

2011 BOULDER COUNTY PUBLIC HEALTH (BCPH) ANNUAL REPORT

PROGRAM NUMBER 460: GENESIS PROGRAM

Goal: The goal of this program is to promote healthy behaviors in Boulder County's pregnant and parenting teen population, optimally impacting these families for generations to come.

Needs Statement: Liz Schorr, in her landmark book *Within Our Reach* notes, "The baby of an adolescent mother is born into peril... Teenage childbearing may impose its heaviest burden on the next generation when it comes of age... They are more likely to have children themselves while still adolescents, their school dropout rates are higher, their achievement is lower, and they are more frequently retained in grade. The children of teenage mothers also start sexual activity earlier than their peers, are more frequently suspended from school, and more often run away from home, get drunk, and hurt someone seriously." Intensive and comprehensive early intervention geared toward enhancing bonding and attachment can mitigate the negative consequences of adolescent childbearing.

There are approximately 250 births to teens per year in Boulder County. GENESIS received 257 referrals to the program in 2009 resulting in 205 new teen families enrolling in GENESIS. Teens were not enrolled for various reasons, including miscarriage or abortion prior to enrollment, client was referred to the Nurse-Family Partnership (NFP) Program, the teen refused services, the family moved prior to enrollment, or the teen did not follow through on multiple intake appointments. In 2009, 626 families participated in GENESIS.

The first time national teen birth rates increased since 1991 took place in 2006; rates continued to rise in 2007, resulting in a 5% increase from 2005-2007. However, Boulder County did not see a rise in teen births during that timeframe; in fact, there was a 8.5% decline during that period in Boulder County.¹ GENESIS is clearly able to positively impact subsequent pregnancies among current clients, contributing to the drop in county birth rates. With implementation of the GENESISTER Program, it is expected that teen pregnancy rates will remain steady, if not further decline.

GENESIS continues to have remarkable success in preventing subsequent births to the teen parenting population. National rates of subsequent births within two years typically run 20-25%.² In 2007, the Colorado subsequent birth rate was 27.2%.³ The GENESIS subsequent birth rate was well below national averages, averaging between 5-10% (in 2009, the rate was 7%). The recidivism rate in teens under age 17 giving birth to their first babies is estimated to be 31%; yet in 2009⁴; only 9% of GENESIS clients who entered the program under age 17 had a repeat birth.

Educational attainment is critical to GENESIS client success for multiple reasons. Clearly, higher educational attainment translates into greater earning potential and decreased poverty rates. In addition, as noted in Healthy People 2020, academic success and achievement are strong predictors of overall adult health outcomes. Proficient academic skills are associated with lower rates of risky behaviors and higher rates of healthy behaviors. In addition, high school graduation leads to lower rates of health problems and risk for incarceration, as well as enhanced financial stability during adulthood. High school dropout is frequently an overlooked public health issue. A recent study measuring the impact of selected behavioral risk factors rates high school dropout, along with poverty and smoking, as imposing the greatest burden of disease in the United States.⁵

GENESIS has identified postpartum depression (PPD) as a service need for clients beginning in 2009. PPD is becoming an increasing concern among maternal/child health workers. Recent studies indicate that up to 80% of PPD cases go undiagnosed, particularly in high-risk populations. The incidence of PPD is currently estimated at approximately 20% of all pregnant women, and prevalence is higher in women with the following risk factors: young (under 25), low income, unmarried, and lower educational attainment – putting GENESIS clients at particular risk. PPD can occur both during and after a pregnancy and can affect pregnancy outcomes; severe depressive symptoms during a pregnancy doubles the risk of a preterm delivery.⁶ The impact of a depressed mother on an infant can be significant and has been associated with cognitive and speech delays, increased visits to urgent care/emergency rooms, disruptive behavior in childhood, and insecure attachment between mother and child.⁷

In 2011, the GENESIS team will pilot a new objective to reduce childhood obesity rates among GENESIS babies. Recent research indicates that obesity prevention needs to start as soon as prenatally. In addition, poor feeding practices, insufficient sleep, and televisions in bedrooms are more prevalent among minority children. Risk factors among mothers include gestational diabetes, low birth-weight, and pregravid overweight BMI.⁸ Although research is new and ongoing in this area, there is universal

agreement that very early intervention plays an important role in obesity prevention. The most recent data available (CDC, 2008) indicates that obesity rates among low-income preschool age children was 14.5% and 18.5% among Hispanic children.

All GENESIS objectives align with Healthy People 2020 (HP 2020) objectives and will be listed parenthetically at the bottom of each GENESIS objective. A key to these objectives is included at the end of this plan.

