# PREVENTING SECONDARY PREGNANCY IN ADOLESCENTS: A MODEL PROGRAM

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## Abstract:
The Dollar-A-Day program in Greensboro, North Carolina, was established in 1990 to prevent subsequent pregnancies in girls under 16 years of age who had already given birth to one child. Conceptualized by nursing professors and using principles from theories of adolescent development and social exchange, the program was planned and implemented in collaboration with nurses from the local health department. Weekly meetings featured food, an informal program focused on needs identified by members, setting of short-term goals, and an award of a dollar for each day they remained nonpregnant. After five years of operation with a series of small grants, only 15% of the 65 girls who had been enrolled in the program experienced subsequent pregnancies. Fhe success of the program convinced health department officials to incorporate Dollar-A-Day into their budget as a permanent service to the population of adolescents they serve. It remains as a model program for others to emulate.

## Article:
The problem of adolescent pregnancy continues to perplex and challenge health care providers in the United States. Although the issues associated with primary pregnancy in the adolescent population are routinely reported and discussed, the concerns related to subsequent pregnancies in this group are often overlooked. In this article, we highlight the problems associated with secondary pregnancy in adolescents and describe an intervention program that we established seven years ago. We believe that this successful, ongoing program is a model that other health care providers should consider.

### *The Problem*
The Unites States has the highest adolescent pregnancy rate in the industrialized world (Attico & Hartner, 1993). More than one million adolescents become pregnant each year, and more than half of those complete their pregnancies. In 1996 there were 505,313 births to girls under 20 years of age (Child Trends, 1997). These national statistics are reflected in reports from individual states. In North Carolina, for example, 22,251 pregnancies and 15,466 births were reported for girls age 19 and under in 1995 (Adolescent Pregnancy Prevention Coalition of North Carolina, 1996b).

Many of these young mothers go on to have other children during their adolescent years, but obtaining exact numbers is difficult because U.S. census data do not provide repeat pregnancy rates. However, Cockey (1997), asserted that of the teens who do get pregnant almost 17% become pregnant again with a year, and Attico and Hartner (1993) estimated that 60% of those who become pregnant before age 15 will have three children by age 19. The Adolescent Pregnancy Prevention Coalition of North Carolina (1997b) reported that 15 out of every 1000 girls ages 15 to 17 years had a second or higher-order pregnancy in 1992. Actual rates vary widely in reports of programs designed to prevent repeated pregnancy in adolescence. Jones and Mondy (1994), for example, reported that 25% of the girls participating in their multisite, pre- and postnatal intervention program had two or more pregnancies by age 18. Furstenberg (1976) initially found that approximately 50% of all adolescent mothers experienced a second pregnancy within three years of delivery of their first infant. In a later report of their landmark longitudinal study, Furstenberg, Brooks-Gunn, and Morgan (1987) revealed that after five years, about 33% had two or more pregnancies, and almost 17% had three children.

The costs of adolescent childbearing, measured in both economic and human terms, are steadily rising. In 1995 the cost to North Carolina taxpayers for welfare (Aid for Families with Dependent Children); food stamps; the Women, Infant, and Children's Food Supplement Program; and Medicaid for families begun by adolescents was reported at $795,000,000, although the amount actually may be as high as $1,107,390,317 (Adolescent Pregnancy Prevention Coalition of North Carolina, 1997a). Cockey (1997) reported that the total direct and indirect costs of adolescent pregnancy in the United States now surpass $34 billion annually. Furthermore, in the state of North Carolina, at least 10% of adolescent mothers deliver low birthweight infants. Neonatal intensive care costs in North Carolina in 1996 ranged from $3,000 to $250,000 per infant (Adolescent Pregnancy Prevention Coalition of North Carolina, 1997a).

Women who begin childbearing as adolescents have more children overall, have their children closer together, and report more of their births as unwanted than do other mothers (Attico & Hartner, 1993). Babies born to adolescent mothers are more likely to be raised in poverty-stricken households that are headed by single women. Young, single mothers are likely to cut short their education, permanently damaging their occupational status and limiting their earning power.

