# Approaching the Adolescent-Headed Family: A Review of Teen Parenting

Lee A. Savio Beers, MD, and Ruth E. Hollo, MD

In the USA, as many as 1 in 6 women nationwide become adolescent mothers, making adolescent pregnancy and childbearing issues a frequently encountered occurrence by pediatricians and adolescent medicine health care providers. Both social and medical programs focus on prevention and management of adolescent pregnancies; however, caring for the adolescent-headed family is less well understood. For many teen parents, various environmental and behavioral risks contributed to early childbearing and parenting. Following delivery of the infant, many of these same psychosocial, environmental, and educational factors continue to play a role in the teen's ability to parent effectively. This review explores these factors in relation to teen parenting as well as describes the limited data available on outcomes of adolescent mothers and their infants. Despite negative social stereotypes regarding adolescent fathers, research suggesting that most fathers desire involvement with their infants and the impact of and factors influencing father involvement is

dolescent parenting is frequently encountered by practitioners in pediatric and family medicine; however, it typically receives little attention in training programs or medical literature. Providers may be well versed on the topics of adolescent pregnancy and primary teen pregnancy prevention but less comfortable with the care of an adolescent-headed family. While teen parenting may be considered the norm in other, particularly less developed countries, in

Curr Probl Pediatr Adolesc Health Care 2009;39:216-233 1538-5442/\$ - see front matter © 2009 Published by Mosby, Inc. doi:10.1016/j.cppeds.2009.09.001 explored. Understanding the dynamics of the coparenting relationship, an expanding field of study, will aid practitioners in strengthening and supporting teen parenting by both mothers and fathers. As most teen parents continue to reside with their families, teen parenting has an important impact on the multi-generational family structure. These relationships can serve both to support and at times to hinder the adolescent parents' development as an individual and as a parent. Successful interventions and programs to support the adolescent-headed family take on various forms but are usually comprehensive and multidisciplinary and consider the developmental status of both the parent and the child. To best care for adolescentheaded families, pediatricians and adolescent medicine providers should understand the psychosocial, developmental, educational, and relationship issues that influence adolescent parenting.

Curr Probl Pediatr Adolesc Health Care 2009;39:216-233

the USA it is generally considered maladaptive, both by the lay public and by professionals. However, while teen parents may have behavioral risk factors in addition to developmental and family considerations that affect care, most can be very successful, especially if given appropriate support. This review describes what is known about adolescent parents, their children, and their families, delving into newer research that suggests that outcomes may not be as dire as previously thought. Recommendations for intervention, medical care, and research are also discussed, to help the pediatric and adolescent provider integrate these findings into their clinical practice.

# Background

#### Teen Births in the USA

Despite overall declining rates since the 1970s, teen births remain remarkably common in the United States—an estimated 1 in 6 women nationwide are projected to become teen mothers.<sup>1</sup> Eleven percent of all US births are to adolescent mothers.<sup>2</sup> In 2006, there

From the Children's National Medical Center, Washington, DC.

Competing interests: Dr. Lee Beers and Dr. Ruth Hollo have no commercial interests that pose a conflict of interest to the material presented in this article. Dr. Lee Beers is the medical director of the Healthy Generations Program, a multi-disciplinary medical and case-management program for teen parents and their children, at Children's National Medical Center, Washington, DC. Dr. Ruth Hollo is the assistant medical director of the Healthy Generations Program at Children's National Medical Center, Washington, DC. Both Drs. Beers and Hollo are Assistant Professors of Pediatrics at the George Washington University School of Medicine.

were 441,831 births to women under 20 years old; approximately one-third were to women 17 years of age and younger. The US has a birth rate of 41.9 births per 1000 females aged 15-19 years old, significantly (up to 7 times) higher than in other Western industrialized countries.<sup>3,4</sup> Additionally, after a 14-year decline, current and preliminary data indicate that the teen birth rate has increased for 2 consecutive years, rising 5% between 2005 and 2007.<sup>5</sup> Of all teens ages 15-19 (2004) who become pregnant, 57% deliver a live infant, 27% obtain an abortion, and 16% have a spontaneous miscarriage/fetal loss.<sup>6</sup> For many teens, their first birth is not their first pregnancy; depending on the population studied, up to 40% may have had a previous spontaneous or induced abortion.<sup>7,8</sup>

There are significant geographic, racial, and ethnic disparities in the teen birth rate. In 2006, the teen birth rate for Hispanic women ages 15-19 was higher than that of whites or non-Hispanic blacks (83 vs 27 and 64 per 1000, respectively); both Hispanic and non-Hispanic black teens had a birth rate more than twice that of white teens.<sup>3</sup> The teen birth rate across states also varies widely, from a rate (2005) of 62/1000 teens aged 15-19 in New Mexico and Texas to a rate of 18/1000 teens aged 15-19 in New Hampshire. Eleven states, most in the south, have a teen birth rate of 50/1000 or greater; 10 states, most in the northeast, have a teen birth rate of 30/1000 or less.<sup>9</sup> Examining these data from a different perspective, the percentage of women estimated to become teen mothers varies across states, from 8% in New Hampshire to 30% in Mississippi.<sup>1</sup> The reasons for these differences are unclear, although probably multifactorial. While there are some differences due to variability in rates of abortion, teen pregnancy rates across states largely follow teen birth rate trends.

Adolescent pregnancy has been associated with numerous interpersonal and environmental factors, including decreased parent-child connectedness, decreased parental monitoring, more permissive parental attitudes regarding adolescent sexual activity, community and family disorganization and disruption, parental characteristics (such as being a teen parent themselves), absence of positive peer norms, and low partner support for contraceptive use.<sup>8,10,11</sup> Children who have warm, loving, and communicative relationships with their parents are much less likely to initiate sex at an early age and become pregnant.<sup>12</sup> Risk factors for adolescent pregnancy, such as early sexual activity and decreased use of contraception, often co-occur with other health risk behaviors such as substance use.<sup>13</sup> Additionally, demographic characteristics such as low socioeconomic status, decreased educational attainment, residence with a single parent, and low parental education are highly related to the risk of early sexual activity and adolescent pregnancy.<sup>12</sup>

### Maternal and Child Outcomes of Teen Childbearing

Teen childbearing has significant social, economic, and health-related consequences for mothers, their children, and society. However, some recent studies demonstrate that, in many circumstances, the life course for parenting teens may not be substantially different from that of their socioeconomic peers.<sup>14-16</sup> At the very least, the impact of childbearing in the teen years may not be as great as once thought. Additionally, for some families or communities, adolescent childbearing may be seen as normative or as a positive life event, although more research is needed to investigate this assertion.<sup>17</sup> Several of the larger and frequently cited studies that describe poor outcomes for teen mothers are over 20 years old and subjects may have been very different from today's teen parents. Additionally, many of these studies do not use demographically matched nonpregnant and parenting teens and/or parenting adults for controls. The risk to children born to adolescent mothers is a little clearer, although it is uncertain how much of the risk is related to maternal age and how much is related to other pre-existing factors such as socioeconomic status or home and environmental factors. Somewhat contrary to popular opinion, most teen parents, children, and families do equally well compared to their peers, particularly when provided with strong social and functional supports; this is important to keep in mind when providing care to adolescent-headed families in order to maintain a strengths-based focus.<sup>18</sup> Despite this, while adolescent pregnancy is not a universally negative life event, it has still been associated with a higher risk of negative outcomes for the young mother, her partner, and her children, even when controlling for demographic factors such as socioeconomic status. Teen pregnancy and parenting remain important public health issues that deserve continued attention.

In the USA, pregnant adolescents are at increased risk for complications such as anemia, poor maternal weight gain, toxemia, increased mortality, and premature delivery. Younger teens are less likely to initiate early prenatal care, with less than half of pregnant 10-14 year olds beginning prenatal care in the first trimester; they are also more likely to deliver low birth weight infants. The relative influence of socio-environmental and biological factors is unclear, but both play a role. Biological factors may be relatively more important for younger, less physically mature teens.<sup>6,18-20</sup>

Adolescent mothers are also more likely to experience school failure and increased dependence on government support in later years. It is important to note, however, that many teens (up to 60% in 1 study) drop out of school before they become pregnant; their academic difficulties predate and perhaps contribute to their pregnancies.<sup>16</sup> Some teens, in fact, return to school after they become pregnant in an effort to improve opportunities for themselves and their child(ren). There is some evidence that racial and ethnic differences exist, with black teen mothers being more likely to progress in school. Educational outcomes, as expected, are better when achievement was higher prepregnancy and high levels of family support exist.<sup>15,16,18,21</sup>

Infants born to adolescent mothers are more likely to be premature and/or low birth weight and to die in the perinatal period.<sup>13,18</sup> All children born to adolescent mothers, including healthy term infants, are at risk for future developmental and behavioral problems, even when controlling for other background characteristics. Children born to mothers 19 and under, and particularly those born to mothers 17 and younger, generally display lower levels of kindergarten readiness (including cognitive and social skills) compared with the children of adult women.<sup>22</sup> Children of adolescent mothers have been shown to have more academic difficulties, school adjustment problems, and increased risks of developmental delay. They are also at risk for later effects such as substance abuse, early sexual activity, increased likelihood of becoming an adolescent parent, decreased self-sufficiency, and continued cognitive and behavioral problems.<sup>18,21,23-26</sup> Although the risks to children born to adolescent mothers are well known, it is not clear how much of the risk is conferred because of young maternal age and how much is because of other demographic and background characteristics. While some studies control for these influences, others do not. Factors such as greater maternal education and more favorable living environments may improve child outcomes.<sup>27</sup> By contrast, less sensitive, more unresponsive parenting is linked to increased academic and behavioral difficulties for school-aged children born to adolescent mothers.<sup>28</sup> Regardless of cause, important risks exist; providers should monitor carefully for them and provide intervention earlier rather than later.