¹ State of Adolescent Sexual Health in Colorado 2009

² Klerman, L. "Another Chance: Preventing Additional Births to Teen Mothers" May 2009.

³ National Campaign to Prevent Teen Pregnancy

⁴ Op cit, Klerman.

⁵ Frudenberg, et.al "Reframing School Dropout as a Public Health Issue," Preventing Chronic Disease, 10/2007

⁶ Marlene Busko, Desiree Lie: Human Reproduction, 10/27/2008

⁷ Brian Stafford, MD, PHD, Kempe Center: Perinatal Depression, Anxiety and Trauma 11/17/2006

⁸ Pediatrics: Racial/Ethnic Differences in Early Life Risk Factors for Childhood Obesity, March 1, 2010

Planning Assumptions:

Large caseloads in the Longmont area remain an area of concern. The growing need for services has been addressed by redirecting staff to Longmont from other sites and supplementing staff hours with social work intern hours. Ten-year birth trend data (1995-2005) demonstrates a 26% increase in the number of teen births in Longmont. In 2008, Temporary Assistance for Needy Families (TANF) funds enabled the program to add an additional .75 FTE to address the increased demand for intakes; however, this funding was not secure and ended in June 2009. No replacement funding source has been identified, yet the need still exists. Staff will continue to seek innovative solutions to address this need.

The Prenatal Plus Program has been moved from the Colorado Department of Public Health and Environment (CDPHE) to the Colorado Department of Health Care Policy and Financing (HCPF). Part of this move entailed a thorough assessment of the program, which concluded in December 2010. Significant modifications to protocol, billing practices, and reimbursement structure are anticipated, but it's too early to predict the impact on GENESIS and whether expected revenue with increase or decrease. There is a small possibility that GENESIS will not be able to continue with the program based upon the new criteria for inclusion.

Number of Clients: 539

| OBJECTIVE | SERVICES/ACTIVITIES | EVALUATION | ACTUALS COMPLETED | RESULTS* | COMMENTS |
|---|---|---|---|----------|----------|
| 1. GENESIS will deliver supportive prenatal services to approximately 95% pregnant GENESIS clients. (MICH HP 2020 1, 5, 7, 10, 16, 17, 24) | a. GENESIS staff will assist with: <ul style="list-style-type: none"> ▪ Nutritional education and/or referral. ▪ Substance use education and/or referral. ▪ Childbirth education and/or referral. ▪ Tobacco cessation and/or referral. ▪ Transportation to necessary prenatal appointments. ▪ Stress reduction. ▪ Case conferencing with prenatal providers. ▪ Counseling and/or referral to address psy- | <ul style="list-style-type: none"> ▪ Chart notes will reflect staff activity related to prenatal support. ▪ Data will be managed on the Statistical Package for the Social Sciences (SPSS). | <ul style="list-style-type: none"> ▪ 97% of pregnant GENESIS clients received prenatal services. | M | |

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| OBJECTIVE | SERVICES/ACTIVITIES | EVALUATION | ACTUALS COMPLETED | RESULTS* | COMMENTS |
|--|---|---|--|-----------|---|
| <p>2. Less than 8% of babies born to GENESIS clients will be low birth weight:</p> <ul style="list-style-type: none"> ▪ The percentage of low birth weight babies born to GENESIS clients will be lower than the percentage of low birth weight babies born to non-GENESIS Boulder County females 20 years and under. ▪ The percentage of low birth weight babies born to GENESIS clients will be lower than the percentage of low birth weight babies born to Colorado women 20 years and under. <p>(MICH HP 1, 7,17)</p> | <p>chosomal concerns relating to pregnancy.</p> <ul style="list-style-type: none"> ▪ Prenatal Plus enrollment. <p>a. Staff will collaborate closely with health care providers and WIC staff to reinforce health and nutritional recommendations that contribute to healthy birth weight outcomes.</p> <p>b. All GENESIS clients who are eligible will receive Prenatal Plus services.</p> | <ul style="list-style-type: none"> ▪ The proportion of low birth weight babies born to participating GENESIS teens, non-participating Boulder County teens, and Colorado teens will be tracked through birth data provided by CDPHE. | <ul style="list-style-type: none"> ▪ Data is currently being analyzed and will be provided once it is available. | <p>NM</p> | |
| <p>3. At least 85% of GENESIS clients will receive the Edinburgh Postnatal Depression Scale (EPDS) screening at intake and within 8 weeks postpartum; 95% of clients who score above “10” will be referred for treatment.</p> <p>(MHMD HP 2020 1, 6, 15)</p> | <p>a. Staff will administer the EPDS screen at both intake and then within eight weeks postpartum.</p> <p>b. Client scoring higher than 10 (indicating depression risk) will be referred for treatment.</p> <p>c. Staff will educate clients about the signs and symptoms of PPD and will provide clients with information on self-care, coping, and support services that are available.</p> | <ul style="list-style-type: none"> ▪ The percentage of clients receiving EPDS screens and scoring higher than 10 will be tracked through client records. | <ul style="list-style-type: none"> ▪ 90% of clients were screened for postpartum depression using the EPDS. ▪ 100% of clients who scored above “10” received a referral for treatment. | <p>M</p> | <ul style="list-style-type: none"> ▪ Although 100% of clients scoring above “10” were referred for treatment, only 87% followed up on treatment. ▪ Clients struggle with both stigma and cultural norms which create barriers to accepting treatment referrals. |
| <p>4. At least 70% of mothers participating in the program will initiate breastfeeding.</p> <ul style="list-style-type: none"> ▪ At least 30% will breastfeed for 6 | <p>a. Staff will encourage and support participating GENESIS teens in breastfeeding their infants through at least 6 months postpartum by</p> | <ul style="list-style-type: none"> ▪ The proportion of participating GENESIS mothers who breastfeed during early postpartum and until babies are six months of age will be | <ul style="list-style-type: none"> ▪ 95% of clients initiated breastfeeding. ▪ 30% continued through 6 months. | <p>E</p> | <ul style="list-style-type: none"> ▪ With emerging evidence that breastfeeding is an effective strategy in reducing childhood obesity, this outcome becomes |

