



Diagnosis of Pregnancy and Providing Options Counseling for the Adolescent Patient

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The American Academy of Pediatrics policy statement “Options Counseling for the Pregnant Adolescent Patient” recommends the basic content of the pediatrician’s counseling for an adolescent facing a new diagnosis of pregnancy. However, options counseling is just one aspect of what may be one of the more challenging scenarios in the pediatric office. Pediatricians must remain alert to the possibility of pregnancy among their adolescent female patients. When discovering symptoms suggestive of pregnancy, pediatricians must obtain a relevant history, perform diagnostic testing and properly interpret the results, and understand the significance of the results from the patient perspective and reveal them to the patient in a sensitive manner. If the patient is indeed pregnant, the pediatrician, in addition to providing comprehensive options counseling, may need to help recruit adult support for the patient and should offer continued assistance to the adolescent and her family after the office visit. All pediatricians should be aware of the legal aspects of adolescent reproductive care and the resources for pregnant adolescents in their communities. This clinical report presents a more comprehensive view of the evaluation and management of pregnancy in the adolescent patient and a context for options counseling.

The American Academy of Pediatrics policy statement “Counseling the Adolescent About Pregnancy Options” was first published in 1989 and has since been reaffirmed continuously.^{1–3} The purpose of this clinical report is to guide the pediatrician through the diagnosis of pregnancy in the adolescent patient and suggest a format for counseling regarding pregnancy options. In 2011, the US teen pregnancy rate fell to its lowest point in 30 years, attributed largely to more effective use of contraception by adolescents, including long-acting reversible contraceptives.^{4–6} Despite these achievements, the United States continues to have one of the highest teen pregnancy rates among industrialized countries.⁷ In 2011,

abstract

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about 5% of all female adolescents 15 through 19 years of age in the United States (more than 550 000) became pregnant.⁴ Most pediatricians, therefore, are likely to face this issue during their careers.

TAKING THE HISTORY

Some adolescents initiate a visit to the pediatrician's office specifically for the diagnosis of pregnancy after experiencing characteristic signs and symptoms or obtaining a positive result on a home pregnancy test. However, many adolescents present with a vague, nonspecific history without an expressed concern for pregnancy. Adolescents may be reluctant to voice their pregnancy concerns, uneducated about the signs and symptoms of pregnancy, or be in denial that pregnancy is possible. Menstrual and sexual histories may be unreliable for making the diagnosis. Therefore, the pediatrician should be alert for the possibility of pregnancy and not hesitate to pursue testing.

Once pregnancy is suspected, it is important to further explore the patient history as well as the adolescent's feelings about a possible pregnancy and any actions she may have already taken.

- Has the adolescent been involved in a consensual sexual relationship? Who is/are her partner(s)?
- Is there a history of sexual coercion or assault?
- Does the adolescent desire a pregnancy?
- Does she think a pregnancy will have a positive or negative effect on her life?
- Whom has she already told about this possible pregnancy? Her parents or guardians? Other adults? Her partner?
- Will a pregnancy affect her living situation?

- Would a pregnancy change her plans for education or employment?
- Has she already considered how she might choose to manage a pregnancy?
- Are there social or cultural issues that could influence her management?
- What adult in her life would be her greatest support at this time?
- If she is not pregnant, would she like to begin a more effective contraceptive method?
- Has the adolescent ever been pregnant previously? If so, what was the outcome?

Having this background knowledge before sharing the diagnosis can make pregnancy counseling more efficient and effective.

MAKING THE DIAGNOSIS

Laboratory test results for pregnancy are likely to be positive before clinical symptoms are reported and before the physical signs of pregnancy are observed.⁸ Testing is based on the presence of human chorionic gonadotropin (hCG) in the urine and serum. Although low concentrations of hCG can be produced by various tissues and some malignancies, hCG is produced primarily by the trophoblastic cells of the placenta. Concentrations of hCG increase quickly after the implantation of an embryo, doubling every 2 to 2.5 days and peaking around the ninth week of gestation. The circulating hCG molecule, consisting of α and β subunits, is modified into many different forms. These hCG heterodimers and modified individual subunits are the targets of hCG immunoassays. Approximately 20% of serum hCG is excreted through the urine, although urine concentrations may be variable, especially early in pregnancy. Most pregnancies are diagnosed by urine

immunoassays, which are rapid, cost-effective, and easily performed by office personnel. Typically, urine immunoassays can detect the presence of hCG by the first day of the missed period, and depending on the test used, usually at a quantitative hCG value of 25 IU/L.

