AT A GLANCE

Safe Motherhood:

Promoting Health for Women Before, During, and After Pregnancy 2004

"Improving maternal health requires a national public health strategy that is culturally and linguistically appropriate and ensures that women receive high-quality health services, including family planning counseling, prenatal and pregnancy care, and care after childbirth for both physical and mental health needs."

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
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Safe motherhood begins before conception with proper nutrition and a healthy lifestyle. It continues with appropriate prenatal care, the prevention of complications when possible, and the early and effective treatment of any complications that do occur. The ideal result is a labor at term without unnecessary interventions, the delivery of a healthy infant, and a healthy postpartum period in a positive environment that supports the physical and emotional needs of the woman, infant, and family.

No Decline in Deaths in 20 Years

In the United States, two to three women die of pregnancy complications each day. From 1900 to 1982, deaths from pregnancy complications in the United States declined dramatically. In 1982, deaths began to level off, and there has been no marked decrease since that time. Yet studies indicate that as many as half of all deaths from pregnancy complications could be prevented if women had better access to health care, received better quality of care, and made changes in their health and lifestyle habits.

The leading causes of pregnancy-related deaths are hemorrhage, blood clot, high blood pressure, infection, stroke, amniotic fluid in the bloodstream, and heart muscle disease.

Large Racial, Ethnic, and Age Disparities

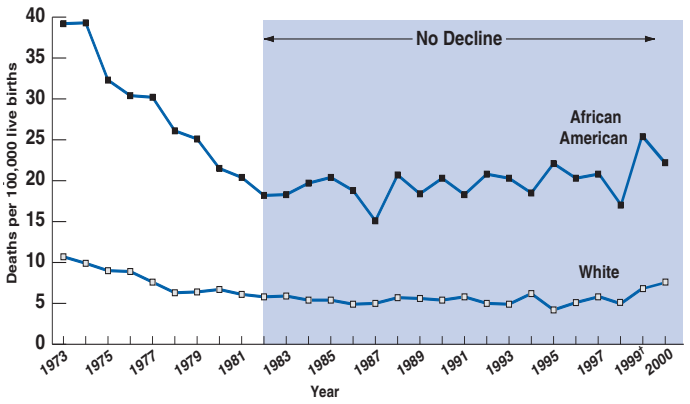
A woman's race, ethnicity, country of birth, and age are associated with her risk of dying of pregnancy complications. For example,

- The risk of death for African American women is almost four times that for white women.
- The risk of death for Asian and Pacific Islander women who immigrated to the United States is two times that for Asian and Pacific Islander women born in the United States.
- The risk of death is nearly three times greater for women 35–39 years old than for women 20–24 years old. The risk is five times greater for women over 40.

Complications Are Costly

Complications before delivery account for more than 2 million hospital days of care and over $1 billion each year in the United States. These figures would be higher if they included complications that occur during and after delivery.

African American and White Women Who Died of Pregnancy Complications,* United States



* Annual number of deaths during pregnancy or within 42 days after delivery, per 100,000 live births.

† The apparent increase in the number of maternal deaths between 1998 and 1999 is the result of changes in how maternal deaths are classified and coded.

Source: CDC, National Center for Health Statistics.

Deaths Are Only Part of the Picture

Public health still has much to learn about the physical and mental effects of pregnancy complications and their short-term and long-term impact on the health of women, infants, and families. Because 4 million women give birth each year in the United States, even small advances in research and prevention efforts can improve the quality of life for hundreds of thousands of women. The most common pregnancy complications include

- Ectopic pregnancy.
- High blood pressure.
- Complicated delivery.
- Premature labor.
- Depression.
- Infection.
- Diabetes.
- Hemorrhage.

Other health risks—such as domestic violence, smoking, and substance abuse—can jeopardize the health of both mother and infant even though these risks have not traditionally been thought of as pregnancy complications. Because women seek health care during pregnancy, this time presents an important window of opportunity for safeguarding the health of mothers and reducing their long-term health risks. CDC and its partners can improve the well-being of women throughout their lives, not just during pregnancy, and ensure a healthier future for women and their families.

CDC's Leadership

One of CDC's most important leadership roles is in gathering accurate, useful data. CDC works to improve both data collection methods and the accuracy of data. Good data not only provide the framework for effective action but also can be used to monitor emerging health topics such as assisted reproductive technology.

Pregnancy Mortality Surveillance System (PMSS)

Through the PMSS, CDC works with state health departments and other organizations to identify and gather information on pregnancy-related death. CDC uses PMSS data to examine

- Trends in pregnancy-related death.
- Risk factors for pregnancy-related death.
- Racial, ethnic, and age disparities in pregnancy-related death rates.
- Specific conditions leading to death.

To collect this data, states must determine whether the woman died during or within a year of pregnancy and, if so, whether the death was due to complications of the pregnancy. Some states have created maternal mortality review committees that specialize in performing this review process. The goal of these committees is to better understand how to reduce the number of pregnancy-related deaths. To help state review committees benefit from the expertise and experience of review committees in other states, CDC is collaborating with the Health Resources and Services Administration's Maternal and Child Health Bureau, the American College of Obstetricians and Gynecologists, the Association of Maternal and Child Health Programs, and the states to publish a monograph of promising practices for improving the maternal mortality review process.

Pregnancy Risk Assessment Monitoring System (PRAMS)

CDC and the states use PRAMS to collect data on women's behaviors and experiences before, during, and immediately after pregnancy. PRAMS surveys are conducted in 31 states and New York City and cover 62% of all U.S. births. (See map on page 4.) The data help to identify groups of women at high risk for health problems, monitor changes in their health status, and measure progress in improving the health of mothers and infants.