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| months postpartum. (MICH HP 2020 12, 27) | b. providing educational, referral, and emotional support. The nurse will do home visits with clients postpartum to troubleshoot breastfeeding problems. | tracked through client self-report and staff observation. | | | even more significant. |
| 5. No more than 15% of mothers participating in the program will have a subsequent birth within 2 years of the birth of their first GENESIS child. <ul style="list-style-type: none"> ▪ For clients entering the program prior to age 17, no more than 15% will have a subsequent birth within 3 years of the birth of their first GENESIS child. ▪ For clients entering the program at age 17 years or older, no more than 15% will have a subsequent birth prior to age 20. (FP HP 2020 1, 5, 6, 8, 10, 11, 13, 15) | a. Staff will educate clients about the importance of creating at least a two-year time span between births to enhance bonding and subsequent emotional stability in children. b. Staff will assist clients in meeting personal goals that extend beyond the role of parenting, such as school or career, lessening the appeal of a second child. c. Staff will arrange home visits with a Women's Health nurse who can provide hormonal birth control in the home. | <ul style="list-style-type: none"> ▪ The proportion of repeat births and progress toward educational/career advancement to participating GENESIS clients will be tracked through program data/case notes. | <ul style="list-style-type: none"> ▪ Only 5% of clients experienced a second birth within 2 years of the birth of their first child. ▪ For clients entering the program prior to age 17, 0% experienced a subsequent pregnancy. ▪ For clients entering the program at age 17 and over, only 4% experienced a subsequent pregnancy. | E | <ul style="list-style-type: none"> ▪ Of the many services provided by GENESIS, subsequent pregnancy prevention has the most profound and positively significant impact on young families. ▪ National recidivism rates run between 20-25% and are even higher (31%) for youth under age 17. |
| 6. GENESIS staff will assess and provide individualized parenting/nurturing education/activities to 95% of clients to enhance parent/child bonding. MICH HP 2020 9, 12; EMC HP2020 5) | a. Activities will include: <ul style="list-style-type: none"> ▪ Warm Welcome visit. ▪ Referral to CIP, Special Connections, Child Protection, when appropriate. ▪ Attendance at GENESIS group/peer support activities. ▪ Home visits to address clients' unique parenting needs. ▪ Parenting education. ▪ Age-appropriate child development education. | <ul style="list-style-type: none"> ▪ The proportion of participating GENESIS teens who have enhanced parent/child bonding will be tracked through case manager assessment. | <ul style="list-style-type: none"> ▪ 96% of clients received parenting education and role modeling. | M | |
| 7. At least 85% of GENESIS babies will score at an ap- | a. Staff will administer the ASQ, 2 nd edition, annually | <ul style="list-style-type: none"> ▪ The proportion of participating GENESIS babies scoring | <ul style="list-style-type: none"> ▪ 98% of GENESIS babies scored at an age- | E | <ul style="list-style-type: none"> ▪ Screening for and addressing developmental |