Urine pregnancy testing usually is highly accurate and straightforward, but misleading results can occur. The most common cause of a false-positive or false-negative result is human error in performing the test. This is especially problematic in the use and interpretation of home pregnancy tests.^{9,10} It is essential to carefully follow the test kit manufacturer's instructions, reading the result at exactly the prescribed time. A false-negative result also may be seen when very low concentrations of hCG are present during the early days of pregnancy, if the urine sample is dilute, or in association with the "hook effect" phenomenon.¹¹ The hook effect can occur when hCG concentrations are extremely high and overwhelm the assay, preventing it from performing properly and producing a false-negative result. If a pregnancy is suspected and the urine test result is negative, one should confirm that the test was performed properly. If so, a repeat urine test may be indicated in several days, or a serum pregnancy test may be performed.

Qualitative and quantitative serum hCG immunoassays are often not immediately available in the clinic setting and are more expensive than urine-based tests but can more accurately diagnose an early pregnancy. However, false-positive qualitative serum test results are possible and must be considered if, conversely, the urine test result is negative. Heterophile antibodies, rheumatoid factors, and some medications (eg, certain anticonvulsants, hypnotics, or tranquilizers) may interfere with serum immunoassays, giving a

false-positive result.¹² As with urine-based tests, false-negative qualitative serum test results can occur because of low hCG concentrations in very early pregnancy or because of the hook effect, as described earlier.

If the pregnancy test confirms a pregnancy, the next step is to estimate the gestational age, because this can influence options counseling. With greater gestational age, adolescents may need to make their management decisions more quickly or may already be limited in their options. Counting the number of weeks since the first day of the last menstrual period (LMP) is the primary means of estimating gestational age. Uncertainty with dates, irregular menstrual cycles, recent use of hormonal contraceptives, and recent pregnancy or breastfeeding are factors that can complicate the task.¹³ A brief examination by the pediatrician may confirm physical findings consistent with the estimated gestational age by LMP. The presence of a softened uterus about the size of an orange may be appreciated by an experienced examiner on pelvic examination at 8 to 12 weeks' gestation. By approximately 12 weeks' gestation, the uterus is about the size of a grapefruit on pelvic examination, and on abdominal examination, it is beginning to rise above the pubic symphysis. The uterine fundus is usually palpable midway between the pubic symphysis and the umbilicus at 16 weeks' gestation and at the level of the umbilicus by about 20 weeks' gestation.¹⁴ If questions remain regarding accurate dating by LMP and uterine size, an ultrasonography can be arranged promptly along with obstetric consultation.¹³

Centers for Disease Control guidelines (2015) recommend that all pregnant women <25 years of age be tested for HIV, syphilis, hepatitis B, *Chlamydia*, and gonorrhea at their first prenatal visit.¹⁵ Although the

diagnostic visit in the pediatrician's office may not be considered a prenatal visit, testing for sexually transmitted infections needs to be considered if the history and/or physical examination are suggestive of an infection or if there may be a delay in obstetric care.

First trimester complications include ectopic pregnancy and spontaneous abortion, which may present to the pediatrician as abdominal pain and/or vaginal bleeding in the patient with a positive pregnancy test result. Ectopic pregnancy also may present as a positive pregnancy test result but with the absence of expected uterine enlargement. Abdominal pain, vaginal bleeding, and suspicion of ectopic pregnancy are all indications for immediate obstetric consultation.¹⁶

SHARING THE TEST RESULT

It is best to convey the result of a pregnancy test to the adolescent alone in a private setting. Although adolescents may be accompanied by a family member, friend, or partner, adolescents often prefer to receive the result privately and may need the help of the pediatrician to remove others from the room. Just like adult women, adolescents will have a wide variety of reactions, ranging from joy to disappointment or excitement to anger or fear. It can be challenging for a pediatrician to offer empathy and support when his or her own feelings about the result are at odds with those of the patient. Providing compassionate, nurturing, and patient-centered care is extremely important, despite the pediatrician's personal feelings about adolescent sexuality and/or pregnancy. A pregnancy diagnosis should lead to a discussion of pregnancy options.³

In the case of a negative pregnancy test result, however, emergency contraception should be offered if the adolescent has recently had unprotected intercourse (ie, in the

previous 5 days) and pregnancy is not desired.¹⁷ For adolescents with a negative pregnancy test result, a "teachable moment" exists to discuss family planning and effective contraception.¹⁸ If the patient is disappointed in the negative pregnancy test result, further discussion about her desire and expectations for motherhood can be helpful.

