CHAPTER 5

Creating Effective School-Based Interventions for Pregnant Teenagers

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In this chapter, we examine how a comprehensive program, addressing medical, educational, and social needs, offered to pregnant and parenting teens in a public school can help them have healthy pregnancies, remain in school, and delay subsequent childbearing. We discuss research evidence from our 18-year longitudinal study of a program that shows both short- and long-term benefits to teen mothers and their children, and we consider components of the program that appear to be responsible for the different kinds of success. Finally, we discuss policy implications, recommending that communities elsewhere would benefit from implementing similar programs.

Teenage parents and their offspring are very appropriate populations to consider in a volume on risk and resilience. Adolescent parenthood, often described as "children having children," creates parents who have problems adapting to adult responsibilities. Nevertheless, many show remarkable recovery from early difficulties, and demonstrate considerable resiliency.

Understanding what leads to success or failure for this high-risk group should ideally be based on longitudinal studies. However, few studies of teenage mothers and their children have continued until the children became adolescents themselves. One of these was a groundbreaking study begun in the late 1960s by Frank Furstenberg, a sociologist, who identified a Baltimore population of 404 women who were

younger than 18 when they became pregnant with their firstborn child. Furstenberg and his colleagues reported results for them and their children when the children were 5 years old (Furstenberg, 1976) and again when the children were 16–17 years old (Furstenberg, Brooks-Gunn, & Morgan, 1987). Two epidemiologists, Lorraine Klerman and James Jekel in New Haven, CT began a second longitudinal study, also in the 1960s, with a group of teenagers attending a special prenatal program at Yale-New Haven Hospital (Klerman & Jekel, 1973). Horwitz and her colleagues reported results for a 20-year follow-up of this population (Horwitz, Klerman, Kuo, & Jekel, 1991a, b). Emmy Werner's longitudinal study of all children born in Kauai County, Hawaii in 1955, has also yielded information about long-term outcomes for the adolescents in the study who became teenage mothers (see Werner & Smith, 1992, chapter 5).

In agreement with many shorter-term studies (Hofferth, 1987), these studies showed that common problems for the mothers included failing to complete high school, having another child quickly, failing to establish a lasting marriage, and remaining welfare-dependent for many years. Long-term outcomes for young mothers were quite variable however, with most of them showing a gradually improving pattern over time. In Baltimore, for example, Furstenberg reported that mothers often resumed their education after their children had entered school. Seventeen years after they gave birth, two-thirds had become high school graduates or earned a GED certificate, a result similar to findings for the New Haven sample. Werner and Smith (1992) reported that all of their former teenage mothers had graduated from high school or earned a GED by their early thirties.

The long-term studies also revealed that—contrary to the stereotype that teenage mothers usually bear numerous children—most adolescents limited their total family size to two or three children. In the New Haven sample, only about one-quarter had large families of 4 or more children, and the Hawaiian results were similar; in Baltimore only about one-eighth had had large families. Furstenberg and his colleagues concluded that, "many teenage parents seem to stage a recovery of sorts in later life. Most do not fit the popular image of the poorly educated, unemployed woman with a large number of children living on public assistance" (1987, p. 133).

Given this picture of apparent resiliency, one might ask whether this population needs special programs or intervention efforts. For at least two reasons the answer is yes. Despite gradual improvement for many mothers, those who have numerous children and remain welfare dependent for many years are extremely costly to society. Burt (1986)

has estimated that more than half of total U.S. federal outlays for AFDC, Medicaid, and food stamps are expended on families begun by teenage mothers. There is a principle, attributed to the Italian economist Pareto, that for many events, 80% of the costs are generated by 20% of the persons concerned (e.g., 20% of the drivers cause 80% of the accidents). Welfare costs arising from teenage mothers probably fit Pareto's principle, and it is worth intervening with adolescent mothers to try to improve outcomes for even a small percentage of them.