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| <p>appropriate developmental age according to the Ages & Stages Questionnaire (ASQ), 2nd edition.</p> <p>(EMC HP 2020 2, 4)</p> | <p>for participating GENESIS babies.</p> <p>b. Staff will provide intervention and referrals for babies scoring below the normal developmental range.</p> <p>c. The GENESIS nurse will provide Children with Special Needs (CSN) Program services to GENESIS babies requiring more intensive interventions.</p> | <p>at an appropriate developmental level will be tracked through ASQ scores.</p> | <p>appropriate developmental level on the ASQ.</p> | | <p>lags increases school readiness among this disparate population.</p> |
| <p>8. At least 65% of GENESIS clients who are eligible will actively pursue one of the following:</p> <ul style="list-style-type: none"> ▪ Vocational training ▪ School ▪ Employment activities <p>(AH HP 2020 1, 10)</p> | <p>a. Staff will assist clients in school enrollment and will encourage attendance.</p> <p>b. Staff will collaborate with teen parenting school programs to optimize clients' educational achievement.</p> <p>c. Staff will refer clients to job training resource centers and will assist them with the resume and job application process.</p> | <ul style="list-style-type: none"> ▪ Chart notes will reflect client educational and vocational achievement. | <ul style="list-style-type: none"> ▪ 81% of clients were involved in educational/employment activities. | <p>E</p> | <ul style="list-style-type: none"> ▪ The link between poverty and long-term health outcomes has been well documented. ▪ Helping teen parent families to work toward self-sufficiency has a profound impact on their overall life expectancy, as well as positively impacting positive health outcomes for their children. |
| <p>9. At least 70% of GENESIS clients will be utilizing one of the following highly effective, long-term methods of contraception: Home-based contraception, Implanon, or the IUD.</p> <p>(FP HP 2020 1, 2, 6, 8, 10, 11, 13, 15)</p> | <p>Staff will:</p> <p>a. Check in with postpartum clients at least twice per reporting period on current contraceptive use.</p> <p>b. Provide and review "Got Sex" informational packets with all clients.</p> <p>c. Transport clients to family planning clinics, as necessary.</p> <p>d. Educate clients regarding the importance of and reasons behind spacing children by at least two years.</p> <p>e. Assist in accessing birth control funds for clients who experience financial barriers to family planning services.</p> <p>f. Encourage career development as an alternative to multiple children at a young</p> | <ul style="list-style-type: none"> ▪ Chart notes will reflect staff activity related to contraceptive education and support. ▪ Utilization of contraception methods will be tracked on the SPSS database. | <ul style="list-style-type: none"> ▪ 80% of clients utilized a highly effective, long-term method of contraception (Depo Provera, IUD, Implanon). | <p>E</p> | <ul style="list-style-type: none"> ▪ Helping clients make sound family planning decisions relates directly to the program's impressive pregnancy prevention outcomes. ▪ Given the re-emergence of the national debate on the "morality" of contraception, it becomes even more imperative that GENESIS continue to redirect the issue back to what it truly is: a public health concern. |

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| | age. g. Problem-solve with clients who are experiencing difficulties with side effects from contraceptive methods. h. Enroll and maintain clients in the Home-based Contraception Program. | | | | |
| 10. Less than 15% of GENESIS babies will have a Body Mass Index (BMI) at or above the 95 th percentile (obese) at 2 years and at 3 years of age. (NWS HP 2020 6, 7, 8, 9, 10, 11, 14, 17, 19-9) | Staff will: a. Encourage breastfeeding through six months of age for GENESIS clients. b. Educate families on appropriate feeding guidelines; discourage early introduction of solids. c. Educate families on appropriate sleep schedules. d. Encourage families to increase exercise opportunities and decrease screen time. e. Discuss limiting/eliminating high sugar beverages and educate on alternatives to fast food. f. Collaborate with WIC and community health centers (CHCs) to provide clear and consistent messaging on healthy weight gain and nutrition. | <ul style="list-style-type: none"> ▪ BMI rates will be collected from WIC or CHC records at yearly intervals. ▪ In instances where the rates are not available, the GENESIS nurse will obtain BMI measurements when possible. | <ul style="list-style-type: none"> ▪ 8% of GENESIS toddlers (ages 2-3) had a BMI at or above the 95th percentile. | E | <ul style="list-style-type: none"> ▪ Childhood obesity prevention has become a priority for staff. ▪ GENESIS provides ongoing education, support, and case management to support families in making healthier meal choices and increasing their activity. |

STAFFING:

Key Staff Members: Andrea Poniers, Community Health Division Manager
 Jody Scanlon, GENESIS Program Manager