The economic, physical, and psychological consequences of adolescent pregnancy are compounded when young mothers experience subsequent pregnancies during their teen years (Attico & Hartner, 1993; Cockey,1997). Repeated pregnancy in adolescence is associated with failure to complete high school and reduced economic sufficiency (Jones & Mondy, 1994). If an adolescent mother can delay a second pregnancy, she has a better chance to mature physically and psychologically. Her opportunities to finish high school, plan for the future, and develop vocational skills are increased (Cockey, 1977; Jones & Mondy, 1994). Additionally, women who have at least a year between the birth of their child and becoming pregnant again have premature births less often than women who become pregnant too quickly (Moore, 1989).

Much effort in both the private and public sectors has been directed toward understanding the causes of these enormous problems and developing innovative plans to reduce the incidence of both primary and secondary pregnancy in adolescents. Fortunately, a small but continuing

decline in adolescent childbearing rates has been reported since 1991 (Child Trends, 1997). The Dollar-A-Day program reported in this article is one of the many initiatives contributing to the slow reduction of the birth rate to adolescents. As a secondary pregnancy prevention program patterned after the original in Denver, Colorado (Dolan & Goodman, 1989), our DollarA-Day program has touched the lives of 65 girls and helped most of them to delay subsequent pregnancies. Our story may encourage others to develop a similar program in their own community.

### *Theoretical Bases in Programs for Adolescent Mothers*

Theories of human development and social exchange are useful in conceptualizing intervention programs for adolescents. Erikson (1950) identified the development of identity as the major psychosocial task of the adolescent between the ages of 13 and 18. In the struggle to avoid role confusion, adolescents must integrate past learning, inner feelings, and future expectations. They face innumerable choices and must make decisions about friendships and lifestyle. Because young adolescents typically plan only for the present without any consideration of long-range consequences, pregnancy may occur unexpectedly. Adolescent mothers, then, must integrate the role of parent into their perception of self before a sense of personal identity is fully developed. The guidance and nurturance from adults who understand this stressful and confusing stage of development is essential to facilitating successful psychosocial development.

A basic premise of social exchange theory is that interactions of individuals are based on rewards they value. In any given interaction, the goal is to minimize costs and maximize profits (Homans, 1974). An adolescent has difficulty focusing on long-term goals such as education and career and may have difficulty understanding that remaining nonpregnant may result in rewards later in life. To prevent subsequent pregnancies, young mothers must be presented with desirable alternatives. Rewards for the achievement of short-term goals reinforce positive behaviors and provide an incentive for future actions.

Prior investigation suggests that programs for adolescent mothers should address such areas as self-esteem, vocational counseling, family life education, family planning, and interpersonal and institutional relations (Attico & Hartner, 1993; Black & DeBassie, 1985; Colleta, Hadler, & Gregg, 1991), Cockey (1997) concluded that five key principles are inherent to successful community efforts to reduce adolescent pregnancy: (a) involvement of parents and other adults, (b) maintenance of abstinence, (c) development of clear strategies for the future, (d) community involvement, and (e) sustained commitment (pp. 38–39). The problems associated with adolescent pregnancy are multifaceted, and no single approach to solving the problem has proven successful. Small groups of similar age peers who can give and take advice and provide mutual support are better than one-on-one counseling sessions with an adult, who may be viewed as an intruding parent (Fullar, Lum, Sprik, & Cooper, 1988; Moyse-Steinberg, 1990). There is some evidence that comprehensive work with small groups is an effective strategy (Fullar et al., 1988; Moyse-Steinberg, 1990). These findings were used in developing a successful intervention initiative to prevent secondary adolescent pregnancy that has lasted seven years and continues to operate today.