#### Adolescent-Headed Families

Adolescent-headed families are structurally and demographically diverse, although they do overall share some common characteristics. In 2006, 92% of teen mothers aged 15-17 and 81% of teen mothers aged 18-19 were unmarried, compared with 39% all women who gave birth that year.<sup>6,9</sup> Of those teens who marry after the birth of their child, only 30% remain in those marriages after the age of 40.<sup>29</sup> Most teen mothers live with their own mother or other close family member. Although the literature is limited, there is evidence that most fathers of children born to adolescent women are not living with the mothers of their children.<sup>8</sup> The predominance of literature dealing with teen parents focuses on the mother and sometimes her child. Much less has been written about adolescent fathers or older fathers of children born to adolescent mothers, and even less on the coparenting relationship, although these topics have appropriately been gaining increased focus over recent years. Because the literature focuses almost exclusively on adolescent mothers and the fathers of their babies separately, this review discusses them separately as well.

Repeat births to teen parents are also remarkably common, and repeat pregnancies are even more so, with recent studies reporting pregnancy rates ranging from 42% to 63% within 18-24 months of a prior birth.8,30 In 2004, 20% of all births to adolescent mothers were repeat births.<sup>31</sup> Looking at these numbers in another way, in 2002, 23.5% of teen mothers (19 and younger) born in 1982 had a second birth by the time they were 20.<sup>32</sup> Many, but not all, studies show that younger mothers are more likely to have a repeat birth in their teen years and they are more likely to be closely spaced, with close to 30% of young women less than 16 years of age having a second birth within 24 months. It is unclear, however, whether age is an independent predictor or if other factors increase the rate of both early and subsequent pregnancies. Second and higher order births are slightly more likely to occur within the context of marriage, with older mothers more likely to be married.<sup>32-34</sup> Repeat pregnancies may also be more likely to be carried to term than adolescent pregnancies experienced before a first

birth.<sup>8,34,35</sup> Geographic trends for repeat births mirror those of overall teen birth rates.<sup>31</sup>

Other individual and psychosocial factors are associated with an increased risk of a repeat birth, including lower educational achievement and cognitive abilities, psychiatric illness, exposure to physical or sexual violence, and drug or alcohol use.<sup>7,8,30,32,34</sup> Several studies report that adolescents who had a repeat teen birth were more likely to be in a relationship, living with, or married to the father of the baby; however, Raneri et al report increased repeat pregnancies among teens who were not in a relationship with their baby's father 3 months after delivery.<sup>8,17,32,34</sup> Intuitively, teens who use long-acting contraceptives such as depot medroxyprogesterone acetate or progesterone implants during the first postpartum year are less likely to experience a repeat birth, although contraceptive discontinuation rates are relatively high.<sup>36-40</sup> Evidence regarding the intentionality of repeat pregnancies is mixed, although most repeat pregnancies are reported as unplanned. As expected, intent to have a second child is associated with repeat pregnancies.<sup>8,18,32</sup> Additionally, many adolescents who have repeat pregnancies in their teen years display ambivalence through inconsistent contraceptive use or lack of decision-making.17,41,42

Repeat birth before the age of 20, particularly when it is closely spaced (less than 24 months), is associated with increased negative outcomes, although it is difficult to know if this is due to the closely spaced births or to other demographic factors. Additionally, the mothers who deliver subsequent children may have more psychosocial risks and less support than mothers who do not, making comparisons of the 2 groups difficult. Older literature consistently suggests that adolescents who experience subsequent pregnancies in their teen years are less likely to continue their schooling or attain economic self-sufficiency.<sup>32</sup> They are also more likely to obtain inadequate prenatal care, to deliver prematurely, and to have lower birth weights than first infants born to teen mothers, although 1 longitudinal study demonstrates that the second infant born to an individual teen is likely to weigh about the same or slightly more than her first.<sup>32,43</sup> This suggests that some of the disparities seen may be related to population differences between teens who have 1 child and teens who have more than 1 child, rather than an inherent risk associated with subsequent pregnancies.

#### Psychosocial Influences on the Adolescent-Headed Family

Adolescent mothers face many different psychosocial influences and stressors that influence their parenting and are sometimes difficult to manage, thus affecting outcomes for the family as a whole. Some of these influences are modifiable, others less so; however, understanding their impact can enhance clinical care and intervention development. Young mothers may be more at risk for problems adjusting to the changes associated with childbearing for many reasons: developmentally, they may be unprepared for the challenges of motherhood and forced to mature before they are truly ready. Their emotions can be very volatile. Physically, their bodies are undergoing the rapid changes of puberty and gestation closely upon each other. Cognitively, they are entering a period of formal operational thinking, which involves reasoning, consistency, and logical thought; however, they have not fully developed these skills.<sup>44</sup>

#### Mental Health Concerns

Depression is very commonly studied when examining adolescent parenthood, as it is expected to be both a common occurrence (based on overall rates of adolescent depression in deprived circumstances) and a likely moderating factor for other outcomes. Indeed, adolescent mothers have a very high incidence of depression, with reported rates ranging from 30% to 59%, and are at particularly high risk for postpartum depression. In longitudinal follow-up, reported depressive symptoms can persist many years.<sup>44-48</sup> Decreased social support and poor partner relations are associated with increased rates of depression.<sup>46,47</sup> At all ages, maternal depression can have a negative impact on a child's development and can lead to decreased interaction between mother and child; these effects are also seen specific to the adolescent mother-child interaction. Studies show that adolescent mothers who are depressed exhibit less supportive care to their children, and their children display more internalizing behaviors.<sup>46,49</sup> Depression in the adolescent mother is additionally associated with decreased self-perceived caretaking abilities. Other studies also report increased rates of other mental health disorders or concerns, including psychiatric hospitalizations and suicidal attempts, with 1 study demonstrating further increased rates of both in teens who have a repeat pregnancy.<sup>34,47</sup>

Some racial and ethnic differences may exist as well. Schweingruber and Kalil found that in white families, teen mothers who were more involved in the decisionmaking regarding the care of their child were less likely to be depressed; however, the opposite was true for black teens.<sup>48</sup> Additionally, Schmidt et al found that, although African American teen mothers had lower rates of depressive symptoms immediately after the birth of their child than Mexican American or Caucasian teen mothers, they had the highest rate of recurrence at 48 months postpartum.<sup>45</sup> More research is needed to determine if race and ethnicity play a significant role in the prevalence and/or persistence of depressive symptoms.

Even if a teen parent does not meet clinical criteria for depression, significant emotional distress may be present. Most adolescent parents do not actually experience high levels of parenting stress, but for those who do, it may be quite maladaptive; in most studies one-third or less of subjects report clinically significant levels of stress on standardized measures, even among teen mothers in foster care.<sup>50-53</sup> Adolescent mothers who report higher levels of parenting stress have less confidence in their parenting abilities and are less empathetic and accepting of their children.<sup>54</sup> Several factors may increase or predict a young mother's levels of stress, including grandparent criticism, inadequate partner support, poor emotional health, maternal perception of difficult child temperament, and intimate partner violence.<sup>14,52,53,55</sup> Intimate partner violence is alarmingly common, with studies reporting approximately one-quarter of teen mothers experiencing some type of violence, often over long periods.<sup>52,56</sup> Economic strain has been shown to be an influence in some studies but not others, particularly when controlling for additional variables.<sup>52,53</sup>

Caring for an infant is a significant change for anyone and can have particular impact on an adolescent's lifestyle, especially if she has many nonparenting friends or peers. Providers should be sensitive to the unique changes parenthood brings to the adolescent, including altered peer interactions and decreased availability to attend school functions or extracurricular activities. Additionally, adolescent parents are required to focus their attention on another at a time when they are developmentally focused on their own maturation. While parenthood is stressful for everyone in some degree, all the above factors can create a uniquely stressful situation for the teen parent. For most adolescent mothers, parenting stress decreases as their child ages, suggesting either increased selfconfidence in caregiving, decreased demands of caring for an older child, or increased maturity of the mother. A small subset of mothers (7% in 1 study) may have chronically high levels of stress and some (10%) may actually have increasing levels over time.<sup>14,50,52</sup>

#### Impact on Parenting

Parental mental health issues can have significant impacts on infant attachment, child behavior and development, and long-term outcomes. Findings are somewhat mixed regarding the independent impact of age on parenting. Many of the studies looking at these issues are older, and, again, most do not use groups with similar socioeconomic background and life experiences for comparison. Much of the methodology used to assess these domains has not been standardized on young minority women and may not be the most appropriate way to assess these variables. Thus, it is difficult to know if differences observed in parenting can be ascribed to the mother's age or to other comorbid factors. The literature does suggest that adolescent mothers tend to be less interactive, tend to be less positive in their parenting style, have more difficulties problemsolving, and have more unrealistic expectations of their infant's development; however, these differences may not be as marked as initially thought, and there is great individual variability.<sup>15,53,57-60</sup>

