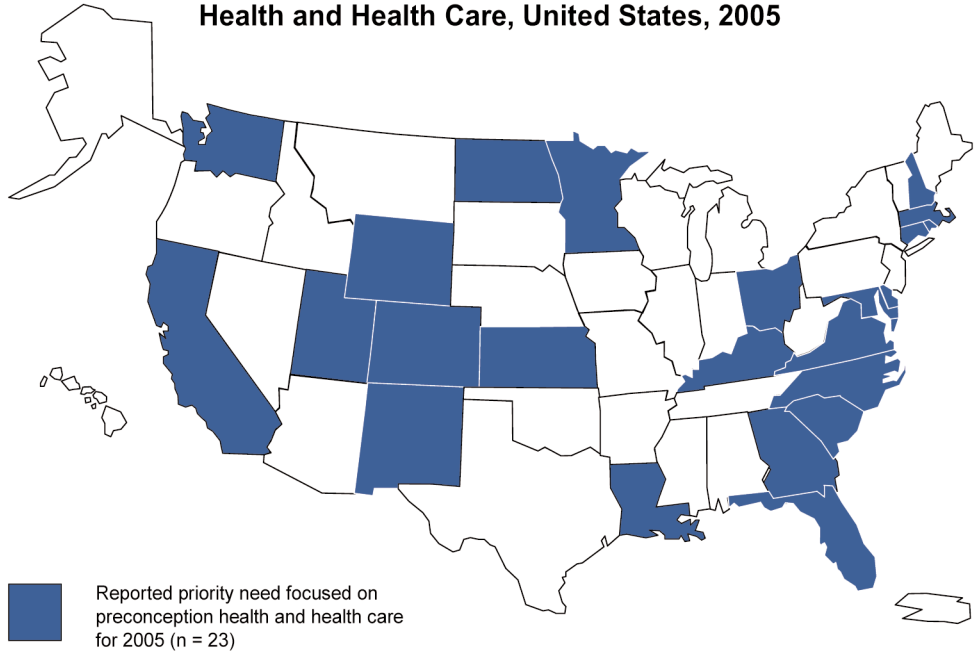
# Preconception Health and Care, 2006

**State Title V Priority Needs Focused on Preconception Health and Health Care, United States, 2005**



Reported priority need focused on preconception health and health care for 2005 (n = 23)

Source: Title V Information System. Data accessed Nov. 15, 2005 from: https://perfdata.hrsa.gov/mchb/mchreports/Search/core/measureindicatemenu.asp

"Preconception health promotion guidance can provide prospective parents with an opportunity to prevent the preventable and to know they did all they desired to encourage a healthy pregnancy and infant."

*–Preconception Health Promotion: A Focus for Women's Wellness. March of Dimes, 2003*

"Optimizing a woman's health before and between pregnancies is an ongoing process that requires access to the full participation of all segments of the health care system."

*–Committee Opinion, Number 31. American College of Obstetricians and Gynocologists, September 2005*

## What Is Preconception Care?

Preconception care is a set of interventions that identify and modify biomedical, behavioral, and social risks to a woman's health and future pregnancies. It includes both prevention and management, emphasizing health issues that require action before conception or very early in pregnancy for maximal impact. The primary target population for preconception care is women of reproductive age, although men are also targeted by several components of preconception care. The overarching goal of preconception care, as described in reports and recommendations of the American Academy of Pediatrics, American Academy of Family Physicians, and the American College of Obstetricians and Gynecologists, is to provide
1) screening for risks,
2) health promotion and education, and
3) interventions to address identified risks.

## Why is Preconception Care a Public Health Concern?

Adverse birth outcomes are a persistent problem in the United States. Maternal and child health outcomes, such as maternal and infant mortality, preterm births, and low birth weight babies, are often used as indicators of the overall status of health in a population.

Prenatal care became a mainstream intervention in the 1980s and has since succeeded in reaching most women in the United States. Despite this accomplishment and significant breakthroughs in medical science, in recent years maternal and infant health has improved very little and some problems have worsened.

