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Delivering Adolescent Preventive Services in an Office Setting

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INTRODUCTION

Although adolescence has long been recognized as a vulnerable period, the emphasis on preventive health care for this age group is a relatively recent phenomenon. In the past 25 years, several prominent organizations have released specific preventive care guidelines for this age group. However, regional and national surveys of youth, providers, and medical records all suggest that delivery of recommended preventive services is suboptimal. In this article, we review the history of adolescent preventive health guidelines, describe current rates of preventive health screening and counseling, and explore barriers to the delivery of preventive care for this age group. We conclude with resources and practical suggestions to help the reader create an adolescent-friendly environment and to facilitate preventive health care delivery in your practice.

GUIDELINES FOR ADOLESCENT PREVENTIVE HEALTH SERVICES

The United States Preventive Services Task Force (USPSTF) was one of the first and most respected groups to provide preventive health services recommendations. The USPSTF is composed of a panel of private-sector health promotion and disease prevention experts. Since the USPSTF released its first clinical preventive services recommendations for physicians in 1989, recommendations have been regularly reviewed and revised. Panel members utilize literature review and expert consensus regarding available evidence to rate clinical pre-

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ventive services, including screening tests, counseling, preventive medications, and immunizations.[1] Services that are judged with high certainty to have benefits that outweigh their risks receive an "A" grade, whereas those thought to have a moderate net benefit receive a "B" grade. Both "A" and "B" graded services are generally recommended. A "C" grade is for services that are not routinely recommended and should only be considered for patients in certain situations. A "D" grade signifies a service where there is moderate or high certainty that there is no net benefit or that the harm outweighs the benefit and is thus discouraged for all patients.[2] The USPSTF ratings have received increased attention recently as those with an "A" or "B" grade will be targeted by the Affordable Care Act, signed into law in 2010.

Currently only a few adolescent preventive services have received an "A" or "B" grade. The USPSTF recommends depression, obesity, and tobacco screening for all adolescents. Of note, depression screening is only recommended in settings where there are systems in place to diagnose, manage, and follow-up patients with depression. For sexually active females younger than 25, USPSTF recommends routine chlamydia screening. Gonorrhea screening is recommended only for sexually active females at increased risk for sexually transmitted infections (STIs). Females younger than the age of 25 have the highest gonorrhea rates of any age group, so many would be classified as high risk. Adolescent males and females at increased risk for STIs are also encouraged to be screened for syphilis and HIV. Blood pressure screening is recommended routinely for young adults, ages 18 years and older. In addition, the USPSTF endorses all Advisory Committee on Immunization Practices (ACIP) recommendations regarding vaccines for adolescents.

More recently, Partnership for Prevention has supported efforts to rank preventive services based on estimated disease burden and potential cost-effectiveness. Founded in 1991, Partnership for Prevention comprises a diverse group of stakeholders, including patient advocacy groups, health professional organizations, and corporations, who share a common mission of promoting a culture of prevention. In their latest report, chlamydia screening for sexually active females younger than 25 years received the highest rank of all adolescent preventive services. In addition, counseling adolescents regarding calcium supplementation (a topic currently under USPSTF review) also received a high rank.[3]

Although most would agree on the importance of providing all USPSTF recommended preventive services, these recommendations do not address many important and potentially modifiable sources of morbidity among adolescents. Thus, the guidelines have been criticized as too stringent in the amount of evidence required to receive an "A" or "B" grade. For example, screening adolescents for alcohol use and counseling adolescents to abstain from using alcohol or drugs have both received "I" grades, signifying there is insufficient evidence on their efficacy. Furthermore, some clinicians may be surprised to learn that routine adolescent

testicular cancer and scoliosis screening have both received "D" grades and are thus discouraged. (For more information on the USPSTF methodology and updated recommendations, please visit: http://www.uspreventiveservicestaskforce.org/index.html.) Following the USPSTF recommendations initial release, several professional medical organizations released their own guidelines regarding adolescent preventive health services. In 1992 the American Medical Association (AMA), in conjunction with the Centers for Disease Control and Prevention (CDC), released the Guidelines for Adolescent Preventive Services (GAPS). GAPS greatly expanded on USPSTF recommendations, introducing a set of 24 clinical preventive services for adolescents addressing 14 different medical or behavioral health issues. Furthermore, GAPS recommended that adolescents receive at least 3 comprehensive preventive health visits, one each during early, middle, and late adolescence. In 1994 the American Academy of Family Physicians (AAFP) released their own periodic health exam recommendations, based on USPSTF guidelines and expert consensus.