Additionally, a significant number of these studies do not take into account the pre-existing mental health and/or cognitive, social, or family functioning of the adolescent parent, which may be a more important predictor of parenting capacity.<sup>61,62</sup> Disrupted or atypical behaviors in the adolescent mother have been shown to be an important predictor of disordered infant attachment.<sup>63,64</sup> Home environment is also important. Oxford and Spieker report that preschool children of adolescent parents were more likely to have poor language development if their home environment was linguistically poor, an effect that was amplified if the mother herself had poor language skills.<sup>65</sup> Several factors have been shown to predict positive parenting attitudes and interactions, including positive grandmother and partner relationships, high self-esteem, greater cognitive maturity, and greater educational achievement.49,54,62,66 Specific care-giving behaviors may also be affected by the home environment and family influences. Teen mothers rely heavily on their own mothers for advice; 1 qualitative study found that grandmothers primarily determined

the feeding practices of their adolescent daughters' young infants.<sup>67</sup>

Evidence supporting the risk of child maltreatment by adolescent mothers is similarly mixed, with some studies demonstrating increased risk and others demonstrating no difference or inconclusive results.<sup>68</sup> Adolescent mothers are likely more at risk for abusing their children if other stressors, such as low family cohesion, high family conflict, or poor educational achievement, are present.<sup>69,70</sup> Stevens-Simon et al found that a 10-question screening tool, the Family Stress Checklist, was able to identify a subgroup of adolescent mothers who were at increased risk for maltreating their children.<sup>71</sup>

A variety of parenting interventions have been shown to be effective in improving outcomes, thus implying that parenting behavior may be modifiable.<sup>72-75</sup> In the clinical setting, focusing on teaching age-appropriate infant development, fostering positive and interactive parenting skills, and identifying strategies for problem-solving may improve outcomes for children born to adolescent mothers. Increased attention to the adolescent mother's level of function before pregnancy and quality of her relationships may also be helpful in identifying adolescent-headed families who are at particular risk.

#### Adolescent Fathers and Fathers of Children Born to Adolescent Mothers

Parenting by adolescent fathers is even less well understood. Research in this area has been limited and has been characterized by a lack of direct access to fathers. Most research to date is based on maternal report of father involvement. Studies that interview fathers directly tend to recruit from parenting programs or seek volunteers, thus potentially selecting more involved fathers. Young fathers and mothers may have differing reports about the father's level of involvement with their children, with fathers reporting greater involvement.<sup>76</sup>

#### Characteristics of Fathers of Children Born to Adolescent Mothers

Fathers of children born to adolescent mothers may be adolescents themselves, although many are older; some studies have documented that these fathers are an average of 2.6-3.4 years older than the mothers.<sup>76-80</sup> The Guttmacher Institute reports that in 2002,

the rate of fatherhood for males aged 15-19 was 19/1000.<sup>81</sup> In considering adolescent fatherhood, studies have found that young men whose family of origin has low socioeconomic status and/or a mother with younger age at first birth, who exhibit poor academic performance or risky sexual behaviors, or who enter a long-term relationship such as cohabitation or marriage, were more likely to become adolescent fathers.<sup>82</sup> In fact, engaging in risk behaviors, including early sexual activity, gang membership, delinquency, drug use, and poor school achievement, has been associated with adolescent fatherhood.<sup>83</sup>

Fathers of children born to adolescent women are more likely to be nonresidential and unmarried,<sup>76,84,85</sup> which influences both access to and engagement with their children. While more than half of these couples remain romantically involved shortly after the baby's birth, this number decreases with time.<sup>76,77,86</sup> There is conflicting evidence as to the impact of the romantic relationship between the parents in sustaining fathering behavior, although most studies suggest that an ongoing romantic relationship with the child's mother increases father's engagement with their children.<sup>85,87-89</sup>

#### Father Involvement

In general, studies of adolescent fathers and/or the fathers of children born to adolescent mothers find that fathers want to be involved but often perceive barriers to involvement, which include lack of money, lack of knowledge of child development, a contentious relationship with the child's mother or her family, and increased psychosocial stress and anxiety.<sup>76,86,90-94</sup> In many studies and from a social perspective, father involvement is often considered primarily as financial support<sup>95</sup>; however, involvement for both residential and nonresidential fathers actually encompasses a much broader range of parenting behaviors including care-giving, playing, nurturing, and offering in-kind support such as provision of materials needed by the infant.<sup>87,88</sup> Several factors have been found to contribute to father involvement. Regardless of age, fathers who are employed are more likely to be involved with their children both financially and through parenting behaviors.<sup>87,96</sup> Additionally, cohabitation positively impacts father involvement, likely due to increased access to the child.<sup>97</sup> The quality of the relationship between the adolescent mother and father, even outside of a romantic relationship, is also predictive, with fathers in higher quality relationships more likely to be involved.<sup>86,87,97</sup> Several studies have suggested that father involvement decreases with time and that fathers may participate more with younger children.<sup>76,77,86,96</sup> Although this may seemingly reflect change in the parent's relationship over time, the complexities of interaction between adolescent mothers, fathers, and their children have not been adequately studied to support this conclusion.

#### Satisfaction With Fathering

Study of fathers' satisfaction with parenting has been limited and has more frequently focused on maternal satisfaction with fathers' parenting behavior. One study has suggested that father satisfaction is positively influenced by personal self-esteem and satisfaction with social supports.<sup>98</sup> Additionally, parenting stress experienced by young fathers has been suggested to have a negative impact on their involvement and care-giving with their infants, an effect that was buffered by social support from paternal grandparents.<sup>99</sup>

#### Impact of Fathers

While involvement of fathers is generally assumed to be good for children, research examining the relationship between nonresidential fathers' involvement and child well-being is limited and mixed, with little looking specifically at children of adolescent mothers. Some studies of children with nonresidential fathers have found improved cognitive outcomes for those who experience more warm and positive interactions with their fathers compared with those who have limited or less warm interactions with their fathers.<sup>100-102</sup> A longitudinal study of children of adolescent mothers with nonresidential fathers over 10 years showed that those children with father contact had improved academic and social outcomes, with fewer behavior problems and higher scores on achievement tests.<sup>103</sup> While some studies report improved behavioral and psychological outcomes associated with nonresidential father involvement compared with noninvolvement, others have found positive behavioral effects for some children, but negative or no effects for others.<sup>101,104-107</sup> There is some evidence that conflicted father-child relationships, or relationships that were initially close but have grown distant, are associated with greater negative outcomes than nonexistent father-child relationships.95

#### Fatherhood Interventions

Several intervention studies have attempted to identify and address the service needs of young fathers and identify programs that could strengthen parenting behaviors. From these, several themes have emerged, including that young fathers desire involvement with their children, that complex factors influence this involvement including self-respect, lack of skills or resources for parenting, lack of educational or employment skills for provision of financial support, lack of communication skills allowing successful navigation of relationships with the adolescent mother and maternal grandparents, and engagement in risk behaviors including unprotected sex, violence, and substance abuse.<sup>90,108-111</sup> Studies have suggested that many young fathers identify employment as a service need in becoming more effective parents; however, they often were found to additionally have social, counselling, and educational needs.<sup>108-111</sup> In a review of service needs of nonresidential adult and teen fathers, Dudley includes the importance of assisting teen fathers in navigating the process of establishing paternity as well as providing of sex education services.<sup>89</sup> When successfully engaged in a father's program, several studies note that addressing the full scope of a young father's needs, beyond employment, was important to achieving positive outcomes in parenting.<sup>90,108-111</sup>

Several interventions specifically targeting teen fathers have shown promise for improving young father's lives and parenting skills. An intervention focused on decreasing risk behaviors in adolescent fathers compared a school-based population vs groups who had obtained GEDs or had dropped out, and determined that those fathers who were enrolled in school were most successful in reducing risk behaviors, suggesting that school-based programs may be an effective method to target this population. Young fathers who are enrolled in school may also have different characteristics and be more amenable to intervention.<sup>83</sup> While parenting classes are often a focus of intervention for adolescent fathers, an intervention in which young fathers were successfully engaged in supportive relationships with social workers in addition to parenting classes demonstrated improvement in the young men's contraceptive use, self-respect, parenting behaviors, and attainment of employment and educational goals compared with a control group of young fathers who received only

parenting classes.<sup>108</sup> Similarly, a small study of young fathers enrolled in a fatherhood program, in which they received case management services as well regular peer group meetings during which topics related to fatherhood were discussed, showed improved engagement with their children at the end of the program.<sup>90</sup> Successful engagement and retention in such programs is a significant problem for young fathers, making evaluation of best practices and approaches for this population difficult.<sup>83,111</sup> Practitioners should, however, assess young fathers' social, medical, and educational needs whenever they are present at health-care visits and attempt to connect them with resources as well as encourage educational achievement.