Adverse pregnancy outcomes remain a prevalent health problem: 12% of babies are born premature, 8% are born with low birth weight, and 3% have major birth defects. Of women giving birth, 31% suffer pregnancy complications. Risk factors for adverse pregnancy outcomes remain prevalent among women of reproductive age. For example, 11% of women smoke during pregnancy, and 10% consume alcohol. Of women who could get pregnant, 69% do not take folic acid supplements, 31% are obese, and about 3% take prescription or over-the-counter drugs that are known teratogens. In addition, about 4% of women have preexisting medical conditions, such as diabetes, that can negatively affect pregnancy if unmanaged. All of these factors pose risks to pregnancies but could be addressed with proper health interventions.

This situation is a major public health concern, suggesting the need for an improved national approach to ensuring healthy birth. Prenatal care, which usually begins at week 11 or 12 of a pregnancy, comes too late to prevent a number of serious maternal and child health problems. The fetus is most susceptible to developing certain problems in the first 4–10 weeks after conception, before prenatal care is normally initiated. Because many women are not aware that they are pregnant until after this critical period, they are unable to reduce the risks to their own health and that of their baby unless intervention begins before conception. Several effective preconception interventions, such as smoking cessation, obesity control, folic acid supplementation, and some medication adjustments, take months to implement and therefore must begin long before conception.

Each child born with an intellectual disability or a comparable condition leads to direct and indirect societal costs over his or her lifetime of more than $1 million. Adverse pregnancy outcomes avoided through preconception care represent both an alleviation of human suffering and a reduced burden on the health system.

Preconception care is critical to improving the health of the nation. Healthy People 2000 set a goal of 60% of primary care physicians providing age-appropriate preconception care, yet only about one in four providers currently do so for the majority of the women they serve. Preconception care could succeed in improving maternal and child health where the current paradigm is failing, but most providers don't provide it, most insurers don't pay for it, and most consumers don't ask for it.

## What Are CDC And Its Partners Doing About Preconception Care?

| Intervention | Proven Health Effect |
|---|---|
| Folic acid supplementation | Reduces occurrence of neural tube defects by two thirds. |
| Rubella vaccination | Provides protection against congenital rubella syndrome. |
| Diabetes management | Substantially reduces the threefold increase in prevalence of birth defects among infants of diabetic women. |
| Hypothyroidism management | Adjusting Levothyroxine dosage early in pregnancy protects proper neurological development. |
| Hepatitis B vaccination for at risk women of reproductive age | Prevents transmission of infection to infants and eliminates the risks to the woman of hepatic failure, liver carcinoma, cirrhosis, and death due to HBV infection. |
| HIV/AIDS screening and treatment | Allows for timely treatment and provides women (or couples) with additional information that can influence the timing of pregnancy and treatment. |
| STD screening and treatment | Reduces the risk of ectopic pregnancy, infertility, and chronic pelvic pain associated with Chlamydia trachomatis and Neisseria gonorrhea, and also reduces the possible risk to a fetus of fetal death or physical and developmental disabilities, including mental retardation and blindness. |
| Maternal PKU management | Prevents babies from being born with PKU-related mental retardation. |
| Oral anticoagulant use management | Switching women off teratogenic anticoagulants (i.e., Warfarin) before pregnancy avoids harmful exposure. |
| Antiepileptic drug (AED) use management | Changing to a less teratogenic treatment regimen reduces harmful exposure. |
| Accutane use management | Preventing pregnancy for women who use Accutane, or ceasing Accutane use before conception, eliminates harmful exposure. |
| Smoking cessation counseling | Completing smoking cessation before pregnancy can prevent smoking-preg associated preterm birth, low birth weight and other adverse perinatal outcomes. |
| Eliminating alcohol use | Controlling alcohol binge drinking and/or frequent drinking before pregnancy prevents fetal alcohol syndrome and other alcohol-related birth defects. |
| Obesity control | Reaching a healthy weight before pregnancy reduces the risks of neural tube defects, preterm delivery, diabetes, cesarean section, and hypertensive and thromboembolic disease that are associated with obesity. |

Currently, a number of preconception interventions show clear, evidence-based effectiveness in improving pregnancy outcomes (*chart at left*).

