

Women's Health

LEARNING OBJECTIVES

By the end of this chapter the reader will be able to:

- Describe the importance of women's health to individuals, families, and communities
 - Describe the determinants of women's health and how they vary in different settings
 - Discuss the burden of disease for women worldwide, with a focus on women in low- and middle-income countries
 - Describe critical challenges in improving women's health in low- and middle-income countries
 - Describe some success stories in improving women's health and the lessons they suggest for other women's health efforts
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VIGNETTES

Suneeta was pregnant with her first child. She lived in northern India where many families prefer to have sons rather than daughters, especially for their first-born child. Eager to have a son, Suneeta's husband took her to get a sonogram to determine the sex of the baby. When they learned the baby would be a girl, they decided that Suneeta should abort the fetus and try again to get pregnant, in hopes of having a boy.

Mariam lived in rural Pakistan and was pregnant with her second child. When she went into labor, Sarah called for the traditional birth attendant, as most women did in her town. As Sarah's labor continued, she and the birth attendant realized that the labor was complicated. Sarah needed to go to a hospital to deliver the baby. In this part of Pakistan, however, women could not be taken to hospitals without their husband's permission. Sarah's husband was

working in another city and was not available to give such permission. Several hours later, Sarah and the baby died at Sarah's home.

Carmen lived in a slum in Guatemala City, Guatemala. She was not married but became pregnant after relations with a man she had met several months before. In her culture, to become pregnant without being married was a source of great shame to a woman's family. Fearing the reaction of her family to her pregnancy, Carmen decided to get an abortion. Although abortions are illegal in Guatemala, except to save the life of the mother,¹ they are performed there by both licensed physicians and by unlicensed medical practitioners. Sarah could not afford the fee charged by a physician and went instead to an unlicensed abortionist. Carmen's abortion was not performed properly; she bled profusely as a result of the procedure, and she died before she could be taken to a hospital.

Elizabeth was a 15-year-old girl in Capetown, South Africa. She was a good student but came from a poor family and was always short of the money she needed to pay for school supplies, uniforms, and books. John had been eyeing Elizabeth for some time. He was 25 years old, had a good job, and was always interested in spending time with the young ladies at Elizabeth's school. At the start of the second semester, when Elizabeth was trying to get together the money for school, John convinced her to sleep with him in exchange for a small amount of money. Elizabeth had heard about HIV, but John convinced her that he was healthy and there was no need to use a condom. About a year later, Elizabeth fell ill, was given an HIV test, and turned out to be HIV positive.

THE IMPORTANCE OF WOMEN'S HEALTH

The vignettes above suggest several reasons why women's health issues must be given a prominent place in this book and in the global health agenda. First, women in many countries face a number of specific and serious health problems. Second, there are important and often unacceptable differences in the health of men and women in a large number of countries. Third, women play especially important roles in

TABLE 9-1 Key Linkages between The Millennium Development Goals and Women's Health

Goal 1—Eradicate Poverty and Hunger

Link—Poor health and nutritional status of women is both a cause and an effect of poverty. Enhancing the nutritional status of women will improve both their health and the health of their babies, with many attendant beneficial consequences for both.

Goal 2—Achieve Universal Primary Education

Link—Improving the health of females will enhance their enrollment in, attendance at, and performance in schools. Improving the educational attainments of females will lead to improvements in their health and the health of their children.

Goal 3—Promote Gender Equality and Empower Women

Link—Improvements in equity and empowerment will lead to better education for females, more income earning opportunities for them, and less violence against them, all of which will improve their health status.

Goal 4—Reduce Child Mortality

Link—An important share of child mortality is linked with poor health and nutritional status of the mother. Improving the health and nutritional status of the mother is the starting point for reducing the share of children born with low birthweight, a major contributor to child morbidity and mortality.

Goal 5—Improve Maternal Health

Link—This is directly connected to the health of women.

Goal 6—Combat HIV/AIDS, malaria, and other diseases

Link—The share of the total number of HIV-affected people who are women is growing worldwide and HIV/AIDS is a major cause of illness, disability, and death for women. Combating HIV/AIDS would have a major impact on the health of females and, as a result, on their families, as well.

Source: Based on the UN Millennium Development Goals. www.un.org/millenniumgoals. Accessed July 10, 2006.

their families, and when they are in poor health it has important negative consequences on their families and especially on their children. Finally, many investments in improving the health of women would result, at relatively low cost, in a substantial number of deaths averted and DALYs saved.

In addition, the health of women is intimately linked with the MDGs.² Table 9-1 indicates how six of the eight goals have a powerful relationship to women's health.

The aim of this chapter is to give readers a sense of the health challenges that women face in the world today, with a particular focus on the health of poor women in low- and middle-income countries. First it will look at the determinants of women's health and then it will examine selected causes of women's illness, disability, and death and the risk factors related to them. The chapter will then review the costs and consequences of key women's health issues for both women and for society more generally. The chapter will also look at some success stories in improving women's health. The chapter will conclude by looking at the challenges that must be tackled in the future if the health of women is to be improved significantly and by recommending ways to address those challenges.

KEY DEFINITIONS

As one reviews the most important health issues that affect women worldwide, a number of terms will be used repeatedly. The most important of these are shown in Table 9-2.

THE DETERMINANTS OF WOMEN'S HEALTH

The determinants of a woman's health relate to both sex and gender. "Sex is biological."³ It has to do with being born a female. "Gender is cultural."³ Gender has to do with societal norms about the roles of women and their social position relative to men.⁴ Some health issues are primarily determined by biology, such as the fact that women alone get ovarian cancer. Other women's health issues are determined mostly by social factors, such as sex selective abortion of female fetuses. Most women's health issues, however, are determined by a combination of biological and social determinants, such as the case of Mariam in the opening vignettes, who died in childbirth for a number of biological and social reasons that interacted. Further comments are given now on the biological and social determinants of women's health.

Biological Determinants

Women face a number of unique biological risks. One is iron deficiency anemia related to menstruation. Other risks are associated with pregnancy, including complications of the pregnancy itself, diseases that may be aggravated by

TABLE 9-2 Selected Definitions on Women's Health

Abortion—Premature expulsion or loss of embryo, which may be induced or spontaneous —embryology.med.unsw.edu.au/Notes/Index/A.htm

Cesarian Delivery (Section)—The delivery of a fetus by surgical incision through the abdominal wall and uterus (wordnet.princeton.edu/perl/webwn

Eclampsia—A serious, life-threatening condition in late pregnancy in which very high blood pressure can cause a woman to have seizures. www.ukhealthcare.uky.edu/patient/glossary/glossary-e.htm

Family Planning -**The conscious effort of couples to regulate the number and spacing of births through artificial and natural methods of contraception. Family planning connotes conception control to avoid pregnancy and abortion, but it also includes efforts of couples to induce pregnancy. www.whiteribbonalliance.com/PressRoom.cfm**

Female Genital Cutting—This is also called “female circumcision,” and “female genital mutilation.” It is a Collective term for various traditional practices which are all related to the cutting of the female genital organs. Four different forms and grades of FGM are usually distinguished. This is based on bwww.bmz.de/de/service/inforthek/fach/spezial/spezial090/spezial090_32.html

Gestational Diabetes—Diabetes that develops during pregnancy because of improper regulation of blood sugar. It usually goes away after delivery, but can increase the woman's risk of developing type 2 diabetes later. www.mayoclinic.com/invoke.cfm