A second major concern is that outcomes for the children of teenage mothers are much less encouraging than the outcomes for their mothers. Problems are likely to begin at birth: pregnant adolescents are at well-documented risk of delivering a low-birthweight baby (Institute of Medicine, 1985; Strobino, 1987), and such children often have later health problems and difficulties in school. Whether or not they are born healthy, children of teenage mothers are at risk for poor health, cognitive, and social outcomes (Brooks-Gunn & Furstenberg, 1986; Osofsky, Eberhart-Wright, Ware, & Hann, 1992). Studies that have continued into adolescence have also revealed problems, some of them very serious. Furstenberg and his colleagues reported finding "massive school failure," as did the researchers in the New Haven study. Delinquency and early parenthood were also frequent. In both studies, between 25% and 40% of the adolescent boys reported engaging in assault or theft, and approximately 25% of the girls became adolescent parents themselves. These are disturbing findings, and they lead to the observation that programs for adolescent parents need to be mounted with the intention of eventually benefiting the children as well as their mothers.

Many communities have established special programs for pregnant teenagers in hospitals or health clinics, often resulting in better birth outcomes for them. Because teenagers often delay seeking prenatal care until late in pregnancy, some communities have attempted to improve early outreach by establishing school programs for pregnant students. Evaluations of such programs have consistently reported better educational outcomes for attendees and better birth outcomes for their babies; however, most school programs have been evaluated with such weak research designs that their findings are not conclusive. In the present chapter, we will describe how one community, New Haven, CT, has developed a school-based program for pregnant teenagers and how we have been able to take advantage of conditions that approximate naturally-occurring random assignment to evaluate the program's effects. After examining these effects, we will discuss broader policy implications.

DESCRIPTION OF THE POLLY T. McCABE CENTER IN NEW HAVEN, CT

The Polly T. McCabe Center is a public school for pregnant students. This school was established in 1966 as an outgrowth of one of the earliest specialized hospital programs for pregnant adolescents, the Young Mothers Program (YMP), initiated at Yale-New Haven Hospital in 1965. Two physicians, an obstetrician and a pediatrician, had established the YMP after observing that pregnant teenagers often needed more care and services than regular prenatal clinics were providing. After the YMP clinic was established, its social workers quickly recognized that the educational needs of its young patients were often unmet, and the program's creators approached the New Haven Public Schools about this problem. Along with community grassroots organizers, their efforts led to the creation of a school program, the Polly T. McCabe Center, aimed at improving the educational and medical outcomes for inner-city teenagers who become pregnant before they have graduated from high school.

The McCabe Center, operated by the New Haven Board of Education, follows the same daily schedule, academic curriculum, and 4-quarter September through June calendar of the other New Haven schools. Students are enrolled by referral from their regular schools when their pregnancy becomes apparent or when they notify a teacher or counselor that they are pregnant. (Pregnant New Haven students can choose either to remain in their regular schools or to attend the McCabe Center). Typically, an enrolled student remains at the McCabe Center to complete the academic quarter in which her baby is born, then returns to her regular school the following quarter. Over the years, there usually have been about 100 students attending at any given time.

The students in our long-term study attended McCabe in its early days (late 1970s through early 1980) when the program was housed in the basement level of a church, with minimal space available. There were several small offices, a large multi-purpose room divided by partitions for classes, two small classrooms, and an open area outside the offices with exercise mats for the students. About a decade ago, the program was relocated to a more spacious and brighter facility. This new building has 11 classrooms, a baby-care room, five smaller offices, and a cafeteria that serves a daily hot lunch. Although the program was moved, its characteristics remained the same. Staff continuity is remarkable with many having taught at McCabe for well over a decade. The program had the same director for 25 years until her retirement in 1992.

The Triad of Services

In an analysis of the effectiveness of programs for pregnant and parenting adolescents, Lorraine Klerman and her colleagues emphasized the need for programs to be comprehensive. That is, it is usually necessary to provide a triad of services—educational, social, and medical—to effectively address the problems that such teenagers experience (Klerman & Horwitz, 1992).