In 1995 the American Academy of Pediatrics (AAP) revised its Recommendations for Pediatric Preventive Care. In 1996 AAP released their Guidelines for Health Supervision III; this booklet further described recommended preventive health services for children and adolescents. The AAP recommendations expanded greatly on those from USPSTF and AMA, both in content and periodicity. While AMA recommended 3 comprehensive preventive health visits during adolescence, AAP advised that these visits occur annually. Furthermore, AAP recommended an increased number of routine adolescent screens, including annual hearing, vision, urinalysis, and hematocrit testing. These guidelines were based on evidence and expert consensus.

The number and variation in recommended adolescent clinical preventive health services has been a source of confusion among clinicians and criticized by researchers and adolescent health advocates. In 1998, Dr. Arthur Elster, author of the AMA GAPS, wrote that "As the 'final common pathway' for synthesizing and applying scientific information . . . primary care physicians are likely to experience a preventive services information overload."[4] More recently, in 2006 Richmond et al[5] reported among various professional organizational discrepancies persisted in adolescent preventive health service recommendations.

Today, Bright Futures provides the most comprehensive and widely adopted guide for health supervision of infants, children, and adolescents. Bright Futures was first introduced in 1994, under the sponsorship of the Maternal and Child Health Bureau (MCH) and the Medicaid Bureau of the Health Care Financing Administration (now the Centers for Medicare & Medicaid Services). *Bright Futures,* 3rd edition, published in 2008, was led by AAP, in collaboration with MCH and AMA. The 3rd edition goals were to provide a uniform set of child and adolescent preventive health care recommendations.

Bright Futures recommends annual preventive health visits for adolescents and young adults, ages 11 to 21 years. Similar to other guidelines, recommendations are divided into 3 age groups: early, middle, and late adolescence. Suggested areas to address during these visits include social and emotional development, physical development and health habits, relationships and sexuality, family functioning, and school performance. Vision screening is recommended during each developmental stage and screening for dyslipidemia is recommended once during late adolescence. Other screens, including hearing, anemia, tuberculosis, chlamydia, and other STIs are reserved for at-risk adolescents. More details on the full Bright Futures guidelines can be accessed via the Maternal and Child Health Bureau Web site: http://brightfutures.aap.org/pdfs/Guidelines_PDF/18-Adolescence.pdf.)

Although Bright Futures provides clinicians with a comprehensive set of clinical preventive services recommendations, other factors may influence physician practices. The Healthcare Effectiveness Data and Information Set (HEDIS) provides an additional source of adolescent preventive health guidelines. Developed by the National Center for Quality Assurance, HEDIS is a tool used to accredit health plans, providing a marker of quality. Managed care plans participating in HEDIS accreditation perform chart audits and/or review claims data to demonstrate their delivery of HEDIS recommended services. As such, clinicians, especially those providing care in health maintenance organizations, may be under increased pressure to comply with HEDIS measures. The HEDIS measures are frequently revised and updated; in the past several years an increasing number have targeted adolescents. Currently, adolescent-specific HEDIS measures include immunizations nutrition and physical activity counseling, and chlamydia screening for sexually active females 15 to 24 years of age. At least 1 recent study has demonstrated a substantial increase in chlamydia screening in response to the HEDIS measure.[6]

A final source for adolescent preventive health recommendations that is likely to influence clinicians' practices is the Early Periodic Screening, Diagnosis, and Treatment (EPSDT) Program. EPSDT ensures that all publicly insured children and adolescents younger than 21 years of age have access to a medical setting where they can receive a comprehensive physical and developmental history, physical examination, laboratory tests, and anticipatory guidance. More specifically, EPSDT indicates services that states must provide to publicly insured children and adolescents. As such, clinicians caring for publicly insured children are required to comply with EPSDT recommended services. EPSDT recommends adolescents receive comprehensive assessments and physical examinations every 2 years. Additional specific EPSDT recommended preventive health services include vision, hearing, mental health, nutritional and substance abuse screening, health education, and counseling. Bright Futures has worked closely with EPSDT to promote consistency across these guidelines.

ARE ADOLESCENTS RECEIVING PREVENTIVE HEALTH SERVICES?