#### Juvenile Offenders

Incarcerated juvenile offenders are one of the most high-risk groups for adolescent fatherhood. Incarcerated juvenile offenders are more likely to be adolescent fathers with approximately 25%-28% of male juvenile offenders fathering at least 1 child compared with the general population rate of 4%-7%.<sup>112,113</sup> Some data have linked the risk factors predisposing young men to adolescent fatherhood with risk factors predisposing to juvenile incarceration including low socioeconomic status and low mother education. For incarcerated juvenile offenders gang membership and having a family member convicted of a felony were also predictive of adolescent fatherhood.<sup>113</sup> Studies assessing the success of juvenile offenders in becoming effective fathers are limited; however, incarcerated fathers may express desire for parental involvement and view their child as an important motivation for avoiding future criminal behavior.<sup>112</sup>

#### Coparenting Between the Adolescent Mother and Her Partner

Many expectant adolescent couples may express plans to marry one day, although most ultimately do not do so. Fathers who provide social support for mothers during pregnancy and demonstrate parenting skills are more likely to be viewed as a good partner for marriage.<sup>114</sup> Although most adolescent parents do not eventually marry, many maintain a parenting relationship that is influenced by their interpersonal relationship and their extended families. Little is known about young parents' satisfaction with the coparenting relationship, and there is some evidence to suggest that fathers view their relationship with the child as distinct from their relationship with the child's mother, whereas mothers see the two as interrelated.<sup>78</sup> Several studies have evaluated maternal perception and satisfaction with father involvement and the parent relationship. These have suggested that mothers view the fathers' parenting involvement, including parenting and nurturing behaviors, more favorably if the couple is engaged in a romantic relationship and if the father provides ongoing financial support.<sup>80,85,115</sup> Interestingly, studies also suggest that the relationship between the adolescent mother and her mother may also influence the mother's perception of the father's parenting behavior; specifically, if the grandmother is approving of the father, the mother is also more likely to view the father positively and allow him greater access to the child.<sup>85,115</sup> A strong coparenting alliance also positively impacts maternal perceptions of father care-giving, even in the absence of a romantic relationship.<sup>80</sup>

Fathers' satisfaction with the coparenting relationship has been less well studied; however, there is some literature to suggest that the relationship with the adolescent mother is influential on parenting behavior. A positive relationship before the child's birth positively impacts the father's subsequent parenting behavior and ongoing parenting relationship with the child's mother, even outside of a romantic relationship, as well as potentially decreasing parenting stress for the father.<sup>116,117</sup> A coparenting intervention with fathers found that fathers who participated in a prebirth coparenting program had improved coparenting behaviors following the child's birth.<sup>118</sup> Stress within the coparenting relationship, which may manifest in risk for abusive behavior toward the child, is not well understood; however, there is some evidence to suggest that a declining relationship with the parenting partner or with grandparents increases parenting stress, and thus risk for perpetrating abuse, for both sexes.<sup>116</sup>

#### **Role of Grandparents**

Grandparents play a unique and integral role in adolescent parents' lives, especially as most adolescent mothers continue to live with their parents during pregnancy and following their child's birth.<sup>119</sup> In fact, the Personal Responsibility and Work Opportunity Act (1996) requires teen mothers to live with a parent or

guardian to qualify for public assistance. Mothers of adolescent mothers play a particularly significant role, often providing both social support such as housing and support for the young woman to complete education, and significant parenting support, especially in the first 24 months of the child's life.<sup>120,121</sup> Research suggests that residing with the maternal grandmother improves adolescent mothers' adjustment to parenting.<sup>121</sup> Both maternal and paternal grandmothers typically continue to parent the adolescent parent as well as model appropriate parenting behavior with their grandchildren, assisting in transitioning adolescent parents into the parenting role.93 In fact, studies suggest that adolescent mothers who are parenting their children with supportive grandmothers who share and model care-giving are more confident in their parenting abilities.<sup>122</sup>

Adolescent mothers who have an open, communicative, and flexible relationship with their own mothers tend to exhibit more positive parenting behaviors toward their children.<sup>123</sup> Some studies have also suggested that increased maternal grandmother support also leads to decreased maternal depression and subsequently better parenting.<sup>124,125</sup> By contrast, as a part of that support, maternal grandmothers in particular may provide a great deal of direct child care to their grandchildren, a role for which they may not have been prepared. Research has suggested that grandmothers who provide a large amount of direct child care have decreased marital satisfaction, increased stress, and decreased satisfaction with their daughter's parenting; additionally, their daughters are more likely to have a repeat teen pregnancy and decreased understanding of child care.<sup>126-128</sup> This suggests that, while support from the grandmother is generally beneficial, it is important for the teen parent to remain engaged in parenting and child care; too much support may lead to more negative outcomes.

Conflicted relationships between an adolescent mother and her mother can lead to parenting stress, decreased parenting satisfaction, and increased depressive symptoms for the adolescent mother.<sup>120,127,129</sup> Less supportive grandmother-adolescent mother relationships also may result in the teen mother leaving her mother's home, leading to decreased social support, opportunities for modeling of parenting behavior, and educational support. The loss of any of these may negatively impact both the adolescent mother and her child.<sup>121</sup> Research done on adolescent mothers in foster care found that most still identified a main parenting figure, most commonly either their biological mother or other female relative, and that if the parenting figure had a history of having been an adolescent parent themselves, the adolescent mother was more likely to have decreased satisfaction with parenting, increased parenting stress, increased depressive symptoms, and lower educational achievement.<sup>130</sup> Limited research has suggested that including maternal grandmothers as active participants in programs for adolescent mothers enhances maternal self-esteem and educational outcomes.<sup>131</sup>

Although grandmothers often have a positive influence on their adolescent daughter's parenting skills and provide significant social support; maternal grandmothers' relationships with fathers are much more varied. Research suggests that grandmothers may play a role in gate-keeping behavior demonstrated by the adolescent mother, as well as actively limiting the father's access to his child.<sup>85,87,115</sup> This gate-keeping behavior is not well understood but may be related to disapproval of the young father and/or his relationship with the adolescent mother, or a desire to have the young father provide financial support to gain access to the child. In one study, an extremely strong bond between the grandmother and the adolescent mother diminished the maternal satisfaction with fathers' involvement, suggesting that the coparenting relationship may have been eroded by the closeness of the grandmother-daughter relationship.85

The impact of grandmothers on adolescent mothers, fathers, their children, and the coparenting relationship is complex and results to date have been somewhat mixed. There appears to be a fine balance of quantity and quality of grandmother involvement that may vary somewhat by individual family and has yet to be clearly delineated. Further research in this area is necessary to better understand these relationships as well as the best approach to the multi-generational family.

# Impact of Teen Pregnancy on the Family System

Just as maternal grandmothers often play an integral and complex role in their parenting children's and grandchildren's lives, the presence of a parenting adolescent and infant affects the dynamics of the entire family. As discussed above, adolescent mothers commonly live with their own mothers, and as a result, with younger siblings and extended family. Overall, research has suggested that adolescent childbearing creates financial stress for families as they attempt to allocate resources for the infant, decreases the quality of parenting by the grandparents as they are stressed to provide additional parenting and support to the new grandchild, changes the expectations of parents for nonchildbearing siblings, and may increase parental acceptance of adolescent childbearing.<sup>132,133</sup>

Stress created within the family by an adolescent pregnancy and birth may influence the interactions of mothers of childbearing teens with all of their children. Research on the grandparents' (parents of the adolescent parent) reaction to other family members is mixed, suggesting that, although many parents may view their nonchildbearing teen as having a brighter future with more opportunities than their childbearing teen, the strains of caring for an adolescent parent and new grandchild cause them to be unable to devote as many resources to the nonparenting child.<sup>132,134</sup> Some research has suggested that mothers of childbearing teens may subsequently treat their children (including the nonparenting siblings) less affectionately, thereby also predisposing the siblings to problem behavior or early parenting.<sup>134</sup> Alternatively, in some families these siblings may receive more attention from parents, focusing on contraception awareness and parenting, intended specifically to prevent adolescent pregnancy.<sup>132</sup>

Overall, the younger sisters of adolescent mothers have specifically been shown to have earlier sexual activity, increased behavior issues, and more permissive attitudes toward childbearing when compared with girls who have an older sister who has not been pregnant. In fact, these younger sisters may have a two-fold or greater risk of becoming adolescent mothers themselves. These girls may also be more pessimistic about future opportunities and education. Younger sisters may participate in child care activities for their nieces and nephews. The quantity and quality of child care provided by these siblings is unknown; however, there is some suggestion that provision of child care may make younger siblings more comfortable with parenting tasks.<sup>132,133</sup> However, the true impact of adolescent pregnancy on younger sisters is unclear, as there have also been some protective elements for younger sisters of parenting teens suggested. These include increased access and communication surrounding sexuality and contraception, exposure to the hardships of teen parenting experienced by their sibling, and, sometimes, more invested parenting with increased expectations for the younger sister.<sup>132,134</sup>

Additional research to further define these dynamics is necessary before specific conclusions can be made. Providers caring for adolescent-headed families may also be caring for the teen parent's siblings, allowing for an opportunity to screen for risk behaviors, to encourage academic achievement and delay of childbearing, and to discuss contraception and condom use.

#### Social Supports of Adolescent Parents

Research, much like community, medical, and governmental programs, has focused on the social support provided to adolescent mothers. Adolescent mothers identify social support, including both parenting and emotional support, as primarily emanating from family members, particularly their own mothers, as well as from the father of the baby.<sup>127,135</sup> Peers are considered as part of the social support network but did not play as strong a role as mothers or infant's fathers when adolescents were asked to consider who they would turn to in an emergency; however, they were still viewed as an important source of emotional support.<sup>135</sup> One study has suggested that adolescent mothers may overestimate scope and availability of support from family members and peers prenatally and are subsequently dissatisfied with support levels and communication after the child is born.<sup>136</sup>

One study found that teen mothers have significant parenting and social support from natural mentors, such as extended family members like aunts or grandmothers. These long-term relationships may assist teen mothers in attaining education goals as well as offering improved emotional support.<sup>137</sup> The same study found that teens with strong natural mentor support had less satisfying relationships with their own mothers, although whether this is a cause or an effect is unclear. Similarly, older sisters may play an important role in the support network for adolescent mothers, with limited research suggesting that supportive older sister relationships decrease depressive and anxietyrelated symptoms in adolescent mothers.<sup>88</sup>

While adolescent mothers often consider community supports as important, they do not access them as readily as family resources.<sup>135</sup> For some adolescent parents, participation in a religious community may provide significant social support and serve as a protective factor.<sup>138</sup> Thorough understanding of the impact of various types of support accessed by teen mothers and fathers requires additional exploration and may lend insight into how to best meet their needs. Practitioners, ideally through use of a multidisciplinary team, should assess teen parents' existing social supports and needs and refer to community-based services as appropriate.