FTE: 11.47

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BUDGET:

Program Expenditures: \$691,171
 Number of Clients: 539
 Direct Cost per Client: \$1,282

| Source of Funds | Amount | % of Program |
|---------------------------------------|------------------|--------------|
| County Appropriation | \$262,032 | 37% |
| Boulder County GENESIS | 107,866 | 15% |
| City of Longmont GENESIS ¹ | 25,884 | 4% |
| City of Boulder GENESIS ² | 104,883 | 15% |
| MCH Block Grant ³ | 30,353 | 4% |
| Community Foundation ⁴ | 11,111 | 2% |
| Medicaid Reimbursement ⁵ | 40,636 | 6% |
| Vital Records Fees | 68,558 | 10% |
| Per Capita Funding | 49,752 | 7% |
| Miscellaneous Donations | 2,000 | <1% |
| Miscellaneous Revenue | 1,500 | <1% |
| Healthy Kids Initiative | 2,925 | <1% |
| TOTAL | \$707,500 | 100% |

¹ – Total Grant with Indirect: \$30,848
² – Total Grant with Indirect: \$125,000
³ – Total Grant with Indirect: \$120,929
⁴ – Total Grant with Indirect: \$13,000
⁵ – Total Grant with Indirect: \$40,636

Service Site

Service Hours

Boulder (Sundquist) Monday – Friday, 8:00 a.m. – 5:00 p.m.
 Longmont Monday – Friday, 8:00 a.m. – 5:00 p.m.
 Lafayette Monday – Friday, 8:00 a.m. – 5:00 p.m.

Healthy People 2020 Objectives:

Family Planning:

- Increase the proportion of pregnancies that are intended.
- Reduce the proportion of females experiencing pregnancy despite use of a reversible contraceptive method.
- Increase the proportion of females at risk of unintended pregnancy who used contraception at most recent sexual intercourse.
- Reduce pregnancy rates among females.
- Increase the proportion of sexually active adolescents aged 15-19 years who use contraception that both effectively prevents pregnancy and against disease. provides barrier protection
- Increase the proportion of adolescents who received formal instruction on reproductive health topics before they were 18 years old.
- Increase the proportion of sexually active women who received reproductive health services in the last 12 months.
- Increase the percentage of women in need of publicly supported contraceptive services and supplies who receive those services and supplies.

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Mental Health and Mental Disorders:

1. Reduce the suicide rate.
6. Increase the proportion of children with mental health problems who receive treatment.
15. Increase depression screening by primary care providers.

Adolescent Health:

1. Increase educational achievement of adolescents and young adults.
10. Increase the percentage of vulnerable adolescents who are equipped with the services and skills necessary to transition into an independent and self-sufficient adulthood.

Nutrition and Weight Status:

6. Increase the contribution of fruits to the diets of the population aged 2 years and older.
7. Increase the variety and contribution of vegetables to the diets of the population aged 2 years and older.
8. Increase the contribution of whole grains to the diets of the population aged 2 years and older.
9. Reduce consumption of saturated fat in the population aged 2 years and older.
10. Reduce consumption of sodium in the population aged 2 years and older.
11. Increase consumption of calcium in the population aged 2 years and older.
14. Eliminate very low food security among children in U.S. households.
15. Prevent inappropriate weight gain in youth and adults.
17. Reduce consumption of calories from solid fats and added sugars in the population aged 2 years and older.
- 19.9. Increase the proportion of persons aged 2 years and older who consume no more than 30 percent of calories from total fat.

Maternal, Infant, and Child Health:

1. Reduce the rate of child deaths.
5. Increase the proportion of pregnant women who receive early and adequate prenatal care.
7. Reduce low birth weight (LBW) and very low birth weight (VLBW).
9. Increase the percentage of healthy full-term infants who are put down to sleep on their backs.
10. Increase abstinence from alcohol, cigarettes, and illicit drugs among pregnant women.
12. Increase the proportion of mothers who breastfeed their babies.
16. Increase the proportion of women who attend a series of prepared childbirth classes.
17. Increase the proportion of mothers who achieve a recommended weight gain during their pregnancies.
24. Increase the percentage of women giving birth who attend a postpartum care visit with a health worker.
27. Decrease the percentage of breast-fed newborns who receive formula supplementation within the first 2 days of life.

Early and Middle Childhood:

2. Increase the proportion of children who are ready for school in all five domains of healthy development.
4. Increase the percentage of children with disabilities, birth through age 2, receiving early intervention services in home or community-based settings.
5. Increase the percentage of parents that use positive parenting and communicate with their doctors or other health care professionals about positive parenting.