a. Lebanon: IUD and pills for modern methods.

Source: 4, 6, 26, 37, 44, 112, 113, 114, 115, 136, 236.

the first 12 months of use: 30 percent in Egypt, 49 percent in Jordan, and 40 percent in Morocco.

Unmet Need

The concept of unmet need was developed to help policymakers and family planning program managers assess the gap between women's stated desire to space or limit their pregnancies and their use of contraception. Among married women of reproductive age, unmet need for family planning[6] is estimated to be 16 percent in Egypt and Morocco, 14 percent in Jordan, and 39 percent in Yemen.[27, 38, 43, 82]

Table 10. Reasons for Not Using/Discontinuing Use of Contraceptive Methods

	DISCONTINUING USE (%)	NOT USING CONTRACEPTIVE METHODS (%)					
REASON	EGYPT	EGYPT	YEMEN	SYRIA	ALGERIA	LEBANON	LIBYA
Fear of side effects/ health concerns	39.0	8.0	10.0	7.0	16.0	12.0	10.0
Desire for another child	23.0	16.0		48.0	9.0	21.0	33.0
Became pregnant	13.0	—	—	—	—	—	—
Husband's refusal	2.0	3.0	16.0	15.0	11.0	8.0	6.0
Religious prohibitions	—	2.0	15.0	4.0	7.0	3.0	9.0
Inconvenient to use	2.0	0.6	3.0	—	0.5	11.0	5.0
Menopause/sterility	2.0	35.0	3.0	9.0	23.0	15.0	12.0
Opposed to family planning	—	0.9	2.0	2.0	2.0	4.0	0.6

Sources: 26, 43, 110, 112, 114, 115.

Among the most common reasons for unmet need are inconvenient or unsatisfactory services, lack of information, fear of contraceptive side effects, and opposition from husbands, relatives, or friends.[21] In Jordan, religion is often cited as restricting use of contraception. Although birth spacing is considered acceptable, family planning is often interpreted to mean birth limiting, which is seen as unacceptable for religious reasons. Jordanian women also feel pressured to produce children to please their husbands or mothers-in-law.[48]

The concept of unmet need has been expanded to also take into account current users of contraception who may have an unmet need for "appropriate contraception." A woman with an unmet need for appropriate contraception is one who is using an ineffective method, using a method incorrectly, using a method that is unsafe or unsuitable for her, or is dissatisfied with her method.[21] The number of women who discontinue use of a method due to method failure could be considered a strong indicator of unmet need for appropriate contraception. In Jordan, where there is a strong preference for traditional over modern methods, ever-use of periodic abstinence and withdrawal are relatively high: 26 percent and 31 percent, respectively. The percentage of women who report discontinuing

use of these methods due to method failure is also high: 50 percent and 39 percent, respectively.[38] Addressing the unmet need for appropriate contraception that the users of these methods have would require counseling and clear information on using the methods more effectively, or counseling about other contraceptive methods that would suit each woman's medical history, reproductive intentions, and personal preferences.

In measuring fertility planning, demographic and health surveys collect data about the status of prior births: whether a birth was planned (wanted then), unplanned or wanted later (mistimed), or not wanted at all (unwanted). Calculating what the TFR would be if unwanted births were avoided is a compelling indicator of potential demographic impact and how far programs need to go to serve the unmet need of the population. The demographic and health surveys demonstrated a significant discrepancy between the total wanted fertility rate and the current TFR (table 11). Thus, if unwanted births were eliminated and ideal fertility were achieved, TFR would be reduced by 71 percent in Yemen, more than 50 percent in Jordan, and 28 percent in Egypt.

Access and Quality

Lack of access to quality services is a major reason for unmet need, indicating that both access and quality issues must be addressed. Expanding the method mix, improving counseling, and strengthening the technical competence of providers are all essential for improving access and quality. Even where services are widely available, hard-to-reach groups, such as women living

Table 11. Total Wanted Fertility Rate and Total Fertility Rate

COUNTRY	TOTAL WANTED FERTILITY RATE	TOTAL FERTILITY RATE
Yemen	4.6	6.5
Jordan	2.9	4.4
Egypt	2.6	3.6

Note: Based on the demographic and health survey of each country between 1995 and 1997.

Sources: 27, 38, 44.

in rural areas and women with little or no education, may need better access to services. In some areas where services are readily available, the poor quality of those services may reduce demand. In Egypt, 42 percent of contraceptive users obtained services outside their communities, citing lack of good services as the reason.[21, 42]

Access to family planning implies both proximity to facilities and availability of contraceptive methods and information. Although physical access to facilities has improved, the contraceptive method mix available in many countries and individual facilities may need to be improved in order to provide adequate and appropriate method choices. Determining a method mix for a country must take into account demand for spacing births or for limiting births, physical health considerations, and socio-psychological considerations. Different methods are needed as women progress through their reproductive life cycles. Methods may be more appropriate for short- or long-term use, and women who are breastfeeding need access to methods that do not interfere with lactation.[51]

Attracting new clients and maintaining satisfied, continuous users requires that family planning programs offer high-quality services. Several elements of quality have been defined: they include access to a range of appropriate contraceptive methods; adequate counseling that responds to the client's concerns and allows her to make an informed choice; and technically competent service providers who adhere to accepted standards.[17] A study in Jordan showed that a major factor in method continuation was whether the client obtained the method that she intended to use before going to the clinic.[47]

In Egypt, three factors have been identified as being essential to improving contraceptive use and effectiveness. First, counseling must be improved so that clients know how to correctly use their selected method and are aware of other method options if a method proves unsuitable. Second, the method mix should be expanded to include methods compatible with breastfeeding for women who object to IUDs and coitus-related contraceptives. Third, IEC efforts should be aimed more at men, who are major decisionmakers about contraceptive use.[30]

Use of modern contraceptive methods doubled in Egypt between 1980 and 1995, from 24 percent to 48 percent. The rapid rate of increase seen during the 1980s slowed in the 1990s. Introduction of the IUD accounts for most of the growth in contraceptive use since 1980; IUD use increased from 4 percent in 1980 to 30 percent in 1995 as a share of all modern contraceptive methods used. Use of injectables has been increasing since their introduction in the early 1990s, but pill use has declined from 13 percent of modern contraceptive methods used in 1992 to 10 percent in 1995.[30]

Methods should be selected based on their appropriateness within the service delivery system. Introduction of Norplant could be considered by countries such as Oman, where there are effective tracking systems for notifying clients when the implant needs to be removed, skilled service providers and adequate facilities, and a national program with the resources to procure the commodities and insertion kits. Additionally, Norplant could be advantageous in Oman and elsewhere for effective long-term use in areas where religious beliefs limit use of permanent methods and where female clients who do not want to be seen by male health professionals for methods such as the IUD might accept being seen by male health professionals for a Norplant insertion.[133]

Methods that affect menstrual bleeding patterns may result in women refusing to start or to continue using the methods. In the MENA region, where the population is predominantly Muslim, irregular menstrual bleeding may indeed have an impact on method use, as Muslim women are restricted from praying, performing some household duties, and engaging in sexual relations during menstrual periods. In Tunisia, about 40 percent of women included in an introduction study for a combined injectable, Cyclofem, discontinued use by one year due to menstrual disturbances.[47]

Requirements for inappropriate or unnecessary examinations and tests, eligibility exclusions, and provider biases also serve to limit client access to methods. These obstacles can be improved by updating clinical guidelines and protocols, training staff in their use, and supervising staff according to the current guidelines. In Oman, the government removed a requirement that a specialist be seen

before beginning use of any contraceptive method, because this was recognized as a barrier to use.

Client-Provider Interaction

The treatment that clients receive from the staff of family planning clinics, be they clinicians, counselors, or receptionists, is a determining factor in whether clients are satisfied or dissatisfied with the service. Dissatisfaction and discontinuation are often the result of poor client-provider interaction. Conversely, client satisfaction is associated with effective and continued family planning use. Treating the client with respect, ensuring privacy during counseling, providing the client's preferred method, helping the client make an informed choice about a method that suits her reproductive intentions and her individual concerns and preferences, and giving the client clear information about correct use of the method and possible side effects are all elements of good client-provider interaction.[101]

Being able to communicate in a common language is also essential for good client-provider interaction. Several countries in the MENA region rely heavily on foreign contract workers for the provision of many health services, including family planning. In Oman, Arabic-speaking health educators provide family planning information to groups of women in clinic waiting areas. Individual counseling about specific methods is done by a nurse who may or may not be fluent in Arabic. Finally, a physician who probably does not speak Arabic fluently provides additional information on the client's chosen method. Clearly, the amount of information about method options, correct use, and potential side effects that is given by the service providers—and understood by the client—is determined by the ability of the providers to communicate in Arabic. Clinic staff and government officials recognize that clients generally respond more positively to Omani health personnel because there is no language barrier. There also seems to be a greater level of trust in the Omani health personnel who can address client fears and dispel rumors about family planning.[133]

Technical Competence

Ensuring that services are provided in a technically competent manner is basic to program quality. Technical competence implies that the staff possess both the knowledge and skills for providing contraceptive methods and other reproductive health services. Standardizing the practices of family planning services helps ensure the quality of the services. Development and use of service delivery guidelines and clinical protocols are important elements in the standardization of practices. Well-designed and applied clinical protocols help improve quality by specifying eligibility criteria for all methods, giving up-to-date information for use, instructing on infection prevention practices, and providing guidance on referral and follow-up procedures.[19] Guidelines also provide standards for training of service providers, define the skills and knowledge needed by each type of provider, specify the content of training courses, and guide the revision of service delivery assessment and management tools.[63] Several MENA countries, including Egypt, Yemen, and Morocco, have developed service delivery guidelines and protocols. Disseminating and applying them and monitoring their use are critical. Revision of guidelines and protocols should be done approximately every three years to incorporate new information and changes in national policies.

Developing the technical competence for providing services more broadly requires training of health personnel. As preservice education in medicine, nursing, and midwifery have not usually included family planning or reproductive health, national programs have had to rely on in-service training to develop the requisite knowledge and skills. By preparing increased numbers of health personnel to provide family planning services, training aims to increase access to family planning as well as improve the quality of services. Training is often intended to provide existing health personnel with new knowledge and skills so that they can assume new tasks and responsibilities. In Yemen, the National Program to Expand Community Midwifery Training was established in 1997 and set to develop a curriculum and conduct a three-month training of trainers (TOT) course. The program uses a

performance-based curriculum and contains seven units: community health and nursing principles; prenatal care; labor and delivery; postpartum care; family planning and common gynecological diseases; child care; and management and supervision. The curriculum was needed to implement the national training program because no unified performance-based curriculum was available in Yemen.[92]

In-service training is often needed when a new method or service is being introduced or when the knowledge and skills of health personnel need to be updated or strengthened to improve the quality of services. In Oman, three TOT courses were conducted to train 28 gynecologists in proper IUD insertion, counseling, and infection prevention.[133] An evaluation conducted approximately one year after the training showed that the trained health personnel were regularly collecting accurate medical, obstetrical, and menstrual histories of clients as well as information about current reproductive health problems. The health personnel properly performed physical and pelvic examinations and demonstrated acceptable skills in IUD insertion. They also provided post-insertion instructions and recorded the information. Infection prevention procedures, which were observed to be a serious problem prior to the training, also improved as a result of the training. Correct decontamination and sterilization procedures were followed, and health personnel used adequate aseptic technique for loading the IUD before insertion.

The experience in Oman may provide a useful example for other countries in the MENA region that also rely heavily on foreign workers for providing health services. Although these health professionals completed medical and nursing education and were licensed to practice before being offered contracts to work in Oman, many of them needed to have their family planning knowledge and skills updated through in-service training courses. Improving the skills of contract workers who may not remain in the country beyond their two-year contract represents a substantial and recurring financial investment for the government, but it is necessary to conduct such training if services are to be improved and the needs

for family planning and reproductive health care of the local population met.

Pre-service education often does not include adequate preparation in family planning and reproductive health; however, efforts are underway throughout the world to revise the curricula of medical, nursing, and midwifery schools. In addition to curriculum reform, new teaching methodologies that rely less on lecture and allow for more practical learning are needed. In Morocco, the Faculty of Medicine in Rabat implemented a revised curriculum designed to strengthen clinical family planning and safe motherhood training.[16] The nine-week rotation in obstetrics and gynecology for sixth-year medical students was reorganized and standardized through the use of a common set of modules. Faculty were trained in the use of a competency-based training approach for the rotation. An evaluation of the program assessed student readiness to provide family planning and safe motherhood services in their internship (seventh) year. Selecting five "sentinel skill areas,"[7] the evaluation found that the majority of students were competent in each skill, and both students and faculty reacted positively to the training experience, especially in comparison to rotations in other areas. Findings of the evaluation point to the need to provide more hands-on practice with anatomic models and clients. While the results of the program are promising and were viewed positively by faculty, continued support is needed to consolidate and strengthen the program and to expand it to other departments.

Private Sector's Role

Access to family planning services has been increased through the participation of the private sector. Although the public sector provides the majority of family planning services in many developing countries, the private sector has become a key source for many clients. In Egypt, the private sector far exceeds the public sector in the provision of family planning services: 63 percent versus 36 percent, respectively. [43] In both urban and rural areas, the private

sector is the major source for family planning services. Private doctors provide 34 percent of all IUDs, and private pharmacies provide 86 percent of oral contraceptives. One of the reasons that IUD clients choose private facilities is the perception of more competent staff and the availability of female physicians. Pill users cite proximity to their homes as an important reason for choosing private pharmacies.

In Jordan, also, the private sector is the largest provider of family planning services. Seventy-two percent of clients are served by the private sector, versus 28 percent by the public sector.[38] Fifty-two percent of pill users get pills from private pharmacies and 36 percent of IUD users are served by the Jordanian Association for Family Planning and Protection (JAFPP). A local affiliate of the International Planned Parenthood Federation, JAFPP is the major provider within the private sector. Physicians in private practice now serve proportionately fewer family planning clients than they did in 1983, when they served 35 percent of users. This shift away from private physicians may be due to the increased availability of services through other private outlets, such as pharmacies and JAFPP, as well as to the relatively high fees charged by private physicians.

Expanding the availability of products and services through the private sector will contribute to increased financing of and better access to quality family planning services. Several arguments can be made for increasing the role of the private sector. First, as family planning use expands, few governments will be able to meet the increasing financial costs. The private sector can provide the additional investment needed to satisfy growing demand. Second, the private sector already provides services to many poor people in both urban and rural areas, because they find access through private channels easier, more convenient, and comparable in cost, or because there is inadequate access to public sector services. And finally, higher-income users who can afford to pay for services should be encouraged to obtain family planning services from the private sector rather than the public sector, thus freeing public resources for those least able to pay.[32]

Men

In much of the world and certainly in the MENA region, men play key roles in reproductive health and family planning. Traditionally, however, family planning services have focused on women, making them bear most of the responsibility for contraceptive use, despite having limited decisionmaking authority. Involving men as the partners of women as well as clients themselves is being recognized as an important objective for improving health and well-being.[22]

Focusing on men as well as women is crucial to meeting unmet need, as many men have an unmet need for family planning. Unmet need for men is defined as wanting no more children but not using any contraceptive method. In Egypt, among husbands who said they did not want any more children, 66 percent were using some form of family planning while 34 percent were not.[124]

Because men have such a strong influence on decisions concerning family size and use of contraceptive methods, improving communication between husbands and wives may be an important element in increasing family planning use. Discussion about family planning and use of family planning seem closely related. In Egypt, 79 percent of husbands said they had discussed family planning with their wives and 50 percent said they were using a method. More efforts are needed to inform men about the benefits of family planning. In the Minya governorate, a community mobilization campaign attracted nine percent of the population of reproductive age to participate in the campaign. As a result of attending one meeting conducted by the campaign, four out of five men said they had discussed family planning with their wives, friends, or a family planning worker. Sixteen percent of women seeking family planning services in a public facility said encouragement from their husband was the primary reason for their visit.[124]

Postpartum and Postabortion Women

Postpartum women constitute a large percentage of the population with unmet need. Women who have recently given birth are likely to become pregnant again if they do not use contraception. A study conducted in 33 countries found that 17–22 percent of pregnancies

occurred within nine months of a previous birth. One-third of women who are pregnant or amenorrheic, while not immediately at risk of becoming pregnant, are considered to have unmet need because their pregnancy was unintended or mistimed.

In 1983, the city of Sfax in Tunisia established a comprehensive postpartum program that scheduled appointments for a mother and baby together at 40 days postpartum. The visit included well-baby care, a postpartum checkup, and family planning. Between 1983 and 1987, the proportion of women returning to the hospital for the postpartum visit increased from 60 percent to 83 percent, and of those who returned, 56 percent accepted a family planning method. The success of the program was attributed to providing services to both mother and baby during the same visit and making the return appointment on the 40th day postpartum, which has cultural and religious significance.[92]

Women who have just undergone an abortion are in critical need of family planning counseling and services and may need other reproductive health services as well, such as screening for STIs.

