SPECIAL ARTICLE

Internists and Adolescent Medicine

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Internists can assume a greater role in the provision of health care to adolescents. Adding an understanding of adolescent development to the skills and knowledge already possessed by internists will allow internists to interact more comfortably and effectively with adolescent patients. Learning about specific areas of importance such as adolescent morbidity and mortality, consent and confidentiality, interviewing techniques, and preventive health care will further enhance the internist's knowledge regarding adolescent health. There are numerous resources available to help internists care for adolescent patients.

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There are approximately 38 million adolescents between the ages of 10 and 19 years in the United States.[1] Many of these adolescents lack a usual source of care.[2] Internists may be called on to provide health services for adolescent patients. Although many physicians find the care of adolescents deeply rewarding, some internists feel challenged by aspects of health care that are unique to this age group.[3-5] This article will review why it is important for internists to learn about the special needs of adolescents and will outline approaches to adolescent health care that should be useful to the practicing internist.

WHAT IS ADOLESCENT MEDICINE?

Adolescence is the time in life that bridges childhood and adulthood. During this transition, individuals undergo rapid somatic growth, pubertal changes, cognitive development, and are faced with the psychosocial tasks of identity formation, independence, sexuality, and pursuit of a vocation.[6] Many medical and psychological problems can arise during this time. The specialty of adolescent medicine has grown out of a need to provide medical care to youths in the context of these remarkable physical and psychosocial changes.

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Internists are familiar with many of the problems commonly encountered in adolescent medicine, such as abdominal pain, sports injuries, and reproductive health issues. Adding an understanding of adolescent development to the skill set already in place will allow the internist to comfortably interact with the adolescent patient. Some adolescent health problems may be less familiar to internists such as behavioral health issues (eg, attention-deficit/hyperactivity disorder, conduct disorder, and running away), nutritional problems (eg, anorexia nervosa and bulimia nervosa), and disorders of growth and pubertal development. Internists have numerous resources available to aid them in addressing these problems, many of which will be outlined in this article. In addition, internists can work in consultation with adolescent medicine specialists. Twenty-six adolescent medicine fellowship training programs are currently available in the United States.[7] The American Board of Internal Medicine, the American Board of Pediatrics, and the American Board of Family Practice offer a Certificate of Added Qualification in adolescent medicine to individuals who are fellowship trained and who successfully complete board examination.[8] In addition to adolescent medicine specialists, there are numerous health care providers with expertise in the care of adolescents, including psychiatrists, psychologists, social workers, dietitians, and pediatric subspecialists who can assist internists in the provision of care to adolescent patients.

WHY SHOULD INTERNISTS BE INTERESTED IN ADOLESCENT MEDICINE?

Data from the 1998 US Census Bureau reveal that 14% of the US population, approximately 38 million individuals, are between the ages of 10 and 19 years.[1] Although many national organizations recommend that adolescents have annual preventive visits in addition to visits for acute and chronic illness,[9,10] adolescents underutilize physician offices relative to their population proportion.[2] Reasons for this include inadequate health insurance[11] and lack of a usual source of care.[2] Data analyzed from a 1994 national survey show that most older adolescents (ages 18-21 years) were seen by family practitioners and obstetrics-gynecology specialists; only 7.1% of adolescents were seen in internal medicine offices.[2] Internists can assume a greater role in the provision of health care to adolescents. In 1989, the American College of Physicians issued a policy statement regarding the role of internists in adolescent health care, stating, "Internists need better training and more involvement in the care of adolescents."[12]

Many diseases of adulthood begin in adolescence. For example, approximately 80% of persons who use tobacco began before age 18 years.[13] Studies have shown that even brief interventions by physicians can lead to tobacco cessation.[14] Identifying and addressing problem behaviors in adolescence may decrease the prevalence of these problems in adulthood.

It is estimated that over 90% of children with chronic illness or disabilities now survive until adulthood.[15,16] Internists will be needed to participate in the care of patients with chronic diseases such as cystic fibrosis, congenital heart disease, juvenile rheumatoid disorders, spina bifida, and cerebral palsy. Many internal medicine specialists have addressed the issues regarding the transition of care from pediatric to adult health care settings, and several successful transition programs have been described.[17-20]

If internists are to assume greater care for adolescents, they should feel adequately trained in adolescent medicine. Studies have shown that residents in internal medicine training programs as well as practicing internists at times feel unprepared to address issues encountered while caring for adolescents.[3-5,21] The Residency Review Committee for internal medicine recommends that internal medicine residents should be formally instructed in adolescent medicine during their 3 years of residency training.[22] Curricula for training in adolescent medicine have been developed for internal medicine training programs.[23] In addition to didactic conferences, potential sites for training in adolescent medicine include inpatient and outpatient adolescent units, pediatric subspecialty clinics, school-based clinics, family planning centers, juvenile detention centers, youth crisis centers, shelters for the homeless, and college health centers. Internists can find literature, workshops, and courses on topics in adolescent health available through many organizations including the Society for Adolescent Medicine (SAM), the North American Society for Pediatric and Adolescent Gynecology, the American Academy of Pediatrics, and the American Medical Association (AMA) (**Table 1**).