Explaining to pregnant adolescents the importance of involving their parents (or legal guardians) may persuade them to share their positive test results with and involve their parents in the discussion of pregnancy options. It is suggested that the pediatrician explain how parental involvement usually is necessary, both emotionally and financially, and reassure the adolescent that parents are generally supportive. If parental support is not possible or likely, the adolescent should be encouraged to seek the involvement of other trusted adults. Together, the adolescent and pediatrician can decide who will be notified and how they will be brought into the discussion.

Minors have legal rights protecting their privacy concerning the diagnosis and treatment of pregnancy, and most professional medical associations have endorsed the right of adolescents to receive confidential health services.¹⁹⁻²⁷ When considering confidentiality, the pediatrician may want to assess the adolescent's capacity to understand the diagnosis of pregnancy and appreciate the implications of that diagnosis. The American Psychological Association has stated that "by middle adolescence (age 14-15) young people develop abilities similar to adults in reasoning about moral dilemmas, understanding social rules and laws, [and] reasoning about interpersonal relationships and interpersonal problems"; this has been affirmed in research in other health areas, such as chronic

and genetic disease management.²⁸ However, it is important for pediatricians to be familiar with local confidentiality laws and to be aware that they vary from state to state.^{23,29,30} In accordance with their state statutes, pediatricians may have the option of sharing the pregnancy diagnosis with parents at their discretion or the responsibility to disclose the diagnosis based on the patient's age.

Other limits to adolescent confidentiality exist. Pediatricians should be aware of their state laws regarding the age of legal consent for sexual activity. If the pregnant adolescent is less than the age of consent, the pediatrician may be required to notify authorities. Similarly, if the pregnant adolescent is developmentally delayed and the pediatrician is concerned about sexual coercion, he or she should consider reporting the situation to authorities. Pediatricians are mandated reporters when there is a reasonable suspicion of sexual abuse.³¹ Rarely, if an adolescent is so distraught with the results of her pregnancy test result that she becomes a threat to herself or others, immediate evaluation by a mental health professional or transfer to an emergency department may be necessary.

OPTIONS COUNSELING

Once a positive pregnancy test result has been shared with the adolescent and at least one trusted adult has been identified as a support, the pediatrician should proceed with pregnancy options counseling. Options counseling may occur at the diagnostic visit or continue over several office visits, although the adolescent must understand the importance of making a timely decision. Included in the discussion could be the adolescent's parents, other identified supportive adults, her male partner, and possibly her

partner's parents. However, it is important that the patient's voice remains heard and that she is not coerced or dominated by others. If there is a question about the patient's competence to make an informed decision about the pregnancy, the pediatrician's knowledge and understanding of state law and procedures necessary to make this determination is important.

Depending on the gestational age of the pregnancy, the adolescent has 3 management options available:

1. carrying her pregnancy to delivery and raising the infant;
2. carrying her pregnancy to delivery and making an adoption or kinship care plan; or
3. terminating her pregnancy.

The pediatrician is encouraged to discuss all 3 options with the adolescent in a factual, respectful, and nonjudgmental manner. If, on the basis of conscience, the pediatrician recognizes his or her own limitations to hold this conversation, prompt referral to a willing colleague or consultant is recommended.³² When referring their patients elsewhere for options counseling, pediatricians are encouraged to carefully investigate the providers they recommend. "Crisis pregnancy centers" or "pregnancy resource centers" in the community may offer free services to women with unplanned pregnancies but typically do not offer a balanced discussion of pregnancy options. Staff at these types of facilities frequently have no medical training and may present medically inaccurate information about pregnancy, abortion, and contraception.^{33,34} It is important that those providing options counseling be medically and legally knowledgeable and experienced in working with adolescents.

It is also important for the pediatrician to identify any coexisting medical conditions (chronic medical illness, psychiatric illness,

or physical or developmental disability) that could influence the decision to continue or terminate the pregnancy. The adolescent's list of medications (and drugs used illicitly) should be reviewed to ensure that none are contraindicated during pregnancy.³⁵⁻³⁷ The use of teratogenic medications or the presence of heritable conditions may warrant the involvement of a genetic counselor. For the adolescent with complicated medical issues, consultation with her subspecialty care providers is important.