Breastfeeding for Fertility Reduction

Breastfeeding is a critical factor in reducing fertility and spacing births (box 1). Full or nearly full breastfeeding delays the resumption of ovulation and the return of the menstrual cycle. Lactational amenorrhea, which is the suppression of menstruation and ovulation due to breastfeeding, is associated with a decreased ability to become pregnant. The lactational amenorrhea method is 98 percent effective and can be used if a woman meets three eligibility criteria: (a) she is fully or nearly fully breastfeeding; (b) she is amenorrheic; and (c) her baby is less than six months old.

To prevent or postpone a subsequent pregnancy, a woman should begin using another contraceptive method (appropriate for breastfeeding) as soon as any one of the criteria is no longer met. Although breastfeeding does have a strong impact on fertility, breastfeeding alone does not provide a reliable means of contraception. In Jordan, 15 percent of women report ever using breastfeeding to avoid pregnancy, and 3 percent of current users rely on

Box 1. Bongaarts-Potter Model

Bongaarts and Potter developed a model that focuses on the four principal proximate determinants of fertility: marriage, contraception, induced abortion, and postpartum infecundability.[14] Using historical populations and World Fertility Survey countries, they showed that the model predicts fertility well and explains 96 percent of the variation in the observed fertility rate. Biologically, the total number of children a woman would bear in the years of childbearing is relatively invariant among populations in the absence of contraception, induced abortion, breastfeeding, and postpartum abstinence. The number is estimated at 15.3. This model indicates that if one index goes down, the other index must go up to maintain the same fertility rate. The following formula shows the Bongaarts-Potter model:

$$TFR = Cm * Cc * Ca * Ci * 15.3$$

where:

Cm = Index of marriage (the proportion of women of reproductive age currently married, weighted by age-specific fertility rate).

Cc = Index of contraception (1 minus product of proportion currently using contraception among married women of reproductive age and average use-effectiveness of contraception adjusted by the factor for sterile couples).

Ca = Index of abortion (ratio of the observed TFR to the estimated TFR without induced abortion).

Ci = Index of postpartum infecundability (ratio of the average duration of birth interval with no breastfeeding to the average duration of birth interval with breastfeeding).

breastfeeding. During the first 12 months of use, however, more than 17 percent discontinued use of breastfeeding because they became pregnant. In Yemen, 20 percent of women report ever-use and 8 percent report current use of breastfeeding for birth spacing.

The lactational amenorrhea method might be appropriately introduced or expanded in the MENA region, particularly in countries where there is a preference for "traditional" or "natural" methods. Jordan has introduced the method and is in the process of expanding availability of the method through training of health personnel, revising the information system to incorporate the method in reporting contraceptive use, and using IEC to inform couples about the method and its correct use.[72]

Even if lactational amenorrhea is not used as a family planning method, countries in which the duration of breastfeeding is long may benefit from the reduced fertility. Declines in breastfeeding, on the other hand, may result in increased fertility levels and decreased birth intervals. To maintain the current fertility level, increased use of contraception would be necessary if the duration of breastfeeding were to decline.[14] This increase in use of contraception would require greater investment to expand family planning services in order to serve the additional women at risk of pregnancy.[57] For example, if duration of breastfeeding were shortened by 25 percent in Yemen, contraceptive prevalence would have to increase from 21

Table 12. Impact of Breastfeeding on Fertility

COUNTRY	TOTAL FERTILITY RATE	MEAN DURATION OF BREASTFEEDING (MONTHS)	CONTRACEPTIVE PREVALENCE (%)	CONTRACEPTIVE PREVALENCE NEEDED WITH 25% DECLINE[a] (%)	CONTRACEPTIVE PREVALENCE NEEDED WITH 50% DECLINE[a] (%)
Yemen	5.9	18.0	21	31	40
Egypt	3.3	18.8	54	61	66
Morocco	3.3	14.7	59	64	67
Jordan	4.4	13.2	53	58	61

a. Contraceptive prevalence that would be required to maintain TFR if duration of breastfeeding were to decline 25 percent and 50 percent, calculated using the aggregate fertility model of Bongaarts and Potter.
Sources: 14, 27, 38, 44, 82.

percent to 31 percent just to maintain the same TFR (table 12). TFR would go up if the contraceptive prevalence increased to any percentage less than 31 percent; to decrease the TFR, contraceptive prevalence would have to increase to more than 31 percent. Therefore, maintaining the duration of breastfeeding is important to continue lowering fertility.

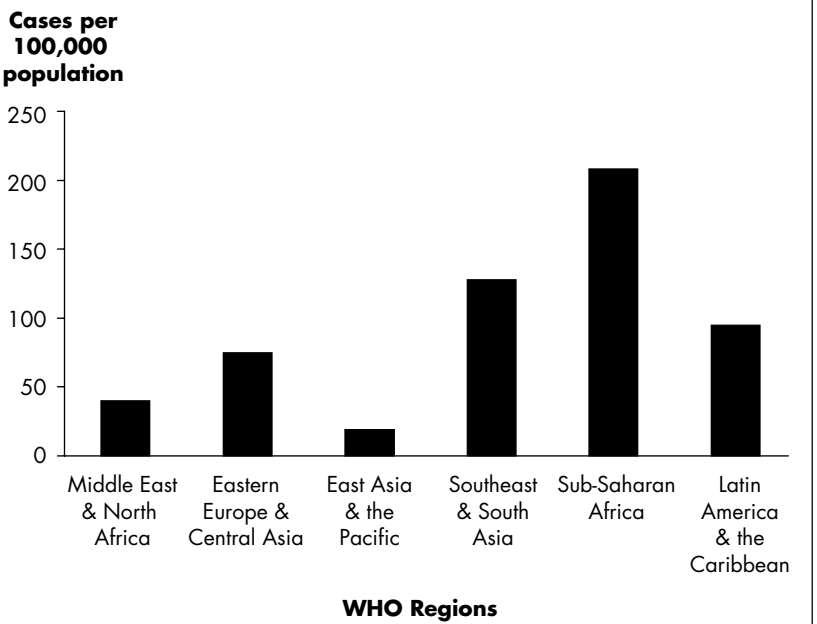
Sexually Transmitted Infections and Reproductive Tract Infections

STIs cause various symptoms such as persistent pain and discharge, and have consequences that include infertility, irreversible damage to fetuses or infants, and death. Estimated STI prevalence in the MENA region was the second lowest among six developing regions (figure 17): Around 12 million people in the region suffer from STIs. The relatively low rates may be attributed to cultural values that are intolerant of sexual relationships outside of marriage. However, they may also reflect a lack of reliable reporting systems. STI cases in many MENA countries are largely under-reported, as blood and prenatal screenings are not routinely carried out, and effective STI surveillance systems have not been put into place.

The prevalence of syphilis among blood donors and pregnant women is relatively low, with the highest prevalence rates being around 1.5 percent in Jordan and Morocco (figure 18). In Yemen, rates determined from syphilis screening tests at various facilities ranged from 1.2 to 15 percent.[222]

RTIs include not only STIs but also infections caused by poor delivery management, unsafe abortion, and other factors. RTIs may be fatal (as in the case of serious puerperal infections), may cause infertility, and may significantly diminish both quality of life and productivity due to persistent pain and discomfort. Women often do not even realize they have an RTI that can and should be treated medically, because they consider these symptoms as something physiologically normal. A study in rural Egypt revealed that more than half of the women who participated in the study had symptoms of an RTI (figure 11).

Figure 17. Prevalence of Sexually Transmitted Infections

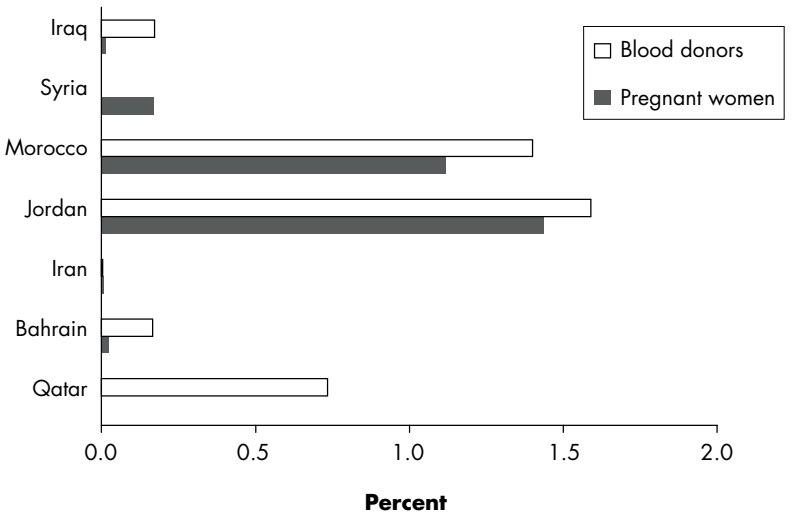


Source: 203.

HIV/AIDS

Although the number of reported AIDS cases is still relatively small, it has increased dramatically in the past seven years throughout the MENA region (figure 19). Only 391 deaths in the region had been reported by 1990, but the number increased sixfold, to 2,278, by 1997. Adult HIV prevalence is estimated to be between 0.005 percent and 0.18 percent among MENA countries (table 13). This prevalence rate is lower than that for countries in other developing regions including Sub-Saharan Africa, Latin America, and South Asia. The prevalence rate may be underestimated because of the lack of reliable surveillance systems.

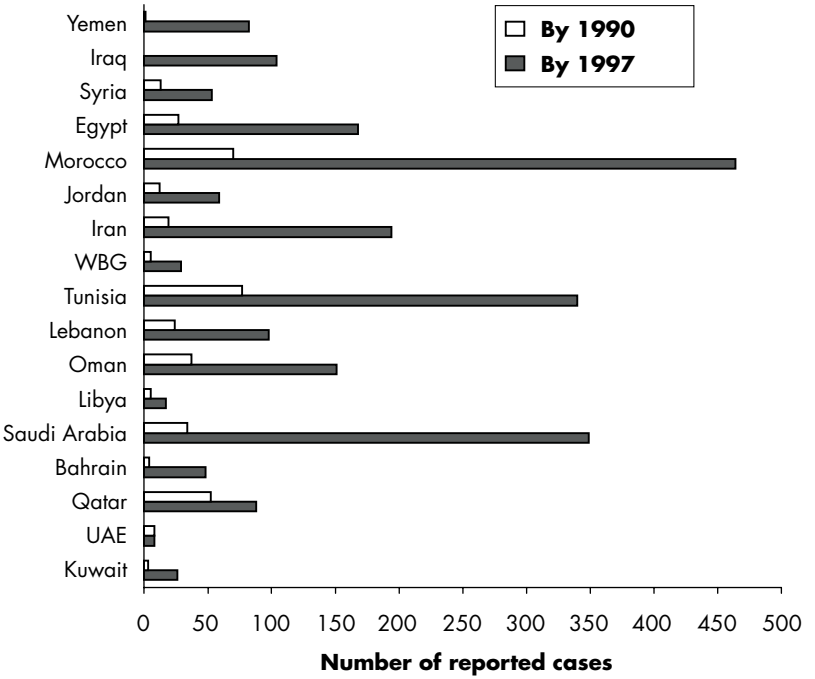
Figure 18. Syphilis Prevalence, 1995



Source: 203.

The Joint United Nations Programme on HIV/AIDS (UNAIDS), which opened a regional coordination office in 1998, reported the status of several MENA countries.[139, 140, 141, 142, 143, 152] The total number of HIV-seropositive and AIDS cases in Egypt was 615. In Iran, the number was 1,344, and 69 percent contracted it as a result of intravenous drug use (HIV prevalence among drug users was 1.6 percent, while it was 0.0004 percent among blood donors). In Yemen, the cumulative number of HIV-seropositive and AIDS cases by 1997 was 155, with a male-female ratio of 5:1; about 45 percent of the cases involved transmission through sexual contact. HIV prevalence for various subgroups in Yemen was 1.5 percent among Yemeni applicants for work abroad; 0.05 percent among blood donors; 3.7 percent among STI patients; and 7

Figure 19. Reported AIDS Cases



Sources: 202, 205.

percent among commercial sex workers. Eight of 378 tuberculosis patients tested (about 2 percent) were HIV positive. Tuberculosis prevalence in Yemen is as high as 0.9 percent, so the increased prevalence of HIV/AIDS could result in a widespread form of highly contagious and drug-resistant tuberculosis.

The general public is largely unaware of high-risk behaviors and measures for preventing infection. Despite the moral standards, high-risk behaviors were observed in MENA countries. Although commercial sex workers are not culturally tolerated in most MENA

Table 13. HIV/AIDS in MENA Countries

COUNTRY	ESTIMATES OF ADULT HIV INFECTION (END 1997)		REPORTED AIDS CASES	
	ADULTS LIVING WITH HIV/AIDS	ADULT PREVALENCE RATE (%)	BY 1990	BY 1997
Yemen	900	0.010	1	82
Iraq	300	<0.005	—	104
Syria	800	0.010	13	53
Egypt	8,100	0.030	27	168
Morocco	5,000	0.030	70	464
Algeria	11,000	0.070	—	—
Jordan	660	0.020	12	59
Iran	1,000	<0.005	19	194
WBG	—	—	5	29
Tunisia	2,200	0.400	77	340
Lebanon	1,500	0.090	24	98
Oman	1,200	0.110	37	151
Libya	1,400	0.050	5	17
Saudi Arabia	1,100	0.010	34	349
Bahrain	500	0.150	4	48
Qatar	300	0.090	52	88
Israel	2,100	0.070	—	—
UAE	2,000	0.180	8	8
Kuwait	1,100	0.120	3	26
Kenya	1,600,000	11.64		
Thailand	770,000	2.23		
Brazil	570,000	0.63		
United States	810,000	0.76		

— Not available.

Note: Adults are women and men 15–49 years of age.

Sources: 154, 202, 205.

countries, they do exist in countries such as Egypt and Jordan. In Yemen, there are around 5,000 illegal commercial sex workers. Among a sample population in Jordan, 3 to 7 percent had sexual contacts outside of marriage, and 6 percent had homosexual contacts, but less than 50 percent used condoms. STI prevalence was about 7 percent among males. High-risk behaviors are likely to increase among those who are apart from their families, such as males drafted for military service and males who migrate from rural areas to urban areas, or from poorer countries to richer ones, in search of work.[8] Those men may then transmit STIs to their wives upon returning home.

Box 2. Infection Prevention Practices in Clinical Settings

Practical preventive measures to reduce the risk of disease transmission must be taken in all clinical settings, including those where reproductive health services are delivered. Simple, inexpensive infection prevention practices have been used around the world. However, health care workers often mistakenly believe that expensive, high-tech equipment and facilities are needed or that simple practices, such as hand washing and use of protective gloves, are not very important. Medical practitioners made efforts to control infection, or to decrease postoperative and nosocomial infections, but did not pay much attention to infection prevention that emphasizes the safety of both clients and staff as quality-of-care issues—until the global emergence of HIV/AIDS.

A comprehensive set of infection prevention practices, which can be used in any type of health facility regardless of its size and location, have been introduced through USAID-sponsored programs.[85] Since 1992, the recommended practices have been introduced to primary health care systems in 34 countries, including Egypt, Morocco, and Tunisia.

The infection prevention practices have two major objectives:

- To prevent major postoperative infections when performing any surgical or invasive procedures.
- To minimize the risk of transmitting serious infections such as hepatitis B and HIV/AIDS, not only to clients but also to health care staff, including cleaning and housekeeping personnel.

The principles of infection prevention are:

- Consider every person, both clients and staff, infectious.
- Wash hands—the most practical procedure for preventing person-to-person cross-contamination.

Infection prevention measures in clinical settings, such as treating used needles properly, wearing gloves, and so forth, are often lacking (box 2). Furthermore, donor blood is not routinely screened in many MENA countries.[222, 226]

Adolescent Health

Adolescents often have an unmet need for family planning as well as for other reproductive health services. Lack of information about services or where to find them, fear of side effects, social taboos, and economic constraints all contribute to making family planning

Box 2. (Continued)

- Wear gloves before touching anything wet (broken skin, mucous membranes, blood, or other body fluids) or soiled instruments and other items.
- Use physical barriers, such as protective goggles, face masks, and aprons, if splashes or spills of any body fluids are anticipated.
- Use safe work practices, such as not recapping or bending needles, safely passing sharp instruments, and properly disposing of medical waste.
- Isolate patients only if secretions (airborne) or excretions (urine or feces) cannot be contained.