Table 1. Resources on Adolescent Health

1. Society for Adolescent Medicine
   Blue Springs, Mo
   http://www.adolescenthealth.org
   Phone: 816-224-8010
   e-mail: sam@adolescenthealth.org
2. American Academy of Pediatrics
   Elk Grove Village, Ill
   http://www.aap.org
   Phone: 847-434-4000
   e-mail: kidsdocs@aap.org
3. Bright Futures
   Arlington, Va
   http://www.brightfutures.org
   Phone: 703-524-7802
   e-mail: brightfutures@ncemch.org
4. Centers for Disease Control and Prevention
   Division of Adolescent and School Health (DASH)
   Atlanta, Ga
   http://www.cdc.gov/nccdphp/dash/
   e-mail: healthyyouth@cdc.gov
5. *Journal of Adolescent Health*
   Palo Alto, Calif
   http://www.elsevier.com/locate/jahonline
   Phone: 650-725-8293
6. American Medical Association, Adolescent Health On-Line
   Chicago, Ill
   http://www.ama-assn.org/ama/pub/category/1947.html
   e-mail: gaps@ama-assn.org
7. North American Society for Pediatric and Adolescent Gynecology (NASPAG)
   Philadelphia, Pa
   http://www.naspag.org
   Phone: 215-955-6331
   e-mail: naspag@aol.com

SPECIFIC AREAS OF IMPORTANCE

Caring for adolescents requires the good clinical skills that internists already possess: the ability to listen and obtain a detailed history, careful attention to the physical examination, thoughtful consideration of diagnostic possibilities, and treatment planning that involves the patient as a partner. Knowledge in certain key areas will help internists interact more successfully with adolescent patients. These areas include (1) major causes of illness and death among adolescents, (2) pubertal, cognitive, and psychosocial development, (3) issues of consent and confidentiality, (4) interviewing strategies, (5) preventive care, and (6) resources for additional guidance.

MORBIDITY AND MORTALITY

Experimentation is a normal part of adolescent psychosocial development. As adolescents begin to interact more with their peer group, they may participate in risk-taking behaviors. Behaviors such as substance use, sexual activity, and violence are a primary source of morbidity and mortality among adolescents. Seventy-two percent of all deaths among adolescents and young adults aged between 10 and 24 years, are due to motor vehicle crashes (31%), homicides (18%), suicides (12%), and unintentional injuries (11%).[24] The Youth Risk Behavior Surveillance Survey (YRBSS), a biannual study conducted by the Centers for Disease Control and Prevention, regularly monitors health risk behaviors of US high school adolescents.[25] The results of this study show that an alarming number of high school youths are participating in high-risk behaviors (**Table 2**).

Knowledge of high-risk behaviors that occur during adolescence helps internists tailor the history to

Table 2. Prevalence of Certain Risk Behaviors Among US High School Teenagers*

Risk Behavior	%
Riding with a driver who had been drinking alcohol†	33.1
Driving after drinking alcohol†	13.1
Carried a gun, knife, or club†	17.3
Suicidal plan within the previous 12 mo	14.5
Lifetime tobacco use	70.4
Current tobacco use (≥1 cigarette, cigar, or use of smokeless tobacco within previous 30 d)	32.8
Tobacco use before age 13 y	24.7
Lifetime alcohol use	81.0
Current alcohol use (≥1 drink of alcohol on ≥1 of the previous 30 d)	50.0
Alcohol use before age 13 y	32.2
Heavy alcohol use (≥5 drinks of alcohol on ≥1 occasion within the previous 30 d)	31.5
Lifetime marijuana use	47.2
Marijuana use before age 13 y	11.3
Lifetime sexual intercourse	49.9
Sexual intercourse before age 13 y	8.3
More than 4 sex partners in lifetime	16.2
Condom use at last intercourse	58.0
Alcohol or drug use at last intercourse	24.8
Overweight (body mass index ≥95th percentile by age and sex)	9.9
Watched more than 2 h of television daily	42.8
Participated in vigorous physical activity (sweating or breathing hard for ≥20 min on ≥3 of the previous 7 d)	64.7

*Data from Kann et al.[25]
†In the previous 30 days.