Although individual recommendations may vary, it is clear across guidelines that some combination of health screening and counseling, performed on a routine basis, would be beneficial for adolescents. Unfortunately, data describing how many adolescents actually receive routine preventive health services are limited in scope and quality.[7] Many studies have utilized local datasets that may not be generalizable to other regions. Other studies rely on physician report of services delivered; these studies may not reflect the content of screening and counseling as understood by the parent or patient. Nationally representative surveys can provide robust estimates but are prone to prolonged lags in data availability. Nevertheless, in this section we present available data describing adolescents' receipt of routinely recommended preventive health services.

As preventive health care is traditionally delivered in the context of a preventive health visit, one important measure is whether adolescents receive an annual or biannual preventive health visit. Annual preventive visits are recommended by AAP and Bright Futures. EPSDT recommends visits occur every 2 years. In the past 20 years, few adolescents have received well care at recommended intervals. For example, Rand and colleagues reviewed data from the 1994-2003 National Ambulatory Medical Care Survey (NAMCS) and National Hospital Ambulatory Medical Care Survey (NHAMCS) and found that only 9% of adolescent medical visits were for preventive health care.[8] More recently, Irwin et al used data from the 2001-2004 Medical Expenditure Panel Survey (MEPS) to show that only 38% of adolescents 12 to 17 years of age had a preventive health visit in the previous year.[9] Dempsey and Freed reviewed 2001-2005 Medicaid claims data and found that fewer than 15% of Michigan teens 11 to 18 years had annual preventive health visits and less than half had a preventive visit over a 2-year period.[10] Finally, using 1998-2007 claims data from a large Midwestern HMO, Nordin et al found that from age 13 to 17, one-third of continuously insured adolescents had no preventive health visits, and an additional 40% had only one preventive health visit.[11] It should be noted that adolescents self-report having had a preventive health visit at rates much higher than that demonstrated by national surveys or claims data review.[12] This may reflect that adolescents are receiving preventive health services at visits outside of those coded specifically as preventive visits.

Studies have found that although adolescents may have fewer outpatient visits than other age groups, most do have some contact with the medical system each year.[10,11,13] These visits are commonly for acute illnesses, sports physicals, or other nonpreventive health needs. Furthermore, at least 1 study, using NAMCS/NHAMCS data reported that counseling related to diet, exercise, STI/HIV testing and family planning all occurred more commonly at acute rather than well visits.[14] Although this finding may seem counterintuitive, it may also reflect clinicians' appropriate use of every clinical encounter to provide recommended preventive health services.

A second way to assess adolescent preventive health delivery is to directly survey providers regarding their screening practices. Although these surveys are prone to recall bias and over-reporting due to social desirability, they can be useful for monitoring changes in practice over time. The AAP conducts periodic surveys of its pediatrician members. In their survey conducted in 2005, nearly two-thirds of pediatricians reported during adolescent preventive health visits that they routinely discussed sexual activity, abstinence, contraception, condoms, and STIs.[15] These rates were higher than those reported in a similar, previous pediatrician survey conducted from 1998-1999.[16] Unfortunately, in the more recent survey, testing rates were lower—only 46% reported they routinely screen all of their sexually active teens for STIs, and only 28% routinely conducted HIV testing.[15] In a separate survey of California physicians, nearly half reported conducting routine chlamydia screening of females younger than 20 years of age.[17]

Chart reviews and surveys of clinical records provide an additional opportunity to estimate adolescent preventive services delivered. A secondary analysis of NAMCS/NHAMCS data found that preventive health counseling was only documented for 39% of adolescent general physical exams. Rates for specific topics, such as HIV or pregnancy prevention, were even lower.[13] Similarly, secondary analysis of MEPS data found that less than half of adolescent well visits included anticipatory guidance related to nutrition, seat belts, or helmet use.[9]

A final method for assessing adolescent receipt of preventive health services is by directly asking teens what services they received. Secondary analysis of the 1999 Youth Risk Behavior Survey (YRBS), a nationally representative survey of high school students, found that less than half of students reported discussing STI, pregnancy, or HIV prevention at their last preventive health visit.[12] In a review of Wave 1 of the National Longitudinal Study of Adolescent Health (Add Health), a home-based interview of a nationally representative sample of 13- to 17-year-olds, conducted in 1995, only one-fourth of older, sexually active teens reported being screened for STIs at a routine medical exam.[18] Similarly, in a random-digit-dial survey of New York City adolescents, conducted from 2002-2003, a minority reported discussing depression, cigarettes, alcohol. or pregnancy prevention during routine medical visits.[19] In summary, whether assessed via medical record review, physician survey, or teen report, it is clear that many teens are not routinely receiving all recommended preventive health services.