Continuing the Pregnancy and Raising the Child

The majority of adolescents will choose to continue their pregnancies, although this varies considerably by state, race, and ethnicity.^{4,38} Pregnant adolescents are less likely than older women to receive early and adequate prenatal care,³⁹ so every effort should be made to facilitate a timely referral to an appropriate obstetric care provider. Some obstetric providers may offer adolescent-focused prenatal care. Such care may improve infant health outcomes, decrease the likelihood of suboptimal prenatal care, improve prenatal knowledge, increase satisfaction with care, and increase breastfeeding initiation.⁴⁰⁻⁴² Family and social support systems are essential for favorable outcomes for young adolescent parents and their infants.⁴³ Pediatricians should facilitate connections between their parenting patients and community programs for adolescent parents. Programs may vary in their goals (eg, teaching parenting skills, promoting high school completion, developing independent living skills, providing mental health support, delaying subsequent pregnancies), structure (eg, group classes, individual mentoring), and settings (eg, community centers, schools, clinics, in-home visits).^{44,45}

A more in-depth discussion of the challenges unique to teen

parents and their children, along with suggestions for support by pediatricians, are outlined in the American Academy of Pediatrics' clinical report, "Care of Adolescent Parents and Their Children."⁴³

Kinship Care

There may be circumstances in which the adolescent may wish to continue a pregnancy but is unable to parent her child. "Kinship care" is an arrangement whereby a family member who is willing to take on this responsibility may parent the child. This may be arranged informally or by a legal process through the state child welfare system. It is important for families to be aware of the legal and financial ramifications of these different arrangements.⁴⁶ Consultation with legal services is encouraged.

Adoption

Adoption may be an appealing option for some adolescents but appears to be chosen less often than in the past. The number of never-married women younger than 45 years who made adoption plans for their newborn infants declined from nearly 9% before 1973 to less than 1% in the mid-1990s.^{47,48}

Many teenagers have little knowledge about adoption, so it is advisable that the pediatrician be prepared to describe the differences between the closed and open adoption processes. Open adoptions currently are much more common than in the past and include planned communication between the birth parent, adoptee, and adoptive parents, with the possibility of future contact between the birth parent(s) and the child over time.^{49,50}

Teenagers who choose adoption are more likely to be non-Hispanic white, come from an intact family, have higher educational aspirations, have a parent with more years of education, have some personal knowledge or experience with

adoption, and cite positive peer approval for adoption.⁵¹ Although limited research exists, one study has shown that adolescents who chose adoption over parenting had slightly less satisfaction with their decision but were more likely to complete their education and/or training, delay marriage, be employed, and delay a subsequent pregnancy.⁵² To make appropriate referrals, the pediatrician's familiarity with local medical, legal, counseling, and social service resources that facilitate adoption is helpful. Throughout the pregnancy, opportunities for the adolescent to discuss the possibility of adoption with her health care providers should be available.

Abortion

It is important for pediatricians to be aware of abortion services available in their communities and offer information about these resources to pregnant adolescents. Both medical and surgical methods may be available to the adolescent, although the gestational age of pregnancy and coexisting medical conditions will need to be considered.⁵³ The point at which pregnancy termination is no longer an option (except in the case of life or health endangerment) varies by state but is often set at 20 or 24 weeks' gestation.⁵⁴

Medical abortion using a combination of the oral medications mifepristone and misoprostol may be an option very early in the pregnancy—typically less than 9 weeks' gestation. This method has been shown to be both safe and effective on an outpatient basis when prescribed by experienced and licensed professionals^{55,56} and may appeal to some patients because it is less physically intrusive than surgical abortion, appears more "natural" by simulating miscarriage, and is completed outside the provider's office in the patient's home. However, compared to surgical abortion, the procedure takes longer

to complete, requires more active participation in the process by the patient, and is accompanied by more cramping and bleeding.⁵³ Medical abortions can be performed further along in pregnancy, even into the second trimester, but are associated with higher rates of incompleteness and need for surgical intervention. Surgical abortion is a low-risk procedure shown to be safer than childbirth⁵⁷ and, depending on state regulations and available providers, may be performed at various gestational ages.⁵⁸ Surgical abortions in the first trimester are typically performed by vacuum aspiration under local anesthesia and in the second trimester are performed by dilation and curettage.^{59,60} If the adolescent is considering terminating her pregnancy, she should be referred promptly to an adolescent-friendly abortion provider for more information and counseling.

Pediatricians should be familiar with state laws regarding parental notification and consent for abortion services, the process of judicial bypass, and the financial costs of termination procedures.^{29,61} The average cost of a first trimester abortion is \$500 nationally for both medical and surgical methods.⁶² Charges increase with increasing gestational age and complexity of the procedure (up to \$5000 or more for a second trimester abortion).^{62,63} Travel expenses associated with the procedure also can be substantial.^{62,64} The total costs often are a significant burden to adolescents and their families, and pediatricians can be a good resource for identifying potential sources of funding within their states to assist them with these expenses.