Contaminated instruments and other items are processed through the following recommended steps. First, decontaminate (soak in 0.5 percent chlorine solution for 10 minutes). Second, thoroughly wash and rinse. Third, sterilize (autoclaving at 121°C for 20–30 minutes, or dry heat at 170°C for 60 minutes), or alternatively, high-level disinfect (boil or steam for 20 minutes, or chemical soak for 20 minutes).

unavailable to adolescents, even those who are married. Among married young women ages 15 to 19 in Egypt and Morocco, 15 and 12 percent, respectively, have an unmet need for family planning.[130]

It is very difficult for adolescents, particularly those who are unmarried and not in school, to obtain reproductive health information and services. For example, many unmarried Jordanian youth are believed to be sexually active, but they often do not know how to avoid high-risk behaviors. NGOs, international agencies, and governments have started adolescent health programs that are intended to educate youths about risky behaviors and raise their self-esteem. Youth peer-counselor training programs have been created in several countries, such as WBG.[226] Youth programs are also planned in Jordan and Syria in partnership with UNAIDS.

Early Marriage

High teenage fertility in MENA countries is a result of the high incidence of early marriage, because sexual relationships outside of marriage are culturally unacceptable. The legal age of marriage for women is younger than 18 years in some MENA countries (table 14). Marriage before 20 years of age is still common in MENA countries (figure 20). Approximately 60 percent of married women under age 24 in Yemen and Oman were married before age 20. The proportions of teenage marriage among women younger than 24

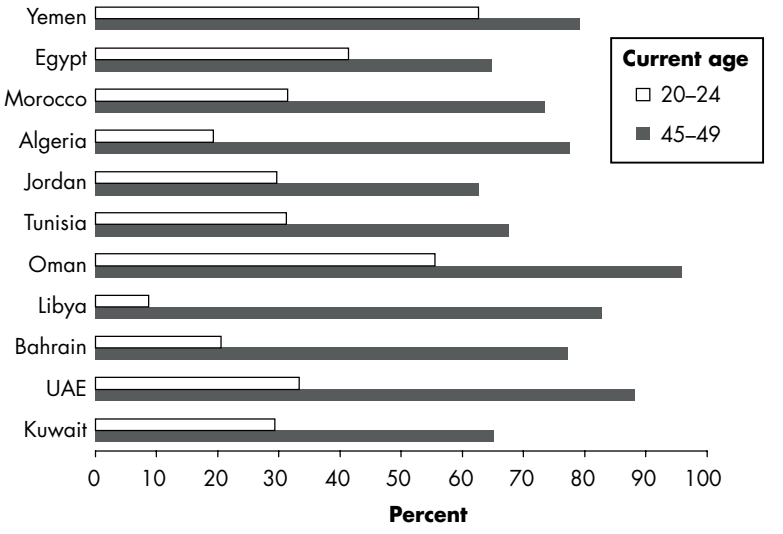
Table 14. Legal Age and Median Age of Marriage

COUNTRY	LEGAL AGE OF MARRIAGE	MEDIAN AGE OF MARRIAGE	MEDIAN AGE AT FIRST BIRTH
Yemen	—	16.5	19.5
Egypt	16	19.7	21.4
Morocco	Parental consent required	20.2	22.7
Jordan	16	21.5	23.2
WBG	—	18.0	20.0
Tunisia	17	—	—
Israel	17	—	—
Kuwait	15	—	—

— Not available.

Sources: 27, 38, 44, 82, 150.

Figure 20. Women Married before Age 20

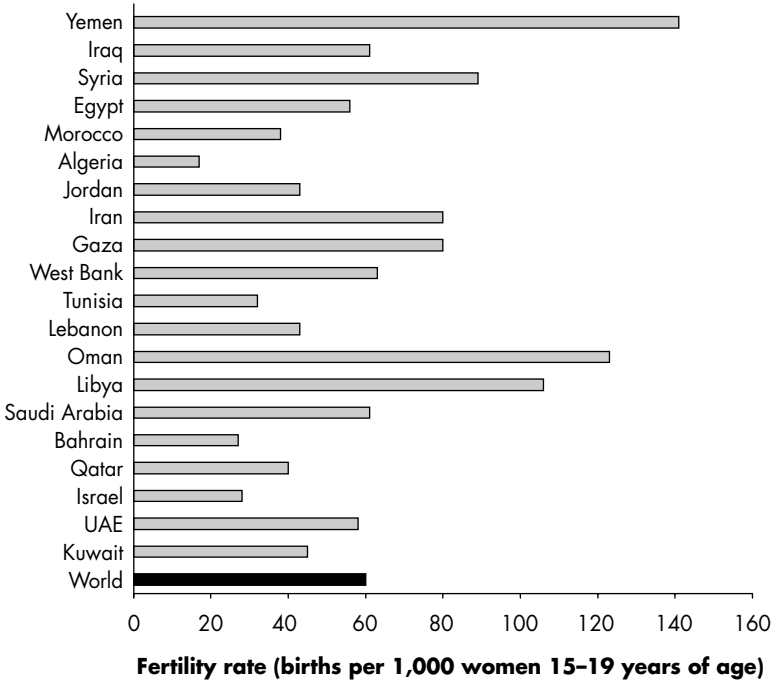


Sources: 4, 6, 26, 36, 43, 80, 81, 110, 114, 136, 236.

are greater than 40 percent in Egypt and around 20 to 30 percent in most other MENA countries. These figures are much lower than those for previous generations of women in the MENA region: Approximately 70 to 90 percent of women currently between the ages of 45 and 49 years were married before the age of 20. Therefore, women's age at marriage has risen significantly in the past two decades. This rise can be attributed mainly to increased levels of female education, other sociocultural changes, and overall economic development. In fact, recent declines in fertility in some MENA countries can be attributed to changes in marriage patterns.

Age-specific fertility rates for women in Yemen, Oman, and Libya between the ages of 15 and 19 years are twice the global average (figure 21). About 1.6 million girls in the region are married before

Figure 21. Adolescent Fertility Rates, 1995



Source: 224.

age 20, and every year about 900,000 babies are born to teenage mothers. Due to social pressures, young women hope to get pregnant as soon as they are married, for a woman's status in her family is usually enhanced and stabilized as a result of having children.

Pregnancy and childbirth carry higher risks of complications and mortality for teenage mothers and their infants than for women over 20 years of age. Research in both developing and industrial countries shows that teenagers have higher rates of pregnancy-induced hypertension, anemia, and low-birthweight babies.[96]

Maternal mortality among teenagers in developing countries is higher than among older women, and infant mortality is higher among infants born to teenage mothers. Postabortion complications are also treated later in teenagers in countries where abortion is illegal.

On one hand, these higher risks are more attributable to socioeconomic and behavioral factors (including lack of prenatal care, marital instability, poverty, low educational attainment, and so on) than to biological factors. On the other hand, in developing countries where women's physical development is slower, their risks of pregnancy are heightened. Physically immature girls may compete with the fetus for essential nutrients; cephalopelvic disproportion and prolonged labor may occur due to pelvic bone immaturity. Higher rates of premature and low-birthweight babies born to teenage mothers result in higher perinatal and infant mortality. For example, in Libya, the mortality rate for infants born to teenage mothers is twice that for infants born to mothers in their twenties.[114]

Female Genital Cutting

FGC is the practice of excising a part of the genitalia of young girls. This practice causes complications, including infection and bleeding, as well as psychological trauma. The international community has continued to condemn FGC in various forums, including the 1994 ICPD in Cairo and the 1995 Fourth U.N. World Conference on Women in Beijing. However, FGC is still practiced in 40 countries around the world, primarily in African countries. MENA countries are adjacent to countries where FGC is highly prevalent, such as Djibouti, Ethiopia, Somalia, and Sudan.

FGC is almost universal in Egypt. It is practiced on a smaller scale in the coastal areas of the Arabian peninsula, including Yemen, Oman, and Saudi Arabia, and is also practiced among Ethiopian descendants in Israel.[66, 134, 187, 188] It is not likely that FGC finds its roots in Islamic or other religious beliefs, as FGC is not practiced in strictly Islamic countries such as Iran, whereas it is practiced widely among Egyptians, regardless of their religious affiliations. Rather, FGC is based on local traditions.

Approximately 98 percent of Egyptian women have undergone FGC (type 1 or type 2). There are no significant variations in age-specific rates, indicating that FGC prevalence is not decreasing (table 15). There is no significant difference in the FGC prevalence rates of urban and rural areas; however, urban women are less willing to support this practice than are rural women. FGC prevalence does decline slightly as women's education levels increase. Although most women without any education support the practice, only slightly more than half of women with a secondary education support it.

In Yemen, FGC is observed among Somali and Ethiopian descendants in coastal areas such as Hudaydah and Aden. According to a recent demographic and health survey, FGC prevalence in Yemen was 23 percent (table 15). The prevalence reached about 70 percent in coastal regions.

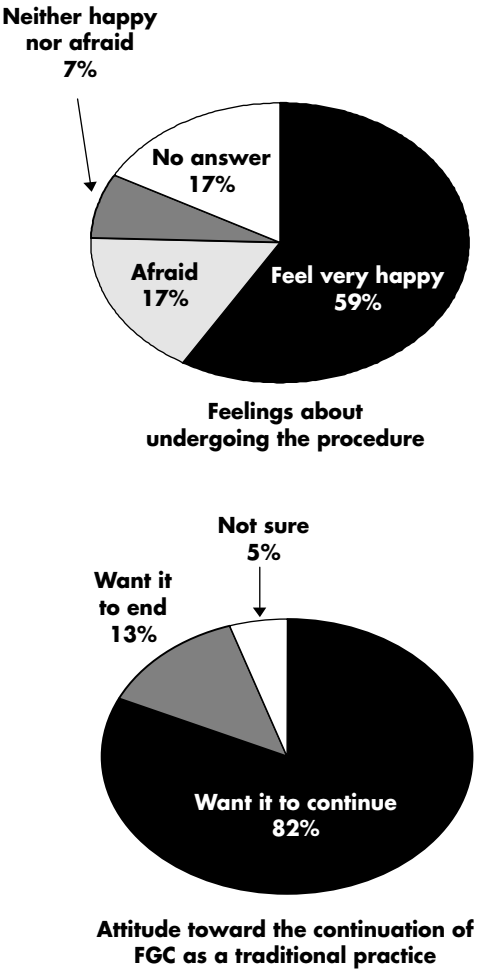
In Egypt, FGC is usually performed on a girl when she is between the ages of 6 and 12 years. Occasionally, several girls in the same community will undergo the procedure at the same time. FGC

Table 15. Female Genital Cutting

		% OF WOMEN WHO HAVE UNDERGONE FGC	% OF WOMEN WHO SUPPORT THE PRACTICE
Egypt			
Age	15–19 years	98	85
	20–29 years	98	83
	30–39 years	96	80
	40–49 years	97	81
Residence	Urban	94	70
	Rural	100	91
Education	No education	99	93
	Primary/secondary	98	77
	Completed secondary	90	57
Yemen			
Age	15–49 years	23	
Residence	Urban	26	
	Rural	22	
	Coastal	69	
Subregion	Mountainous	15	
	Plateau and desert	5	

Sources: 27, 43.

Figure 22. Attitudes toward Female Genital Cutting in Egypt



Sources: 43, 71.

is regarded as one of the rites of passage necessary for a girl to become a woman.[71] Therefore, girls usually feel happy and proud when their time comes to undergo the procedure (figure 22). However, unlike festivities for boys, FGC is generally accompanied by only a modest celebration. As seen in various studies, the majority of women have positive attitudes toward the continuation of FGC, viewing it not only as a good tradition, but also as a necessity in practicing proper hygiene.

FGC is usually performed by TBAs or barbers, neither of whom has the necessary medical qualifications for conducting surgical procedures, and often takes place under unhygienic conditions. FGC procedures constitute an important source of income for these practitioners. Some physicians perform FGC in their private practices, although this is legally prohibited.

The Egyptian government recently succeeded in banning the practice, despite the fact that the Supreme Court had overturned the government's previous attempt. It is not likely that the eradication of FGC will be achieved easily or soon, for even though FGC is legally banned, a majority of Egyptians nevertheless believe in continuing the practice. Many Egyptians, including some scholars, consider FGC to be a religious requirement. National and international NGOs have long been working for the eradication of FGC through dialogue with community members.[66]

Nutrition

Major nutritional issues in the region include child malnutrition; anemia among women and children; iodine deficiency disorders; vitamin D deficiency among small children and women; and obesity and diet-related noncommunicable diseases.[9] Children and women of reproductive age are most at risk of nutritional deficiencies, as they require additional nutrients for growth and reproduction.

Moderate to high levels of child malnutrition, or a stunting prevalence of more than 20 percent, has been observed in several

countries, especially in rural areas (table 1). The prevalence of malnutrition is comparable for both girls and boys. However, girls' malnutrition is more likely to have long-term negative impacts. Stunted girls grow up to be short women, and short women are more likely to suffer from obstetric complications due to contracted pelvis, which may endanger the lives of both mother and child.

Low birthweight prevalence rates of more than 10 percent were observed in Egypt, Iraq, Lebanon, Syria, and Yemen (table 1). Low birthweight is mainly attributable to the poor health and nutrition status of pregnant women. The incidence of low birthweight is higher among mothers who are short, undernourished, or anemic. Infants with low birthweight die more frequently during infancy, and if they survive, are more likely to suffer from stunting. In addition, several epidemiological studies have shown that fetal malnutrition increases susceptibility later in life to chronic diseases such as hypertension and diabetes mellitus.

Exclusive breastfeeding for up to six months is internationally recommended. Breastfeeding also assists in postpartum recovery, inhibits ovulation, and causes postpartum amenorrhea through hormonal feedback systems; therefore, it functions as a natural contraception method. However, at most only around half of mothers in MENA countries exclusively breastfeed their infants (table 16). The duration of breastfeeding is gradually declining in most countries, especially in urban areas. In addition, there are numerous traditional beliefs and attitudes that negatively affect breastfeeding practices.

Iron deficiency anemia is a common problem throughout the world, particularly among children and women of reproductive age. Anemia is common among women and children throughout the MENA region regardless of income level; the incidence in Kuwait is similar to that in Egypt and WBG (table 17).

Risk factors of anemia for women include high fertility, short birth intervals, poor maternal health care, an unbalanced diet, and lack of nutritional knowledge. Anemia among children under five years of age is caused by poor feeding practices, childhood illnesses such as

diarrhea, and mothers' anemia during pregnancy and lactation. Women with lower incomes in rural areas are the highest-risk group, because they have less diversified diets and lack access to regular health care. Coverage of and compliance with iron supplementation regimes are often problematic. Women who do receive prenatal care may avoid taking iron supplements because they can cause stomach discomfort, and some women believe that the iron pills cause abortion or excess enlargement of the fetus.

Anemia during pregnancy increases the risk of maternal mortality, as it lowers both tolerance of blood loss and resistance to infection. Although 25 percent of maternal deaths are due to bleeding and 15 percent are due to infection, anemia is a contributing factor in one-quarter to almost all maternal deaths.[185, 193] Frequent pregnancies at short intervals impede recovery from the worsened nutritional status incurred during pregnancy and lactation. A young girl's anemia worsens after adolescence, and if she becomes pregnant, her baby will have low birthweight and anemia; the mother's health will deteriorate as well.

Table 16. Breastfeeding Patterns

COUNTRY	EVER BREASTFED (%)	EXCLUSIVELY BREASTFED (<6 MONTHS) (%)	BREASTFED WITH COMPLEMENTARY FOODS (6–9 MONTHS) (%)	MEDIAN DURATION OF ANY BREASTFEEDING (MONTHS)
Yemen	97	18	79	18
Syria	92	13	60	13
Egypt	95	56	78	19
Morocco	95	25	61	15
Algeria	93	5	50	10
Jordan	95	11	68	13
Iran	98	56	84	22
Tunisia	94	5	70	14
Lebanon	88	12	38	7
Oman	99	28	85	19
Libya	91	6	42	8
Bahrain	97	—	69	15
UAE	93	—	52	12

Source: 86.

The major dietary source of iron in MENA countries is cereal, but unlike heme iron in animal products, the nonheme iron in cereals is poorly absorbed. Much of the anemia in MENA countries can be prevented by diversifying diets to include animal products, fruits, and leavened bread, and by avoiding consuming tea with meals. Furthermore, iron fortification of staple foods such as wheat flour and bakery products is a sustainable and equitable way to cover the entire population.