WHY ARE ADOLESCENTS NOT RECEIVING RECOMMENDED PREVENTIVE HEALTH SERVICES?

Barriers to adolescent preventive health delivery have been well described. Perhaps the most significant barrier is that many teens do not have annual preventive health visits. However, even teens who present for care face other barriers. Clinicians often cite lack of time as a barrier to conducting comprehensive preventive health screening and counseling.[15,20] Indeed it has been estimated to sim-

ply focus on USPSTF recommended services would take providers 40 minutes to complete. As described earlier, the Bright Futures guidelines are much more comprehensive and thus likely to require more time than USPSTF guidelines. In an AAP survey of pediatricians conducted 1998-1999, the average adolescent visit lasted only 19 minutes. In this survey, providers who had visits greater longer than 20 minutes were more likely to provide preventive health counseling.[16]

A second, related barrier to delivering adolescent preventive health services is the need for confidentiality. Many recommended services (eg, substance use counseling, STI screening, and depression screening) are difficult to implement unless confidentiality can be assured. Although every state has enacted statutes allowing minors to consent for specific types of health care, some states include limitations such as age or type of care that may be provided.[21] All states authorize minors to consent for confidential STI screening and treatment. Almost every state authorizes minors to consent for care related to substance use related mental health care and treatment. Numerous states allow minors to consent for outpatient mental health services.

Although most providers aim to provide confidential care, they report limited reimbursed visit time as a barrier to allowing teens private time with their provider.[20] In Irwin's 2001-2004 MEPS data review, only 40% of adolescents had time alone with their provider during a routine preventive health visit.[9] Of concern, a secondary analysis of Add Health data found that adolescents with high-risk behaviors were those most likely to report confidentiality concerns.[22] Conversely, a randomized trial demonstrated that by assuring confidentiality, teens were more likely to disclose to providers information regarding sexuality, substance abuse, and mental health. Furthermore, teens who received confidentiality assurances were more likely to return for follow-up visits.[23] It should be noted that confidentiality is not an issue specific for clinicians; all office staff should be aware of state laws and office procedures regarding confidential services. In one survey of nearly 200 Washington, DC, area private offices, there were significant discrepancies between office staff and physicians regarding the availability of services at their site. In addition, less than half of office staff surveyed knew that adolescents had the legal right to access confidential sexual health services.[24]

Other barriers to the provision of adolescent preventive health services include clinician discomfort and cultural barriers. These barriers can be addressed through educational initiatives.[25] A final barrier is that providers may be overwhelmed by the sheer number of recommended services. A recent article by Belamarich et al described this issue for well child care.[26] The concerns regarding an ever increasing number of recommendations are quite similar for adolescent preventive health care. Although comprehensive care may be generally lauded, there is a real concern that providers cannot do it "all" and that services that are

known to be the most effective and beneficial (such as vaccinations and depression and chlamydia screening) may be crowded out by others where the benefits are less clear.[7]

PROMOTING ADOLESCENT PREVENTIVE HEALTH SERVICES IN OFFICE SETTINGS

In most practices, adolescents are already receiving some preventive health services, albeit often informally and unrecognized as such. This preventive care includes immunizations, screening for physical and behavioral risks, and providing age-appropriate health guidance and counseling to patients and parents. For many practices, formalizing delivery systems and documentation of health promotion services can help improve care and ensure appropriate physician reimbursement for time spent. (Resources to assist with billing for adolescent services, and specifically for confidential services, have been developed by the AAP and Society for Adolescent Health and Medicine (SAHM) and can be found at: http://www.adolescenthealth.org/Clinical_Care_Resources/2721.htm#BillingAndCoding.)

As described earlier, the 2 most significant barriers to adolescent preventive service delivery are adolescents' limited use of preventive care and concerns about confidentiality. A key step toward promoting preventive health for this age group is to encourage visits by maintaining an office space that is welcoming to teenagers. Although this may seem difficult in a busy practice that serves patients of all ages, creating a teen-friendly environment can be achieved with some simple strategies. For example, designating a small space in the waiting area for adolescents, with age-appropriate health information and leisure reading materials, can serve to make adolescents feel welcome and respected (Fig 1). Similarly, training office staff to greet adolescents, and not just their parents, can be a small step toward acknowledging their growing role in their own health care. Additionally, offices can facilitate discussions with teens regarding sensitive topics providing, both pre- and post-visit, access to resources for health education, such as a practice Web site for youth and their parents with links to appropriate sources of information. In addition, offices can further reduce barriers by establishing systems to allow parents to consent for their teen to receive care in the future when unaccompanied by their parent or guardian. A list of recommended Web resources is highlighted in Table 1.