Hemorrhage (related to pregnancy)—**—** Significant and uncontrolled loss of blood, either internally or externally from the body. Antepartum (prenatal) hemorrhage is that which occurs after the 20 th week of gestation but before delivery of the baby. Postpartum hemorrhage is the loss of 500ml or more of blood from the genital tract after delivery of the baby. Primary postpartum hemorrhage occurs in the first 24 hours after delivery. ... www.whiteribbonalliance.com/PressRoom.cfm

Maternal Death—The death of a woman while pregnant, during delivery or within 42 days of delivery, irrespective of the duration and the site of pregnancy. The cause of death is always related to or aggravated by the pregnancy or its management; it does not include accidental or incidental causes. www.whiteribbonalliance-india.org/definitions.htm

Obstetric Fistula—An injury in the birth canal that allows leakage from the bladder or rectum into the vagina, leaving a woman permanently incontinent, often leading to isolation and exclusion from the family and community. www.unfpa.org/mothers/terms.htm

Pre-eclampsia (previously called toxemia)—is a hypertensive disorder of pregnancy. It is said to exist when a pregnant woman with gestational hypertension develops proteinuria. Originally, edema was considered part of the syndrome of pre-eclampsia, but presently the former two symptoms are sufficient for a diagnosis of pre-eclampsia. en.wikipedia.org/wiki/Preeclampsia

Sepsis—infection in the blood. www.health.qld.gov.au/diabetes_chd_resource/resources/glossary/glossary_s.html

Sex Selective Abortion—Sex-selective abortion is the practice of aborting a fetus after a determination, usually by ultrasound but also rarely by amniocentesis or another procedure, that the fetus is an undesired sex, typically female. en.wikipedia.org/wiki/Sex_selective_abortion

Sexually Transmitted Infections—Sexually-transmitted infections (STIs), also known as sexually-transmitted diseases (STDs), are diseases that are commonly transmitted between partners through some form of sexual activity, most commonly vaginal intercourse, oral sex, or anal sex. en.wikipedia.org/wiki/Sexually_transmitted_infections

Uterine Prolapse—A condition in which the uterus protrudes into, and sometimes out of, the vagina. www.whiteribbonalliance.com/PressRoom.cfm

pregnancy, and the effects of some unhealthy lifestyles, such as smoking, on pregnancy.⁵ During pregnancy, there are a number of conditions, for example, that can cause women to become ill or to die, including hypertensive disorders of pregnancy. In addition, a woman can be left with a number of permanent disabilities related to pregnancy, including uterine prolapse and obstetric fistulas. Women can also die of

preeclampsia or eclampsia. It is hemorrhage, however, that is the leading cause of maternal mortality. The conditions that can exacerbate pregnancy-related health risks could include malaria, hepatitis, tuberculosis, malnutrition, and obesity, as well as certain mental health issues, such as depression. Unsafe abortions lead to significant morbidity and mortality for women. In terms of the effects of lifestyles on pregnancy,

it is clear that certain occupations and the use of alcohol, tobacco, and drugs are especially important to avoid during pregnancy.

Women are also biologically more susceptible to some sexually transmitted infections than men are, including to the HIV virus.⁶ This relates to the fact that women have a greater mucosal area that is exposed during sexual relations than men have. There are also certain health conditions specific to women for biological reasons, such as uterine cancer or ovarian cancer, as mentioned above. There are other health conditions in which women have a disproportionate share of the burden of disease, such as breast cancer. As women age, they also have a higher rate of heart disease than men have, although it is diagnosed far less frequently.⁴

Social Determinants

The social determinants of a woman's health are also very important, especially in societies that favor males. These social determinants relate predominantly to gender norms, which assign different roles and values to males and females, usually to the disadvantage of females. In many societies, women's inferior status leads to social, health, and economic problems for women that men do not face.

The social determinants of health begin even before young women are born. In some societies where male preference is very strong, such as in India and in China, some families are determining the sex of their unborn children with the use of sonograms and then aborting females, especially for the birth of their first child.⁷⁻⁹ This was the case for Suneeta in one of the opening vignettes.

Female infants are often breastfed less than boys of the same age and then fed less complementary food when they become toddlers.¹⁰ In addition, young girls in many societies are also fed less than their male siblings. Older women in some cultures feed men first and then eat only the portions that are remaining. Others eat less nutritious food than the men in their family eat. Poor nutrition, often stemming partly from social causes, makes women more susceptible to illness. It also contributes to stunting and small pelvic size, which are hazards to the health of pregnant women.

There are a number of critical social issues that relate to women's sexual experiences. The low social status of women in many societies is linked to the physical and sexual abuse of women. Furthermore, male dominance means that women often have only a limited choice about when to have sexual relations, with whom, how to have them, and whether or not to use protection. As a result, women are often forced to have sex, often at young ages, and often without a condom

or other contraceptives. For these social reasons, women face heightened risks of becoming pregnant, of having repeated pregnancies at close intervals, and of getting sexually transmitted diseases, including HIV.

A dowry is the gifts that a bride's family gives to the family of a groom, and among the worst forms of violence against women is "dowry death." The data on mortality for young women in India suggest that there are a disproportionate number of young married women who suffer burns, which are often alleged to occur when women are cooking. It appears, however, that some of these deaths are not accidental. Rather, the husband's family sometimes perpetrates the burning of the young women when they are not satisfied with the dowry that she has brought to her marriage.¹¹

High levels of depression also appear to be related to the low status position of women in different societies and the expectations that those societies have of them. There is also widespread reporting in many societies of general gynecologic discomfort without physical explanation, which may be related to the stresses on the lives of many women.¹²

Especially in low-income populations, there are many households that are headed by females who are divorced, separated, or widowed, or by women whose husbands are working elsewhere. These households tend to be among the poorest people. These women also tend to be among the least well-educated people in a community and low income and education mitigate severely against the health of such women.

The roles that women play in different cultures can also pose important hazards to their health. In many societies, for example, women cook indoors on open fires without adequate ventilation, as discussed in Chapter 7. This is strongly associated with respiratory problems and asthma for such women and for their children.

Poverty, lack of or low levels of education, and low social status of women in many societies seriously constrain the access of women to health services. In addition, girls and women who need health services often do not take advantage of such services in a timely way. There are also numerous instances in which women cannot use health services without the permission of a husband or male relative or without having a male relative take them to the health services, which also constrains their attendance. In some settings, even when women need emergency care, such as during complications of pregnancy, social constraints sometimes prevent them from seeking such care and inhibit their husbands from taking them for treatment, as well, as reflected in the vignette about Mariam.

THE BURDEN OF HEALTH CONDITIONS FOR FEMALES

Having looked at the biological and social determinants of health for women, we can now look at some of the key health issues that females face, their prevalence, and the critical risk factors for those health conditions. This part of the chapter will examine selected women's health issues through their life cycle. In particular, it will focus on sex-selective abortion, female genital cutting, sexually transmitted infections, violence against women, and complications of pregnancy. It will comment on nutrition only briefly, because nutrition is largely covered in Chapter 8.

Sex-Selective Abortion

How common is sex-selective abortion worldwide? How many unborn children are affected? Sex-selective abortion appears to be a phenomenon that is more prevalent in India and China than in any other countries in the world.¹³ A number of studies have been done of this phenomenon and “one study suggested that close to one million female fetuses were aborted in India in the last 20 years.”¹⁴

An important consequence of sex-selective abortion is the skewed ratios of males to females in a number of countries. Naturally, one would expect that there would be about 105 females born for every 100 males. However, in China today, there are about 120 males born for every 100 females, with similar male to female ratios in Taiwan, Singapore, and parts of India. South Korea also has more than 10 percent more male births than female births.¹⁵

There is considerable evidence worldwide that both family size and preferences for males go down as income and education rise. In the case of the countries cited above, however, this has not been the case. Rather, as incomes and education have risen, and as technology has become more available, some families have used their income, knowledge, and access to technology—ultrasound in this case—to express their preference for males by engaging in sex-selective abortion. Punjab State, for example, is the wealthiest state in India. Yet, it has the most skewed ratio in India of males to females. The one-child policy in China has exacerbated male preference in that country.

