Preventive Health Counseling for Adolescents

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The leading causes of adolescent mortality are accidents (death from unintentional injury), homicide, and suicide. Additional morbidity is related to drug, tobacco, and alcohol use; risky sexual behaviors; poor nutrition; and inadequate physical activity. One third of adolescents engage in at least one of these high-risk behaviors. Physicians should specifically target these risk factors with preventive counseling, although adolescents may be reluctant to initiate discussions about risky behaviors because of confidentiality concerns. The key to providing relevant and useful preventive counseling for adolescent patients is developing the trust necessary to discuss the specific issues that impact this age group. (Am Fam Physician 2006;74:1151-6. Copyright © 2006 American Academy of Family Physicians.)

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Ninety-eight percent of American adolescents describe their health as good or excellent.[1] Although adolescents are less likely than persons in other age groups to routinely receive health care, 73 percent of adolescents visit a physician's office at least annually.[2] Providing preventive health counseling for adolescents can be challenging; however, it is essential that physicians offer a comfortable and confidential environment for discussion; address health-related issues that are common in this age group; and provide support, guidance, and appropriate treatment.

Defining Adolescence

Adolescence is a period of physical, emotional, and spiritual growth. This period can be divided into three chronologic phases: early, middle, and late adolescence. Patients in early adolescence (i.e., eight to 13 years of age) typically are concrete thinkers and are unable to clearly understand how their behaviors relate to their health.[3] Therefore, counseling for patients in early adolescence should be clear and direct. These patients also may be relatively attached to their parents or other adults who can help reinforce counseling points.

Middle adolescence (i.e., 14 to 17 years of age) is characterized by continuing physical development along with social and emotional changes. Patients in middle adolescence are able to think more abstractly; typically are capable of complex, logical thinking; and sometimes are allowed to make their own health care decisions. In this stage, further experimentation with risky behaviors often occurs.[3]

Patients in late adolescence (i.e., 18 years of age) have a more longitudinal understanding of how their behaviors can affect their health than do patients in early or middle adolescence.[3] Counseling during late adolescence should continue to focus on risky behaviors (e.g., substance abuse, violence, sexual behaviors).

Challenges of Adolescent Health Care

One in 10 adolescents does not have adequate health insurance, and one in 12 does not have a primary care physician.[1] Although adolescents generally view physicians as credible sources for health-related information,[4] many are reluctant to routinely seek health care because of confidentiality concerns.[5] Developing a specific, written office confidentiality policy can help reassure adolescents and their parents. A statement on confidential health care for adolescents from the American Academy of Family Physicians is available at http://www.aafp.org/x6613.xml.

Unfortunately, even when adolescents visit physicians, valuable opportunities for prevention are missed in more than 50 percent of routine visits.[6] Recommendations for screening and prevention are clear for adults and children[7] but are less clear for

SORT: KEY RECOMMEDATIONS FOR PRACTICE

Clinical recommendation	*Evidence rating*	*References*
Adolescents should strive for 30 minutes of moderate to vigorous physical activity on most, but preferably all, days of the week.	C	20
Physicians should screen sexually active females younger than 25 years for chlamydia infection.	A	7
Physicians should screen adolescents for alcohol use and provide counseling to prevent binge drinking and alcohol abuse.	C	22
Physicians should screen adolescents for tobacco use and provide cessation recommendations and interventions for those who use tobacco.	C	22
Adolescents should be counseled to wear a seat belt when riding in a vehicle.	C	22

A = consistent, good-quality patient-oriented evidence; B = inconsistent or limited-quality patient-oriented evidence; C = consensus, disease-oriented evidence, usual practice, expert opinion, or case series. For information about the SORT evidence rating system, see page 1079 or http://www.aafp.org/afpsort.xml.

adolescents.[8] Evidence regarding the effects of specific counseling on adolescent health outcomes is limited. However, some studies suggest that implementing professional guidelines[9] or physician training[10] improves the delivery of preventive health care in these patients. Strategies to successfully communicate with adolescents include the following:

- Address the patient directly and ask open-ended questions.
- Listen attentively without interrupting.
- Observe nonverbal communication (e.g., posture, hand and eye movements).
- Avoid making judgments based on a patient's appearance.
- Ask for an explanation regarding unfamiliar slang terms that the patient uses.

