

THE HEALTH BENEFITS AND COST-EFFECTIVENESS OF PRENATAL CARE

Prenatal care monitors the health of women during pregnancy, when special health problems can arise. It may include smoking cessation programs and nutrition counseling. Preconception care for women with certain medical conditions ensures that the woman is in good health before she conceives, reducing her risks during pregnancy. Preconception care and prenatal care also ensure that women have healthy babies.

- ✓ Providing women with prenatal care reduces their risk of maternal mortality.
- ✓ Prenatal care results in about \$3 in savings for every \$1 spent on high-risk women.
- ✓ One perinatal care program in California resulted in net savings of \$2,200 per participant.

Pregnant women have special health care needs that can be met through prenatal care.

- Women with diabetes, anemia, hypertension, and sexually transmitted diseases require prenatal care to decrease their risk of maternal mortality and improve birth outcomes (National Center for Health Statistics, 1994).
- Together, preeclampsia and eclampsia (illnesses related to hypertension) occur in five to seven percent of all deliveries and are the second most common source of maternal mortality, after infection; both are associated with lack of prenatal care (Kasper, 1994).

- About eight percent of women develop hypertension as a result of becoming pregnant (Harlap et al., 1991). Their conditions should be monitored through prenatal care.

Prenatal care, including smoking cessation programs and nutrition counseling, can prevent low birth weight, which is associated with poor infant health and infant mortality:

- The majority of infant deaths occur among low birth weight babies (Shapiro et al., 1980).

- **Low birth weight babies have longer hospital stays and more medical complications** (Shapiro et al., 1980; Leveno et al., 1985).
- **The nation spent between \$2.4 and \$3.3 billion dollars on neonatal intensive care in 1985**, most of it attributable to low birth weight babies. This is an average of \$14,287 per infant (U.S. General Accounting Office, 1987). In that same year, the average cost for a baby of normal weight was approximately \$720 (Schwartz, 1989).

HEALTH BENEFITS OF PRENATAL CARE

Pregnant women with specific medical conditions require prenatal care to reduce their risk of medical complications or mortality:

- **Preconception and prenatal care help diabetic women to stabilize their blood sugar level before and during pregnancy**, reducing their risk of maternal and fetal complications (Elixhauser et al., 1993).

Because many women do not see a doctor regularly, prenatal visits can be used to educate women about health risks and improve health:

- A Canadian study of 224 pregnant non-smokers found that immediate smoking cessation interventions during the prenatal care visit have two to three times the rates of success as programs that refer women elsewhere (O'Connor et al., 1992).
- **Women can be treated for syphilis and other sexually transmitted diseases during prenatal care visits**, improving maternal health and preventing miscarriages, premature birth, and transmission to the offspring (Ernst et al., 1993). Pregnant women at high risk of syphilis who are not receiving prenatal care can be screened in emergency rooms (Ernst, 1993).

Prenatal care reduces the likelihood that a woman will die during pregnancy:

- A study of all maternal deaths in the United States between 1979 and 1986 found that a **woman who received no prenatal care was 5.7 times more likely to die in child birth than a woman who receives adequate care** (Koonin et al., 1991; Syverson et al., 1991).

Prenatal care is the most effective way to reduce low birth weight and infant mortality:

- **Between 27 and 66 low birth weight births would be averted for each 1,000 additional prenatal care recipients and between five and eight lives would be saved**, according to a study of county level data representing 80 percent of the U.S. population (Joyce et al., 1988).

- **Rates of low birth weight could be reduced by 15 percent among whites and 12 percent among blacks if all pregnant women began prenatal care in the first trimester of pregnancy and continued with the schedule of visits recommended by the obstetric profession, according to a 1981 analysis of single live births in the United States (Brown, 1985).**

- **A study of 4,619 primarily low-income women in Dallas who gave birth in 1980 found that prenatal care improves birth outcomes:**

- **Those women receiving prenatal care delivered low birth weight babies at one third the rate of women who received no such care (Leveno et al., 1985).**

- **The perinatal mortality rate for the women in Dallas who received prenatal care was 16 per 1,000, less than one-fourth the rate of 73 per 1,000 for women who received no prenatal care (Leveno et al., 1985).**