Deaths of Young Girls

Females are born with biological advantages over males. If they received the same childcare as boys, the same nutrition, and the same access to health care, then they would be less affected than boys by certain childhood illnesses, and boys would die at higher rates than do girls. However, in many countries, girls receive less parental attention, poorer nutri-

tion, and less access to health care than do boys. Thus, girls younger than five years of age have higher rates of mortality than boys younger than five years of age.¹⁰

Female Genital Cutting

Female genital cutting (FGC) is also known as “female genital mutilation” and “female circumcision.” The WHO has grouped FGC into four types, generally varying from excision of the prepuce, the fold of skin surrounding the clitoris, to excision of part or all of the external genitalia and the stitching and narrowing of the vaginal opening. There are also a variety of related practices, including pricking of the genitalia or using chemicals to narrow the vaginal opening.¹⁶

Female genital cutting is generally carried out on girls 4 to 14 years of age by traditional practitioners, although it is sometimes carried out on infants. The cutting is done with razor blades, knives, or glass. It is estimated that between 100 million and 140 million women worldwide have had female genital cutting performed on them. Estimates also suggest that as many as 3 million girls in Sub-Saharan Africa and in Egypt have such cutting performed on them each year.¹⁶ In some countries, such as Egypt, FGC is practically universal among women who are 15 to 49 years old. However, there are other countries in Africa in which only a small share of the women have had FGC, such as Niger.¹⁶ The practice appears to be diminishing almost everywhere, with fewer younger girls being cut than their mothers. FGC is very closely related to ethnicity. It also varies inversely with education; the higher the level of education of the mother, the lower the level of FGC.

When FGC is done initially, it can result in terrible pain or shock. It is also associated with infection and blood poisoning, because the instruments used for FGC are not always clean. Over the longer term, it can lead to the retention of urine, infertility, and obstructed labor. If infection and hemorrhage linked to the act of FGC are not addressed in a timely and appropriate manner, FGC can also lead to death.¹⁶

Sexually Transmitted Infections

Chapter 11, which is on infectious diseases, discusses HIV/AIDS and its relationship with other sexually transmitted infections (STIs). This chapter highlights the facts that women are more biologically susceptible to sexually transmitted infections because of more exposed mucosal surfaces, they often show no symptoms of those diseases, and because of their roles in society, they are less likely to get treated for sexually transmitted infections than men are.

Sexually transmitted infections that are not treated in a timely and appropriate manner can have a number of

long-lasting effects on the health of women. These include pelvic inflammatory disease, chronic pain, ovarian abscesses, ectopic pregnancies, and infertility.¹⁷ The failure of pregnant women to get STIs treated in appropriate and timely ways can lead to fetal wastage, stillbirths, low birth weight babies, eye and lung damage in their babies, and congenital abnormalities.¹⁷ Human papilloma virus is associated with cervical cancer,¹⁷ and the complications of syphilis can lead to death.¹⁸ Chlamydia bears special mention, because it is nine times more prevalent in women than in men.¹⁹ Chlamydia is very prevalent in low-income countries and is associated with chronic conjunctivitis, reproductive tract infections, genital ulcer disease, and infertility.¹⁹

The data on the burden of STIs, other than HIV, is incomplete. However, based on the best available studies about chlamydia, gonorrhea, and syphilis, it appears that about 176,000 people worldwide died in 2001 from STIs in low- and middle-income countries²⁰ and that about 0.6 percent of the global burden of disease in those countries in 2001 was from STIs.²¹ Sub-Saharan Africa faces a disproportionately high share of morbidity and mortality from STIs. In fact, about half of all the DALYs lost from STIs were lost in that region.²¹

From the limited studies available, the prevalence of chlamydia, gonorrhea, and syphilis appears to vary widely. Studies done in China showed that rates of chlamydia ranged from 1 percent to 24 percent.²² Studies done in other parts of Asia indicated that the prevalence of syphilis ranged from almost negligible to about 15 percent.²² Studies done in Sub-Saharan Africa have shown ranges for chlamydia from 2 to 30 percent, for gonorrhea from 2 to 32 percent, and for syphilis from almost negligible to 23 percent.²³

Worldwide, it is the group aged 15 to 44 in whom we find the largest burden of STIs, and within that group, women have a larger share of disease than men have. About 1.9 percent of the total DALYs lost in this group to women were lost to STIs.²¹ About 0.5 percent of the total DALYs lost to men in this age group were lost to these infections.²¹

The risk factors for a woman getting an STI are well known and include young age when engaging in sexual relations; multiple sexual partners; sex with high risk partners, including partners considerably older than the woman; and failure to use a condom. The use of alcohol and drugs is also associated with unprotected sex, as is unequal power between the woman and the man who are engaging in sexual relations.

Violence and Sexual Abuse Against Women

Violence and sexual abuse against women occur with remarkable frequency throughout the world. Violence is usually episodic, it is often not reported, and it is often associated with

sexual abuse.²⁴ “Sexual abuse includes rape, sexual assault, sexual molestation, sexual harassment, economic exchange for sex, and incest.”²⁵ It is very hard to get reliable data on violence and sexual abuse against women. However, UNAIDS suggests that 10 percent to 50 percent of women worldwide have been abused physically by an intimate partner at least once in their lives.²⁶ Another study on intimate partner violence indicated that “one-third of women have been beaten, coerced into sex, or subjected to extreme emotional abuse.”²⁷ Other data suggest that between 20 percent and 60 percent of women report having been beaten by their partners.²⁸ A study about forced sex done in a number of countries concluded that “between 20 percent and 50 percent of adolescent girls aged 10–25 report their first sexual encounter was forced.”²⁶ In addition, there have been a number of conflicts in which rape has been used systematically, as a “tool of war.”²⁹

Violence and abuse against women have a number of negative consequences for the health of women. These include injuries, unwanted pregnancies, STIs, depression, and sometimes permanent disability or death.³⁰ The risk factors for a whether or not a woman will suffer violence can be complicated, are often a result of many factors, and are not well documented. However, it appears that such violence is associated with factors such as young age of the male partner, a history of violence of the male partner, low socioeconomic status of the male and female involved, proximity to drugs or alcohol, social isolation, and gender inequality. The likelihood of violence is heightened in conflict and post-conflict situations.³¹

Maternal Morbidity and Mortality

There are about 530,000 maternal deaths per year in the world, meaning deaths that occur during pregnancy, during childbirth, or until 42 days after the baby is born.³² This is equal to about 400 maternal deaths for every 100,000 live births.³³ It is estimated that between 11 percent and 17 percent of maternal deaths happen during childbirth.³⁰ Between 50 percent and 71 percent of maternal deaths occur in the postpartum period, with most of those occurring in the first week after birth.³⁰ Of the estimated 530,000 annual maternal deaths, it is thought that about 70,000, or 13 percent, were due to unsafe abortions.³⁴

There are both indirect and direct causes of maternal death. About 20 percent of maternal deaths are from indirect causes, meaning diseases that complicate pregnancy or that are complicated by pregnancy. These include malaria, anemia, HIV/AIDS, and cardiovascular disease.³³ The importance of these problems depends on the presence of these diseases in different communities and how effective the

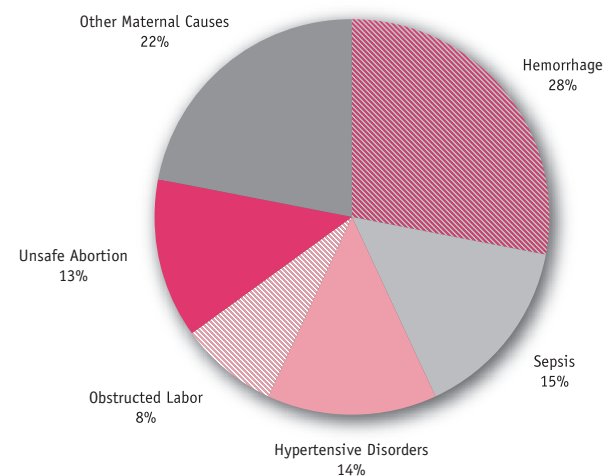
health system is in responding to them. About 80 percent of maternal deaths stem from direct causes, including hemorrhage, infection, eclampsia, and obstructed labor. Figure 9-1 indicates the major causes of maternal death and the share of maternal deaths worldwide that are associated with them.