Table 3. HEADSS Acronym for Interviewing Adolescents

Home environment	Who lives at home? How does everyone get along?
Education/**E**mployment	Where do you go to school/work? What kind of grades do you make? Do you like school/work?
Activities/Exercise	What do you do for fun? What do you do for exercise?
Drugs	Do your friends ever use tobacco/alcohol/illicit drugs? Have you ever used tobacco/alcohol/illicit drugs? Have you ever driven or been driven by someone under the influence of alcohol or drugs? Have you ever done anything that you later regretted while under the influence of alcohol or drugs?
Sexuality	Are you interested in anyone? Has anyone ever forced you to do anything you were uncomfortable doing? Have you ever had sex? (Should be asked in a sensitive manner and should be gender neutral.) How many sexual partners have you had in your life? In the past 2 months? Do you use any method of protection? Have you ever had a sexually transmitted infection? Have you ever been pregnant or gotten someone pregnant?
Suicide/Depression	In the past 2 months have you felt worthless, guilty, hopeless, bored? Have your eating or sleeping patterns changed? Do you still enjoy doing the same things? When was the last time you had fun? Do you now or have you ever felt suicidal?

include important psychosocial questions. Suggestions regarding what questions to ask and ways in which to ask them are provided in **Table 3**. Each office visit offers an opportunity to ask about dangerous behaviors and to provide counseling and education. Internists should learn about the community resources available to adolescents such as hot lines, therapists, counseling centers, family planning clinics, and substance use programs.

PUBERTAL, COGNITIVE, AND PSYCHOSOCIAL DEVELOPMENT

The physical changes of adolescence involve both somatic growth and the development of secondary sexual characteristics (puberty). During normal pubertal development, adolescents achieve approximately 25% of their adult height and 40% of their adult ideal body weight.[6] Changes in body composition occur, with an increase of lean body mass for male adolescents and a decrease in lean body mass and increase in adipose tissue for female adolescents.[6] The use of Tanner staging or sexual maturing rating helps to track the progression of breast development and pubic hair growth in the female adolescent and testicular and penile development and pubic hair growth in the male adolescents (**Figure 1**).[26] Physicians caring for adolescents should be knowledgeable about normal developmental changes and when to initiate an evaluation for growth and/or pubertal delay. Several excellent reviews regarding adolescent growth and pubertal development may be found in the medical literature.[6,27,28]

Changes in cognitive functioning occur during adolescence. According to Piaget, the development of formal operational thought allows an adolescent to progress from a concrete thinker to an abstract thinker.[29] Cognitive development does not necessarily parallel chronological age or pubertal development. Studies suggest that by age 14 years, adolescents do not differ from adults in their capacity to make informed treatment decisions.[30] It is important to assess the level of understanding in adolescents when taking a history, providing education, or obtaining informed consent.[31]

Adolescents must achieve psychosocial tasks to transition to adulthood. Identified tasks include a need to (1) develop an identity and self-image, (2) establish autonomy from parents or guardians, (3) establish a sexual identity and form intimate relationships, and (4) choose a vocation.[6,32] It is helpful to consider these tasks in the context of early, middle, and late adolescence.[33] During early adolescence (ages 10-13 years), adolescents may feel self-conscious about the physical changes that are occurring in their bodies. They may begin to spend more time with peers and show an interest in their sexuality. During middle adolescence (ages 14-17 years), teenagers may experiment with different identities, establish greater independence from families, and may rely more on peers for guidance and support. Older adolescents (ages 18-21 years) begin to feel more comfortable with body image