Additional Counseling and Follow-up

By the conclusion of options counseling, the adolescent may or may not have made a firm decision. A list of community resources for each of the 3 pregnancy options is helpful

to the patient so she can further investigate them on her own or begin to seek the services she desires. Girls who are pregnant should be encouraged to maintain a healthy lifestyle, including an adequate well-balanced diet, daily exercise, and abstinence from tobacco, alcohol, and other drugs. All adolescents who are pregnant and who intend to maintain their pregnancies (and those who are unsure) should be prescribed a daily prenatal vitamin. Whatever an adolescent's initial leanings, it is advisable that the pediatrician schedule a follow-up conversation with the patient and her supportive adult(s) to encourage that a timely final decision be made. Once a decision is made, the pediatrician can follow up to be sure that the adolescent has made a successful connection with appropriate clinical services and financial resources and that social support for her is in place. It is important for the pediatrician to emphasize his or her availability to provide for the adolescent's health care after her pregnancy, whatever option she chooses. If she continues her pregnancy and cares for the infant herself, the pediatrician is the ideal care provider for both the adolescent parent and the newborn infant.⁴³

The time needed to advise the pregnant adolescent and provide options counseling can vary greatly depending on circumstances. Another appointment may be made so that discussions can include her supportive adult(s) and allow adequate time in the pediatrician's schedule. The utilization of billing codes for counseling time will be necessary.

When confidentiality is desired, particularly by the adolescent who is older than 18 years but remains covered by her parent's insurance, it is essential for the pediatrician to be mindful of the ways that insurance (most notably the explanation of benefits) may violate patient

confidentiality by sharing with the guarantor the diagnoses coded for that visit and laboratory testing performed. This lack of confidentiality can be problematic with reproductive care in general, not just with a positive pregnancy test result. Although standard practices for protecting adolescent confidentiality are evolving,^{65,66} the pediatrician must be cognizant of the issues and, if necessary, willing to work with the adolescent on an acceptable solution.

THE ADOLESCENT FATHER

Little research exists on the level of involvement that the male adolescent desires in the discussion of pregnancy options and subsequent decision making when his female partner has a positive pregnancy test result.⁶⁷ Even when an unplanned pregnancy is viewed as a negative life event, male adolescents are often able to construct a rational analysis of its social costs and benefits, not only for themselves but also for their partner and an infant.⁶⁸ In some cases, the pregnancy may have been desired by the adolescent male.⁶⁹ Adolescent fathers may see parenthood as an opportunity to take on an adult role and a reason to make positive changes in their own health behaviors and lifestyle.^{70,71} Those who come from environments where teen pregnancy is prevalent may view an unplanned pregnancy with more ambivalence.⁷² When the male adolescent discovers that his partner is pregnant, the pediatrician may facilitate an exploration of the young man's feelings about the pregnancy and his interest in its outcome. Involving his parents or trusted adults in the decision-making process may recruit support for both the male adolescent and his female partner.

CONCLUSIONS

Pediatricians must be alert to the possibility of pregnancy in their

adolescent patients. Office-based urine pregnancy tests usually are highly accurate in making the diagnosis, but false-positive and false-negative results can occur, and further evaluation may be necessary. Once the diagnosis of pregnancy is made, it is advisable that the pediatrician work with the patient to identify supportive adults who can participate in a discussion of pregnancy options. Pregnancy options include continuation of the pregnancy with the patient parenting the infant, continuation of the pregnancy with an adoption or kinship care plan made for the infant, or termination of the pregnancy. The pediatrician is encouraged to be aware of local laws or regulations that protect the adolescent's privacy and affect her access to desired services. Once the patient has chosen how to manage her pregnancy, the pediatrician can assist the adolescent in accessing appropriate care and can be available to continue her care after the pregnancy.

The diagnosis of pregnancy is a sensitive and emotional time for the adolescent, her family, and her sexual partner. Creating an accepting environment in which the adolescent feels secure to explore her own feelings about the pregnancy and her future is essential. No matter what her decision (becoming a parent, making an adoption or kinship care plan, or having an abortion) there will be personal consequences for the adolescent. It is important for the pediatrician to provide her with accurate information and support, regardless of her management decision. The pediatrician has the counseling expertise, the understanding of adolescent developmental and medical issues, and often a long-standing relationship with the patient and is, therefore, the best person to help her through this life-changing event.

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ABBREVIATIONS

hCG: human chorionic gonadotropin
LMP: last menstrual period

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