The ratio of maternal deaths to the number of live births varies considerably across regions. The highest maternal mortality ratios are in Sub-Saharan Africa, where there are 940 maternal deaths per 100,000 live births.³⁵ The lowest maternal mortality rates are in Western Europe, where only about 5 women die of maternal causes per 100,000 live births.³⁶ Table 9-3 shows the maternal mortality ratio by region and the lifetime chance of maternal death.

The risk of maternal death is a stark reflection of the disparities in the health status between different countries and within those countries. A woman in Western Europe has only a 1 in 10,000 chance of dying a maternal death. In some of the poorest countries of Sub-Saharan Africa, however, a woman has a 1 in 20 chance of dying a maternal death. This means that a woman in some countries in Sub-Saharan Africa faces 500 times the risk of dying a maternal death as does a woman in Western Europe.

There are a number of risk factors for maternal death. Among the first are the nutritional status and general health status of the mother. There is also a very strong correlation between maternal death and the level of education and income of the mother. Clearly, well-educated women with comfortable incomes do not suffer many maternal deaths; uneducated and poor women do. Maternal death also varies with ethnicity and location, with rural women being at greater risk than urban dwellers. The risk of maternal death is also associated, among other things, with childbirth by adolescents,³⁷ women having their first child,³⁸ women having

FIGURE 9-1 Maternal Death by Cause, Low and Middle Income Countries, Percentage Distribution, 2000



Data from Maternal Mortality in 2000, Estimates Developed by WHO, UNICEF, UNFPA. WHO, Geneva, Annex 2.

more than five children,³⁸ and childbirth at ages older than 35 years.³⁹ Short intervals between the births of subsequent children are also a risk factor for maternal death. Having a birth attended by a skilled health care provider and having access to emergency obstetric care are important to successful outcomes of pregnancy. In addition, consumption of alcohol, tobacco, and drugs during pregnancy can also be harmful to both mother and child.

TABLE 9-3 Maternal Mortality Ratio and Lifetime Risk of Dying a Maternal Death, by Region, 2000

Region	Maternal Mortality Ratio	Lifetime Risk of Dying a Maternal Death (1 in X)
Central & E. Europe and Central Asia	64	770
East Asia & the Pacific	110	360
Latin America & the Caribbean	190	160
Middle East & No. Africa	220	100
South Asia	560	43
Sub-Saharan Africa	940	16
High-Income Countries	13	4000

Source: Adapted from: Wendy J. Graham, et al. Maternal and Perinatal Conditions. In Disease Control Priorities in Developing Countries, Dean T. Jameson et al. Washington, DC, 2006, Page XXX. Oxford University Press and the World Bank.

Unsafe Abortion

Many pregnancies are not wanted. It is estimated that there are 211 million pregnancies worldwide each year, of which about 46 million end in induced abortion.³⁰

One critical issue concerning abortion is whether they are “safe” or “unsafe.” WHO defines “safe” abortion as those abortions that are performed “by trained health care providers, with proper equipment, correct technique, and sanitary standards.” “Unsafe” abortions are essentially the opposite of that definition—performed by an untrained provider, with inappropriate equipment, poor technique, and unhygienic conditions.³⁰ It is thought that only about 60 percent of the abortions that are carried out every year worldwide are safe.³⁰

Fewer than 1 woman per 100,000 who have a safe abortion will die as a result of the abortion. The mortality rate for unsafe abortions, however, is at least 100 times greater, although it varies by country, from about 100 per 100,000 such abortions to about 600 per 100,000. It is estimated that about 70,000 women in the world die every year from unsafe abortions. This would be equal to about 13 percent of the total maternal deaths that occur annually worldwide.^{40,41}

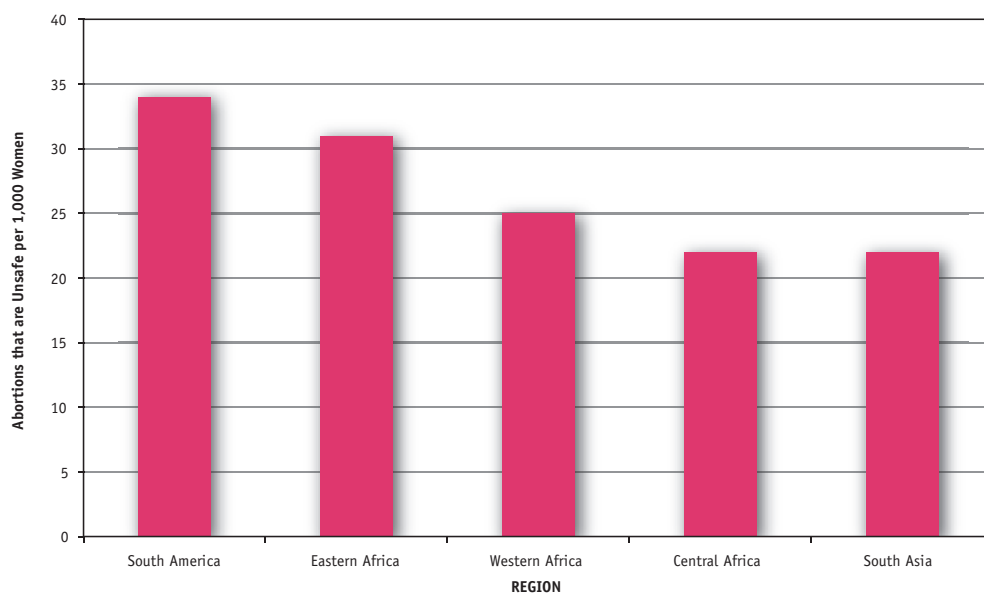
Figure 9-2 shows the extent to which unsafe abortions take place in different regions of the world. The age of those having an unsafe abortion also varies by region. About 60 percent of the unsafe abortions in Africa take place among women younger than 25 years of age, compared to about 30 percent for women this age in Asia. In Latin America and the Caribbean, about half of the unsafe abortions are carried out on women 20 to 29 years of age.⁴²

Obstetric Fistula

It is difficult to get good estimates of the number of women who suffer from obstetric fistula every year. Studies suggest that for every 100,000 births, between 50 and 80 women in Sub-Saharan Africa, North Africa, West and South Asia and about 30 women in Latin America and China suffer a fistula.⁴³ At these rates, about 50,000 to 100,000 women each year will suffer a fistula.⁴⁴ It is thought that about 2 million women worldwide are living with fistula.⁴⁴

The risk factors for fistula are those that are linked with an obstructed delivery, which is the precipitating factor for a fistula. These include undernutrition, young age at first birth, and having had multiple births. In addition, female genital cutting and some traditional practices that damage the birth

FIGURE 9-2 Unsafe Abortions, by Region



Data from The World Health Report 2005—Make Every Mother and Child Count, WHO, Geneva 2005.

canal can also cause prolonged labor and lead to fistula. The lack of access to emergency obstetric care and the failure to make use of such care, if available, also contribute to the prevalence of fistula.⁴⁴

Cardiovascular Disease

Cardiovascular disease is the leading cause of death worldwide, as discussed earlier, and it affects people in both low- and high-income countries. There is a strong correlation between lifestyle and cardiovascular disease. As women around the world begin to eat more processed foods, become more obese, and take up smoking, their rates of cardiovascular disease will increase.

