

2007
National Perinatal Foundation Statement
The Case for Preconception Health

The foundation of life-long health begins with a healthy fetus, who is directly dependant on a woman's state of health before and during pregnancy. In order to ensure optimal intergenerational health in our changing society, we must pay attention to supporting the health and healthy behaviors of women and men leading up to and during the reproductive years.

Statement of need.

- Current U.S perinatal and infant health statistics illustrate disturbing upward trends in prematurity, low birth weight and infant mortality, and persistently widening gaps between races compared to other industrialized nations. The proportion of infants born preterm, very preterm, low birthweight and very low birthweight all increased since 1980. Unacceptably high rates of perinatal mortality exist despite increased access to prenatal care and significant medical technological discoveries.
- Population health research links adverse health conditions of the pregnant mother and fetus with low birth weight and costly life-long medical complications, including cardiovascular disease, obesity, diabetes and developmental delays. When women who become pregnant have themselves been low birthweight infants, their children are more likely to be low birthweight. These adverse health statistics have far-reaching implications for national health, wealth, resource utilization and the ability to compete successfully in the international marketplace.
- Multidisciplinary systematic research to reduce the incidence of preterm birth and other perinatal complications by diagnostic and therapeutic interventions during pregnancy has met only limited success, primarily through improving survival of infants already born prematurely.
- Many of the factors that contribute to adverse pregnancy outcomes are rooted in health conditions and health behaviors of reproductive age men and women prior to conception. The

proportion of women with medical complications of pregnancy or chronic prepregnancy disease increased since 1980.

How do we define Preconception Health and Preconception Health Care?

- Preconception health denotes a set of positive health behaviors and decision making by a reproductive age woman and her male partner in a supportive family and community. Preconception health is created through thoughtful personal behaviors, high quality clinical care, social and community relationships, and health policies.
- Development of healthy behaviors and quality care before pregnancy ensures a healthy start for newborns. Several analyses of the long term effects of low-birthweight surviving infants demonstrate that infants born healthy and in the full term of pregnancy encounter major medical diseases less frequently and later in life than do infants born prematurely and less healthy.
- 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. This definition is based on broad, multidisciplinary support
- The primary target population for preconception care is women of reproductive age, although men are also targeted by several components of preconception care.
- To promote prevention, the core components of preconception care are: 1) screening and assessment, 2) health promotion and education, and 3) brief interventions (e.g., immunization updates, smoking and tobacco cessation efforts).
- Relatively simple and cost effective methods focused on preconception health of all women can improve pregnancy outcomes dramatically.
- The CDC Select Panel on Preconception Care emphasized that further research may determine other factors and further practice guidelines to improve pregnancy outcomes.

Improving preconception health and health care.

- Improving preconception health and health care is the focus of the *Recommendations to Improve Preconception Health and Health Care– United States* (MMWR, April 21, 2006), which were developed with a panel of 35 experts convened by the CDC and scientists from 22 programs within CDC. The Select Panel -- comprised of experts from the fields of obstetrics, gynecology, nursing, public health, midwifery, epidemiology, dentistry, family practice, pediatrics, and health policy -- summarized the published research on preconception health care, evaluated best and emerging practice models, and provided ten recommendations to guide changes in programs, practice, and policy in reproductive age families. These recommendations focus on changes in consumer knowledge, clinical practice, public health programs, health-care financing, and data and research activities.
- The ten recommendations are aimed at achieving four goals: 1) to use evidence based approaches to improve the reproductive health knowledge and attitudes and behaviors of men and women of childbearing age (aged 15–44 years); 2) promote universal access to high quality preconception care, including screening, health promotion, and intervention; 3) prevent subsequent morbidity and mortality for women who have had previous adverse outcomes; and 4) reduce social and racial/ethnic disparities in both care and outcomes.(See Table 1.)
- The group concluded that early prenatal care is often too late to improve pregnancy outcomes. Rather, attention should focus on medical conditions and health behaviors prior to pregnancy, especially in women with racial, ethnic, and socio-economic disparities, in order to realize improved perinatal outcomes.
- Interventions and clinical practice guidelines of several medical specialties already exist to address several risk factors and health behaviors known to affect pregnancy outcome. (See Table 2). However, interventions are either not systematically delivered or standard tools of care do not exist, and there is a need to develop innovative approaches to deliver and finance bundles of preconception interventions

Establishing preconception health as the tipping point to improved pregnancy outcomes.

Improved pregnancy outcomes are the desired result of thoughtful health behaviors and preventive care requires several approaches, with emphasis on life-long positive health behaviors. The National Perinatal Foundation supports:

- individual patient/consumer education about the importance of health and well-being prior to pregnancy;
- professional education and training to improve clinical provider practice, particularly in primary care;
- social marketing geared to unique community needs and risks;
- state and national health policies to assure health coverage for more women of childbearing age;
- research and demonstration projects that serve as the foundation for evidence-based practice in the future.

These approaches, coupled with a plan to focus national attention on preconception health should provide the kind of tipping point that leads to meaningful social changes and improved pregnancy outcomes.

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Table 1 Preconception Health and Health Care

The CDC internal workgroup and the Select Panel recommendations for improving preconception health and care:

1. Individual responsibility across the life span.

Encourage each woman and every couple to have a reproductive life plan.

2. Consumer awareness.

Increase public awareness of the importance of preconception health behaviors and increase individuals' use of preconception care services using information and tools appropriate across varying age, literacy, health literacy, and cultural/linguistic contexts.

3. Preventive visits.

At primary care visits, provide risk assessment and counseling to all women of childbearing age to reduce risks related to the outcomes of pregnancy.

4. Interventions for identified risks.

Increase the proportion of women who receive interventions as follow up to preconception risk screening, focusing on high priority interventions.

5. 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 birthweight or preterm birth).

6. Pre-pregnancy checkups.

Offer, as a component of maternity care, one pre-pregnancy visit for couples planning pregnancy.

7. Health coverage for low-income women.

Increase coverage among low-income women to improve access to preventive women's health, preconception, and interconception care.

8. Public health programs and strategies.

Infuse and integrate components of preconception health into existing local public health and related programs, including emphasis on those with prior adverse outcomes.

9. Research.

Augment research knowledge related to preconception health.

10. Monitoring improvements.

Maximize public health surveillance and related research mechanisms to monitor preconception health.

Table 2. Evidence-Based Preconception Interventions

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
Detection and Treatment of HIV/AIDS, Hepatitis, and Other Infections	Allows timely treatment and provides women (or couples) with additional information that can influence the timing of pregnancy onset
Maternal PKU Management	Prevents babies from being born with PKU-related mental retardation
Oral Anticoagulant Use Management	Switching women off teratogenic anticoagulants (ie. Warfarin) before pregnancy avoids harmful exposure
Antiepileptic Drugs (AEDs) 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-associated preterm birth, low birthweight and other adverse perinatal outcomes
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
Eliminating Alcohol Use	Controlling alcohol binge drinking and/or frequent drinking before pregnancy begins prevents fetal alcohol syndrome and other alcohol-related birth defects