Health conditions amenable to preconception care also include hypertension, thromboembolic disease, repetitive pregnancy loss, eating disorders, substance abuse, domestic violence, and poor nutrition. Addressing these problems before pregnancy can not only yield known benefits to women's health but also positively impact later pregnancy outcomes.

Preconception health promotion should be directed toward all women, with or without known health risks. Specific issues to address with women before pregnancy are nutrition and weight; use of tobacco, alcohol, medications, and illicit drugs; occupational and environmental hazards; domestic violence; infections and immunization; screening for medical disease; family planning; and genetic risks. The challenge for preconception health care providers is to reach all women with these interventions in time for them to be effective in reducing risks to women and their pregnancies.

Through a 2-year collaborative effort, CDC has successfully aligned the efforts of a number of its external partners and internal programs. An internal workgroup on preconception care, with participants representing 22 programs from across CDC, was convened in 2003–2004. CDC also convened a Select Panel on Preconception Care in 2005, which included experts from a variety of national organizations concerned about the health of women, infants, and families. Together, the CDC internal workgroup and the Select Panel developed the following recommendations for improving preconception health and care.

- **Individual responsibility across the life span.** Encourage each woman and every couple to have a reproductive life plan.
- **Consumer awareness.** Using information and tools appropriate across varying age, literacy, health literacy, and cultural/linguistic contexts, increase public awareness of the importance of preconception health behaviors and increase individuals' use of preconception care services.
- **Preventive visits.** As part of primary care visits, provide risk assessment and counseling to all women of childbearing age to reduce risks related to pregnancy outcomes.

## What Are CDC And Its Partners Doing About Preconception Care? (Cont'd.)

- **Interventions for identified risks.** Increase the proportion of women who receive interventions as follow-up to preconception risk screening, focusing on high-priority interventions.
- **Interconception care.** Use the interconception period to provide intensive interventions to women who have had a prior pregnancy ending in adverse outcome (e.g., infant death, low birth weight or preterm birth).
- **Prepregnancy check ups.** Offer, as a component of maternity care, one prepregnancy visit for couples planning pregnancy.
- **Health coverage for low-income women.** Increase coverage among low-income women to improve access to preventive women's health, preconception, and interconception care.
- **Public health programs and strategies.** Infuse and integrate components of preconception health into existing local public health and related programs, including emphasis on women with prior adverse outcomes.
- **Research.** Augment research knowledge related to preconception health.
- **Monitoring improvements.** Maximize public health surveillance and related research mechanisms to monitor preconception health.

These recommendations are designed to achieve four goals that guarantee optimal reproductive health outcomes for all women and couples:

1. Improve the knowledge, attitudes, and behaviors of men and women related to preconception health.
2. Ensure that all U.S. women of childbearing age receive preconception care services—screening, health promotion, and interventions—that will enable them to enter pregnancy in optimal health.
3. Reduce risks indicated by a prior adverse pregnancy outcome through interventions in the interconception (interpregnancy) period that can prevent or minimize health problems for a mother and her future children.
4. Reduce the disparities in adverse pregnancies outcomes.

## Future Directions

With the support of external partners and the Select Panel, CDC will continue to promote preconception health and care with providers, policy makers, and the public in accordance with action steps that have been agreed upon for each of the recommendations. Publishing and disseminating the recommendations will begin in 2006. Next steps will include efforts to increase awareness among public and private providers; to identify opportunities to integrate preconception care programs and policies into state, local, and community health programs; to develop tools and guidelines for practice; and to evaluate existing programs for feasibility and demonstrated effectiveness.

For more information or additional copies of this document, please contact:

**Centers for Disease Control and Prevention**
**National Center on Birth Defects and Developmental Disabilities**

1600 Clifton Road NE, MS E-87, Atlanta, GA 30333
Phone: 404-498-3988 E-mail: EEdding@cdc.gov