DIFFERENCES BETWEEN THE HEALTH OF MEN AND WOMEN

Much of the attention paid to the health of women over the last several decades has focused on reproductive health and on “women as child bearers.” More recently, however, greater focus has been put on females in all of their roles and on the extent to which gender discrimination impacts their overall health negatively. Although still somewhat limited, increasing amounts of information are available on the health of females compared to the health of males.⁴⁵ Overall, women have a higher life expectancy at birth than men. On average, women in low-income countries live one year longer than men and women in high-income countries live on average 7 years longer than men.⁴⁵

However, an analysis of the extent to which females suffer a burden of disease greater than males identified 19 conditions that disproportionately affect females. Some of these relate to conditions that are specific to women, such as maternal conditions and cancers that overwhelmingly affect females. Some of these conditions are associated with the fact that females live longer than males, such as Alzheimer's disease, osteoarthritis, cerebrovascular and cardiovascular disease, and age related vision disorders. In fact, it has been estimated that females lose 80 percent more DALYs from Alzheimer's disease, more than 60 percent more DALYs from osteoarthritis and age related vision disorders, and more than 40 percent more DALYs from cerebrovascular and cardiovascular disease than men. Females also lose more than 50 percent more DALYs than males from depression and almost three times more DALYs than men from migraine headaches. As noted earlier, a condition affecting females that appears to be driven solely by discrimination is the excess burden of disease that women in South Asia suffer from fires and burns. In South Asia, females lose more than 250 percent more DALYs from fire and burns than males lose.⁴⁶ In fact, South Asia is

the region of the world in which females are the least healthy compared to males.

THE COSTS AND CONSEQUENCES OF WOMEN'S HEALTH PROBLEMS

The costs and consequences of women's health problems have not been examined carefully, and there are insufficient data on the social and economic costs related to them. Nonetheless, it is possible to make a number of comments on the economic and social costs of the health problems that women face in low- and middle-income countries.

First, there are a number of important social costs that relate to women's health issues. Violence against girls and women tends to isolate them socially. When a woman dies in childbirth, the social impacts are enormous. In most societies, women are the primary caregivers for children; therefore, when a mother dies, the death usually has a profound impact on the health of her children, with young children often dying thereafter. The social costs of some problems are particularly high. For example, women who have obstetric fistula are often socially isolated from their community.

Second, there are exceptional economic costs related to women's health conditions, and these are not often given the attention they deserve. The economic costs of nutritional issues have already been examined. The costs of violence against women, especially in low-income countries, have not been studied carefully. However, it is clear that these would include the direct costs of caring for women against whom violence has been perpetrated, as well as the indirect costs of earnings lost due to the impact of violence on their health and ability to work. A study in Chile, for example, suggested that the costs of domestic violence in Chile were equal to 2 percent of Chile's GDP. A similar study in Nicaragua indicated that such violence cost 1.6 percent of GDP. A review of intimate partner violence in the United States indicated that it led to 2 million injuries in a year and costs of about \$6 billion.⁴⁷

The economic costs of maternal health conditions are substantial but not well documented. As noted earlier, women play important economic roles both inside and outside the home. If a woman cannot attend to her home chores because of ill health following a delivery, then families often have to search for help in doing those activities. This is essential because in low-income societies, many women are responsible, among other things, for gathering water and fuel, cooking, doing the laundry, and caring for the children. In addition, many women in low- and middle-income settings do work outside their home chores. Illness associated with maternal conditions seriously constrains women's pro-

ductivity and reduces the income they can contribute to their family. Similarly, women's higher proportion of depression is also likely to have high economic costs.

CASE STUDIES

There has been some progress in a number of countries in dealing with the critical health issues discussed previously. The next section of this chapter examines three cases about efforts to address health conditions among women and to promote family planning. The first deals with the reduction of maternal deaths in Sri Lanka, the second concerns efforts to encourage family planning in Bangladesh, and the third is about a program to deal with obstetric fistula in Tanzania. The Sri Lanka and Bangladesh cases are well-documented success stories. The case about Tanzania concerns a promising new effort to help women with fistula.

Maternal Mortality in Sri Lanka

Background

Sri Lanka has had an impressive history of public-sector commitment to education and health, even when its income per capita was low. Today, the female literacy rate in Sri Lanka is more than double the South Asian average, and free health services have been available in rural areas since the 1930s.⁴⁸ Another unusual strength of Sri Lanka is that it has a good civil registration system that has recorded maternal deaths since about 1900.

Interventions

Sri Lanka has taken a number of steps to reduce maternal deaths. First, Sri Lanka improved access to health services. Starting in the 1930s, Sri Lanka established health facilities throughout the country that were staffed by medical officers. In addition, Sri Lanka expanded secondary and tertiary facilities in the 1950s and around the same time established a working ambulance service.

Second, as early as the 1940s, Sri Lanka introduced policies to expand the number of midwives, who were the front line workers dealing with pregnant women and childbirth. The focus on midwifery and on promoting easy access to higher-level health services in Sri Lanka has contributed to a wide acceptance by women and their families of giving birth with the assistance of a trained midwife at home or in the hospital. Midwives in Sri Lanka today serve a population of 3,000 to 5,000 people and they provide an invaluable link between the local community and the health system.

Another step that Sri Lanka took to reduce maternal deaths was to make use of its civil registration data to

identify what areas of the country had the most significant problems with maternal mortality. On this basis, the government was able to target its efforts to especially vulnerable groups, including women who were isolated both physically and socially, such as on distant tea estates. The government coupled these efforts with continuous activities, starting in the 1960s, to ensure that the quality of maternal health services was always appropriate. The lessons learned from individual maternal deaths, for example, were disseminated throughout the health system so that the quality of services could be improved and errors in dealing with obstetric problems could be reduced.

At the same time, the government made considerable progress in other health areas. This included efforts to improve health by improving sanitation and by measures to combat malaria and hookworm. These actions also contributed to improved health and lowered maternal mortality rates.⁴⁹

Impact

As a result of these efforts, Sri Lanka has halved maternal deaths every 6 to 12 years since 1935. This has meant a decline in the maternal mortality ratio from between 500 and 600 maternal deaths per 100,000 live births in 1950 to 60 per 100,000 today. Skilled medical practitioners now attend 97 percent of the births in Sri Lanka, compared with 30 percent in 1940.

One very important point to note about Sri Lanka is that that it has achieved better health outcomes than many countries that have higher per capita incomes and spend more on health than Sri Lanka spends. In India, for example, the maternal mortality ratio is more than 400 per 100,000 live births, and spending on health constitutes over 5 percent of the GNP. In Sri Lanka, however, the ratio of maternal deaths to live births is less than one-quarter of that for India, even though the country spends only 3 percent of its GNP on health. Low-cost, but dedicated and well-trained health personnel, including midwives, helped make the expansion of access to health care in Sri Lanka affordable.