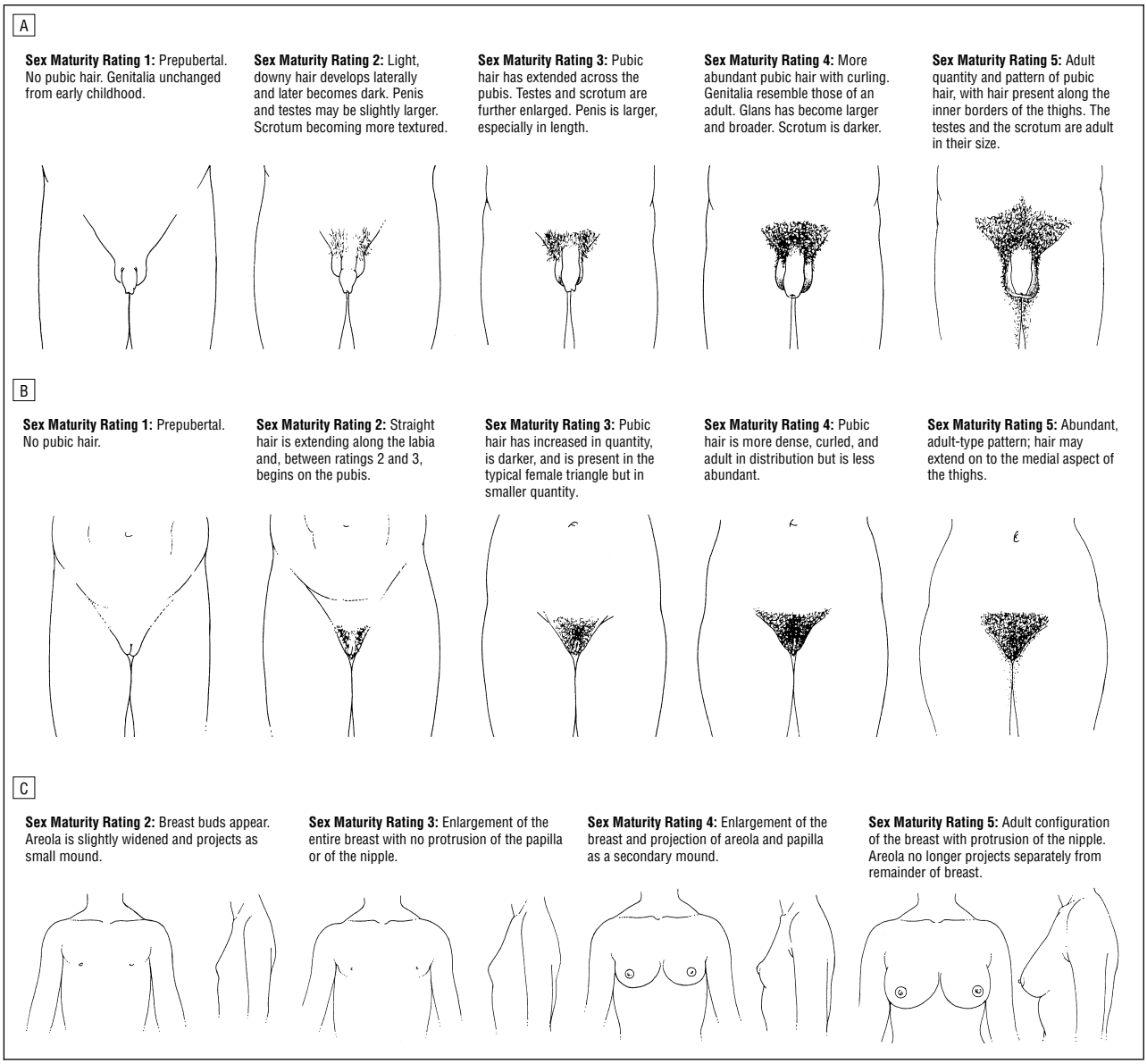

Figure 1. Sexual Maturity Rating. A, Male genital and pubic hair development. Rating for hair and genital development can differ in a typical boy at any given time as pubic hair and genitalia do not necessarily develop at the same rate. B, Female pubic hair development. C, Female breast development (sex maturity rating 1 not shown; prepubertal, elevations of papilla only). Reprinted with permission from *Patient Care*.[26] Illustrations by Paul J. Singh-Roy.

and identity and work on establishing independence and intimate relationships as well as plan for future vocation. Adolescents with chronic diseases must work through these developmental tasks while struggling with the various challenges imposed by their medical illnesses.[34-36]

CONSENT AND CONFIDENTIALITY

Physicians caring for adolescent patients may have questions regarding the circumstances in which adolescents can legally consent to their own medical care.[37] Additionally, physicians may encounter situations in which they feel uncertain about their ability and obligation to provide confidential care to adolescents.[38] Numerous studies have shown that adolescents will not seek health care for many medical problems if the ability to consent and to receive confidential care is not assured.[39-41] It is useful to establish a policy regarding consent and confidentiality in a practice and to discuss this policy with adolescents and their parents or guardians.[42]

There are certain circumstances in which adolescents younger than 18 years may consent for the diagnosis and treatment of a medical condition without the knowledge or approval of a parent or guardian. The laws governing these situations vary from state to state, and internists should be aware of the specific laws within their own state. In most states, adolescents may consent for their medical care if they are (1) in active duty in the armed forces, (2) emancipated minors (ie, living apart from parents and responsible for their own financial affairs), (3) pregnant, (4) legally married, or (5) seeking care for sexually transmitted diseases, substance use, or mental health problems.[43-46]

The legal basis for permitting adolescents to consent to their own care also assures that that care may be confidential.[42] Numerous medical

organizations including American College of Physicians–American Society of Internal Medicine, SAM, and the AMA support the provision of confidential care to adolescents.[42,47] The physician's policy regarding confidentiality should be explained to patients and their parents at the beginning of the visit. If the health care provider believes he or she cannot provide confidential care, the adolescent patient should be made aware of this before the history is elicited.