## *THE "DOLLAR-A-DAY" PROGRAM IN GREENSBORO, NC Planning*

In 1989 the three of us, who are part of the parent-infant nursing faculty at the University of North Carolina at Greensboro, met with the director of the county health department's family planning/maternity clinic to plan the local Dollar-A-Day program. In a spirit of collaboration, the director donated space for the meetings, provided a registered nurse to assist with the weekly meetings, and promised vigorous recruitment of participants in the clinics. We wrote proposals for grants to fund the program, provided guidance and assistance for the program, and one of us or a student assisted with each weekly meeting. The North Carolina Greater Triad Chapter of the March of Dimes funded the program for the first four years, and the Z. Smith Reynolds Foundation funded the program for the fifth year. Subsequently, the program has been operated with funds budgeted by the health department. Approximately $9500 was needed each year to operate the program.

To be selected for the program, mothers 16 years of age or younger had to be willing to attend a weekly meeting, stay in school, and state a desire to remain nonpregnant. The criterion of being age 16 or younger was thoughtfully established to provide girls with the opportunity to have at least one year in the program before graduating from high school. To develop attachment to a group and to change attitudes or behaviors requires an extended period of time and work. A simple contract stating the expectations for both participants and leaders was developed to formalize the adolescent mother's acceptance into the program.

### *Recruitment*

Initially, flyers advertising the program were placed throughout the city. However, most of the adolescents first accepted into Dollar-A-Day were recruited when they attended the family planning clinic located near the area where the meetings were held. The adolescents knew and liked the clinic nurses who assisted with the program, and their personal invitation to join the program was irresistible. Within a few months of the program's operation, the members themselves began to recruit eligible friends and bring them to the meetings. Full enrollment of the maximum 18 members was reached five months into the program. The composition of the group has changed over time as members have left voluntarily, graduated, or become pregnant.

### *Description of the Participants*

During the first five years, 65 adolescent mothers participated in the Dollar-A-Day program. Members ranged from 13 to 16 years of age on admission to the program and were primarily from the lower socioeconomic group. Sixty-two girls (95%) were African American; the other three were Caucasian. None of the members were married, and their children ranged in age from one month to four years on admission to the program. All were enrolled in school, working on their general education diploma, or had firm plans to return to classes.

### *Meetings*

The group met for an hour each Monday from 4:30 to 5:30 p.m. during the school year and from 3:30 to 4:30 p.m. during the summer. When the health department was closed for holidays, the group met at a restaurant mutually selected by participants and leaders. Although the food was more expensive than usual, the change of location was exciting for participants.

The meetings served as a supportive social event for the teens as well as a time for learning. A consistent schedule for meetings promoted our efforts to teach responsibility. On the rare

occasion when the meeting place was changed because of a holiday, each member was sent a reminder by mail. Members were responsible for their own transportation, but this usually was not a problem. The health department is strategically located for the population it serves in the city, and public transportation is available. However, students often had someone bring them in a car.

Due to sporadic absences, approximately a dozen members attended the program each week; however, twice that number were often present at meetings. The adolescents brought their children and sometimes their driver, who may have been a parent, sibling, boyfriend, or friend. At one point, when attendance of others threatened the integrity of the educational programs, a policy was set to restrict the number of visitors, and efforts were made to recruit someone to care for the children during the educational sessions.

For the first 15–20 minutes of each meeting, participants ate and socialized. We brought foods the adolescents liked that were nutritional and sometimes educational. Some members, for example, had never eaten bagels or avocados until these items were brought to the meeting. Likewise, some members had never eaten a meal at an upscale restaurant, so after a lesson about dining etiquette using a place setting of china, silver, crystal, and napkins, we took them to a restaurant where they experienced ordering from a menu and enjoyed the service of a waiter.