Lessons

Sri Lanka's success in reducing maternal deaths can be attributed to widespread access to maternal health care, including emergency obstetric care, built upon a strong health system that provides free services to the entire population. The professionalism and broad use of midwives, the systematic use of health information to identify problems and guide decision making, and targeted quality improvements for vulnerable groups were also ingredients for success. Sri Lanka's tradition

of public-sector commitment to human development created conditions where gains were reinforced by good education, an emphasis on gender equity, the promotion of family planning, and a coordinated network of health services. Although factors such as the introduction of antibiotics and national efforts against malaria helped lower maternal mortality rates, it was the step-by-step actions of the government rather than better living conditions alone that led to most of the improvements in maternal health. Sri Lanka's success offers important lessons for other low- and middle-income countries that have unacceptably high levels of maternal deaths. Detailed information on this case is available in *Case Studies in Global Health: Millions Saved*.

Reducing Fertility in Bangladesh

Background

Despite the existence of several family planning methods, more than 150 million women in developing countries who wish to limit or space childbearing do not use contraception. In Bangladesh, where more than half the women are illiterate and cultural traditions favor large families, each woman had, on average, almost seven children in the mid-1970s, thereby jeopardizing her health and that of her children. For a country with the world's highest population density⁵⁰,⁵¹ where almost 80 percent of the people live in poverty, it became clear that lowering population growth would be key to improving its economic prospects.

The Intervention

In 1975 the government of Bangladesh launched a program to reduce the national birth rate. The program had four components. First, young, married women were trained as outreach workers to visit women at home and offer information and contraceptive services. The number of these family welfare assistants (FWAs) eventually exceeded 40,000. Their outreach surpassed all expectations, with virtually all Bangladeshi women having been contacted at least once by an FWA, including many women isolated by cultural practices, geographical location, or poor transportation. The second element of the program was the provision of a wide range of family planning methods through a well-managed distribution system. The third component was the establishment of thousands of family planning clinics in rural areas to which outreach workers could refer clients for long-term family planning methods such as sterilization. The fourth element was the information, education, and communication (IEC) campaign. The IEC program successfully tailored its message to achieve different aims, such as persuading men

to talk to their wives about contraception, and winning social acceptance for FWAs by creating a story about a compelling soap opera heroine who eventually becomes an FWA. In fact, the IEC campaign's remarkable success has inspired similar mass media initiatives in other countries such as Kenya, Tanzania, and Brazil.⁵²

The government's program evolved substantially over time, benefiting greatly from the existence of the Matlab Health Research Center that has operated for over 35 years as a site for large-scale research on the operation of health, nutrition, and family planning programs. Within villages in the Matlab area, researchers have tested various approaches to the delivery of health services. Matlab evaluations have shaped maternal and child health programs both in Bangladesh and throughout the developing world.

The Impact

The program resulted in virtually all women in Bangladesh becoming aware of family planning options. Contraceptive use increased from 8 percent in the mid-1970s to its current level of about 50 percent, and fertility declined from 6.3 births per woman in the early 1970s to about 3.3 in the mid-1990s.⁵³ Although other factors such as increased education and employment opportunities for women also increased demand for contraception, the family planning program has been shown to have had an independent effect on attitudes and behaviors.⁵⁴

Costs and Benefits

The program is estimated to have cost about \$100 million to \$150 million per year, with more than half the funding coming from The United States Agency for International Development (USAID), The United Nations Development Program (UNDP), the World Bank, and other agencies. Efforts are under way to increase program efficiency. The most expensive program component is that of FWAs, who were once critical to program success but are now valued by clients more as a convenience than as an essential source of information.⁵⁵ Research has determined that the most cost-effective strategy for the continued promotion of family planning is a fixed site approach that provides health and family planning services from clinics, complemented with targeted outreach to hard-to-reach clients.⁵⁶

Lessons Learned

The success of the program can be attributed to four factors. The first was political commitment on the part of Bangladesh and the international agencies involved. The second was the broad use of FWAs who carried the pro-

gram's message into almost every home, however isolated. The third was the excellent use of mass media strategies to target audiences and change behavior. The fourth was the research and data provided by the Matlab center that helped to constantly identify problems and improve the program. Although the program is far from perfect and the optimal outreach strategy is yet to be identified, Bangladesh is one of the few low-income countries to have reduced fertility rapidly without resorting to coercive measures. More detailed information on this case is available in *Case Studies in Global Health: Millions Saved*.

Fistula in Tanzania

Background

The emotional and physical side effects of obstetric fistulas stem largely from the fact that urine or feces leak from the fistula of affected women and cause them to be shunned by others. As a result of a fistula, women lose their babies, suffer constant pain or discomfort created by the unrelenting moisture from the leak, and are often deserted by their husbands and communities. Moreover, the women become socially isolated, lose the ability to sustain normal lives, and become economically dependent on others. To make matters worse, many communities view fistulas as a curse and hide the women away, rather than realizing that it is a medical condition. Decreasing the prevalence of obstetric fistulas is challenging, because it requires altering cultural practices on the one hand and strengthening very weak health care systems on the other.⁵⁷

To assist in addressing the problem of fistula, the Bill & Melinda Gates Foundation⁵⁸ provided funding in 2002 to the United Nations Population Fund (UNFPA) and two NGOs, EngenderHealth and the Women's Dignity Project, to create The Obstetric Fistula Partnership. In conjunction with this funding, UNFPA initiated in 2003 The Global Campaign to End Fistula. The aim of the partnership and campaign, among other things, was to prevent obstetric fistulas by strengthening emergency obstetric care; to enhance the capacity of the health system to deal with the large number of women who already have a fistula; and, to help through advocacy to promote greater attention to and resources for dealing with maternal health.⁵⁷

Surgery for uncomplicated cases of fistula is about 90 percent effective. Surgery for complicated cases of fistula is about 60 percent effective.¹³ Most women with a fistula are unaware of any opportunities for repairing their fistula or of getting support to help them return to normal lives.

The Intervention

The Women's Dignity Project (WDP), called *Utu Mwanamke* in Swahili, is a program operated by a Tanzanian NGO that is dedicated to "addressing fistula and advocating for the health rights of the poor, within a human rights framework."⁵⁹ The WDP is a partner of the UNFPA's Campaign to End Fistula. It is estimated that more than 1,000 new cases of fistula occur every year in Tanzania.⁶⁰

The WDP carries out activities in four areas: participatory research, organizational strengthening, policy and advocacy work, and the funding of fistula repairs. The research work of the WDP began in 2001, with a survey of the magnitude of the fistula problem in Tanzania and of the resources available to help address the problem. This has been followed by other community-based surveys. In addition, the WDP has worked with the Ministry of Health in Tanzania to establish a national referral system for fistulas and to train health care workers to deal with fistula. The WDP has also advocated to help make the community, the government, and Tanzania's development partners more aware of the fistula problem and to allocate additional resources to address it. Moreover, the WDP has provided funds to five hospitals to support the health services needed to deal with fistulas more effectively.⁶¹

In carrying out those efforts, the WDP has:

- Identified women with fistula through community-based efforts and arranged transport for them to a hospital at which they could have surgery.⁶²
- Published a booklet to raise awareness about fistulas that is based on the life stories of seven women who are affected by this condition.⁶³
- Worked with a number of other NGOs, such as the African Medical and Relief Foundation (AMREF),⁶⁴ to raise additional money for fistula efforts. AMREF, for example, now contributes \$100 to hospitals for each fistula repair they carry out.
- Collaborated with some NGOs, such as Engender Health, to identify and address the risk factors for fistula.⁵⁷

The Impact

The impact of the WDP efforts has not been studied scientifically or documented extensively and independently. However, it does appear that the activities described have led to an increase in the number of women who are getting fistulas repaired and who can, therefore, return to productive and healthy lives. The work of the WDP is also strengthening the capacity within Tanzania to continue dealing with

fistulas more effectively in the future, through work at the community level in identifying the problem, training health providers, and helping to increase financial resources.