Iodine deficiency disorders remain a serious public health issue, and very high total goiter rates were reported in Iran, Syria,

Table 17. Anemia and Iodine Deficiency Disorders

	ANEMIA PREVALENCE (DATA FROM SUBNATIONAL SURVEYS BETWEEN 1980 AND 1996)					TOTAL GOITER RATE (DATA BETWEEN 1981 AND 1994)
INCOME LEVEL AND COUNTRY	CHILDREN UNDER AGE 5 (%)	SCHOOL-AGE CHILDREN (%)	PREGNANT WOMEN (%)	REPRODUCTIVE-AGE WOMEN (%)	MEN (%)	CHILDREN AGES 6–11 (%)
Low-income						
Yemen	17–66	—	—	5–36	—	32.0
Lower-middle-income						
Iraq	—	—	—	18	—	7.3
Syria	53	—	49–52	30	—	73.0
Egypt	23–90	22–45	21–79	17–71	—	5.2
Morocco	27–47	—	20–40	—	—	20.0
Algeria	—	—	42	19–42	—	8.5
Jordan	34	—	25–46	4–23	—	—
Iran	>30	—	20–50	—	—	30.0
WBG	58–76	40–67	23–56	28–44	—	—
Tunisia	30	—	41	—	—	4.3
Lebanon	—	—	49	27	—	15.0
Upper-middle-income						
Oman	40–67	31–78	49–54	15–48	3–24	10.0
Libya	—	—	—	6	—	6.3
Saudi Arabia	36–37	26–55	5–57	—	30–56	—
Bahrain	30–39	21–42	—	40–49	20	—
High-income						
Qatar	26	—	30	—	—	—
Israel	44–71	—	10–32	18–61	—	—
UAE	28–76	8–95	22–62	—	—	—
Kuwait	—	13–26	40	42	34	—

Sources: 75, 105, 106, 182, 185, 186.

Yemen, and the New Valley area in Egypt (table 17). The most visible result of iodine deficiency is goiter, the enlargement of the thyroid gland visible as a swelling in the front of the neck. Iodine deficiency disorders in pregnant women may cause irreversible damage to fetuses and infants, such as congenital anomalies and cretinism. Therefore, there is an urgent need to treat iodine deficiency disorder among reproductive age women. Many MENA countries have started universal salt iodization programs to eliminate this public health problem.

Vitamin D deficiency has been reported in several countries, including Iran, Kuwait, Libya, Morocco, Saudi Arabia, WBG, and Yemen.[9] This condition causes rickets in children, as well as osteomalacia and, in extreme cases, bone fractures in adults. Vitamin D deficiency in MENA countries is due to the low intake of dietary vitamin D included in animal foods, as well as to lifestyles and habits that keep people out of the sunlight: for example, living in dark houses, wrapping infants for long periods, and the wearing of thick, dark veils by women. Young unmarried women are particularly at risk, as they tend to be thoroughly covered. In fact, bone pains and fractures were reported among young women. Mothers of infants with rickets had low vitamin D serum levels, and prolonged breastfeeding increased the risks, as breast milk is the major source of vitamin D for infants. Although rickets can be treated with sufficient exposure to sunlight, disturbed bone growth may irreversibly damage the development of the skeleton, and underdeveloped pelvises among women may lead to a higher frequency of obstetric complications.

Table 18. Obesity Prevalence (most recent data between 1993 and 1996)

MENA COUNTRY	MALE (%)	FEMALE (%)	OECD COUNTRY	MALE (%)	FEMALE (%)
Kuwait	32.0	44.0	United States	19.7	24.7
UAE	16.0	38.0	England	15.0	16.5
Bahrain	9.5	30.3	Netherlands	8.4	8.3
Saudi Arabia	16.0	24.0	Japan	1.8	2.6
Iran	2.5	7.7			

Source: 197.

Obesity and excess fat intake are problems in the region, particularly in high-income countries, in urban areas, and among women (table 18). Obesity increases the risk of diet-related noncommunicable diseases, such as coronary heart disease and diabetes mellitus. Obesity prevalence is much higher among women than among men. Obesity and diet-related noncommunicable diseases increase the risk of complications during pregnancy and delivery, and therefore increase both maternal and perinatal morbidity and mortality. Sedentary lifestyles, particularly for those who are urban and affluent, increase the risk. High obesity prevalence among women may be partially due to the tradition that women tend to avoid physical exercise.

Other Reproductive Health Issues

Uterine, Ovarian, and Breast Cancers

A major cause of uterine cervical cancer is infection with certain strains of the human papilloma virus, which can be transmitted sexually. Obesity is one of the risk factors of breast cancer and uterine corpus cancers; therefore, the prevalence rates of these cancers generally increase as the epidemiological transition takes place. However, compared with other regions, the incidences of uterine, ovarian, and breast cancers in the MENA region remain significantly low (table 19).[226]

Table 19. Breast, Uterine, and Ovarian Cancer Incidence (per 100,000 population)

TYPE OF CANCER	MIDDLE EASTERN CRESCENT[a]	ESTABLISHED MARKET ECONOMIES	SUB-SAHARAN AFRICA	LATIN AMERICA AND THE CARIBBEAN	WORLD
Breast cancer	7	66	8	20	20
Uterine cervical cancer	4	5	14	14	9
Uterine corpus cancer	2	17	2	7	6
Ovarian cancer	2	9	3	3	4

a. Includes Central Asian countries.
Source: 102.

Infertility

Approximately 10 percent of couples worldwide experience some type of infertility problem, which might be attributed to the female, the male, or both.[45] Infertility is an especially serious issue for women in the MENA region, given the high cultural value of fertile women. A woman's status in a family is enhanced when she gives birth to a child, particularly a son. As soon as they are married, women find themselves under enormous social pressure to have a child, and women are usually blamed for a couple's failure to conceive, regardless of what the real reason might be. Therefore, women often seek assistance if they have not become pregnant within a couple of months after marriage, and they are willing to pay dearly for any such treatment. This attitude encourages technically ineffective and hazardous treatments, such as the misuse of ovulation-inducing agents and unnecessary therapeutic laparoscopy. Even advanced assisted reproductive technologies such as in vitro fertilization are available in MENA countries.[226] It is urgent that standard protocols for infertility treatment be established quickly in order to control the quality of care, protect clients' well-being, and contain the costs of medical care.

Postmenopausal and Elder Women

In the MENA region, where the population is relatively young, there is not yet widespread knowledge about the health issues of postmenopausal and elder women. Because life expectancy is increasing and fertility has declined in recent years, the region will probably begin to face problems that are characteristic of an aging population in the near future.

The status of elder women in a family is usually strong, as long as they have sons.[131] Elder mothers are respected by other family members and participate in the decisionmaking process for issues such as contraceptive use by daughters-in-law and the FGC of granddaughters. However, unmarried elder women and childless women are unlikely to enjoy this high status and are more likely to be neglected when they experience health problems.

Refugees and Internally Displaced Women

There is growing recognition that women who have been displaced because of disasters or civil conflicts have particular reproductive health needs.[31, 67] It is estimated that about 80 percent of the 40 million refugees and internally displaced people worldwide are women and children. Humanitarian relief and assistance programs have begun to address the needs of these women, who are at risk for unsafe delivery, lack of prenatal care, exposure to STIs including HIV/AIDS, unwanted pregnancy, unsafe abortion, and the physical and mental trauma of sexual assaults. Although these reproductive health problems sometimes threaten the lives of women and often damage their physical and mental health, for many years relief agencies concentrated only on immediate basic needs such as water, food, shelter, security, and general PHC services.

Aid workers try to provide reproductive health services such as obstetric care and emergency contraception. However, service standards are often inconsistent from camp to camp, and service provision is often interrupted due to the cyclical nature of the refugee experience: leaving home, living in camps, returning home, and rebuilding their lives. Moreover, many refugees remain in their "temporary" living status for a very long time (for example, Palestinian refugees have been in Lebanon for 50 years). Therefore, aid workers advocate providing women refugees with systematic and consistent reproductive health services.

Significant numbers of refugees and internally displaced peoples are present in the MENA region, including Palestinian refugees, Iraqi refugees, and Western Saharan refugees. The situations of displaced people vary, depending on the length of displacement, policies of host countries, relief programs, and aid agencies.

Palestinians are one of the largest refugee groups in the world. The United Nations Relief and Work Agency for Palestine Refugees in the Near East (UNRWA) provides services, including health and education, to the Palestinian refugees in WBG, Jordan, and Lebanon. UNRWA in Gaza has been providing family planning services as a part of its reputable PHC services since 1990, which was four years before the Palestinian Ministry

of Health began providing family planning services there.[226] Many NGOs have also been actively providing reproductive health services in WBG. Some NGOs provide high-quality comprehensive reproductive health services that include family planning, MCH, STI management, cervical cancer screening, and health education. Since 1994 the total fertility rate in Gaza, including both refugee and non-refugee women, declined from 7.4 to 6.0, indicating the high demand for and increasing supply of family planning services.

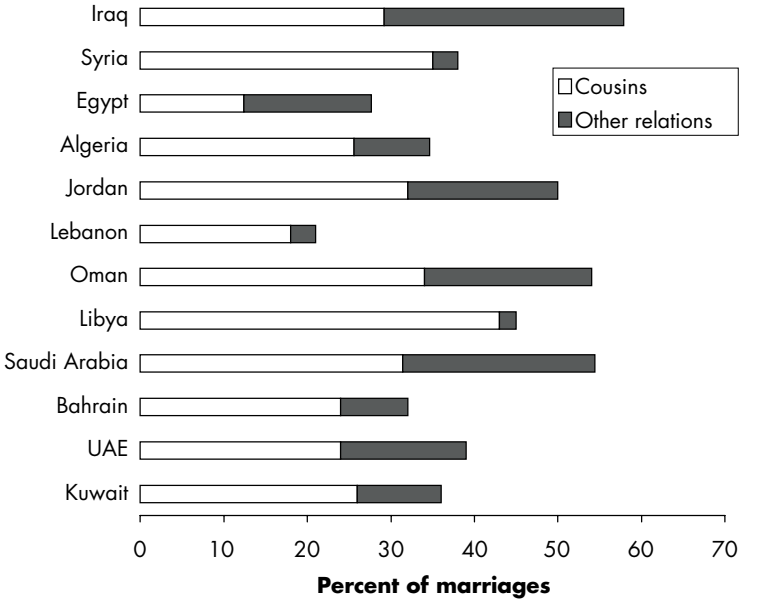
Palestinian refugees in Lebanon are in a different situation. There are currently 350,000 Palestinian refugees living in 12 camps in Lebanon administered by UNRWA. UNRWA, Palestinian Red Crescent Society, and Popular Aid for Relief and Development provide health services to them. UNRWA's services include MCH and family planning, while Popular Aid for Relief and Development provides MCH, family planning, and HIV/AIDS education. Clinics run by these groups offer pills, condoms, and spermicides; IUDs are available in some clinics. Despite the availability of services, Palestinian women in Lebanon have high fertility rates. In a survey, only 22 percent of women with four or more children said they wanted that many; 92 percent said they approved of family planning, but only 43 percent said they had used or were currently using a contraceptive method. In 1996, UNRWA in Lebanon had only 4,524 registered family planning users, thus the contraceptive prevalence rate can be roughly estimated to be 14 percent among married women of reproductive age.[119]

Gender and Marriage

Consanguineous Marriage and Hereditary Diseases

Consanguineous marriage is commonly practiced throughout the region: The incidence ranges from 30 to 60 percent (figure 23). Marriage between paternal first cousins is considered to be the most desirable form. Consanguineous marriages are usually stable,

Figure 23. Consanguineous Marriage



Sources: 4, 6, 7, 36, 44, 110, 114, 115, 136, 236.

as they enhance family ties and secure family property; they may also bestow social and cultural benefits. However, these marriages increase the risk of hereditary diseases that are endemic in the region (table 20).

For instance, the rates of hemolytic anemia caused by Glucose-6-phosphate dehydrogenase (G6PD) deficiency and thalassemia, sicklecell anemia, and congenitalhypothyroidism are relatively high in the MENA region. Genetic counseling before marriage would be necessary in order to prevent them. However, cultural sensitivity should be taken into consideration when these issues are addressed.

Table 20. Prevalence of Hereditary Diseases in MENA Countries

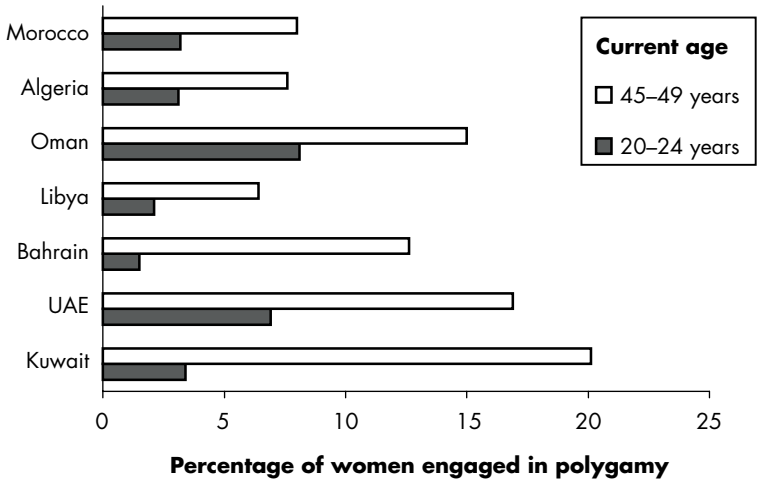
	HEMOGLOBIN DISORDERS											
	CARRIERS				NEWBORNS AFFECTED		SICKLE CELL DISEASE		G6PD	CONGENITAL HYPO-THYROIDISM	CYSTIC FIBROSIS	PHENYL-KETONURIA
	HBS	HBC	ß-THALASSEMIA	TOTAL		(PER 1,000	AFFECTED	CARRIERS	DEFICIENCY	(PER 1,000	(PER 1,000	(PER 1,000
COUNTRY	(%)	(%)	(%)	(%)	(PER YEAR)	BIRTHS)	(%)	(%)	(%)	BIRTHS)	BIRTHS)	BIRTHS)
Yemen	4	—	2	6	1,571	2	—	—	—	—	—	—
Iraq	0–20	—	3	6	1,501	2	1.7	16.0	9–13	—	+	+
Syria	1	—	5	6	1,043	2	—	—	—	—	—	—
Egypt	—	—	3	3	808	0	—	—	4–26	0.33	0.380	+
Morocco	2	2	3	7	1,824	2	—	—	—	—	—	—
Jordan	1	—	3	4	97	1	—	—	5–13	—	0.390	—
Iran	1	—	1–12	4	1,896	1	—	—	18–23	0.71	+	0.116
WBG	1	—	3	4	54	1	—	—	—	0.40	+	—
Tunisia	2	+	3	6	390	2	—	—	2–7	—	—	—
Lebanon	1	—	3	4	70	1	—	0.3	3	—	+	—
Oman	5	—	1	6	128	2	0.4	6.1	12–27	0.45	—	—
Libya	2	1	1–2	4	166	1	—	—	3	—	—	—
Saudi Arabia	1–25	+	2	10	2,845	5	1.4	13.1	3–22	0.37	0.236	—
Bahrain	10	—	3	13	126	9	2.1	11.2	21–26	—	—	—
Qatar	3	—	3	6	16	2	—	—	—	—	—	—
UAE	2	—	3	5	46	1	—	—	—	—	—	—
Kuwait	+	—	+	4	47	1	—	—	20–22	—	+	—

— Not available.

+ Cases reported (unknown frequency).

Sources: 7, 40, 183.

Figure 24. Polygamy by Age

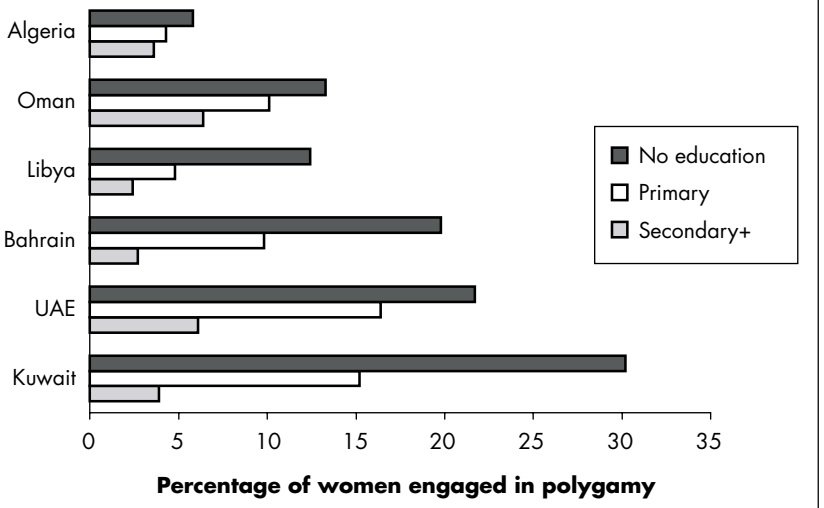


Sources: 4, 6, 81, 110, 111, 136, 236.