The McCabe Program was designed to provide services in all three domains. As a school program, the educational aspects of the services are the most obvious. The program offers courses from the public school curriculum, taught by public school teachers, which can be applied for credit toward high school graduation. A typical day for a McCabe student is to attend six 40-minute classes. Class size varies from a low of 6 in nurse-taught classes to a high of 20 in regular academic courses. Entering a McCabe classroom, a visitor would notice that the classrooms have tables instead of desks and chairs in a row. As one teacher describes the classes, "You can't get lost here, and you can't skip classes either." The program staff also offers transitional support for the student to help her return to her regular school program.

Unlike the average urban school, the McCabe program offers substantial supportive social services to address the home and school-life issues of the students. In one form, this involves a personalized follow-up on absences. If a student is absent, a staff person telephones her to ask how she is and why she is not in school. If there is no compelling medical or other reason for her absence, she is urged to come in. If there is a problem, the staff person attempts to solve it. The McCabe social worker provides help, if needed, to address problems such as dealing with a substance-abusing parent or helping to find affordable housing. In some cases, outreach services are provided, with home visits.

Thirdly, many medical services are provided in this school setting. These mostly take the form of educational efforts to supplement and reinforce information that the teenagers are receiving in their regular prenatal care at hospitals or clinics. The services therefore resemble what David Olds has called "enhanced prenatal care" (Olds, et al., 1986), as provided by the nurses in his program who make regular home visits to pregnant women. (We will describe McCabe medical services more extensively below). In sum, the Polly T. McCabe Center is an excellent example of what Klerman and her colleagues have labeled a "comprehensive" program.

Using Schools as Part of the Health-Care System

The fact that it is possible to use schools effectively to provide health care is so important that it is worth examining carefully how such services are delivered. One unique medical aspect of the McCabe program is the ongoing observation of students by nurses, teachers, and other personnel, all of whom are attuned to health issues. If a student does not look well, or has symptoms of problems with the pregnancy, such as swollen ankles, the staff alerts the student and refers her for evaluation. Thus the program provides personalized day-to-day health monitoring of the teens.

Three times a week, pregnant students go to a prenatal education class taught by a registered nurse. This class presents information about fetal development, the importance of nutrition and prenatal care, women's health, and preparation for labor and delivery. The instructors have developed specialized curricula designed to help the teenagers begin to bond with their babies. For example, they draw life-sized pictures of developing fetuses matched to the teenager's current stage of pregnancy and encourage the teens to place these pictures over their abdomens and look into the mirror so that they can better visualize their baby. The nurses have reported to us, "They love it. The more they can bond with their baby during pregnancy, the less likely they are apt to abuse it later on."

The nurses encourage the teens to eat a well-balanced diet, not to smoke, not to use over-the-counter medications without specific approval by their doctors, and to avoid street drugs. In addition to providing Lamaze training so that the teens will be prepared for labor and delivery, at an appropriate stage of the pregnancy, the nurse takes her students on a tour of the hospital labor and delivery rooms. She tells us, "That's when reality sets in. It is important to help them with the experience." Evidently, this preparation is very effective, and the nurses are proud of reports from the hospitals about how well the students handle labor and delivery.

After their babies are born, the students continue to attend this class once a week, but begin to attend classes taught by a perinatal fitness specialist and a pediatric nurse practitioner who specializes in postpartum health care for the other two days a week. Although the nurses who teach the different classes specialize in different phases of the students' health education, there is crossover and continuity, with both nurses available to counsel and teach the students during and after pregnancy.

The nurse who teaches the postpartum education class addresses the new mother's concerns about how to care for her baby. Students

are taught basics of feeding, bathing, dressing, and safety as well as information about normal infant development. Discussions are also held about arranging suitable childcare for the baby while the young mother attends school. Each student is helped by a personalized, case-by-case review of her available childcare options.

