# MAKING PREGNANCY AND CHILDBIRTH SAFER

Nearly 600,000 women around the world die of pregnancy-related causes each year. Ninety-nine percent of these deaths occur in less developed countries. Many of these deaths could be prevented, however, if increased awareness of the problem leads to appropriate interventions.

A woman's lifetime risk of dying from pregnancy-related complications or during childbirth is one in 48 in the less developed world, versus only one in 1,800 in the developed world. The risk of dying from pregnancy-related causes is highest in Africa, both because African women have more children than women on other continents and because risks are greater with each pregnancy (*see Figure 1*). Because of Asia's much larger population, however, each year the majority of maternal deaths take place there.

Interventions can improve the chances of women's survival and can also save many of the 3 million to 4 million babies who die annually in the first month of life. Existing health services have contributed to dramatic declines in infant deaths over the past 30 years, but there is little evidence that maternal deaths have decreased. The majority of complications that cause maternal deaths cannot be averted simply by improving women's overall health or nutritional status.

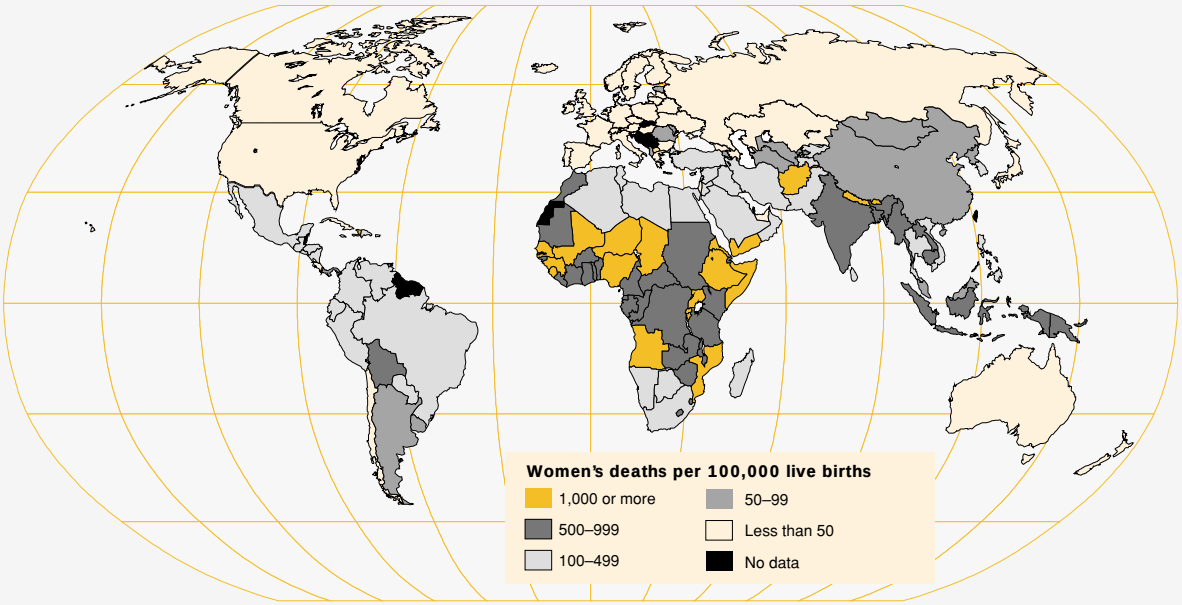
## What causes maternal deaths?

Maternal deaths have both direct and indirect causes. About 80 percent of maternal deaths are due to causes directly related to pregnancy and childbirth — unsafe abortion and obstetric complications such as severe bleeding, infection, hypertensive disorders, and obstructed labor. Women also die of causes such as malaria, diabetes, hepatitis, and anemia (*see Figure 2*), which are aggravated by pregnancy.

The environment in which women live influences maternal health. Maternal deaths are strongly

*Figure 1*

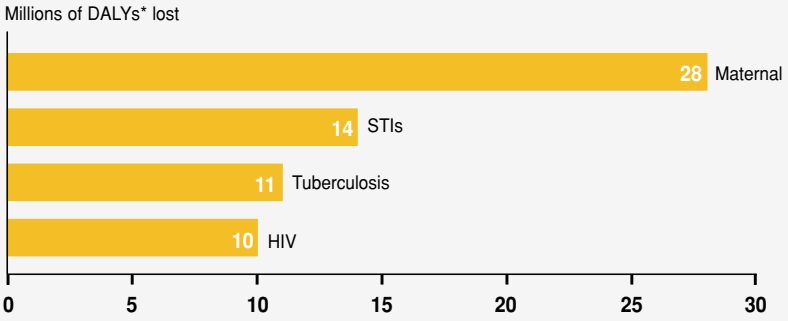
**Women's deaths related to pregnancy and childbirth by country**