Once teens feel welcomed in the office, concerns about confidentiality can be more easily addressed. Offices can overcome this barrier by ensuring that all office staff, including providers, nurses, medical assistants and administrative assistants, are familiar with the types of services adolescents can access without parental notification and/or consent. In addition, offices should consider implementing systems for confidential appointment-making, confirmation and bill-

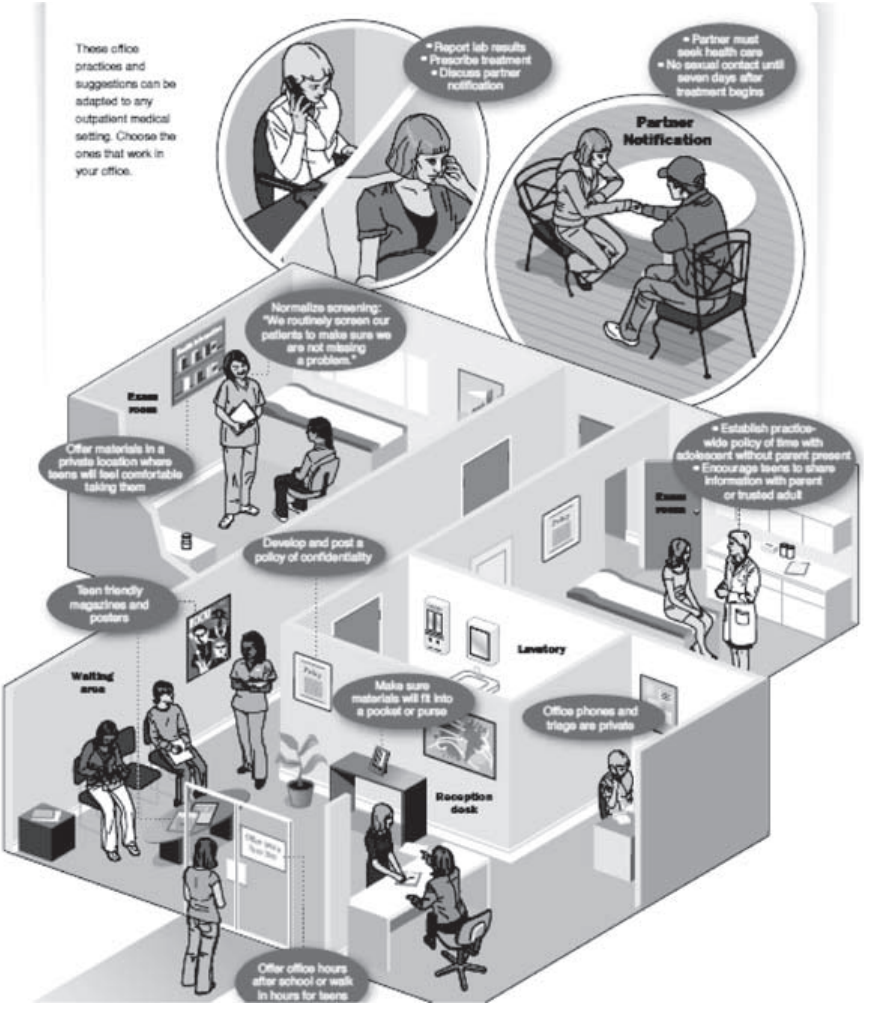


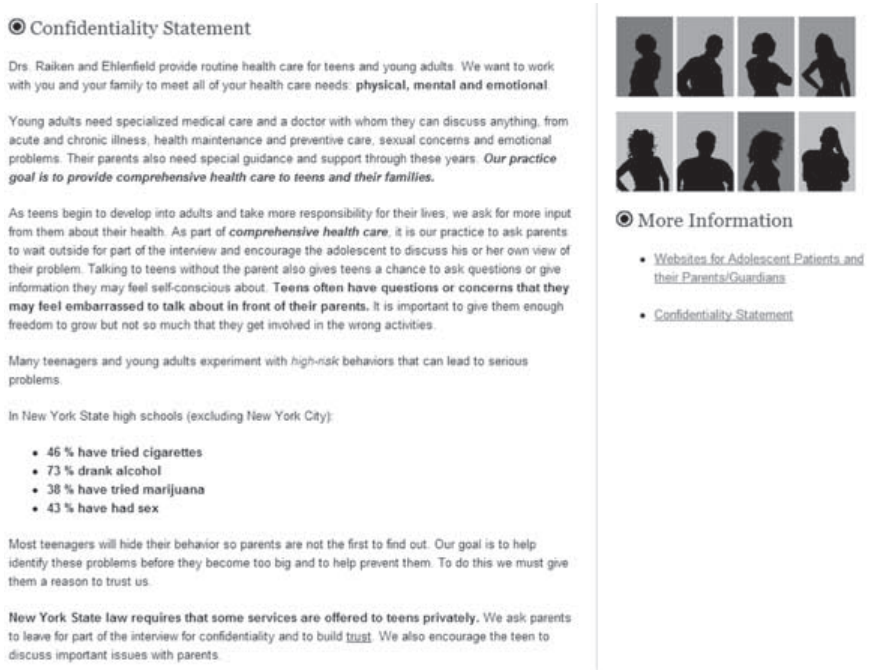
Fig 1. Teen Friendly Office Tips. Source: Maloney SK, Johnson C. *Why Screen for Chlamydia? An Implementation Guide for Healthcare Providers*. Washington, DC: Partnership for Prevention; 2008. Available at: http://ncc.prevent.org/providers.aspx

ing and ensuring that adolescents have private time with their provider at each visit. Using posters or handouts to establish policies and expectations for confidentiality may ease the transition to increasingly confidential care and shifting responsibilities for patients, parents, and providers. An example of this type of handout is shown in Figure 2. (Other sample posters or handouts are available online from several professional organizations, including SAHM (www.adolescenthealth.org) and the Adolescent Health Working Group (www.ahwg.net) Table 1.)

Table 1.
Key Online Resources for Teens, Parents and Providers

Organization	Web Site	Description
American Academy of Pediatrics Section on Adolescent Health	www.aap.org/Sections/adolescenthealth	Resources for office, patients, and families; information about AAP adolescent health publications, initiatives, and projects; and latest news about the field of adolescent health.
Adolescent Health Working Group (AHWG)	www.ahwg.net	Toolbox series includes "Adolescent Health Care 101" and "Sexual Health," among others. Posters and other resources available.
Advocates for Youth	www.advocatesforyouth.org	The Web site provides information for youth, parents, and health professionals related to health promotion and advocacy.