The teenager's own personal medical concerns are also a focus. The nurse provides a "hands-on" discussion about contraception, passing around an array of contraceptive devices and medications and encouraging discussions about their use and any fears or concerns the teens may have about them. She also provides individual counseling about contraception, placing this information within the context of the teenager's short- and long-term educational goals.

The nurses have told us that the first month after the baby is born is typically a kind of "honeymoon period" for the teen and her family, when all are highly enthusiastic about the new baby. After this, however, the troublesome demands of caring for a new baby must be met, and family stresses reappear. At the same time, as the new mother recovers from the delivery, issues of resuming sexuality begin to emerge. Thus, the second month after the baby is born is an opportune time to address the issue of repeat pregnancy. At this critical "teachable moment" a new mother's attention can be focused on her future and how to avoid having another child quickly, and information about contraception becomes most meaningful to her. The discussions at McCabe occur under the guidance of persons whom the teenager has learned to trust during her pregnancy and in a group of other teenagers who are facing the same issues. The postpartum medical services are thus a continuation of the same kind of services begun during pregnancy. As we will now see, this innovative blend of medical and educational services in a school setting has important consequences for the teenagers and their children.

EVALUATION OF THE EFFECTS OF THE POLLY T. McCABE CENTER

In the best research design, persons are assigned randomly either to receive a program or to be part of a comparison group. This is rarely feasible in evaluating a public school. However, program rules sometimes mimic random assignment when they do not allow attendees choice about how long to attend. We found that, if we limited our analyses to students who attended the McCabe Center as long as the rules permitted, we were able to create good comparison groups. We will explain how we did this for each of the outcomes we measured.

Question #1: How Well Did the McCabe Program Reach Its Target Population?

To answer this question, we used hospital birth records to identify all the first-time school-aged mothers who were New Haven city residents and who gave birth from March 1979 through February 1980. We then searched city school records to determine the school status of the teens. We discovered that almost three-quarters of the first-time school-aged mothers in the city were African-American, and almost three-quarters of this group (72%) were successfully served by the Polly T. McCabe Center. Many of the Latina and White school-aged mothers had dropped out of school before they became pregnant. In general, our findings suggest that a public high school can successfully reach a majority of the ethnic group of students that most commonly become adolescent mothers in the city but that other ethnic groups may perhaps feel out of place in such a school and choose not to attend.

Question #2: Did Attending the McCabe Center Improve the Students' Birth Outcomes?

To study this question, we looked at all teens, not just African-American teens. As noted above, students were allowed to enroll at McCabe when they were pregnant and to remain until the end of the school quarter in which their baby was born. Because of summer vacation, the school did not accept new students after May first, so that from May through August each year, the school was closed to admission. This created two groups of students, those who were able to enroll as soon as they wished, and those who were forced to wait until the school re-opened in September.

Their medical records showed that the teenagers were slow to acknowledge and seek medical help with their pregnancy, typically waiting about four months until their first prenatal checkup. As Table 5-1 shows, the result was that students who became pregnant in the months of January through April were the ones most likely to have to wait until late in their pregnancy before they could attend McCabe.

Very few students who conceived in January through April began attending the McCabe Center in the first half of their pregnancy, whereas many students who conceived in the rest of the year did so. This difference in timing made a substantial difference in whether the teens then had a successful pregnancy (i.e., were able to carry their pregnancy to full term). Among teenagers enrolled in public school when they became pregnant who conceived in the months of January through April,

Table 5-1 Time of Entry into McCabe for Pregnant Teenagers Who Were Enrolled in Public School at Conception ($N = 158$)

	Approximate Time of Conception	
	January–April ($N = 43$)	May–December ($N = 115$)
Before mid-pregnancy	14%	43%
After mid-pregnancy	58%	31%
Didn't attend or dropped out	28%	26%

an alarming 12% delivered a preterm, low-birthweight infant; only 1% of teens who conceived in the other months of the year did so.

