

The Prenatal Plus Program ★

Location: Colorado (statewide)
 Date submitted: 11/2008
 Category: **Promising Practice**

BACKGROUND

Low birthweight is one of Colorado's most critical public health problems; the rate has consistently been one of the highest in the nation, 9.0% in 2006 and 2007. The health and quality of life for low birthweight infants are often compromised for many years, resulting in substantial cost to families and society due to increased medical needs, long-term learning problems, and dependence on programs that serve special needs individuals and ongoing challenges to families caring for these infants.

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. The goal is to reduce the number of low birthweight infants born to women in the program. The Prenatal Plus Program has consistently demonstrated that improved birth outcomes can be achieved among high-risk populations when behavioral, nutritional and psychosocial risks are identified and resolved.

The Prenatal Plus Program components were developed as the result of an extensive evaluation of the Helping Moms Program, which included data analysis of health outcomes, focus groups with participants, and surveys of program staff.

PROGRAM OBJECTIVES

The overall 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. To achieve this goal, the Prenatal Plus team works with each client to:

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

TITLE V/MCH BLOCK GRANT MEASURES ADDRESSED

- #3:** Percent of very low birth weight (VLBW) infants born in a hospital with a Level III+ Neonatal Intensive Care Unit (NICU)
- #4:** A) Percent of infants who are ever breastfed and B) Percent of infants breastfed exclusively through 6 months
- #5:** Percent of infants placed to sleep on their backs

TARGET POPULATION SERVED

The program serves pregnant women on Medicaid. Approximately 21 agencies currently provide Prenatal Plus services in 22 counties in Colorado. In 2007, 1,893 women were enrolled in the Prenatal Plus Program statewide. A total of 1,458 mothers completed the program, delivering 1,480 infants.

PROGRAM ACTIVITIES

The Prenatal Plus Program uses the Client-Centered Counseling approach with all participants to address a variety of issues that have been shown to have a negative impact on birth outcomes. Client-centered counseling is an approach to working with clients that allows both the provider and the client to focus on and prioritize small goals during each session. Providers are required to assist the client in developing a goal during one of the first three visits and then follow-up on this goal at subsequent visits. Women are enrolled in the program through a variety of referral sources including Medicaid application sites, WIC, medical providers and other community agencies. The women are screened for eligibility using an intake questionnaire, which addresses risk factors most likely to contribute to low birthweight. The program is voluntary, therefore women selecting to participate in the program could be more likely to be motivated to have a healthy pregnancy and therefore more likely to change behaviors. The key health areas targeted by this program are healthy weight, smoking/cessation and depression.

Weight: Providers are required to track and identify weight gain risk using a weight gain grid based on the Institute of Medicine guidelines.

Smoking: Current research recommends complete cessation, therefore providers are required to follow-up with mothers who smoke to encourage complete cessation and then identify whether or not women quit smoking by the end of the pregnancy. Initial research on smoking during pregnancy indicated that even a reduction in smoking had benefits. Therefore, the data that were collected tracked “reduction” as well as “cessation”.

Depression: As awareness of perinatal depression has grown in recent years, the program has incorporated a screening and intervention protocol to be followed for all women in the program. A recent addition to the program protocol is the use of the Edinburgh Postpartum Depression Screen to identify symptoms of depression during and after pregnancy.

Finally, in order to encourage providers to offer model care for all women in the program, the Medicaid reimbursement structure has been adapted to offer a greater monetary incentive for completing the required number of visits (10) for model care.

The eligibility enrollment form (Prenatal Plus Intake Form) was developed using evidence shown in the research to effect low birthweight. Model care for the program is defined as client enrollment in the first or second trimester (prior to 28 weeks gestation) and continuation through delivery and up to 60 days postpartum. The client must receive a minimum of 10 contacts with the Prenatal Plus staff.

PROGRAM OUTCOMES/EVALUATION DATA

The Women’s Health Unit at the Colorado Department of Public Health and Environment collects data for all Prenatal Plus clients including client information, the number of Prenatal Plus visits, risk factors, behavioral risk resolution information and birth outcomes. In addition, an analysis is completed using data from the Colorado PRAMS and birth certificates to make a comparison to those women on Medicaid with similar risks, but who are not enrolled in the Prenatal Plus Program.

Results

There was a reduction in the rate of low birthweight infants born to Prenatal Plus Program participants. In 2007, the low birthweight rate for infants born to Prenatal Plus participants who remained in the program through delivery was 10.7%. Without Prenatal Plus services, the low birthweight rate for the Prenatal Plus population was expected to be 13.8%. This expected rate is based on the outcomes for women on Medicaid with the same risks who did not receive Prenatal

Plus services. The Prenatal Plus rate is 22.5% lower than the expected rate.