Polygamy

Although polygamy is becoming less tolerated in recent generations, it is legally practiced among Muslims. A man is allowed to marry up to four wives under the condition that the wives are treated equally in all respects. The proportion of women between the ages of 25 and 29 engaged in polygamy is about 10 percent in UAE and Oman, and about 5 percent in Algeria, Kuwait, and Morocco. This proportion increases for the higher age categories, reaching as high as 20 percent for women between the ages of 45 and 49 in Kuwait (figure 24). The proportion decreases as women's education levels increase (figure 25), and is lower among women living in urban areas. Despite the fact that some modern societies are less tolerant of polygamy than in the past, women are often afraid that their

Figure 25. Polygamy by Education Level



Sources: 4, 6, 110, 111, 136, 236.

husbands will take another wife; therefore, they often opt to discontinue contraceptive use and attempt to have more children.

Violence against Women

Various types and degrees of domestic violence against women occur in MENA countries. The most extreme case would be the murder of a woman by a male family member because she has committed an "honor crime." As cultures in the MENA region place a high value on virginity, a woman who is suspected of having a sexual relationship before marriage or of engaging in acts of adultery would be killed by her father or brother in order to protect the honor of her family.[66, 71, 226] The murderers are rarely prosecuted. Domestic

violence related to substance abuse, such as qat abuse in Yemen,[222] is also known. Traditional rituals such as FGC can also be considered violence against women and girls. NGOs, in partnership with governmental offices of women's affairs, actively advocate the resolution of these issues.

Women's Status and Other Social and Cultural Factors

Women's status is mainly determined by local cultures and traditions, which vary according to economic, social, and political circumstances. The United Nations Development Programme (UNDP) reported that women's participation in key economic and political areas and decisionmaking processes remained low in most MENA countries, regardless of the country's income level.[158] The adult literacy rates for females in many MENA countries are less than 60 percent and are much lower than those for males. Secondary school enrollment rates for females are less than 60 percent in approximately half of the countries. Overall, women constitute about 15 percent of the economically active population in MENA countries.[149]

Women's status in society has significant repercussions on the health of the population as a whole. Increased levels of women's education have positive impacts, including reduced fertility and improved children's health and nutrition.[222] Various sociocultural constraints prevent women from making decisions about accessing health services. Even when health services are accessible, women may not use the services because husbands and mothers-in-law usually make the decisions. Community or religious leaders also exert a strong influence regarding whether or not community members should utilize family planning and other health services. Some women in Yemen, particularly in rural areas, are not permitted to receive health services without being accompanied by male family members, nor can they be examined by male health personnel. Therefore, the absence of male family members and the lack of female personnel at health facilities can be major obstacles to receiving care. Lack of awareness of health problems is also a reason for not seeking care. Women sometimes do not recognize their problems as symptoms of curable

diseases. For example, women often bear pain, discomfort, and discharge—the symptoms of RTIs—because they consider them to be normal and inevitable occurrences, perhaps signs of aging.

Traditional beliefs and customs often exert a much stronger influence over people's decisionmaking than does legal enforcement. For instance, despite the legal ban, people continue to practice FGC, because they believe that FGC is a good tradition and are unaware of its health hazards. People are often reluctant to seek care for health problems caused by behaviors that go against moral standards. For example, because abortion is culturally unacceptable and legally prohibited in most MENA countries, women sometimes attempt to terminate unwanted pregnancies secretly, using procedures that may result in life-threatening complications. Seeking treatment for STIs may also stigmatize women. Because unmarried youth are not supposed to be sexually active, they cannot openly seek reproductive health information and services, and thus they may not be able to avoid high-risk behaviors.

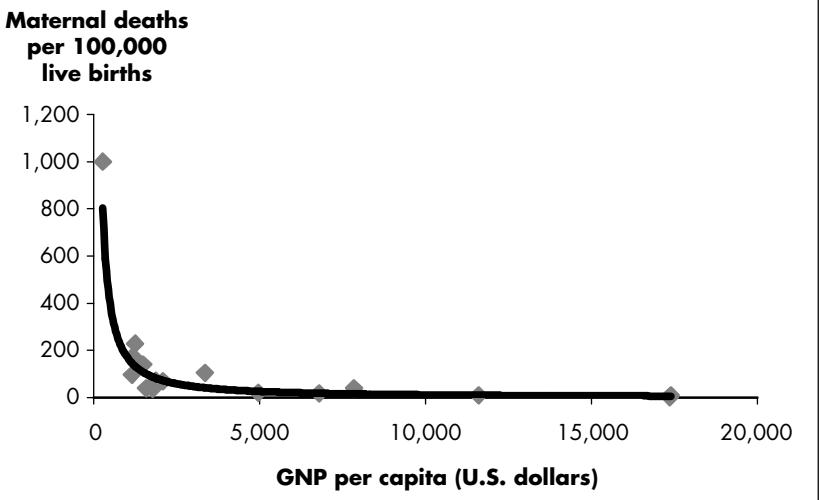
Correlation with Socioeconomic Factors

Income Levels

Global experience shows that increased income correlates with improved health status and decreased fertility. Therefore, growing incomes in the region would be expected to contribute to the improvement of reproductive health outcomes. Experience also shows that economic growth alone cannot improve health status, and resources must be specifically targeted to social sectors.

The decrease in the maternal mortality ratio correlates with the increase in GNP/c among MENA countries, but the decrease becomes less significant at the upper-middle-income and high-income levels (figure 26). The proportion of deliveries assisted by skilled attendants increases as GNP/c increases (figure 27), but the proportion increases less significantly once it reaches 80 percent at the upper-middle-income and high-income levels; proportions vary widely, even among the low-income to lower-middle-income

Figure 26. Maternal Mortality Ratio and GNP Per Capita in MENA Countries



Sources: 204, 230, 231, 233.

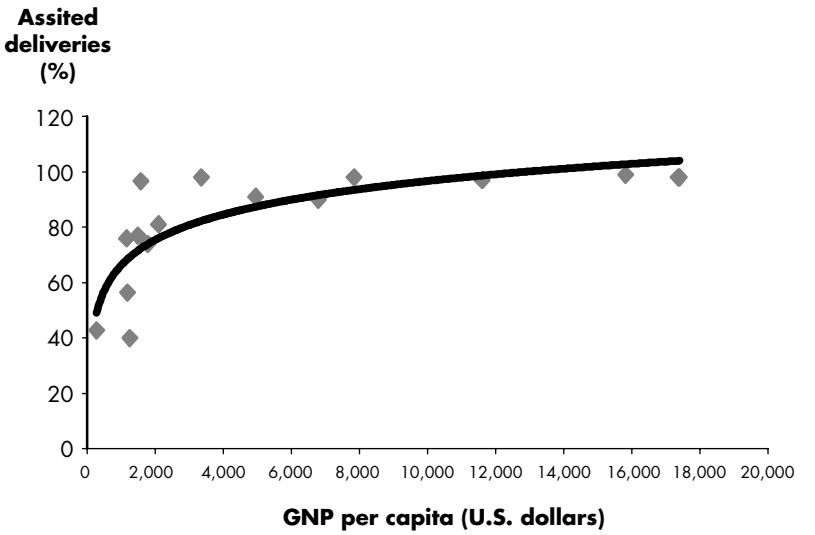
countries. Urban-rural gaps in the proportion of deliveries assisted by skilled attendants decrease along with the increase in GNP/c among MENA countries (figure 28), but there are also wide variations among low-income to lower-middle-income countries. This suggests that targeted interventions, particularly in rural areas, will be needed to achieve further improvement.

TFRs among MENA countries have no correlation with GNP/c (figure 29). This indicates that sociocultural factors exert greater influence over fertility rates in MENA countries than does economic growth.

Health Expenditure

Increased spending for health care contributes to improved maternal health; however, spending must be well targeted if it is

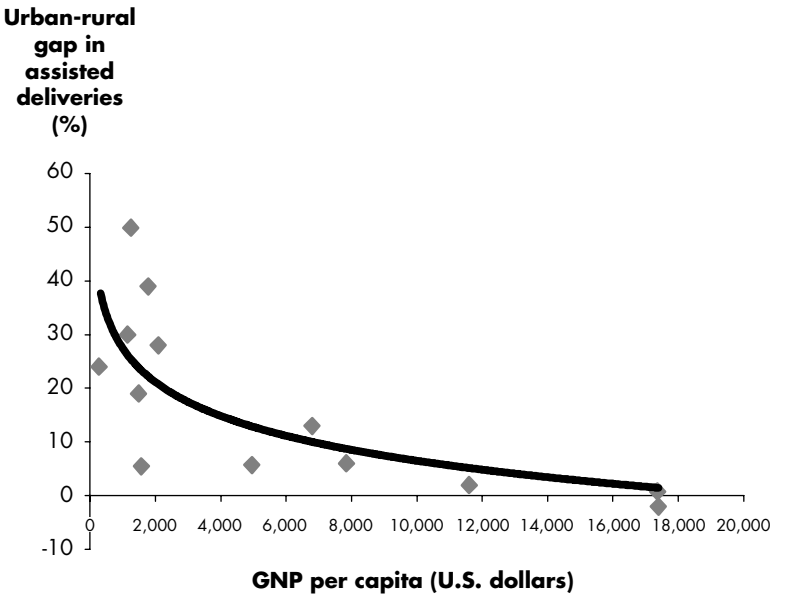
Figure 27. Deliveries Assisted by Skilled Attendants and GNP Per Capita in MENA Countries



Sources: 4, 6, 26, 37, 44, 82, 112, 113, 114, 136, 166, 191, 230, 231, 236.

to achieve further improvement. Decreases in MMR correlate with increases in per capita health care expenditure among MENA countries, but decreases are less significant in countries spending more than $120 per capita for health care (figure 30). The proportion of deliveries assisted by skilled attendants increases along with increased per capita health expenditure among MENA countries (figure 31). The increase is less significant once the proportion reaches 80 percent in countries spending more than $120 per capita for health care. This suggests that further health care spending may not be allocated to essential services such as maternal care, but rather spent on more sophisticated and expensive medical care and equipment.

Figure 28. Urban-Rural Gap in Deliveries Assisted by Skilled Attendants and GNP Per Capita in MENA Countries



Sources: 4, 6, 26, 37, 44, 82, 112, 113, 114, 136, 166, 191, 230, 231, 236.

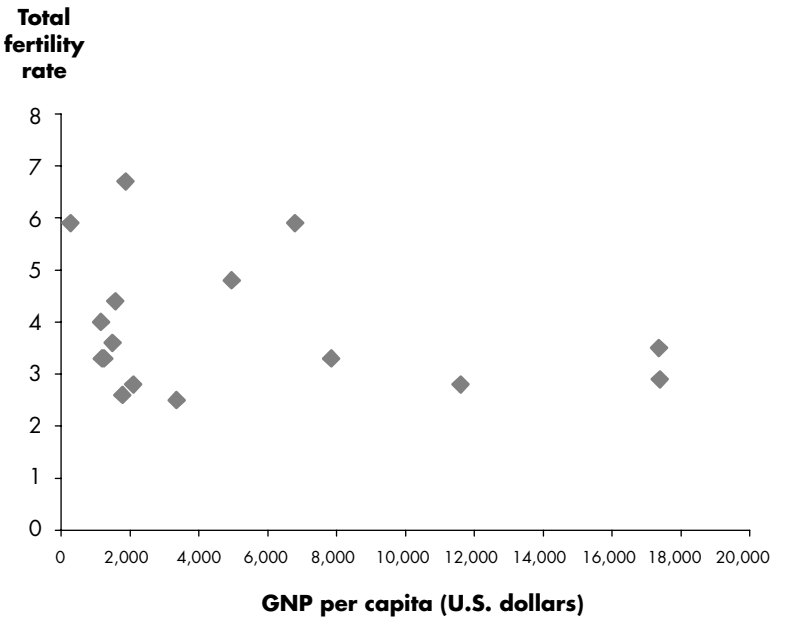
Note: Gap is measured as difference between urban and rural coverage of deliveries assisted by skilled attendants.

TFRs among MENA countries have no correlation with per capita health expenditure (figure 32). This suggests that population programs should not require high health expenditures; rather, interventions need only be more effectively targeted and more efficient.

Education of Women

Low educational attainment of women is likely to have negative impacts on reproductive health status, as the overall health status of

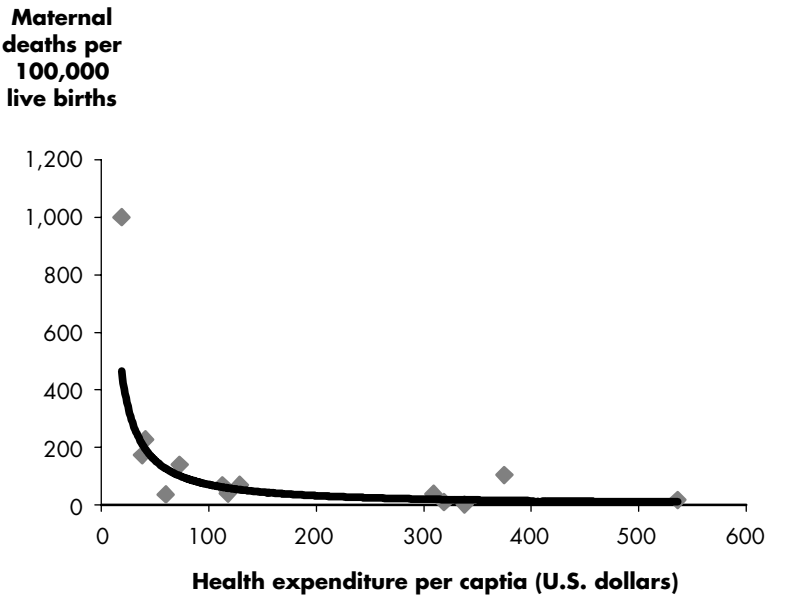
Figure 29. Total Fertility Rate and GNP Per Capita in MENA Countries



Sources: 89, 204, 230, 231, 233.

a country usually improves along with the increased educational levels of the people. Education contributes to improved awareness of health, nutrition, and hygiene, as well as to increased competency and income. Women's educational attainment has significant impacts not only on the women themselves, but also on all family members, because a woman is usually the caretaker of her family. In addition, increased female educational levels commonly correlate with decreased fertility, which benefits the health of both women and their children.

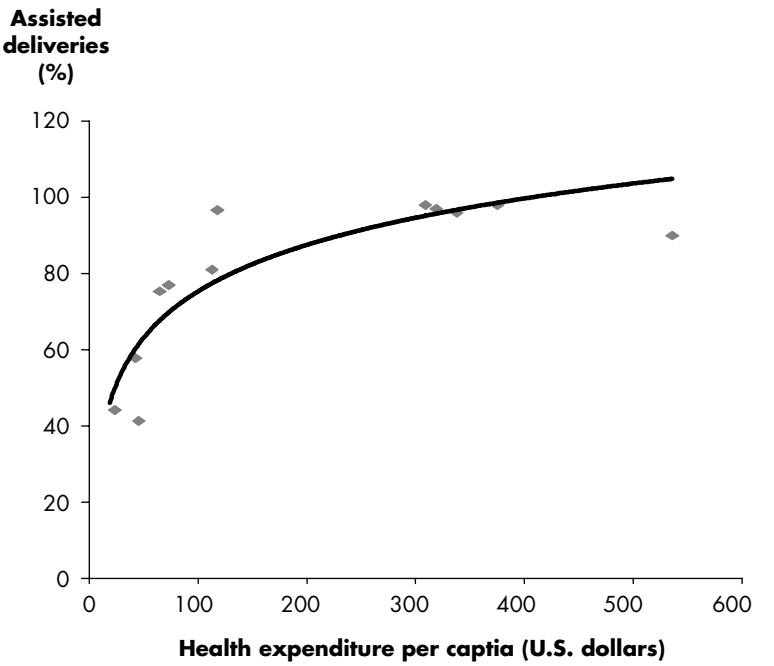
Figure 30. Maternal Mortality Ratio and Health Expenditure Per Capita in MENA Countries



Sources: 204, 233.