We looked for time-of-conception effects in the rest of the teenage mothers in the city that year (i.e., those who were not enrolled in public school when they became pregnant), and found that the time they became pregnant did not affect their birth outcomes. Thus, the findings for the students did not indicate some kind of citywide seasonal effect. As we had expected, the practice of denying program availability during the summer months led to the existence of two groups of teenagers who appeared to be equivalent except in their probability of receiving early intervention and in their birth outcomes. David Olds and his colleagues have shown that a comprehensive program of prenatal nurse home visitation that is begun prior to mid-pregnancy can improve birth outcomes for pregnant adolescents (Olds, Henderson, Tatelbaum, & Chamberlin, 1986). The results of our evaluation suggest that a comparable program provided by nurses in a school setting can be similarly effective. (For a full description of our study, see Seitz & Apfel, 1994).

Question #3: Did Attending McCabe Improve the Students' Educational Outcomes?

To answer this question, we looked at the students who were motivated enough to remain at McCabe until they delivered their baby and to earn passing grades in at least one subject while they were there. Because almost all such students were African-American, we limited our final analyses to the African-American students (there were 106 students who met this study's criteria). Examining these students' academic records, we found that most had been poor students before they became pregnant. We thought it likely that McCabe might have different effects for poorer than for better students, so we divided the sample approximately in half. We defined students who had not earned at least a C average in any marking period for the year before they became pregnant

as poorer students (there were 49 of them). The remaining students, who had earned a C average or better at least once, we defined as better students prior to pregnancy (there were 55 such students).

The McCabe Center had a very powerful educational effect on poorer students. As we described above, the length of attendance at McCabe was not a matter of choice for the students, and those who attended only one quarter were no different in any way that we could measure from those who were able to attend for four quarters. But the differences in outcome were striking. Only 16% of poor students who attended one quarter were educationally successful by the time their baby was two years old, whereas 80% of poor students who were able to attend for four quarters were educationally successful. (The percentage of successful outcomes for two-quarter and three-quarter attendees fell in between, with 40% and 60% of such students, respectively, becoming educationally successful.) For students who had previously had better academic achievement, approximately two-thirds were educationally successful, no matter how long they remained at the McCabe Center.

For school outcomes, the McCabe program thus appeared to operate in two different ways, depending upon the previous academic success of its students. For better students, it offered a safe environment in which to continue their educational progress without a potentially dangerous interruption. For poorer students, however, it actually turned their academic careers around, raising them to the same level of educational success as students who had previously been academically competent. In a specialized program such as McCabe, more individual attention is possible due to the small class sizes. Also, support is available to help a student overcome personal problems that could interfere with academic success. In such a setting, the marginal student who is able to attend for a longer time may be able to establish an increasingly strong sense that she is capable of being an adequate student. This positive response of poorer students to a smaller, personalized setting agrees with evidence from many studies of scholastically at-risk students. In an analysis of such studies, both Dryfoos (1990) and Hodgkinson (1985) have noted that a small student-teacher ratio is consistently one of the most important factors in preventing marginal students from becoming school dropouts. A full description of our study of the educational effects of the McCabe Center in our study is available in Seitz, Apfel, and Rosenbaum (1991).

Question #4: Did Attending McCabe Help Students Postpone Additional Childbearing?

To answer this question, we looked at the same group we studied for educational outcomes (question #3), except that we did not include 4 students who dropped out of school after delivering their baby. Students

who delivered their baby in the summer months were unable to attend McCabe after their babies were born, and those who delivered their babies near the end of a marking period also received little or no time at McCabe postnatally. They did not choose to leave so quickly, but being forced to do so had serious consequences for them.