Costs and Benefits

According to the UNFPA, the average cost of treating fistula is \$300.⁶⁵ This includes the reconstructive surgery, post-operation stay at the hospital or clinic, and rehabilitation. There are no data on the economic returns to fistula repair in Tanzania. However, one should expect that a woman with a successful fistula repair could return to a productive life that she could not have without that surgery. In addition, of course, there would be large social benefits to the surgery, because the woman whose fistula is repaired can also overcome the social ostracism that she faced earlier and can return to a more normal social life with her family and community.

Lessons Learned

The WDP's program in Tanzania suggests some promising approaches to dealing with difficult global health issues. First, it appears that combining a global effort such as The Campaign to End Fistula, with a local effort, such as the work of the WDP, can set a valuable foundation for addressing some global health problems. Second, careful advocacy efforts with the right stakeholders in a country, such as local communities, key government agencies, and selected development partners can help to build both awareness and support for trying to address health problems. Third, the initial successes of the WDP seem to stem from its efforts to embed its work at the level of the community and to involve the community in helping to identify problems and then act on them. Finally, carefully trying to build capacity through training and financial support can provide both immediate benefits and set the basis for programs to be sustained in the longer run.

ADDRESSING FUTURE CHALLENGES

The health of females in low-income countries is a powerful reflection of biological susceptibility and gender norms that assign certain roles, restrictions, and values to females, compared to males. They also reflect the fact that the health systems in many countries have profound gender gaps and cannot or do not serve effectively the health needs of females. In this light, making major improvements in the future in the health of females in low- and middle-income countries will require attention to an array of social and public health measures.

One future challenge will be to improve the nutritional status of females, because it is poor nutrition in utero and from infancy that later can lead to women becoming stunted,

not reaching their full biological potential, and experiencing a variety of health conditions. Measures to address nutritional concerns more effectively are discussed in Chapter 8.

Another challenge that is central to the long-term improvement in the health of females is access to education. The empowerment of females socially is strongly associated with their level of education. Empowerment will improve the status of females and reduce the extent to which discrimination against them hurts their health. In addition, education improves access to important health information that can make a difference in women's and children's health.

Major changes must also be made in the perception that communities have of female roles and the health of females. This will require significant efforts at the level of communities and populations as a whole to put greater value on women's health. This will help to reduce the abortion of female fetuses and to ensure that women in obstructed labor do not die because they lack appropriate and timely medical attention.

A continuing challenge will also be to put greater emphasis on the health of females as people, rather than as just "women who give birth." This would encourage policy makers to take a number of steps that are essential to improving the health of females globally, including gaining a better understanding of the health conditions affecting females and what can be done about them and making the health of females central to all health efforts. In addition, in many cultures, females are constrained in dealing with male medical workers and it is also very important to train more female health workers.

The next section comments on further measures that can be taken to deal with some of the particular health problems discussed previously, such as female genital cutting, sexually transmitted infections, violence against women, and other reproductive health issues, including maternal mortality, unsafe abortion, and fistula.

Female Genital Cutting

Although fewer families appear to be practicing FGC, there is little evidence so far about cost-effective interventions to reduce harmful FGC practices. It is clear, however, that efforts to achieve this aim will have to be based on good data about who is practicing FGC and how they practice it, which will require additional research on this topic. In addition, advocacy efforts that promote change need to be specifically tailored to local practices and to local beliefs. Linking these efforts with other measures that promote female empowerment, female education, and female control over economic resources will also be needed. FGC is intimately linked with

deep-seated local beliefs and traditions that vary with location, ethnicity, education, and income. Only by taking account of these underlying issues will one be able to address FGC.⁶⁶

Violence Against Women

We have already discussed the extent to which violence against women is usually a result of a complex set of factors and the interactions among them. Although there is increasing evidence on the factors linked to violence against women, there is little evidence about what works to reduce such violence and what the most cost-effective approaches to doing so are.

Some studies have shown that protecting women against violence through legislation, as has been done in the United States and some other high-income countries, can have important positive effects in some settings. Shelters for abused women can also be used to reduce violence against them. Ensuring that the police, judges, and health care personnel are trained to deal with violence against women in more sensitive and more effective ways has also been useful. It also appears that many non-governmental organizations can deal with violence against women as effectively and at lower cost than some government services can do.⁶⁷

In the end, however, it is a combination of measures adapted to local circumstances that can best address the combination of factors that put women at risk of violence. Some of the most important of these measures are noted in Table 9-4.

Sexually Transmitted Infections

Sexually transmitted infections are important not only because of the morbidity and mortality associated with them, particularly among women in Sub-Saharan Africa, but they

are also important because they increase the chance of getting HIV. It is critical, therefore, that the burden of these diseases be addressed. Some comments follow about addressing three of the most common STIs among women, syphilis, gonorrhea, and chlamydia.

The goals of any program for reducing these sexually transmitted infections have to be to reduce infection, reduce the complications of infections, and reduce the spread of STIs to infants when they are born.⁶⁸ It is much more cost-effective to prevent these diseases and to treat them before they lead to complications. Achieving these goals requires that young women initiate their first sexual relations at later ages; be able to refuse unwanted sex, even from their husbands; have relations with fewer partners; use condoms; and have any STIs diagnosed early and treated properly.

Meeting these aims will also require that young people get “the information and skills for making good decisions;” have access to “a range of health services that help them to act on those decisions;” and live within a social, legal, and regulatory framework that supports health behaviors and protects young people from harm ...”⁶⁹

The successes in reducing STIs to date have focused on a common set of health system interventions and capacities. First, the health system must have an ability to carry out surveillance of STIs. Second, there needs to be a program of health education, targeted to those people most at risk of infection. Third, appropriately trained health workers need to be able to provide proper treatment of infection. Fourth, a system of partner notification must be in place so that the partners of the infected people can also be tested and treated, if necessary. Finally, there must be an effective program for access to health services, including condom use, generally referred to as “condom promotion.”⁷⁰

Sweden made important strides in reducing chlamydia. Sweden offered free diagnosis, coupled with a major health education campaign in schools, partner notification, and condom promotion. Linked to this, Sweden was able to reduce the prevalence of gonorrhea by 15 times and cut the prevalence of chlamydia by one-half over a 15 year period. Zambia also made good progress in reducing the burden of sexually transmitted infections by expanding the number of STI clinics, improving the training of health educators and clinicians, and expanding health education.⁷⁰ South Africa's “Love Life” initiative focuses on improving the sexual health of adolescents aged 12 to 17 years. Some reviews of this program suggest that is associated with “better understanding of health risks, delayed debut of sexual relations, fewer partners, more assertive behavior regarding condom use, and better communication with parents about sex.”⁷¹

TABLE 9-4 Selected Measures to Reduce Intimate Partner Violence

Prevention and education campaigns to increase awareness of intimate partner violence and change cultural norms about violence against women
Treatment for those who engage in intimate partner violence
Programs to strengthen ties to family and jobs
Couples Counseling
Shelters and crisis centers for battered women
Mandatory arrest for offenders

Source: Adapted from Interpersonal Violence, Mark Rosenberg et al, Chapter 40, pp 755 to 770 in Disease Control Priorities in Developing Countries, pp 762-763

Maternal Mortality

We have already seen that more than 500,000 women die a year of maternal causes, and that 70,000 die as a result of unsafe abortion. The fact that childbirth itself is such a risk in some settings is usually a result of the “three delays:” a delay in identifying complications and seeking care, a delay in transporting the woman to a hospital, and a delay in providing appropriate emergency obstetric care in the hospital.⁷⁰ There is also considerable disability, illness, and death related to unsafe abortion.