A decrease in MMR correlates with an increase in female secondary school enrollment among MENA countries, while an increase in MMR correlates with an increase in the male-female gap in the secondary school enrollment rate (figures 33, 34). The proportion of deliveries assisted by skilled attendants increases along with female secondary school enrollment among MENA countries and decreases along with the widening of the male-female gap in secondary school enrollment (figures 35, 36). TFRs have no correlation with

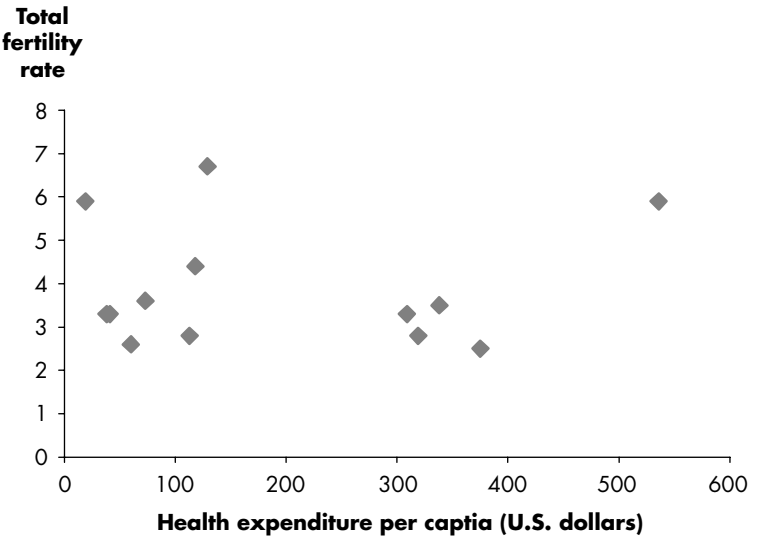
Figure 31. Deliveries Assisted by Skilled Attendants and Health Expenditure Per Capita in MENA Countries



Sources: 4, 26, 37, 44, 82, 110, 113, 115, 166, 191, 233, 236.

either female secondary school enrollment rates or male-female gaps in secondary school enrollment rates among MENA countries (figures 37, 38). This indicates that both women's increased educational attainment and decreased male-female differences in educational levels contribute to improved maternal health, but these factors do not contribute much to decreased fertility in MENA countries.

Figure 32. Total Fertility Rate and Health Expenditure Per Capita in MENA Countries

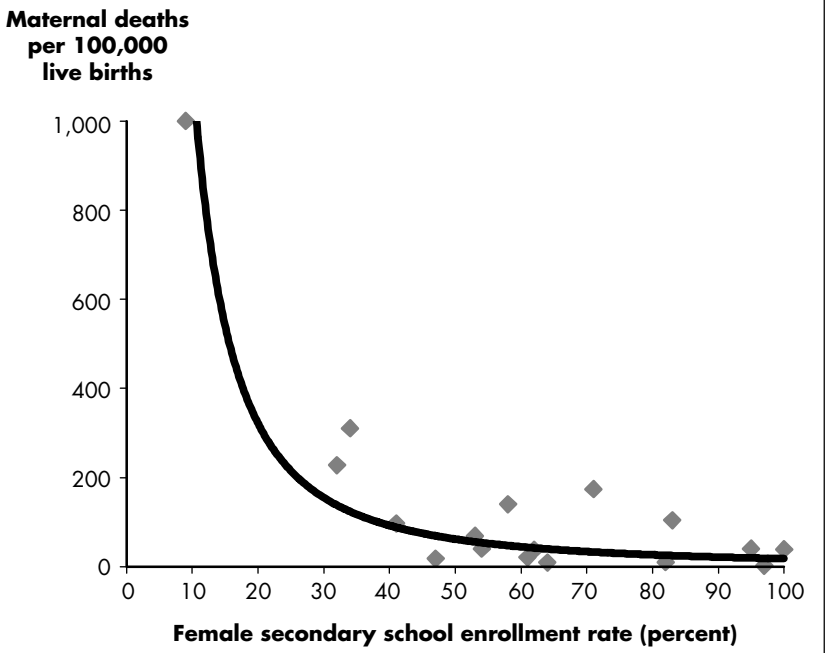


Sources: 89, 204, 233.

Women's Share of Household Income

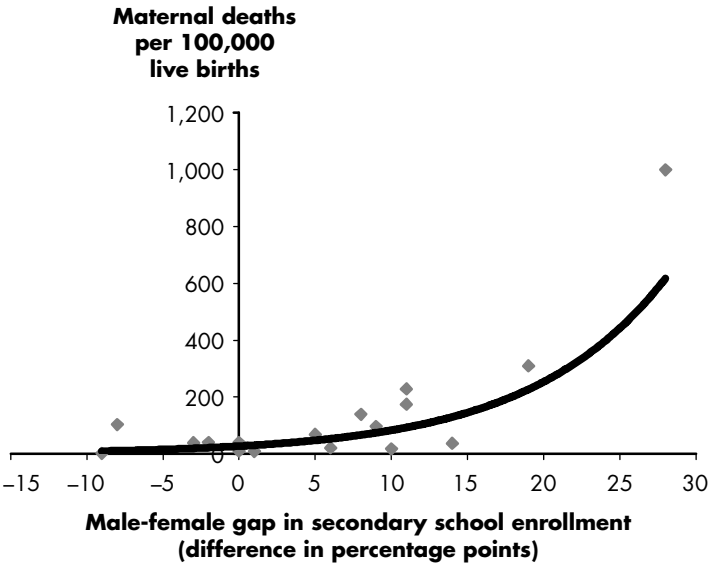
Although women's share of income is expected to reflect the degree of women's participation in social activities and decisionmaking processes in the family, it is not a significant determining factor in terms of maternal health and fertility among MENA countries. MMR even slightly increases along with an increase in women's share of household income (figure 39). Neither the proportion of deliveries assisted by skilled attendants nor TFR have any correlation with women's share of household income among MENA countries (figures 40, 41).

Figure 33. Maternal Mortality Ratio and Female Secondary School Enrollment Rate in MENA Countries



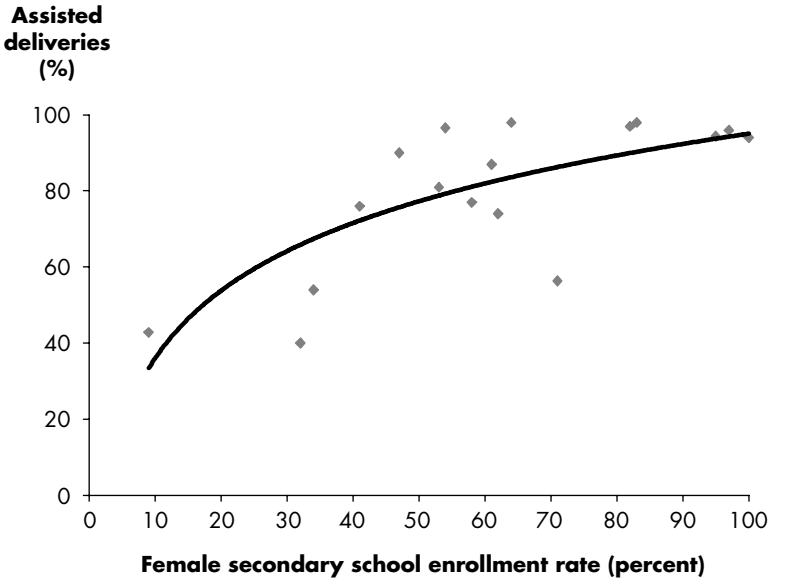
Sources: 9, 165, 204, 233.

Figure 34. Maternal Mortality Ratio and Male-Female Gap in Secondary School Enrollment Rate in MENA Countries



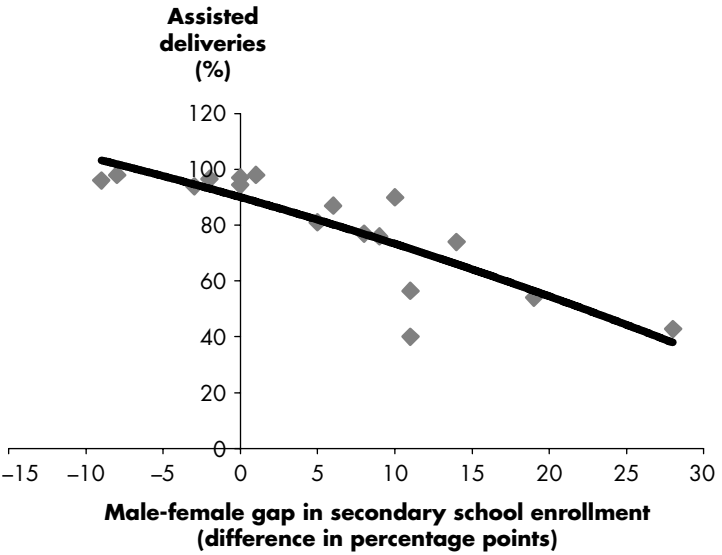
Sources: 9, 166, 204, 233.

Figure 35. Deliveries Assisted by Skilled Attendants and Female Secondary School Enrollment Rate in MENA Countries



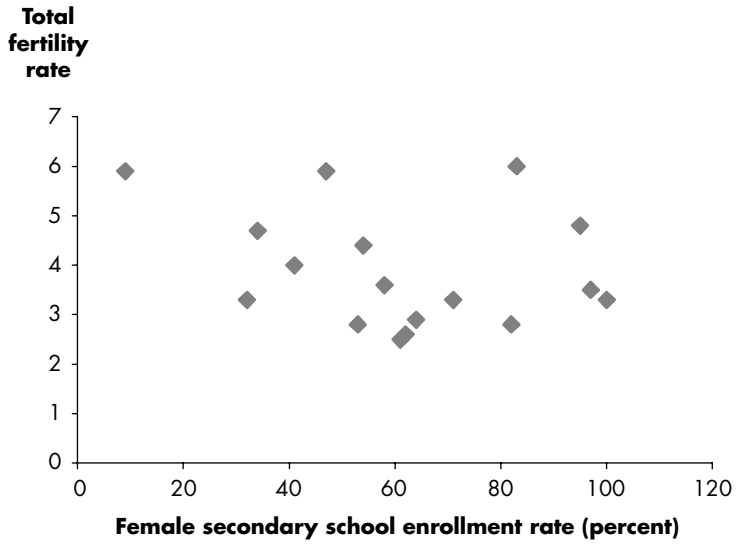
Sources: 4, 6, 9, 26, 37, 44, 82, 112, 113, 114, 115, 136, 166, 191, 236.

Figure 36. Deliveries Assisted by Skilled Attendants and Male-Female Gap in Secondary School Enrollment Rate in MENA Countries



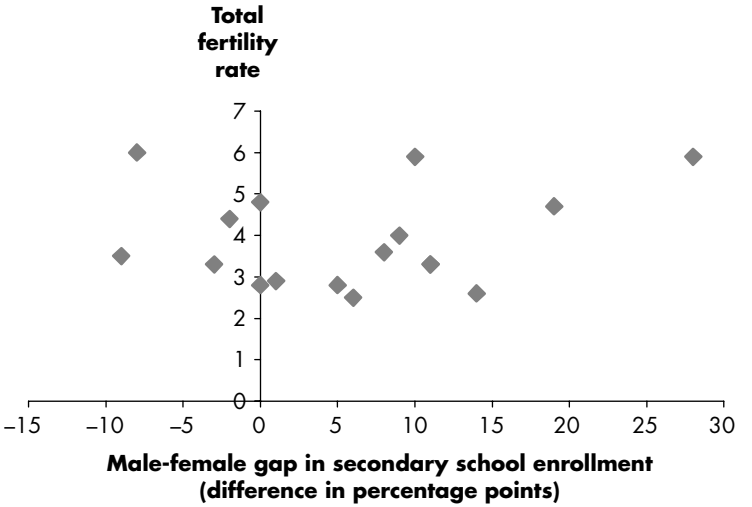
Sources: 4, 6, 9, 26, 37, 44, 82, 112, 113, 114, 115, 136, 166, 191, 236.

Figure 37. Total Fertility Rate and Female Secondary School Enrollment Rate in MENA Countries



Sources: 9, 166, 204, 233.

Figure 38. Total Fertility Rate and Male-Female Gap in Secondary School Enrollment Rate

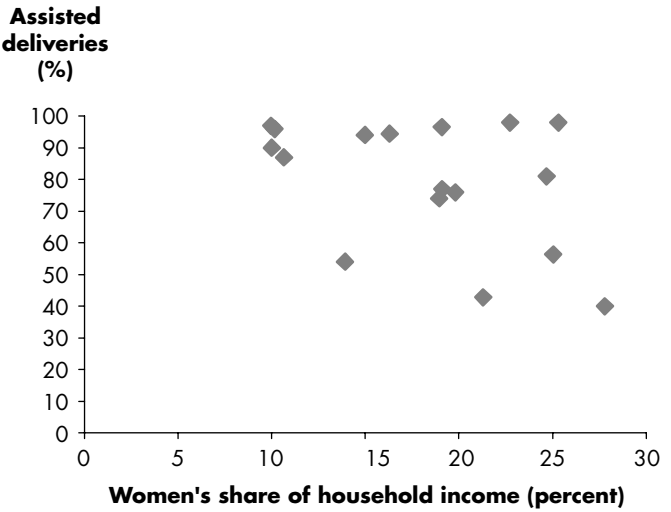


Sources: 9, 166, 204, 233.

Figure 39. Maternal Mortality Ratio and Women's Share of Household Income in MENA Countries

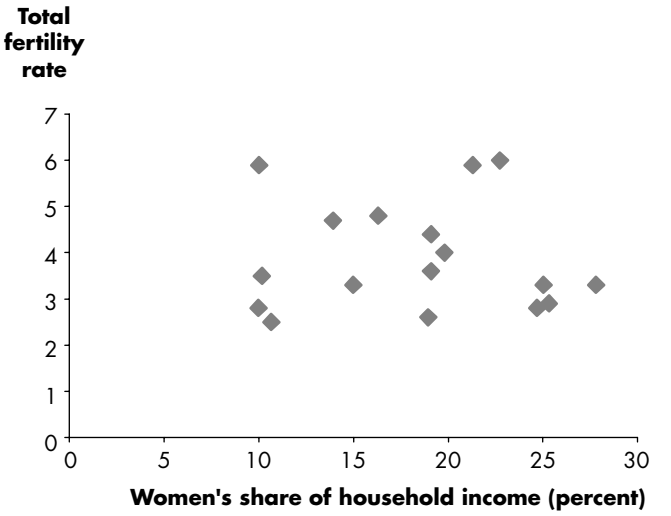
Sources: 158, 166, 204, 233.

Figure 40. Deliveries Assisted by Skilled Attendants and Women's Share of Household Income in MENA Countries



Sources: 4, 6, 26, 37, 44, 82, 112, 113, 114, 115, 136, 158, 191, 236.

Figure 41. Total Fertility Rate and Women's Share of Household Income in MENA Countries



Sources: 158, 204, 233.

CHAPTER 3

Improving Reproductive Health in MENA Countries

Priority Issues and Obstacles

According to the priority reproductive health issues (table 21), MENA countries can be roughly categorized into three groups:

1. Low-income and lower-middle-income countries with high fertility, high adolescent fertility, and high maternal mortality.
2. Lower-middle-income and upper-middle-income countries with high fertility, high adolescent fertility, and moderately high maternal mortality.
3. High-income countries with moderately high fertility and increasing prevalence of STIs.

It is noteworthy that MENA countries, particularly upper-middle-income countries, have high total fertility and adolescent fertility compared with countries of similar income levels in other regions. Countries with high maternal mortality have an urgent need to improve maternal care, countries with high fertility need to develop effective strategies and improve access to and quality of

services, and all countries should strengthen STI prevention programs. The countries that have experienced significant fertility decline may require a new approach to achieve further decline. Countries in which fertility remains high must put into place effective programs. Strategies and interventions will be different depending on each country's economic and social situation. Financial and technical assistance from international agencies will be indispensable for low-income and lower-middle-income countries, while only technical advice may be required for upper-middle-income and high-income countries.

Table 21. Major Reproductive Health Issues in MENA Countries

COUNTRY	MATERNAL MORTALITY	TOTAL FERTILITY	TEENAGE FERTILITY	SEXUALLY TRANSMITTED INFECTIONS AND HIV/AIDS	FEMALE GENITAL CUTTING
Yemen	+++	+++	+++	±	+
Iraq	+++	++	+	±	—
Syria	++	++	++	±	—
Egypt	+++	+	+	±	+++
Morocco	+++	+	+	+	—
Algeria	++	+	±	±	—
Jordan	+	++	+	+	—
Iran	+	+	++	±	—
WBG	+	+++	+	±	—
Tunisia	+	+	±	+	—
Lebanon	++	+	+	±	—
Oman	+	++	+++	+	±
Libya	+	++	+++	±	—
Saudi Arabia	±	+++	+	±	±
Bahrain	+	+	±	+	—
Qatar	±	+	+	±	—
Israel	±	+	±	±	±
UAE	±	+	+	+	—
Kuwait	±	+	+	+	—

+++ Very high prevalence.
++ High prevalence.
+ Low prevalence.
± Very low prevalence.
— Not reported.
Note: Shaded cells represent significant public health issues.