We divided the group in half at the median length of time that students remained at McCabe after their baby was born (7.1 weeks). We found that students who were able to continue attending at the McCabe Center for more than 7 weeks after their baby was born were much less likely to have a second baby within the next 5 years than were students who had been required to leave by the time their baby was 7 weeks old. Surprisingly, more than half of the young mothers who had stayed more than 7 weeks postnatally (55%) still had not had a second child when their first child was 5 years old, whereas this was true for only 30% of the mothers who had had to leave McCabe quickly. As we describe more fully elsewhere (Seitz & Apfel, 1993), the two groups of students were similar in age, the amount of family support they received, the kind of students they were, their measured cognitive ability, and in every other way we examined, but they had very different patterns of later childbearing. As we will now show, these differences in childbearing had profound consequences for both the adolescent mothers and their firstborn children.

Consequences of Delaying Childbearing for the Teenage Mother

Approximately one-quarter of the mothers had a second baby before their first child's second birthday. This led to negative educational and economic outcomes for them, and they were likely to have larger families. As Table 5-2 shows, only one quarter of the mothers who had another child quickly became high school graduates and they were mostly still welfare dependent by the time their first child was 18 years old.

Table 5-2 Consequences of Rapid Repeated Childbearing for Young African-American Mothers ($N = 115$)

	New Delivery Within 2 Years of First		
	No (73%)	Yes (27%)	
High school graduate at 18 yrs	55%	25%	$p < .01$
AFDC within last year at 18 yrs	55%	83%	$p = .02$
Number of living children	3	4.4	$p < .04$

Consequences of Delaying Childbearing for the Firstborn Children of the Teenage Mothers

Eighteen years later, the length of time mothers had waited before having a second child varied from 8.5 months (a prematurely born second child) to 18 years (for mothers who had never had a second child). The length of time that children remained an only child was an important protective factor for them. Interestingly, boys needed to remain an only child longer (at least 5 years) than did girls, who needed to be an only child for only 2 years to show benefits. Table 5-3 shows the results for the firstborn daughters of the African-American mothers in our study.

As Table 5-3 shows, remaining an only child for at least 2 years led to better school achievement for teenage daughters of the teen mothers and to a higher likelihood they would graduate from high school or be expected to do so by age 18. It also reduced the likelihood that the girls would have a police record and sharply decreased the likelihood of following in their mothers' footsteps by becoming school-aged mothers themselves. (Almost half the girls who had a sibling by age 2 became school-aged mothers, whereas this was true for only 20% of those who remained an only child for at least 2 years.) We present the original teenage mothers' scores on the Peabody Picture Vocabulary Test to show that those who waited to have a second child did not have higher cognitive ability than those who had a second child quickly. Thus, the good results for their daughters did not occur simply because their mothers were brighter.

Table 5-4 shows the results for the sons of the school-aged mothers in our study. As was true for the girls, being an only child for a sufficient time (in this case, throughout the entire preschool period), led to much

Table 5-3 Consequences of Short Sibship Interval (<2 years) for Daughters of Young African-American Mothers ($N = 58$)

	New Sibling by Age Two		
	No (71%)	Yes (29%)	
Age 6 Stanford-Binet IQ	83.5	75.8	$p < .08$
Age 12 Reading Percentile Rank	45th	22nd	$p < .04$
Age 12 Math Percentile Rank	37th	14th	$p < .01$
Age 18 Good Educational Outcome	74%	41%	$p < .02$
Police record by Age 18	0%	12%	$p < .03$
Ever in jail by Age 18	8%	12%	n.s.
Parent by Age 18	20%	47%	$p < .05$
[Mothers' PPVT IQ Score]	70.5	70.1	n.s.