### *Program Content*

The first part of the program for each meeting consisted of personal goal setting and reporting. Each adolescent set a goal to achieve during the following week. Goals and level of accomplishment were recorded by a leader. With their developmental level constantly in mind, we used social exchange theory to assist the young mothers in defining their values and setting goals. For example, we asked them questions like, "What is your goal? What will it take to get that?" and "What will you have to do, change, or give up to get it?" Participant goals typically related to schoolwork or to personal interests such as finding child care, finding a job, providing clothing or a treat for the child or herself, or working on a personal relationship.

A 20–30 minute educational program followed. Topics were suggested by the participants, and they varied widely over the years to include information about interpersonal and institutional relationships; choices and personal decisionmaking; education and careers; emotional, informational, and financial support; child development and parenting responsibilities and concerns; drug use and abuse; legal concerns; personal grooming; sexuality; and issues related to contraception. Clarification of personal values and making informed choices were topics emphasized often.

The topic of job hunting surfaced each spring prior to the end of the school year. As they complained about the perils of working at fast food places and the unavailability of other employment, we discussed their reasons for working, the importance of developing a good work record, and, ultimately, the importance of remaining in school to insure a wide availability of options for employment in the future. We had sessions devoted to completing job applications, writing resumes, and practicing interviewing for jobs.

Many of the programs were designed to promote self-esteem and the development of clear life goals. One activity used to encourage introspection was revealing to the leaders. Each girl was asked to cut from magazines those pictures that represented how she saw herself now and how she would like to see herself in the future. Those pictures were arranged by the adolescents on colorful posters divided into "Now" and "Future" sections. Each member discussed her poster and what the items meant to her. The posters portrayed idealistic assessments of both the present and the future. Pictures representing the present were of beautiful young women and children who were well-dressed, and pictures of the future included handsome men, weddings, class rings, new cars, and nice homes. The posters remained on display for several weeks and were a point of reference in discussing the importance of making sound decisions during adolescence. At the end of each session, each member present received seven one- dollar bills, a dollar a day for the week. Each girl stated, "My name is ____ , and today I am not pregnant." The money served as an incentive to encourage regular attendance, and it was a constant reminder of the program's ultimate goal: delaying a subsequent pregnancy until it was desired.

### *Evaluation*

Of the 65 adolescents enrolled in the program during the first five years, 10 of them became pregnant, a 15% repeat pregnancy rate. Although a higher rate than we desired, our rate was substantially lower than the 30% repeat pregnancy rate reported for the Denver program (Chiles, 1995) and the 30–35% rates reported for other programs (Cockey, 1977; Jones & Mondy, 1994). In retrospect, we recognize that a few of the girls admitted to the program were at greater risk for repeated pregnancy than others because of their personal circumstances. For example, one girl whose newborn had died was enchanted with other infants at the meetings, and her desire to have another infant of her own became obvious after she was admitted to the program. After coming to the meetings for several months, the girl happily reported that she was pregnant. We firmly believe, however, that intervention programs such as Dollar-A-Day need to target the whole population at risk and not select members with consideration only for projected statistical outcomes. The value of social support and education in the adolescent years often cannot be fully measured in the short term.

Perhaps more important than the low pregnancy rates were the success stories of some members of the program. One of the three girls who attended the first session had perfect attendance at the meetings for the first year. Six months after the program started, a high-school teacher called for information. The teacher reported that this student had made tremendous positive changes over the past six months, "She knows what she needs to do and does it. She sets goals and is very mature about her activities." When the teacher discussed the student's progress with her, the student gave the Dollar-A-Day program credit for the changes in her attitude and work habits. This high school senior is considering nursing as a career, and she has been encouraged by two nursing students who brought her to the university campus for a tour and an opportunity to obtain more information.

To evaluate the ongoing program, written questionnaires were periodically given to the members. They were asked to rate on a Likert-type scale how important six aspects of the program were to them. Members consistently rated the goal-setting activity and interaction with leaders as the two most valuable aspects of the meetings. Interaction with other group members ranked closely behind and was followed by interest in the topics discussed at the meetings and

obtaining $7.00 each week. Ranked as least important to the girls was the food served at each meeting. These findings were not surprising when Cockey's (1997) five key principles of successful community efforts to reduce adolescent pregnancy are considered.