# Successful Interventions

A better understanding of the background characteristics, behaviors, and support systems of teen parents will ideally lead to interventions that will improve outcomes for adolescent-headed families. Qualitative studies report that teens themselves desire close personal relationships with program staff, tangible supports such as assistance with child care and housing, and health and parenting education.<sup>139-141</sup> There are multiple types of program interventions, which can largely be grouped into 4 main categories: (1) schoolbased, (2) home-based, (3) comprehensive communitybased, and (4) medical setting-based.

School-based programs can take many forms, including psychosocial or parenting interventions taking place in the school, school-based health clinics, and residential or alternative school placements for pregnant and parenting teens. The school setting is a natural place to reach certain pregnant and parenting teens, providing a "captive audience"; however, support does not reach those teen parents who have dropped out of school. As noted, teens who are not attending school are at higher risk for poor outcomes and are in need of additional support. Ideally though, a school-based program can help prevent school dropout once teens are enrolled in the intervention. A review of school-based health clinics found that many had a positive impact on pregnancy outcomes and educational success.<sup>142</sup> Although alternative school placements are commonly considered when available, there is little evidence describing their efficacy, and one can assume there is great individual variability. Providers should become informed about the types and quality of local school placement options before making referrals.

*Home-based programs* may provide a variety of services in the client's home, including parenting support, nurse visits, and mentorship. Programs have a wide range of types of service providers, intensity, and

goals. Home-based programs may allow for more frequent contact and more contact with family members and other supports, leading to closer relationships between clients and staff.<sup>32</sup> Of the home visiting programs that have been rigorously evaluated, the Nurse Home Visitation program demonstrates the clearest and most consistent evidence of success, with decreased repeat pregnancy rates for adolescents at 2 sites at 24, 36, and 45 months.<sup>143</sup> Again, however, few programs have been evaluated rigorously over the long term, and many evaluations lack the sample size to draw meaningful conclusions.

*Comprehensive community-based programs* may operate at a variety of different sites and again offer a wide assortment of services, depending on the program. Case management and group parenting classes are common interventions in these programs, which may vary in intensity and fidelity, even across sites providing the same intervention. No one model has been proven effective, although many programs have demonstrated some success.<sup>32</sup> Again, there is great regional variability, and providers should educate themselves as to what is available in their own community, asking for evidence of improved outcomes for participants in the program.

Medical setting-based programs typically focus on providing reproductive health care, although many provide more comprehensive intervention as well. "Teen-tot" clinics exist across the country, providing a medical home for adolescent parents and their children in the same clinic. Practitioners, usually either pediatricians or family practitioners, are the primary care provider for both the teen parent and the child, who are seen together at clinic visits if appropriate. Practitioners take advantage of all encounters to inquire after the health and well-being of the whole family, addressing any concerns that arise. Comprehensive, "wraparound" services are often provided, such as case management, mental health services, parenting education, and social work support. A review of "teen-tot" programs, for which only 4 studies met criteria for inclusion, found that 3 of the 4 were able to reduce repeat pregnancy rates. Educational as well as maternal and child health outcomes were also positively affected.<sup>144</sup> This model is most easily implemented in medical practices and reflects the best practice principles of family-centered care. Even if social service supports are limited, caring for the adolescent mother, child, and sometimes father together can decrease barriers to accessing care, increase

the family's trust in the medical provider, and provide improved continuity. Scheduling family members at the same time may even save time in the clinical setting, allowing the practitioner to address the needs of the adolescent parents and their children at once, rather than at multiple visits.

Unfortunately, the literature describing current interventions is also plagued by frequent limitations. Many studies do not use experimental or quasi-experimental designs, or if they do, they use a control group that is very different from the group studied; intervention types are quite varied, and there is no consensus regarding outcomes studied, time points of evaluation, or age of participants (ie, including participants younger than 18 vs younger than 20). A recent meta-analysis of programs designed to decrease the repeat pregnancy rate for adolescent mothers, the outcome most commonly studied across programs owing to its relation to improved outcomes overall, found only 16 studies that met criteria for inclusion. This meta-analysis found that results of program evaluations are largely mixed and there is no consensus regarding 1 best model. Most programs seemed to be effective at earlier follow-up points (average, 19.13 months), but less so at later follow-up points (average, 30 months); however, only about half of the programs tracked clients to the later follow-up. Even a moderate delay in repeat childbearing can have a positive effect; however, there would ideally be longer term impact from these programs. The only moderating factor that seemed to be influential was socioeconomic status, with programs serving teens from lower socioeconomic groups having higher rates of repeat pregnancy.<sup>145</sup>

A comprehensive review published by the National Campaign to Prevent Teen and Unplanned Pregnancy (then the National Campaign to Prevent Teen Pregnancy) summarizes the evaluation literature available regarding programs designed to prevent repeat teen births.<sup>32</sup> Similarly to the meta-analysis described above, results are mixed and no one program was shown to be uniformly successful. In this review, Dr. Klerman describes the following 4 common characteristics of successful programs:

- *Close and sustained relationships with teen mothers*: Programs that seemed to foster prolonged and strong relationships between teens and program staff were most successful.
- *Effective personnel*: Staff with higher levels of training and more advanced degrees, who had

**Table 1.** Best practices: components of a model secondary pregnancy

 prevention program (Adapted from Klerman<sup>32</sup>)

- Develop close and sustained relationships with program participants, ideally in the home
- Begin care during pregnancy and continue until the child is at least 2 and/or the mother is at least 18 years of age
- Employ professional staff who are willing and able to skillfully discuss sensitive issues such as family planning and domestic violence
- Allow time for individual, intense, intervention with program participants. Avoid merely telling clients what to do but help them to come to their own decisions
- Discuss fertility goals in a supportive and nonjudgmental manner, focusing on specifics such as the worsening of outcomes for teens with closely spaced births, what milestones a teen wants to achieve before a second birth is considered, and specific desires for timing of possible future births
- Provide comprehensive, medically accurate information regarding contraceptive options. Provide ongoing support and ensure teens have access to medical services. Advise teens that if they desire to stop a method because of side effects, or for any reason, they should do so in consultation with a medical provider
- Educate teens regarding the benefits of long-acting contraceptive methods and emphasize condom use
- Develop a close relationship with a Family Planning Service, to improve access for teen parents. Consider providing transportation to appointments
- Encourage returning to, and remaining enrolled in, school
- Address pre-existing special educational needs and encourage additional educational supports
- Provide child care for parents who are in school or working
- Encourage teen mothers to live with parents or other adults who are able to provide economic and emotional supports

comfort discussing issues related to family planning, were generally more effective.

- *Family Planning Emphasis*: The evidence on this is actually inconclusive, and programs that focus on family planning **only** may not be as successful in the long term due to high levels of contraceptive discontinuation rates. However, the review concluded that this is an essential component of successful programs.
- *Encouraging Education*: Teen mothers should be encouraged to return to school and pre-existing educational needs should be addressed.

Because of these findings, recommendations for secondary teen pregnancy prevention programs were made (Table 1). Those who provide care to adolescent-headed families should be cognizant of these findings in their clinical practices. For example, office and nursing staff members who are approachable and comfortable talking with adolescents may provide important support to a teen parent. Additionally, practitioners should try to refer to community-based pro-

Table 2. 2001 AAP Policy Statement Recommendations for Care of Adolescent Parents and Their Children<sup>147</sup>

Create a medical home for adolescent	Involve both adolescent mothers and coparenting father
parents and their children	Emphasize anticipatory guidance, parenting, and basic child care-giving skills
Provide comprehensive, multi-disciplinary care	Access community resources such as special Supplemental Nutrition Program for Women, Infants, and Children
	Provide medical and developmental services to low-income parents and children
	Facilitate coordination of services
Contraceptive counseling	Emphasize condom use
	Encourage long-acting contraceptive methods
Encourage breastfeeding	Support breastfeeding in home, work, and school settings
Encourage high school completion	
Assess risk of domestic violence	
Encourage adolescent parenting	Work with other involved adults such as grandparents to encourage developmental growth of adolescent as parent as well as optimize infant developmental outcomes
Adapt counseling to developmental level of	Utilize school-, home-, and office-based interventions
adolescent	Consider use of support groups
Awareness and monitoring of developmental progression of infant and adolescent	Advocate for high-quality community resources for adolescents including developmental resources, child care, and parenting classes
parent	Facilitate access to Head Start and individuals with disability education resources
Provide positive reinforcement for success	Educational achievements
	Parenting achievements such as compliance with well child care and immunizations Avoidance of drugs, alcohol, or nicotine
	Maintenance of breastfeeding and other healthy behaviors

grams that follow these recommendations. Providers should be sure to comprehensively discuss family planning with teen parents, including an honest discussion of the risks and benefits of each method (including abstinence, hormonal methods, and barrier methods).<sup>141,146</sup> Recommendations for program evaluation were also provided, including using an experimental design with an appropriate control group, following participants for at least 2 years, and using intention to treat and survival analyses when describing results. Published studies should also take care to carefully describe the intervention and report details of the participant's engagement with services.