Adolescents should understand that there are situations in which confidentiality will be breached, including behaviors that lead to harm to oneself or others, situations of abuse, and reportable infectious diseases.[43,44,46] When parents or guardians must be informed, the adolescent can be given the choice of having the physician talk with the adults, the adolescent talk with the adults, or the adolescent and physician inform the adults together. This shows respect for the adolescent and allows him or her some degree of control over the situation. When providing confidential care, the physician must be careful to avoid revealing information through billing slips, laboratory forms, or phone calls. Some adolescents are willing to pay for services out of pocket to ensure confidentiality.[48] Medical records may be difficult to protect as parents have a legal right to access these documents in most states.[42]

INTERVIEWING

Establishing a trusting relationship is one of the most important tasks for the internist caring for an adolescent. Adolescents should feel comfortable and welcome in the health care setting, and the staff should be friendly and respectful. Office hours offered after school, in the evenings, and on weekends can facilitate visits.[49] When meeting with the adolescent and his or her parent or guardian, the internist can show an interest in the adolescent by shaking the adolescent's hand first. A discussion of the policy of consent and confidentiality with the adolescent and the adult can establish an atmosphere of privacy, respect, and trust. Questions can be initially directed to the adolescent, with the parent or guardian invited to respond as well. At some point the adult should be asked to leave the room to allow for conversation with the adolescent alone.[50] This is an opportune time to obtain a detailed psychosocial history. The acronym HEADSS (home environment, education/employment, activities/exercise, drugs, sexuality, and suicide/depression)[51] is a popular tool used by adolescent physicians to ensure that a thorough social history has been obtained (Table 3). Many providers will begin with less threatening questions about family and friends before progressing to more sensitive and personal questions. If the internist learns information that causes concern about issues such as substance use, school problems, sexuality, or mood disturbances, counseling can be offered and referrals can be instituted for community services that will help the adolescent to address these problems. The physician should have time to establish rapport with the adolescent and can encourage the adolescent to answer questions openly and honestly by using open-ended questions and language that the adolescent can understand. Most importantly, the practitioner should be respectful and nonjudgmental of the adolescent. There are many excellent reviews of interviewing techniques for adolescent patients.[52,53]

PREVENTIVE HEALTH CARE

Much of the morbidity and mortality that affects adolescents is a result of preventable causes. Internists should be knowledgeable about preventive services that are recommended for adolescents. The AMA, the Maternal and Child Health Bureau (MCHB), and the US Preventive Services Task Force (USPSTF) have each established recommendations regarding the frequency of visits and what should be accomplished at each visit.[9,10,54] **Figure 2** reviews the AMA's recommendations regarding periodic preventive services for adolescents. In its *Guidelines for Adolescent Preventive Services (GAPS)*,[9] the AMA recommends the yearly measurement of blood pressure, height, and weight, with a comprehensive physical examination to be performed every 3 years. Laboratory tests such as lipoprotein profile, purified protein derivative, human immunodeficiency virus, and rapid plasma reagin should be ordered when indicated by history or findings from physical examination. All sexually active female adolescents or those 18 years or older should receive a Papanicolaou smear and tests for *Neisseria gonorrhoeae* and *Chlamydia trachomatis* annually (regardless of symptoms). Sexually active male adolescents should be screened annually for asymptomatic urethritis with a urine leukocyte esterase or other newer screening tools. Immunizations should be kept current, with particular attention to hepatitis B, hepatitis A, tetanus-diphtheria toxoid, and varicella vaccinations. Screening for high-risk behaviors including eating disorders, sexual activity, substance use, and school problems is recommended annually, along with counseling for healthy eating, exercise, and injury prevention. The AMA has published useful questionnaires for adolescents and parents/guardians to complete during both new and return visits.[55]

AVAILABLE RESOURCES

There are several excellent resources on adolescent medicine available to internists; *Guidelines for Adolescent Preventive Services (GAPS)*[9] (published by the AMA), *Bright Futures: Guidelines for Health Supervision of Infants, Children and Adolescents*[10] (published by the MCHB), and *The Guide to Clinical Preventive Services*[54] (published by the USPSTF) are all outstanding guides to preventive services for adolescents. Many textbooks on the topic of adolescent medicine have been written[33,56-58] and may be used as references. Several comprehensive reviews have been written[59-62] to aid physicians who are caring for adolescent patients. Table 1 provides additional useful Web sites and phone numbers.

There are no specific guidelines indicating when an internist should refer an adolescent patient to an adolescent medicine specialist. This can be guided by the internist's level of comfort in diagnosing and caring for a particular problem. It may be useful to seek the help of an adolescent medicine specialist when an adolescent presents with an eating