First, parents and other adults were consistently involved. We communicated almost weekly with some parents as they brought their daughters to the meetings. They asked questions and participated as invited. The girls saw the same adults at the meetings repeatedly, and they seemed to appreciate the fact that we knew their names, remembered their concerns, and followed up on previous conversations. Further, the health department nurse assisting with the Dollar-A-Day meetings made home visits to the majority of the participants, who also were clients in the family planning clinic.

Second, Cockey (1997) asserted that for the program to be successful, members must agree to abstain from sex. In view of the fact that all participants were adolescent mothers, it was apparent that they had been sexually active before joining Dollar-A-Day. While program leaders discussed the value of sexual abstinence and explored issues related to sexual identity, we also presented the need for responsible contraception practices if individuals chose to remain sexually active. Of all members who reported their sexual activity, they consistently indicated that they were abstinent only when they had no boyfriend. For many of them, the baby's father was still the boyfriend, and sexual intercourse was an important part of the relationship. We found that cultural patterns and mores sanctioning continued sexual activity were considerably more influential than we were as leaders. The importance of teaching very young girls about their bodies and helping them to make more informed decisions about becoming sexually active is readily apparent.

Cockey's third principle emphasized the importance of girls developing clear strategies for obtaining goals for the future. Setting weekly goals seemed to help girls in the Dollar-A-Day program plan for the short term "here and now," as is age appropriate for adolescents. Whether members will obtain the long-term goals they indicated were important is not as clear. A few of the members who discussed their plans to complete high school did not do so. One teen dropped out and reentered an educational program three times before becoming one of our repeat pregnancy statistics. A few girls who talked about their desire to go to college were unable to go because of poor grades and lack of family support. One member who did enroll withdrew after the first year due to academic problems. A few are now in college. More life-long planning is needed to instill ideas of success so that teens can see their futures more clearly. If life goals are envisioned at a young age, pregnancy during the adolescent years is likely to be avoided (Chilman, 1983).

Community involvement was Cockey's fourth principle and was no doubt the Dollar-A-Day program's greatest strength. The health department nurses knew the young mothers and the community agencies well. Referrals were made almost weekly to organizations for needs related to finances, housing, mental health, legal matters, child care, and social services. Additionally, the numerous speakers who came to the meetings expressed a genuine interest in this population of adolescents and gave freely of their time and effort. The problems associated with childbearing during the adolescent years are well known, given the incessant attention of the media, and the community seems ready to rally behind efforts made to intervene in solving the

problem. Harnessing the vast energy available in the community and channeling the desires to assist are challenging prospects for those of us who have limitations on our time and energy. Loxley (1997) described collaboration in the health and welfare arenas as "the acting together of two or more people from different professions either within the same or from different agencies to deliver a service which neither can deliver alone" (p. 76). The working together of the nursing professors and the staff at the health department was vital to the successful initiation and operation of the Dollar-A-Day program.

The last characteristic of a successful intervention program described by Cockey is the principle of sustained commitment. Adolescent mothers were accepted into the Dollar-A-Day program only if they were 16 years of age or younger, and they were expected to stay in the program until they completed high school. The girls grew attached to the program leaders and shared problems and concerns readily during the meetings and through phone calls during the week. Developing this type of relationship is difficult unless time is invested. When the health department's board of directors made the decision to incorporate the cost of the program into their budget and fully operate the program, the sustained commitment was ensured. In fact, a second Dollar-A-Day program, replicating the one described here, was added and has been in operation at another city in the same county for three years.

### *Significance of the Program*

Delaying subsequent pregnancies in adolescent mothers produces obvious benefits for the young mothers themselves. When a young mother delays a second pregnancy, she has a better chance to mature physically and psychologically. Her opportunities are increased to finish high school, plan for the future, and develop vocational skills.