This reduction in the low birthweight rate resulted in an estimated savings of 2.7 million dollars in health care costs for Medicaid during 2007. The savings are based on expected costs for the 1,893 women who received Prenatal Plus services in 2007 and their infants through their first year of life if they had not participated in the program. Reductions in the low birthweight rate are directly related to the decreases in risk achieved by the women enrolled in Prenatal Plus. The Prenatal Plus Program continues to achieve high resolution rates in all five of the risk categories:

- Among women who were smokers when they began the program, 66% quit before they delivered.
- Among women who reported psychosocial problems, 80% resolved their risk during pregnancy.
- For women with inadequate weight gain during pregnancy, 72% gained the recommended amount of weight before delivery.
- A total of 92% of the women who reported using drugs quit.
- 99% of the women who reported alcohol use abstained during pregnancy.

In addition, for each of the risk categories, more women were able to resolve their risk factors if they received model care (10 visits). Ninety-one percent of participants receiving model care resolved all or some of their risks compared to 77% among those who received fewer visits, a difference that is statistically significant ($p < .001$). The percentage of clients receiving model care increased to 63% in 2007.

The significant differences in low birthweight infants among women who resolved individual or multiple risks and women who did not resolve those risks underscores the fact that providing assistance to achieve risk resolution results in fewer low birthweight infants.

PROGRAM COST

Based on agency cost analysis information, the average cost/client was \$1,192 in 2007. Medicaid reimburses the program at 4 different levels, based on the number of visits received—\$850 for 11+ visits, \$750 for 10 visits, \$400 for 4-9 visits, \$150 for 1-4 visits – although this only covers on average ~45% of the program costs. Local agencies are responsible for finding other resources to provide the local subsidy for uncompensated costs. Each agency is required to have a care coordinator, mental health professional and registered dietitian as part of the Prenatal Plus team. At the state level, Medicaid currently provides the Colorado Department of Public Health and Environment with \$108,000 to cover costs for staff salaries and other administrative activities, although this does not cover all the costs of administering the program.



ASSETS & CHALLENGES

Assets

- A report in the late 80's created a funding opportunity for case management, and grant dollars from the Maternal and Child Health Block Grant made it possible to conduct the initial pilot program.
- In 1995, the Colorado Department of Health Care Policy and Financing approved expanding Medicaid benefits to include enhanced prenatal care coordination services through the Prenatal Plus Program.

Challenges

- Obtaining reimbursement for services was difficult.
- Recruiting clients and providers took time.

Overcoming Challenges

- Prenatal Plus is currently working on getting higher reimbursement rate for providers. The increase was approved by the legislature and staff members are in the process of determining the best method for implementation.
- Provider outreach materials have been developed so that local agencies can take them to potential referral sources and inform them about the benefits of the program.
- Client outreach materials are given to providers and other referral sources so that they can be posted in appropriate offices to increase client awareness of the program.

LESSONS LEARNED

- The multidisciplinary aspect of the program is an essential component that has allowed participants to receive an effective intervention from a qualified professional according to their identified risks.
- Encouraging a higher number of visits with the client has consistently been shown to yield better results.
- It is important to routinely evaluate various areas of the program for the purposes of quality improvement and highlighting gaps in service.

FUTURE STEPS

This program is currently a designated service in the Medicaid state plan and has approved funding from the Colorado legislature. Next steps include improved reimbursement and increased provider and client recruitment.

COLLABORATIONS

The Prenatal Plus Program is a partnership between the Colorado Department of Public Health and Environment/Women's Health Unit and the Colorado Department of Health Care Policy and Financing/Acute Care Benefits Section. The Women's Health Unit oversees

polycymaking, administrative responsibilities, quality assurance activities, data collection and analysis, and training. The Department of Health Care Policy and Financing provides the funding for services through direct reimbursement to local providers and audits providers for compliance with Medicaid funding policies. Prenatal Plus services are provided at county health departments, county nursing services, community health centers and non-profit agencies throughout the state of Colorado.

PEER REVIEW & PROGRAM REPLICATION

Ricketts, SA., Murray, EK., Schwalberg R. "Reducing Low Birthweight by Resolving Risks: Results from Colorado's Prenatal Plus Program", American Journal of Public Health, November 2005, Vol. 95, No. 11, 1952-1956.

Prenatal Plus services are provided in a variety of different settings throughout the state of Colorado, including county health departments, county nursing services, community health centers and non-profit agencies. Results have been seen consistently at all agencies since the start of the program in 1996.

RESOURCES PROVIDED

The Prenatal Plus Program has a designated website containing information about the program:

<http://www.cdphe.state.co.us/pp/womens/PrenatalPlus.html>

Key words: Infant Mortality, Low Birthweight, Prenatal Care, Medicaid, Cost-effectiveness

★ This program was highlighted at AMCHP's 2009 Annual Conference with a Promising Practice award.

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