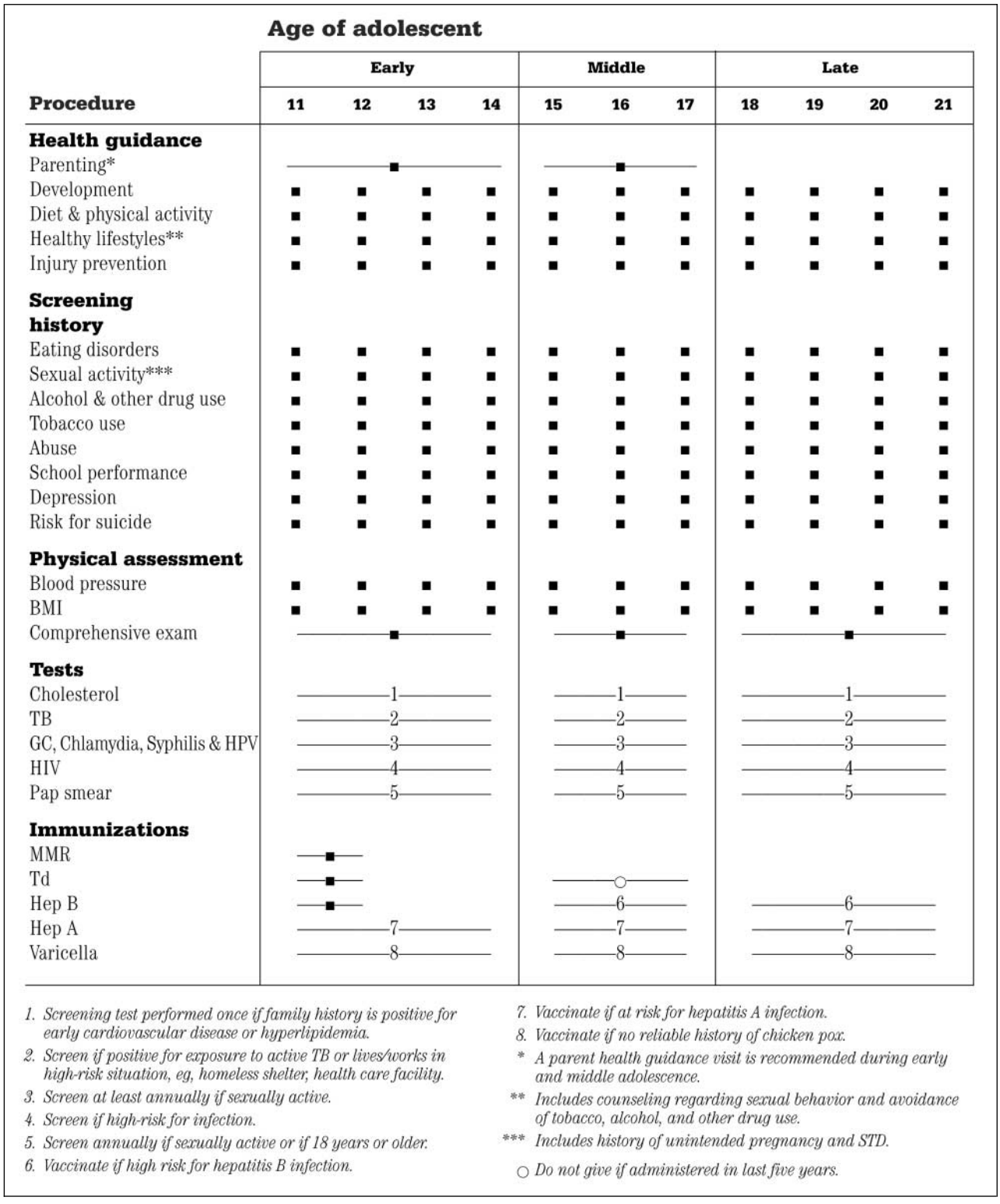

Figure 2. Preventive health services by age and procedure. Reprinted with permission from *AMA Guidelines for Adolescent Preventive Services (GAPS): Recommendations and Rationale*.[9] BMI indicates body mass index; TB, tuberculosis; GC, gonococci; HPV, human papilloma virus; HIV, human immunodeficiency syndrome; MMR, measles, mumps, and rubella; Td, tetanus-diphtheria toxoids; and Hep, hepatitis.

disorder, dysfunctional uterine bleeding, polycystic ovary syndrome, contraceptive issues, behavioral problems, substance use, school problems, or mental health issues, or any time there is difficulty in establishing a diagnosis. Because many adolescent medicine physicians work in multidisciplinary environments, numerous health care specialists can assist the referring physician in the treatment of the adolescent patient.

CONCLUSIONS

Adolescence is a period of marked growth and change. Internists can serve an important role during this time of transition. By learning about

aspects of adolescent medicine such as causes of morbidity and mortality, pubertal and cognitive development, issues of consent and confidentiality, interviewing techniques, and adolescent preventive health, internists can tailor their skills to provide care to this age group. There are abundant resources to aid internists caring for adolescents including medical literature, mental health professionals, community resources, professional organizations, and adolescent medicine specialists. Additionally, residency training programs in internal medicine should include didactic and clinical teaching in adolescent medicine to better prepare their residents. Caring for adolescent patients can be rewarding for both the patient and the internist.