Society also benefits from delaying subsequent pregnancies in adolescents. A 50% decrease in subsequent pregnancy rates, for example, would decrease the national cost of adolescent births by approximately $17 billion, which is one-half of the $34 billion reported by Cockey (1997). Following their first birth, 85% of the Dollar-A-Day group remained nonpregnant, as compared with a 50–70% repeat pregnancy rate reported from other studies (Chiles, 1995; Cockey, 1997; Jones & Mondy, 1994). The financial savings accrued to taxpayers is unquestionable.

The media's interest in the Dollar-A-Day program is evidence of the community's concern with the problems associated with adolescent pregnancy. Numerous news articles have been published, and a television documentary was broadcast during the fourth year of operation. The nursing professors and the health department staff have been invited to make numerous presentations about the program, and the adolescent members themselves have been invited to participate in a variety of panels and meetings. We hope that our experience in establishing and operating a successful program to delay subsequent pregnancies in adolescent mothers is encouraging and that others will use it as a model in establishing similar programs in their own communities.

### *References*

Adolescent Pregnancy Prevention Coalition of North Carolina (1997a, September). Financial facts: Adolescent pregnancy in North Carolina [Handout]. Chapel Hill, NC: Author.

Adolescent Pregnancy Prevention Coalition of North Carolina (1997b, September). North Carolina adolescent pregnancies by outcome (10–19 years) [Handout]. Chapel Hill, NC: Author.

Attico, N. B., & Hartner, J. A. (1993). Teenage pregnancy: Identifying the scope of the problem. Journal of the American Academy of Physicians, 6(10), 711–718.

Black, C., & DeBassie, R. R. (1985). Adolescent pregnancy: Contributing factors, consequences, treatment, and plausible solutions. Adolescence, 20, 281–290.

Child Trends (1997, October). Facts at a glance. Washington, DC.

Chiles, K. (1995, January 3). Young and pregnant: Pilot programs pay teens not to have babies. Wilmington Morning Star, pp. C1, C3.

Chilman, C. S. (1983). Adolescent sexuality in a changing American society: Social and psychological perspectives from the human service professions. New York: Wiley. Cockey, C. D. (1997), Preventing teen pregnancy. Lifelines, 1(3), 32–40.

Colleta, N. C., Hadler, S., & Gregg, C. H. (1991). How adolescents cope with the problems of early motherhood. Adolescence, 26, 499–512.

Dolan, J. I., & Goodman, S. M. (1989). Dollar-A-Day: Teenage pregnancy prevention program. Denver, CO: Planned Parenthood of the Rocky Mountains.

Erickson, E. (1950). Childhood and society. New York: Norton.

Fullar, S. A., Lum, B., Sprik, M. G., & Cooper, E. M. (1988). A small group can go a long way. Maternal Child Nursing, 13, 414–418.

Furstenberg, F. F. (1976). Unplanned parenthood: The social consequences of teenage childbearing. New York: Free Press.

Furstenberg, F. F., Brooks-Gunn, J., & Morgan, S. P. (1987). Adolescent mothers and their children in later life. Family Planning Perspectives, 19, 142–152.

Homans, G. C. (1974). Social behavior, its elementary forms. New York: Harcourt Brace Jovanovich.

Jones, M. J., & Mondy, L. W. (1994). Lessons for prevention and intervention in adolescent pregnancy: A five-year comparison of outcomes of two programs for school-aged pregnant adolescents. Journal of Pediatric Health Care, 8(4), 152–159.

Loxley, A. (1997). Collaboration in health and welfare. Bristol, PA: Kingsley.

Moore, M. L. (Ed.). (1989). Perinatal health care and the 1989 North Carolina General Assembly. Perinatal Post, p. 2.

Moyse-Steinberg, D. (1990). A model for adolescent pregnancy prevention through the use of small groups. Social Work With Groups, 12, 57–69.