Possible causes of the problems and obstacles to improving reproductive health status include:

- *Lack of explicit policy guidelines and strong commitment by governments*. Some MENA countries do not have policies to curb population growth, although even relatively rich countries will not be able to sustain rapid population increase, given limited water resources and declining oil revenues.
- *Lack or shortage of financial resources*. Countries do not allocate enough financial resources to establish and maintain effective service delivery systems or to train and deploy qualified health personnel. Reproductive health programs sometimes have lower priority than other investment programs.
- *Lack of awareness on the part of policymakers and the general public*. Both policymakers and the general public, particularly decisionmakers in households and communities, often do not recognize the serious consequences of reproductive health problems.
- *Cultural and social barriers*. MENA countries have relatively large gender gaps in terms of education and social participation of women, regardless of country income levels. Cultural and social constraints often make it difficult to address various reproductive health issues directly.
- *Poor quality of services*. Technical competency of health personnel is often insufficient because of inappropriate training and supervision. Counseling services are often lacking. Essential equipment, drugs, and medical supplies are in short supply or are poorly maintained.
- *Ineffective program design and unclear targets*. Past programs sometimes failed to focus on interventions that could have direct impacts, to target underserved groups, or to increase the demand for services.
- *Delayed development of other critical sectors*. Overall social sector development, including general health care coverage, girls'

education, women's job opportunities, and development of other sectors such as transportation and communication, are critical for improving reproductive health.

Strategies and Possible Interventions

Key strategies for improving reproductive health in the region are as follows:

- *Focus on priority issues*. A strategy should have clear objectives that address priority issues in each country. Programs should be designed to achieve tangible impacts on priority issues. In the region, high maternal mortality and high fertility are two of the highest priority issues.
- *Target the underprivileged*. Since reproductive health problems are far more serious among underprivileged population groups, such as the poor and rural inhabitants, a strategy should be developed to decrease the gaps within a country.
- *Overcome the obstacles*. Programs should be carefully designed to overcome major obstacles, such as shortage of financial and human resources, and cultural resistance. For instance, comprehensive approaches that provide reproductive health services through a single channel will make best use of available financial and human resources, take advantage of any opportunities to reach clients, and reduce cultural resistance. If women are reluctant to be examined by male staff, female health professionals should be trained and deployed.
- *Improving quality of care*. Quality of services should be improved, standardized, and carefully monitored. Standard protocols should be established for ensuring quality of care, reducing unnecessary medical intervention, and containing costs. Each country should establish quality monitoring and regulation systems.[9] Essential equipment, drugs, and medical supplies must be secured. Facilities should be designed to protect the privacy of clients. Qualified

health professionals with life-saving and other specialized skills, as well as communication and counseling skills, need to be trained, deployed, and properly supervised. Managerial capacity must be improved at all levels.

- *Developing sustainable financing mechanisms*. To ensure access to essential services, feasible and sustainable financing mechanisms need to be established. The public sector alone will not be able to continue to play a major role in service provision; therefore private sector involvement and community financing measures should be explored. Reproductive health services should be included in benefit packages of health insurance schemes.[10] Financing systems should provide incentives that encourage preventive care but discourage unnecessary medical intervention. Based on lessons learned from the experiences of other countries, there are many innovative approaches that can be tried: community financing measures to provide emergency transportation for pregnant women; partnership with community organizations and private nonprofit agencies for delivering services to underserved areas;[(229)] and involvement of private physicians and pharmacies for family planning services.

- *Raising awareness and changing behaviors*. IEC strategies to change people's attitudes and behaviors are crucial, as people's lack of awareness and behaviors based on harmful beliefs and customs are contributing factors to problems. Target audiences include women, their husbands, and the elders in their families, community leaders, and policymakers. IEC programs can be delivered through mass media or on a personal level at health facilities and communities. Involving religious and opinion leaders will be important.

- *Empowering women*. The improvement of women's societal status contributes to improved reproductive health. Women's participation in the decisionmaking processes of their families and communities, as well as in the overall developmental process, should be promoted. Teenage fertility is expected to decrease

Box 3. Reaching Out to Bedouin Women through Innovative Partnership in Jordan

Although about 73 percent of Jordan's population of 4.4 million is urban, improving the quality of life of the traditionally nomadic rural population—the Bedouin—is an important policy issue for the government. In the past half-century, Jordan has made remarkable progress in the social sector, as demonstrated by a relatively low infant mortality rate and a high literacy rate.[220, 230] However, progress in the rural population has lagged behind. Moreover, in contrast to other social indicators, the total fertility rate remains high even at the national level, and the national population strategy was approved only in 1996. Thus, reproductive health issues of the rural population require particular attention.

The Queen Alia Fund for Social Development (QAF) is a quasi-NGO headed by a member of the royal family. QAF actively participates in women's education and income-generation programs through a network of social centers located in rural areas. Despite the conservative culture of the rural populace, they trust QAF because of the authority of the royal family and are willing to send their women to the centers. QAF also sponsors the National Population Commission. QAF has created partnerships with many other development agencies, including bilateral donor agencies and international NGOs.

Taking into account the close links between reproductive health issues and the status of women, an innovative program in a rural district near the Dead Sea successfully integrated reproductive health services and activities to empower women. QAF and the Ministry of Health implemented the program in partnership with a bilateral donor

Box 3. (Continued)

agency, the Japan International Cooperation Agency (JICA). This program used existing public health facilities and QAF social centers and mobilized local communities. Women from local communities were educated about women's empowerment and reproductive health issues at the social centers. Then, some of the participants were recruited as health communicators for their communities. Existing health facilities were rehabilitated to provide reproductive health services, including family planning services. The partnership worked well: JICA provided technical expertise and financial assistance, and QAF successfully addressed culturally sensitive issues and reached into conservative communities.(62, 128, field interviews)

along with the increase in girls' education levels. The empowerment of women is expected to benefit not only women themselves, but also entire families, because better educated and healthier women are able to provide better care and stability for their families. Education and social participation programs for poor women are an important component of reproductive health interventions (box 3).

Intervention components for each major reproductive health issue in the region are summarized in table 22. Each specific objective should be established on the basis of accurate data, and each component should have measurable indicators.

- *High maternal mortality:* Establish EOC at the first-referral level with effective linkage to high-quality prenatal care; raise awareness.

Table 22. Possible Intervention Components

AREA	MATERNAL MORTALITY	FERTILITY	SEXUALLY TRANSMITTED INFECTIONS AND HIV/AIDS	EARLY MARRIAGE AND TEENAGE FERTILITY	FEMALE GENITAL CUTTING
Primary health care services	Improve quality of prenatal care; create effective linkages to referral services; strengthen postnatal care.	Ensure supply of and access to various contraceptive methods; provide counseling and clinical follow-up; increase private sector involvement.	Provide high-quality case management services; provide counseling services for prevention and treatment; ensure confidentiality; screen pregnant women.	Provide family planning services; provide regular prenatal checkups.	Provide counseling for prevention.
Referral services	Establish high-quality essential obstetric services at the first-referral level; improve access.	Improve access to surgical procedures.	Provide diagnostic and curative services with good quality and confidentiality; screen donated blood and surgical patients.	Provide care for high-risk pregnancies.	Provide care for serious complications.
Health personnel	Train physicians and midwives with life-saving obstetric skills; deploy qualified personnel; train health workers and TBAs with knowledge of referral.	Improve technical competency and communication skills.	Establish clinical protocols and infection-prevention procedures and provide training; improve communication skills.	Improve communication skills; increase outreach activities.	Provide training and incentives/disincentives to service providers (TBAs, etc).
Information, education, and communication	Raise awareness of obstetric risks among women and their family members; give nutrition education.	Increase demand for family planning services; give information on methods and how to access; raise awareness of men and community leaders.	Raise awareness of high-risk behaviors; change behaviors of men; give information on symptoms.	Raise awareness of risks among decisionmakers in families; promote girls' education.	Raise awareness of risks; change behaviors of family elders and opinion leaders.
Policy and health systems	Establish referral systems, including transportation.	Establish explicit policies; commit politically.	Develop surveillance systems; establish blood safety systems.	Raise and enforce legal age of marriage.	Ban FGC and enforce the ban.

- *High fertility and slowing fertility decline:* Improve access to and quality of family planning services; enhance IEC activities aimed at increasing demand.
- *Increasing prevalence of STIs, including HIV/AIDS:* Establish surveillance and blood-screening systems; develop clinical protocols for treatment and prevention; provide counseling and high-quality services; raise awareness of risky behaviors.
- *Early marriage and high teenage fertility:* Raise awareness of the risks among decisionmakers; promote girls' education.
- *FGC in Egypt and Yemen:* Raise awareness of the risks among decisionmakers.

The impact of current and past policies and interventions should be evaluated and analyzed. Each country should review both the achievements and shortcomings to date, refocus on unsolved and emerging issues, and develop new, more effective strategies. Some of the program evaluations in MENA countries done by the sponsoring agencies are shown in table 23. Evaluations indicated that integration of family planning services into existing basic health care systems had achieved favorable outcomes. Most programs successfully increased contraceptive prevalence rates and reduced fertility rates, but common constraints were the low management capacity of local counterparts and cultural norms that hindered interventions.

In-depth analyses are necessary in each country and in various subnational areas. Operational research would help identify various obstacles and contributors to success, as well as the hidden needs of the people. Sociologic and anthropologic analyses are also useful in designing well-targeted interventions and decreasing obstacles. Because many qualitative studies have already been conducted in various communities, the findings of these studies should be reviewed and integrated into each specific intervention, as well as into national-level policies and strategies. Impacts of other sector developmental programs should be also evaluated and analyzed.

Table 23. Program Evaluations: Examples in MENA Countries

PROGRAM	OBJECTIVES	EVALUATION
Egypt: Second Population Project (1979–84), The World Bank	To expand family planning services and reduce fertility (total US$60.3 million).	Health service delivery was expanded by constructing health units, deploying health staff, and implementing outreach activities. The coverage of family planning services did not expand as expected due to low political commitment and the lack of implementation capacity of the government.
Egypt: Family Planning II Project (1987–93), USAID	To upgrade the quality and quantity of family planning services, to increase knowledge of family planning, and to reduce fertility.	High-quality family planning service centers were established. The cost was high in part because of nonessential equipment procured for the centers. The centers were underutilized due to institutional and management turmoil and lack of proper market research. Contraceptive prevalence rose significantly, but cultural norms constrained the delivery of services, especially in rural areas.
Morocco: Population and Family Support Project, Phase III (1984–91), USAID	To improve family planning information and services and to support child survival.	The project achieved significant outcomes and even exceeded the planned target. Integrated service delivery was more effective than separate delivery; family planning and immunization were valid for child survival.
Jordan: HEALTHCOM project (1987–89), USAID	To implement a communications campaign and to institutionalize the methodology.	Radio and TV messages on birth spacing and breastfeeding were produced; however, the birth-spacing spots were never broadcast because of cultural controversy. Local participation in choosing the topics was important.
Iran: Population Project (1974–80), The World Bank	To construct family planning training centers and to deliver family planning services to rural areas.	(Reviewed in 1994) Behavioral changes to use contraceptives and fertility decline continued. The expansion of services to new groups of women (in rural areas, etc.) and the introduction of new methods were needed, so they were included in the ongoing project.
Tunisia: Population and Family Health Project (1990–98), The World Bank	To integrate MCH and family planning services into existing basic health facilities, and to reduce fertility, mortality, and regional disparities (total US$63.2 million).	Investments were successfully channeled to underserved areas, and the integration of MCH and family planning services was achieved. MMR, IMR, and other indicators showed significant improvement, but impacts were diminished due to difficulties in staff allocation. Public resources could be better allocated by taking into account the availability of private sector resources and using regional indicators to weigh resource allocations.

Sources: 18, 175, 176, 178, 179, 209, 228.

Costs and Benefits

Considering the value of the potential benefits, reproductive health interventions could be provided at relatively low cost. Estimated average costs of pregnancy-related care were US$90 to $225 per birth attended, which was US$4 to $9 per capita and less than US$2,000 per death averted.[213] The costs varied, depending on the level of health sector development, or the quality, quantity, and accessibility of the existing health facilities.[144] For instance, in a district with a population of 500,000, which had only one health center and a hospital that was inaccessible to many women and not adequately equipped, the estimated cost of intervention per maternal death averted was US$11,777. In situations where the district had one hospital and 10 health centers, the estimated cost was $6,966. In Bangladesh, the intervention cost was estimated at $2,158 per maternal and neonatal death averted; however, the cost of averting one additional maternal or neonatal death was estimated at $24,110. In Latin American countries in 1990, the intervention costs were $5 per pregnant woman for prenatal care, $20 for normal delivery at a health center, and $200 for delivery at a hospital.

WHO's Mother-Baby Package program integrates maternal care, management of obstetric complications and abortion, neonatal care, family planning, and STI management at both the primary health care and referral levels.[192] The program is estimated to cost US$65.80 per birth and US$2.90 per capita in a district with a population of 2.3 million and a crude birth rate of 44 per 1,000 population (about 100,000 annual births). The cost goes down to US$44.10 per birth and US$1.80 per capita in a district of population 500,000 (table 24). The largest share of the input cost is for clinical personnel (almost 40 percent), followed by the annualized capital cost and drugs.

A cost-benefit study of a higher-level family planning program in Egypt estimated the high benefit-cost ratio of 30.[108] The higher level of family planning was intended to achieve the following national objectives in Egypt: (a) 74 percent contraceptive prevalence by 2015; (b) a population of less than 80 million in 2015; and (c)

Table 24. Mother-Baby Package: Summary of Intervention Costs

District population	2,280,000	Number of pregnancies	110,352
Crude birth rate	44 (per 1,000 population)	Number of births	100,320

	HEALTH POST		HEALTH CENTER		HOSPITAL		
Number	51		102		19		
% of delivery care	50		40		10		
	TOTAL COST (US$)	COST/CLIENT (US$)	TOTAL COST (US$)	COST/CLIENT (US$)	TOTAL COST (US$)	COST/CLIENT (US$)	% OF TOTAL COMBINED COSTS
Family planning	891,000	5	845,000	6	246,000	7	30.0
Maternity	324,000	6	1,184,000	27	354,000	32	28.2
Anemia	42,000	8	140,000	32	95,000	86	4.2
STI	22,000	20	136,000	35	48,000	35	3.1
Eclampsia	0	—	131,000	473	185,000	671	4.8
Abortion	0	—	141,000	17	276,000	33	6.3
Hemorrhage	0	—	139,000	25	249,000	45	5.9
Obstructed labor	0	—	131,000	48	321,000	116	6.9
Sepsis	0	—	130,000	473	185,000	670	4.8
Neonatal	0	—	131,000	118	256,000	31	5.9
Total	1,278,000	7	3,107,000	23	2,214,000	65	100
Total (US$)	1,278,000		3,107,000		2,214,000		6,600,000
Per capita (US$)	0.56		1.36		0.97		2.90
Per birth (US$)							65.80

INPUT	%	INPUT	%	INPUT	%
Annualized capital cost	16	Drugs	12	Clinical personnel	39
Bed/hospital costs	4	Consumable supplies	10	Management and supervision	3
Maintenance and utilities	6	Laboratory supplies	1	Support salaries	3
Transport (fuel)	1	Blood supplies	2	IEC/social marketing	3

Source: 192.

two-child families. In 20 years, US$5.5 billion for food subsidies, education, potable water, sewage, housing, and health care would be saved as a result of the reduction in population growth that would accompany a contraceptive prevalence rate of 74 percent, while the family planning program would cost only US$184 million (table 25). It is expected that a reduction in population growth would lead to improved living standards. Gross domestic product was estimated to rise 4.5 percent, while average household incomes would increase by 6.5 percent.