#### **Recommendations for Practitioners**

In 2001, the American Academy of Pediatrics released a policy statement on the "Care of Adolescent Parents and Their Children." The committee made several recommendations based on existing research on teen pregnancy, secondary pregnancy prevention, teen parenting, and maximizing the outcomes of children of teen parents. Overall, these recommendations emphasize the importance of the creation of a medical home model, addressing medical needs including contraception for teen parents, developmental assessment of the adolescent and their child, addressing psychosocial needs through a multi-disciplinary approach, encouraging and supporting educational achievement, and involving the adolescents' social support figures such as grandparents. The recommendations also emphasize the need for further research and program evaluation to better define and establish best practices for care of this population. Table 2 summarizes policy recommendations.<sup>147</sup>

Legal issues also deserve brief consideration. Contrary to popular belief, teen parents are not automatically designated as emancipated minors in every state, and some states do not have any legislation on the topic.<sup>148</sup> Most, but not all, states allow minors to consent to place their own child for adoption, although some explicitly require adult involvement. Additionally, most states explicitly allow minor teen parents to consent for their children's medical care, and the others simply have no policy.<sup>149</sup> It is important to remember that, depending on the laws of your state and the emancipated status of the minor parent, he or she may be able to consent for their child(ren)'s medical care but not their own. There is great statewide variability; therefore, any provider who cares for adolescents or adolescent parents in their practice should educate themselves on the laws in their own state.

#### Conclusions

To date, study of the multiple facets of teen parenting has been limited and has pointed researchers into

ever-expanding dimensions of this issue. While there are no gold-standard programs or interventions that are effective for all teen parents at the time of this review, an approach to the teen-headed family should consider the developmental stage and progression of both the adolescent mother and the father, the complexities of the multi-generational family dynamic in which the mother-infant dyad often lives, the importance and fragility of the coparenting relationship to both the parents and the child, and the social context of the family. Comprehensive, multi-disciplinary care addressing the psychosocial, medical, developmental, and educational needs of adolescent parents and their children is an essential first step to achieving positive outcomes for adolescent parents, their children, and the extended family.

#### References

- Perper K, Manlove J. Estimated percentage of females who will become teen mothers: Differences across states. Washington, D.C.: Child Trends March 2009. Report No. 2009-09.
- 2. Facts on American Teens' Sexual and Reproductive Health. New York: Guttmacher Institute, September 2006.
- Martin JA, Hamilton BE, Sutton PD, et al. Births: Final Data for 2006. Hyattsville (MD): National Center for Health Statistics, January 7, 2009.
- 4. Demographic Yearbook 2006. New York: United Nations, 2006.
- Hamilton BE, Martin JA, Ventura SJ. Births: Preliminary Data for 2007. Hyattsville (MD): National Center for Health Statistics, March 18, 2009.
- Gavin L, MacKay AP, Brown K, Harrier S, Ventura SJ, Kann L, et al. Sexual and reproductive health of persons aged 10-24 years—United States, 2002-07. Atlanta (GA): Centers for Disease Control and Prevention, 2009.
- Linares LO, Leadbeater BJ, Jaffe L, Kato PM, Diaz A. Predictors of repeat pregnancy outcomes among Black and Puerto Rican adolescent mothers. J Dev Behav Pediatr 1992;13:89-93.
- Raneri LG, Wiemann CM. Social ecological predictors of repeat adolescent pregnancy. Perspect Sex Reprod Health 2007;39:39-47.
- Ikramullah E, Keith J, Manlove J, Moore KA. Facts at a glance. Washington, D.C.: Child Trends, July 2008; Publication number 2008-29.
- Kirby D, Lepore G, Ryan J. Sexual risk and protective factors: factors affecting teen sexual behavior, Pregnancy and childbearing and sexually transmitted disease: which are important? Which can you change? Washington, D.C.: The National Campaign to Prevent Teen Pregnancy, August 2005.
- Crosby RA, DiClemente RJ, Wingood GM, et al. Low parental monitoring predicts subsequent pregnancy among African-American adolescent females. J Pediatr Adolesc Gynecol 2002;15:43-6.

- Miller BC. Families matter: A research synthesis of family influences on adolescent pregnancy. Washington, D.C.: The national campaign to prevent teen pregnancy; 1998.
- Elfenbein DS, Felice ME. Adolescent pregnancy. Pediatr Clin North Am 2003;50:781-800.
- Milan S, Ickovics JR, Kershaw T, Lewis J, Meade C, Ethier K. Prevalence, course and predictors of emotional distress in pregnant and parenting adolescents. J Consult Clin Psychol 2004;72:328-40.
- Coley RL, Chase-Landsdale L. Adolescent pregnancy and parenthood: recent evidence and future directions. Am Psychol 1998;53:152-66.
- SmithBattle L. Helping teen mothers succeed. J Sch Nurs 2006;22:130-5.
- Black MM, Bentley ME, Papas MA, et al. Delaying second births among adolescent mothers: a randomized, controlled trial of a home-based mentoring program. Pediatrics 2006;118:1087-99.
- Klein JD. Adolescent pregnancy: current trends and issues. Pediatrics 2005;116:281-6.
- Goldenberg RL, Klerman LV. Adolescent pregnancy—Another look. N Engl J Med 1995;332:1161-2.
- Satin A, Leveno K, Sherman M, Reedy N, Lowe T, McIntire D. Maternal youth and pregnancy outcomes: middle school versus high school age groups compared with women beyond the teen years. Am J Obstet Gynecol 1994;171:184-7.
- Furstenburg F, Brooks-Gunn J, Morgan S. Adolescent mothers in later life. New York: Cambridge University Press; 1987.
- Terry-Humen E, Manlove J, Moore KA. Playing catch-up: how children born to teen mothers fare. Washington, D.C.: The national campaign to prevent teen pregnancy. January 2005.
- Pogarsky G, Thornberry T, Lizotte A. Developmental outcomes for children of young mothers. J Marriage Fam 2006;68:332-44.
- Nord C, Moore K, Morrison D, Brown B, Myers D. Consequences of teenage parenting. J Sch Health 1992;62:310-8.
- Horwitz S, Klerman L, Kuo H, Jekel J. School-age mothers: predictors of long-term educational and economic outcomes. Pediatrics 1991;87:862-8.
- Hardy JB, Shapiro S, Astone NM, Miller TL, Brooks-Gunn J, Hilton SC. Adolescent childbearing revisited: the age of inner-city mothers at delivery is a determinant of their children's self-sufficiency at age 27 to 33. Pediatrics 1997;100:802-9.
- Luster T, Bates L, Fitzgerald H, Vandenbelt M. Factors related to successful outcomes among preschool children born to low-income adolescent mothers. J Marriage Fam 2000;62:133-46.
- Lounds JJ, Borkowski JG, Whitman TL. The potential for child neglect: the case of adolescent mothers and their children. Child Maltreat 2006;11:281-94.
- Teen pregnancy, out-of-wedlock births, healthy relationships, and marriage. Washington DC: The National Campaign to Prevent Teen Pregnancy, 2009.
- 30. Jacoby M, Gorenflo D, Black E, Wunderlich C, Eyler E. Rapid repeat pregnancy and experiences of interpersonal

violence among low-income adolescents. Am J Prev Med 1999;16:318-21.

- Schelar E, Franzetta K, Manlove J. Repeat teen childbearing: differences across states and by race and ethnicity. Washington, D.C.: Child Trends, October 2007.
- Klerman LV. Another chance: preventing additional births to teen mothers. Washington, D.C.: The National Campaign to Prevent Teen Pregnancy; March 2004.
- Manlove J, Mariner C, Papillo AR. Subsequent fertility among teen mothers: Longitudinal analyses of recent national data. J Marriage Fam 2000;62:430-48.
- Pfitzner MA, Hoff C, McElligott K. Predictors of repeat pregnancy in a program for pregnant teens. J Pediatr Adolesc Gynecol 2003;16:77-81.
- Alan Guttmacher Institute. US Teenage Pregnancy Statistics: National and State Trends by Race and Ethnicity. New York: Alan Guttmacher Institute, 2006.
- Coard SI, Nitz K, Felice M. Repeat pregnancy among urban adolescents: Sociodemographic, family and health factors. Adolescence 2000;35:193-200.
- Templeman CL, Cook V, Goldsmith J, Powell J, Hertweck SP. Postpartum contraceptive use among adolescent mothers. Obstet Gynecol 2000;95:770-6.
- O'Dell CM, Forke CM, Polaneczky MM, Sondheimer SJ, Slap GB. Depot medroxyprogesterone acetate or oral contraception in postpartum adolescents. Obstet Gynecol 1998; 91:324-8.
- 39. Stevens-Simon C, Kelly L, Kulick R. A village would be nice but ... it takes a long-acting contraceptive to prevent repeat adolescent pregnancies. Am J Prev Med 2001;21:60-5.
- Kershaw TS, Niccolai LM, Ickovicks JR, Lewis JB, Meade CS, Ethier KA. Short and long-term impact of adolescent pregnancy on postpartum contraceptive use: Implications for prevention of repeat pregnancy. J Adolesc Health 2003;33: 359-68.
- 41. Herrman JW. Repeat pregnancy in adolescence: Intentions and decision making (references). MCN Am J Matern Child Nurs 2007;32:89-94.
- 42. Stevens-Simon C, Kelly L, Singer D, Nelligan D. Reasons for first teen pregnancies predict the rate of subsequent teen conceptions. Pediatrics 1998;101:e8.
- Blankson ML, Cliver SP, Goldenberg RL, Hickey CA, Jin J, Dubard MB. Health behavior and outcomes in sequential pregnancies of black and white adolescents. J Am Med Assoc 1993;269:1401-3.
- 44. Trad PV. Mental health concerns of adolescent mothers. J Am Acad Child Adolesc Psychiatry 1995;34:130-42.
- 45. Schmidt RM, Wiemann CM, Rickert VI, Smith EOB. Moderate to severe depressive symptoms among adolescent mothers followed four years postpartum. J Adolesc Health 2006;38:712-8.
- 46. Black MM, Papas MA, Hussey JM, Dubowitz H, Kotch JB, Starr RH Jr. Behavior problems among preschool children born to adolescent mothers: effects of maternal depression and perceptions of partner relationships. J Clin Child Adolesc Psychol 2002;31(1):16-26.
- 47. Cox JE, Buman M, Valenzuela J, Joseph NP, Mitchell A, Woods ER. Depression, parenting attributes and social sup-