**SOURCE:** *1997 World Population Data Sheet* (Washington, DC: Population Reference Bureau).

*Figure 2*

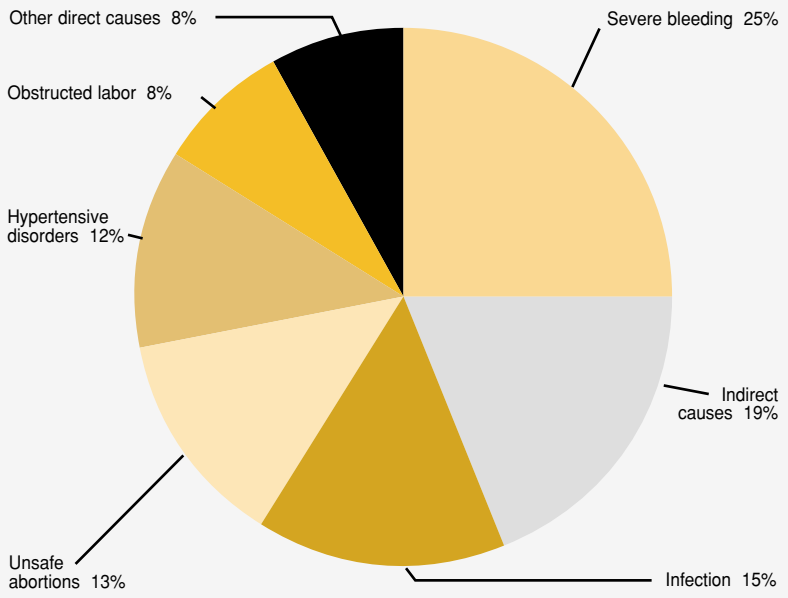
**Top causes of disabilities and death among women ages 15 - 44**




**SOURCE:** World Bank Development Report, 1993.
*DALYs are "disability-adjusted life years."

*Figure 3*

**Medical causes of maternal deaths**




**SOURCE:** Ann G. Tinker and Marjorie A. Koblinsky, *Making Motherhood Safe* (World Bank Discussion Paper no. 202, 1993).

associated with substandard health services and the lack of medical supplies at the time of labor, delivery, and immediately after birth. Women may also delay or fail to seek treatment because of logistical, social, or cultural barriers.

Most births in less developed countries — about 60 percent — take place outside health facilities. Births at home need not be unsafe, provided that a woman's family and her birth attendant can recognize the signs of labor and delivery complications and, if complications occur, move her to a facility where trained professionals can provide adequate care. In far too many cases, however, women are not brought to facilities in time. The warning signs of complications may not be recognized, or families may fear patronizing treatment, high fees, or substandard care at such health facilities. Even deliveries in health facilities may be risky because the quality of obstetric care is inadequate.

## What are the consequences?

A mother's death has profound consequences for her family: In some less developed countries, if the mother dies, the risk of death for her children under age 5 can increase by as much as 50 percent. In addition, because these women are stricken during their most productive years, their deaths have a profound impact on society and on the economies of their nations.

Furthermore, for every maternal death, many more women suffer from injuries, infections, and disabilities related to pregnancy and childbirth. Studies show that as a consequence of childbirth women bear injuries as distressing as ruptures of the uterus, pelvic inflammatory disease, and fistulae — damage to the reproductive tract which can lead to incontinence if not repaired. The World Health Organization (WHO) estimates that more than 15 million women per year suffer from untreated injuries that occur during pregnancy and childbirth.

The World Bank and WHO estimate the burden of disability and untimely deaths in order to measure the cost-effectiveness of various health interventions. "Disability-adjusted life years," or DALYs, are used to measure the effects of disease by combining the healthy years lost because of premature death and disability. This analysis shows that the complications of pregnancy and childbirth

are the greatest threat to women's lives and health in less developed countries (*see Figure 3*).

### What can be done to make pregnancy and childbirth safer?

Family planning can prevent many maternal deaths by helping women prevent unintended pregnancies and by reducing their exposure to the risks involved in pregnancy and childbirth. Family planning allows women to delay motherhood, space births, prevent unsafe abortions, protect themselves from sexually transmitted infections (STIs) — including HIV/AIDS — and stop childbearing when they have reached desired family size.