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REFERENCES

1. US Bureau of the Census. *Statistical Abstract of the United States*. 119th ed. Washington, DC: US Bureau of the Census; 1999.
2. Ziv A, Boulet JR, Slap GB. Utilization of physician offices by adolescents in the United States. *Pediatrics*. 1999;104:35-42.
3. Klistner IN, Borok GM, Neinstein L, MacKenzie R. Adolescent health care in a large multispecialty prepaid group practice: who provides it and how well are they doing? *West J Med*. 1992;156:628-632.
4. Blum R. Physician's assessment of deficiencies and desire for training in adolescent care. *J Med Educ*. 1987;62:401-407.
5. Orr DP, Weiser SP, Dian DA, Maurana CA. Adolescent health care. *J Adolesc Health Care*. 1987; 8:239-245.
6. Slap GB. Normal physiological and psychosocial growth in the adolescent. *J Adolesc Health Care*. 1986;7(6 suppl):13S-23S.
7. Fellowships in adolescent medicine—2002. *J Adolesc Health*. 2001;28:434-440.
8. Butzin DW, Guerin RO, Langdon LO, Irwin CE Jr. The certification process in adolescent medicine. *J Adolesc Health*. 1998;23:328-331.
9. Elster AB, Kuznets NK, eds. *AMA Guidelines for Adolescent Preventive Services (GAPS): Recommendations and Rationale*. Baltimore, Md: Williams & Wilkins; 1993.
10. Green M, ed. *Bright Futures: Guidelines for Health Supervision of Infants, Children and Adolescents*. Arlington, Va: National Center for Education in Maternal and Child Health; 1994.
11. American Academy of Pediatrics, Section on Adolescent Health. Improving the implementation of state children's health insurance programs for adolescents: report of an invitational conference sponsored by the American Academy of Pediatrics, Section on Adolescent Health, September 26-27, 1999. *Pediatrics*. 2000;105:906-912.
12. American College of Physicians. Health care needs of the adolescent. *Ann Intern Med*. 1989;110:930-935.
13. US Department of Health and Human Services. *Preventing Tobacco Use Among Young People: A Report of the Surgeon General*. Atlanta, Ga: US Dept of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 1994.
14. Fiore MC, Bailey WC, Cohen SJ, et al. *Treating Tobacco Use and Dependence: A Clinical Practice Guideline*. Rockville, Md: US Dept of Health and Human Services, Public Health Service; 2000.
15. Gortmaker SL, Sappenfield W. Chronic childhood disorders: prevalence and impact. *Pediatr Clin North Am*. 1984;31:3-18.
16. Blum RW. Transition to adult health care: setting the stage. *J Adolesc Health*. 1995;17:3-5.
17. Rettig P, Athreya BH. Adolescents with chronic disease. *Arthritis Care Res*. 1991;4:174-180.
18. Rosen D. Between two worlds: bridging the cultures of child health and adult medicine. *J Adolesc Health*. 1995;17:10-16.
19. American Academy of Pediatrics and Committee on Children with Disabilities and Committee on Adolescence. Transition of care for adolescents with special health care needs. *Pediatrics*. 1996; 98:1203-1206.
20. Blum RW, Garell D, Hodgman CH, et al. Transition from child-centered to adult health-care systems for adolescents with chronic conditions. *J Adolesc Health*. 1993;14:570-576.
21. Graves CE, Bridge MD, Nyhuis AW. Residents' perception of their skill levels in the clinical management of adolescent health problems. *J Adolesc Health Care*. 1987;8:413-418.
22. American Medical Association. *Program Requirements for Residency in Internal Medicine: Graduate Medical Education Directory*. Chicago, Ill: American Medical Association; 1999:86-95.
23. Council of Medical Societies of the American College of Physicians. A Guide to Expanding Educational Objectives in Internal Medicine Residency. Philadelphia, Pa: American College of Physicians-American Society of Internal Medicine; 1994. Document 011213. Available at: http://www.acponline.org/srf/smc.htm#AdolescentMedicine. Site verified April 5, 2002.
24. Hoyert DL, Kochanek KD, Murphy SL. Deaths: final data for 1997. *Natl Vital Stat Rep*. 1999;47: 1-104.
25. Kann L, Kinchen SA, Williams BI, et al. Youth risk behavior surveillance—United States, 1999. *Mor Mortal Wkly Rep CDC Surveill Summ*. 2000;49 (No. SS-5):1-96.
26. Daniel WA, Paulshock BZ. A physician's guide to sexual maturity. *Patient Care*. 1979;13:122-129.
27. Blondell RD, Foster MV, Dave KC. Disorders of puberty. *Am Fam Physician*. 1999;60:209-218, 223-224.
28. Albanese A, Stanhope R. Investigation of delayed puberty. *Clin Endocrinol (Oxf)*. 1995;43:105-110.