Implementing Preventive Health Counseling

Accidents (death from unintentional injury), suicide, and homicide are the leading causes of death among American adolescents.[11] Additional morbidity is related to drug, alcohol, and tobacco use; risky sexual behaviors; poor nutrition; and inadequate physical activity. More than 800,000 adolescents become pregnant and more than 3 million cases of sexually transmitted diseases (STDs) in adolescents are reported annually.[1] Eighty percent of adolescents do not follow recommended dietary guidelines, and only 40 percent engage in sufficient daily physical activity.[11] *Table 1* lists resources for more information on adolescent counseling.

Physicians can help improve health care outcomes in adolescents by providing preventive counseling that focuses on issues specific to this population. The federal Healthy People 2010 initiative has identified several critical objectives pertinent to adolescent health care *(Table 2)*.[12] Professional recommendations regarding preventive health counseling for adolescents are listed in *Table 3*.[7,12-16]

Several tools are available to help physicians structure adolescent counseling. One of the most commonly used models is HEADDSS (Home/health, Education/employment, Activities, Drugs, Depression, Safety, Sexuality), which is outlined in *Table 4*.[17]

PHYSICAL ACTIVITY AND NUTRITION

The number of adolescents who are overweight or at risk of becoming overweight has increased fourfold since 1995.[18] In addition, the number of adolescents who participate in regular physical activity and the number who have healthy eating habits have declined.[18] These changes are associated with sharply higher incidences of type 2 diabetes, hypertension, and hyperlipidemia in this population.[19] Physicians should advise their adolescent patients to strive for 30 minutes of moderate to vigorous physical activity on most, but

TABLE 1
Resources for Additional Information on Adolescent Counseling

The CDC Division of Adolescent and School Health
Web site: http://www.cdc.gov/HealthyYouth/index.htm
USPSTF Preventive Health Guidelines
Web site: http://www.ahrq.gov/clinic/prevenix.htm
AMA Guidelines for Adolescent Preventive Services
Web site: http://www.ama-assn.org/ama/pub/category/1980.html
The Society for Adolescent Medicine
Web site: http://www.adolescenthealth.org
Telephone: 816-224-8010

CDC = Centers for Disease Control and Prevention; USPSTF = U.S. Preventive Services Task Force; AMA = American Medical Association.

TABLE 2
Adolescent Health Objectives Identified by the Healthy People 2010 Initiative

Environmental factors

Reduce the rate of death from motor vehicle crashes, increase seat belt use, and reduce the number of adolescents who ride with drunk drivers.

Reduce the homicide rate.

Reduce the number of adolescents who participate in physical fighting.

Reduce the number of students who carry weapons to school.

Mental health

Reduce the rates of suicide and attempted suicide.

Increase mental health treatment.

Physical activity

Reduce the number of adolescents who are overweight or at risk of becoming overweight.

Physical activity

Increase the number of adolescents who get adequate physical activity.

Sexual activity

Reduce the pregnancy rate.

Reduce the incidence of HIV, chlamydia, and other sexually transmitted diseases.

Increase the number of adolescents who practice abstinence.

Substance abuse

Reduce death and injury from alcohol- and drug-related motor vehicle crashes.

Reduce the prevalence of drug and tobacco use and binge-drinking behaviors.

HIV = human immunodeficiency virus.

Information from reference 12.

TABLE 3
Preventive Health Recommendations for Adolescents

Recommendation	*AAFP*	*AAP*	*AMA*	*Bright Futures*	*USPSTF 2005*
Target age range (years)	13 to 18	11 to 21	11 to 21	11 to 21	Not defined
General health					
Frequency of physician visits	Tailored	Annual	Annual	Annual	Not discussed
Injury prevention	Yes	Yes	Yes	Yes	Insufficient evidence
Nutrition	Yes	Yes	Yes	Yes	Insufficient evidence
Physical activity	Yes	Yes	Yes	Yes	Insufficient evidence
Screening and preventive counseling					
Alcohol use	Yes	Yes	Yes	Yes	Insufficient evidence
Breast or testicular self-examination	Yes	Yes	No	Yes	No
Contraception and STDs	Yes	Yes	Yes	Yes	Not discussed
Depression and suicide	Yes	Yes	Yes	Yes	Insufficient evidence
Drug use	Yes	Yes	Yes	Yes	Insufficient evidence
Tobacco use	Yes	Yes	Yes	Yes	Insufficient evidence
Violence and abuse	Yes	Yes	Yes	Yes	Insufficient evidence
Other screening					
Chlamydia	Yes	Yes	Yes	Yes	Yes
Papanicolaou smear	Yes	Yes	Yes	Yes	Yes (if sexually active)*