Bright Futures	www.brightfutures.aap.org	Questionnaires and visit forms for adolescents as well as guidelines for appropriate health supervision.
Centers for Disease Control and Prevention	www.cdc.gov	Numerous resources, including 2010 Treatment Guidelines for sexually transmitted infections
Centers for Young Women's and Young Men's Health	www.youngwomenshealth.org www.youngmenshealthsite.org	These Web sites, directed by Children's Hospital Boston, provide a wealth of gender-specific health information for youth.
Children Now	www.talkingwithkids.org	Provides information for parents on how to talk with kids about sexuality, drugs, and alcohol and other health topics.
Go Ask Alice!	www.goaskalice.columbia.edu	Go Ask Alice! is a health Q&A Internet resource run by Health Services at Columbia University
Physicians for Reproductive Choice and Health (PRCH)	www.prch.org	PRCH includes more than a dozen PowerPoint educational modules aimed at providers. These modules are available for download free of charge.
Planned Parenthood Teens	www.teenwire.com	This Web site provides important information for youth, including specific information for LGBTQ youth on topics related to reproductive health.
Society for Adolescent Health and Medicine (SAHM)	www.adolescenthealth.org	Includes screening questionnaires and billing and coding resources. Site has a "find an adolescent health provider" for referral purposes.

Many providers report time as significant barrier to providing teens all recommended preventive services. Therefore, having teens complete screening questionnaires prior to the visits can be an important and efficient tool for assessing risk behaviors and strengths. In order to ensure accuracy and validity of responses, these instruments should be completed in a private area, away from



Confidentiality Statement

Drs. Raiken and Ehlenfield provide routine health care for teens and young adults. We want to work with you and your family to meet all of your health care needs: **physical, mental and emotional**.