Possible Roles of the World Bank

During the past few years, the World Bank has focused intensively on improving its effectiveness in social sectors. The 1997 Health, Nutrition and Population (HNP) sector strategy paper[224] described reform initiatives for improving effectiveness through

Table 25. Projected Costs and Savings of Family Planning Program in Egypt

	IN 1992	IN 2015 (WITH NO CHANGE IN FAMILY PLANNING)	IN 2015 (WITH HIGHER LEVEL OF FAMILY PLANNING)	CUMULATIVE COST/ SAVINGS 1993–2015 (LE MILLION)	CUMULATIVE COST/ SAVINGS 1993–2015 (US$ MILLION)	BENEFIT-COST RATIO
Cost of family planning	£E 66 million	£E 111 million	£E 167 million	635	184	
Food subsidy	£E 623 million	£E 1,000 million	£E 885 million	1,317	382	2.07
Health	£E 833 million	£E 1,350 million	£E 1,185 million	1,034	300	2.05
Education		38,300 schools	29,800 schools	5,932	1,720	9.34
Sewage	1.2 billion m^3	4.4 billion m^3	3.8 billion m^3	2,821	818	4.44
Drinking water				3,701	1,073	5.82
Housing				4,047	1,174	6.37
Total				18,852	5,467	30.09

Note: £E: Egyptian pound. £E 1 = US$0.29.
Source: 108.

better definition of public and private sectors in financing and delivering health services, better organization and management of health systems, and greater community involvement in designing and monitoring services. Further, the Bank recently published a population and reproductive health strategy paper, "Population and the World Bank—Adapting to Change," to complement the HNP sector strategy paper.[234]

As described in the population and reproductive health paper, new approaches bring opportunities for addressing reproductive health issues. For example, sector-wide reform can address many of the underlying constraints that make health systems unresponsive to the needs of the poor. Although reform efforts usually focus on such key agendas as financing reorganization and decentralization, the technical and financial inputs required for reproductive health must be maintained. The quality and accessibility of services need to be ensured, and the impact of reforms on key reproductive health indicators must be monitored.

The Bank's comparative advantage recognized in the strategy paper is its capacity for policy dialogue and resource mobilization. Because of the Bank's access to both finance and planning ministries, as well as functional ministries such as health, education, and women's affairs, it is well positioned to facilitate synergistic policies that link investments in different sectors to achieve optimum impacts. The impact of collaborative interventions in several sectors is likely to be greater than the sum of each program in health, education, gender, and poverty reduction. The Bank's long-term commitment is also important, because it takes at least 15 years to achieve results in human development interventions in general; it may take even longer in reproductive health interventions. Further, the Bank has the financial capacity to support strengthening of obstetric referral systems, including first-referral hospitals, which are essential. Reproductive health services can be a core around which primary and secondary health care are strengthened during health sector reform efforts. Strengthening partnerships with other agencies that are active in reproductive health will help the Bank improve effectiveness in its operations.

One of the major challenges identified in the strategy paper is regional and cultural diversity. The range of unmet reproductive health needs, including effective contraception and safe childbearing, varies substantially among the regions of the world. Such differences are typically greater in maternal health than in other health issues. Attitudes and cultural barriers are complex and particular to each country, so interventions must be context-specific and culturally sensitive. Therefore, a regional strategy and country-specific strategies need to be developed in a framework of global strategy. The Bank's comparative advantage in policymaking emerges from its analytical work and dialogue on country and sector strategies. This reproductive health review of the MENA region will provide the base of knowledge and a tool to stimulate discussion in each country. Consequently, the review is expected to help develop a regional strategy and country strategies for improving reproductive health.

Possible roles of the World Bank for improving reproductive health in the MENA region are:

- *Refocus on reproductive health issues as an unfinished policy agenda.* Reproductive health issues should be discussed with governments in the context of economic and social development. The issues should be taken into account in the Country Assistance Strategy of the Bank.

- *Assist in effective and efficient health sector development.* To improve reproductive health, overall health system development is required. Areas to be developed include service delivery mechanisms, and referral systems; quality standards for services, along with monitoring systems; sustainable financing mechanisms; information management systems; policy and legal frameworks; private sector involvement; institutional and technical capacity building; and human resources. As most MENA countries are making efforts to reform their health systems, Bank sector strategies should pay attention to the impact on reproductive health. Reproductive health indicators should be used to monitor health system development.

- *Support specific programs.* Current programs could be improved in quality and targeted to the underprivileged, using lessons learned from the past. The programs should ensure client-oriented comprehensive service delivery, competency-based capacity building, and sustainable and feasible financing plans. The Bank can mobilize relatively large amounts of funds, which may assist in essential infrastructure development, such as establishing first-referral hospitals. The Bank's experience in other regions would help in formulating a better strategy for addressing both the new emerging issues and the old unsolved problems in the MENA region.
- *Monitor and adjust the programs of other sectors.* Developmental programs in other sectors, such as education, poverty reduction, rural development, communication, transportation, and so on, have impacts on reproductive health. Decreasing gender inequity in terms of income, education, and participation in decisionmaking processes will contribute to the improvement of reproductive health. The Bank's programs in other sectors should be designed and adjusted so that they can have a positive impact on reproductive health.
- *Coordinate with other assistance programs.* The Bank, as a neutral international agency, could also assist in coordinating and mobilizing the technical and financial resources of other agencies, as well as the private sector. Each country has to improve its programs to meet international standards. MENA countries, including countries that do not require financial assistance, should strengthen their technical and managerial capacities for planning, implementing, and monitoring the programs. The Bank could facilitate technical assistance in partnership with other organizations such as the World Health Organization (WHO), the U.N. Population Fund (UNFPA), UNICEF, bilateral agencies, and reputable NGOs, while taking into account each agency's technical advantage.

CHAPTER 4

Conclusion

Reproductive health problems have direct negative impacts on both women and their children, who constitute approximately three-quarters of the world's population. Reproductive health problems also impede the long-term economic and social development of a country, because they diminish productivity, educational attainment, and quality of life while increasing health care costs and social inequity. The reproductive health status of a country reflects the gaps between men and women, rich and poor households, and urban and rural areas within that country. Long-term losses caused by reproductive health problems should not be underestimated: The failure to invest in positive outcomes now will result in even greater costs in the future.

Despite the achievements of the population and health sectors during the last several decades in the MENA region, reproductive health issues remain unfinished, and new issues are emerging. As reproductive health issues are often culturally sensitive, strong political commitment will be essential to solve the problems.

Improved reproductive health will contribute to reducing poverty and inequity and to developing human capital comprehensively. This is necessary to fulfill the World Bank's mandate, which is to reduce poverty and foster sustainable economic and social development. Improving reproductive health is a key to achieving the well-being of the next generation and prosperity for society as a whole.

APPENDIX

Reproductive Health Terms and Indicators

Adolescence: WHO defines adolescence as the period from 10 to 19 years, and complements that broad category with terms that extend the age range: youth, 15–24 years; young people, 10–24 years; and children, 10–18 years.[96]

Anemia: Blood hemoglobin levels that indicate anemia are: for nonpregnant women, < 12 g/dl; for pregnant women, < 11 g/dl; and for adult men, < 13 g/dl. Iron deficiency is a major cause of anemia, which is common among women of reproductive age because iron is generally lost as a result of pregnancy, delivery, and menstrual bleeding.[9]

Body mass index (BMI): An indicator of adult obesity and malnutrition. BMI is calculated using the following formula: weight (kg)/height $(m)^2$. Being underweight is defined as having a BMI < 20; overweight as BMI > 25; and obesity as BMI > 30.[9]

Case fatality rate: Proportion of women with obstetric complications in a specific facility who die. Numerator is the number of women with obstetric complications who die in a particular facility in a given period of time. Denominator is the number of women admitted to

the facility with an obstetric complication or who develop a complication while in that particular facility over the same time period as in the numerator.[98]

Cesarean section rate: Proportion of pregnant women who have a cesarean section in a specific geographic area in a given time period. Numerator is the number of pregnant women with cesarean section in a specific geographic area in a given time period. Denominator is the number of live births in that specific geographic area in the same time period as in the numerator.[98]

Contraceptive prevalence rate: Percentage of women who are practicing, or whose sexual partners are practicing, any form of contraception. It is usually measured for married women aged 15 to 49 years, and usually includes all methods, whether traditional or modern. Modern contraceptive methods include IUDs, oral contraceptive pills, injections, tubal ligation, and vasectomy, and sometimes include condoms.

Crude birth rate: The number of live births in a given year per 1,000 population.

Eclampsia: Pregnancy-induced hypertension complicated by convulsions with or without loss of consciousness. Convulsions can be independent of the degree of pre-eclampsia.[238]

Emergency obstetric care: A subset of EOC, emergency obstetric care responds to unexpected complications such as hemorrhage and obstructed labor with blood transfusion, anesthesia, and surgery.[98] Emergency obstetric care includes vacuum extraction, symphysiotomy, cesarean section and laparotomy, resuscitation, manual removal of the placenta, bimanual compression, managing infections, managing eclampsia, and suturing lacerations.[64] It does not include management of problem pregnancies, monitoring of labor, or neonatal special care.

Essential obstetric care: Includes the services that are required to save the lives of the majority of women with obstetric complications.[173] EOC provides not only the means to manage emergency complications when they happen, but also procedures for early detection and treatment to prevent problem pregnancies from progressing to the level of an emergency.[98] Basic EOC services include: administering parenteral antibiotics; administering parenteral oxitocic drugs; administering parenteral anti-convulsants for eclampsia; performing manual removal of the placenta; performing removal of retained products; and performing assisted vaginal delivery. Comprehensive EOC services include performing surgery (such as cesarean section) and blood transfusion, in addition to the basic services.

FGC/female genital mutilation: All procedures that involve the partial or total removal of the external female genitalia or other injury to the female genital organs, whether for cultural or any other nontherapeutic reasons.[188] FGC is classified into four types. Type 1 is excision of the prepuce, with or without excision of part or all of the clitoris. Type 2 is excision of the prepuce and clitoris together, with partial or total excision of the labia minora. Type 3 (infibulation) is excision of part or all of the external genitalia, and stitching/narrowing of the vaginal opening. Type 4 (unclassified) includes any other procedures that fall under the definition of FGC, such as piercing, incision, or stretching of clitoris and labia. In Egypt, types 1 and 2 are widely practiced among both Muslims and Christians, while type 3 is reported in southern areas close to Sudan.

Fistulas: Urinary fistulas are tracts established by trauma that conduct urine from the ureter, bladder, or urethra into the vagina, while rectovaginal fistulas are tracts that conduct feces into the vagina. Urinary and rectovaginal fistulas in women are usually the result of trauma such as obstetric injuries.[13]

Incomplete abortion: An abortion in which the fetus and placenta are not expelled entirely. Because placental parts often remain in utero, a postpartum curettage is necessary.

Infant mortality rate: The number of infants who die before reaching one year of age, expressed per 1,000 live births in a given year.

Infertility: Inability of a couple to conceive or to bring a pregnancy to term after one year or more of regular, unprotected intercourse.[45] Approximately 10 percent of couples worldwide experience some form of infertility problem, which can be attributed to the female, the male, or both. Female factors include: an- or oligo-ovulation; abnormal tubal function, which is caused mainly by pelvic inflammatory diseases; and uterine abnormality.[13] Male factors include azospermia, varicocele, and retrograde ejaculation. Treatments include artificial insemination, ovulation-inducing agents such as clomiphene and human gonadotropins, and assisted reproductive technologies such as in vitro fertilization.

Low birthweight: Birthweight of less than 2,500 grams.[9] Low-birthweight infants include those who are born prematurely and those who are small for gestational age due to intrauterine growth retardation. The latter condition is mainly caused by maternal malnutrition, pre-eclampsia or other maternal complications, cigarette smoking, or fetal disorders such as chromosomal anomaly and intrauterine viral infection.

Maternal death: Death of a woman while pregnant or within 42 days of the termination of pregnancy, irrespective of the duration or site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental causes.[144] A leading cause of death among women of reproductive age is pregnancy-related illness.

Maternal mortality rate: The number of maternal deaths per 100,000 women between 15 and 49 years of age. The rate reflects both the MMR and the fertility rate; therefore, it is influenced by both obstetric risk and the likelihood of becoming pregnant.

Maternal mortality ratio: The number of maternal deaths per 100,000 live births. The ratio measures the obstetric risk of women, or the risk of death once pregnant.

Met need for essential obstetric care: Proportion of women with major obstetric complications who are appropriately managed in a specific geographic area in a given time period.[98] Numerator is the number of women with major direct obstetric complications who are appropriately managed in a specific geographic area in a given time period. Denominator is the number of women with major obstetric complications estimated for the same geographic area and time period.

Postpartum amenorrhea: The failure to resume menstruation beyond the 10th postpartum week or six weeks after weaning.[238]

Pre-eclampsia: Pregnancy-induced hypertension, which is characterized by hypertension and proteinuria, frequently combined with excessive edema.[238] Cases of pre-eclampsia typically occur in the third trimester, and rarely before 20 weeks.

Prolapse: Significant descent of the uterus and vagina, which may descend partly or completely beyond the vulva.[238] Prolapse is primarily the result of frequent deliveries. It causes disturbing symptoms such as pelvic fullness, back pain, urinary symptoms such as incontinence and pollakiuria, vaginal discharge, and bleeding.

Proportion of births by site: Proportion that is calculated by the number of deliveries by site (such as home, health center, hospital) divided by the number of all live births in the same geographic area and time frame.[98]

Proportion of deliveries assisted by skilled attendants: The number of deliveries by skilled health personnel (skilled delivery care) irrespective of outcome (live birth or fetal death), divided by the number of all live births in the same geographic area and time

frame.[98] The WHO definition in 1996 indicates that skilled birth attendants include physicians, nurses, midwives, and trained health workers, but exclude traditional birth attendants.

Referral rate: Proportion of women with potential or actual obstetric complications moving from one level of care to another (for example, from a community to an EOC facility).[98] Numerator is the number of women with a potential or actual obstetric complication moved to another site for care. Denominator is the number of all women with obstetric complications (or deliveries or live births) in the same area and within the same time frame as in the numerator.

Sexually transmitted infection/sexually transmitted disease (STD): Infections transmitted by sexual contact, which include venereal diseases such as syphilis, gonorrhea, chancroid, and lympho-granuloma venereum; trichomoniasis, candidiasis, and nonspecific genital infections caused by neisseria, mycoplasmas, chlamydia, and herpes simplex viruses; viral hepatitis; HIV/AIDS; and scabies and infestation with lice.[238] Fetuses and infants may contract certain STIs from their mothers during pregnancy and delivery, which may lead to serious health problems. WHO recommends the use of the term "sexually transmitted infections" instead of "sexually transmitted diseases." [198] The term "diseases" is considered inappropriate for asymptomatic infections (such as trichomoniasis in men). A new generation of professionals attached to the new reproductive health concepts would like to see STDs in the context of reproductive tract infections (that includes endogenous and exogenous, sexually and nonsexually transmitted, micro-organisms). The term "STI" also indicates better the necessity to provide care to asymptomatic women.

Total fertility rate: Total of each age-specific fertility rate per population of women between the ages of 15 and 49. TFR indicates the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with current age-specific fertility rates.[144]

Unmet need: Unmet need for family planning means, in general, the percentage of married women of reproductive age who want to avoid becoming pregnant but are not currently using family planning. More precisely, the unmet need group includes all fecund women who are married or living in union—and thus presumed to be sexually active—who are not using any method of contraception and who either do not want to have any more children or want to postpone their next birth for at least two more years.[21] Those who want to have no more children are considered to have an unmet need for limiting births, while those who want more children but not for at least two more years are considered to have an unmet need for spacing births. The unmet need group also includes pregnant women and postpartum amenorrheic women whose pregnancies were unwanted or mistimed but who became pregnant as a result of not using contraception.

Unmet obstetric need: Estimate of the number of women needing a major obstetric intervention for life-threatening complications who did not have access to appropriate care.[98] It is calculated as follows: the estimate of the number of needed major obstetric interventions for absolute maternal indications, minus the number of interventions actually performed.

Notes

1. The U.N. conferences included the 1993 World Conference on Human Rights in Vienna, the 1994 International Conference on Population and Development in Cairo, the 1995 World Summit for Social Development in Copenhagen, and the 1995 Fourth World Conference on Women in Beijing.

2. The definitions of income groups are as follows: low-income countries have a GNP/c of $785 or less; lower-middle-income countries, $786–$3,125; upper-middle-income countries, $3,126–$9,655; and high-income countries, $9,656 or more.[231]

3. According to recent demographic and health survey data, the MMR was 351 per 100,000 live births in Yemen and 79 per 100,000 live births in Jordan.[27, 38]

4. If pregnancy and delivery are both managed well, an estimated 5 percent of deliveries will require cesarean section in order to save the life of mother or child or both.[184]

5. "Short birth interval" is defined as less than 24 months after a previous birth.

6. Unmet need for family planning is the percentage of married women of reproductive age who want to avoid becoming pregnant but are not currently using family planning.

7. The five skill areas were counseling for combined oral contraceptive acceptors, IUD insertion, examination in the third trimester of pregnancy, interpretation of the partograph, and management of postpartum hemorrhage.

8. Military service is compulsory in Egypt, starting from the age of 18 years. Around 3 million Egyptians work outside the country.[90]

9.The Quality Improvement Program component of a World Bank–sponsored project in WBG decreased postoperative infection, improved efficiency, and prepared standard treatment protocols.[225]

10. MCH care benefit packages are developed through the Egypt health sector reform project.[227]

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