Table 5-4 Consequences of Short Sibship Interval (<5 Years) for Sons of Young African-American Mothers ($N = 58$)

	New Sibling by Age Five		
	No (28%)	Yes (72%)	
Age 6 Stanford-Binet IQ	87.0	78.7	$p = .03$
Age 12 Reading Percentile Rank	48th	22nd	$p = .05$
Age 12 Math Percentile Rank	40th	18th	$p = .05$
Age 18 Good Educational Outcome	56%	34%	n.s.
Police record by Age 18	12%	34%	n.s.
Ever in jail by Age 18	31%	62%	$p < .05$
Parent by Age 18	0%	30%	$p < .02$
[Mothers' PPVT IQ Score]	67.9	67.0	n.s.

better school achievement for the boys. In fact, the reading performance for such boys was nearly at national norms for 12-year-old children in the United States, an astonishing performance for boys born to poor, African-American teenage mothers. Sadly, good school performance at age 12 did not translate into a higher likelihood of educational success by age 18. Nevertheless, by age 18, boys with this protective factor were less likely to have spent any time in jail and they were unlikely to have become teenage fathers. Again we present their mothers' scores on the PPVT vocabulary test to show that the better outcomes for the boys did not occur simply because their mothers were brighter.

To summarize, the effects of the McCabe program in helping mothers postpone having a second child were of immense importance for both the young mothers and their children. In addition, these effects were evident many years after program participation, when the children were nearly adults themselves.

Question #5: What Features of the McCabe Program Contributed to Its Success?

In Table 5-5, we summarize the factors that are probably responsible for the McCabe Program's success.

Interviews with former students years later revealed the powerful effect that the personalized, nurturant attitude of the staff had on these vulnerable teens. (We use substitute names in the following quotes to protect privacy.) As one young woman, Donna, told us, "They have the sweetest teachers there, and you get to eat free." Adrienne told us, "It was easy to have excuses about school. McCabe helped me keep motivated to go back to school. The one-on-one counseling got you thinking about

Table 5-5 Features of the Polly T. McCabe Program Probably Contributing to Its Success

- Low student-staff ratio and high personalized attention: Staff available for counseling and follow-up on student absences
- Education about prenatal development, and preparation for childbirth and delivery taught by a nurse or health care professional
- Academic courses for which a student receives credit toward graduation (the primary motivation for attendance for many students)
- A daily nutritious lunch
- Continuity of staff from pregnancy through the postnatal period
- Nurse/health educator-taught postnatal education continued for at least two months after delivery
- Postnatal support in establishing childcare to prevent school dropout.
- A totally voluntary approach to attendance at the program

what to do after high school. I didn't want to be on welfare." (Adrienne went to business school after her high school graduation.) For many teens, McCabe represented their first positive experience with school in many years, and it was hard for them to leave. Stephanie told us, "I wanted to say at McCabe. I did not want to go back. I cried like a baby." Twelve years after leaving McCabe, one student asked during her interview whether the poem she had written there was still mounted on the bulletin board. This young mother, who had had few academic successes before McCabe, wistfully remembered the recognition she had received there for her creative writing efforts—evidently an extremely meaningful event for her.

Special Considerations in Using Schools to Provide Services to Pregnant Adolescents

Advantages

Public schools offer numerous advantages as a service delivery model. Because schools are already available in all communities, the task is one of modifying existing services rather than building entirely new programs. From the point of view of medical services, schools permit a much more intensive intervention than do specialized clinics or home visitation programs. Students attend for about 25 hours a week, in which they receive health education, counseling, and monitoring. Free transportation typically is available through school buses, or, as at McCabe, can be arranged by providing vouchers for students to ride city buses. Nutrition can be improved by providing at least one meal (lunch),

and possibly two per day. Schools would obviously not be the model of choice for reaching pregnant teens who have dropped out of school. Our study showed, however, that at least for some ethnic groups within the city, most pregnant teens were still enrolled in school when they became pregnant. Public schools, especially if the program policies are inviting and inclusive ones, can reach a surprisingly high proportion of at least some groups of pregnant teens. Finally, peer group support is intrinsic within school programs and can be capitalized upon to strengthen the effectiveness.