Young adults need specialized medical care and a doctor with whom they can discuss anything, from acute and chronic illness, health maintenance and preventive care, sexual concerns and emotional problems. Their parents also need special guidance and support through these years. ***Our practice goal is to provide comprehensive health care to teens and their families.***

As teens begin to develop into adults and take more responsibility for their lives, we ask for more input from them about their health. As part of ***comprehensive health care***, it is our practice to ask parents to wait outside for part of the interview and encourage the adolescent to discuss his or her own view of their problem. Talking to teens without the parent also gives teens a chance to ask questions or give information they may feel self-conscious about. **Teens often have questions or concerns that they may feel embarrassed to talk about in front of their parents.** It is important to give them enough freedom to grow but not so much that they get involved in the wrong activities.

Many teenagers and young adults experiment with *high-risk* behaviors that can lead to serious problems.

In New York State high schools (excluding New York City):

- **46 % have tried cigarettes**
- **73 % drank alcohol**
- **38 % have tried marijuana**
- **43 % have had sex**

Most teenagers will hide their behavior so parents are not the first to find out. Our goal is to help identify these problems before they become too big and to help prevent them. To do this we must give them a reason to trust us.

New York State law requires that some services are offered to teens privately. We ask parents to leave for part of the interview for confidentiality and to build trust. We also encourage the teen to discuss important issues with parents.

Fig 2. Example of Web-based Confidentiality Statement for Parents Allentown Pediatric and Adolescent Medicine (Buffalo, NY) web site, http://www.allentownpeds.com/adolescents.html.

parents, significant others, and other patients. Both paper and electronic screening tools have been demonstrated to be effective in increasing preventive service delivery.[27-28] (The American Academy of Pediatrics endorses the use of Bright Futures, with screening recommendations, tools, and encounter forms available for review and download from http://brightfutures.aap.org/. A more concise screening questionnaire is also available in English and Spanish through the SAHM (http://www.adolescenthealth.org/Clinical_Care_Resources/2721.htm#ScreeningQuestionnaires).) Although not meant to replace face time with a clinician, these questionnaires can help providers quickly identify those adolescents who may need additional counseling, examination, or testing. In addition, paper or electronic questionnaires can help to diminish reporting bias and improve validity of responses to sensitive behavioral questions.[29] Some questionnaire packages, including those created by AMA GAPS or the AHWG, offer a parent/guardian version to facilitate gathering past medical and family history and capturing parent/guardian concerns.

Even if self-completed screening tools are used, providers should assess each adolescent patient for risks and assets. The widely used (and variably spelled) HEADDSS mnemonic (Fig 3) can help providers identify both risky behaviors and items of concern as well as adolescents' strengths and assets. This semi-

structured interview tool allows a provider to quickly assess the areas suggested by *Bright Futures* (social and emotional development, physical development and health habits, relationships and sexuality, family functioning, and school performance). Additional specific screening tools include the CRAFFT for substance

H- home:
Where and with whom does the adolescent live, and is there stability in that situation? How are the relationships within the family? What roles and responsibilities does the adolescent have?
E – education & environment:
Is the adolescent in school, and how is that going? What is in the community as far as safety concerns, opportunities, and resources?
A – activities:
What does the adolescent do at school, at home, in the community? Is he or she over or under scheduled? What is self-motivated? How much physical exercise does the adolescent get?
D – diet:
A 24-hour food recall can highlight deficits in nutrition, restrictive eating patterns, or sources of excess calories. Ask the adolescent about who is responsible for meal planning and preparation. Ask about bingeing and purging.
D – depression:
Assess the adolescent's overall mood and temperament. Directly assess for suicidal risk.
S – substance use:
Often asking about what is happening at school and among friends can offer insight into opportunities for substance use in a non-threatening way. Ask about tobacco, alcohol, illicit drugs, and nonmedical use of prescription drugs.
S – sexuality:
Ask about sexual behaviors with same and opposite sex partners. Important areas to address include age at first sexual encounter, lifetime number of partners, and use of contraceptives and barrier methods to prevent sexually transmitted infections.

Fig 3. Screening Adolescents for Risk and Resiliency using the HEADDSS Mnemonic

Part A

During the PAST 12 MONTHS, did you:	**No**	**Yes**
1. Drink any alcohol (more than a few sips)? (Do not count sips of alcohol taken during family or religious events.)	☐	☐
2. Smoke any marijuana or hashish?	☐	☐
3. Use anything else to get high? ("anything else" includes illegal drugs, over the counter and prescription drugs, and things that you sniff or "huff")	☐	☐

For clinic use only: Did the patient answer "yes" to any questions in Part A?