Unsafe Abortion

Most of the disability, morbidity, and mortality associated with abortion is the result of “unsafe abortion,” mostly in low-income and middle-income countries in which abortion is not legal. To address the effects of unsafe abortion, it is essential that the health system in these settings be able to provide hygienic and appropriate post-abortion care at the lowest level of the health system possible. This means that they must be able to deal effectively with sepsis, hemorrhage, and shock. This may require a hospital stay, antibiotics, the ability to perform anesthesia, and the ability to transfuse blood. The most cost-effective manner in which to deal with incomplete abortion will be to perform vacuum aspiration, rather than to depend on the more surgical dilation and curettage approach. Of course, it is also important that women receive post-hospital counseling about choices for family planning.⁷²

In countries in which abortion is legal, it is important that it be widely available so that women do not turn to unsafe abortion providers. In addition, it is critical that legal abortions be safe and hygienic and that services also be available to deal with any post-abortion complications. In these cases, including countries in eastern Europe and Japan, in which abortion is a common method of family planning, it is also important that counseling be available about choices of family planning methods.⁷³

Family Planning

Because pregnancy and abortion are such important risks for disability, illness, and death, one way to avoid these problems is to reduce unwanted pregnancy through the promotion and widespread availability of family planning. In fact, it has been suggested that in countries with high rates of maternal mortality, as much as one third of the maternal deaths could be avoided through an effective family planning program.⁷² The importance of family planning is highlighted by the fact that many women in the world today would like to avoid pregnancy or space their births, but they do not have the access

to family planning needed to do this. Indeed, studies done in Sub-Saharan Africa suggest that 20 percent of the women in the region who would like to avoid pregnancy do not have access to family planning.

There are permanent methods of family planning that include sterilization of either males or females, although only about 8 percent of the total number of sterilizations worldwide are among men.⁷⁴ There are also long-term methods of family planning, including intrauterine devices and implants. Short-term methods include contraceptive pills, injectables, and barrier methods, including condoms or diaphragms. In addition, exclusive breastfeeding for at least six months—before the mother’s menstrual period returns—acts as a natural contraception. There are also methods for natural family planning that focus on periodic abstinence.

A number of countries have made important progress in promoting the use of family planning, including Bangladesh, Brazil, Colombia, Korea, and Vietnam. The experience from these countries suggests that an effective family planning program has to include information, education, and communication to promote informed choices by families about family planning; the need for a good selection of family planning technologies; the use of many points of service in both the public and private sector; services that are free or inexpensive enough for the poor to afford them; and health workers who are trained to work on family planning with knowledge and sensitivity, especially female health workers for women who are reluctant to see male health workers.⁷⁵ There is considerable evidence that “social marketing” is an effective tool for promoting family planning, as well. Social marketing refers to the use of commercial marketing techniques to sell health related measures, such as family planning or prevention of malaria.

Family planning is a cost effective investment in reducing maternal death, but it is not clear which approach to family planning programs is more cost-effective than other approaches. The high rate of maternal death in Sub-Saharan Africa and South Asia suggest that these are the two regions in which family planning would be most cost-effective to reduce maternal morbidity, disability, and mortality.⁴¹

Complications of Pregnancy

The risks of complications of pregnancy increase when the general health of the mother is not good. Thus, the nutritional status of the mother is very important. In addition, malaria is very dangerous for pregnant women, especially in Sub-Saharan Africa.

Some of the conditions that affect pregnancy outcomes can be identified during prenatal care. However, although

it is important for pregnant women to get regular medical exams during their pregnancy—and WHO recommends four such visits—some complications of pregnancy cannot be foreseen during those checks-ups. Thus, it is also critical to ensure that births are attended by a skilled health care provider who can handle the complications of pregnancy and who can refer the pregnant woman to a facility where these complications can be handled. In addition, it is important that communities have transportation to get women to emergency obstetric care urgently when they have complications of pregnancy and that health services be able to address the most important complications appropriately.

Studies show that there are several cost-effective packages of services that can reduce maternal death due to complications of pregnancy. The basic package of essential obstetric services that all countries should have is shown in Table 9-4. Countries that have more financial resources may wish to also provide some additional services that can address, for example, food—multivitamin supplements and malaria prophylaxis; the ability to deal with complicated deliveries and an HIV positive mother; and arrangements for caring for a high risk infant,⁷⁶ which are also shown on Table 9-4.

MAIN MESSAGES

As discussed by one women's health advocate, "being born female is dangerous to your health."¹² Some of the health conditions that women face are biologically determined. Others are socially determined. Some result from the interplay between biological and social determinants of health. The inferior social status of women in many cultures, however, is reflected in certain health conditions that women face and in some of the differentials that favor men between the health of men and the health of women.

As one looks globally at the health of women, especially poor women in low- and middle-income countries, one notes the importance of several key health issues. One is nutrition. Another is sex-selective abortion. A third is discriminatory health care practices toward young girls that cause these girls to suffer higher rates of mortality before age five than boys have. Sexually transmitted infections are an important cause of DALYs lost for women in the reproductive age group,

especially in Sub-Saharan Africa. Female genital cutting is also a practice that is widespread, especially in parts of Africa, and it is associated with important morbidity and disability for women. Violence against women is also an important cause of ill health for women.

Illness, disability, and death from maternal causes are also unnecessarily high. More than 500,000 women die each year of maternal causes, of which about 70,000 are due to unsafe abortions. Complicated labor that is not properly attended can also lead to problems, such as fistula, which an estimated 2 million women suffer worldwide.

The costs of women's health problems are very substantial. In many societies, women are the primary caregivers to children, and when the health of the mother suffers, there is often a negative effect on the health of the children, as well. In addition, women play important economic roles in many families and the morbidity, disability, and mortality associated with particular problems of women's health have substantial economic implications.

There are countries, such as Sri Lanka, that have been able to improve the health of women at relatively low levels of expenditure by making wise choices about investments in health and education. These included increasing female education, providing widespread access to midwives, and ensuring adequate back up for the midwives at hospitals.

Improving the health of women in the future will require that health systems provide a cost-effective package of services, including nutrition, family planning, prenatal care, deliveries attended by trained health care providers, emergency transportation of women who are having complicated labors, and emergency obstetric services at a hospital. In the long run, it will be important to change the gender roles that favor males, promote the education and empowerment of females, promote their prospects for employment, and educate communities to better understand the health conditions that females face and the measures that can be taken to address them. These measures could help to reduce sex-selective abortion, female infanticide, violence against women, and avoid the "three delays" that are associated with maternal morbidity, disability, and mortality.

Study Questions

1. Why can it be said that “being born female is dangerous to your health?”
2. Why should we pay particular attention to the health of females?
3. In what ways do gender issues affect the health of females?
4. What are some of the key differences in the burden of disease between males and females?
5. What are the sources of those differences?
6. What are the “three delays” and why are they important?
7. What steps do countries need to take to deal with the complications of unsafe abortions?
8. What measures might be taken to reduce intimate partner violence?
9. How could one reduce the risk to women of sexually transmitted infections?
10. What are some of the most cost-effective investments that should be made to improve the health of women in low-income countries?

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