- **The OB Access program aimed at low income women in California reduced the incidence of low-weight births. Only 4.7 percent of the 5,244 participants gave birth to a low-weight baby, compared to 7.1 percent of a comparable group of non-participants. The health benefits of this program are greater than those found in other studies that conclude that prenatal care is cost-effective (Korenbrod, 1984).**

**DESPITE THE CLEAR BENEFITS
OF PRENATAL CARE,
MANY WOMEN GO WITHOUT IT:**

- **Financial constraints and lack of insurance coverage are two important factors that reduce a woman's ability to receive adequate prenatal care (Brown, 1985).**

- **The role of insurance in increasing access to prenatal care was demonstrated by a General Accounting Office study, finding that only 46 percent of Medicaid recipients and 41 percent of uninsured women began prenatal care in their first month of pregnancy, while 84 percent of insured women with uncomplicated pregnancies received such care (U.S. General Accounting Office, 1987).**

POTENTIAL COST SAVINGS OF PRENATAL CARE

- **If use of prenatal care services provided to high risk women were to reduce low birth weight births to 10 percent (from the current rate of 11.5 percent), the net savings in medical costs would equal \$12.4 million a year in 1985, according to an Institute of Medicine study. If the percent of low birth weights was reduced to nine percent, the savings would be \$28.9 million (Brown, 1985).**

- **If the prenatal care provided to all high risk women receiving public assistance reduced the low birth weight rate by only 0.7 percentage points, the program would pay for itself (Brown, 1985).**

COST-BENEFITS

- A study by the Institute of Medicine analyzed the costs and benefits of enrolling a population of high-risk pregnant women in prenatal care programs found that in the first year after birth, the **savings would be \$3 for every \$1 spent on prenatal care** (Brown, 1985).
- A study of all women giving birth in New Hampshire between 1981 and 1984 found that the state would have **saved \$2.57 for each \$1 spent on prenatal care** (Gorsky and Colby, 1989).
- Both these studies note their figures are conservative because they do not include longer term costs that occur if there is a disability.
- The State of California saved **\$2,200 on mother-baby in-patient hospital care for each woman who participated in the Comprehensive Perinatal Program** when compared to expenditures on mothers and babies who did not receive prenatal care even when the cost of providing the prenatal care was taken into consideration (Moore et al., 1986).
- The University of San Diego Medical Center would have had **net savings of \$877,600 per year between 1981 and 1984** if all women who gave birth there had received prenatal care (Moore et al., 1986).
- The immediate savings would be **\$96 million (1985 dollars)** if 20 percent of low birth weight infants cared for at major urban hospitals increased their weight into the next birth weight category, based on data from a 1985 stratified sample of urban hospitals (Schwartz, 1989).
- The GNP would have increased between **\$6.4 and \$12 billion** due to increases in the future earnings of children and their parents over the children's projected lifetimes if, in 1985, the U.S. rate of infant mortality and the rate of disabled low birth weight infants had been cut in half (National Commission to Prevent Infant Mortality, 1988).

This Research-in-Brief is part of IWPR's Research and Resource Kit on *Preventive Health Services for Women: Benefits and Cost-Effectiveness*, produced by Stephanie Aaronson and Nicoletta Karam with the assistance of Ellen Cutler in August 1994. The project was funded by the Nathan Cummings Foundation, with additional funds for dissemination provided by The Ford Foundation. A related annotated bibliography is available from the Institute for Women's Policy Research, describing the studies cited in this fact sheet as well as additional studies that are of interest.

IWPR has produced eight fact sheets and annotated bibliographies on the benefits and cost-effectiveness of women's preventive health services relating to breast cancer, cervical cancer, domestic violence, family planning, mental health, prenatal care, osteoporosis, and sexually transmitted diseases. Each fact sheet/bibliography pair is available from IWPR for \$5.00; the entire Kit, which includes all topics and comes in a three-ring binder, is available from IWPR for \$20.00. Members of IWPR receive discounts on this kit and all publications. Please contact IWPR for information on membership and bulk order discounts.