Conducting Innovative Research

Because ensuring safe motherhood begins long before conception and continues after birth, CDC research examines issues ranging from fertility and contraception to delivery and postdelivery. As part of this framework, CDC studies pregnancy-related deaths and complications. These are some of the research questions being studied:

- Why are black women more likely than white women to die of pregnancy complications?
- How do risk factors for women who die of serious pregnancy complications differ from those for women who survive?
- Can data from managed care organizations be used to identify pregnancy complications?
- How often do labor and delivery complications occur?

Smokeless Tobacco Use During Pregnancy

In response to the growing perception that using smokeless tobacco is safer than smoking, CDC is exploring the effects of smokeless tobacco use on pregnancy. Previous research on the safety of smokeless tobacco has not included pregnant women. An analysis of Swedish birth registry data suggests that smokeless tobacco use during pregnancy may be associated with increased risk of preterm delivery and pre-eclampsia. CDC plans to conduct a similar analysis of data from parts of the United States where rates of smokeless tobacco use among women are high. Understanding the effects of smokeless tobacco use on pregnancy will increase our overall knowledge of how tobacco exposure harms pregnant women and their infants.

Sudden Infant Death Syndrome

Although the overall rate of sudden infant death syndrome (SIDS) in the United States has declined by 57% since 1990, rates have declined less among non-Hispanic black and American Indian infants. Moreover, SIDS remains the leading cause of death among infants (aged 1–12 months). CDC is investigating reasons for the racial disparities in SIDS rates. In addition, CDC is collaborating with experts to improve the consistency of SIDS diagnoses by revising national guidelines for investigating sudden, unexplained infant deaths.

CDC's Partnerships to Promote Safe Motherhood

CDC supports the advancement of safe motherhood through partnerships with other agencies and organizations. These collaborative efforts help to build more productive and meaningful programs.

Research on Perinatal Depression

During a series of meetings in 2002–2003, eight federal agencies and offices within the U.S. Department of Health and Human Services (HHS), led by the Office on Women's Health, established priorities for research to fill gaps in our knowledge of factors that affect maternal health. These agencies also made a commitment to coordinate their efforts to address these research issues.

Perinatal depression will be the first issue addressed by this collaborative effort. Previous research has shown that depression is one of the leading causes of disability among women and that depression could be especially common among women during and immediately after pregnancy. However, there are no clear recommendations for screening women for depression during pregnancy and the postpartum period. As a first step toward developing recommendations, the federal agencies are funding a review of the evidence related to perinatal depression.

Smoking and Maternal and Child Health

Smoking during pregnancy is the single most preventable cause of illness and death among mothers and infants. CDC's Maternal and Child Health Smoking-Attributable Mortality, Morbidity, and Economic Costs is an Internet-based program that allows users to estimate the number of smoking-attributable deaths, the years of potential life lost, and the cost of health care for infants with illnesses related to maternal smoking in the United States.

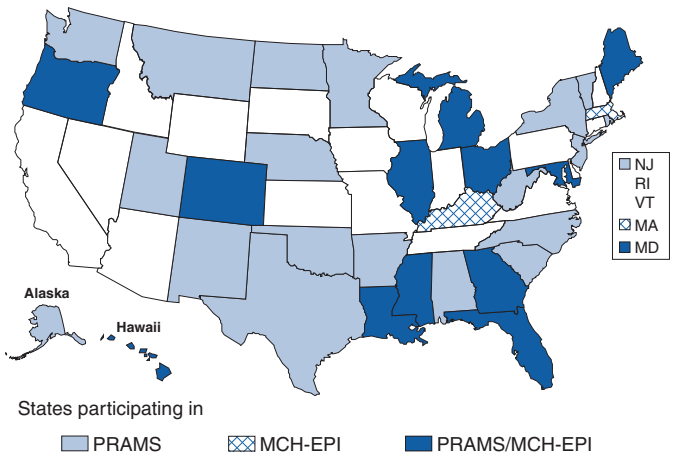
Health Needs of American Indians and Alaska Natives (AI/AN)

AI/AN women are at greater risk of pregnancy complications and adverse pregnancy outcomes than most American women. CDC is collaborating with the Indian Health Service, AI/AN leaders, and other partners to lower this risk by promoting maternal and child health in AI/AN communities and developing a research agenda.

Maternal and Child Health Epidemiology Program (MCH-EPI)

Through MCH-EPI, state and local health departments strengthen their ability to collect, analyze, and use data to develop health policies and programs for women, children, and families. This Health Resources and Services Administration/CDC program provides epidemiologists to 14 states and the Indian Health Service. MCH-EPI also sponsors courses, conferences, and Internet activities for epidemiologists and other public health staff.

State-Based Efforts to Promote Safe Motherhood, 2003



Future Directions

Public health must invest in research to determine why African American women are more likely than white women and women of other racial and ethnic minorities to die of pregnancy complications; to identify ways to reduce infant deaths caused by prematurity; and to determine why disparities in maternal and infant health continue to exist. Results of this research must be used to develop interventions to reduce pregnancy-related illness and death. We must work together to ensure the health of women before, during, and after pregnancy.

For more information or additional copies of this document, please contact the Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Mail Stop K–20, 4770 Buford Highway NE, Atlanta, GA 30341-3717; (770) 488-6250. ccdinfo@cdc.gov • http://www.cdc.gov/reproductivehealth