AAFP = American Academy of Family Physicians; AAP = American Academy of Pediatrics; AMA = American Medical Association; USPSTF = U.S. Preventive Services Task Force; STD = sexually transmitted disease.

**—Three years after initiation of intercourse, but before age 21.*

Information from references 7 and 12 through 16.

TABLE 4
Adolescent Interview Questions Based on the HEADDSS Model

Home/health
Where and with whom do you live?
Are your parents your legal guardians?
How well do you get along with the people you live with?
How is your health in general?
Do you have any health problems?

Education/employment
Do you go to school?
What grade are you in and what school do you attend?
Are you in a specialized education program?
Do you have a job?

Activities
What do you do for fun?
Do you have friends to socialize with?

Drugs
Do you smoke?
Do you drink? If so, how much and how often?
Do you use drugs?

Depression (including suicidal feelings)
Do you ever feel depressed?
What do you do to cheer yourself up?
Do you ever want to hurt yourself?
Do you have anyone to discuss your problems with?

Safety
Do you feel safe at school?
Do you feel safe at home?

Sexuality
Have you ever had sex?
Are you using birth control?
Do you use condoms every time you have sex?
Have you ever been pregnant?
Did anyone ever make you do something that you didn't want to do?

HEADDSS = Home/health, Education/employment, Activities, Drugs, Depression, Safety, Sexuality.

Adapted with permission from Goldring J, Rosen D. Getting into adolescent heads: an essential update. Contemp Pediatr 2004;21:64.

preferably all, days of the week.[20] Adolescents also should consume five servings of fruits and vegetables every day and limit their caloric and sugar intake.[21]

SEXUAL ACTIVITY

Approximately 15 million cases of STDs are reported in the United States annually,[22] 25 percent of which occur in adolescents. Chlamydia infection rates have decreased overall in the past five years; however, the highest incidence of gonorrhea and chlamydia infections occurs in 15- to 19-year-old females.[23] In addition, nearly 900,000 females younger than 19 years become pregnant every year in the United States.[1]

Several preventive programs targeting adolescent reproductive health have been deployed. Although the specific longitudinal success of individual programs is unclear, trends in adolescent reproductive behaviors over the past decade suggest important gains (e.g., decrease in reported sexual intercourse, increase in condom use).[1] On the other hand, only two out of three adolescents reported using condoms during their most recent sexual encounter, and the number of adolescents who reportedly used drugs or alcohol before their last sexual encounter has increased over the past decade.[22]

Specific counseling recommendations related to adolescent sexuality include a discussion of sexual activity, number of sex partners, contraceptive use, and history of STDs. Sexually active females younger than 25 years should be screened for chlamydia infection.[7] Adolescents who have multiple sex partners or who engage in high-risk sexual behaviors should be counseled about the risk of human immunodeficiency virus, syphilis, human papillomavirus, and other STDs.[24] Sexually active females should receive routine cervical cancer screening.