No ☐ → **Ask CAR question only, then stop**

Yes ☐ → **Ask all 6 CRAFFT questions**

Part B	**No**	**Yes**
1. Have you ever ridden in a **CAR** driven by someone (including yourself) who was "high" or had been using alcohol or drugs?	☐	☐
2. Do you ever use alcohol or drugs to **RELAX**, feel better about yourself, or fit in?	☐	☐
3. Do you ever use alcohol or drugs while you are by yourself, or **ALONE**?	☐	☐
4. Do you ever **FORGET** things you did while using alcohol or drugs?	☐	☐
5. Do your **FAMILY** or **FRIENDS** ever tell you that you should cut down on your drinking or drug use?	☐	☐
6. Have you ever gotten into **TROUBLE** while you were using alcohol or drugs?	☐	☐

CRAFFT Scoring: Each "yes" response in **Part B** scores 1 point.
A total score of 2 or higher is a positive screen, indicating a need for additional assessment.

Fig 4. The CRAFFT Screening Interview

use (Fig 4), the Patient Health Questionnaire for Adolescents (PHQ-A), and the Beck Depression Inventory-Primary Care Version (BDI-PC) for depression.[30] Several studies have demonstrated that general training of providers regarding adolescent preventive health screening can improve the rate of service delivery and quality of care for this age group.[25,31]

There is a growing movement toward strength-based screening of adolescents rather than the traditional risk-based approach.[32] In this model, providers assess for protective factors and adolescent assets (making healthy choices, identifying individuals and community sources of support, etc.) rather than simply screening for risky behaviors. Not only does this approach support a more general movement toward positive youth development, but it also allows providers to develop rapport and connection around positive factors in adolescents' lives and facilitates motivational interviewing.[33] Furthermore, providers can play an important role by acknowledging and promoting healthy behaviors described by teens.

TRANSLATING RESEARCH INTO PRACTICE

In this last section of our article, we describe a real-life example of translating adolescent health services research into practice. To test whether routine adolescent health promotion can be successfully incorporated into the health systems constraints of a primary care office visit, 3 Western New York State pediatric offices set out to develop an "adolescent medical home." Their goal was to enhance the delivery of comprehensive and confidential adolescent preventive care, including sexual health services. In their pilot project, for each scheduled adolescent preventive heath visit, the offices gave parents, either before the visit by mail or at the visit in the waiting room, an informational handout explaining the confidential services routinely provided and the reasons these services are recommended by AAP. Before the adolescent patient was seen by the pediatrician or nurse practitioner, a brief (16 questions) behavioral questionnaire was given to the teen patient to complete in a private area (see Fig 1). The provider reviewed the questionnaire answers before walking into the exam room to determine where to focus further questioning and anticipatory guidance at the visit. All adolescent patients were provided with "private physician time;" parents were asked to step out to the waiting room during physical exams. To "routinize" chlamydia screening of sexually active females, the offices developed protocols for all adolescent females to provide a urine specimen with vital sign measurements. If patients reported sexual activity in the questionnaire, the nurse would send the specimen for a chlamydia nucleic acid amplification test. Offices provided information about adolescent health and confidentiality in brochures in waiting and exam rooms, as well as on their Web sites (see Fig 2). In addition, adolescent STIs and contraceptive management training was offered to interested office staff.

At the end of the 6-month pilot period, all the offices reported great satisfaction with the enhanced adolescent services; by 9 months following start up, all 3 offices reported universally offering chlamydia screening to all females identified as engaging in sexual intercourse. None reported parental dissatisfaction with confidential services or chlamydia testing. One of the offices has incorporated chlamydia screening into their quality assurance project. Another office has placed an alert in adolescent female patients' electronic medical records to prompt nurses to collect a urine specimen for possible chlamydia testing.

CONCLUSION

In this article we aimed to provide a framework to help providers understand the rationale for and importance of promoting adolescent preventive health services in an office setting. With a 20-minute time-slot for a general adolescent physical, addressing all relevant health issues may seem daunting. However, counseling and screening can begin before the visit; maintaining an up-to-date Web site, providing pre-visit questionnaires and health resources in the waiting room can

all help to promote efficiency and maximize time for patient care and health promotion counseling. In addition, medical providers should not feel alone in their efforts, all available staff, including nurses and medical assistants can participate in efforts to screen and counsel youth. Finally, as many teens do not receive routine general checkups, providers should consider incorporating high priority preventive health services at all visits.

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