



Colorado Department  
of Public Health  
and Environment

## Prenatal Plus Program

### Cause for Concern

Low infant birthweight is one of Colorado's most critical public health problems. A low birthweight infant weighs 5 pounds, 8 ounces or less (less than 2500 grams). The health and quality of life for low birthweight infants is often compromised for many years, including possible neurological deficits, sensory deficits, learning problems, central nervous system conditions and an increased risk for attention-deficit hyperactivity disorder. Other long-term health risks include an increased risk for obesity, diabetes, stroke and osteoporosis. This results in substantial cost to families and society in the form of increased medical care, increased educational needs and lower lifetime job achievement.

### Program Description

Prenatal Plus is a Medicaid-funded program that provides care coordination, nutrition and mental health counseling to Medicaid-eligible pregnant women in Colorado who are at a higher risk for delivering low birthweight infants. These services complement medical prenatal care by addressing the lifestyle, behavioral and non-medical aspects of a woman's life likely to affect her pregnancy.

### Scope

The goal of the Prenatal Plus Program is to improve birth outcomes by reducing the number of low birthweight infants born to Medicaid-eligible pregnant women in Colorado. In 2006, the low birthweight rate for infants born to Prenatal Plus participants who remained in the program through delivery was 11.4 percent. Without Prenatal Plus services, the low-birthweight rate for the Prenatal Plus population was expected to be 13.7 percent. This expected rate is based on the outcomes of women on Medicaid with the same risks who did not receive Prenatal Plus services.<sup>i</sup>

In 2006, 2,137 women were enrolled in the Prenatal Plus Program, and a total of 1,576 mothers completed the program. More than half (54 percent) of those participants who completed the program were able to resolve **all** of their risks, and the resulting low birthweight rate for their infants was 7.4 percent. This is well below the 9.0 percent low birthweight rate for all births in the state of Colorado in 2006.

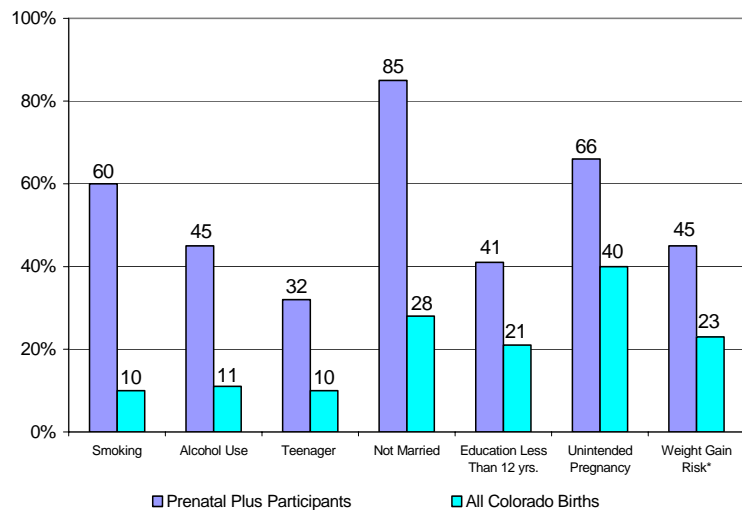
Participants in the Prenatal Plus Program achieve high resolution rates in all five of the identified risk categories (smoking, psychosocial problems, inadequate weight gain, drug, and alcohol use). Among women who were smokers when they began the program, 64 percent quit before they

Picture a Healthy Baby



Prenatal Plus

Comparison of Characteristics and Initial Risk Factors  
Prenatal Plus Participants vs. All Women Giving Birth  
in Colorado, 2006



\* Weight gain risk includes only women with inadequate prenatal weight gain, defined as any weight gain below the appropriate line on the weight gain grid, weight loss below prepregnancy weight in the first trimester, weight loss of two pounds or more in the second or third trimester, or weight gain of less than two pounds per month in the second or third trimester.

delivered. Of the women who reported psychosocial problems, 72 percent resolved their risk during pregnancy. For women with inadequate weight gain, 69 percent gained the recommended amount of weight. A total of 90 percent of the women who reported using drugs quit, and 99 percent of the women who reported alcohol use stopped drinking during pregnancy.

## Economic Burden

Results of a 2001 program cost study showed that for every \$1 spent on the Prenatal Plus Program, \$2.48 is saved in Medicaid costs annually<sup>2</sup>. In 2006, the Prenatal Plus Program saved Medicaid an estimated \$2.9 million in health care costs for the 2,137 women who participated in the program and their infants in the first year of life.

## Challenges

Only a fraction of the women who are eligible for Prenatal Plus services in Colorado are receiving the services. An estimated 17,000 additional Medicaid-eligible women could benefit from program services. Increasing provider participation in the program could result in significant health benefits for more clients, along with a greater cost savings for Medicaid.

## Primary Strategies

Prenatal Plus team members empower women to make lifestyle changes that positively impact their pregnancies and result in healthy babies by using a client-centered counseling approach. This approach focuses on allowing the client to define her own goals, while the team offers encouragement and assistance in achieving those goals. The multidisciplinary team consists of a care coordinator, registered dietitian and mental health professional. The Prenatal Plus team works with each client to:

- Improve her psychosocial and nutritional health status
- Assist her in developing and maintaining a healthy lifestyle during pregnancy and beyond, especially discouraging the use of tobacco, alcohol and illicit drugs
- Increase her ability to appropriately use resources, including medical and social services.

Clients are seen in the office and at home for visits throughout pregnancy and up to 60 days postpartum. The program has established that “model care” services include a minimum of 10 visits with each client. Providing model care has shown the best outcomes for risk reduction among the clients, and has yielded healthier birth outcomes among their babies.

## Statewide Partnerships

Prenatal Plus services are offered statewide at county health departments, county nursing services, community health centers and non-profit agencies.

## Additional Information

Annual reports, program locations and eligibility criteria can be found at [www.cdphe.state.co.us/pp/womens/PrenatalPlus.html](http://www.cdphe.state.co.us/pp/womens/PrenatalPlus.html).

### SOURCES/CITATIONS

- Information adapted from *The Effects of the Prenatal Plus Program on Infant Birthweight and Medicaid Costs*, Judith E. Glazner, M.S., Brenda L. Beaty, M.S.P.H., University of Colorado Health Sciences Center, December, 2002
- <sup>1</sup> Prenatal Plus Program 2006 Annual Report, accessed 1-24-08 at [www.cdphe.state.co.us/pp/womens/PrenatalPlus.html](http://www.cdphe.state.co.us/pp/womens/PrenatalPlus.html)