port among adolescent mothers attending a teen tot program. J Pediatr Adolesc Gynecol 2008;21:275-81.

- Schweingruber HA, Kalil A. Decision making and depressive symptoms in black and white multigenerational teenparent families. J Fam Psychol 2000;14(4):556-69.
- Luster T. Individual differences in the caregiving behavior of teenage mothers: an ecological perspective. Clin Child Psychol Psychiatry 1998;3:341-60.
- Chang Y, Fine MA. Modeling parenting stress trajectories among low-income young mothers across the childs second and third years: Factors accounting for stability and change. J Fam Psychol 2007;21:584-94.
- 51. Budd KS, Holdsworth MJA, HoganBruen KD. Antecedents and concomitants of parenting stress in adolescent mothers in foster care. Child Abus Negl 2006;30:557-74.
- Larson NC. Parenting stress among adolescent mothers in the transition to adulthood. Child Adolesc Soc Work J 2004; 21(5):457-76.
- Passino AW, Whitman TL, Borkowski JG, et al. Personal adjustment during pregnancy and adolescent parenting. Adolescence 1993;28:97-122.
- 54. East PL, Matthews KL, Felice ME. Qualities of adolescent mothers' parenting. J Adolesc Health 1994;15:163-8.
- 55. Chang Y, Fine MA, Ispa J, Thornburg KR, Sharp E, Wolfenstein M. Understanding parenting stress among young, low-income, African-American, first-time mothers. Early Educ Dev 2004;15:265-82.
- 56. Sussex B, Corcoran K. The impact of domestic violence on depression in teen mothers: is the fear or threat of violence sufficient? Brief Treat Crisis Interv 2005;5:109-20.
- Tamis-Lemonda CS, Shannon J, Spellmann M. Low-income adolescent mothers knowledge about domains of child development. Infant Ment Health J 2002;23:88-103.
- Karraker KH, Evans SL. Adolescent mothers' knowledge of child development and expectations for their own infants. J Youth Adolesc 1996;25:651-66.
- 59. Meyers SA, Battistoni J. Proximal and distal correlates of adolescent mothers parenting attitudes. J Appl Dev Psychol 2003;24:33-49.
- Sommer K, Whitman TL, Borkowski JG, Schellenback CJ, Maxwell SE, Keogh D. Cognitive readiness and adolescent parenting. Dev Psychol 1993;29:389-98.
- Frodi A, Grolnick W, Bridges L, Berko J. Infants of adolescent and adult mothers: two indices of socioemotional development. Adolescence 1990;25:363-74.
- Hess CR, Papas MA, Black MM. Resilience among African American adolescent mothers: predictors of positive parenting in early infancy. J Pediatr Psychol 2002;27:619-29.
- 63. Moran G, Forbes L, Evans E, Tarabulsy GM, Madigan S. Both maternal sensitivity and atypical maternal behavior independently predict attachment security and disorganization in adolescent mother-infant relationships. Infant Behav Dev 2008;31:321-5.
- Madigan S, Moran G, Pederson DR. Unresolved states of mind, disorganized attachment relationships, and disrupted interactions of adolescent mothers and their infants. Dev Psychol 2006;42:293-304.

- Oxford M, Spieker S. Preschool language development among children of adolescent mothers. J Appl Dev Psychol 2006;27:165-82.
- 66. Crockenberg S. Predictors and correlates of anger toward and punitive control of toddlers by adolescent mothers. Child Dev 1987;58:964-75.
- Bentley ME, Gavin L, Black MM, Teti L. Infant feeding practices of low-income, African-American, adolescent mothers: an ecological, multigenerational perspective. Soc Sci Med 1999;49:1085-100.
- 68. Affif TO. Child abuse and adolescent parenting: developing a theoretical model from an ecological perspective. J Aggression Maltreat Trauma 2007;14:89-105.
- 69. Kinard EM. Adolescent child bearers in later life: maltreatment of their school-age children. J Fam Issues 2003;24: 687-710.
- McCullough M, Scherman A. Family-of-origin interaction and adolescent mothers potential for child abuse. Fam Ther 2004;31:145-54.
- Stevens-Simon C, Nelligan D, Kelly L. Adolescents at risk for mistreating their children. Part I: Prenatal identification. Child Abus Negl 2001;6:737-51.
- 72. Causby V, Nixon C, Bright JM. Influences on adolescent mother–infant interactions. Adolescence 1991;26:619-30.
- Deutscher B, Fewell RR, Gross M. Enhancing the interactions of teenage mothers and their at-risk children: effectiveness of a maternal-focused intervention. Top Early Child Spec Educ 2006;26:194-205.
- Thomas DV, Looney SW. Effectiveness of a comprehensive psychoeducational intervention with pregnant and parenting. J Child Adolesc Psychiatr Nurs 2004;17(2):66-77.
- 75. Woods ER, Obeidallah-Davis D, Sherry MK, et al. The parenting project for teen mothers: The impact of a nurturing curriculum on adolescent parenting skills and life hassles. Ambul Pediatr 2003;3:240-5.
- Rhein LM, Ginsburg KR, Schwarz DF, Pinto-Martin JA, Zhao H, Morgan AP, et al. Teen father participation in child rearing: family perspectives. J Adolesc Health 1997;21(4): 244-52.
- Cox JE, Bithoney WG. Fathers of children born to adolescent mothers: predictors of contact with their children at 2 years. Arch Pediatr Adolesc Med 1995;149(9):962-66.
- Dallas C, Wilson T, Salgado V. Gender differences in teen parents' perceptions of parental responsibilities. Pub Health Nurs 2000;17:423-33.
- Hardy JB, Duggan AK, Masnyk K, Pearson C. Fathers of children born to young urban mothers. Fam Plann Perspect 1989;21:159-63, 187.
- Futris TG, Schoppe-Sullivan SJ. Mothers' perceptions of barriers, parenting alliance, and adolescent fathers' engagement with their children. Fam Relat 2007;56:258-69.
- 81. Guttmacher Institute. Fact sheet: focus on young men's sexual and reproductive health. New York: Guttmacher Institute; 2008.
- Pears KC, Pierce SL, Kim HK, Capaldi DM, Owen LD. The timing of entry into fatherhood in young, at-risk men. J Marriage Fam 2005;67:429-47.

- Weinman ML, Buzi RS, Smith PB, Nevarez L. A comparison of three groups of young fathers and program outcomes. Sch Soc Work J 2007;32:1-13.
- Saul R. Using and misusing data on age differences between minors and their sex partners. Guttmacher Report on Public Policy. New York: Guttmacher Institute; 1999. p. 2(4).
- Krishnakumar A, Black MM. Family processes within threegeneration households and adolescent mothers' satisfaction with father involvement. J Fam Psychol 2003;17:488-98.
- Miller DB. Influences on parental involvement of African American adolescent fathers. Child Adolesc Soc Work J 1994;11:363-78.
- Gavin LE, Black MM, Minor S, Abel Y, Papas MA, Bentley ME. Young, disadvantaged fathers' involvement with their infants: An ecological perspective. J Adolesc Health 2002;31:266-76.
- Gee C, Nicholson M, Osborne L, Rhodes J. Support and strain in pregnant and parenting adolescents' sibling relationships. J Adolesc Res 2003;18:25-35.
- 89. Dudley JR. Helping nonresidential fathers: the case for teen and adult unmarried fathers. Fam Soc 2007;88:171-81.
- Saleh M, Buzi R, Weinman M, Smith P. The nature of connections: young fathers and their children. Adolescence 2005;40:513-23.
- Allen WD, Doherty WJ. The responsibilities of fatherhood as perceived by African American teenage fathers. Fam Soc 1996;77:142-55.
- Coley RL, Chase-Lansdale PL. Stability and change in paternal involvement among urban African American fathers. J Fam Psychol 1999;13:416-35.
- Dallas C. Family matters: How mothers of adolescent parents experience adolescent pregnancy and parenting. Pub Health Nurs 2004;21:347-53.
- 94. Fry PS, Trifiletti RJ. Teenage fathers: an exploration of their developmental needs and anxieties and the implications for clinical-social interventions and services. J Psychiatr Treat Eval 1983;5:219-27.
- Coley RL. (In)visible men: emerging research on lowincome, unmarried and minority fathers. Am Psychol 2001;56:743-53.
- 96. Danziger SK, Radin N. Absent does not equal uninvolved: predictors of fathering in teen mother families. J Marriage Fam 1990;52:636-42.
- 97. Gee CB, McNerney CM, Reiter MJ, Leaman SC. Adolescent and young adult mothers' relationship quality during the transition to parenthood: associations with father involvement in fragile families. J Youth Adolesc 2007;36:213-24.
- Thompson SD, Walker AC. Satisfaction with parenting: A comparison between adolescent mothers and fathers. Sex Roles 2004;50:677-87.
- 99. Fagan J, Bernd E, Whiteman V. Adolescent fathers' parenting stress, social support and involvement with infants. J Res Adolesc 2007;17:1-22.
- 100. Black MM, Dubowitz H, Starr RH Jr. African American fathers in low income, urban families: development, behavior, and home environment of their three-year-old children. Child Dev 1999;70:967-78.