SUBSTANCE ABUSE

Alcohol and drug use contribute to more than 40 percent of adolescent deaths from motor vehicle crashes. More than 75 percent of adolescents in the United States have reportedly used alcohol and more than 25 percent have engaged in binge drinking (i.e., consuming more than five drinks in one sitting).[22] Tobacco use also is common during adolescence. Lifetime use of tobacco has decreased over the past decade, but nearly 60 percent of adolescents have used tobacco at least once.[1]

The reported lifetime use of marijuana, cocaine, methamphetamine, and designer drugs such as Ecstasy

TABLE 5
Rate of Lifetime Illicit Drug Use Among Adolescents in 1991 and 2003

	Lifetime use (%)	
Drug	*1991*	*2003*
Anabolic steroids	3	6
Cocaine	6	9
Ecstasy*	—	11
Heroin	—	3
Inhalants	20†	12
Marijuana	31	40
Methamphetamine	—	8

**—3,4-methylenedioxymethamphetamine.*
†—Lifetime use in 1995.
Information from reference 22.

(3,4-methylenedioxymethamphetamine) has increased in the past decade.[22] The rates of lifetime illicit drug use among adolescents are shown in *Table 5*.[22]

Specific counseling recommendations regarding adolescent substance abuse include screening for alcohol use. Physicians should advise adolescent patients to avoid binge drinking because it is associated with secondary morbidity and mortality (e.g., accidents, violence, unsafe sexual practices). Physicians should screen for tobacco use and recommend cessation for those who use tobacco.[7,22] There is insufficient evidence to recommend for or against routine screening for other illicit drug use in adolescent patients.

The five A's strategy (i.e., ask, advise, assess, assist, arrange) is a useful office-based tool for counseling tobacco users. Physicians should ask the patient about his or her tobacco use; advise the patient in a clear, concise manner to stop using tobacco; assess the patient's willingness to adhere to a smoking cessation program and recommended behavior modifications; assist the patient by offering resources and appropriate counseling; and arrange follow-up care to track the patient's success.[25] Although the five A's strategy was developed for patients with tobacco addiction, it is reasonable to apply this strategy to other high-risk behaviors.

MENTAL HEALTH

Suicide is one of the leading causes of mortality in the adolescent population.[22] Although the number of adolescents reporting suicidal thoughts has decreased significantly in the past decade, the number of suicide attempts has remained constant (8 percent of adolescents attempted suicide in the previous 12 months, according to one survey).[22] Risk factors for suicide in adolescents include active substance abuse, personal history of depression, family history of depression, problems at school, problems communicating with parents, current legal problems, and the presence of a handgun in the home.[26,27] Adolescent suicide typically is attempted by suffocation, hanging, or use of a firearm. Suicide attempts often are associated with drug or alcohol use.[27]

Depression also is a significant cause of morbidity in the adolescent population. Approximately one out of 20 adolescents has symptoms of clinical depression.[28] In addition to an increased suicide risk, adolescent depression is associated with interpersonal relationship difficulties, decreased quality of life, and decreased overall functioning.[29] Physicians should consider screening adolescents for depression if they present with common signs of depression (e.g., poor school performance, guilt, anger, irritability, recurrent truancy).[30] There is insufficient evidence to recommend for or against routine screening for depression or suicidal ideation in adolescent patients who do not display these signs. Nevertheless, because suicide is a leading cause of mortality in this population, physicians should ask adolescent patients about symptoms of depression or suicidal thoughts.

ENVIRONMENTAL FACTORS

Adolescents are particularly susceptible to environmental factors that can directly impact their health and safety. Accidents are the leading cause of death among adolescents.[1] Many of these injuries are preventable with the use of simple safety measures. Specifically, the routine use of bicycle or motorcycle helmets has declined by 10 percent over the past decade, and only 82 percent of adolescents routinely use seat belts.[22]

Physical violence is a persistent problem in American schools. Although the number of students who report carrying a weapon to school has decreased, approximately one in five admits to participating in a physical fight at school.[31] For younger adolescents in particular, bullying can be a significant source of stress. Victims of bullying are more likely to suffer from psychological symptoms (e.g., helplessness, isolation, loneliness) than those who are not bullied.[31] Furthermore, 10 percent of students report physical or sexual abuse from a girlfriend or boyfriend.[22]

Preventive counseling for environmental factors should include the importance of using a seat belt and bicycle and motorcycle helmets.[22] Physicians should remind adolescents about the risks of riding with a driver who is under the influence of drugs or alcohol. There is insufficient evidence to recommend for or against routine screening or counseling for physical violence or abuse in adolescent patients.

The opinions and assertions contained herein are the private views of the author and are not to be construed as official or as reflecting the views of the U.S. Naval Department or the U.S. Naval Service at large.

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