Maternal deaths can also be prevented with existing health knowledge and technology. All pregnant women, even healthy women, face some unpredictable risks — 15 percent of pregnancies require special medical care. Thus women and their families and communities need to be able to recognize the symptoms of complications and have access to medical care when complications arise. Governments can make pregnancy and childbirth safer for mothers and their newborns by taking some basic steps.

**Ensure recognition of complications of pregnancy and delivery.** Many women, especially in rural areas, live far from sources of adequate obstetric care. Families and birth attendants need to be aware of the warning signs of complications and must act quickly to get women in need to health facilities. Prenatal care providers can give women information about where to seek care for pregnancy complications. Prenatal care can also give women information about appropriate diet and other healthy behaviors. Prenatal care should include screening and treatment for STIs and anemia, as well as detection and treatment of pregnancy-induced hypertension. A study in Nepal showed that giving women low-dose supplements of vitamin A during pregnancy reduced maternal infections and death.

**Ensure access to essential obstetric care.** Trained midwives at the community level can manage or stabilize some complications — for example, by providing women with antibiotics for infections or with injections to prevent excess bleeding. Midwives can also have an important role in community education and providing referrals to health facilities.

Wherever possible, communities should have specific plans for transporting women who suffer the most serious complications during childbirth to facilities that can provide most or all of the elements of essential obstetric care, or EOC. EOC includes the ability to perform surgery and provide anesthesia, blood transfusions, management of problem pregnancies (for example, women with anemia or hypertension), and special care for at-risk newborns. This care requires adequately trained professional staff, logistical support (to make sure intravenous drugs and other supplies are available when needed), and good supervision. Standard protocols for managing complicated deliveries can guide and coordinate the actions of health professionals.

**Provide postpartum care for mother and baby.** The majority of maternal deaths occur during the post-partum period. Immediate postpartum care can detect and manage problems arising after delivery, such as hemorrhage, infection, and problems with breastfeeding.

**Provide postabortion care.** Many women die of complications related to unsafe abortions. Unsafe abortion accounts for about 13 percent of maternal deaths worldwide, and in some countries, the percentage is much higher. Even in countries where abortion is legal, the services are often difficult to obtain because of the stigma attached to abortion, and because of the cost of the services. Women who have unsafe abortions need access to care to treat complications, such as infections, incomplete abortions, hemorrhages, and injuries to the cervix and uterus.

### Raise awareness of safe motherhood

Implementing a safe motherhood program requires commitment from public and private health services, as well as from leaders at the community level. A lack of political commitment at either the national or local level can undermine efforts to strengthen safe motherhood programs. The Safe Motherhood Initiative (SMI), launched in 1987 by UNFPA, the World Bank, and WHO, seeks to raise awareness about maternal mortality and to find solutions. This initiative, which has since been joined by UNICEF, UNDP, IPPF, and the Population Council, sponsored a technical

meeting in 1997 to reaffirm the commitment to reducing maternal mortality.

Implementing the steps outlined above will require resources and sustained effort, but can result in many saved lives. In Sri Lanka, the site of the SMI's 1997 Safe Motherhood Technical Consultation, the number of maternal deaths has dropped dramatically in the past fifty years. Sri Lanka now has one of the lowest maternal mortality ratios in the less developed world. Among other factors, a nationwide expansion of the health care system and improved midwifery skills are credited with this decline. Sri Lanka has had a major increase in the proportion of births attended by trained personnel, and in 1996, over 94 percent of births occurred in local hospitals.

In other countries, program designers are testing interventions that will save lives. In a rural area of Bangladesh, for example, a research project provided a combination of interventions. Midwives and community health workers taught families about the warning signs of complications, and how women could be transported for care in emergencies. The project also increased women's access to skilled health care providers and facilities equipped to handle complications. Boats served as ambulances to bring women with serious complications to facilities that were open 24 hours a day.

Improvements in health services are also being linked with community education about maternal health. John Snow International's MotherCare project, for example, has worked in six countries (Bolivia, Egypt, Guatemala, Honduras, Indonesia, and Pakistan) to collect information through community assessments that have helped them develop behavior change communication strategies to save the lives of mothers and newborns. In Bolivia, MotherCare used "autodiagnosis," a method in which community members identify their maternal and newborn health problems and create and implement a plan of action to solve them. The project was so successful that the methodology was incorporated into the Ministry of Health's national health strategy and implemented throughout Bolivia.

Researchers and program managers continue to search for ways to design programs that will reduce the burden of disability and death for mothers, their newborns and their families. With collaboration among political leaders, health care program designers, practitioners and communities, pregnancy and childbirth can be safer.

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