- Coley RL. Children's socialization experiences and functioning in single-mother households: the importance of fathers and other men. Child Dev 1998;69:219-30.
- Yogman MW, Kindlon D, Earls F. Father involvement and cognitive/behavioral outcomes of preterm infants. (see comment). J Am Acad Child Adolesc Psychiatry 1995;34:58-66.
- 103. Howard KS, Lefever JE, Borkowski JG, Whitman TL. Fathers' influence in the lives of children with adolescent mothers. J Fam Psychol 2006;20:468-76.
- Coley RL, Medeiros BL. Reciprocal longitudinal relations between nonresident father involvement and adolescent delinquency. Child Dev 2007;78:132-47.
- Perloff JN, Buckner JC. Fathers of children on welfare: their impact on child well-being. Am J Orthopsychiatr 1996;66: 557-71.
- Crockett LJ, Eggebeen DJ, Hawkins AJ. Father's presence and young children's behavioral and cognitive adjustment. J Fam Issues 1993;14:355-77.
- 107. Thomas G, Barnes GM. The effects of single-mother families and non-resident fathers on delinquency and substance abuse in Black and White adolescents. J Marriage Fam 1996; 58:884-94.
- Mazza C. Young dads: the effects of a parenting program on urban African-American adolescent fathers. Adolescence 2002;37:681-93.
- Smith PB, Buzi RS, Weinman ML, Mumford DM. The use of focus groups to identify needs and expectations of young fathers in a male involvement program. J Sex Educ Ther 2001;26:100-5.
- 110. Lane T, Clay C. Meeting the service needs of young fathers. Child Adolesc Soc Work J 2000;17:35-54.
- 111. Weinman ML, Smith PB, Buzi RS. Young fathers: An analysis of risk behaviors and service needs. Child Adolesc Soc Work J 2002;19:437-53.
- 112. Shannon SK, Abrams LS. Juvenile offenders as fathers: perceptions of fatherhood, crime, and becoming and adult. Fam Soc 2007;88:183-91.
- 113. Unruh D, Bullis M, Yovanoff P. Adolescent fathers who are incarcerated juvenile offenders: explanatory study of the co-occurence of two problem behaviors. J Child Fam Stud 2004;13:405-19.
- 114. Fagan J, Schmitz MF, Lloyd JJ. The relationship between adolescent and young fathers' capital and marital plans of couples expecting a baby. Fam Relat 2007;56:231-43.
- 115. Herzog MJ, Umana-Taylor AJ, Madden-Derdich DA, Leonard SA. Adolescent mothers' perceptions of fathers' parental involvement: satisfaction and desire for involvement. Fam Relat 2007;56:244-57.
- 116. Florsheim P, Sumida E, McCann C, Winstanley M, Fukui R, Seefeldt T, et al. The transition to parenthood among young African American and Latino couples: relational predictors of risk for parental dysfunction. J Fam Psychol 2003;17:65-79.
- 117. Florsheim P, Smith A. Expectant adolescent couples' relations and subsequent parenting behavior. Infant Ment Health J 2005;26:533-48.
- 118. Fagan J. Randomized study of a prebirth coparenting intervention with adolescent and young fathers. Fam Relat 2008; 57:309-23.

- 119. Roye CF, Balk SJ. Caring for pregnant teens and their mothers, too. Am J Matern Child Nurs 1997;22:153-7.
- Davis A. Younger and older African American adolescent mothers' relationships with their mothers and female peers. J Adolesc Res 2002;17:491-508.
- Oberlander SE, Shebl FM, Magder LS, Black MM. Adolescent mothers leaving multigenerational households. J Clin Child Adolesc Psychol 2009;38:62-74.
- 122. Oberlander SE, Black MM, Starr RH. African American adolescent mothers and grandmothers: a multigenerational approach to parenting. Am J Community Psychol 2007;39: 37-46.
- 123. Wakschlag LS, Chase-Lansdale PL, Brooks-Gunn J. Not just "ghosts in the nursery": contemporaneous intergenerational relationships and parenting in young African-American families. Child Dev 1996;67:2131-47.
- 124. Shanok AF, Miller L. Stepping up to motherhood among inner-city teens. Psychol Women Q 2007;31:252-61.
- Benson MJ. After the adolescent pregnancy parents, teens, and families. Child Adolesc Soc Work J 2004;21:435-52.
- 126. Brooks-Gunn J, Chase-Lansdale L. Children having children: effects on the family system. Pediatr Ann 1991;20:467-81.
- Bunting L, McAuley C. Research review: teenage pregnancy and motherhood: the contribution of support. Child Fam Soc Work 2004;9:207-15.
- 128. Culp A, Culp R, Noland D, Anderson J. Stress, marital satisfaction and child care provision by mothers of adolescent mothers: considerations to make when providing services. Child Youth Serv Rev 2006;28:673-81.
- Reiner-Hess C, Papas MA, Black MM. Resilience among African American adolescent mothers: predictors of positive parenting in early infancy. J Pediatr Psychol 2002;27:619-29.
- Felix E, Kelly A, Poindexter L, Budd K. Cross-generational parenting influences on psychosocial functioning of adolescent mothers in substitute care. J Adolesc Res 2003;18:154-68.
- 131. Roye CF, Balk SJ. Evaluation of an intergenerational program for pregnant and parenting adolescents. Am J Matern Child Nurs 1996;24:32-40.
- 132. East P. Impact of adolescent childbearing on families and younger siblings: effects that increase younger siblings' risk for early pregnancy. Appl Dev Sci 1998;2:62-74.
- 133. East P, Jacobson L. Adolescent childbearing, poverty and siblings: taking new direction from the new literature. Fam Relat 2000;49:287-92.
- 134. East P, Jacobson L. Mothers' differential treatment of their adolescent childbearing and nonchildbearing children: contrasts between and within families. J Fam Psychol 2003;17:384-96.
- 135. Burke P, Liston W. Adolescent mothers' perceptions of social support and the impact of parenting on their lives. Pediatr Nurs 1994;20:593-9.
- 136. Quinlivan J, Luehr B, Evans S. Teenage mother's predictions of their support levels before and actual support levels before and actual support levels after having a child. J Pediatr Adolesc Gynecol 2004;17:273-8.
- 137. Klaw E, Rhodes J, Fitzgerald L. Natural mentors in the lives of African American adolescent mothers: Tracking relationships over time. J Youth Adolesc 2003;32:223-32.
- 138. Carothers S, Borkowski J, Burke Lefever J, Whitman T. Religiosity and the socioemotional adjustment of adoles-

cent mothers and their children. J Fam Psychol 2005;19: 263-75.

- Stiles AS. Parenting needs, goals and strategies of adolescent mothers. MCN Am J Matern Child Nurs 2005;30:327-33.
- 140. Spear HJ. Reading, writing, and having babies: A nurturing alternative school program. J Sch Nurs 2002;18:293-300.
- 141. Cox JE, Bevill L, Forsyth J, Missal S, Sherry M, Woods ER. Youth preferences for prenatal and parenting teen services. J Pediatr Adolesc Gynecol 2005;18:167-74.
- 142. Strunk JA. The effect of school-based health clinics on teenage pregnancy and parenting outcomes: an integrated literature review. J Sch Nurs 2008;24:13-20.
- 143. Klerman LV, Baker BA, Howard G. Second births among teenage mothers: program results and statistical methods. J Adolesc Health 2003;32:452-5.
- 144. Akinbami LJ, Cheng TL, Kornfeld D. A review of teen-tot

programs: comprehensive clinical care for young parents and their children. Adolescence 2001;36:381-93.

- Corcoran J, Pillai VK. Effectiveness of secondary pregnancy prevention programs: a meta-analysis. Res Soc Work Pract 2007;17:5-18.
- Hellerstedt WL, Story M. Adolescent satisfaction with postpartum contraception and body weight concerns. J Adolesc Health 1998;22:446-52.
- 147. American Academy of Pediatrics, Committee on Adolescence and Committee on Early Childhood, Adoption and Dependent Care. Care of adolescent parents and their children. Pediatrics 2001;107:429-34.
- 148. Emancipation in the United States. Philadelphia (PA): Juvenile Law Center; September 2007.
- Minors' rights as parents. New York: Guttmacher Institute; 1009.