29. Piaget J, Inhelder B. *The Psychology of the Child*. New York, NY: Basic Books Inc; 1969.
30. Weithorn LA, Campbell SB. The competency of children and adolescents to make informed treatment decisions. *Child Dev*. 1982;53:1589-1598.
31. Sigman GS, O'Connor C. Exploration for physicians of the mature minor doctrine. *J Pediatr*. 1991; 119:520-525.
32. Tobias BB, Ricer RE. Counseling adolescents about sexuality. *Prim Care*. 1998;25:49-70.
33. Neinstein LS. *Adolescent Health Care: A Practical Guide*. 3rd ed. Philadelphia, Pa: Lippincott Williams & Wilkins; 1996.
34. Coupey SM, Cohen MI. Special considerations for the health care of adolescents with chronic illnesses. *Pediatr Clin North Am*. 1984;31:211-219.
35. Siegel DM. Adolescents and chronic illness. *JAMA*. 1987;257:3396-3399.
36. Perrin EC, Gerrity PS. Development of children with a chronic illness. *Pediatr Clin North Am*. 1984; 31:19-31.
37. Fleming GV, O'Connor KG, Sanders JM. Pediatricians' views of access to health services for adolescents. *J Adolesc Health*. 1994;15:473-478.
38. Resnick MD, Litman TJ, Blum RW. Physician attitudes towards confidentiality of treatment for adolescents. *J Adolesc Health*. 1992;13:616-622.
39. Cheng TL, Savageau JA, Sattler AL, DeWitt TG. Confidentiality in health care. *JAMA*. 1993;269: 1404-1407.
40. Ford CA, Millstein SG, Halpern-Felsher BL, Irwin CE Jr. Influence of physician confidentiality assurances on adolescents' willingness to disclose information and seek future health care: a randomized controlled trial. *JAMA*. 1997;278:1029-1034.
41. Ginsburg KR, Slap GB, Cnaan A, Forke CM, Balsley CM, Rouselle DM. Adolescents' perceptions of factors affecting their decisions to seek health care. *JAMA*. 1995;273:1913-1918.
42. Sigman G, Silber TJ, English A, Epner JE. Confidential health care for adolescents: position paper of the Society for Adolescent Medicine. *J Adolesc Health*. 1997;21:408-415.
43. English A. Reproductive health services for adolescents: critical legal issues. *Obstet Gynecol Clin North Am*. 2000;27:195-211.
44. Jacobstein CR, Baren JM. Emergency department treatment of minors. *Emerg Med Clin North Am*. 1999;17:341-352.
45. Lieberman D, Feierman J. Legal issues in the reproductive health care of adolescents. *J Am Med Womens Assoc*. 1999;54:109-114.
46. English A. Treating adolescents: legal and ethical considerations. *Med Clin North Am*. 1990;74: 1097-1112.
47. Gans JE. *Policy Compendium on Confidential Health Services for Adolescents*. Chicago, Ill: American Medical Association; 1994.
48. Rainey DY, Brandon DP, Krowchuk DP. Confidential billing accounts for adolescents in private practice. *J Adolesc Health*. 2000;26:389-391.
49. Irwin CE. Why adolescent medicine? *J Adolesc Health Care*. 1986;7:2S-12S.
50. Silber TJ. Approaching the adolescent patient. *J Adolesc Health Care*. 1986;7:31S-40S.
51. Goldenring JM, Cohen E. Getting into adolescent heads. *Contemp Pediatr*. 1988;5:75-90.
52. Ehrman WG, Matson SC. Approach to assessing adolescents on serious or sensitive issues. *Pediatr Clin North Am*. 1998;45:189-204.
53. Coupey SM. Interviewing adolescents. *Pediatr Clin North Am*. 1997;44:1349-1364.
54. *US Preventive Services Task Force: Guide to Clinical Preventive Service*. 2nd ed. Baltimore, Md: Williams & Wilkins; 1996.
55. American Medical Association. Guidelines for Adolescent Preventive Services (GAPS) Implementation Materials. Available at: http://www.ama-assn.org/ama/pub/printcat/1981.html. Site verified. April 5, 2002.
56. Hoffman AD, Greydanus DE, eds. *Adolescent Medicine*. 3rd ed. Stamford, Conn: Appleton & Lange; 1997.
57. Friedman SB, Fisher MM, Schonberg SK, Alderman EM, eds. *Comprehensive Adolescent Health Care*. 2nd ed. St Louis, Mo: Mosby; 1998.
58. Emans SJ, Laufer MR, Goldstein DP, eds. *Pediatric and Adolescent Gynecology*. 4th ed. Philadelphia, Pa: Lippincott-Raven Publishers; 1998.
59. Elster AB, Levanberg P. Integrating comprehensive adolescent preventive services into routine medical care: rationale and approaches. *Pediatr Clin North Am*. 1997;44:1365-1377.
60. Reif CJ, Elster AB. Adolescent preventive services. *Primary Care*. 1998;25:1-21.
61. Hampton HL. Examination of the adolescent patient. *Obstet Gynecol Clin North Am*. 2000; 27:1-18.
62. Rapp CE. The adolescent patient. *Ann Intern Med*. 1983;99:52-60.