The McCabe Center was a separate school for pregnant students, a characteristic that not all communities might be willing to consider. Nevertheless, it may have been a key feature in its effectiveness. One young mother, Gail, spoke for many when she told us, "I didn't want to go to school. I was embarrassed. I wanted to hide my head in the sand. There was no way I was going back to high school pregnant. I would have dropped out of school (without McCabe)." And, as Adrienne observed in commenting favorably on the all-girl atmosphere, "There were no boys there. That's why we were there (in the first place). That's what brought us there." Many teens expressed relief in not having to contend with the often-chaotic setting of public school hallways and stairwells when classes change. They indicated that they would have felt vulnerable to jostling and even injury, especially late in their pregnancy.

Potential Problems

Summer vacation is the most obvious concern when schools are used as a service delivery model for pregnant adolescents. As we saw in our evaluation, the long vacation adversely affected birth outcomes by making it impossible for some teens to enter the program early in pregnancy. Teens who delivered their babies in the summer were unable to receive postnatal intervention and were at higher risk of having another child quickly. Although a remedy might be to provide school services on a year-round basis, such a strategy might not be popular with students and might therefore be ineffective. More promising options might be to supplement schools with other approaches, as needed. The school nurses, for example, might make postnatal home visits to teens who deliver during the summer, and specialized clinics in hospitals might provide enhanced prenatal care to teenagers who become pregnant during the late winter months and who are unable to attend a school program early in pregnancy. School programs could also adopt a very liberal entrance policy, allowing admission even very late in the school year, recognizing the health advantages of beginning participation early in pregnancy.

More subtle problems with school programs can arise when the philosophy of the service providers differs from that of the successful McCabe Center. As noted above, the original director of the program had a very liberal approach to enrollment, recognizing that many of these students were highly troubled prior to their pregnancy, and she did not expect them to be exemplary students. High absenteeism, poor grades, and aggressive behavior were shown by many McCabe students before they entered. Nevertheless, the program philosophy was that such students were welcome, nurtured, and helped to behave in more appropriate ways. In response to such expectations, many of these seemingly impossible students became able to function in the McCabe environment and, as noted earlier, were able to return to their regular programs and eventually graduate from high school.

A change in philosophy occurred when the original director retired and a new director adopted a more restrictive enrollment policy, discouraging the more troubled population of students (those with a history of poor grades, high absenteeism, or fighting) from enrolling. The result has been that the program now enrolls a smaller, better-behaved population. In all likelihood, however, the many who are not being served by McCabe are now dropping out of school or enrolling in alternative GED programs. Whether such students are having their educational needs met is not clear, but they are almost certainly not receiving the medical and social services that they need. This example illustrates that even when a program is in place and functioning well it can be vulnerable to shifts in operating philosophy.

POLICY IMPLICATIONS IN REPLICATING NEW HAVEN'S MODEL

Many communities have established special programs for pregnant adolescents and for those who have become parents. Such programs are rarely evaluated because ethical considerations make it difficult to establish comparison groups to show what happens when the program's services are not available. Our evaluation of the McCabe Center suggests that many programs existing elsewhere are probably far more effective than their staffs realize.

A reasonable implication of our findings is that other communities should be encouraged to implement programs similar to McCabe with the expectation of reaping substantial immediate and long-term benefits. A community could begin with a school program, supplemented by more expensive outreach interventions for the minority of high-risk teenagers who are missed by the schools. If, for financial or

philosophical reasons, communities are not able to implement all aspects of the McCabe model, a modified approach that builds on its strengths might still be effective, retaining the elements we summarized in Table 5-5.

We suggest that communities give serious consideration to a full-scale program like the McCabe model. This program is a popular choice among pregnant students. Given that many of these students are in serious academic difficulty by the time they become pregnant, their improved performance has been striking, as well as their subsequent determination to return to school after birth, and to finish high school. The majority of these students become high school graduates before their firstborn goes to school, overwhelmingly they deliver healthy babies, and, with only about 2 months of attendance after their baby is born, more than half of them are able to avoid having a second child over the next 5 years. Their children, who remain only children for several years, have much better life outcomes, including the avoidance of teen parenthood themselves. We recommend this totally voluntary approach to improving the lives of high-risk students to other urban community leaders and policymakers.

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